

## PLC Connection Guide

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## AIBUS

Supported Series: UDIAN Automation AI-501, AI-518, AI-519, AI-701, AI-702M, AI-704M, AI-706M, AI-719.

Website: <http://www.yudian.us>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	AIBUS		
PLC I/F	RS485 2W	RS232	
Baud rate	9600	9600, 19200	
Data bits	8		
Parity	None		
Stop bits	2		
HMI sta. no.	0		
PLC sta. no.	1	0-100	

On-line simulation	YES
Extend address mode	NO

### Device Address:

#### AI-518

Bit/Word	Device type		Format	Range	Memo
W	0	00H	DD		SV/STEP
W	1	01H	DD	-1999 ~ 9999	HIAL
W	2	02H	DD	-1999 ~ 9999	LoAL
W	3	03H	DD	0 ~ 9999	dHAL
W	4	04H	DD	0 ~ 9999	dLAL
W	5	05H	DD	0 ~ 2000	dF
W	6	06H	DD	0 ~ 4	Ctrl
W	7	07H	DD	0 ~ 9999	M5
W	8	08H	DD	1 ~ 9999	P
W	9	09H	DD	0 ~ 2000	t
W	10	0AH	DD	0 ~ 125	Ctl
W	11	0BH	DD	0 ~ 37	Sn (read only)
W	12	0CH	DD	0 ~ 3	dIP (read only)

W	13	0DH	DD	-1999 ~ 9999	dIL
W	14	0EH	DD	-1999 ~ 9999	dIH
W	15	0FH	DD	0 ~ 9999	ALP
W	16	10H	DD	-1999 ~ 4000 0.1□	Sc
W	17	11H	DD	0 ~ 48	Op1
W	18	12H	DD	-110 ~ 110%	oPL
W	19	13H	DD	0 ~ 110%	oPH
W	20	14H	DD	0 ~ 127	CF (read only)
W	21	15H	DD	0 ~ 19.2K	Baud rate ( bAud ) /808Pstatus word: run: 0 suspend: 4 stop: 12 (read only)
W	22	16H	DD	0 ~ 100	ADDR
W	23	17H	DD	0 ~ 20	dL
W	24	18H	DD	0 ~ 127	Run
W	25	19H	DD	0 ~ 9999	Loc



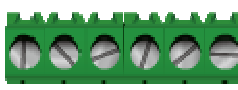
## AI-701

Bit/Word	Device type	Format	Range	Memo	
W	1	01H	DD	-9990 ~ 30000	HIAL
W	2	02H	DD	-9990 ~ 30000	LoAL
W	3	03H	DD	-9990 ~ 30000	HdAL
W	4	04H	DD	-9990 ~ 30000	LdAL
W	5	05H	DD	0 ~ 2000	AHYS
W	11	0BH	DD	0 ~ 37	InP (read only)
W	12	0CH	DD	0 ~ 3	dPt
W	13	0DH	DD	-9999 ~ 30000	SCL
W	14	0EH	DD	-9999 ~ 30000	SCH
W	15	0FH	DD	0 ~ 4444	AOP
W	16	10H	DD	-1999 ~ 4000 0.1□	Scb
W	17	11H	DD	0 ~ 48	Opt
W	21	15H	DD	0 ~ 19.2K	Baud rate ( bAud ) /808P status word run: 0 suspend: 4 stop: 12



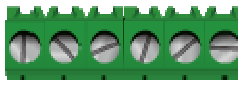
					(read only)
W	22	16H	DD	0 ~ 80	ADDR
W	23	17H	DD	0 ~ 40	FILt
W	25	19H	DD	0 ~ 255	Loc

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W terminal
1 RX-	6 Data-		4 COMM A
2 RX+	9 Data+		3 COMM B
5 GND	5 GND		
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W terminal
1 RX-	7 Data-		4 COMM A
2 RX+	8 Data+		3 COMM B
5 GND	5 GND		
			

## Driver Version:

Version	Date	Description
V1.20	Dec/30/2008	

# Allen-Bradley CompactLogix – Free Tag Names

Website: <http://www.ab.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley CompactLogix – Free Tag Names		
PLC I/F	RS232		
Baud rate	19200	9600, 19200, 38400	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
HMI sta. no.	0		
PLC sta. no.	1	1-31	

## PLC Setting:





Communication mode	DF1 Full Duplex protocol 19200, None, 8, 1 (default) Error Check: BCC, Station Address: 1
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## Device Address:



PLC Data Type Name	Bit/Word	EasyBuilder Data Format	Memo
BOOL	Boolean	Bit object	
BitArray			
SINT			
INT	Integer	16-bit signed, ASCII	-32768 ~ 32767
DINT	Double Integer	32-bit signed	$-2^{31} \sim (2^{31}-1)$
REAL	Single Precision Float	32-bit Float	IEEE 754

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	AB CPU CH0 RS232 9P D-Sub Female
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			AB CPU CH0 RS232 9P D-Sub Female
9 RX			3 TD
6 TX			2 RD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.00	June/2/2011	Driver released.

# Allen-Bradley CompactLogix/FlexLogix

Supported Series: Allen-Bradley ControlLogix, CompactLogix, FlexLogix CH0 DF1.

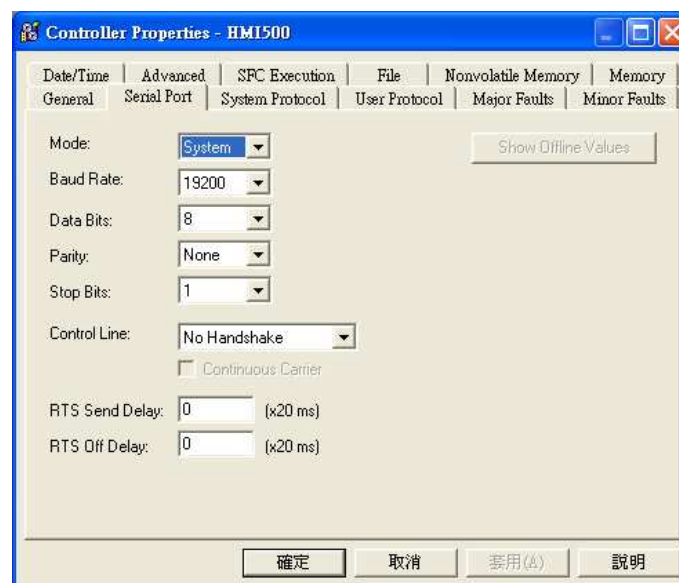
Website: <http://www.ab.com>

## HMI Setting:

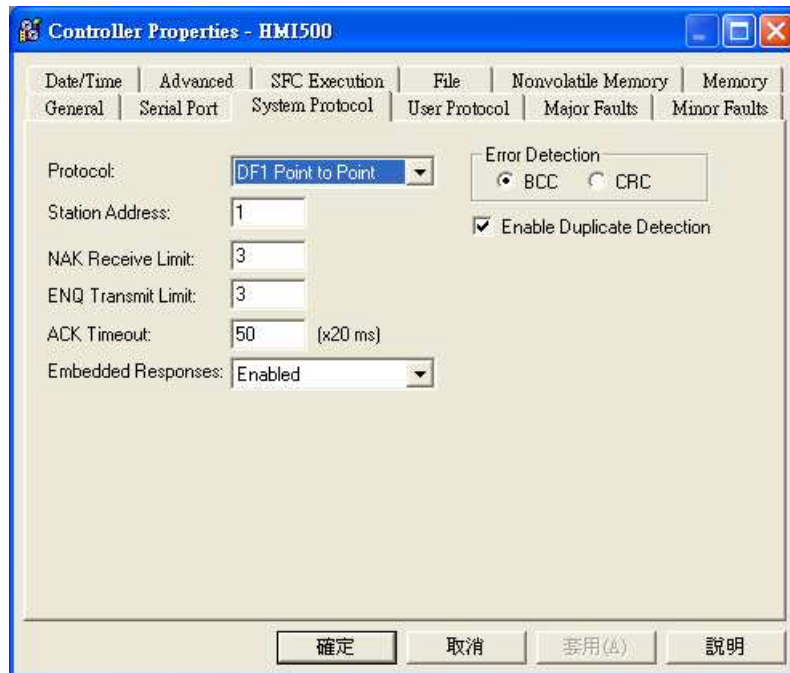
Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley CompactLogix/FlexLogix		
PLC I/F	RS232		
Baud rate	19200	9600, 19200, 38400	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
HMI sta. no.	0		
PLC sta. no.	1	1-31	

## PLC Setting:

Communication mode	DF1 Full Duplex protocol 19200, None, 8, 1 (default) Error Check: BCC, Station Address: 1
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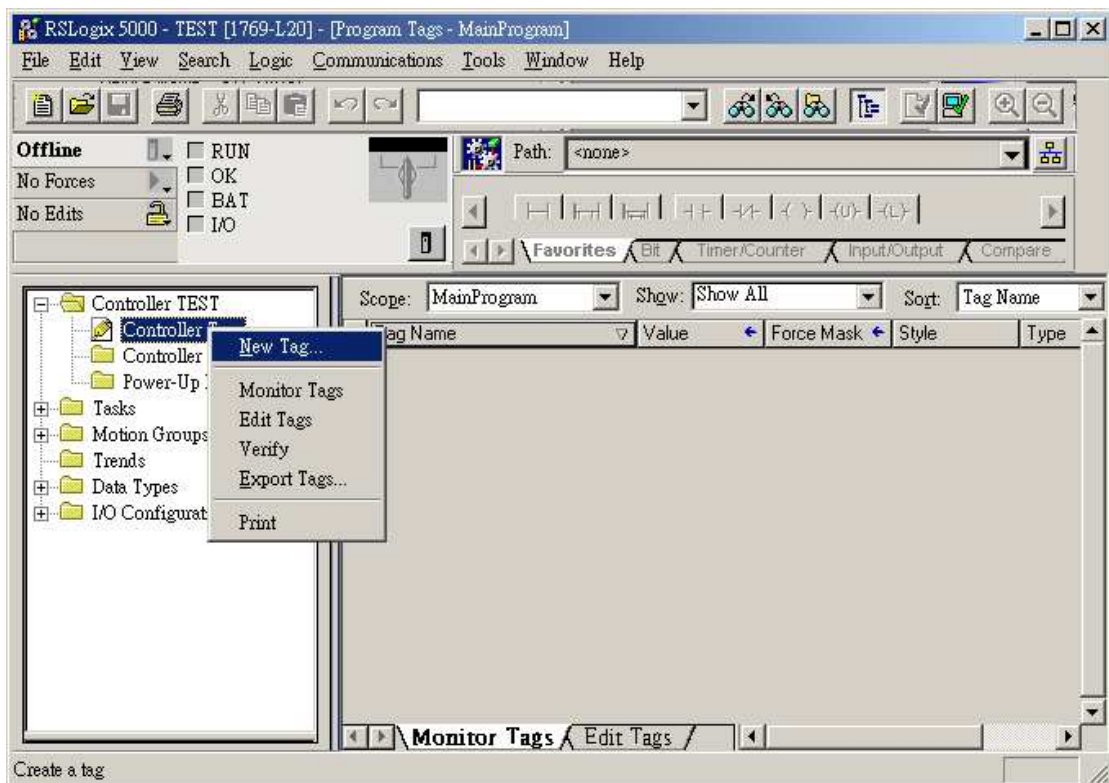
ControlLogix, CompactLogix CPU CH0 setting:

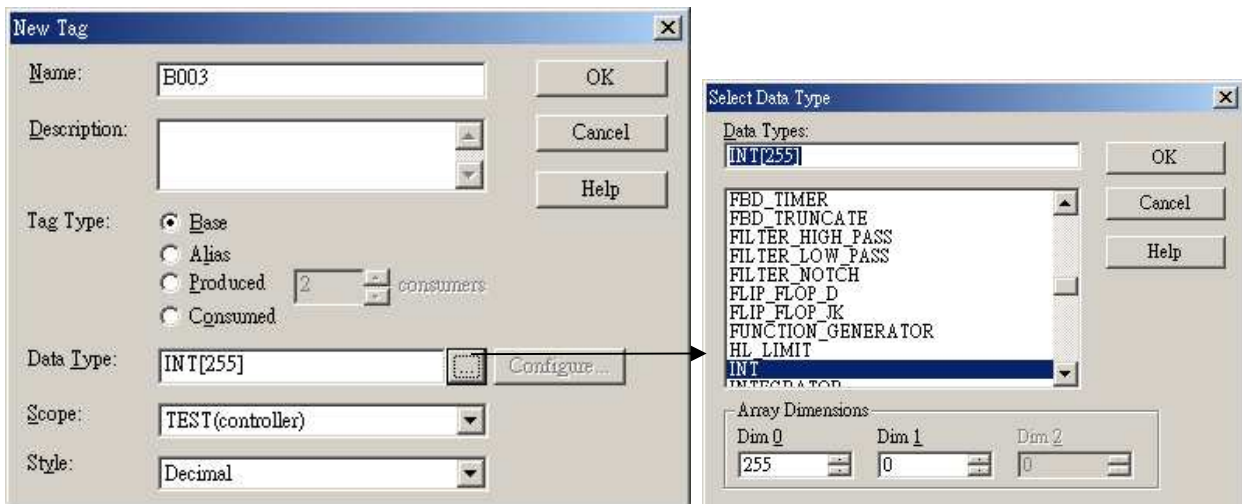


Create a Tag:

The name format must be 4 chars. For example: B003, T004, C005, N007, and F008.

Two or three chars are not available. For example: B03 or B3.









## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	B_BOOL	FFFDDDDdd	0 ~ 25525515	Bit data file
B	N_BOOL	FFFDDDDdd	0 ~ 25525515	Integer data file bit level (N7, 10 ~ 255)
DW	Tx.ACC	FFFDDD	0 ~ 255255	Timer Accumulator Value (T4, T10 ~ 255)
DW	Tx.PRE	FFFDDD	0 ~ 255255	Timer Preset Value (T4, T10 ~ 255)
DW	Nx_INT	FFFDDD	0 ~ 255255	Integer data file (N7, 10 ~ 255)
W	Bx_INT	FFFDDD	0 ~ 255255	Bit data file word level
DW	Cx.ACC	FFFDDD	0 ~ 255255	Counter Accumulator Value (C5, C10 ~ 255)
DW	Cx.PRE	FFFDDD	0 ~ 255255	Counter Preset Value (C5, C10 ~ 255)
W	F8_REAL	DDD	0 ~ 255	Floating point data file (F8)
W	Fx_REAL	FFFDDD	0 ~ 255255	Floating point data file (F008, F010 ~ F255)





## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	AB CPU CH0 RS232 9P D-Sub Female
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			AB CPU CH0 RS232 9P D-Sub Female
9 RX			3 TD
6 TX			2 RD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.50	Dec/30/2008	

## Allen-Bradley DF1

Supported Series: Allen-Bradley MicroLogix 1000, 1100, 1200, 1400, 1500, SLC 5/03, 5/04, 5/05.

Website: <http://www.ab.com>

Note: Allen-Bradley DF1 driver uses CRC checksum.

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley DF1		
PLC I/F	RS232		
Baud rate	9600	9600, 19200, 38400	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
HMI sta. no.	0		
PLC sta. no.	1	1-31	

### PLC Setting:

Communication mode	DF1 Full Duplex protocol 19200, None, 8, 1 (default) Error Check: CRC
--------------------	--

### Device Address:





Bit/Word	Device type	Format	Range	Memo
B	I1	DDDdd	0 ~ 25515	Input (I)
B	O0	DDDdd	0 ~ 25515	Output (O)
B	B3	DDDdd	0 ~ 25515	Bit data file (B3)
B	B10 ~ 13	DDDdd	0 ~ 25515	Bit data file (B10 ~ 13)
B	S_Bit	DDDdd	0 ~ 25515	Status (S) bit level
B	Bfn	FFFDDDDdd	0 ~ 25525515	Bit data file (B3, 10 ~ 254)
B	NfnBit	FFFDDDDdd	0 ~ 25525515	Integer data file bit level (N7, 10 ~ 254)
W	T4SV	DDD	0 ~ 255	Timer Preset Value (T4)
W	T4PV	DDD	0 ~ 255	Timer Accumulator Value (T4)
W	C5SV	DDD	0 ~ 255	Counter Preset Value (C5)
W	C5PV	DDD	0 ~ 255	Counter Accumulator Value (C5)

Bit/Word	Device type	Format	Range	Memo
W	TfnSV	FFFDDD	0 ~ 255255	Timer Preset Value
W	TfnPV	FFFDDD	0 ~ 255255	Timer Accumulator Value
W	CfnSV	FFFDDD	0 ~ 255255	Counter Preset Value
W	CfnPV	FFFDDD	0 ~ 255255	Counter Accumulator Value
W	N7	DDD	0 ~ 255	Integer data file (N7)
W	N10 ~ 15	DDD	0 ~ 255	Integer data file (N10 ~ 15)
W	Nfn	FFFDDD	0 ~ 255255	Integer data file (N7, 10 ~ 254)
W	S	DDD	0 ~ 255	Status (S)
W	F8	DDD	0 ~ 255	Floating point data file (F8)
W	Ffn	FFFDDD	0 ~ 255255	
W	Lfn	FFFDDD	0 ~ 255255	



## Wiring Diagram:

### 9P D-Sub to 8P Mini-DIN: MicroLogix 1000, 1100, 1200, 1400, 1500

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	MicroLogix RS232 8P Mini-DIN Male
2 RX	6 RX	8 RX	7 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	2 GND
			

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			MicroLogix RS232 8P Mini-DIN Male
9 RX			7 TXD
6 TX			4 RXD
5 GND			2 GND
			

**9P D-Sub to 9P D-Sub: SLC5/03, 04, 05 CH0**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	AB CPU CH0 RS232 9P D-Sub Female
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			AB CPU CH0 RS232 9P D-Sub Female
9 RX			3 TD
6 TX			2 RD
5 GND			5 GND
			

**Driver Version:**

Version	Date	Description
V2.20	Jan/05/2010	

## Allen-Bradley DF1 (BCC)

Supported Series: Allen-Bradley MicroLogix 1000, 1100, 1200, 1500, SLC 5/03, 5/04, 5/05.

Website: <http://www.ab.com>

Note: Allen-Bradley DF1 (BCC) and Allen-Bradley DF1 are the same; the only difference is the use of BCC checksum.

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley DF1 (BCC)		
PLC I/F	RS232		
Baud rate	19200	9600, 19200, 38400	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
HMI sta. no.	0		
PLC sta. no.	1	1-31	

### PLC Setting:

Communication mode	DF1 Full Duplex protocol 19200, None, 8, 1 (default) Error Check: CRC
--------------------	--

### Device Address:





Bit/Word	Device type	Format	Range	Memo
B	I1	DDDdd	0 ~ 25515	Input (I)
B	O0	DDDdd	0 ~ 25515	Output (O)
B	B3	DDDdd	0 ~ 25515	Bit data file (B3)
B	B10 ~ 13	DDDdd	0 ~ 25515	Bit data file (B10 ~ 13)
B	S_Bit	DDDdd	0 ~ 25515	Status (S) bit level
B	Bfn	FFFDDDDdd	0 ~ 25525515	Bit data file (B3, 10 ~ 254)
B	NfnBit	FFFDDDDdd	0 ~ 25525515	Integer data file bit level (N7, 10 ~ 254)
W	T4SV	DDD	0 ~ 255	Timer Preset Value (T4)
W	T4PV	DDD	0 ~ 255	Timer Accumulator Value (T4)
W	C5SV	DDD	0 ~ 255	Counter Preset Value (C5)

Bit/Word	Device type	Format	Range	Memo
W	C5PV	DDD	0 ~ 255	Counter Accumulator Value (C5)
W	TfnSV	FFFDDD	0 ~ 255255	Timer Preset Value
W	TfnPV	FFFDDD	0 ~ 255255	Timer Accumulator Value
W	CfnSV	FFFDDD	0 ~ 255255	Counter Preset Value
W	CfnPV	FFFDDD	0 ~ 255255	Counter Accumulator Value
W	N7	DDD	0 ~ 255	Integer data file (N7)
W	N10~15	DDD	0 ~ 255	Integer data file (N10 ~ 15)
W	Nfn	FFFDDD	0 ~ 255255	Integer data file (N7, 10 ~ 254)
W	S	DDD	0 ~ 255	Status (S)
W	F8	DDD	0 ~ 255	Floating point data file (F8)
W	Ffn	FFFDDD	0 ~ 255255	
W	Lfn	FFFDDD	0 ~ 255255	



## Wiring Diagram:

### 9P D-Sub to 8P Mini-DIN: MicroLogix 1000, 1100, 1200, 1500

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	MicroLogix RS232 8P Mini-DIN Male
2 RX	6 RX	8 RX	7 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	2 GND
			

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			MicroLogix RS232 8P Mini-DIN Male
9 RX			7 TXD
6 TX			4 RXD
5 GND			2 GND
			

**9P D-Sub to 9P D-Sub: SLC5/03, 04, 05 CH0**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	AB CPU CH0 RS232 9P D-Sub Female
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			AB CPU CH0 RS232 9P D-Sub Female
9 RX			3 TD
6 TX			2 RD
5 GND			5 GND
			

**Driver Version:**

Version	Date	Description
V2.30	Apr/26/2010	

# Allen-Bradley DH485

Supported Series: Allen-Bradley MicroLogix 1000, 1100, 1200, 1500, SLC 5/03, 5/04, 5/05.

Website: <http://www.ab.com>

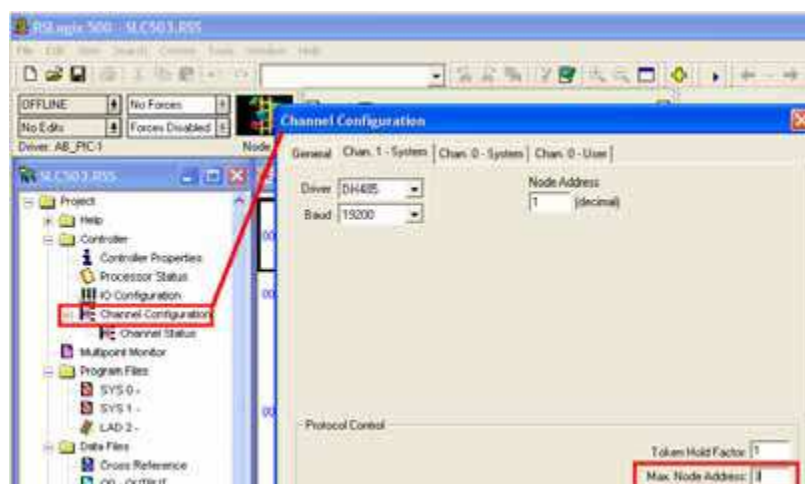
## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley DH485		
PLC I/F	RS485 2W	RS232	
Baud rate	19200	9600, 19200	
Data bits	8		
Parity	Even		
Stop bits	1		
HMI sta. no.	0	2	
PLC sta. no.	1	1-31	

Online simulation	YES	
Extend address mode	NO	

## PLC Setting:

Communication mode	DH485 protocol 19200 (default) Set the Max. Node Address to the number of PLCs in use.
--------------------	---





## Device Address:




Bit/Word	Device type	Format	Range	Memo
B	I1	DDDdd	0 ~ 25515	Input (I)
B	O0	DDDdd	0 ~ 25515	Output (O)
B	B3	DDDdd	0 ~ 25515	Bit data file (B3)
B	B10 ~ 13	DDDdd	0 ~ 25515	Bit data file (B10 ~ 13)
B	Bfn	FFFDDDDdd	0 ~ 25525515	Bit data file (B3, 10 ~ 254)
B	NfnBit	FFFDDDDdd	0 ~ 25525515	Integer data file bit level (N7,10 ~ 254)
B	S_Bit	DDDdd	0 ~ 25515	Status file
W	T4SV	DDD	0 ~ 255	Timer Preset Value (T4)
W	T4PV	DDD	0 ~ 255	Timer Accumulator Value (T4)
W	C5SV	DDD	0 ~ 255	Counter Preset Value (C5)
W	C5PV	DDD	0 ~ 255	Counter Accumulator Value (C5)
W	TfnSV	FFFDDD	0 ~ 255255	Timer Preset Value
W	TfnPV	FFFDDD	0 ~ 255255	Timer Accumulator Value
W	CfnSV	FFFDDD	0 ~ 255255	Counter Preset Value
W	CfnPV	FFFDDD	0 ~ 255255	Counter Accumulator Value
W	F8	DDD	0 ~ 255	Floating point data file (F8)
W	N7	DDD	0 ~ 255	Integer data file (N7)
W	N10 ~ 15	DDD	0 ~ 255	Integer data file (N10 ~ 15)
W	Nfn	FFFDDD	0 ~ 255255	Integer data file (N7,10 ~ 254)
W	S	DDD	0 ~ 255	Status file

## Wiring Diagram:




**RS-485: SLC500 Fixed type, SLC5/01, 02, 03 CH1.**

**HMI can't connect to 1747-AIC peripheral port.**

MT6000/8000 series except MT6050i/MT8050i




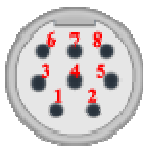
COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		AB SLC500 DH485 RJ8 Male
1 RX-	6 Data-		2 SDB
2 RX+	9 Data+		1 SDA
5 GND	5 GND		7 GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		AB SLC500 DH485 RJ8 Male
1 RX-	7 Data-		2 SDB
2 RX+	8 Data+		1 SDA
5 GND	5 GND		7 GND
			



**9P D-Sub to 8P Mini-DIN: MicroLogix 1000, 1100, 1200, and 1500 must set DH485 protocol.**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	MicroLogix RS232 8P Mini-DIN Male
2 RX	6 RX	8 RX	7 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	2 GND
			





MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			MicroLogix RS232 8P Mini-DIN Male
-------------------------------	--	--	--------------------------------------



9 RX			7 TXD
6 TX			4 RXD
5 GND			2 GND
			

**9P D-Sub to 9P D-Sub: SLC5/03, 04, 05 CH0 must set DH485 protocol.**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	AB CPU CH0 RS232 9P D-Sub Female
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			AB CPU CH0 RS232 9P D-Sub Female
9 RX			3 TD
6 TX			2 RD
5 GND			5 GND
			

Note: AB DH485 supports HMI X series only.

**Driver Version:**

Version	Date	Description
V1.20	Apr/17/2009	

## Allen-Bradley EtherNet/IP (CompactLogix)

Supported Series: Allen-Bradley ControlLogix, CompactLogix, FlexLogix Ethernet.

Website: <http://www.ab.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley EtherNet/IP (CompactLogix)		
PLC I/F	Ethernet		
Port no.	44818		
PLC sta. no.	1		

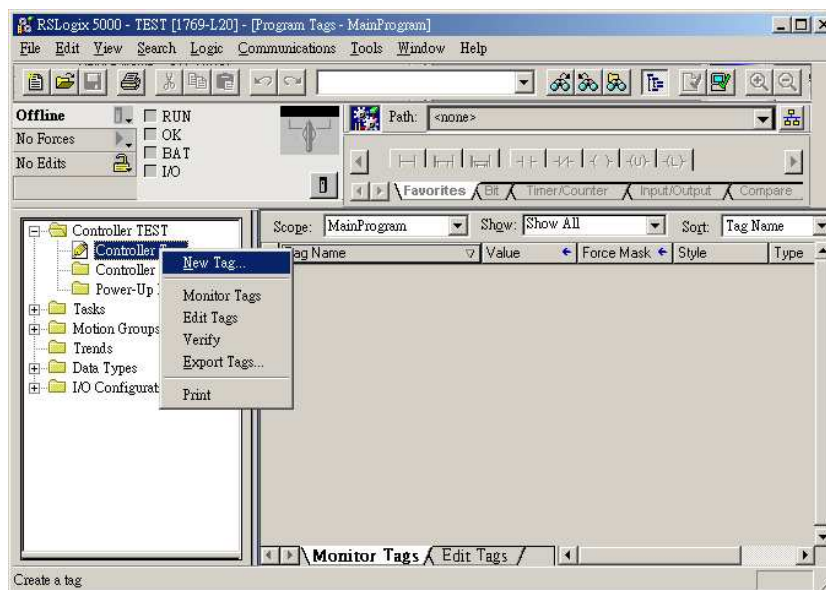
### PLC Setting:

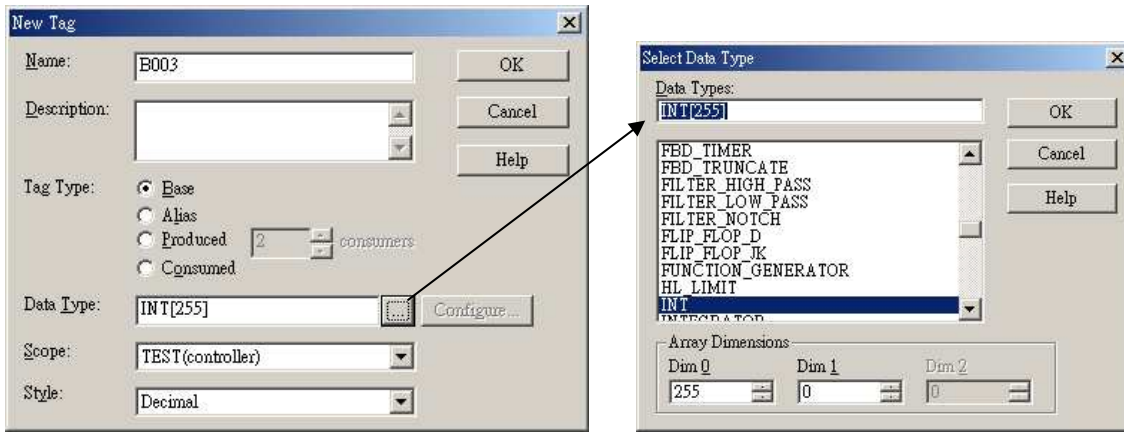
RSLogix 5000 setting

Create a Tag:

The name format must be 4 chars. For example: B003, T004, C005, N007, and F008.

Two or three chars are not available. For example: B03 or B3.






## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Bx_BOOL	FFFDDDD	0 ~ 25525515	Bit data file
B	Nx_BOOL	FFFDDDD	0 ~ 25525515	Integer data file bit level (N7, 10 ~ 99)
W	Bx_INT	FFFDDD	0 ~ 255255	Bit data file word level
W	Nx_INT	FFFDDD	0 ~ 255255	Integer data file (N7, 10 ~ 99)
DW (F)	F8_REAL	DDD	0 ~ 255	Floating point data file (F8)
DW (F)	Fx_REAL	FFFDDD	0 ~ 255255	Floating point data file (F8)
DW	Cx.ACC	FFFDDD	0 ~ 255255	Counter Accumulator Value (C5, C10 ~ 255)
DW	Cx.PRE	FFFDDD	0 ~ 255255	Counter Preset Value (C5, C10 ~ 255)
DW	Tx.ACC	FFFDDD	0 ~ 255255	Timer Accumulator Value (T4, T10 ~ 255)
DW	Tx.PRE	FFFDDD	0 ~ 255255	Timer Preset Value (T4, T10 ~ 255)

## Wiring Diagram:


Driv Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.30	Dec/30/2008	

# Allen-Bradley EtherNet/IP (CompactLogix) – Free Tag Names

Supported Series: Allen-Bradley CompactLogix, FlexLogix Ethernet

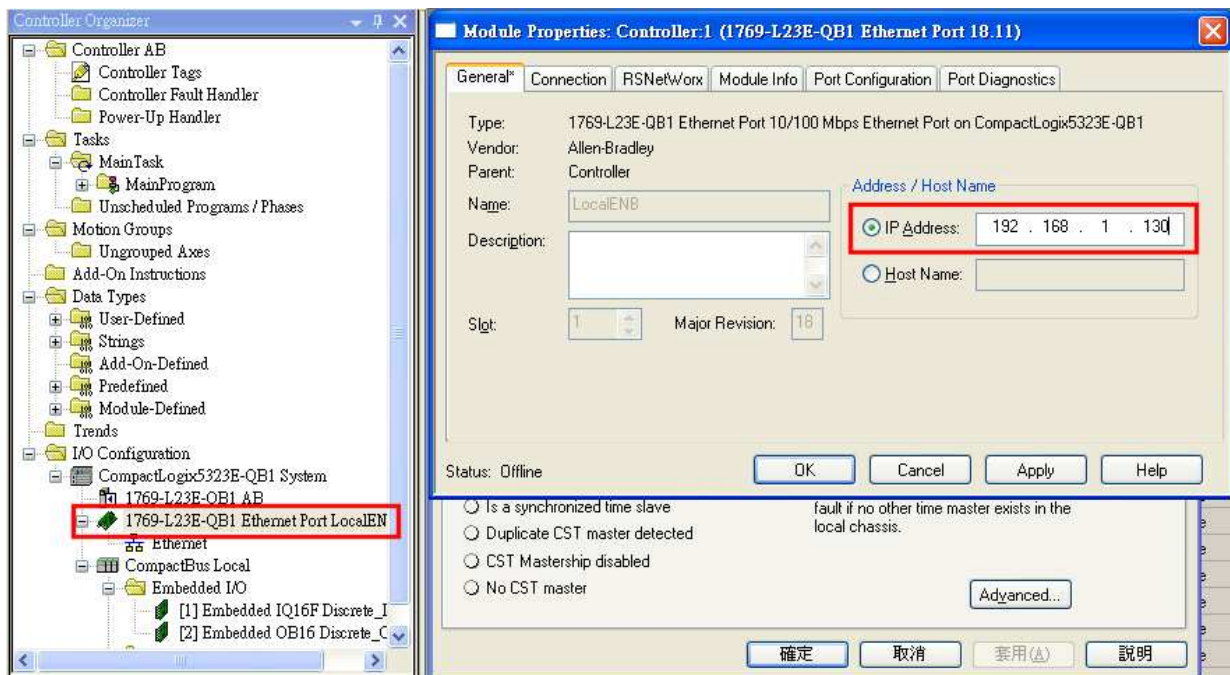
Website: <http://www.ab.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley EtherNet/IP (CompactLogix) – Free Tag Names		
PLC I/F	Ethernet		
Port no.	44818		
PLC sta. no.	1		

## PLC Setting:

1. Set PLC IP address.





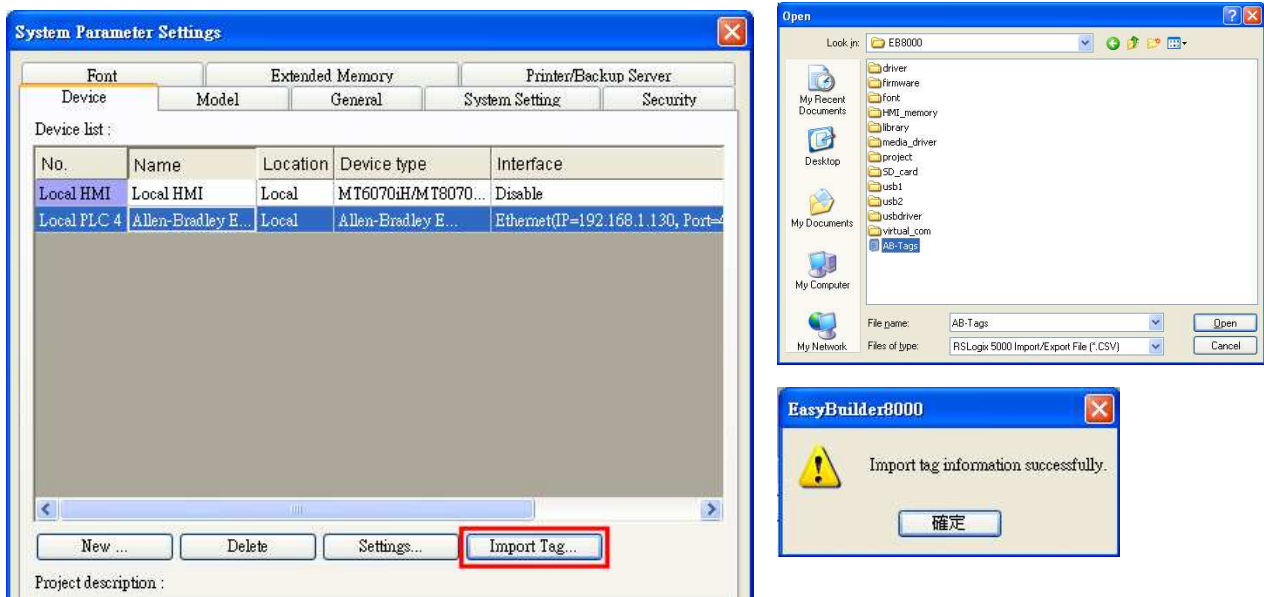
## 2. Create Tags.

Name	Value	Force Mask	Style	Data Type
+ ABC	56		Decimal	DINT
+ Array2D	{...}	{...}	Decimal	DINT[25,5]
+ ArrayBool	{...}	{...}	Decimal	BOOL[256]
+ ArrayDINT	{...}	{...}	Decimal	DINT[130]
+ ArrayReal	{...}	{...}	Float	REAL[125]
b1	0		Decimal	BOOL
+ INT	{...}	{...}	Decimal	INT[360]
+ Local1:C	{...}	{...}		AB:Embedded_IQ...
+ Local1:I	{...}	{...}		AB:Embedded_IQ...
+ Local2:C	{...}	{...}		AB:Embedded_O...
+ Local2:I	{...}	{...}		AB:Embedded_O...
+ Local2:O	{...}	{...}		AB:Embedded_O...
VarBool	0		Decimal	BOOL
+ VarDint	21862		Decimal	DINT
+ VarInt	0		Decimal	INT
VarReal	0.0		Float	REAL
+ VarSint	-128		Decimal	SINT

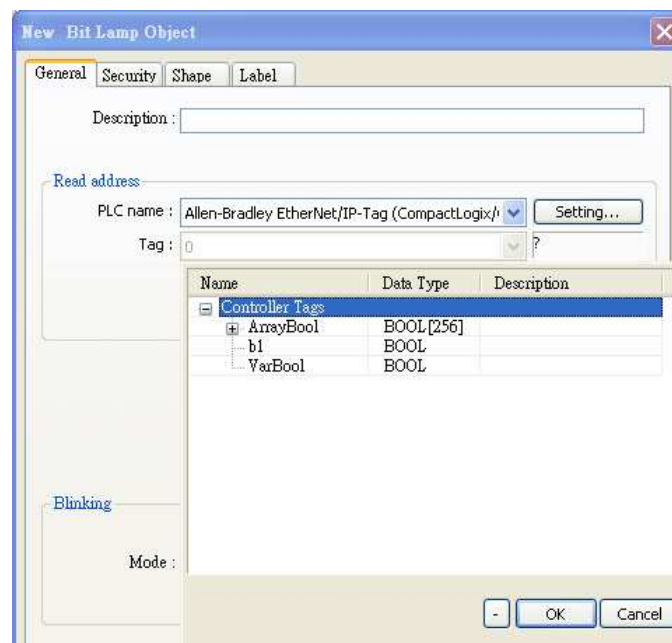
## 3. Export Tag data to CSV file.

4. In EB8000, add Allen-Bradley EtherNet/IP (CompactLogix)- Free Tag Names driver. Input PLC IP address. On System Parameter Settings dialog click [Import Tag...] button.





5. On object dialog, select PLC, click Tag and select a Controller Tag.




## Device Address:

PLC data type name	Bit/Word	EB8000 data format	Memo
BOOL	Boolean	Bit object	
BitArray			
SINT			
INT	Integer	16-bit signed, ASCII	-32768 ~ 32767
DINT	Double Integer	32-bit signed	$-2^{31} \sim (2^{31}-1)$
REAL	Single Precision Float	32-bit Float	IEEE 754

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.10	Aug/25/2010	

# Allen-Bradley EtherNet/IP (ControlLogix) – Free Tag Names

Supported Series: Allen-Bradley ControlLogix, CompactLogix, FlexLogix Ethernet.

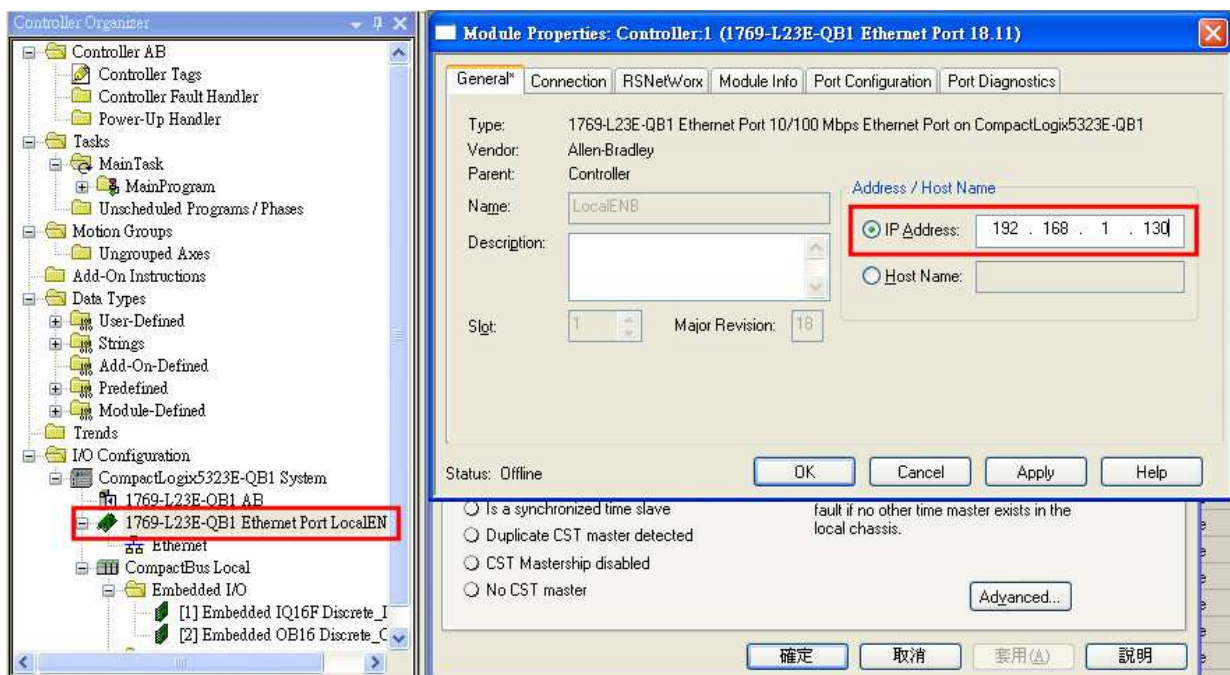
Website: <http://www.ab.com>

## HMI Setting:

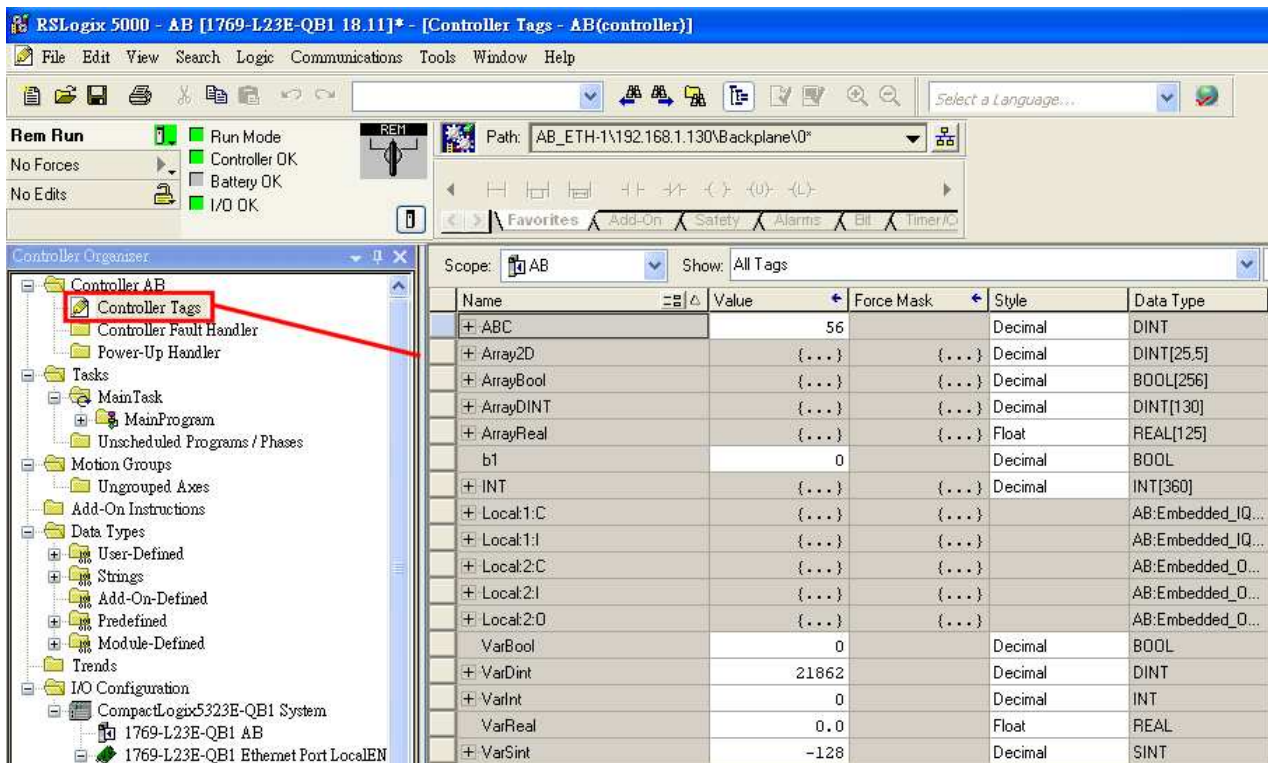
Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley EtherNet/IP (ControlLogix) – Free Tag Names		
PLC I/F	Ethernet		
Port no.	44818		
PLC sta. no.	The same as CPU Slot No.		

## PLC Setting:

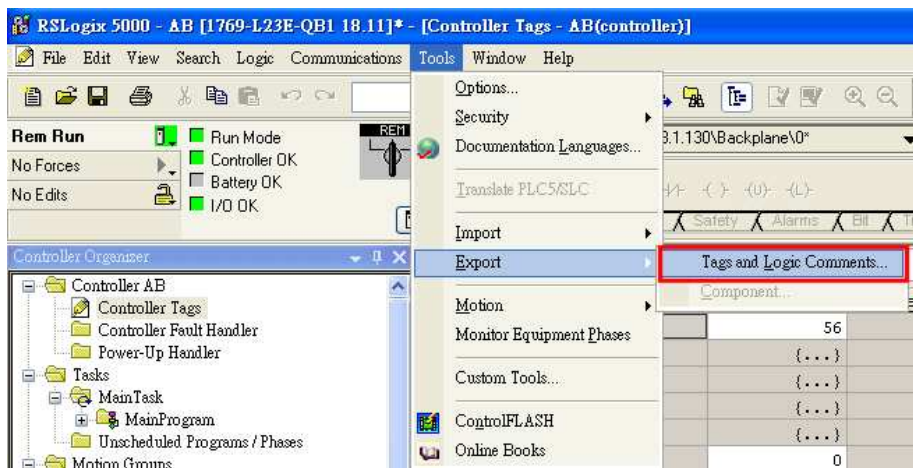
1. Set PLC IP address.



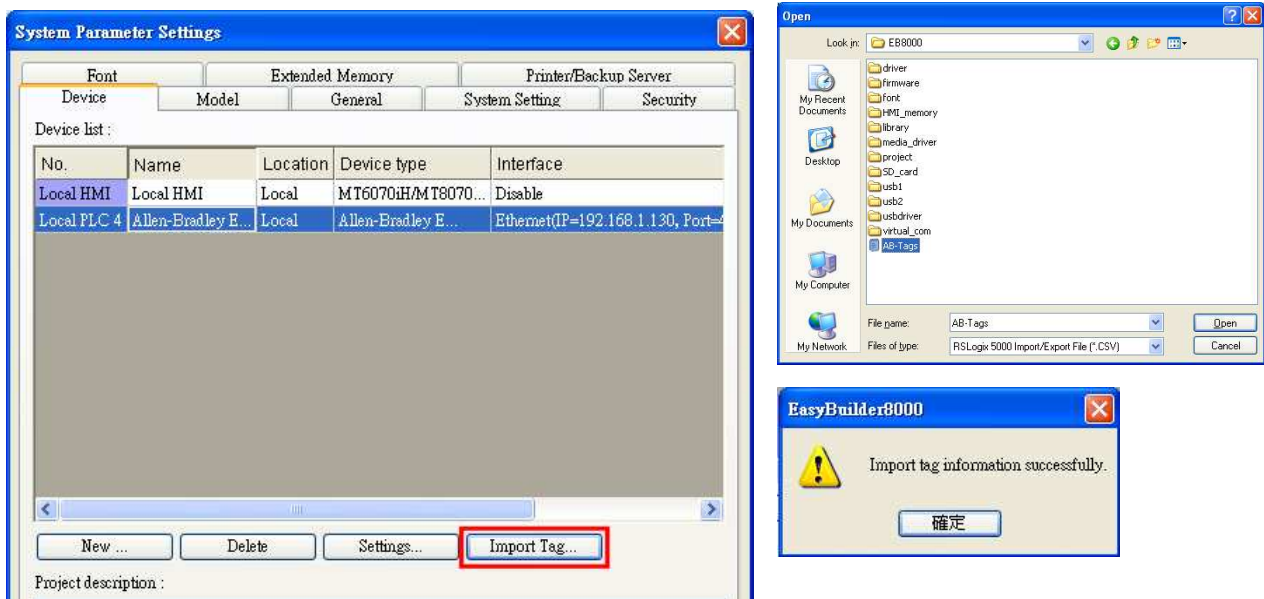
## 2. Create Tags.



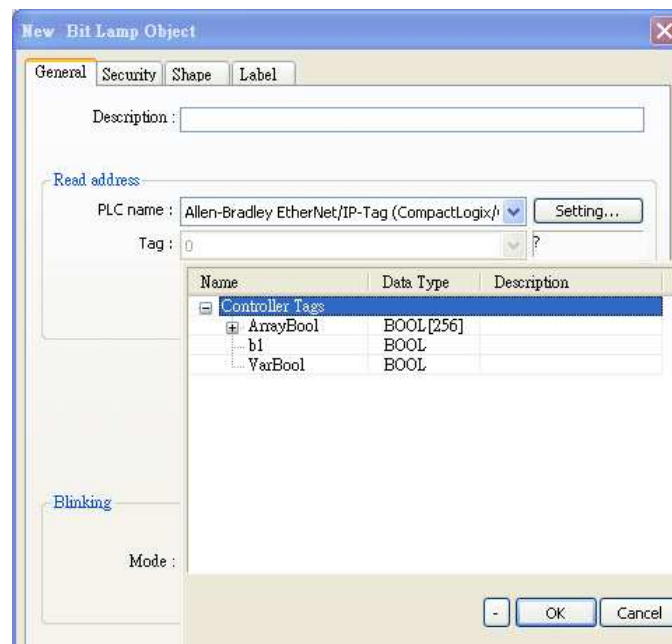
## 3. Export Tag data to CSV file.



4. In EB8000, add Allen-Bradley EtherNet/IP (ControlLogix) – Free Tag Names driver. Input PLC IP address. On System Parameter Settings dialog click [Import Tag...] button.



5. On object dialog, select PLC, click Tag and select a Controller Tag.



### Device Address:


PLC data type name	Bit/Word	EB8000 data format	Memo
BOOL	Boolean	Bit object	
BitArray			
SINT			
INT	Integer	16-bit signed, ASCII	-32768 ~ 32767
DINT	Double Integer	32-bit signed	$-2^{31} \sim (2^{31}-1)$
REAL	Single Precision Float	32-bit Float	IEEE 754



## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.10	Oct/05/2010	

## Allen-Bradley EtherNet/IP (DF1)

Supported Series: Allen-Bradley MicroLogix 1100, 1400, SLC5/05 Ethernet port.  
MicroLogix1000, 1200, 1500, SLC 5/03, 5/04 with 1761-NET-ENI

Website: <http://www.ab.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley EtherNet/IP (DF1)		
PLC I/F	Ethernet		
Port no.	44818		
HMI sta. no.	0		
PLC sta. no.	1		

### PLC Setting:

Communication mode	Port Setting: 10/100 Mbps Full Duplex/Half Duplex
--------------------	---

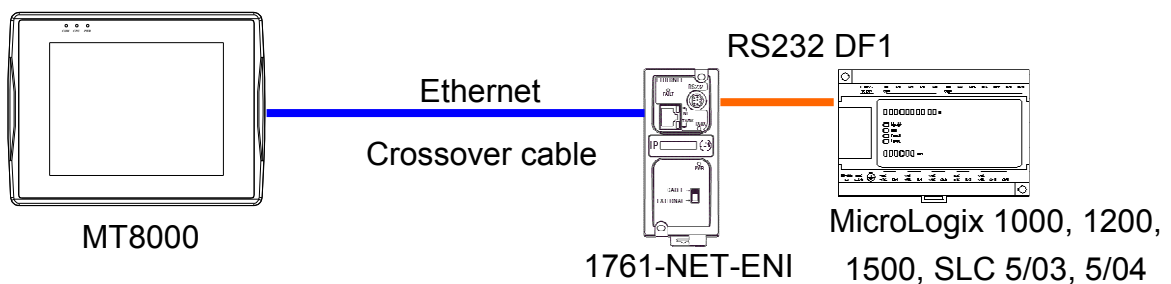
### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I1	DDDdd	0 ~ 25515	Input (I)
B	O0	DDDdd	0 ~ 25515	Output (O)
B	B3	DDDdd	0 ~ 25515	Bit data file (B3)
B	S_Bit	DDDDDDdd	0 ~ 25525515	Status file
B	Bfn	FFFDDDdd	0 ~ 25525515	Bit data file (B3, 10 ~ 254)
B	NfnBit	FFFDDDdd	0 ~ 25525515	Integer data file bit level (N7, 10 ~ 254)
W	T4SV	DDD	0 ~ 255	Timer Preset Value (T4)
W	T4PV	DDD	0 ~ 255	Timer Accumulator Value (T4)
W	C5SV	DDD	0 ~ 255	Counter Preset Value (C5)
W	C5PV	DDD	0 ~ 255	Counter Accumulator Value (C5)
W	TfnSV	FFFDDD	0 ~ 255255	
W	TfnPV	FFFDDD	0 ~ 255255	

W	CfnSV	FFFDDD	0 ~ 255255	
W	CfnPV	FFFDDD	0 ~ 255255	
W	S	DDD	0 ~ 255	
W	N7	DDD	0 ~ 255	Integer data file (N7)
W	Nfn	FFFDDD	0 ~ 255255	Integer data file (N7, 10 ~ 254)
DW (F)	F8	DDD	0 ~ 255	Floating point data file (F8)
DW (F)	Ffn	FFFDDD	0 ~ 255255	Floating point data file (F8, 10 ~ 254)
DW	Lfn	FFFDDD	0 ~ 255255	Driver version 2.00 or later supported

## Wiring Diagram:

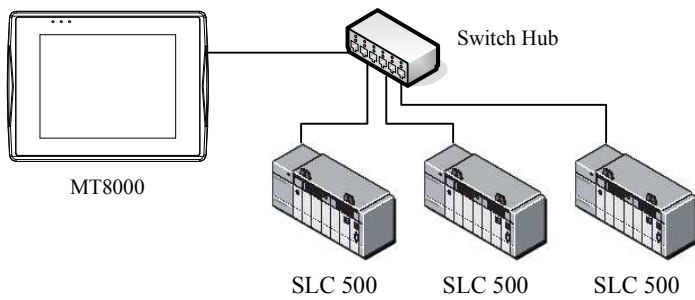
Direct connect (crossover cable):




HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:



HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-

### Driver Version:

Version	Date	Description
V2.00	Dec/21/2009	Add Lfn register.

# Allen-Bradley PLC5

Website: <http://www.ab.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Allen-Bradley PLC5		
PLC I/F	RS232		
Baud rate	19200	9600, 19200	
Data bits	8	8	
Parity	Even	Even, Odd, None	
Stop bits	1	1	
HMI sta. no.	0		
PLC sta. no.	1	1-31	

## PLC Setting:

Communication mode	DF1 Full Duplex protocol 19200, None, 8, 1 (default)
--------------------	--

Allen-Bradley PLC-5 Family PLCs use DF1 Full Duplex protocol.

For PLC-5/10, PLC-5/15 and PLC-5/25, MT8000 should be connected to the DF1 port on the 1785-KE module.

For PLC-5/11, PLC-5/20, PLC-5/30 and PLC-5/40, MT8000 should be connected to the Channel 0 Port on the PLC.

## Device Address:




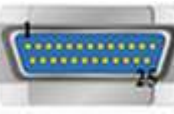
Bit/Word	Device type	Format	Range	Memo
B	I1	DDDdd	0 ~ 25515	Input (I)
B	O0	DDDdd	0 ~ 25515	Output (O)
B	B3	DDDdd	0 ~ 99915	Bit data file (B3)
B	B10 ~ 13	DDDdd	0 ~ 99915	Bit data file (B10 ~ 13)
B	S_Bit	DDDDDDdd	0 ~ 25599915	
B	Bfn	FFFDDDDdd	0 ~ 25599915	
B	NfnBit	FFFDDDDdd	0 ~ 25599915	
W	T4SV	DDD	0 ~ 999	Timer Preset Value (T4)

Bit/Word	Device type	Format	Range	Memo
W	T4PV	DDD	0 ~ 999	Timer Accumulator Value (T4)
W	C5SV	DDD	0 ~ 999	Counter Preset Value (C5)
W	C5PV	DDD	0 ~ 999	Counter Accumulator Value (C5)
W	TfnSV	FFFDDD	0 ~ 255999	
W	TfnPV	FFFDDD	0 ~ 255999	
W	CfnSV	FFFDDD	0 ~ 255999	
W	CfnPV	FFFDDD	0 ~ 255999	
W	N7	DDD	0 ~ 999	Integer data file (N7)
W	N10 ~ 15	DDD	0 ~ 999	Integer data file (N10 ~ 15)
W	Nfn	FFFDDD	0 ~ 255999	Integer data file (V2.5.0 or newer)
W	S	DDD	0 ~ 255	
W	F8	DDD	0 ~ 999	Floating point data file (F8)
W	Ffn	FFFDDD	0 ~ 255999	Floating point data file (V2.5.0 or newer)

## Wiring Diagram:

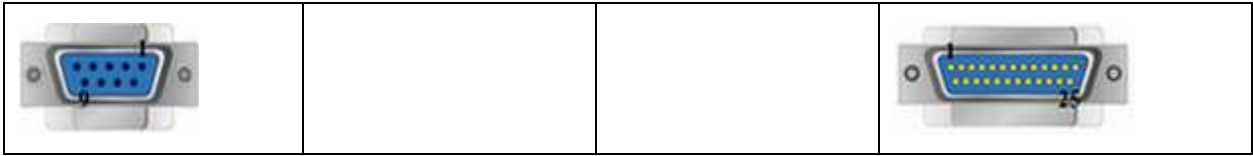
### 9P D-Sub to 25P D-Sub: PLC5 CPU CH0

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	AB CPU CH0 RS232 25P D-Sub Male
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	7 GND
			

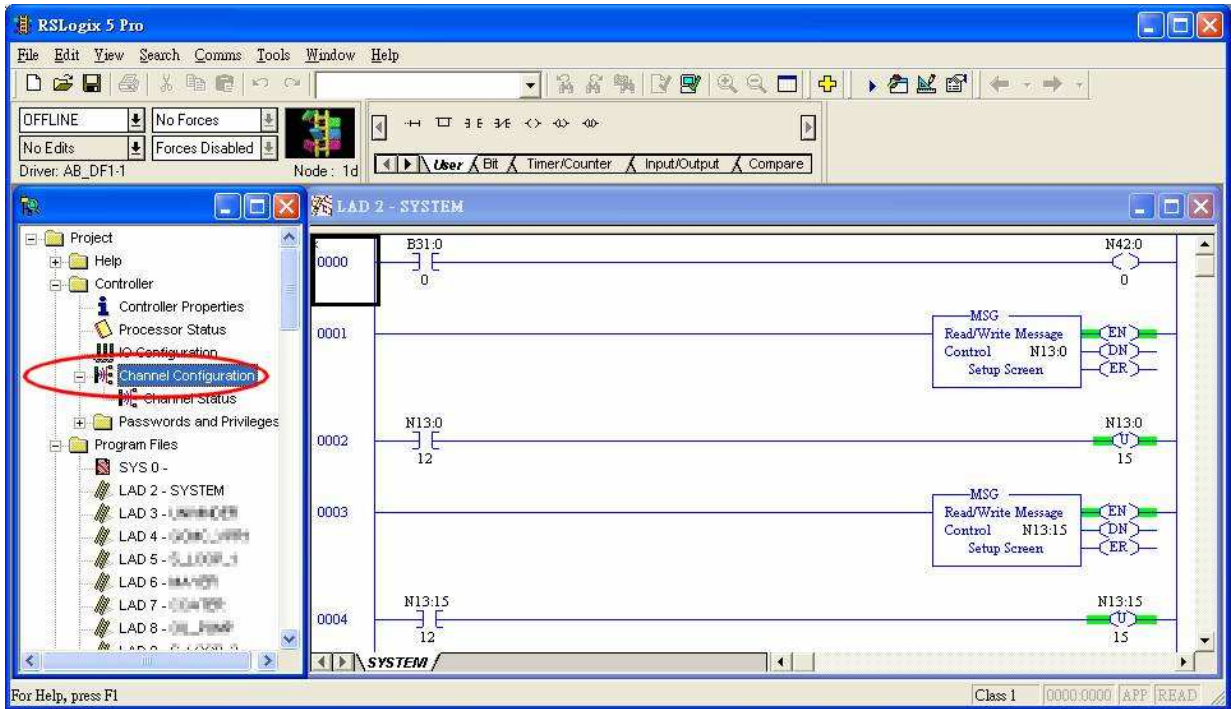
MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			AB CPU CH0 RS232 25P D-Sub Male
9 RX			3 TD
6 TX			2 RD
5 GND			7 GND

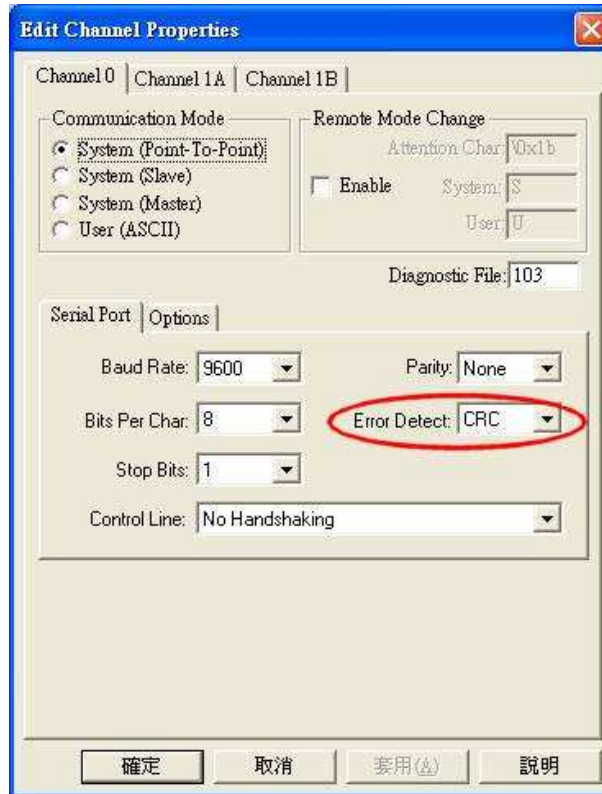


**Note:**

The default error checking of AB PLC5 is BCC, whereas our driver is CRC.



Access [Channel Configuration] from RSLogix5, under Channel 0 tab, please select “CRC” for [Error Detect].



### Driver Version:

Version	Date	Description
V1.20	Apr/17/2009	

## altus ALNET-I

Supported Series: Altus SeriesMode PO3042, PO3142, PO3242, PO3342, PL103 ,PL104, PL105, QK800, QK801, QK2000.

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	altus ALNET-I		
PLC I/F	RS232		
Baud rate	9600		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	0		

### Device Address:

Bit/Word	Device Type	Format	Range	Memo
B	M_Bit	DDDDh	0 ~ 1023f	Memories
B	A	DDDh	0 ~ 511f	Auxiliary Relays
B	E	DDDh	0 ~ 511f	Input Relays
B	D_Bit	DDDDdd	0 ~ 102331	Decimals
B	F_Bit	DDDDdd	0 ~ 102331	Reals
B	I_Bit	DDDDdd	0 ~ 102331	Integers
B	S	DDDh	0 ~ 511f	Output Relays
W	M	DDDD	0 ~ 4096	Memories
DW	D	DDDD	0 ~ 4096	Decimals
DW	F	DDDD	0 ~ 1023	Reals
DW	I	DDDD	0 ~ 1023	Integers
W	TM	HHHH	0 ~ ffff*	Memory Tables
DW	TD	HHHH	0 ~ ffff*	Decimal Tables
DW	TF	HHHH	0 ~ ffff*	Real Tables
DW	TI	HHHH	0 ~ ffff*	Integer Tables

Note: The formats of TM, TD, TF and TI in PLC software are represented as TXA[B]. "X" can be M, D, F, or I.





The address range of B is 0~FF, and A is 0~FF. The device type is AABB, and the range depends on the PLC settings.

For example: Model PO3242, range of "A" is "0" and range of "B" is 0 ~ 7.



## Wiring Diagram:

### 9P D-Sub to 8P RJ45: PLC PO3042, PO3142, PO3242, PO3342

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	PLC RS232 8P RJ45 Male
2 RX	6 RX	8 RX	2 TX
3 TX	4 TX	7 TX	3 RX
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			PLC RS232 8P RJ45 Male
9 RX			2 TX
6 TX			3 RX
5 GND			5 GND
			



### 9P D-Sub to 9P D-Sub: PLC PL103, PL104, PL105

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	PLC RS232 9P D-Sub Male
2 RX	6 RX	8 RX	7 TX
3 TX	4 TX	7 TX	1 RX
5 GND	5 GND	5 GND	5 GND
			





MT6050i/MT8050i

COM1 RS232 9P			PLC RS232 9P D-Sub



D-Sub Female			Male
9 RX			7 TX
6 TX			1 RX
5 GND			5 GND
			

### 9P D-Sub to 9P D-Sub: PLC QK800, QK801, QK2000.

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	PLC RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TX
3 TX	4 TX	7 TX	3 RX
5 GND	5 GND	5 GND	7 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			PLC RS232 9P D-Sub Male
9 RX			2 TX
6 TX			3 RX
5 GND			7 GND
			

### Driver Version:

Version	Date	Description
V1.10	Jul/24/2009	



# Baumuller

Website: <http://www.baumuller.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Baumuller		
PLC I/F	RS485 4W		
Baud rate	19200	9600, 19200	
Data bits	8	7 or 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1 or 2	
HMI sta. no.	0		
PLC sta. no.	0	Defaults	

## PLC Setting:



Communication mode	RK 512 Protocol, 19200, 8, 1, Even
--------------------	------------------------------------

## Device Address:



Bit/Word	Device type	Format	Range	Memo
B	DB0_bit ~ DB29_bit	DDDh	0 ~ 255f	
W	DB0 ~ DB29	DDD	0 ~ 255	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			Baumuller servo RS422 9P D-Sub Male
1 RX-			1 TXD-
2 RX+			9 TXD+
3 TX-			5 RXD-
4 TX+			6 RXD+
5 GND			8 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			Baumuller servo RS422 9P D-Sub Male
1 RX-			1 TXD-
2 RX+			9 TXD+
3 TX-			5 RXD-
4 TX+			6 RXD+
5 GND			8 GND
			

## Driver Version:

Version	Date	Description
V1.10	Apr/17/2009	

# Change

Supported Series: Compressor controller

Website: <http://www.sh-changjia.com/>

## HMI Setting:




Parameters	Recommended	Options	Notes
PLC type	Change		
PLC I/F	RS485 2W		
Baud rate	9600		
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1	1~6	

## Device Address:



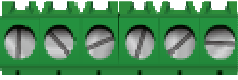
Bit/Word	Device type	Format	Range	Memo
B	CTL	DDD	0 ~ 5, 128, 150	Write only
DW	SET	DDD	0 ~ 57, 128	
DW	STATUS	DD	1 ~ 20	Read only

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		Change RS485 terminal
1 RX-	6 Data-		15 D-
2 RX+	9 Data+		16 D+
5 GND	5 GND		
			

**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		Change RS485 terminal
1 RX-	7 Data-		15 D-
2 RX+	8 Data+		16 D+
5 GND	5 GND		
			

**Driver Version:**

Version	Date	Description
V1.00	Jan/19/2011	Driver released.

# Cimon CM1-CP4A/ECO1A

Supported Series: Cimon CM1 series, CP4A module

Website: <http://www.kdtsys.com>

## HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	Cimon CM1-CP4A/ECO1A		
PLC I/F	RS232		
Baud rate	38400		
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1		

## Device Address:



Bit/Word	Device type	Format	Range	Memo
B	X	DDh	0 ~ 23f	0-1F Read Only
B	Y	DDh	0 ~ 23f	
B	M	DDDh	0 ~ 511f	
B	K	DDDh	0 ~ 127f	
B	L	DDDh	0 ~ 127f	
B	F	DDDh	0 ~ 127f	Read Only
B	T	DDDh	0 ~ 102f	
B	C	DDDh	0 ~ 102f	
W	D	DDDD	0 ~ 4999	
W	S	DD	0 ~ 99	Max. Range: 99
W	TS	DDDD	0 ~ 1023	
W	TC	DDDD	0 ~ 1023	
W	CS	DDDD	0 ~ 1023	
W	CC	DDDD	0 ~ 1023	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	CM1-CP4A RS232 6P RJ11 Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			CM1-CP4A RS232 6P RJ11 Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.20	Nov/30/2009	

# Cimon CM1-SC02A

Supported Series: Cimon CM series, SC02A module

Website: <http://www.kdtsys.com>

## HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	Cimon CM1-SC02A		
PLC I/F	RS232		
Baud rate	38400		
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1		

## Device Address:



Bit/Word	Device type	Format	Range	Memo
B	X	DDh	0 ~ 23f	0-1F Read Only
B	Y	DDh	0 ~ 23f	0-F Read Only
B	M	DDDh	0 ~ 511f	
B	K	DDDh	0 ~ 127f	
B	L	DDDh	0 ~ 127f	
B	F	DDDh	0 ~ 127f	Read Only
B	T	DDDh	0 ~ 102f	
B	C	DDDh	0 ~ 102f	
W	D	DDDD	0 ~ 4999	
W	S	DD	0 ~ 99	Max. Range: 99
W	TS	DDDD	0 ~ 1023	
W	TC	DDDD	0 ~ 1023	
W	CS	DDDD	0 ~ 1023	
W	CC	DDDD	0 ~ 1023	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	CM1-SC02A RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			CM1-SC02A RS232 9P D-Sub Male
9 RX			3 TD
6 TX			2 RD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.20	Nov/30/2009	



## Copley Controls

Supported Series: Digital Servo Driver & Controllers, Xenus, Xenus Micro, Accelnet, Accelnet Micro, Stepnet series.

Website: <http://www.copleycontrols.com/motion/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Copley Controls		
PLC I/F	RS232		
Baud rate	9600	9600~115200	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
HMI sta. no.	0		
PLC sta. no.	0	0-127	





### Device Address:

Bit/Word	Device type	Format	Range	Memo
W	Flash INT 16	HHH	0 ~ 999	For Register is INT16 or U16
W	RAM INT 16	HHH	0 ~ 999	For Register is INT16 or U16
W	Flash INT 32	HHH	0 ~ 999	For Register is INT32 or U32
W	RAM INT 32	HHH	0 ~ 999	For Register is INT32 or U32
W	Register	DDDD	0 ~ 2457	
W	T_command	H	0	
W	Reset	H	0	



### Wiring Diagram:

#### 9P D-Sub to 6P RJ11: Xenus, Xenus Micro, Accelnet, Stepnet




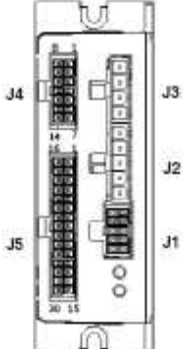
MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P RJ11 Male
2 RX	6 RX	8 RX	5 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	3, 4 GND
			

**MT6050i/MT8050i**


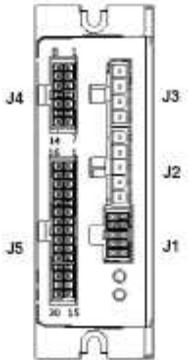
COM1 RS232 9P D-Sub Female			RS232 6P RJ11 Male
9 RX			5 TXD
6 TX			2 RXD
5 GND			3, 4 GND
			

**Accelnet Micro:**
**MT6000/8000 series except MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Accelnet Micro Panel RS232 J5 Cable Connector
2 RX	6 RX	8 RX	29 TXD
3 TX	4 TX	7 TX	14 RXD
5 GND	5 GND	5 GND	15 GND
			

**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			Accelnet Micro Panel RS232 J5 Cable Connector
9 RX			29 TXD
6 TX			14 RXD
5 GND			15 GND

			
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### Driver Version:

Version	Date	Description
V1.20	Dec/30/2008	

## CROUZET M3 (FBD)

### HMI Setting:



Parameters	Recommended	Options	Notes
PLC type	CROUZET M3 (FBD)		
PLC I/F	RS232		
Baud rate	115200		
Data bits	7		
Parity	Even		
Stop bits	1		
PLC sta. no.	1		

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	SLI_Bit	DDh	10 ~ 24f	Serial link input
B	SLO_Bit	DDh	250 ~ 48f	Serial link output (read only)
W	IA	DD	1 ~ 99	Analogy input (default: 1 ~ 4)
W	SL_IN	DD	1 ~ 24	Serial link input
W	SL_OUT	DD	25 ~ 48	Serial link output (read only)

### Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			CROUZET M3 RS232 9P D-Sub Male (Extension Cable)
2 RX			2 TD
3 TX			3 RD
5 GND			5 GND
7 RTS			4 DTR
			



(3m serial link cable)

Note: Please use 3m serial link cable (Accessories from Millenium 3) and extension cable (as shown) to communicate with HMI series.

MT6050/8050i  
RS232  
9P D-SUB Male  
COM1

CROUZET CD12  
RS-232  
9P D-SUB Female  
(Extension cable)

6	TX	3	RD
9	RX	2	TD
5	GND	5	GND
4	TX+	4	DTR



HMI



User's cable



88970102



Millenium 3

### Driver Version:

Version	Date	Description
V1.10	Oct/26/2010	

## CROUZET M3 (LAD)

### HMI Setting:



Parameters	Recommended	Options	Notes
PLC type	CROUZET M3 (LAD)		
PLC I/F	RS232		
Baud rate	115200		
Data bits	7		
Parity	Even		
Stop bits	1		
PLC sta. no.	1		

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DD	1 ~ 99	Input (default: 1 ~ 4)
B	O	DD	1 ~ 99	Output (default: 1 ~ 4)
B	M	DD	1 ~ 28	Relay
B	SLI_Bit	DDh	10 ~ 24f	Serial link input
B	SLO_Bit	DDh	250 ~ 48f	Serial link output (read only)
W	T	DD	1 ~ 12	Timer
W	C	DD	1 ~ 16	Counter
W	IA	DD	1 ~ 99	Analogy input (default: 1 ~ 4)
W	SL_IN	DD	1 ~ 24	Serial link input
W	SL_OUT	DD	25 ~ 48	Serial link output (read only)

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			CROUZET M3 RS232 9P D-Sub Male (Extension Cable)
2 RX			2 TD
3 TX			3 RD
5 GND			5 GND
7 RTS			4 DTR
			



(3m serial link cable)

Note: Please use 3m serial link cable (Accessories from Millenium 3) and extension cable (as shown) to communicate with HMI series.

MT6050/8050i  
RS232  
9P D-SUB Male  
COM1

CROUZET CD12  
RS-232  
9P D-SUB Female  
(Extension cable)

6 TX	3	RD
9 RX	2	TD
5 GND	5	GND
4 TX+	4	DTR



HMI



User's cable



88970102



Millenium 3

## Driver Version:

Version	Date	Description
V1.20	Oct/26/2010	



## Danfoss ECL Apex20

Website: <http://www.danfoss.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Danfoss ECL Apex20		
PLC I/F	RS232		
Baud rate	9600		
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1		





### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Flag	DDDD	0 ~ 8191	
B	Output	DDDD	0 ~ 1023	
B	Input	DDDD	0 ~ 1023	
B	Reg_Bit	DDDDdd	0 ~ 1638331	dd: Bit no. (00 ~ 31)
W	Register	DDDDD	0 ~ 16383	
W	Counter	DDDD	0 ~ 1599	
W	Timer	DDDD	0 ~ 1599	
W	Reg_Float	DDDDD	0 ~ 16383	Support 32-bit float format



EasyBuilder device address range may differ from PLC extended mode, please refer to EasyBuilder address range as above.

## Wiring Diagram:




MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	ECL Apex20 Controller RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			7 RTS
			8 CTS
			circuit
			

MT6050i/MT8050i




COM1 RS232 9P D-Sub Female			ECL Apex20 Controller RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			7 RTS
			8 CTS
			circuit
			

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		ECL Apex20 Controller Port#1 / Port#0
1 RX-	6 Data-		11 / 29
2 RX+	9 Data+		12 / 28
5 GND	5 GND		
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		ECL Apex20 Controller Port#1 / Port#0
----------------------------------	----------------------------------	--	--

1 RX-	7 Data-		11 / 29
2 RX+	8 Data+		12 / 28
5 GND	5 GND		
			

### Driver Version:

Version	Date	Description
V1.30	Jan/10/2011	

## Danfoss ECL Apex20 (Ethernet)

Website: <http://www.danfoss.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Danfoss ECL Apex20 (Ethernet)		
PLC I/F	Ethernet		
Port no.	5050		
PLC sta. no.	0		

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Flag	DDDD	0 ~ 8191	
B	Output	DDDD	0 ~ 1023	
B	Input	DDDD	0 ~ 1023	
B	Reg_Bit	DDDDdd	0 ~ 1638331	dd: Bit no. (00 ~ 31)
W	Register	DDDD	0 ~ 16383	
W	Counter	DDDD	0 ~ 1599	
W	Timer	DDDD	0 ~ 1599	
W	Reg_Float	DDDD	0 ~ 16383	Support 32-bit float format

EasyBuilder device address range may differ from PLC extended mode, please refer to EasyBuilder address range as above.

### Wiring Diagram:

Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



### Driver Version:

Version	Date	Description
V1.10	Jan/10/2011	

## Danfoss FC Series

Supported Series: FC051, FC100, FC200, FC300, VLT Micro Driver.

Website: <http://www.danfoss.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Danfoss FC Series		
PLC I/F	RS485 2W		
Baud rate	9600		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	1		



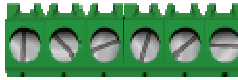
### Device Address:

Bit/Word	Device type		Format	Range	Memo
W	Parameter	09	DDDD	0 ~ 9999	Set Parameter
DW	Reference	10	D	0 ~ 1	Control Bus Reference
DW	Para_Index	11	DDDDDD	0 ~ 999999	Set Parameter(Index)




Para\_Index 310.1=31001, Para\_Index310.0=31000

### Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		FC RS485 terminal
1 RX-	6 Data-		69 D-
2 RX+	9 Data+		68 D+
5 GND	5 GND		
			

## MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		FC RS485 terminal
1 RX-	7 Data-		69 D-
2 RX+	8 Data+		68 D+
5 GND	5 GND		
			

- \*RW100 set PCD1 Control Word of station 1
- \*RW101 read PCD1 Status Word of station 1
- \*RW102 set PCD2 Control Word of station 2
- \*RW103 read PCD2 Status Word of station 2
- \*RW104 set PCD3 Control Word of station 3
- \*RW105 read PCD3 Status Word of station 3
- \*RW106 set PCD4 Control Word of station 4
- \*RW107 read PCD4 Status Word of station 4

### Driver Version:

Version	Date	Description
V1.10	Jan/14/2010	

## Danfoss VLT2800 Series

Supported Series: VLT2800 series

Website: <http://www.danfoss.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Danfoss VLT2800 Series		
PLC I/F	RS485 2W		
Baud rate	9600		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	1	0-126	According to PLC

### PLC Setting:

Communication mode	9600, Even, 8, 1 (default)
--------------------	----------------------------

### Device Address:

Bit/Word	Device type	Format	Range	Memo
DW	Parameter	DDDD	0 ~ 2000	Set Parameter
W	Reference	D	0 ~ 1	Control Bus Reference



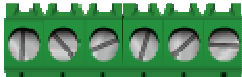
The control word register is set according to the station number.

If the station number is 1, the control word will be RW100 and RW101; if the station number is 2, the control word will be RW102 and RW103, and so on.






## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 terminal
1 RX-	6 Data-		69 D-
2 RX+	9 Data+		68 D+
5 GND	5 GND		
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 terminal
1 RX-	7 Data-		69 D-
2 RX+	8 Data+		68 D+
5 GND	5 GND		
			

## Driver Version:

Version	Date	Description
V1.10	Dec/30/2008	

# DELTA DVP

Supported Series: DELTA DVP series

Website: <http://www.deltadriver.com>

## HMI Setting:




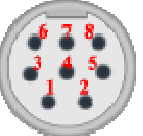
Parameters	Recommended	Options	Notes
PLC type	DELTA DVP		
PLC I/F	RS232	RS232, RS485	
Baud rate	9600	9600, 19200	
Data bits	7	7, 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	1	0-255	

## Device Address:



Bit/Word	Device type	Format	Range	Memo
B	X	OOOOO	0 ~ 23417 (octal)	Input
B	Y	OOOOO	0 ~ 23417 (octal)	Output
B	M	DDDDD	0 ~ 65536	Auxiliary Relay
B	S	DDDD	0 ~ 9999	Step Relay
B	T	DDDD	0 ~ 9999	Timer
B	C	DDDD	0 ~ 9999	Counter
B	TV_Bit	DDDDdd	0 ~ 999915	Timer
W	TV	DDDD	0 ~ 9999	Timer
W	CV	DDD	0 ~ 127	Counter
W	CV2	DDD	200 ~ 254	Double Word Counter
W	D	DDDD	0 ~ 9999	Data Register

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 8P Mini-DIN Male
2 RX	6 RX	8 RX	5 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	3/8 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 8P Mini-DIN Male
9 RX			5 TXD
6 TX			4 RXD
5 GND			3/8 GND
			

## Driver Version:

Version	Date	Description
V1.20	Dec/30/2008	

# BECKHOFF Embedded PC (CX-ARM)

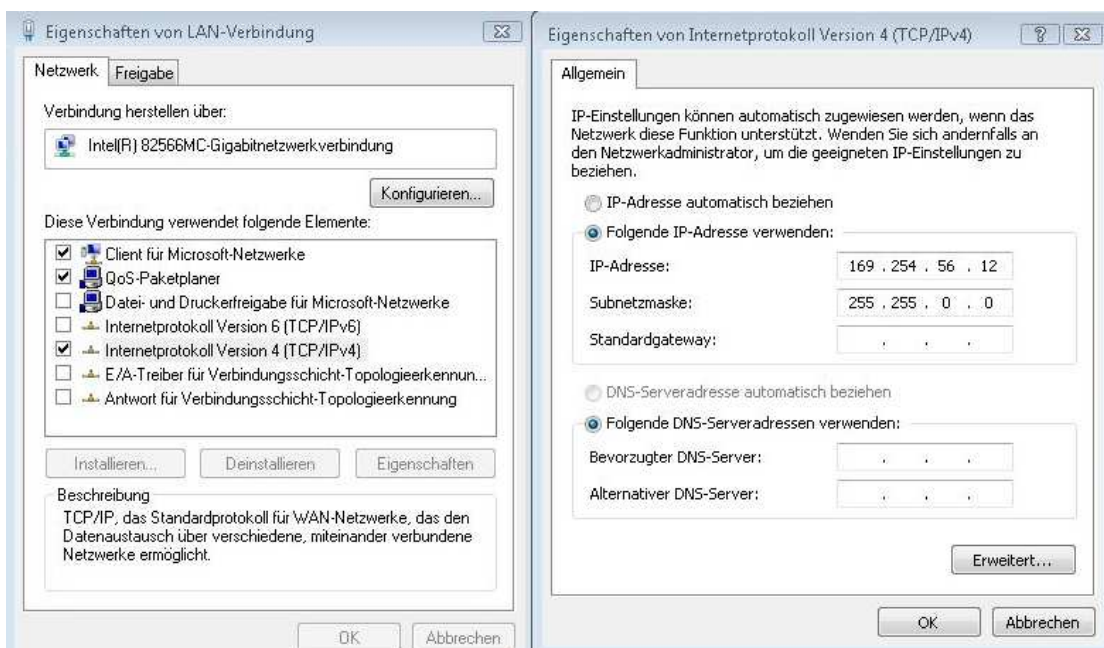
Supported Series: ARM-CX90x0 and CX80xx

## HMI Setting:

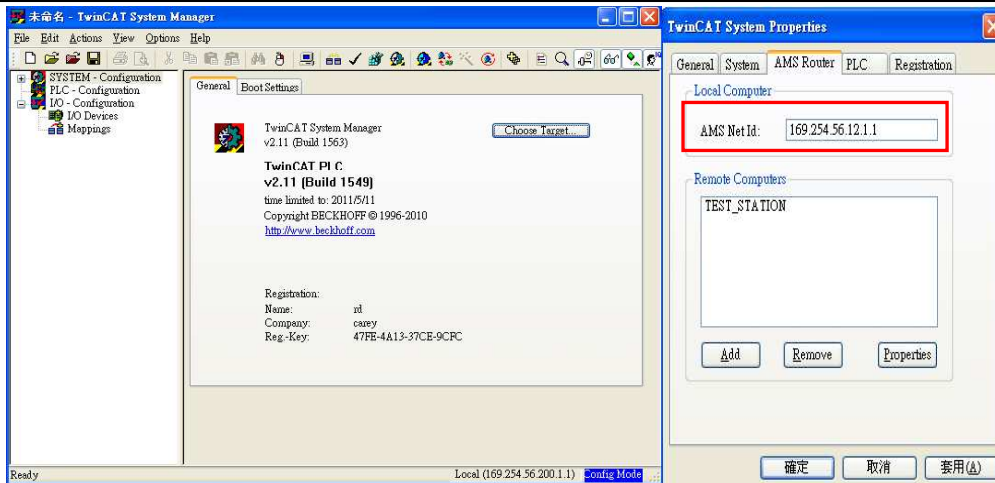
Parameters	Recommended	Options	Notes
PLC type	BECKHOFF Embedded PC (CX-ARM)		
PLC I/F	Ethernet		
Port no.	48898		
ADS port	801	801, 811, 821, 831	
PLC sta. no.	1		

## PLC Setting:

### a. Confirm PC IP address

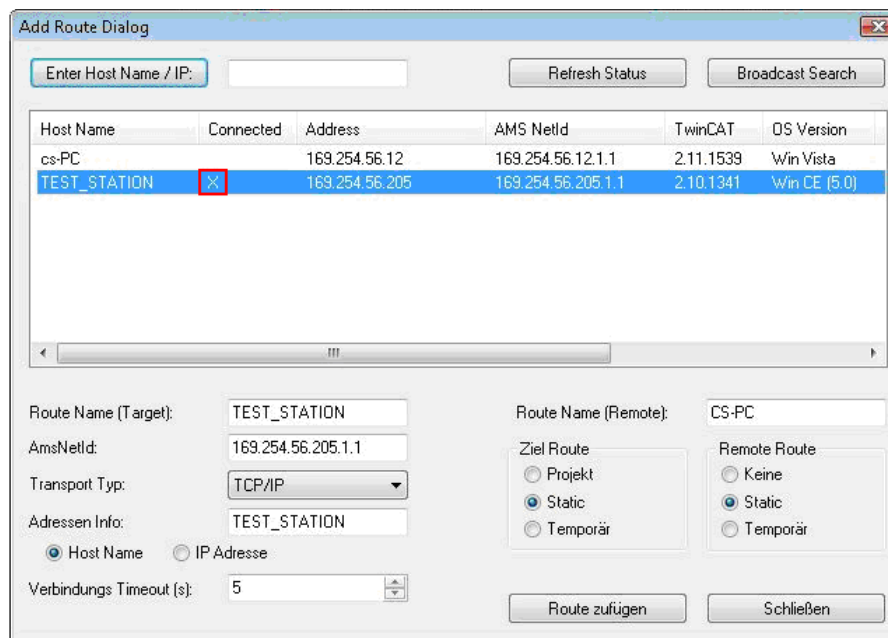


### b. Open Twincat, Set IP address 169.254.56.12.1

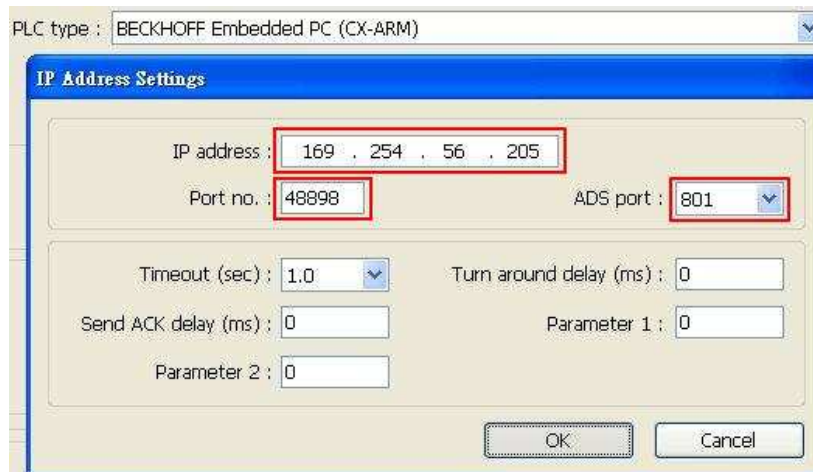


- c. Use Twincat to build a Route Table to make sure the system is connected, if PLC power turns OFF and then ON, please redo this step.

Note: when connected, if “X” is displayed, the connection succeeded.



- d. Open EB8000, set IP address, ADS port and Port no.



- e. Run on line simulation.

Note: If the project is downloaded to HMI, please set HMI IP 169.254.56.12 identically to Twincat IP address setting.


## Device address:

Bit/Word	Device type	Format	Range	Memo
B	IX	DDDDDo	0 ~ 655357	o : Bit no.(0 ~ 7)
B	QX	DDDDDo	0 ~ 655357	o : Bit no.(0 ~ 7)
B	MX	DDDDDo	0 ~ 655357	o : Bit no.(0 ~ 7)
W	IW	DDDDD	0 ~ 65535	
W	QW	DDDDD	0 ~ 65535	
W	MW	DDDDD	0 ~ 65535	
DW	ID	DDDDD	0 ~ 65535	
DW	QD	DDDDD	0 ~ 65535	
DW	MD	DDDDD	0 ~ 65535	

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+

5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-
		

### Driver Version:

Version	Date	Description
V1.00	Apr/18/2011	Driver released.
V1.10	Aug/24/2011	Extended address range up to 65535.

# BECKHOFF Embedded PC (PC or CX-x86)

Supported Series: Intel-CX10x0 and CX50x0

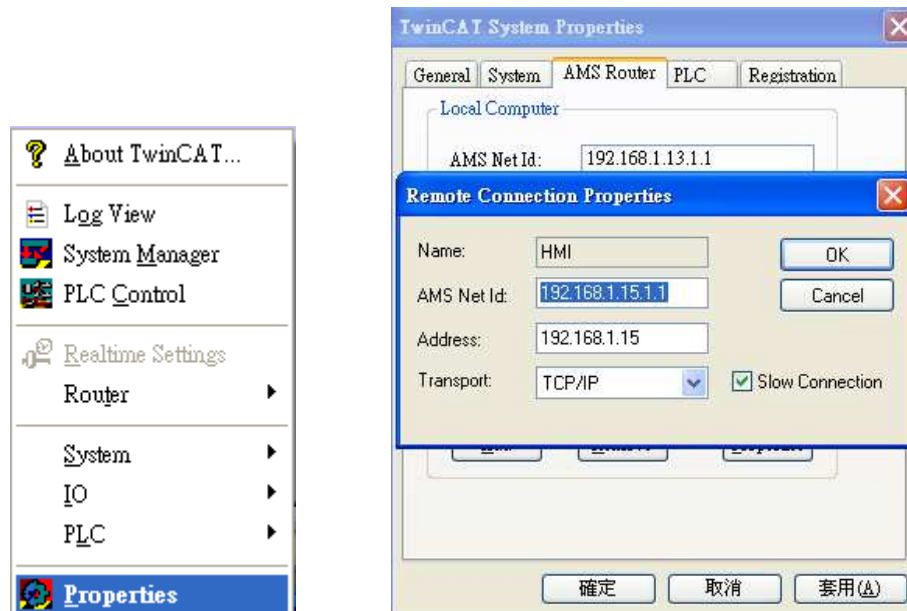
## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	BECKHOFF Embedded PC (PC or CX-s86)		
PLC I/F	Ethernet		
Port no.	48898		
ADS port	801	801, 811, 821, 831	
PLC sta. no.	1		

## PLC Setting:

### Step1.

Open TwinCat System Properties.



PLC Settings: Set HMI Name, AMS Net ID, and Address.

Ex:

HMI IP: 192.168.1.15

AMS Net ID: Must input 192.168.1.15.1

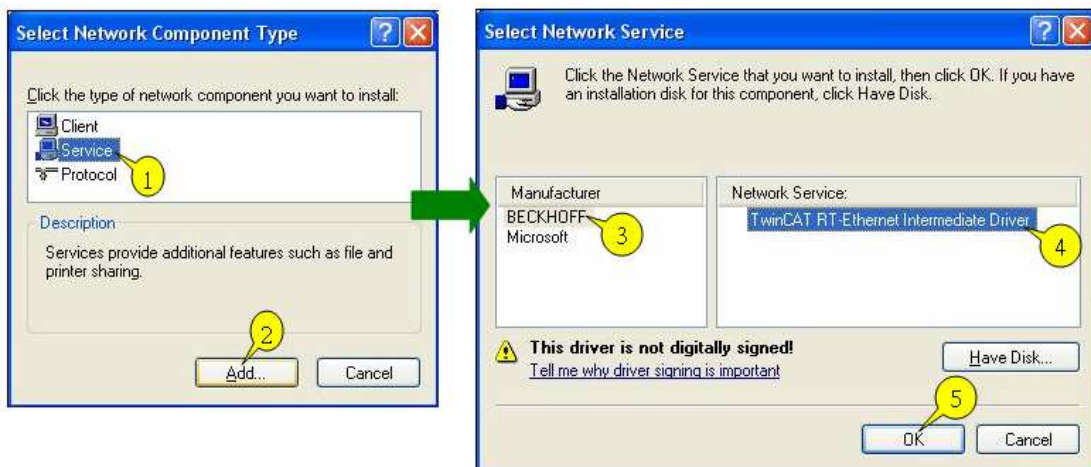
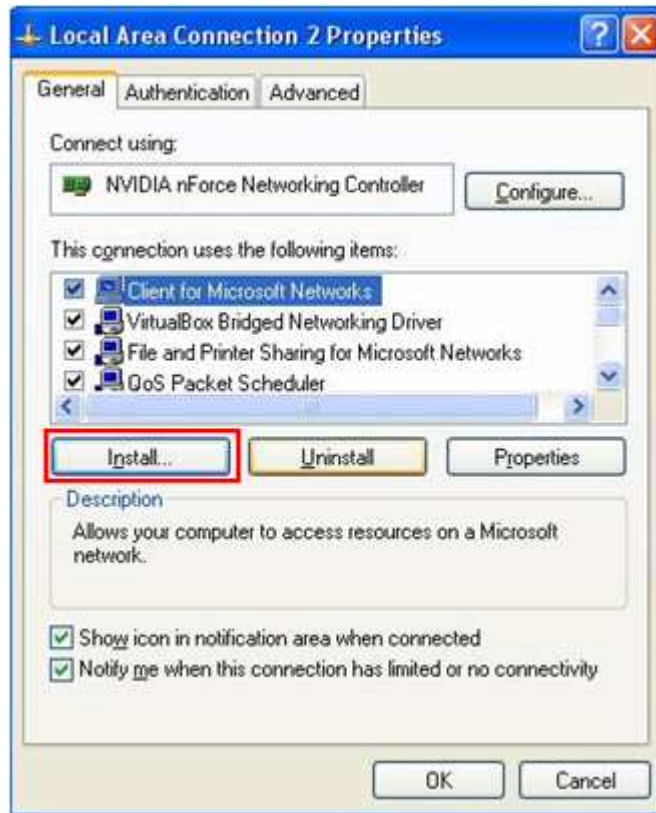
Address: 192.168.1.15

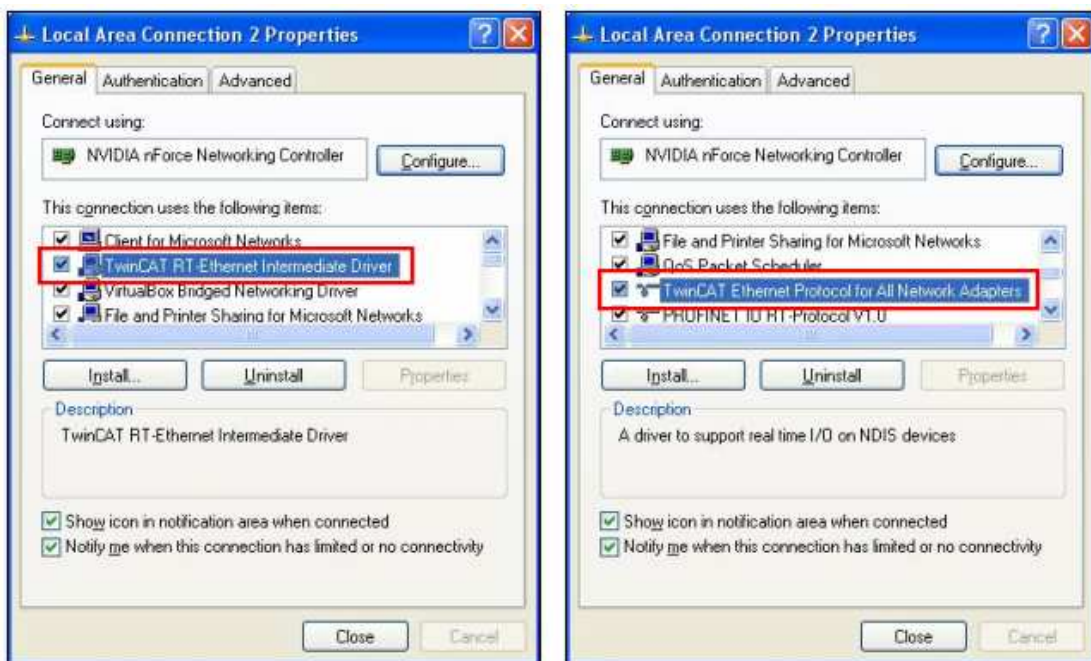
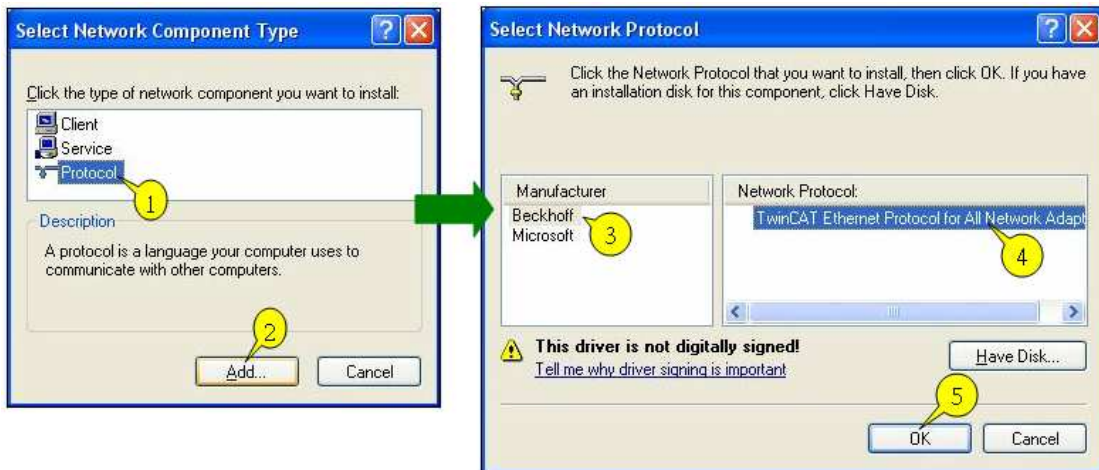
Name: Input "HMI" or any user-defined name.



## Step2.

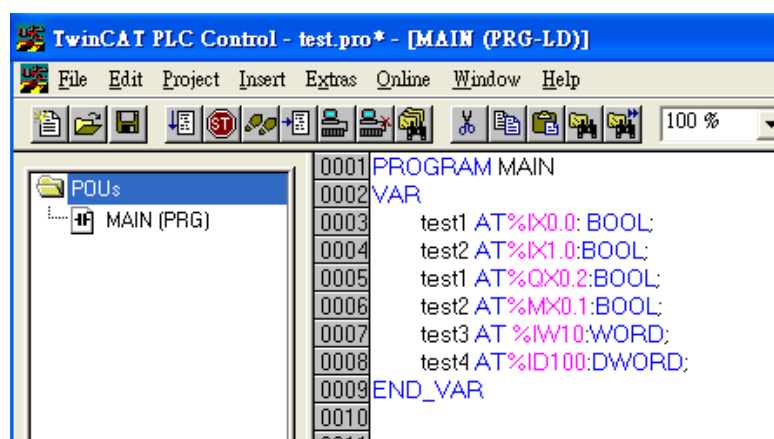
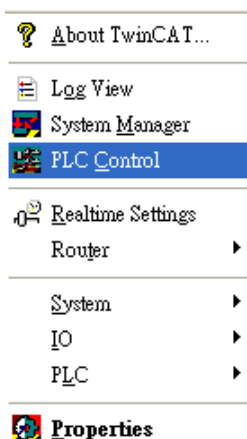
Simulate PLC on PC. 2 Twincat drivers must be installed as follows:





**Step3.**

The following commands can be utilized for Twincat PLC to output the parameters observed.



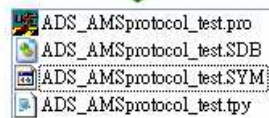
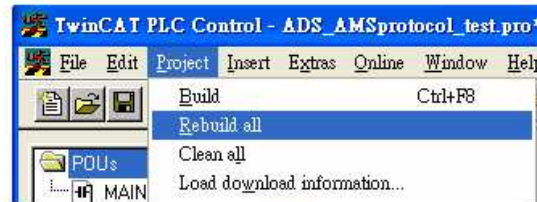
## PS. TwinCAT PLC

IX, QX, MX - Must output in BOOL type.

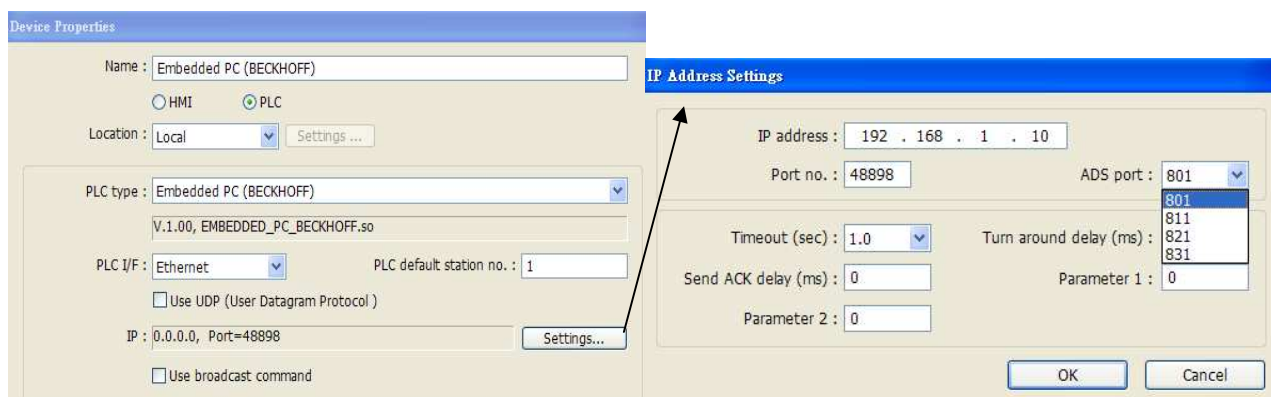
IW, QW, MW - Must output in UINT, WORD, and INT types.

ID, QD, MD - Must output in UDINT, DWORD, and DINT types.

Project -> Rebuild all

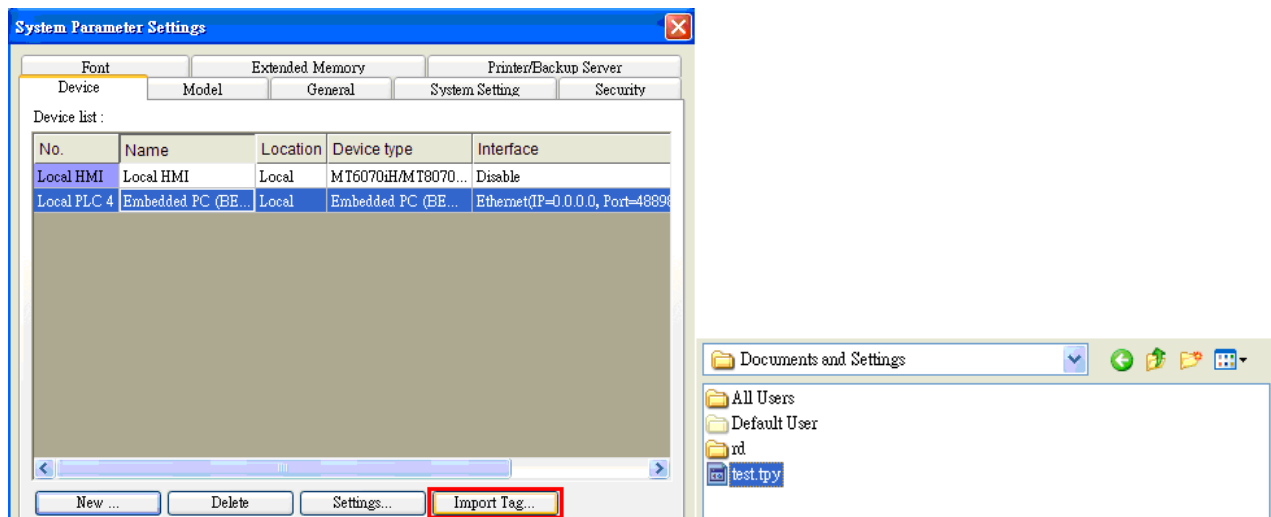


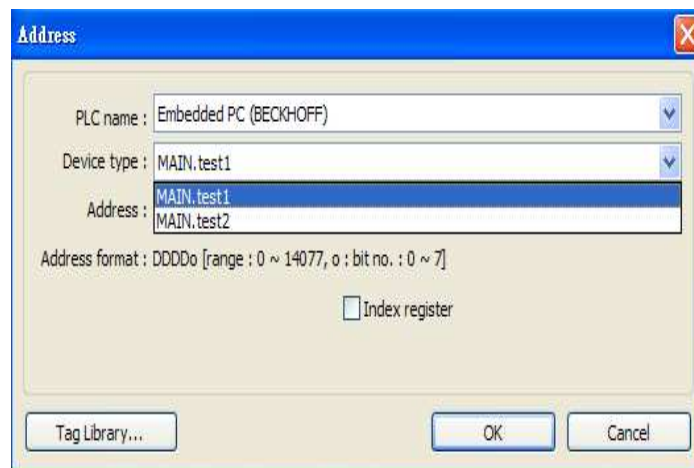
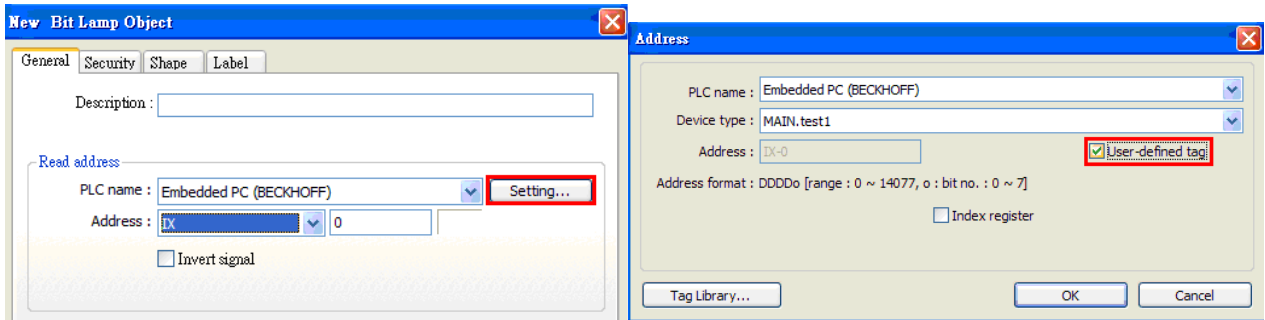
### Step4. Set PLC IP in EasyBuilder.



### Step5.

Click [Import Tag] button in EasyBuilder to open the TPY file compiled by TwinCAT PLC Control.





### Step6.

Download the project compiled in EasyBuilder to HMI.


### Device address:

Bit/Word	Device type	Format	Range	Memo
B	IX	DDDDDo	0 ~ 655357	o : Bit no.(0 ~ 7)
B	QX	DDDDDo	0 ~ 655357	o : Bit no.(0 ~ 7)
B	MX	DDDDDo	0 ~ 655357	o : Bit no.(0 ~ 7)
W	IW	DDDDD	0 ~ 65535	
W	QW	DDDDD	0 ~ 65535	
W	MW	DDDDD	0 ~ 65535	
DW	ID	DDDDD	0 ~ 65535	
DW	QD	DDDDD	0 ~ 65535	
DW	MD	DDDDD	0 ~ 65535	

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.00	Dec/08/2010	Driver released.
V1.10	Aug/24/2011	Extended address range up to 65535.

## EMERSON PLC EC20

Supported Series: Emerson PLC EC20 Series. (Modbus RTU Protocol)

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	EMERSON PLC EC20		
PLC I/F	RS232		
Baud rate	9600	9600, 19200, 115200	
Data bits	8	7 or 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	0	0-255	

### PLC Setting:

Communication mode	Modbus RTU protocol
--------------------	---------------------




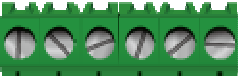
### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Y	OOO	0 ~ 377 ( octal ) 256 point	0000-0255
B	X	OOO	0 ~ 377 ( octal ) 256 point	1200-01455 0000-0255
B	M	DDDD	0 ~ 1999	2000-3999
B	SM	DDD	0~ 255	4400-4655
B	S	DDD	0 ~ 991	6000-6991
B	T	DDD	0 ~ 255	8000-8255
B	C	DDD	0 ~ 255	9200-9455


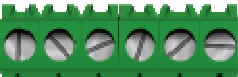
W	D	DDDD	0 ~ 7999	0000-7999
W	SD	DDD	0 ~ 255	8000-8255
W	Z	DD	0 ~ 15	8500-8515
W	T	DDD	0 ~ 255	9000-9255
W	C	DDD	0 ~ 199	9500-9699
DW	C_Double	DDD	200 ~ 255	9700-9811
DW	D_Double	DDDD	0 ~ 7998	0000-7999

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Emerson EC20 COM1 terminal
2 RX	6 RX	8 RX	TXD
3 TX	4 TX	7 TX	RXD
5 GND	5 GND	5 GND	GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			Emerson EC20 COM1 terminal
9 RX			TXD
6 TX			RXD
5 GND			GND
			

## Driver Version:

Version	Date	Description
V1.10	Dec/30/2008	





# F930GOT Server

Supported Series: F930GOT general-purpose communication Type 1.

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	F930GOT Server		
PLC I/F	RS232		
Baud rate	38400	9600, 115200	
Data bits	8	7 or 8	
Parity	None	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	1		





## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	RB	DDDD	0 ~ 2047	
W	RW	DDDDD	0 ~ 65535	

**Note:** In PLC name drop - down menu don't select F930GOT Server.  
Please select Local HMI, Device Type=RW.



## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Micro Computer Board RS232 Female
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			Micro Computer Board RS232 Female
9 RX			3 TD
6 TX			2 RD

5 GND			5 GND
			

## Protocol:

### Read Command:

PC → HMI

02	'0'	Read address	Size	CR
----	-----	--------------	------	----

02	30	30	30	30	30	30	32	0D
----	----	----	----	----	----	----	----	----

Read RW0 1 word (2 bytes) STX = 0x02, '0' = Read command, CR = 0x0D

Read address (hexadecimal)

0 ~ FFFF = RW0 ~ 65535

Size (hexadecimal)

2 ~ FE = 2 ~ 254 bytes = 1 ~ 127 word.

Size must be even.

HMI → PC (response)

02	Data1	Data2	.....	CR
----	-------	-------	-------	----

02	30	30	31	30	0D
----	----	----	----	----	----

RW0 = 0x0010 = 16

### Write Command:

PC → HMI

02	'1'	Read address	Size	Data1	Data2	.....	CR
----	-----	--------------	------	-------	-------	-------	----

02	31	30	30	30	30	30	32	12	34	0D
----	----	----	----	----	----	----	----	----	----	----

Write RW0 = 0x1234

Read address (hexadecimal)

0 ~ FFFF = RW0 ~ 65535

Size (hexadecimal)

2 ~ FE = 2 ~ 254 bytes = 1 ~ 127 word.

Size must be even.

HMI → PC (response)

06
----

ACK = 0x06

**Driver Version:**

Version	Date	Description
V1.00	Aug/14/2009	Driver released.

## FATEK FB Series

Supported Series: FATEK FBs series, FB MC series, and FB MA series need FB-DTBR converter.

Website: <http://www.fatek.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	FATEK FB Series		
PLC I/F	RS232	RS232/RS485 /Ethernet	
Baud rate	9600		
Data bits	7		
Parity	Even		
Stop bits	1		
PLC sta. no.	1	0-255	Must match PLC port setting.
TCP port no.	500		Ethernet only.

### Device Address:





Bit/Word	Device type	Format	Range	Memo
B	X	DDDD	0 ~ 9999	Input
B	Y	DDDD	0 ~ 9999	Output
B	M	DDDD	0 ~ 9999	Internal Relay
B	S	DDDD	0 ~ 9999	Step Relay
B	T	DDDD	0 ~ 9999	Timer
B	C	DDDD	0 ~ 9999	Counter
B	PLC_MODE	D	0	PLC mode
B	R_Bit	DDDDdd	0 ~ 999915	
B	D_Bit	DDDDdd	0 ~ 999915	
W	RT	DDDD	0 ~ 9999	Timer Register
W	RC	DDDD	0 ~ 9999	Counter Register
W	R	DDDD	0 ~ 9999	Data Register
W	D	DDDD	0 ~ 9999	Data Register
W	DRT	DDDD	0 ~ 9999	Double Word Timer

				Register
W	DRC	DDD	200 ~ 255	Double Word Counter Register
W	WX	DDDD	0 ~ 9999	Input Word
W	WY	DDDD	0 ~ 9999	Output Word
W	WM	DDDD	0 ~ 9999	Internal Relay Word
W	WS	DDDD	0 ~ 9999	



## Wiring Diagram:

### 9P D-Sub to 4P Mini-DIN: FBs Port0

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	FBs RS232 4P Mini-DIN Male
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	4 RX
5 GND	5 GND	5 GND	2 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			FBs RS232 4P Mini-DIN Male
9 RX			3 TX
6 TX			4 RX
5 GND			2 GND
			



### 9P D-Sub to 9P D-Sub: FBs communication module

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	FBs communication module RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TX



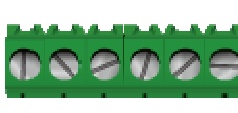
3 TX	4 TX	7 TX	3 RX
5 GND	5 GND	5 GND	5 GND
			

**MT6050i/MT8050i**



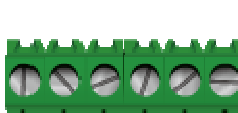
COM1 RS232 9P D-Sub Female			FBs communication module RS232 9P D-Sub Male
9 RX			2 TX
6 TX			3 RX
5 GND			5 GND
			

**FBs communication module 3P Terminal Block**

## MT6000/8000 series except MT6050i/MT8050i





COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		FBs communication module 3P Terminal
1 RX-	6 Data-		D-
2 RX+	9 Data+		D+
5 GND	5 GND		
			

**MT6050i/MT8050i**



COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		FBs communication module 3P Terminal
1 RX-	7 Data-		D-
2 RX+	8 Data+		D+
5 GND	5 GND		
			

**9P D-Sub to 15P D-Sub: CPU Port**

MT6000/8000 series except MT6050i/MT8050i



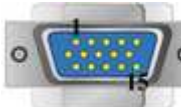
COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	FB CPU Port RS232 15P D-Sub Male
2 RX	6 RX	8 RX	2 TX
3 TX	4 TX	7 TX	1 RX
5 GND	5 GND	5 GND	6 GND
			3 RTS
			4 CTS
			circuit
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			FB CPU Port RS232 15P D-Sub Male
9 RX			2 TX
6 TX			1 RX
5 GND			6 GND
			3 RTS
			4 CTS
			circuit
			




**9P D-Sub to 15P D-Sub: CPU Port RS485 2W**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		FB CPU Port RS485 2W 15P D-Sub Male
1 RX-	6 Data-		7 D-
2 RX+	9 Data+		5 D+
5 GND	5 GND		
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		FB CPU Port RS485 2W 15P D-Sub Male
1 RX-	7 Data-		7 D-

2 RX+	8 Data+		5 D+
5 GND	5 GND		
			

## Driver Version:

Version	Date	Description
V1.60	Feb/17/2011	R_Bit, D_Bit and WS address types are added.



# FLEXI SOFT (SICK)

## HMI Setting:




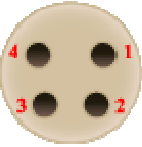
Parameters	Recommended	Options	Notes
PLC type	FLEXI SOFT (SICK)		
PLC I/F	RS232		
Baud rate	115200	9600,19200,3 8400,57600,1 15200	
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	0		

## Device Address:


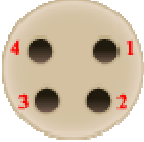
Bit/Word	Device type	Format	Range	Memo
B	I	DDo	0 ~ 967	Input
B	Q	DDo	0 ~ 487	Output
B	Logic result	DDo	0 ~ 327	Logic Result
B	RS-232	DDo	0 ~ 327	RS-232

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	FLEXI soft CPU0 Port0 4P Mini-DIN Male
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	2 RX
5 GND	5 GND	5 GND	4 GND
			

**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			FLEXI soft CPU0 Port0 4P Mini-DIN Male
9 RX			3 TX
6 TX			2 RX
5 GND			4 GND
			

**Driver Version:**

Version	Date	Description
V1.00	Apr/6/2011	Driver released.

## Fuji NB Series

Website: <http://www.fujielectric.co.jp/fcs/eng/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Fuji NB Series		
PLC I/F	RS485 4W		
Baud rate	19200		
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	0		

### PLC Setting:



Communication mode	NITP Protocol / PLC Password (default is 0)
--------------------	---

### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	Y	HHH	0 ~ 7ff	Output Relay
B	X	HHH	0 ~ 3ff	Input Relay
B	M	HHH	0 ~ fff	Internal Relay
B	L	HHH	0 ~ fff	Latch Relay
B	C	HH	0 - ff	Counter
B	M_Spe	HHHH	0 ~ 81ff	Special Relay
B	T	HHH	0 ~ 1ff	Timer
W	TV	HHH	0 ~ 3ff	Timer value
W	CV	HHH	0 ~ 3ff	Counter value
W	D	HHHH	0 ~ 1fff	Data Register
W	D_Spe	HHHH	0 ~ 81ff	Special Register

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			Fuji NB Series RS422 8P RJ45 Male
1 RX-			4 TX-
2 RX+			3 TX+
3 TX-			6 RX-
4 TX+			5 RX+
5 GND			
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			Fuji NB Series RS422 8P RJ45 Male
1 RX-			4 TX-
2 RX+			3 TX+
3 TX-			6 RX-
4 TX+			5 RX+
5 GND			
			

## Driver Version:

Version	Date	Description
V1.10	May/05/2009	

## GE FANUC 0i MD

Website: [http://www.fanucfa.com/welcome\\_worldwide/](http://www.fanucfa.com/welcome_worldwide/)

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	GE FANUC 0i MD		
PLC I/F	RS232		
Baud rate	19200		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	0		

On-line simulation	YES
--------------------	-----

### PLC Setting:

Reader/Puncher interface (2ch.) is used for touch panel interface.


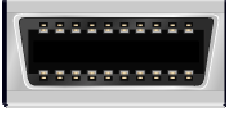

External touch panel interface, S/N: A02B-0320-J685, for Power Mate Series.

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	DDDDo	0 ~ 11277	
B	Y	DDDDo	0 ~ 11277	
B	K	DDDo	0 ~ 9997	
B	E	DDDDo	0 ~ 99997	
B	D_Bit	DDDDo	0 ~ 99997	
B	R_Bit	DDDDo	0 ~ 94997	
W	T	DDDD	0 ~ 9499	Must be a multiple of 2
W	C	DDDD	0 ~ 5199	Must be a multiple of 4
W	D_Byte	DDDD	0 ~ 9999	
W	R_Byte	DDDD	0 ~ 9499	
W	D	DDDD	0 ~ 9999	Must be a multiple of 2
W	R	DDDD	0 ~ 9499	Must be a multiple of 2

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			GE FANUC 0i MD RS232 20P JD36B or JD54 Female
2 RX			11 TX
3 TX			1 RX
5 GND			8 GND
7 RTS	circuit		
8 CTS			
		15 RTS	circuit
		05 CTS	
		03 DR	circuit
		07 CD	
		13 ER	
		 	

## Driver Version:

Version	Date	Description
V1.00	May/16/2011	Driver released.

# GE Fanuc CMM

Website: <http://www.ge.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	GE Fanuc CMM		
PLC I/F	RS232	RS232/RS485	
Baud rate	19200	9600,19200,38400,57600,115200	
Data bits	8	7,8	Must set to 8 for this protocol
Parity	Odd	Even, Odd, None	
Stop bits	1	1, 2	
PLC sta. no.	0	0-255	Does not apply to this protocol

## PLC Setting:

Refer to the related PLC manual.



## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDDD	1 ~ 10000	Input relay
B	Q	DDDDD	1 ~ 10000	Output relay
B	M	DDDDD	1 ~ 10000	Auxiliary relay
B	G	DDDD	1 ~ 7680	
B	T	DDD	1 ~ 256	
B	SA	DDD	1 ~ 128	
B	SB	DDD	1 ~ 128	
B	SC	DDD	1 ~ 128	
B	S	DDD	1 ~ 128	
W	AI	DDDDD	1 ~ 10000	Analog input register
W	AQ	DDDDD	1 ~ 10000	Analog output register
W	R	DDDDD	1 ~ 32640	Data register



## Wiring Diagram:

### CPU Port 90-30/VersaMax

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			90-30/VersaMax RS485 4W 15P D-Sub Male
1 RX-			12 SDA
2 RX+			13 SDB
5 GND			7 GND
3 TX-			10 RDA
4 TX+			11 RDB
			9 RT
			6 RTSA
			15 CTSA
			8 RTSB
			14 CTSB
			circuit
			circuit
			circuit
			





MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			90-30/VersaMax RS485 4W 15P D-Sub Male
1 RX-			12 SDA
2 RX+			13 SDB
5 GND			7 GND
3 TX-			10 RDA
4 TX+			11 RDB
			9 RT
			6 RTSA
			15 CTSA
			8 RTSB
			14 CTSB
			circuit
			circuit
			circuit
			





**CPU Port (90-30 series CPU351/352/363/364)**

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	90-30/90-70 series RS232 6P RJ11 Male
2 RX	6 RX	8 RX	2 TX
3 TX	4 TX	7 TX	5 RX
5 GND	5 GND	5 GND	3 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			90-30/90-70 series RS232 6P RJ11 Male
9 RX			2 TX
6 TX			5 RX
5 GND			3 GND
			

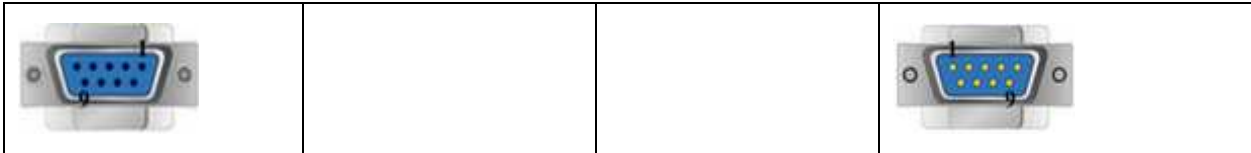
**CPU Port (VersaMax series CPU001/002/005/E05)**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	VersaMax series RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TX
3 TX	4 TX	7 TX	3 RX
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			VersaMax series RS232 9P D-Sub Male
9 RX			2 TX
6 TX			3 RX
5 GND			5 GND



### Driver Version:

Version	Date	Description
V1.00	Jul/09/2009	Driver released.

## GE FANUC RX3i

Website: <http://www.ge.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	GE FANUC RX3i		
PLC I/F	RS232	RS232, RS485	
Baud rate	19200	1200~115200	
Data bits	8		
Parity	Odd	None, Even, Odd	
Stop bits	1	1 or 2	
PLC sta. no.	1	1~99	

### PLC Setting:





Refer to the related PLC manual.

### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	I	DDDDD	1 ~ 32768	
B	Q	DDDDD	1 ~ 32768	
B	M	DDDDD	1 ~ 32768	
B	G	DDDDD	1 ~ 32768	
B	T	DDDDD	1 ~ 32768	
B	SA	DDDDD	1 ~ 32768	
B	SB	DDDDD	1 ~ 32768	
B	SC	DDDDD	1 ~ 32768	
B	S	DDDDD	1 ~ 32768	
W	AI	DDDDD	1 ~ 32768	
W	AQ	DDDDD	1 ~ 32768	
W	R	DDDDD	1 ~ 32768	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i



COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	GE Fanuc RX3i COM1 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			GE Fanuc RX3i COM1 RS232 9P D-Sub Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			5 GND
			

**GE Fanuc RX3i COM2**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			GE Fanuc RX3i COM2 RS232 15P D-Sub Male
1 RX-			12 SDA
2 RX+			13 SDB
5 GND			7 GND
3 TX-			10 RDA
4 TX+			11 RDB
			9 RT
			6 RTSA
			15 CTSA
			8 RTSB
			14 CTSB
			circuit
			circuit
			circuit
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			GE Fanuc RX3i COM2 RS232 15P D-Sub Male
1 RX-			12 SDA
2 RX+			13 SDB
5 GND			7 GND
3 TX-			10 RDA
4 TX+			11 RDB
			9 RT
			6 RTSA
			15 CTSA
			8 RTSB
			14 CTSB
			circuit
			circuit
			circuit
			

**Driver Version:**

Version	Date	Description
V1.10	Oct/01/2010	Driver released.

## GE Fanuc Series 90-30 (Ethernet)

Supported Series: GE 90-30 series, CPU model 374plus.

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	GE Fanuc Series 90-30 (Ethernet)		
PLC I/F	Ethernet		
Port no.	18245		
PLC sta. no.	1	1~99	

### Device Address:


Bit/Word	Device type	Format	Range	Memo
B	I_bit	DDDDD	1 ~ 32768	
B	Q_bit	DDDDD	1 ~ 32768	
B	M_bit	DDDDD	1 ~ 32768	
B	G_bit	DDDDD	1 ~ 32768	
B	T_bit	DDDDD	1 ~ 32768	
B	SA_bit	DDDDD	1 ~ 32768	Read Only
B	SB_bit	DDDDD	1 ~ 32768	Read Only
B	SC_bit	DDDDD	1 ~ 32768	Read Only
B	S_bit	DDDDD	1 ~ 32768	Read Only
W	I	DDDDD	1 ~ 32753	Address increment by 8 words, ex: I1, I9, I17, I25.....
W	Q	DDDDD	1 ~ 32753	The rule is same as above, ex:Q1, Q9, Q17...
W	M	DDDDD	1 ~ 32753	The rule is same as above, ex:M1, M9, M17..
W	G	DDDDD	1 ~ 32753	The rule is same as above, ex:G1, G9, G17...
W	T	DDDD	1 ~ 1024	The rule is same as above, ex:T1, T9, T17....
W	SA	DDDDD	1 ~ 32753	Read only, the rule is same as above
W	SB	DDDDD	1 ~ 32753	Read only, the rule is same as above

W	SC	DDDDD	1 ~ 32753	Read only, the rule is same as above
W	S	DDDDD	1 ~ 32753	Read only, the rule is same as above
W	R	DDDDD	1 ~ 32768	
W	AI	DDDDD	1 ~ 32768	
W	AQ	DDDDD	1 ~ 32768	

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



**Driver Version:**

Version	Date	Description
V1.70	Apr/09/2010	



## GE Fanuc SNP-X

Supported Series: GE Fanuc 90 & VersaMax series PLC

Website: <http://www.ge.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	GE Fanuc SNP-X		
PLC I/F	RS485 4w	RS232/RS485	
Baud rate	19200	9600, 19200, 38400, 57600, 115200	
Data bits	8	7, 8	Must set to 8 for this protocol
Parity	Odd	Even, Odd, None	
Stop bits	1	1, 2	
PLC sta. no.	0	0-255	Does not apply to this protocol

### PLC Setting:

Refer to the related PLC manual.

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDDD	1 ~ 10000	Input relay
B	Q	DDDDD	1 ~ 10000	Output relay
B	M	DDDDD	1 ~ 10000	Auxiliary relay
B	G	DDDD	1 ~ 7680	
B	T	DDD	1 ~ 256	
B	SA	DDD	1 ~ 128	
B	SB	DDD	1 ~ 128	
B	SC	DDD	1 ~ 128	
B	S	DDD	1 ~ 128	
W	AI	DDDDD	1 ~ 10000	Analog input register

W	AQ	DDDDD	1 ~ 10000	Analog output register
W	R	DDDDD	1 ~ 32640	Data register

## Wiring Diagram:

Note: 90 VersaMax series PLC of GE Fanuc includes series: 90-30, 90-70, VersaMax Micro, VersaMax Nano and VersaMax, etc.

CPU of 90-30 series can utilize RS485 serial com port of the module, and SNP serial communication protocol of GE to connect with EasyView MT8000HMI. In addition: CPU331/340/341/350/351/352/360/363/364 can connect through CMM311

communication module ;



CPU351/352/363/364 can connect through serial com port of CPU unit.

90-70 series CPU can connect through CMM711 communication module or serial com port of CPU unit.

For relevant software and hardware settings please refer to the technical manual offered by GE Fanuc.



### CPU Port (90-30/VersaMax)

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			90-30/VersaMax RS422 15P D-Sub Male
1 RX-			12 SDA
2 RX+			13 SDB
5 GND			7 GND
3 TX-			10 RDA
4 TX+			11 RDB
			9 RT
			6 RTSA
			15 CTSA
			8 RTSB
			14 CTSB
			circuit
			circuit
			circuit
			





MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			90-30/VersaMax RS422 15P D-Sub Male
1 RX-			12 SDA



2 RX+			13 SDB	
5 GND			7 GND	
3 TX-			10 RDA	
4 TX+			11 RDB	circuit
			9 RT	
			6 RTSA	circuit
			15 CTSA	
			8 RTSB	circuit
			14 CTSB	
				

### CPU Port (90-30 series CPU351/352/363/364)

MT6000/8000 series excepts MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	90-30/90-70 series RS232 6P RJ11 Male
2 RX	6 RX	8 RX	2 TX
3 TX	4 TX	7 TX	5 RX
5 GND	5 GND	5 GND	3 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			90-30/90-70 series RS232 6P RJ11 Male
9 RX			2 TX
6 TX			5 RX
5 GND			3 GND
			



### CPU Port (VersaMax series CPU001/002/005/E05)

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	VersaMax series RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TX

3 TX	4 TX	7 TX	3 RX
5 GND	5 GND	5 GND	5 GND
			

**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			VersaMax series RS232 9P D-Sub Male
9 RX			2 TX
6 TX			3 RX
5 GND			5 GND
			

**Driver Version:**

Version	Date	Description
V1.20	Jan/09/2009	

# HanYoung Series

Supported Series: Temperature Controller.

Website: <http://hynux.com/kor/>

## HMI Setting:


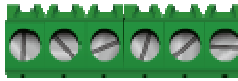
Parameters	Recommended	Options	Notes
PLC type	HanYoung Seires		
PLC I/F	RS485 4W		
Baud rate	9600		
Data bits	8	7 or 8	
Parity	None	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	1	0-255	

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDD	1 ~ 9999	
W	D	DDDD	1 ~ 9999	



## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			Han Young RS422 terminal
1 RX-			32 TX-
2 RX+			31 TX+
3 TX-			34 RX-
4 TX+			33 RX+
5 GND			
			

MT6050i/MT8050i

COM1 RS485 4W			Han Young RS422
---------------	--	--	-----------------

9P D-Sub Female			terminal
1 RX-			32 TX-
2 RX+			31 TX+
3 TX-			34 RX-
4 TX+			33 RX+
5 GND			
			

### Driver Version:

Version	Date	Description
V1.60	Jun/14/2010	

# Heng Yuan Sensor

Supported Series: EU series, EU5 series, EU10 series.

Website: <http://www.tjhysensor.cn/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Heng Yuan Sensor		
PLC I/F	RS485 2W		
Baud rate	9600		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	2	1-31	




Online simulator	YES	
Extend address mode	YES	

## Device Address:




Bit/Word	Device type	Format	Range	Memo
W	Parameter	DDDD	0 ~ 2000	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		Heng Yuan Sensor RS485
1 RX-	6 Data-		7 RX- (Yellow)
2 RX+	9 Data+		6 RX+ (Green)
5 GND	5 GND		4 GND (Black)
			

**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		Heng Yuan Sensor RS485
1 RX-	7 Data-		7 RX- (Yellow)
2 RX+	8 Data+		6 RX+ (Green)
5 GND	5 GND		4 GND (Black)
			

**Driver Version:**

Version	Date	Description
V1.00	Dec/30/2008	Driver released.



# HITACHI EH-SIO

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	HITACHI EH-SIO		
PLC I/F	RS232	RS232, RS485	
Baud rate	19200	9600, 19200, 38400	
Data bits	7	7	
Parity	Even	Even	
Stop bits	1	1	
PLC sta. no.	0		

## PLC Setting:

Communication mode	19200, E, 7, 1 (default)
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## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	HHHHh	0 ~ ffff	External input-bit (X)
B	Y	HHHHh	0 ~ ffff	External output-bit (Y)
B	M	HHHHh	0 ~ ffff	Data area-bit (M)
B	T	HHHHh	0 ~ ffff	Timer (T)
B	R	HHHHh	0 ~ ffff	Internal output (R)
B	L	HHHHh	0 ~ ffff	Link area-bit (L)
W	TC	HH	0 ~ ff	Timer/Counter current value
W	WM	HHHH	0 ~ 270f	Data area-word (M)
W	WX	HHHH	0 ~ 270f	External input-word (X)
W	WY	HHHH	0 ~ 270f	External output-word (Y)
W	WR	HHHH	0 ~ 270f	Internal output-word (R)
W	WL	HHHH	0 ~ 270f	Link area-word (L)



## Wiring Diagram:

### EH-SIO port1/port 2 RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 8P RJ45 Male
2 RX	6 RX	8 RX	5 SD
3 TX	4 TX	7 TX	6 RD
5 GND	5 GND	5 GND	1 SG
8 CTS			8 RS
			4 PHL
			7 DR
			circuit
			


MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 8P RJ45 Male
9 RX			5 SD
6 TX			6 RD
5 GND			1 SG
			8 RS
			4 PHL
			7 DR
			circuit
			



### EH-SIO port2 RS485 4W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			Hitachi EH-SIO
1 RX-			2 TX-
2 RX+			1 TX+
3 TX-			4 RX-
4 TX+			3 RX+
5 GND			6 SG



			
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MT6050i/MT8050i



COM1 RS485 4W 9P D-Sub Female			Hitachi EH-SIO
1 RX-			2 TX-
2 RX+			1 TX+
3 TX-			4 RX-
4 TX+			3 RX+
5 GND			6 SG
			

### EH-SIO port2 RS485 2W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		Hitachi EH-SIO
1 RX-	6 Data-		2 TX-
			4 RX-
2 RX+	9 Data+		1 TX+
			3 RX+
5 GND	5 GND		6 SG
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		Hitachi EH-SIO
1 RX-	7 Data-		2 TX-
			4 RX-
2 RX+	8 Data+		1 TX+
			3 RX+
5 GND	5 GND		6 SG
			

## Driver Version:

Version	Date	Description
V1.00	May/25/2010	Driver released.

## HITACHI EHV Series (Ethernet)

Website: <http://www.hitachi-ies.co.jp/english/products/plc/index.htm>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	HITACHI EHV Series (Ethernet)		
PLC I/F	Ethernet		
Port no.	3004	3004~3007	


### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	HHHHh	0 ~ ffff	External input-bit (X)
B	Y	HHHHh	0 ~ ffff	External output-bit (Y)
B	M	HHHHh	0 ~ ffff	Data area-bit (M)
B	T	DDDDD	0 ~ 65535	Timer (T)
B	R	HHHHh	0 ~ ffff	Internal output (R)
B	L	HHHHh	0 ~ ffff	Link area-bit (L)
W	TC	DDDD	0 ~ 2559	Timer/Counter current value
W	WM	HHHH	0 ~ 7fff	Data area-word (M)
W	WX	HHHH	0 ~ ffff	External Input-word (X)
W	WY	HHHH	0 ~ ffff	External output-word (Y)
W	WR	HHHH	0 ~ ffff	Internal output-word (R)
W	WL	HHHH	0 ~ 73ff	Link area-word (L)

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.00	Jan/12/2010	Driver released

## HITACHI H/EH/EHV Series

Supported Series: HITACHI H series, EH-150, Micro-EH, H20, H40, H64, H200, H250, H252, H300, H302, H700, H702, H1000, H1002, H2000, H4010.

Website: <http://www.hitachi-ies.co.jp/english/products/plc/index.htm>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	HITACHI H/EH/EHV Series		
PLC I/F	RS232	RS232, RS485	
Baud rate	19200	9600, 19200, 38400	
Data bits	7	7	
Parity	Even	Even	
Stop bits	1	1	
PLC sta. no.	0	0-255	Does not apply to this protocol.

Online simulator	YES	Broadcast command	NO
Extend address mode	NO		

### PLC Setting:

Communication mode	19200,E,7,1 (default)
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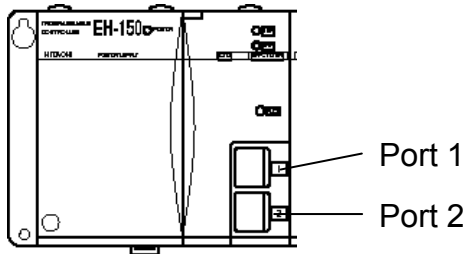
### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	HHHHh	0 ~ ffff	External input-bit (X)
B	Y	HHHHh	0 ~ ffff	External output-bit (Y)
B	M	HHHHh	0 ~ ffff	Data area-bit (M)
B	T	HHHHh	0 ~ ffff	Timer (T)
B	R	HHHHh	0 ~ ffff	Internal output (R)
B	L	HHHHh	0 ~ ffff	Link area-bit (L)

W	TC	HH	0 ~ ff	Timer/Counter current value
W	WM	HHHH	0 ~ 270f	Data area-word (M)
W	WX	HHHH	0 ~ 270f	External input-word (X)
W	WY	HHHH	0 ~ 270f	External output-word (Y)
W	WR	HHHH	0 ~ c3ff	Internal output-word (R)
W	WL	HHHH	0 ~ 270f	Link area-word (L)

## Wiring Diagram:

**WARNING:** If your communication cable is not wired exactly as shown in our cable assembly instructions, damage to the HMI or loss of communications can be caused.

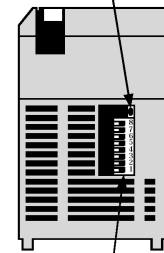


CPU TYPE	Port 1	Port 2
EH-150/CPU 104A	RS-232	RS-232
EH-150/CPU 208A	RS-232	RS-232
EH-150/CPU 308A	RS-232/RS-485	RS-232
EH-150/CPU 316A	RS-232/RS-485	RS-232
EH-150/CPU 448A	RS-232/RS-485	RS-232



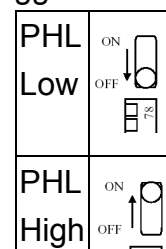
Switch Number				
1	OFF	Normal mode		
2	OFF	TRNS0 operation		
3, 4	3	4	Port1 transmission speed	
	ON	ON	4,800 bps	Doesn't support
	OFF	ON	9,600 bps	
	ON	OFF	19,200 bps	Default
	OFF	OFF	38,400 bps	
5	ON	Dedicated port		
6	6	PHL	Port2 transmission speed	
	ON	Low	9,600 bps	
	ON	High	38,400 bps	
	OFF	Low	4,800 bps	Doesn't support
	OFF	High	19,200 bps	Default
7	OFF	(System mode)		Do not turn on.
8	OFF	(System mode)		Do not turn on.

Port setting toggle-switch







Mode setting DIP-switch

Toggle-Switch





### EH-150 port1/port 2 RS232 / MICRO-EH port1 RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 8P RJ45 Male	
2 RX	6 RX	8 RX	5 SD	
3 TX	4 TX	7 TX	6 RD	
5 GND	5 GND	5 GND	1 SG	
8 CTS			8 RS	
			4 PHL	circuit
			7 DR	
				



MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 8P RJ45 Male
9 RX			5 SD
6 TX			6 RD
5 GND			1 SG
			8 RS



			4 PHL	circuit
			7 DR	
				

### EH-150 port1 RS485 4W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 8P RJ45 Male
1 RX-			5 TX-
2 RX+			4 TX+
3 TX-			6 RX-
4 TX+			7 RX+
5 GND			1 SG
			



MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS485 4W 8P RJ45 Male
1 RX-			5 TX-
2 RX+			4 TX+
3 TX-			6 RX-
4 TX+			7 RX+
5 GND			1 SG
			



### EH-150 port1 RS485 2W

MT6000/8000 series except MT6050i/MT8050i





COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 8P RJ45 Male	
1 RX-	6 Data-		4 TX+	circuit
			7 RX+	
2 RX+	9 Data+		5 TX-	circuit
			6 RX-	

5 GND	5 GND		1 SG
			

**MT6050i/MT8050i**



COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 8P RJ45 Male
1 RX-	7 Data-		4 TX+
			7 RX+
2 RX+	8 Data+		5 TX-
			6 RX-
5 GND	5 GND		1 SG
			

**H Series CPU Port RS232**
**MT6000/8000 series except MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 15P D-Sub Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	9 SG
			10 SG
8 CTS			4 RTS
			5 CTS
			7 DSR
			8 PHL
			14 PV12
			

**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			RS232 15P D-Sub Male
9 RX			5 SD
6 TX			6 RD
5 GND			1 SG
			circuit

			8 RS	circuit
			5 CTS	
			7 DSR	
			8 PHL	
			14 PV12	
				

### Driver Version:

Version	Date	Description
V1.10	Oct/22/2009	Fixed HMI occupies the control right of CPU module.
V1.30	Mar/22/2010	

# HUST H4X

Supported Series: HUST CNC Controller H4 Series.

Website: <http://www.hust.com.tw/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	HUST H4X		
PLC I/F	RS-232		CPU port
Baud rate	38400	9600,19200,38400,57600	
Data bits	7		
Parity	Even		
Stop bits	2		
Turn around delay	5		
PLC sta. no.	1		





## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDD	0 ~ 255	Mapping to VM 10800 ~ 10807 (read only)
B	O	DDD	0 ~ 255	Mapping to VM 10808 ~ 10815 (read only)
B	C	DDD	0 ~ 255	Mapping to VM 10816 ~ 10823 (read only)
B	S	DDD	0 ~ 255	Mapping to VM 10824 ~ 10831 (read only)
B	A	DDD	0 ~ 255	Mapping to VM 10832 ~ 10863 (read only)
B	VM_bit	DDDDdd	100 ~ 9999931	Bit address (dd): 00 ~ 31
DW	VM	DDDDD	1 ~ 99999	Please refer to the controller specification for register range.
DW	R	DDD	0 ~ 255	Mapping to VM 10000 ~ 10255 (read only)



DW	Cn	DDD	0 ~ 255	Mapping to VM 10256 ~ 10511 (read only)
DW	Tm	DDD	0 ~ 255	Mapping to VM 10512 ~ 10767 (read only)

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	HUST CNC Controller RS232 D-Sub Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			HUST CNC Controller RS232 D-Sub Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V2.01	Sep/29/2009	

# IAI X-SEL CONTROLLER

Website: <http://www.iai-robot.co.jp/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	IAI X-SEL CONTROLLER		
PLC I/F	RS232		
Baud rate	9600	9600~19200	
Data bits	7	7 or 8	
Parity	None	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	0		

## Device Address:

Bit/Word	Device type	Format	Range	Memo
W	Servo_On_Off	H	1 ~ 8	Address 1~8 represent the corresponding axis. Write 1 means ON and 0 means OFF.
W	Servo_Origin	H	1 ~ 8	Address 1~8 represent the corresponding axis. Back to origin.
W	CurrentAxisPos	H	1 ~ 8	For reading current position. The state of current axis is put in RW axis*100. i.e., for the state of axis 2, 2*100=200, so it is in RW200.
W	RunProgram	H	0	Data written indicates which program to run.
W	EndProgram	H	0	Data written indicates which program to stop.
W	PointMove	H	0 ~ 8	Address 1~8 represent the corresponding axis. The data written indicates which point to reach. Put parameters ACC, DEC, SPEED in





				axis*100+1, axis*100+2 and axis*100+3 respectively.
W	JoggingMove	H	0 ~ 8	Jogging. Address 1~8 represent the corresponding axis. Put parameters ACC, DEC, SPEED and Position in axis*100+11, axis*100+12, axis*100+13 and axis*100+14 respectively.
W	AbsoluteMove	H	0 ~ 8	Jog to the set absolute coordinate. Address 1~8 represent the corresponding axis. Put parameters ACC, DEC, SPEED and Position in axis*100+21, axis*100+22, axis*100+23 and axis*100+24 respectively.
W	PointChange	H	0 ~ 8	To change the value of the point. Address 1~8 represent the corresponding axis. Put parameters ACC, DEC, SPEED and Position in axis*100+31, axis*100+32, axis*100+33 and axis*100+34 respectively.
W	SoftWareReset	H	0	Reset soft ware.

Note: ddd: Decimal, hhh: Hexadecimal, ooo: Octal.

Each model of CPU is different; it is recommended to refer to PLC Manual Device List.



## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Host RS232 D-Sub Female
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	2 RX
5 GND	5 GND	5 GND	5 GND
			



**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			Host RS232 D-Sub Female
9 RX			3 TX
6 TX			2 RX
5 GND			5 GND
			

**Driver Version:**

Version	Date	Description
V1.00	Jun/01/2010	Driver released.

## IDEC Micro

Supported Series: IDEC Micro3, Micro3C, MicroSmart, OpenNet Controller series.

Website: <http://www.idec.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	IDEC Micro		
PLC I/F	RS232	RS232, RS485	
Baud rate	9600	9600, 19200	
Data bits	7	7, 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	255 (for 1:1 connect)	0-255	255 or same as the PLC setting

Online simulator	YES	
Extend address mode	YES	Do not set the PLC Station No. to 255

### PLC Setting:

Communication mode	9600, E, 7, 1 (default), Use Computer Link Protocol
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### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	DDDDo	0 ~ 20477	Input (I)
B	Y	DDDDo	0 ~ 20477	Output (Q)
B	M	DDDDo	0 ~ 20477	Internal Relay (M)
W	RT	DDDD	0 ~ 9999	Timer (T)
W	RC	DDDD	0 ~ 9999	Counter (C)
W	D	DDDD	0 ~ 9999	Data Register (D)



## Wiring Diagram:

### Micro3C, MicroSmart, OpenNet Controller CPU Ladder Port

MT6000/8000 series except MT6050i/MT8050i




COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Port1 or Port2 RS232 8P Mini-DIN Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	7 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			Port1 or Port2 RS232 8P Mini-DIN Male
9 RX			3 TXD
6 TX			4 RXD
5 GND			7 GND
			




### Micro3 CPU Port, MicroSmart with FC4A-PC2 RS485 Communication Adapter

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 8P Mini-DIN Male
1 RX-	6 Data-		2 RXD-
2 RX+	9 Data+		1 RXD+
5 GND	5 GND		7 GND
			



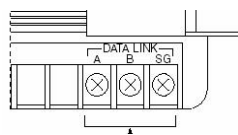
MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 8P Mini-DIN Male
1 RX-	7 Data-		2 RXD-



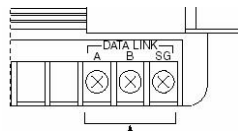
2 RX+	8 Data+		1 RXD+
5 GND	5 GND		7 GND
			

### Micro3C, OpenNet Controller Data Link Terminals, MicroSmart with FC4A-PC3 RS485 Communication Adapter

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		Data Link Terminal
1 RX-	6 Data-		A RXD-
2 RX+	9 Data+		B RXD+
5 GND	5 GND		SG GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		Data Link Terminal
1 RX-	7 Data-		A RXD-
2 RX+	8 Data+		B RXD+
5 GND	5 GND		SG GND
			

### Driver Version:

Version	Date	Description
V1.20	Jun/19/2009	

# INOVANCE H2U/H1U

Website: <http://www.inovance.cn/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	INOVANCE H2U/H1U		
PLC I/F	RS485 4W		
Baud rate	9600	9600~19200	
Data bits	7	7 or 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	0		

## Device Address:



Bit/Word	Device type	Format	Range	Memo
B	X	OOO	0 ~ 377	Input Bits
B	Y	OOO	0 ~ 377	Output Bits
B	M	DDDD	0 ~ 7999	Auxiliary Relay
B	T	DDD	0 ~ 255	Timer Relay
B	C	DDD	0 ~ 255	Counter Relay
B	SM	DDDD	8000 ~ 9999	Special Auxiliary Relay
B	D_Bit	DDDDdd	0 ~ 799915	
B	S	DDDD	0 ~ 4095	
W	TV	DDD	0 ~ 255	Timer Memory
W	CV	DDD	0 ~ 199	Counter Memory
W	D	DDDD	0 ~ 7999	Data Registers
DW	CV2	DDD	200 ~ 255	Counter Memory (32bit)
W	SD	DDDD	8000 ~ 9999	Special Data Register

Note: ddd: Decimal, hhh: Hexadecimal, ooo: Octal.



Each model of CPU is different, it is recommended to refer to PLC Manual Device List.

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			H2U/H1U RS422 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			H2U/H1U RS422 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			

## Driver Version:

Version	Date	Description
V1.00	May/19/2010	Driver released.

# Intelligent Servo

Supported Series: Intelligent Servo supports IDM640, IDM240.

Website: <http://www.techsoftmotion.com>

## HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	Intelligent Servo		
PLC I/F	RS232		
Baud rate	9600	9600~115200	
Data bits	8	7 or 8	
Parity	None	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	1		

## Device Address:

Bit/Word	Device type	Format	Range	Memo
W	Register_32bit	HHHH	0 ~ 270f	32bit signed
DW	Register_H	HHHH	0 ~ 270f	32bit Hex
W	UPD	HHHHH	0 ~ 1869f	Send UDP command
W	STOP	HHHHH	0 ~ 1869f	Send STOP command



## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Servo RS232 D-Sub Male
2 RX	6 RX	8 RX	2 TD
3 TX	4 TX	7 TX	3 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P			Servo RS232 D-Sub
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D-Sub Female			Male
9 RX			2 TD
6 TX			3 RD
5 GND			5 GND
			

### Driver Version:

Version	Date	Description
V1.00	Nov/06/2009	Driver released.



## Justfi controller

Supported Series: Justfi weighing instruments, Industrial Batching Controller supports XK31CB4, XK31CB6.

Website: <http://www.justfi.com>

### HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	Justfi controller		
PLC I/F	RS232		
Baud rate	9600	9600, 19200	
Data bits	7	7 or 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	1		

### Device Address:



Bit/Word	Device type	Format	Range	Memo
W	Func	DD	0 ~ 99	Read / Write
DW	Func_DW	DD	0 ~ 99	Read / Write
W	RW	H	0	Weight (read only)
W	RF	H	0	Read result (read only)
W	RT	H	0	Read total (read only)
W	RG	H	0	Read prescription group
W	RC	H	0	Circle
W	RB	H	0	Read status (read only)
W	MZ	H	0	Zero (write only)
W	MT	H	0	Tare (write only)
W	CT	H	0	Clear tare (write only)
W	DT	H	0	Clear total (write only)
W	BB	H	0	Start (write only)
W	HB	H	0	Stop (write only)
W	BD	H	0	Discharge (write only)
W	RP1t ..... RP6F	H	0	Read/Write recipe

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	CB4 RS232
2 RX	6 RX	8 RX	TD
3 TX	4 TX	7 TX	RD
5 GND	5 GND	5 GND	GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			CB4 RS232
9 RX			TD
6 TX			RD
5 GND			GND
			

## Driver Version:

Version	Date	Description
V1.40	Nov/04/2009	

## Kernel sistemi

Supported Series: Kernel sistemi DMX 30

Website: <http://www.kernel.modena.it/>

### HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	Kernel sistemi		
PLC I/F	RS232	RS485	
Baud rate	19200	9600	
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1		Must match the PLC port setting

### Device Address:

Bit/Word	Device type	Format	Range	Memo
W	D	HHHH	0 ~ ffff	



### Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	DMX30 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	2 RX
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			DMX30 RS232 9P D-Sub Male
9 RX			3 TX

6 TX			2 RX
5 GND			5 GND
			

### Driver Version:

Version	Date	Description
V1.00	Feb/06/2010	Driver released.

# KEYENCE KV-10/16/24/40/80/Visual KV Series

Supported Series: KEYENCE KV series, KV16~80

Website: <http://www.keyence.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	KEYENCE KV-10/16/24/40/80/Visual KV Series		
PLC I/F	RS232	RS232	
Baud rate	9600		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	0		Must match the PLC port setting.

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	RLY	DDDdd0*	0 ~ 655150*	dd:0 ~ 15
B	DM_Bit	DDDDh	0 ~ 65535f	
W	DM	DDDD	0 ~ 65535	
W	TM	DDDD	0 ~ 8999	
W	T	DDDD	0 ~ 9999	
W	T_Curr	DDDD	0 ~ 9999	Timer_Current
W	T_Preset	DDDD	0 ~ 9999	
W	C	DDDD	0 ~ 9999	
W	C_Curr	DDDD	0 ~ 9999	Counter_Current
W	C_Preset	DDDD	0 ~ 9999	

Note:\*





If Relay (bit) register is used, please place a zero at the end of the address.

For example, to read Relay (bit) 100, the address is written as "1000".



## Wiring Diagram:

### RS232 CPU Port:

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	OP-26486 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			OP-26486 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			



### 9P D-Sub to 6P RJ11:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P RJ11 Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	3 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P RJ11 Male
9 RX			2 TXD
6 TX			4 RXD
5 GND			3 GND

			
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### Driver Version:

Version	Date	Description
V1.40	Apr/17/2009	

## KEYENCE KV-5000 (Ethernet)

Supported series: KV5000, 3000, 1000 series.

Website: <http://www.keyence.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	KEYENCE KV-5000 (Ethernet)		
PLC I/F	Ethernet		
Port no.	8501		Must match the PLC port setting.
PLC sta. no.	0		Must match the PLC port setting.

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	MR	DDDdd	0 ~ 99915	
B	LR	DDDdd	0 ~ 99915	
B	CR	DDDdd	0 ~ 99915	
B	RLY	DDDdd	0 ~ 99915	
W	DM	DDDDD	0 ~ 65535	
W	TM	DDDD	0 ~ 9999	
W	T	DDDD	0 ~ 9999	
W	T_Curr	DDDD	0 ~ 9999	Timer Current
W	T_Preset	DDDD	0 ~ 9999	Timer Preset
W	C	DDDD	0 ~ 9999	
W	C_Curr	DDDD	0 ~ 9999	
W	C_Preset	DDDD	0 ~ 9999	
W	CM	DDDDD	0 ~ 65535	
W	EM	DDDDD	0 ~ 65535	
W	FM	DDDDD	0 ~ 65535	

Note:




If RLY (bit) register is used, please place a zero at the end of the address.  
 For example, to read RLY 100, the address is written as "1000".

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.00	Dec/25/2009	Driver released.

## KEYENCE KV-700/1000/3000/5000 Series

Website: <http://www.keyence.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	KEYENCE KV-700/1000/3000/5000 Series		
PLC I/F	RS232	RS232	
Baud rate	115200		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	0		Must match the PLC port setting.

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	MR	DDDdd	0 ~ 99915	
B	LR	DDDdd	0 ~ 99915	
B	CR	DDDdd	0 ~ 99915	
B	RLY	DDDdd	0 ~ 99915	
W	DM	DDDDD	0 ~ 65535	
W	TM	DDDD	0 ~ 9999	
W	T	DDDD	0 ~ 9999	
W	T_Curr	DDDD	0 ~ 9999	Timer_Current
W	T_Preset	DDDD	0 ~ 9999	
W	C	DDDD	0 ~ 9999	
W	C_Curr	DDDD	0 ~ 9999	Counter_Current
W	C_Preset	DDDD	0 ~ 9999	
W	CM	DDDDD	0 ~ 65535	
W	EM	DDDDD	0 ~ 65535	
W	FM	DDDDD	0 ~ 65535	





Note:

If Relay (bit) register is used, please place a zero at the end of the address.



For example, to read Relay (bit) 100, the address is written as "1000".

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	OP-26486 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			OP-26486 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V2.20	Jul/28/2009	

# Korenix 6550

Website: <http://www.korenix.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Korenix 6550		Modbus protocol
PLC I/F	Ethernet		
Port no.	502		
PLC sta. no.		0	

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	1x	DDDDD	1 ~ 65535	
B	0x	DDDDD	1 ~ 65535	
B	3x_Bit	DDDDDdd	100 ~ 6553515	
B	4x_Bit	DDDDDdd	100 ~ 6553515	
B	6x_Bit	DDDDDdd	100 ~ 6553515	
W	3x	DDDDD	1 ~ 65535	
W	4x	DDDDD	1 ~ 65535	
W	5x	DDDDD	1 ~ 65535	
W	6x	DDDDD	1 ~ 65535	

## Wiring Diagram:

Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



### Driver Version:

Version	Date	Description
V1.61	Apr/17/2009	

# Koyo CLICK

Supported Series: KOYO CLICK PLC series

Website: <http://www.automationdirect.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Koyo CLICK		
PLC I/F	RS232		
Baud rate	38400	Communications Port1 (fixed)	Reference PLC Specification
Data bits	8	Communications Port1 (fixed)	Reference PLC Specification
Parity	Odd	Communications Port1 (fixed)	Reference PLC Specification
Stop bits	1	Communications Port1 (fixed)	Reference PLC Specification
PLC sta. no.	1	Communications Port1 (fixed)	Reference PLC Specification

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	Ddd	001 ~ 816	Input Status (Read Only)
B	Y	Ddd	001 ~ 816	Output Status
B	C	DDDD	1 ~ 2000	Control Bit
B	T	DDD	1 ~ 500	Timer Status (Read Only)
B	CT	DDD	1 ~ 250	Counter Status (Read Only)
B	SC	DDDD	1 ~ 1000	System Control Bit (Read Only)
W	DS	DDDD	1 ~ 4500	Data Registers
W	DD	DDDD	1 ~ 1000	Data Registers (Double Word)
W	DH	DDD	1 ~ 500	Data Registers
W	DF	DDD	1 ~ 500	Data Registers (Double Word)
W	XD	D	0 ~ 8	Input Status Registers (Read Only)
W	YD	D	0 ~ 8	Output Status Registers
W	TD	DDD	1 ~ 500	Timer Current Values (Read Only)

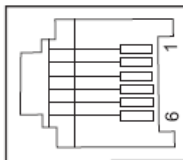
W	CTD	DDD	1 ~ 250	Counter Current Values (Double Word/Read Only)
W	SD	DDDD	1 ~ 1000	System Data Registers (Read Only)
W	TXT	DDDD	1 ~ 1000	Text Data Registers

ddd: Decimal / hhh:Hexadecimal / ooo:Octal

## Wiring Diagram:

KOYO CLICK PLC Com Port:

6 pin RJ12 Phone  
Type Jack – both ports



Port 1 Pin Descriptions		
1	0V	Power (-) connection (GND)
2	5V	Power (+) connection
3	RXD	Receive data (RS-232)
4	TXD	Transmit data (RS-232)
5	NC	No connection
6	0V	Power (-) connection (GND)

Port 2 Pin Descriptions		
1	0V	Power (-) connection (GND)
2	5V	Power (+) connection
3	RXD	Receive data (RS-232)
4	TXD	Transmit data (RS-232)
5	RTS	Request to send
6	0V	Power (-) connection (GND)

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P RJ12 Male
2 RX	6 RX	8 RX	4 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	1 GND

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P RJ12 Male
9 RX			4 TXD
6 TX			3 RXD
5 GND			1 GND

**Version:**

Version	Date	Description
V1.50	Jun/22/2010	



## KOYO DIRECT

Supported Series: KOYO DirectLogic series PLC DL05, DL06, DL105, DL205, DL305, and DL405 series.

Website: <http://www.automationdirect.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	KOYO DIRECT		
PLC I/F	RS232	RS232, RS485	
Baud rate	9600	9600, 19200, 38400	
Data bits	8	7, 8	
Parity	Odd	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	1	1-90	

### PLC Setting:

	<ol style="list-style-type: none"> <li>1. The PLC must not have a password.</li> <li>2. PLC must be set for Full Duplex operation.</li> <li>3. PLC must be set for No Hardware Handshaking.</li> <li>4. The PLC must be set to use the 'K' Sequence Protocol.</li> <li>5. Set the mode switch to the TERM mode.</li> <li>6. When using the D4-440 CPU, the station number must be set to 1.</li> </ol>
--	--

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	O000	0 ~ 4000	Input Bits
B	Y	O000	0 ~ 4000	Output Bits
B	C	O0000	0 ~ 10000	Control Relays
B	T	O000	0 ~ 1000	Timer Status Bits
B	CT	O000	0 ~ 1000	Counter Status Bits
B	S	O000	0 ~ 2000	





B	SP	0000	0 ~ 2000	
B	GX	00000	0 ~ 10000	
B	GY	00000	0 ~ 10000	
W	V	00000	0 ~ 77777	V Memory
W	Timer	0000	0 ~ 1000	
W	Counter	0000	0 ~ 1000	

## Wiring Diagram:



### 9P D-Sub to 6P RJ12 Jack: CPU unit:

#### DL05/DL06/DL105/DL230/DL240/DL250/DL350/DL450 RS232 port

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	KOYO CLICK PLC RS232 6P RJ12 Male
2 RX	6 RX	8 RX	4 TX
3 TX	4 TX	7 TX	3 RX
5 GND	5 GND	5 GND	1 GND
			





MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			KOYO CLICK PLC RS232 6P RJ12 Male
9 RX			4 TX
6 TX			3 RX
5 GND			1 GND
			



### 9P D-Sub to 15P D-Sub: CPU unit: DL06/DL250 CPU Port2 RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 Port2 15P D-Sub Male	
2 RX	6 RX	8 RX	2 TX	
3 TX	4 TX	7 TX	3 RX	
5 GND	5 GND	5 GND	7 GND	
			4 RTC	circuit



			5 CTS
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 Port2 15P D-Sub Male
9 RX			2 TX
6 TX			3 RX
5 GND			7 GND
			4 RTC
			5 CTS
			circuit
			



**9P D-Sub to 15P D-Sub: CPU unit: DL06/DL250 CPU Port2 RS422**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS422 Port2 15P D-Sub Male
1 RX-			10 TX-
2 RX+			9 TX+
3 TX-			6 RX-
4 TX+			13 RX+
5 GND			7 GND
			11 RTS+
			14 CTS+
			Circuit
			12 RTS-
			15 CTS-
			Circuit
			

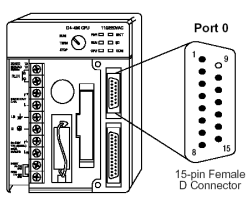




MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS422 Port2 15P D-Sub Male
1 RX-			10 TX-
2 RX+			9 TX+
3 TX-			6 RX-

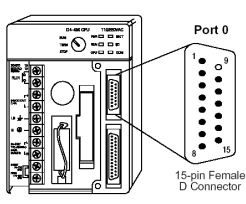
4 TX+			13 RX+	
5 GND			7 GND	
			11 RTS+	Circuit
			14 CTS+	
			12 RTS-	Circuit
			15 CTS-	
				

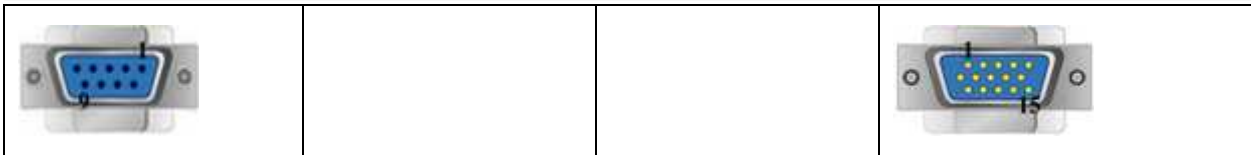
Note: DL06/DL250 CPU Port2 include RS232 and RS422

**9P D-Sub to 15P D-Sub: CPU unit: DL430/DL440/DL450 CPU unit Port0 RS232**  
 MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 Port0 15P D-Sub Male	
2 RX	6 RX	8 RX	2 TX	
3 TX	4 TX	7 TX	3 RX	
5 GND	5 GND	5 GND	13 GND	
			1 YOP	circuit
			7 CTS	
			2 YOM	circuit
			4 ONLINE	
			14 GND	
				

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 Port0 15P D-Sub Male	
9 RX			2 TX	
6 TX			3 RX	
5 GND			13 GND	
			1 YOP	circuit
			7 CTS	
			2 YOM	circuit
			4 ONLINE	
			14 GND	



**9P D-Sub to 25P D-Sub: CPU unit: DL430/DL440/DL450 CPU unit Port1 & DL350 CPU unit Port2 RS232**

MT6000/8000 series except MT6050i/MT8050i



COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 Port1 25P D-Sub Male	
2 RX	6 RX	8 RX	2 TX	
3 TX	4 TX	7 TX	3 RX	
5 GND	5 GND	5 GND	7 GND	
			4 RTC	Circuit
			5 CTS	

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			RS232 Port1 25P D-Sub Male	
9 RX			2 TX	
6 TX			3 RX	
5 GND			7 GND	
			4 RTC	Circuit
			5 CTS	

**9P D-Sub to 25P D-Sub: CPU unit: DL430/DL440/DL450 CPU unit Port1 & DL350 CPU unit Port2 RS422**

MT6000/8000 series except MT6050i/MT8050i



COM1 RS485 4W 9P D-Sub Male			RS422 Port 25P D-Sub Male
1 RX-			16 TX-
2 RX+			14 TX+
3 TX-			10 RX-
4 TX+			9 RX+
5 GND			7 GND
			19 RTS+
			11 CTS+
			Circuit
			18 RTS-
			23 CTS-
			Circuit
			

MT6050i/MT8050i



COM1 RS485 4W 9P D-Sub Female			RS422 Port 25P D-Sub Male
1 RX-			16 TX-
2 RX+			14 TX+
3 TX-			10 RX-
4 TX+			9 RX+
5 GND			7 GND
			19 RTS+
			11 CTS+
			Circuit
			18 RTS-
			23 CTS-
			Circuit
			

**9P D-Sub to 25P D-Sub: CPU unit: DL450 CPU unit Port3 RS422**

MT6000/8000 series except MT6050i/MT8050i




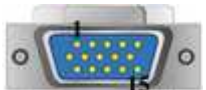
COM1 RS485 4W 9P D-Sub Male			RS422 Port3 25P D-Sub Male
1 RX-			13 TX-
2 RX+			12 TX+
3 TX-			25 RX-
4 TX+			24 RX+
5 GND			7 GND
			

MT6050i/MT8050i



COM1 RS485 4W 9P D-Sub Female			RS422 Port3 25P D-Sub Male
1 RX-			13 TX-
2 RX+			12 TX+
3 TX-			25 RX-
4 TX+			24 RX+
5 GND			7 GND
			

**9P D-Sub to 25P D-Sub: Communication unit: DL205 series D2-DCM and DL405 series D4-DCM RS232**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 Port 25P D-Sub Male
2 RX	6 RX	8 RX	2 TX
3 TX	4 TX	7 TX	3 RX
5 GND	5 GND	5 GND	7 GND
			4 RTC
			5 CTS
			circuit
			

**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			RS232 Port 25P D-Sub Male
9 RX			2 TX
6 TX			3 RX
5 GND			7 GND
			4 RTC
			5 CTS
			circuit
			

**Driver Version:**

Version	Date	Description
V1.30	Nov/08/2010	



## Koyo Ethernet

Supported Series: KOYO DirectLogic series, model H0-ECOM100, H2-ECOM100.

Website: <http://www.automationdirect.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Koyo Ethernet		
PLC I/F	Ethernet		UDP/IP
Port no.	28784		
PLC sta. no.	No need to set station no.	0	

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	GX	OOOO	0 ~ 3777	Global I/O
B	X	OOOO	0 ~ 1777	Real Word Inputs
B	SP	OOOO	0 ~ 1777	Special Purpose Relays
B	GY	OOOO	0 ~ 3777	More Global I/O
B	Y	OOOO	0 ~ 1777	Real Word Outputs
B	C	OOOO	0 ~ 3777	Control Relays
B	S	OOOO	0 ~ 1777	Stage Status Bits
B	T	OOO	0 ~ 377	Timer Status Bits
B	CT	OOO	0 ~ 377	Counter Status Bits
W	V	OOOOO	0 ~ 41237	V-memory
W	CCM_32	HHH	1 ~ 200	GX, X, SP
W	CCM_33	HHH	1 ~ 340	GY, Y, C, S, Y, CT, V
W	CCM_31	HHHH	1 ~ 42a0	V


EasyBuilder device address ranges may be different from PLC extended mode, please refer to EasyBuilder address range as above.

ddd:Decimal, hhh:Hexadecimal, ooo:Octal

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.10	Jul/03/2009	

## Lenze

Supported Series: PLC Model No.: 9300/8200 series, and EPL10200

Pass-through 2102IB fieldbus module: RS485 (LECOM B)

Website: <http://www.lenze.de>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Lenze		
PLC I/F	RS232		
Baud rate	9600	9600, 19200	
Data bits	7	7,8	
Parity	None	Even, Odd, None	
Stop bits	1	1, 2	
PLC sta. no.	1	0-255	

### PLC Setting:



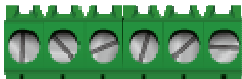
Communication mode	Same as the MT500 setting
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### Device Address:



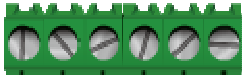
Bit/Word	Device type	Format	Range	Memo
B	CNB	DDDDdd	0 ~ 999915	Subcode not supported. Can only read/write CNI Word Type.
B	CB	DDDDddxx	0 ~ 81920015	Subcode supported. Can only read/write CI Word Type.
W	CI	DDDDdd	0 ~ 819200	Subcode supported. Integer
W	CD	DDDDdd	0 ~ 819200	Subcode supported. DWord
W	CF	DDDDdd	0 ~ 819200	Subcode supported. DWord (float point)
W	CNI	DDDD	0 ~ 9999	Subcode not supported. Integer
W	CND	DDDD	0 ~ 9999	Subcode not supported. DWord
W	CNF	DDDD	0 ~ 9999	Subcode not supported. DWord (float point)

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		Lenze 2102IB LECOM-B RS485 plug-in terminal 4-pole
1 RX-	6 Data-		72 T/R (A)
2 RX+	9 Data+		71 T/R (B)
5 GND	5 GND		
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		Lenze 2102IB LECOM-B RS485 plug-in terminal 4-pole
1 RX-	7 Data-		72 T/R (A)
2 RX+	8 Data+		71 T/R (B)
5 GND	5 GND		
			

## Driver Version:

Version	Date	Description
V1.10	Apr/17/2009	
V1.20	Sep/6/2011	

## LIYAN EX series

Supported Series: LIYAN PLC Ex/Ex1s/Ex1n/Ex2n series

Website: <http://www.liyanplc.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LIYAN EX series		
PLC I/F	RS232	RS232	
Baud rate	9600	9600~115200	
Data bits	7	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1,2	
PLC sta. no.	0	0-255	Must match the PLC port setting.





### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	ooo	0 ~ 377	Input Relay
B	Y	ooo	0 ~ 377	Output Relay
B	M	ddd	0 ~ 9999	Internal Bit Memory
B	T	ddd	0 ~ 255	Timer Bit Memory
B	C	ddd	0 ~ 255	Counter Bit Memory
W	TV	ddd	0 ~ 255	Timer Register
W	CV	ddd	0 ~ 199	Counter Register
W	D	ddd	0 ~ 9999	Data Register
W	CV2	ddd	200 ~ 255	Counter Register (Double Word)
W	SD	ddd	8000 ~ 9999	Special Data Register



## Wiring Diagram:

### 9P D-Sub to 8P Mini-DIN: Ex, Ex1s, Ex1n, Ex2n series

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 8P Mini-DIN Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	7 RXD
5 GND	5 GND	5 GND	6 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 8P Mini-DIN Male
9 RX			2 TXD
6 TX			7 RXD
5 GND			6 GND
			

## Driver Version:

Version	Date	Description
V1.10	Aug/12/2009	

## LS GLOFA Cnet

Supported Series: LS GLOFA GM6/GM7 CPU port. G7L-CUEB / G6L-CUEB / G4L-CUEA / G3L-CUEA Cnet module

Website: <http://www.lgis.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS GLOFA Cnet		
PLC I/F	RS232	RS232/RS485 2W/4W	
Baud rate	9600	9600~115200	
Data bits	8	7, 8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	0	0~31	

### PLC Setting:

Communication mode	9600,N,8,1 (default), Cnet protocol
Communication module	Applicable mode: 1 dedicated communication





### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	MX	DDDDD	0 ~ 32767	Internal Relay
B	IX	ddDdd	0 ~ 63763	Input
B	QX	ddDdd	0 ~ 63763	Output
W	MW	DDDDD	0 ~ 32767	Data Register
DW	MD	DDDDD	0 ~ 16383	Double Word



## Wiring Diagram:

9P D-Sub to 9P D-Sub:

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	7 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			7 TXD
6 TX			4 RXD
5 GND			5 GND
			



### 9P D-Sub to 9P D-Sub: Communication Module (G7L-CUEB / G6L-CUEB / G4L-CUEA / G3L-CUEA Cnet RS232)

MT6000/8000 series except MT6050i/MT8050i


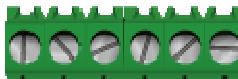
COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
			1 CD	circuit
			7 RTS	
			8 CTS	
			4 DTR	circuit
			6 DSR	
				



**MT6050i/MT8050i**



COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			1 CD
			7 RTS
			8 CTS
			4 DTR
			6 DSR
			circuit
			circuit
			

**Communication Module (G7L-CUEC / G6L-CUEC / G4L-CUEA / G3L-CUEA Cnet RS422)**
**MT6000/8000 series except MT6050i/MT8050i**

COM1 RS485 4W 9P D-Sub Male			RS422 terminal
1 RX-			SDB
2 RX+			SDA
3 TX-			RDB
4 TX+			RDA
5 GND			GND
			

**MT6050i/MT8050i**

COM1 RS485 4W 9P D-Sub Female			RS422 terminal
1 RX-			SDB
2 RX+			SDA
3 TX-			RDB
4 TX+			RDA
5 GND			GND

			
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### Driver Version:

Version	Date	Description
V1.80	Jun/08/2010	

## LS GLOFA FEnet (Ethernet)

Website: <http://www.lgis.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS GLOFA FEnet (Ethernet)		
PLC I/F	Ethernet		
Port no.	2004		
PLC sta. no.	0	0~31	


### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	MX	DDDDDD	0 ~ 131056	Internal Relay
B	IX	ddDdd	0 ~ 63763	Input
B	QX	ddDdd	0 ~ 63763	Output
W	MW	DDDD	0 ~ 8191	Data Register
DW	MD	DDDD	0 ~ 4095	Double Word

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.00	Apr/02/2009	Driver released.

## LS GLOFA GM3467 (LOADER)

Supported Series: LS GLOFA series GM3, GM4, GM6, GM7 CPU port.

Website: <http://www.lgis.com/>

### HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	LS GLOFA GM3467 (LOADER)		
PLC I/F	RS232		
Baud rate	38400		
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1		

### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	MX	DDDDDD	0 ~ 524272	
B	IX	ddDdd	0 ~ 63763	00.0.0 ~ 63.7.63 (dd.D.dd)
B	QX	ddDdd	0 ~ 63763	00.0.0 ~ 63.7.63 (dd.D.dd)
W	IW	HHH	0 ~ 273	
W	QW	HHH	0 ~ 273	
W	MW	DDDDD	0 ~ 32767	
W	MD	DDDDD	0 ~ 16383	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	LS GLOFA series RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			LS GLOFA series RS232 9P D-Sub Male
9 RX			3 TD
6 TX			2 RD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.30	Mar/08/2010	

## LS MASTER-K Cnet

Supported Series: LS MASTER-K series: K80S, K200S, K300S, and K1000S

Website: <http://www.lgis.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS MASTER-K Cnet		
PLC I/F	RS232	RS232/RS485	
Baud rate	38400	9600, 19200, 38400	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	0	0-31	Must match the PLC port setting.





Online simulator	YES
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### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	P	DDDh	0 ~ 255f	I/O Relay (P)
B	K	DDDh	0 ~ 255f	Keep Relay (K)
B	M	DDDh	0 ~ 255f	Auxiliary Relay (M)
B	L	DDDh	0 ~ 255f	Link Relay (L)
B	F	DDDh	0 ~ 255f	Special Relay (F)
B	D_bit	DDDDh	0 ~ 9999f	D_bit
W	TV	DDD	0 ~ 255	Timer Present Value
W	CV	DDD	0 ~ 255	Counter Present Value
W	D	DDDD	0 ~ 9999	Data Register (D)
W	M_word	DDD	0 ~ 255	Word type for M
W	L_word	DDD	0 ~ 255	Word type for L
W	F_word	DDD	0 ~ 255	Word type for F

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	CPU Port Cnet I/F RS232 9P D-Sub Male
2 RX	6 RX	8 RX	7 TX
3 TX	4 TX	7 TX	4 RX
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			CPU Port Cnet I/F RS232 9P D-Sub Male
9 RX			7 TX
6 TX			4 RX
5 GND			5 GND
			

If connected with Cnet module, please refer to Cnet module document.

## Driver Version:

Version	Date	Description
V1.00	Apr/19/2010	Driver released.
V1.10	May/11/2011	Added registers: D_bit, M_word, F_word, L_word



## LS MASTER-K CPU Direct

Supported Series: LS MASTER-K series: K80S, K120S, K200S, K300S, K1000S, K7M.

Website: <http://www.lgis.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LG MASTER-K CPU Direct		
PLC I/F	RS232	RS232/RS485	
Baud rate	38400	9600, 19200, 38400	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	0	0-31	Must match the PLC port setting.





Online simulator	YES
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### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	P	DDDh	0 ~ 255f	I/O Relay (P)
B	K	DDDh	0 ~ 255f	Keep Relay (K)
B	M	DDDh	0 ~ 255f	Auxiliary Relay (M)
B	L	DDDh	0 ~ 255f	Link Relay (L)
B	F	DDDh	0 ~ 255f	Special Relay (F)
B	D_bit	DDDDh	0 ~ 9999f	D_bit
W	TV	DDD	0 ~ 255	Timer Present Value
W	CV	DDD	0 ~ 255	Counter Present Value
W	D	DDDD	0 ~ 9999	Data Register (D)
W	M_word	DDD	0 ~ 255	Word type for M
W	L_word	DDD	0 ~ 255	Word type for L
W	F_word	DDD	0 ~ 255	Word type for F

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	2 RX
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TX
6 TX			2 RX
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.20	May/11/2011	Added registers: D_bit, M_word, F_word, L_word

# LS MASTER-K MODBUS RTU

Supported Series: LS MASTER-K MODBUS RTU

Website: <http://www.lgis.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS MASTER-K MODBUS RTU		
PLC I/F	RS485 2W		
Baud rate	9600		
Data bits	8	8	
Parity	Even	Even	
Stop bits	1	1	
PLC sta. no.	1		Must match the PLC port setting.





## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	P	DDDDh	0 ~ 9999f	I/O Relay (P)
B	M	DDDDh	0 ~ 9999f	Auxiliary Relay (M)
B	L	DDDDh	0 ~ 9999f	Link Relay (L)
B	K	DDDDh	0 ~ 9999f	Keep Relay (K)
B	F	DDDDh	0 ~ 9999f	Special Relay (F)
B	D_bit	DDDDh	0 ~ 9999f	
W	T	DDDD	0 ~ 9999	Timer (T)
W	C	DDDD	0 ~ 9999	Counter (C)
W	S	DDDD	0 ~ 9999	
W	D	DDDD	0 ~ 9999	Data Register (D)
W	T_double	DDDD	0 ~ 9999	
W	C_double	DDDD	0 ~ 9999	
W	S_double	DDDD	0 ~ 9999	
W	D_double	DDDD	0 ~ 9999	
W	F_word	DDDD	0 ~ 9999	
W	L_word	DDDD	0 ~ 9999	



W	M_word	DDDD	0 ~ 9999	
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## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	2 RX
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TX
6 TX			2 RX
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.10	May/11/2011	Added registers: D_bit, M_word, F_word, L_word

# LS MASTER-K10S1

Supported Series: LS MASTER-K10S1

Website: <http://www.lgis.com/>

## HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	LS MASTER-K10S1		
PLC I/F	RS232	RS232/RS485	
Baud rate	9600		
Data bits	8	8	
Parity	None	None	
Stop bits	1	1	
PLC sta. no.	0		Must match the PLC port setting.

## Device Address:



Bit/Word	Device type	Format	Range	Memo
B	P	DDDh	0 ~ 255f	I/O Relay (P)
B	K	DDDh	0 ~ 255f	Keep Relay (K)
B	M	DDDh	0 ~ 255f	Auxiliary Relay (M)
B	L	DDDh	0 ~ 255f	Link Relay (L)
B	F	DDDh	0 ~ 255f	Special Relay (F)
B	T	DDD	0 ~ 255	Timer (T)
B	C	DDD	0 ~ 255	Counter (C)
W	TV	DDD	0 ~ 255	Timer Present Value
W	CV	DDD	0 ~ 255	Counter Present Value
W	D	DDDD	0 ~ 9999	Data Register (D)

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	2 RX
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TX
6 TX			2 RX
5 GND			5 GND
			

## Version:

Version	Date	Description
V1.00	Sep/08/2009	Driver released.

## LS XGB Cnet

Supported Series: LS XGB/XGT Series

Website: <http://www.lgis.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS XGB Cnet		
PLC I/F	RS232	RS232/RS485	
Baud rate	115200	9600~115200	
Data bits	8	7, 8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	1	0-31	Must match the PLC port setting.





### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	P_Bit	DDDDh	0 ~ 2047f	I/O device Bit
B	M_Bit	DDDDh	0 ~ 2047f	Internal device Bit
B	L_Bit	DDDDDh	0 ~ 11263f	Communication device Bit
B	K_Bit	DDDDh	0 ~ 2559f	Preservation device Bit
B	F_Bit	DDDDh	0 ~ 2047f	Special device Bit( write available from 1025)
B	S_Bit	DDDDD	0 ~ 12799	Relay for step control Bit
B	D_Bit	DDDDDh	0 ~ 32767f	Data register_Bit expression (D0000.0)
B	U_Bit	DH.DDh	0.000 ~ 7f.31f	XGK-CPUe : hh(0~1f)
B	T_Bit	DDDD	0 ~ 2047	Timer device Bit
B	C_Bit	DDDD	0 ~ 2047	Counter device Bit
W	P	DDDD	0 ~ 2047	I/O device_2,048 points
W	M	DDDD	0 ~ 2047	Internal device_4,096 points
W	L	DDDDD	0 ~ 11263	Communication device_20,480



				points
W	K	DDDD	0 ~ 2559	Preservation device_4,096 points
W	F	DDDD	0 ~ 2047	Special device_4,096 point
W	S	DDDDD	0 ~ 12799	Relay for step control
W	D	DDDDD	0 ~ 32767	Data register_5120 words
W	U	DH.DD	0.00 ~ 7f.31	Analog data register_256 words
W	N	DDDDD	0 ~ 21503	Communication data register_3,936 words
W	Z	DDD	0 ~ 127	Index register_128 words
W	T	DDDD	0 ~ 2047	Timer current value register_256 words
W	C	DDDD	0 ~ 2047	Counter current value register_256 words

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P Mini-DIN Male
2 RX	6 RX	8 RX	6 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	3 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P Mini-DIN Male
9 RX			6 TXD
6 TX			2 RXD
5 GND			3 GND
			



## Driver Version:

Version	Date	Description
V1.50	Mar/07/2011	Added registers: P_Bit, M_Bit, L_Bit, K_Bit...etc

# LS XGB FEnet (Ethernet)

Supported Series: LS XGB/XGT with XBL-EMTA

Website: <http://www.lgis.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS XGB FEnet (Ethernet)		
PLC I/F	Ethernet		
Port no.	2004		
PLC sta. no.	0	0~255	

## PLC Setting:

Communication mode	FEnet Potocol
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## Device Address:


Bit/Word	Device type	Format	Range	Memo
B	P_Bit	DDDDh	0 ~ 2047f	I/O device Bit
B	M_Bit	DDDDh	0 ~ 2047f	Internal device Bit
B	L_Bit	DDDDDh	0 ~ 11263f	Communication device Bit
B	K_Bit	DDDDh	0 ~ 2559f	Preservation device Bit
B	F_Bit	DDDDh	0 ~ 2047f	Special device Bit( write available from 1025)
B	S_Bit	DDDh	0 ~ 127f	Relay for step control Bit
B	D_Bit	DDDDDh	0 ~ 32767f	Data register_Bit expression (D0000.0)
B	U_Bit	DH.DDh	0.000 ~ 7f.31f	XGK-CPUE : hh(0~1f)
B	T_Bit	DDDD	0 ~ 2047	Timer device Bit
B	C_Bit	DDDD	0 ~ 2047	Counter device Bit
W	P	DDDD	0 ~ 2047	I/O device_2,048 points
W	M	DDDD	0 ~ 2047	Internal device_4,096 points
W	L	DDDDD	0 ~ 11263	Communication device_20,480 points

W	K	DDDD	0 ~ 2559	Preservation device_4,096 points
W	F	DDDD	0 ~ 2047	Special device_4,096 point
W	S	DDDDD	0 ~ 12799	Relay for step control
W	D	DDDDD	0 ~ 32767	Data register_5120 words
W	U	DH.DD	0.00 ~ 7f.31	Analog data register_256 words
W	N	DDDDD	0 ~ 21503	Communication data register_3,936 words
W	Z	DDD	0 ~ 127	Index register_128 words
W	T	DDDD	0 ~ 2047	Timer current value register_256 words
W	C	DDDD	0 ~ 2047	Counter current value register_256 words

## Wiring Diagram:

Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.50	Aug/16/2011	Added registers: P_Bit, M_Bit, L_Bit, K_Bit...etc

## LS XGK Cnet

Supported Series: LS XGT series communication module XGL-CH2A

Website: <http://www.lgis.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS XGK Cnet		
PLC I/F	RS232	RS232/RS485 2W/4W	
Baud rate	115200	9600~115200	
Data bits	8	7, 8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	0	1	

### Device Address:





Bit/Word	Device type	Format	Range	Memo
B	P_Bit	DDDDh	0 ~ 2047f	I/O device Bit
B	M_Bit	DDDDh	0 ~ 2047f	Internal device Bit
B	L_Bit	DDDDDh	0 ~ 11263f	Communication device Bit
B	K_Bit	DDDDh	0 ~ 2559f	Preservation device Bit
B	F_Bit	DDDDh	0 ~ 2047f	Special device Bit( write available from 1025)
B	S_Bit	DDDDD	0 ~ 12799	Relay for step control Bit
B	D_Bit	DDDDDh	0 ~ 32767f	Data register_Bit expression (D0000.0)
B	U_Bit	DH.DDh	0.000 ~ 3f.31f	XGK-CPUE : hh(0~1f)
B	T_Bit	DDDD	0 ~ 2047	Timer device Bit
B	C_Bit	DDDD	0 ~ 2047	Counter device Bit
W	P	DDDD	0 ~ 2047	I/O device
W	M	DDDD	0 ~ 2047	Internal device
W	L	DDDDD	0 ~ 11263	Communication device
W	K	DDDD	0 ~ 2559	Preservation device

Bit/Word	Device type	Format	Range	Memo
W	F	DDDD	0 ~ 2047	Special device( write available from 1025)
W	S	DDDDD	0 ~ 12799	Relay for step control
W	D	DDDDD	0 ~ 32767	Data register
W	U	DH.DD	0.00 ~ 3f.31	Analog data register XGK-CPUE : hh(0~1f)
W	N	DDDDD	0 ~ 21503	Communication data register
W	Z	DDD	0 ~ 127	Index register_128 words
W	T	DDDD	0 ~ 2047	Timer current value register
W	C	DDDD	0 ~ 2047	Counter current value register
W	R	DDDDD	0 ~ 32767	
W	ZR	DDDDD	0 ~ 32767	



## Wiring Diagram:

### 9P D-Sub to 9P D-Sub:

MT6000/8000 series except MT6050i/MT8050i


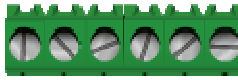
COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	XGL-CH2A CH1 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i


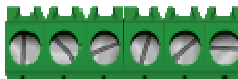
COM1 RS232 9P D-Sub Female			XGL-CH2A CH1 RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			

**9P D-Sub to Terminals:**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			XGL-CH2A CH2 5P Terminal
1 RX-			TXD-
2 RX+			TXD+
3 TX-			RXD-
4 TX+			RXD+
5 GND			GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			XGL-CH2A CH2 5P Terminal
1 RX-			TXD-
2 RX+			TXD+
3 TX-			RXD-
4 TX+			RXD+
5 GND			GND
			

**Driver Version:**

Version	Date	Description
V1.30	Feb /25/2011	Added registers: P_Bit, M_Bit, L_Bit, K_Bit...etc

## LS XGK FEnet (Ethernet)

Supported Series: LS XGT series XGL-EFMT Ethernet module.

Website: <http://www.lgis.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS XGK FEnet (Ethernet)		
PLC I/F	Ethernet		
Port no.	2004		
PLC sta. no.	0		

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	P_Bit	DDDDh	0 ~ 2047f	I/O device Bit
B	M_Bit	DDDDh	0 ~ 2047f	Internal device Bit
B	L_Bit	DDDDh	0 ~ 11263f	Communication device Bit
B	K_Bit	DDDDh	0 ~ 2559f	Preservation device Bit
B	F_Bit	DDDDh	0 ~ 2047f	Special device Bit( write available from 1025)
B	S_Bit	DDDDD	0 ~ 12799	Relay for step control Bit
B	D_Bit	DDDDh	0 ~ 32767f	Data register_Bit expression (D0000.0)
B	U_Bit	DH.DDh	0.000 ~ 3f.31f	XGK-CPUE : hh(0~1f)
B	T_Bit	DDDD	0 ~ 2047	Timer device Bit
B	C_Bit	DDDD	0 ~ 2047	Counter device Bit
W	P	DDDD	0 ~ 2047	I/O device
W	M	DDDD	0 ~ 2047	Internal device
W	L	DDDDD	0 ~ 11263	Communication device
W	K	DDDD	0 ~ 2559	Preservation device
W	F	DDDD	0 ~ 2047	Special device( write available from 1025)
W	S	DDDDD	0 ~ 12799	Relay for step control
W	D	DDDDD	0 ~ 32767	Data register




Bit/Word	Device type	Format	Range	Memo
W	U	DH.DD	0.00 ~ 3f.31	Analog data register XGK-CPUE : hh(0~1f)
W	N	DDDDD	0 ~ 21503	Communication data register
W	Z	DDD	0 ~ 127	Index register_128 words
W	T	DDDD	0 ~ 2047	Timer current value register
W	C	DDDD	0 ~ 2047	Counter current value register
W	R	DDDDD	0 ~ 32767	
W	ZR	DDDDD	0 ~ 32767	

## Wiring Diagram:

Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.30	Mar/10/2011	Added registers: P_Bit, M_Bit, L_Bit, K_Bit...etc

## LS XGT/XGK CPU DIRECT

Supported Series: LS XGT/XGK CPU RS232 port.

Website: <http://www.lgis.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	LS XGT/XGK CPU DIRECT		
PLC I/F	RS232	RS232/RS485	
Baud rate	115200	9600~115200	
Data bits	8	7, 8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	0		





### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	P_Bit	DDDDh	0 ~ 2047f	I/O device Bit
B	M_Bit	DDDDh	0 ~ 2047f	Internal device Bit
B	L_Bit	DDDDDh	0 ~ 11263f	Communication device Bit
B	K_Bit	DDDDh	0 ~ 2559f	Preservation device Bit
B	F_Bit	DDDDh	0 ~ 2047f	Special device Bit( write available from 1025)
B	S_Bit	DDDDD	0 ~ 12799	Relay for step control Bit
B	D_Bit	DDDDDh	0 ~ 32767f	Data register_Bit expression (D0000.0)
B	U_Bit	DH.DDh	0.000 ~ 3f.31f	XGK-CPUE : hh(0~1f)
B	T_Bit	DDDD	0 ~ 2047	Timer device Bit
B	C_Bit	DDDD	0 ~ 2047	Counter device Bit
W	P	DDDD	0 ~ 2047	I/O device
W	M	DDDD	0 ~ 2047	Internal device
W	L	DDDDD	0 ~ 11263	Communication device
W	K	DDDD	0 ~ 2559	Preservation device



W	F	DDDD	0 ~ 2047	Special device( write available from 1025)
W	S	DDDDD	0 ~ 12799	Relay for step control
W	D	DDDDD	0 ~ 32767	Data register
W	U	DH.DD	0.00 ~ 3f.31	Analog data register XGK-CPUE : hh(0~1f)
W	N	DDDDD	0 ~ 21503	Communication data register
W	Z	DDD	0 ~ 127	Index register_128 words
W	T	DDDD	0 ~ 2047	Timer current value register
W	C	DDDD	0 ~ 2047	Counter current value register
W	R	DDDDD	0 ~ 32767	
W	ZR	DDDDD	0 ~ 32767	
W	TS	DDDD	0 ~ 2047	Setup value
W	CS	DDDD	0 ~ 2047	Setup value

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.40	Mar/10/2011	Added registers: P_Bit, M_Bit, L_Bit, K_Bit...etc

## Master (Master-Slave Protocol)

To connect HMI with MT500, MT500 has to be set as [Slave].

For more information, please refer to User's Manual CH28.

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Master (Master-Slave Protocol)		
PLC I/F	RS232		
Baud rate	115200	38400, 115200	
Data bits	8		
Parity	Even		
Stop bits	1		
HMI sta. no.	0		
PLC sta. no.	0		
Parameter 1	MT500 PLC ID	Use PLCAddressView.exe to find PLC ID.	



### PLC Setting:

Communication mode	MT500 Multiple HMI set Slave.
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**System Parameter Setting**

PLC: **General** | Indicator | Security | Editor | Hardware | Atmc

PLC type: MITSUBISHI FX0n/FX2

HMI model: MT510T/MT508T (640 x 480)

PLC I/F port: RS-485 4W      Baud rate: 9600

Data bits: 7 Bits      Parity: Even

Stop bits: 1 Bit

Parameter 1: 0      Turn around delay: 0

Parameter 3: 0      Parameter 4: 0

Parameter 5: 0      Parameter 6: 0

HMI station no.: 0      PLC station no.: 0

Multiple HMI: Slave      HMI-HMI link speed: 115200

Connect I/F: Serial

Local IP address: 0 - 0 - 0 - 0

Server IP address: 0 - 0 - 0 - 0

Subnetwork mask: 0 - 0 - 0 - 0

Default route IP address: 0 - 0 - 0 - 0

PLC time out constant (sec): 3.0      PLC block pack: 0

OK      Cancel

**PLC Address View**

MITSUBISHI FX0n/FX2

PLC Address	Type ID	Bit/Word	Address Type	Addressing Format	Max	Min
MITSUBISHI FX0n/FX2						
PLC ID=10						
0		Bit(HMI)	LB	ddd	9999	0
1		Bit(PLC)	X	ooo	377	0
2		Bit(PLC)	Y	ooo	377	0
3		Bit(PLC)	M	ddd	9999	0
4		Bit(PLC)	T	ddd	255	0
5		Bit(PLC)	C	ddd	255	0
8		Word(HMI)	LW	ddd	9999	0
9		Word(PLC)	TV	ddd	255	0
10		Word(PLC)	CV	ddd	199	0
11		Word(PLC)	D	ddd	9999	0
12		DWord(PLC)	CV2	ddd	255	200
13		Word(PLC)	SD	ddd	9999	0000
121		Word(HMI)	RW	ddd	32767	0
120		Bit(HMI)	RBI	dddH	2047	0
140		Bit(HMI)	RB	dddH	2047	0
141		Word(HMI)	RW	ddd	65535	0
160		Bit(HMI)	Mx_RB	dddH	4095	0
161		Bit(HMI)	Mx_LB	ddd	9999	0
100		Word(HMI)	Mx_RW	ddd	65535	0

Exit

**Device Address:**

Bit/Word	MT500	MT8000	Range	Memo
B	Ms_RB	RW_Bit	ddd: 0 ~ 4095 (h): 0 ~ f	
B	Ms_LB	LB	dddd:0 ~ 9999	
W	Ms_RW	RW	ddd:0 ~ 65535	
W	Ms_LW	LW	ddd:0 ~ 9999	

**Driver Version:**

Version	Date	Description
V1.00	Dec/30/2008	Driver released.



## Memobus (Yaskawa MP Series Controllers)

Supported Series: YASKAWA MP2200, MP2300, MP2300S, MP9xx communication module.

Website: <http://www.yaskawa.com/>

### HMI Setting:

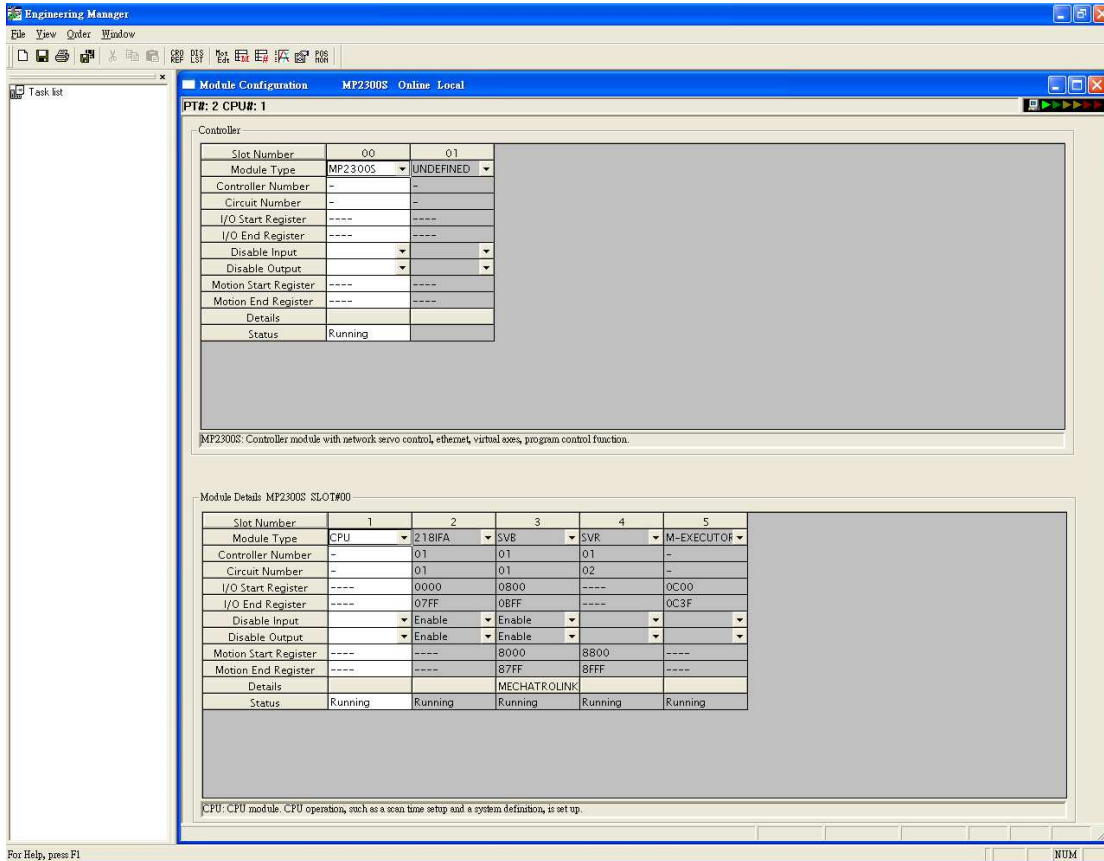
Parameters	Recommended	Options	Notes
PLC type	Memobus (Yaskawa MP Series Controllers)		
PLC I/F	RS485/Ethernet	RS232/RS485 2w/4w, Ethernet	
Baud rate	19200	9600~57600	
Data bits	8		
Parity	Even		
Stop bits	1		
Port no.	502	default	Ethernet Module Only
PLC sta. no.	1	1-31	Must match the PLC port setting.

### PLC Setting:

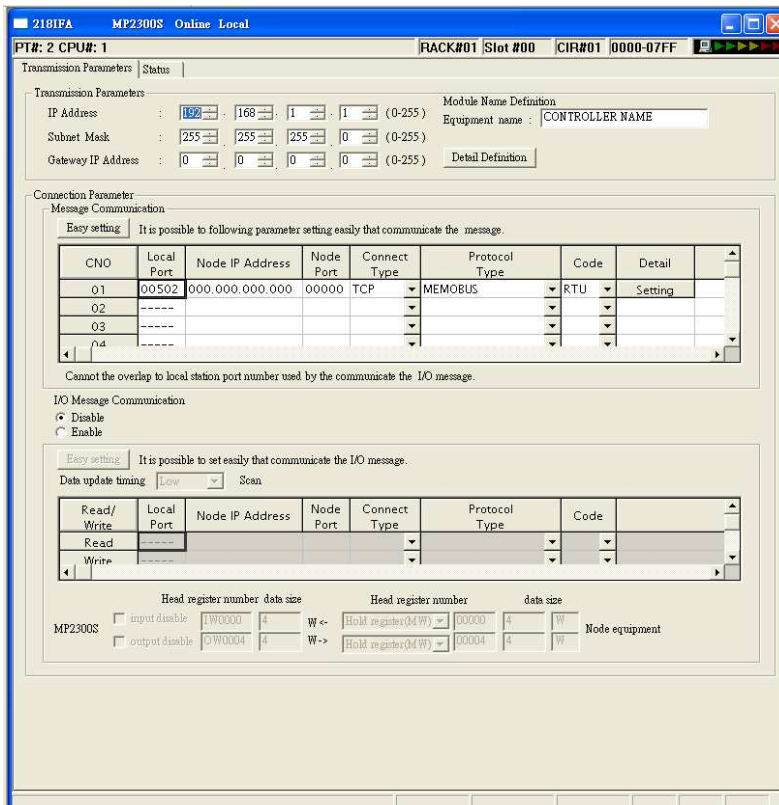
Communication mode	MEMOBUS, Slave, RTU
--------------------	---------------------

### PLC Ethernet Setting:

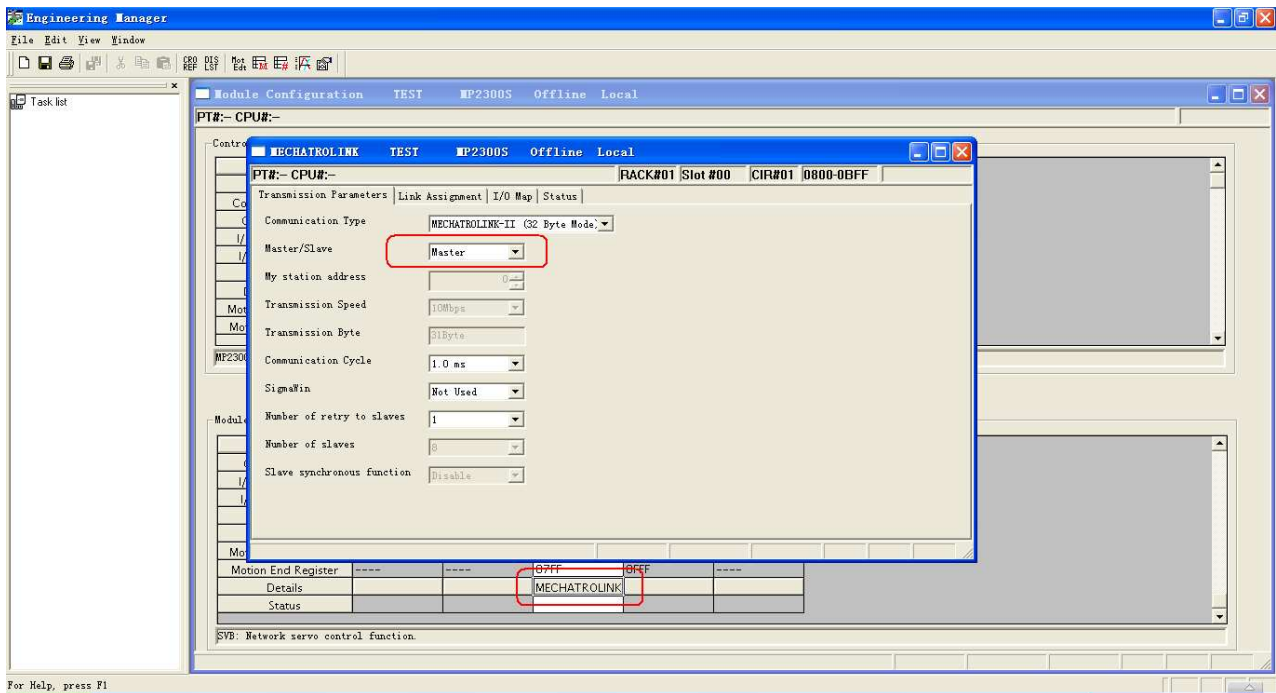
1. Use MPE720 program software, open Module Configuration, double click "218IFA".



- In Transmission Parameters input MP2300S IP address, Subnet Mask, Gateway IP. In Connection Parameter, CNO -1 input: Local Port=502, Node IP address=000.000.000.000, Node Port=00000, Connect Type=TCP, Protocol Type=MEMOBUS, Code=RTU.



### 3. Click MECHATROLINK to set up MP2300S PLC as Master.



### 4. Close all dialogs and save to MP2300S.

## Note:

1. Only CNO 01 can auto communicate with one HMI. Other CNO need a ladder program created for communication.
2. DIP SW2-2 of MP2300S must be set to OFF position during normal communication, otherwise, IP address will be erased after reset power, and it will be unable to communicate with HMI when set to ON position.

## Device Address:





Bit/Word	Device type	Format	Range	Memo
B	MB_1	DDDDh	0 ~ 9999f	MB 0 ~ 9999
B	MB_2	DDDDDh	10000 ~ 65534f	MB 10000 ~ 65535
B	IB	HHHHH	0 ~ a7ff0	Read only
B	IW_Bit	HHHHdd	0~ a7ff15	
W	IW	HHHH	0 ~ a7ff	Read only
DW	IL	HHHH	0 ~ a7ff	Read only
DW (F)	IF	HHHH	0 ~ a7ff	Read only
W	MW	DDDDD	0 ~ 65534	Holding register
DW	ML	DDDDD	0 ~ 65533	Double word
DW (F)	MF	DDDDD	0 ~ 65533	Floating point

\*: When connect via Ethernet interface the max range of IW, IL and IF would be restricted.



## Wiring Diagram:

### 9P D-Sub to 9P D-Sub: 217IF-01, 218IF-01

MT6000/8000 series except MT6050i/MT8050i




COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TX
3 TX	4 TX	7 TX	3 RX
5 GND	5 GND	5 GND	7 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			2 TX
6 TX			3 RX
5 GND			7 GND
			



### 217IF-01 RS485 2W:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		217IF-01 RS485 14P Connector
1 RX-	6 Data-		2, 4 D-
2 RX+	9 Data+		1, 3 D+
5 GND	5 GND		14 GND
			


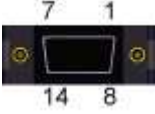
MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		217IF-01 RS485 14P Connector
1 RX-	7 Data-		2, 4 D-
2 RX+	8 Data+		1, 3 D+


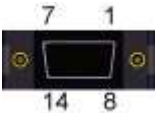
5 GND	5 GND		14 GND
			

**217IF-01 RS4854W:**

MT6000/8000 series except MT6050i/MT8050i


COM1 RS485 4W 9P D-Sub Male			217IF-01 RS422 14P Connector
1 RX-			2 TX-
2 RX+			1 TX+
3 TX-			4 RX-
4 TX+			3 RX+
5 GND			14 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			217IF-01 RS422 14P Connector
1 RX-			2 TX-
2 RX+			1 TX+
3 TX-			4 RX-
4 TX+			3 RX+
5 GND			14 GND
			


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.70	Dec/20/2010	

## Memory Map

Memory Map protocol is similar to IBM 3764R communication protocol. EasyBuilder reserves 512 words of data memory to use with this protocol. EasyBuilder must update the values in these words. EasyBuilder uses these words to display data and control parts status on screen. When touch actions are taken, data is sent to the others once, and then update the memory in it. The HMI should always update the data memory.

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Memory Map		
PLC I/F	RS232	RS232, RS485 4W, 2W	RS232 default
Baud rate	115200	9600~115200	
Data bits	8		
Parity	Even	Even, Odd, None	
Stop bits	1		

### Device Address:





Bit/Word	Device type	Format	Range	Memo
B	MB	DDDDh	0 ~ 9999f	
W	MW	DDDD	0 ~ 9999	

MB and MW share the same data storage.



MW 0 = MB 000000 ~ MB 0000f, MW 1 = MB 000100 ~ MB 0001f

### Wiring Diagram:




MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	HMI COM1 RS232 9P D-Sub Female
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	2 RX
5 GND	5 GND	5 GND	5 GND
			




**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			HMI COM1 RS232 9P D-Sub Female
9 RX			3 TX
6 TX			2 RX
5 GND			5 GND
			

**MT6000/8000 series except MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		HMI COM1 RS485 2W 9P D-Sub Male
1 RX-	6 Data-		1 RX-
2 RX+	9 Data+		2 RX+
5 GND	5 GND		5 GND
			



**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		HMI COM1 RS485 2W 9P D-Sub Female
1 RX-	7 Data-		1 RX-
2 RX+	8 Data+		2 RX+
5 GND	5 GND		5 GND
			



**MT6000/8000 series except MT6050i/MT8050i**

COM1 RS485 4W 9P D-Sub Male			HMI COM1 RS485 4W 9P D-Sub Male
1 RX-			3 TX-
2 RX+			4 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			5 GND



			
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MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			HMI COM1 RS485 4W 9P D-Sub Female
1 RX-			3 TX-
2 RX+			4 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			5 GND
			

### Note:

For Memory map information, please refer to User's Manual "Chapter 31 Memory Map Communication".

### Driver Version:

Version	Date	Description
V1.00	Mar/19/2009	Driver released.

# mitsubishi A1S

Supported Series: MITSUBISHI A1S

Website: <http://www.mitsubishi-automation.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI A1S		
PLC I/F	RS232		
Baud rate	9600		
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	0		

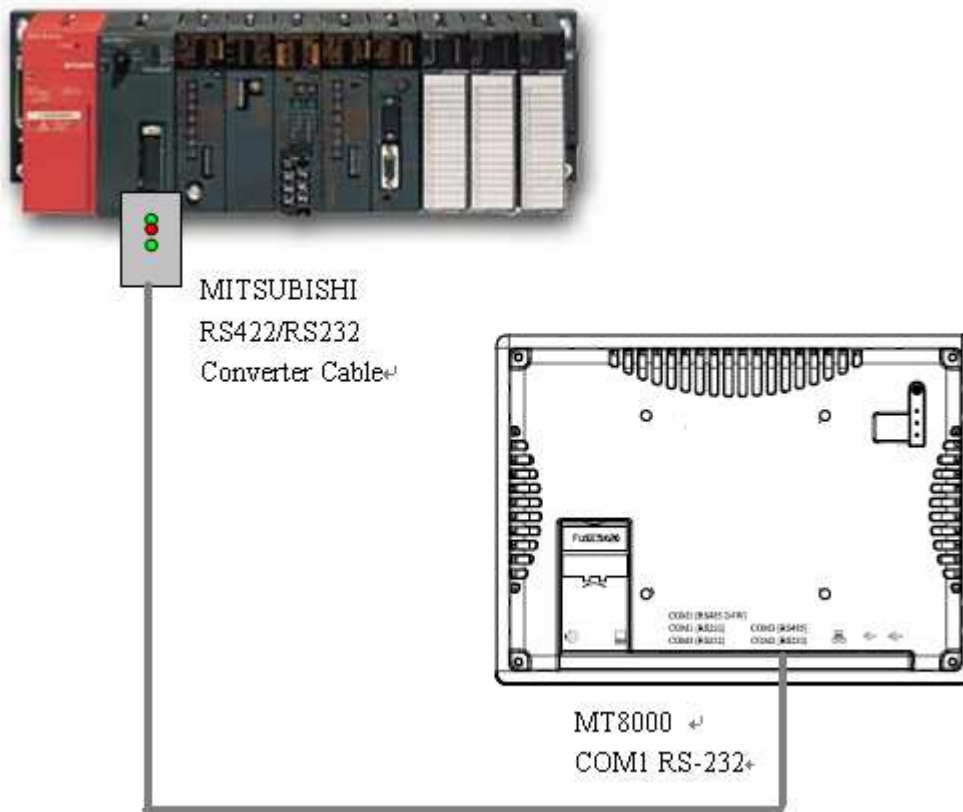
## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	HHHH	0 ~ ffff	Input Relay
B	Y	HHHH	0 ~ ffff	Output Relay
B	M	DDDDD	0 ~ 65535	Auxiliary Relay
B	B	HHHH	0 ~ ffff	
B	F	DDDDD	0 ~ 65535	
W	TV	DDDDD	0 ~ 65535	Timer Memory
W	CV	DDDDD	0 ~ 65535	Counter Memory
W	D	DDDDD	0 ~ 65535	Data Register
W	W	HHHH	0 ~ ffff	
W	R	DDDDD	0 ~ 65535	



## Wiring Diagram:

Use the RS422 to RS232 PLC programming cable (shown as follows)

MITSUBISHI AnS CPU



MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	PLC Programming Converter		Mitsubishi RS422 25P D-Sub Male
2 RX	TX	TX+	2 RX+
3 TX	RX	RX+	3 TX+
5 GND	GND	DTR+	4 DSR+
7 RTS	CTS	GND	7 GND
8 CTS	RTS	TX-	15 RX-
		RX-	16 TX-
		DTR-	17 DSR-
			

**Driver Version:**

Version	Date	Description
V1.00	Sep/18/2009	Driver released.

# mitsubishi A2A

Supported Series: MITSUBISHI A2A, A2USH

Website: <http://www.mitsubishi-automation.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	mitsubishi A2A		
PLC I/F	RS232		
Baud rate	9600		
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	0		

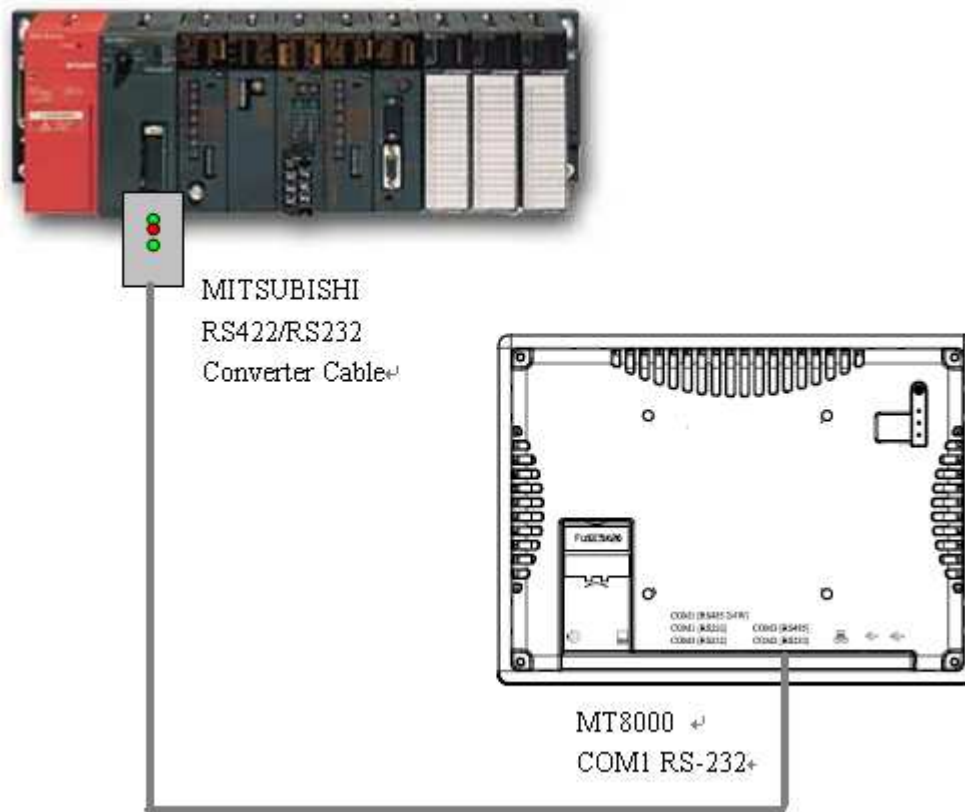
## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	HHHH	0 ~ 270f	Input Relay
B	Y	HHHH	0 ~ 270f	Output Relay
B	M	DDDD	0 ~ 9999	Auxiliary Relay
B	B	HHHH	0 ~ ffff	
B	F	DDDDD	0 ~ 65535	
W	TV	DDD	0 ~ 255	Timer Memory
W	CV	DDD	0 ~ 255	Counter Memory
W	D	DDDD	0 ~ 9999	Data Register
W	W	HHHH	0 ~ ffff	
W	R	DDDDD	0 ~ 65535	

## Wiring Diagram:

Use the RS422 to RS232 PLC programming cable (shown as follows)

MITSUBISHI AnS CPU



MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	PLC Programming Converter		Mitsubishi RS422 25P D-Sub Male
2 RX	TX	TX+	2 RX+
3 TX	RX	RX+	3 TX+
5 GND	GND	DTR+	4 DSR+
7 RTS	CTS	GND	7 GND
8 CTS	RTS	TX-	15 RX-
		RX-	16 TX-
		DTR-	17 DSR-

## Driver Version:

Version	Date	Description
V1.00	Aug/12/2009	Driver released.

# MITSUBISHI A2US

Supported Series: MITSUBISHI A2US

Website: <http://www.mitsubishi-automation.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI A2US		
PLC I/F	RS232		
Baud rate	9600		
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	0		

## Device Address:

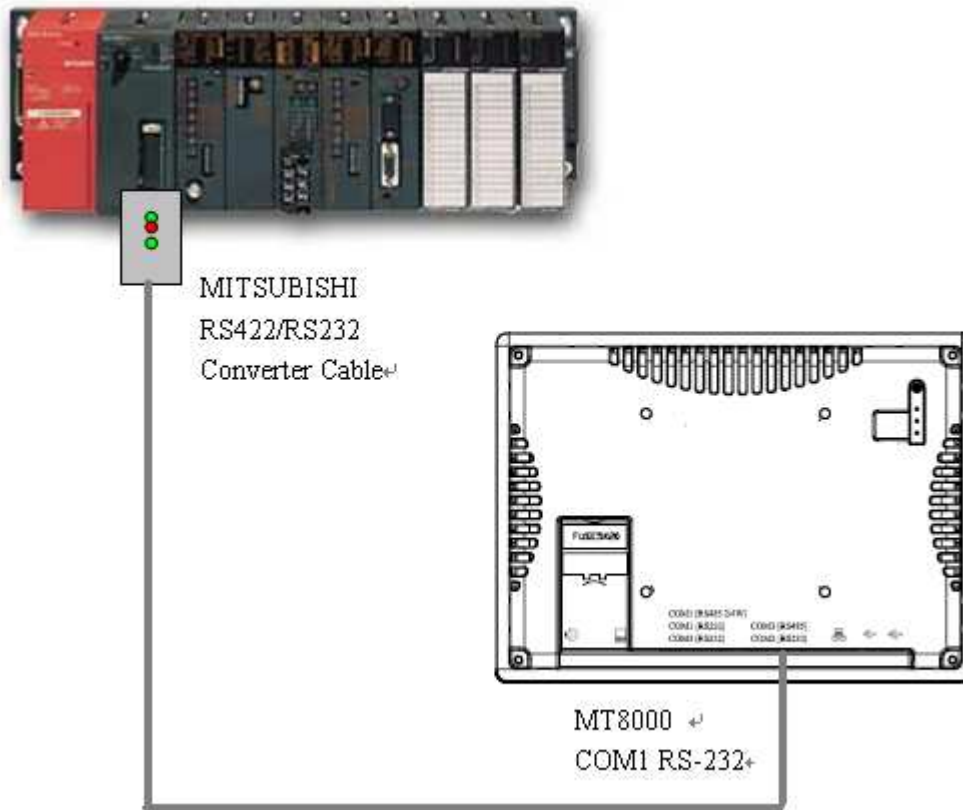
Bit/Word	Device type	Format	Range	Memo
B	X	HHHH	0 ~ 270f	Input Relay
B	Y	HHHH	0 ~ 270f	Output Relay
B	M	DDDD	0 ~ 9999	Auxiliary Relay
W	TV	DDD	0 ~ 255	Timer Memory
W	CV	DDD	0 ~ 255	Counter Memory
W	D	DDDD	0 ~ 9999	Data Register





## Wiring Diagram:

Use the RS422 to RS232 PLC programming cable (shown as follows)

MITSUBISHI AnS CPU



MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	PLC Programming Converter		Mitsubishi RS422 25P D-Sub Male
2 RX	TX	TX+	2 RX+
3 TX	RX	RX+	3 TX+
5 GND	GND	DTR+	4 DSR+
7 RTS	CTS	GND	7 GND
8 CTS	RTS	TX-	15 RX-
		RX-	16 TX-
		DTR-	17 DSR-
			

**Driver Version:**

Version	Date	Description
V1.00	Mar/20/2009	Driver released.

# MITSUBISHI A3N/A1SH

Supported Series: MITSUBISHI A3N/A3A/A1SH/A2SH

Website: <http://www.mitsubishi-automation.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI A3N/A1SH		
PLC I/F	RS232		
Baud rate	9600		
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	0		

Note: This driver is not available for On-line Simulation.

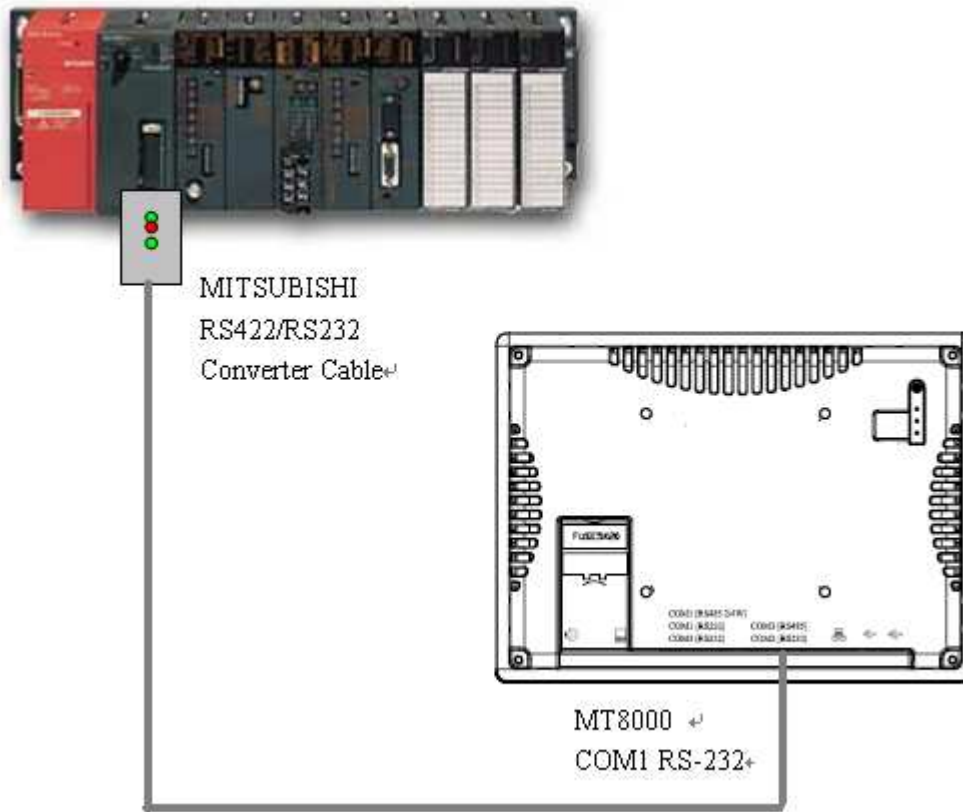
## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	HHHH	0 ~ ffff	Input Relay
B	Y	HHHH	0 ~ ffff	Output Relay
B	M	DDDDD	0 ~ 65535	Auxiliary Relay
B	B	HHHH	0 ~ ffff	
B	F	DDDDD	0 ~ 65535	
W	TV	DDDDD	0 ~ 65535	Timer Memory
W	CV	DDDDD	0 ~ 65535	Counter Memory
W	D	DDDDD	0 ~ 65535	Data Register
W	W	HHHH	0 ~ ffff	
W	R	DDDDD	0 ~ 65535	



## Wiring Diagram:

Use the RS422 to RS232 PLC programming cable (shown as follows)

MITSUBISHI AnS CPU



MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	PLC Programming Converter		Mitsubishi RS422 25P D-Sub Male
2 RX	TX	TX+	2 RX+
3 TX	RX	RX+	3 TX+
5 GND	GND	DTR+	4 DSR+
7 RTS	CTS	GND	7 GND
8 CTS	RTS	TX-	15 RX-
		RX-	16 TX-
		DTR-	17 DSR-
			

## Driver Version:

Version	Date	Description
V1.00	Oct/20/2009	Driver released.

## mitsubishi AJ71

Supported Series: Mitsubishi A series PLC with AJ71C24 communication module using the Computer Link protocol.

Website: <http://www.mitsubishi-automation.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI AJ71	MITSUBISHI AJ71 (AnA/AnU CPU), MITSUBISHI AJ71 (Format 4)	
PLC I/F	RS485 4W	RS485 4W, RS232	
Baud rate	19200	9600, 19200	
Data bits	8	8	
Parity	Even	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	0		

### PLC Setting:

Communication mode	Computer Link protocol 9600, Even, 8, 1 (default)
Mode setting switch	Format 1
Parity check	Enable
Sum check	Enable

### Device Address:


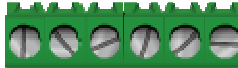
Bit/Word	Device type	Format	Range	Memo
B	X	HHHH	0 ~ ffff	Input Bits
B	Y	HHHH	0 ~ ffff	Output Bits
B	M	DDDDD	0 ~ 65535	Internal Relays
B	T	DDDDD	0 ~ 65535	
B	C	DDDDD	0 ~ 65535	
B	B	HHHH	0 ~ ffff	

B	F	DDDDD	0 ~ 65535	
W	TV	DDDDD	0 ~ 65535	Timer Preset Value
W	CV	DDDDD	0 ~ 65535	Counter Preset Value
W	D	DDDDD	0 ~ 65535	Data Registers
W	W	HHHH	0 ~ ffff	
W	R	DDDDD	0 ~ 65535	



## Wiring Diagram:

### AJ71C24 RS422

MT6000/8000 series except MT6050i/MT8050i





COM1 RS485 4W 9P D-Sub Male			AJ71C24 RS422 Terminal
1 RX-			SDB
2 RX+			SDA
3 TX-			RDB
4 TX+			RDA
5 GND			GND
			

MT6050i/MT8050i



COM1 RS485 4W 9P D-Sub Female			AJ71C24 RS422 Terminal
1 RX-			SDB
2 RX+			SDA
3 TX-			RDB
4 TX+			RDA
5 GND			GND
			

**A1SJ71UC24-R2**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
  			1 DCD	circuit
			4 DTR	
			6 DSR	
			7 RTS	circuit
			8 CTS	
				

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			3 TXD	
6 TX			2 RXD	
5 GND			5 GND	
			1 DCD	circuit
			4 DTR	
			6 DSR	
			7 RTS	circuit
			8 CTS	
				

**Driver Version:**

Version	Date	Description
V1.50	Mar/11/2010	



## MITSUBISHI FX0n/FX2

Supported Series: Mitsubishi FX0s/FX0n/FX1s/FX2 PLC

Website: <http://www.mitsubishi-automation.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI FX0n/FX2		
PLC I/F	RS485 4W	RS232/RS485	
Baud rate	9600	9600/19200/38400/ 57600/115200	
Data bits	7	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1,2	
PLC sta. no.	0	0-255	Must be set identically to the PLC setting.



### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	OOO	0 ~ 377	Input Relay
B	Y	OOO	0 ~ 377	Output Relay
B	M	DDDD	0 ~ 9999	Auxiliary Relay
B	T	DDD	0 ~ 255	Timer Relay
B	C	DDD	0 ~ 255	Counter Relay
B	SM	DDDD	8000 ~ 9999	Special Aux. Relays
B	D_Bit	DDDDdd	0 ~ 999915	Data Register Bit (D)
B	S	DDDD	0 ~ 4095	States
W	TV	DDD	0 ~ 255	Timer Memory
W	CV	DDD	0 ~ 199	Counter Memory
W	D	DDDD	0 ~ 9999	Data Register
DW	CV2	DDD	200 ~ 255	Counter Memory(D Word)
W	SD	DDDD	8000 ~ 9999	Special Data Register



## Wiring Diagram:

### 9P D-Sub to 8P MiniDIN:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS422 Port 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			



MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS422 Port 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			



### 9P D-Sub to 25P D-Sub:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS422 Port 8P Mini-DIN Male
1 RX-			16 TXD-
2 RX+			3 TXD+
3 TX-			15 RXD-
4 TX+			2 RXD+
5 GND			7 GND
			4 DSR+
			8 GND
			13 +5V
			circuit
			circuit

			17 DSR-
			

**MT6050i/MT8050i**

COM1 RS485 4W 9P D-Sub Female			RS422 Port 8P Mini-DIN Male
1 RX-			16 TXD-
2 RX+			3 TXD+
3 TX-			15 RXD-
4 TX+			2 RXD+
5 GND			7 GND
			4 DSR+
			8 GND
			13 +5V
			17 DSR-
			circuit
			circuit
			

**Driver Version:**

Version	Date	Description
V1.10	Sep/ 01/2009	Added registers: S, SM, D_bit

## mitsubishi FX232/485BD

Supported Series: MITSUBISHI FX0n/FX2/FX2n COM for Communication Module BD FX2N-485-BD, FX2N-232-BD, FX1N-485-BD and FX1N-232-BD.

Website: <http://www.mitsubishi-automation.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	mitsubishi FX232/485BD		
PLC I/F	RS232/RS485	RS232/RS485 2w/4w	in accordance with the BD module
Baud rate	19200	9600/19200	
Data bits	7	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1,2	
PLC sta. no.	1	0-15	

Note: It is recommended to set turn around delay to 8. (For i series HMI)

Online simulator	YES	Extend address mode	YES
------------------	-----	---------------------	-----

### PLC Setting:

Communication mode	Must set PLC station when using BD Module.
--------------------	--

Register D8120 setting: set b9 and b8 of BFM#0 to 0.

FX2N-485-BD, FX1N-485-BD

FX2N-232-BD, FX1N-232-BD





## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	OOO	0 ~ 377	Input Relay
B	Y	OOO	0 ~ 377	Output Relay
B	M	DDDD	0 ~ 7999	Auxiliary Relay
B	T	DDD	0 ~ 511	Timer Relay
B	C	DDD	0 ~ 255	Counter Relay
B	SM	DDDD	8000 ~ 9999	Special Auxiliary Relay
B	D_Bit	DDDDh	0 ~ 7999f	Data Register Bit
B	S	DDDD	0 ~ 4095	State Relay
W	TV	DDD	0 ~ 255	Timer Memory
W	CV	DDD	0 ~ 199	Counter Memory
W	D	DDDD	0 ~ 7999	Data Register
W	CV2	DDD	200 ~ 255	Counter Memory(D Word)
W	SD	DDDD	8000 ~ 9999	Special Data Register



## Wiring Diagram:

### 9P D-Sub to 9P D-Sub: Communication Module RS232BD

MT6000/8000 series except MT6050i/MT8050i



COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			


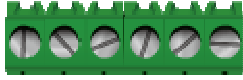
### Communication Module RS485BD: RS485 4W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			485BD Module 5P Terminal
1 RX-			SDB
2 RX+			SDA
3 TX-			RDB
4 TX+			RDA
5 GND			SG
			



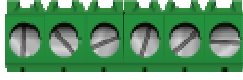
MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			485BD Module 5P Terminal



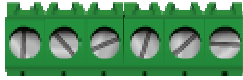
1 RX-			SDB
2 RX+			SDA
3 TX-			RDB
4 TX+			RDA
5 GND			SG
			

**Communication Module RS485BD: RS485 2W**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		485BD Module 5P Terminal	
1 RX-	6 Data-		SDB	circuit
			RDB	
2 RX+	9 Data+		SDA	circuit
			RDA	
5 GND	5 GND		SG	
				

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		485BD Module 5P Terminal	
1 RX-	7 Data-		SDB	circuit
			RDB	
2 RX+	8 Data+		SDA	circuit
			RDA	
5 GND	5 GND		SG	
				

## Driver Version:

Version	Date	Description
V1.40	Jul/26/2011	Added registers: D_Bit and S.



# MITSUBISHI FX2n

Supported Series: Mitsubishi FX1n/FX2n series PLC

Website <http://www.mitsubishi-automation.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI FX2n		
PLC I/F	RS485 4W	RS232/RS485	
Baud rate	19200	9600/19200/38400 /57600/115200	
Data bits	7		
Parity	Even		
Stop bits	1		
PLC sta. no.	0		

Online simulator	YES	Extend address mode	NO
------------------	-----	---------------------	----



## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	OOO	0 ~ 377	Input Relay
B	Y	OOO	0 ~ 377	Output Relay
B	M	DDDD	0 ~ 7999	Auxiliary Relay
B	T	DDD	0 ~ 255	Timer Relay
B	C	DDD	0 ~ 255	Counter Relay
B	SM	DDDD	8000 ~ 9999	Special Auxiliary Relay
B	D_Bit	DDDDdd	0 ~ 799915	Data Register Bit (D)
B	S	DDDD	0 ~ 4095	State Relay (S)
W	TV	DDD	0 ~ 255	Timer Memory
W	CV	DDD	0 ~ 199	Counter Memory
W	D	DDDD	0 ~ 7999	Data Register
DW	CV2	DDD	200 ~ 255	Counter Memory(D Word)
W	SD	DDDD	8000 ~ 9999	Special Data Register



## Wiring Diagram:

### Mitsubishi FX series

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS422 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS422 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			

## Driver Version:

Version	Date	Description
V1.60	Sep/10/2009	

# MITSUBISHI FX3u (Ethernet)

Supported Series: MITSUBISHI FX SERIES, Module: FX3U-ENET.

Website: <http://www.mitsubishi-automation.com>

## HMI Setting:

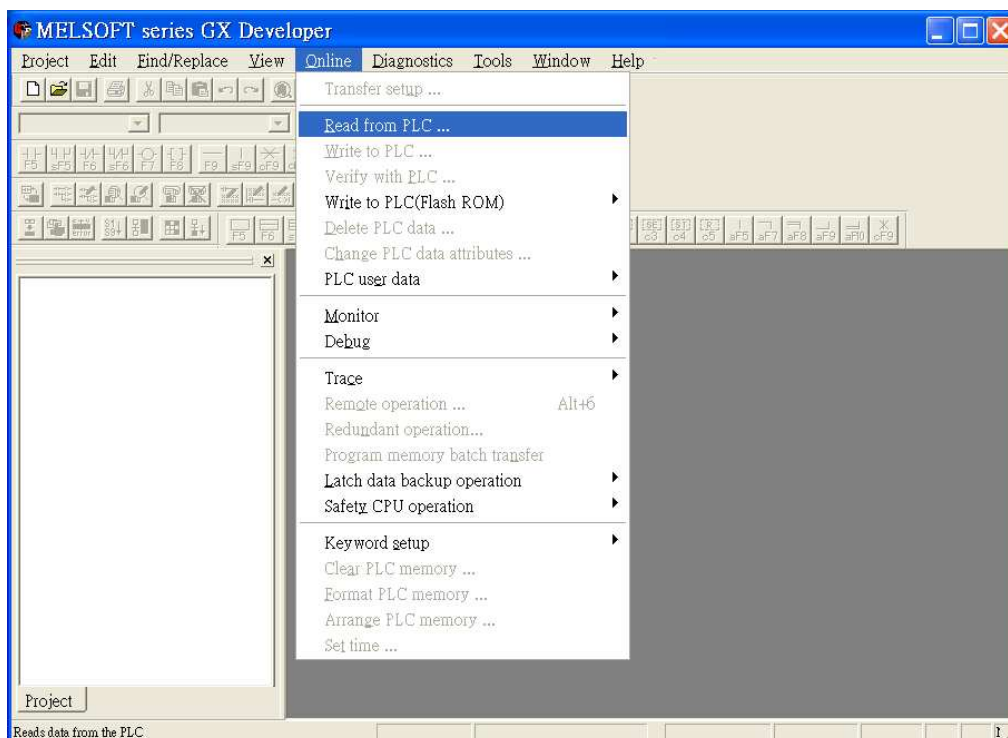
Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI FX3u (Ethernet)		
PLC I/F	Ethernet		
Port no.	5001(default)		Refer to Module Setting
PLC sta. no.	0 (default)		Refer to Module Setting

## PLC Setting:

Fx3u-ENET module setting:

Before using Ethernet module, use GX Developer / FX Configurator-EN to set the Ethernet module, the FX3u-ENET module setting steps are shown below.

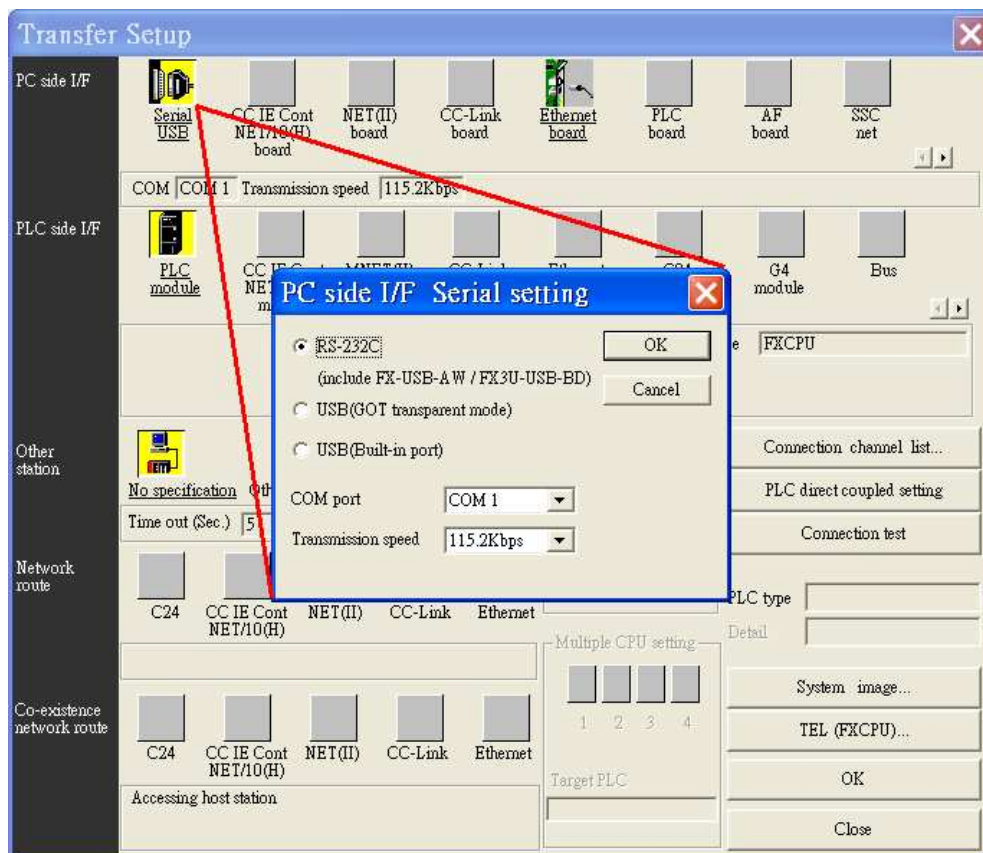
1. Open GX Developer, select “Read from PLC” in Online list.



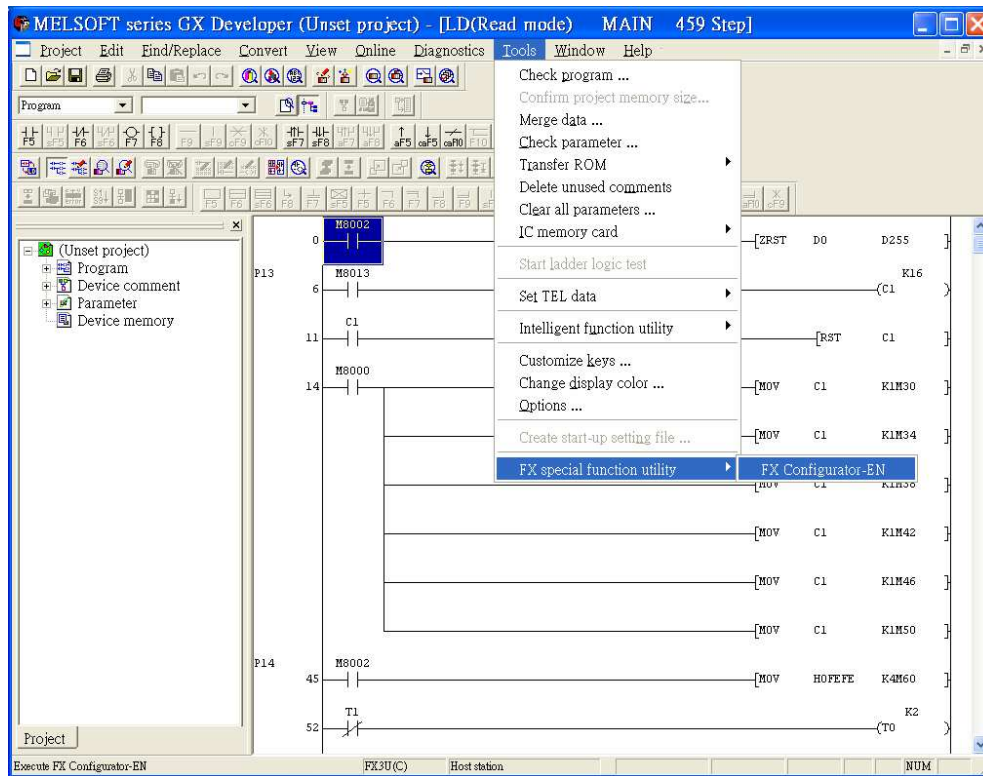
2. Select "FXCPU" in PLC series.



3. Connect PLC via serial port for setting IP address first.

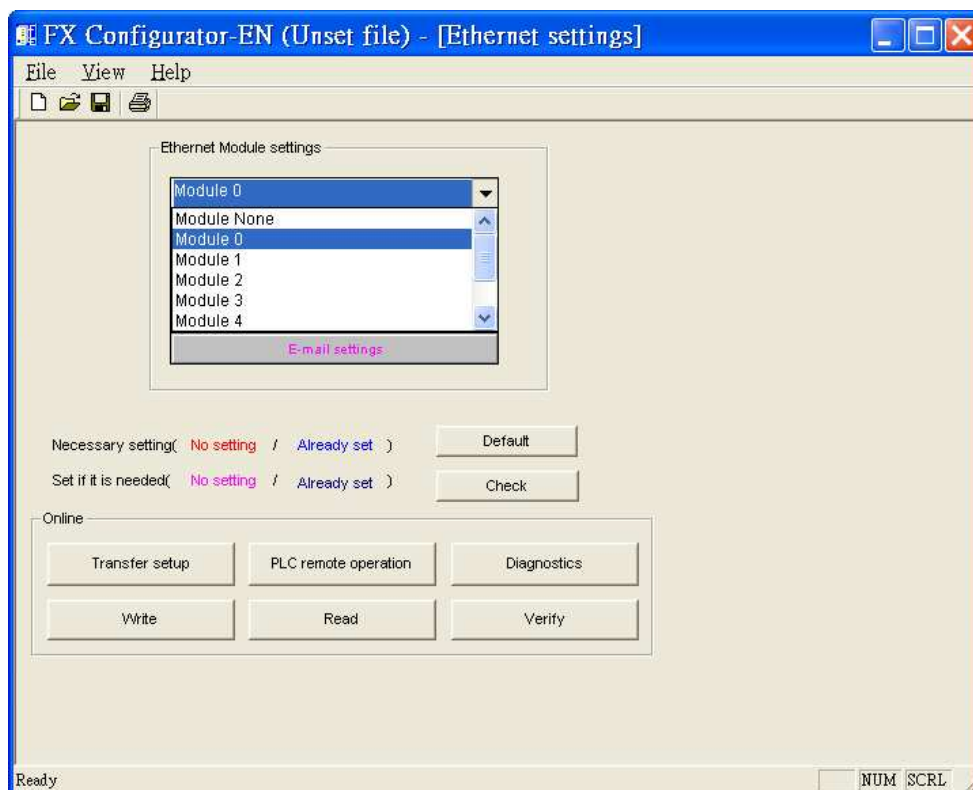


4. After finishing the PLC settings, select Tools/FX special function utility/FX Configurator-EN.

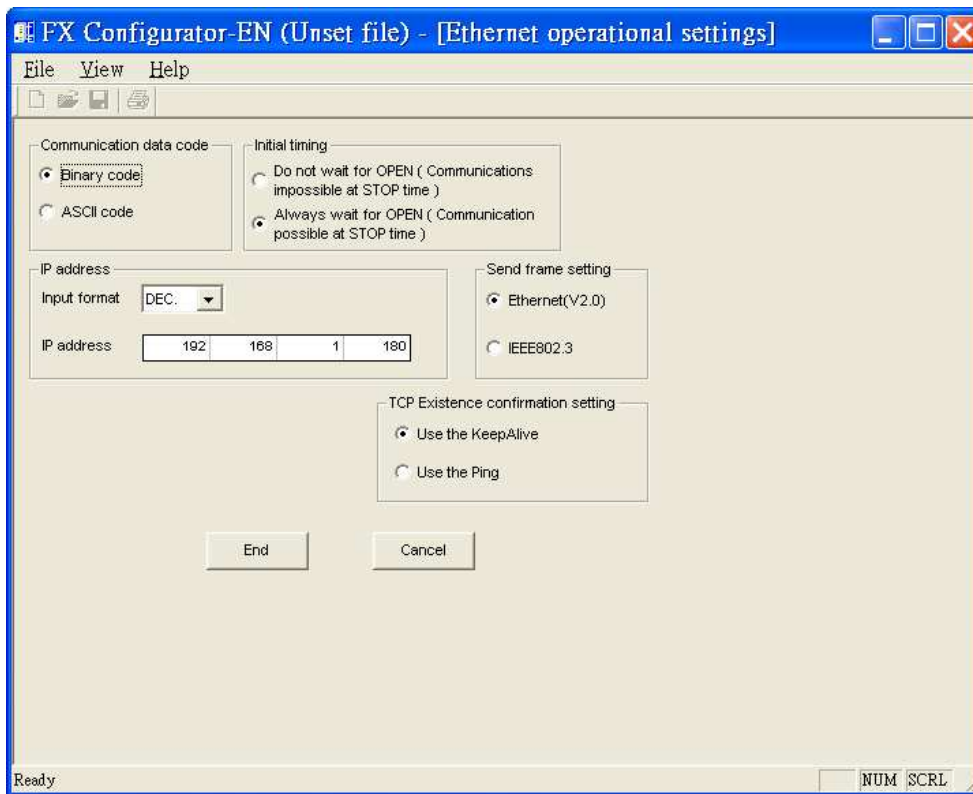


5. Select “Module 0” in Ethernet Module settings.

(If more than one module needed, please set modules step by step)



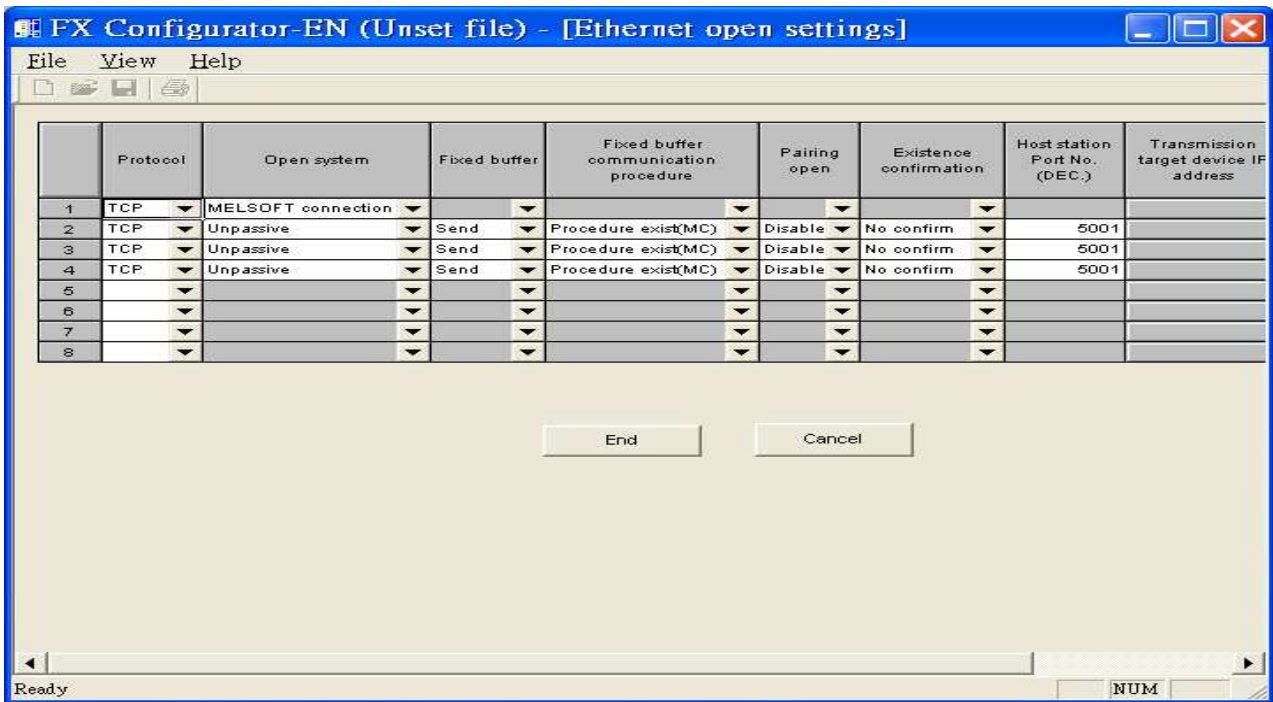
6. In Ethernet operational settings, select the related parameters and IP address and then press "End" to finish setting.



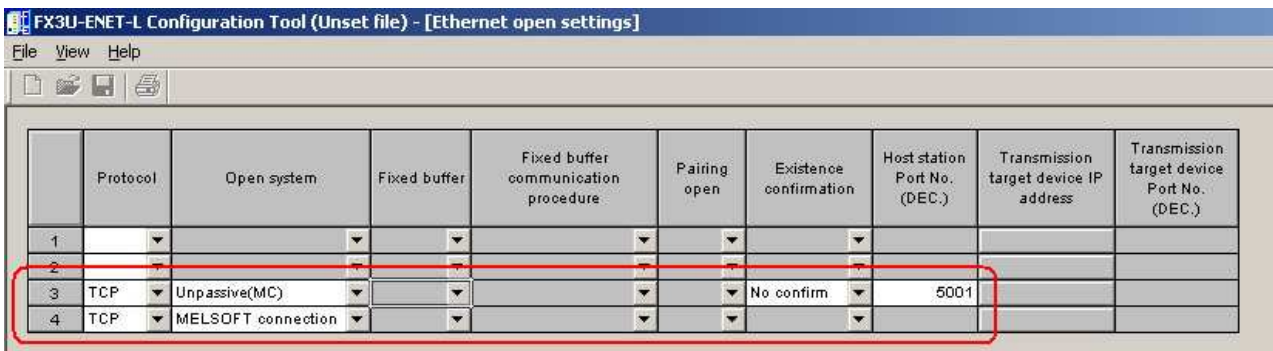
7. In Ethernet open settings, press "End" after setting the parameters below.

1	TCP	MELSOFT connection						
2	TCP	Unpassive	Send	Procedure exist(MC)	Disable	No confirm	5001	
3	TCP	Unpassive	Send	Procedure exist(MC)	Disable	No confirm	5001	
4	TCP	Unpassive	Send	Procedure exist(MC)	Disable	No confirm	5001	

(The first Protocol means using GX Developer to communicate with module, the max. "Fixed buffer communication procedure" is 4 units.)



Or



8. After setting the parameters of PLC, restart for Ethernet communication.





## Device Address:


Bit/Word	Device type	Format	Range	Memo
B	X	OOO	0 ~ 571	Input
B	Y	OOO	0 ~ 571	Output Relay
B	M	DDDD	0 ~ 7999	Internal Relay
B	T	DDD	0 ~ 511	Timer Contacts
B	C	DDD	0 ~ 255	Counter Contacts
B	SM	DDDD	8000 ~ 8511	Special Int. Relays
B	D_Bit	DDDDDdd	0 ~ 1799915	Data Register Bit Access
B	S	DDDD	0 ~ 4095	Step Relays
W	TV	DDD	0 ~ 511	Timer Value
W	CV	DDD	0 ~ 199	Counter Value
W	D	DDDD	0 ~ 7999	Data Registers
W	CV2	DDD	200 ~255	Counter Value
W	SD	DDDD	8000 ~ 8511	Special Data Registers
W	R	DDDDD	0 ~ 32767	File Register



## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.00	Feb/12/2009	Driver released.

# MITSUBISHI FX3u/FX3G

Supported Series: Mitsubishi FX3U/FX3UC/FX3G.

Website: <http://www.mitsubishi-automation.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI FX3u/FX3G		
PLC I/F	RS485 4w	RS232/RS485 2w/4w	
Baud rate	38400	9600/19200	
Data bits	7		
Parity	Even		
Stop bits	1		
PLC sta. no.	0		Does not apply to this protocol

Online simulator	YES (9600 baud rate only)	Extend address mode	NO
------------------	------------------------------	---------------------	----



## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	OOO	0 ~ 764	Input Relay
B	Y	OOO	0 ~ 764	Output Relay
B	M	DDDD	0 ~ 7999	Auxiliary Relay
B	T	DDD	0 ~ 511	Timer Relay (T)
B	C	DDD	0 ~ 255	Counter Relay (C)
B	SM	DDDD	8000 ~ 9999	Special Relay (M)
B	D_Bit	DDDDdd	0 ~ 799915	Data Register Bit (D)
B	S	DDDD	0 ~ 4095	State Relay (S)
W	TV	DDD	0 ~ 511	Timer Memory (T)
W	CV	DDD	0 ~ 199	Counter Memory (C)
W	D	DDDD	0 ~ 7999	Data Register (D)
DW	CV2	DDD	200 ~ 255	Counter Memory(D Word)



Bit/Word	Device type	Format	Range	Memo
W	SD	DDDD	8000 ~ 9999	Special Data Register (D)
W	R	DDDDD	0 ~ 32767	Extended Register (R)
W	Z	D	0 ~ 7	Index register

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS422 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS422 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			

## Driver Version:

Version	Date	Description
V1.71	Nov/15/2010	

## MITSUBISHI MELSEC-Q (Ethernet)

Supported Series: MITSUBISHI Q series (Q03UDE, Q04UDEH, Q06UDEH, Q10UDEH, Q13UDEH, Q20UDEH, Q26UDEH), MELSEC-Q protocol application to CPU of Ethernet interface or Ethernet module.

Website: <http://www.mitsubishi-automation.com>

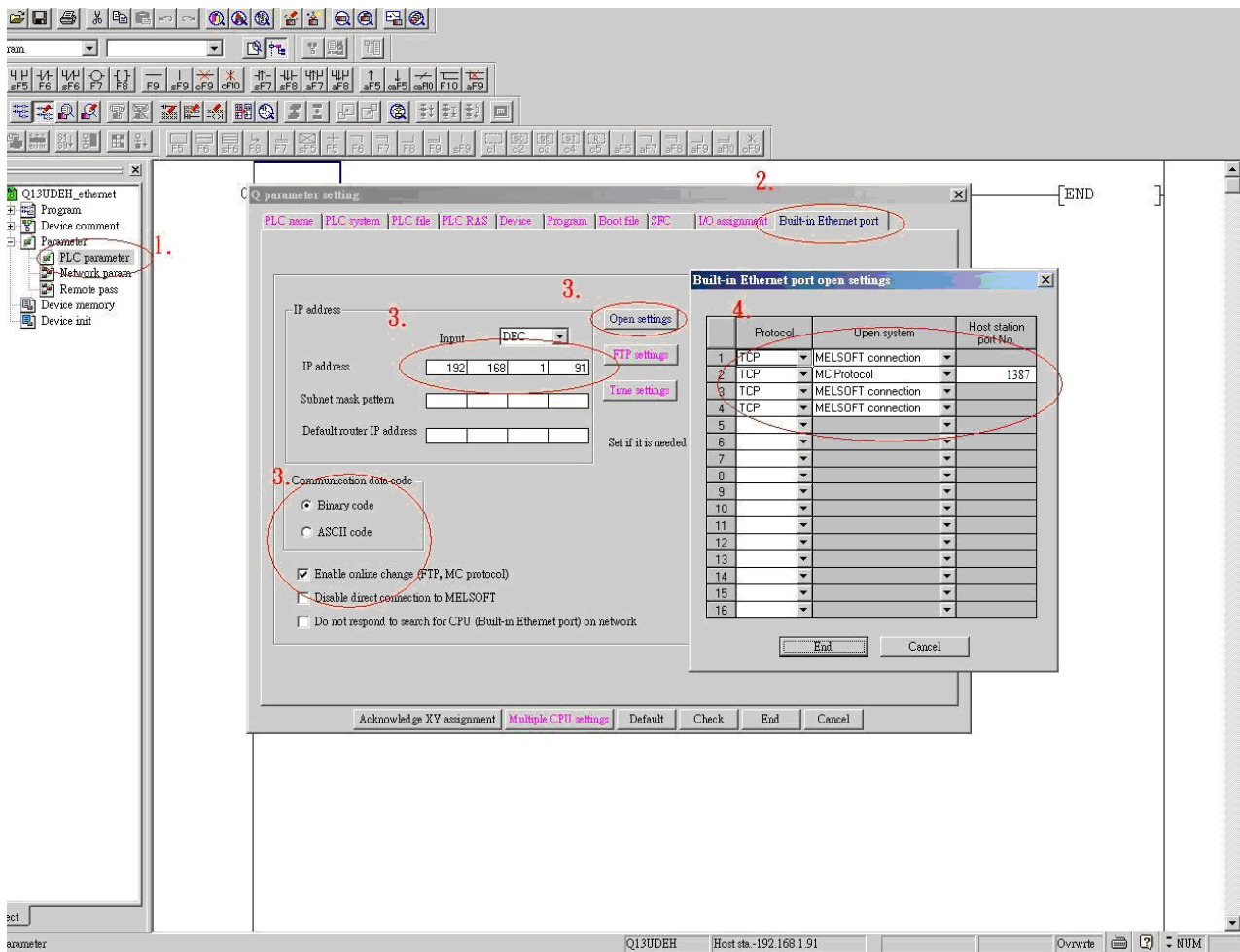
### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI MELSEC-Q (Ethernet)		
PLC I/F	Ethernet		
Port no.	Set identically to the PLC setting		Advised to set port no. to 4999
Parameter 1	Networking no. (Set identically to PLC setting)	0~255	Q13UDEH has to be set to 0
PLC sta. no.	Set identically to the PLC setting	255	Q13UDEH has to be set to 255

### PLC Setting:

MITSUBISHI Q series Ethernet module setting:

Note: If using QJ71E71 module, please refer to MITSUBISHI QJ71E71 connection guide.

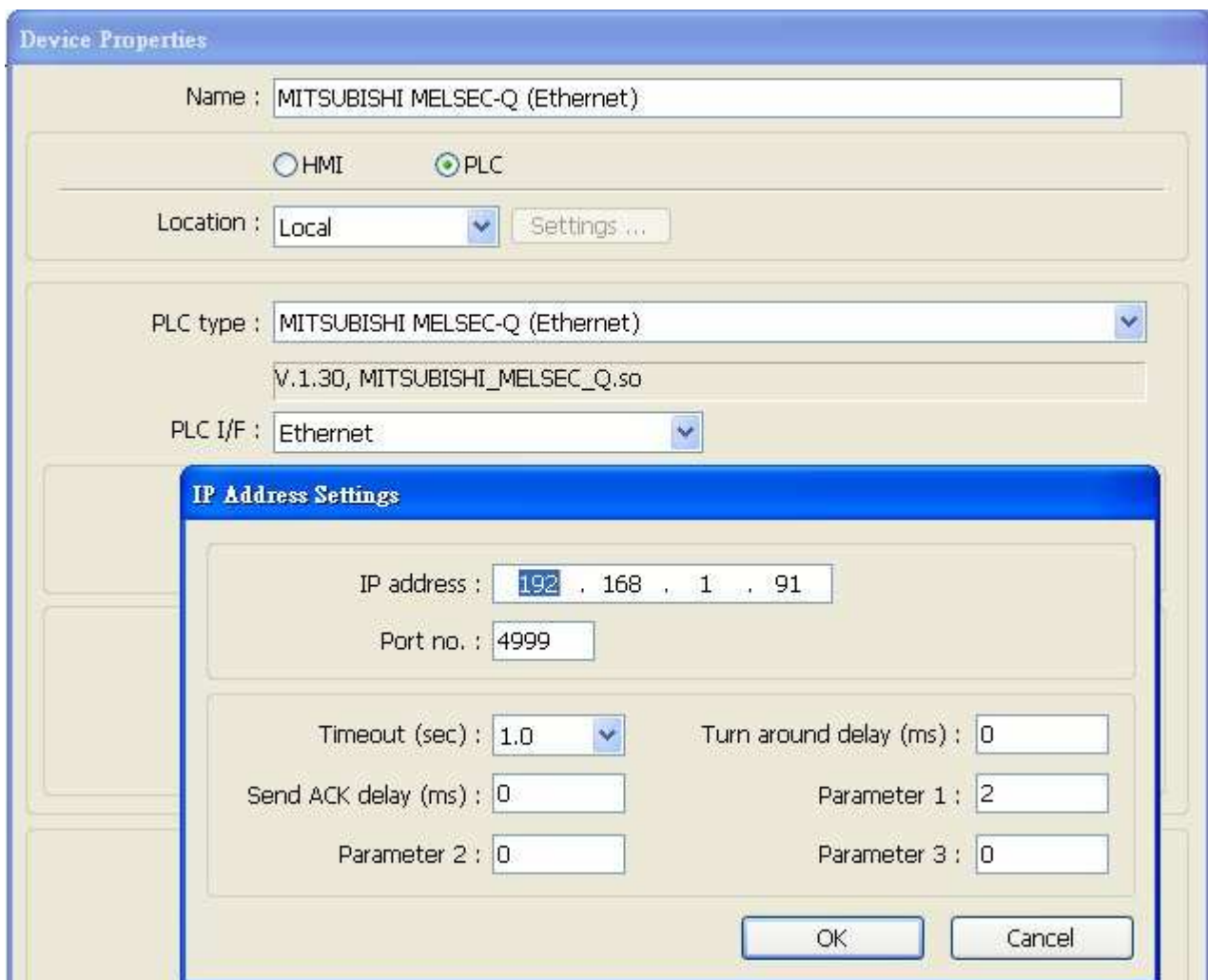


1. Click [PLC parameter].
2. [Built-in Ethernet port].
3. Click [Open settings] and then set the IP address and communication data code
4. Set the MC protocol-TCP Port No.1387 (Hex) and in EasyBuilder, TCP port is 4999 (Dec).

Note: In EasyBuilder, please fill in [Network No.] in Parameter 1 as PLC setting. For example below, the Network No. is 2.

Module 1	
Network type	Ethernet
Starting I/O No.	0000
Network No.	2
Total stations	
Group No.	1
Station No.	1
Mode	On line
	Operational settings
	Initial settings
	Open settings
	Router relay parameter
	Station No.<->IP information
	FTP Parameters
	E-mail settings

Set to 2 for Parameter 1 in EasyBuilder.



## Device Address:


Bit/Word	Device type	Format	Range	Memo
B	SM	DDDD	0 ~ 2047	Special Relay
B	X	HHHH	0 ~ 1fff	Input Relay
B	Y	HHHH	0 ~ 1fff	Output Relay
B	M	DDDDD	0 ~ 61439	Internal Relay
B	L	DDDDD	0 ~ 32767	Latch Relay
B	F	DDDDD	0 ~ 32767	Annunciator
B	V	DDDDD	0 ~ 32767	Edge Relay
B	B	HHHH	0 ~ efff	Link Relay
B	TS	DDDDD	0 ~ 25471	Timer Contact
B	TC	DDDDD	0 ~ 25471	Timer Coil
B	SS	DDDDD	0 ~ 25471	Retentive Timer Contact
B	SC	DDDDD	0 ~ 25471	Retentive Timer Coil
B	CS	DDDDD	0 ~ 25471	Counter Contact
B	CC	DDDDD	0 ~ 25471	Counter Coil
B	SB	HHHH	0 ~ 7fff	Special Link Relay
B	S	DDDD	0 ~ 8191	Step relay
B	DX	HHHH	0 ~ 1fff	Direct Input
B	DY	HHHH	0 ~ 1fff	Direct Output
B	D_Bit	DDDDDDDDh	0 ~ 4184063f	Data Register bit
B	SD_bit	DDDDh	0 ~ 2047f	Special register Bit
B	ZR_bit	HHHHHHHh	0 ~ 3fd7fff	File Register Bit
B	R_bit	DDDDDDh	0 ~ 32767f	File Register Bit
B	SW_bit	HHHh	0 ~ 7fff	Special Link Register Bit
B	W_bit	HHHHHHHh	0 ~ 3fd7fff	Link Register Bit
W	SD	DDDD	0 ~ 2047	Special register
W	D	DDDDDDDD	0 ~ 4184063	Data Register
W	W	HHHHHH	0 ~ 3fd7ff	Link Register
W	TN	DDDDD	0 ~ 25471	Timer Current value
W	SN	DDDDD	0 ~ 25471	Retentive Timer Current value
W	CN	DDDDD	0 ~ 25471	Counter Current value
W	SW	HHH	0 ~ 7ff	Special Link Register
W	Z	DD	0 ~ 20	Index Register
W	R	DDDDD	0 ~ 32767	File Register
W	ZR	HHHHHH	0 ~ 3fd7ff	File Register

Note: Each model of CPU is different, it is recommended to refer to MITSUBISHI MELSEC-Q Manual Device List.

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.30	Jan/14/2011	



# mitsubishi MR J3 A

Website: <http://www.mitsubishi-automation.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI MR J3 A		
PLC I/F	RS485 4W	RS232/RS485	
Baud rate	9600	9600~115200	
Parity	Even		
Data bits	8		
Stop bits	1		
PLC sta. no.	0	0~31	

## Device Address:

Bit/Word	Device type	Format	Range	Memo
W	PA	DD	1 ~ 19	Basic Setting
W	PB	DD	1 ~ 45	Gain / Filter Setting
W	PC	DD	1 ~ 50	Extension Setting
W	PD	DD	1 ~ 30	Input / Output Setting
W	Status	DD	0 ~ 17	Amplifier Status
W	Alarm	D	0 ~ 6	Alarm
W	Alarm_T	D	0 ~ 6	Alarm Time (Hour)
W	Mode	D	1 ~ 4	Write Only, Mode Setting*
W	Speed	D	0 ~ 1	Write Only, Set Current Speed *
W	Acc	D	0 ~ 1	Write Only, Set Acceleration*
W	Rotation	D	0 ~ 1	Write Only, Rotation Direction*
W	End	D	0 ~ 1	Write Only, End*
W	M_dist	D	0 ~ 1	Write Only, Moving Distance*
W	Rot_P	D	0 ~ 1	Write Only, Rotation Position*
W	P_start	D	0 ~ 1	Write Only, Start Positioning*

Note: \* represents the write-only registers. The usage of this kind of registers is to run Jog Mode and Positioning Mode.

## How to use EasyBuilder8000/Easy BuilderPro to run Jog and Positioning Mode

### \*Jog Mode

To run Jog Mode, please follow the steps listed sequentially:

- (1) Set Jog Mode
- (2) Set rotation speed
- (3) Set acceleration
- (4) Set forward / reverse rotation direction
- (5) End

The following shows how to run the steps above using Macro in EasyBuilder8000/Easy BuilderPro.



On the editing window of EasyBuilder8000/Easy BuilderPro, the write address of "speed" is set to Local HMI LW0 (the address can be user-defined), and set "Acc" (Acceleration) to LW1.

To run Jog Mode, the communication with the device must be continuous which only allows an interval less than 0.5 seconds, otherwise the motor will be locked. Therefore, in this example, only one register PA\_1 is set to read device value.

Macro Demonstration:

a. Start Macro

```
macro_command main()
```

```
short speed
```

```
short acc
```

```
short mode
```

```
mode = 1 // This represents Jog Mode.
```

```
SetData(mode, "MITSUBISHI MR J3 A", Mode, 1, 1) // Set driver mode to Jog.
```

```
GetData(speed, "Local HMI", LW, 0, 1) // Save LW0 value to speed.
```

```
SetData(speed, "MITSUBISHI MR J3 A", Speed, 0, 1) // Set motor operating speed.
```

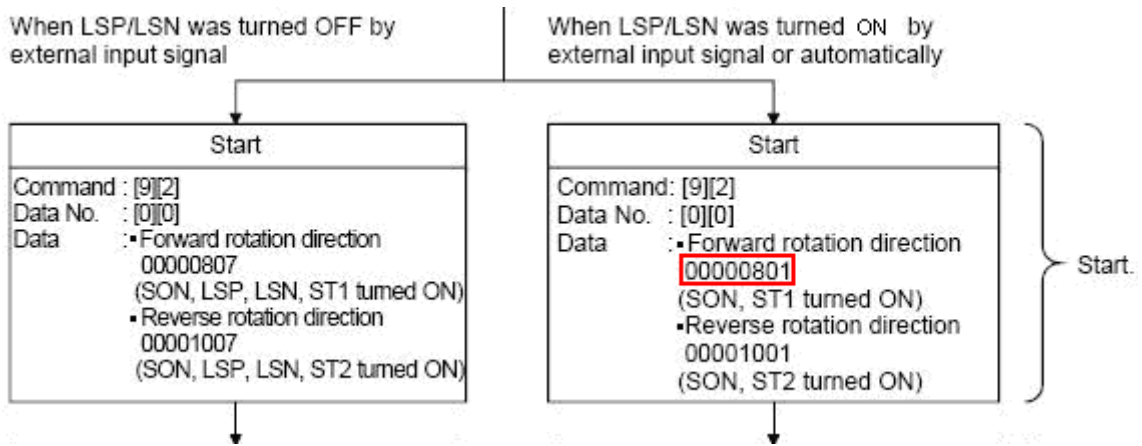
```
GetData(acc, "Local HMI", LW, 1, 1) //
SetData(acc, "MITSUBISHI MR J3 A", Acc, 0, 1) // Set motor acceleration.
```

```
short motion
motion = 0x0801 // Special code, see Note 1.
```

```
SetData(motion, "MITSUBISHI MR J3 A", Rotation, 0, 1) // Rotate.
```

```
end macro_command
```

Note 1. Original Factory Manual:



b. End Macro

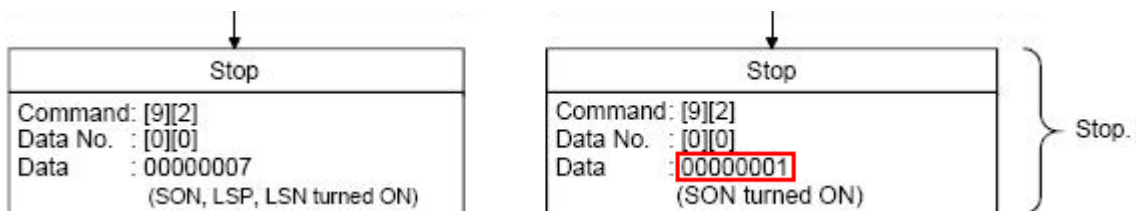
```
macro_command main()
```

```
short stop
stop = 1 // See Note 2.
```

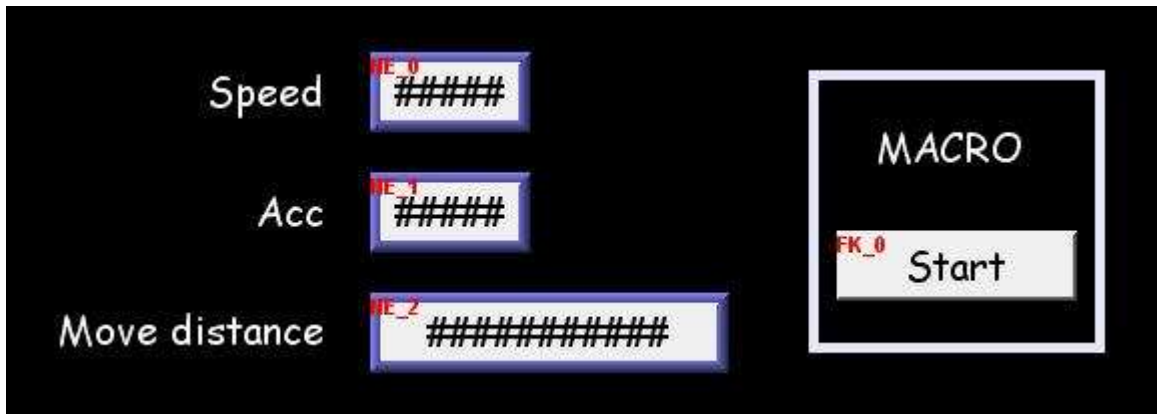
```
SetData(stop, "MITSUBISHI MR J3 A", End, 1, 1)
```

```
end macro_command
```

Note 2. Original Factory Manual:



## \*Positioning Mode



On the editing window of EasyBuilder8000/Easy BuilderPro, the write address of "Speed" is set to Local HMI LW2 (the address can be user-defined), and set "Acc" (Acceleration) to LW3, "Move distance" to LW4 (DW format).

Macro Demonstration:

```
macro_command main()
```

```
short mode
```

```
mode = 0x2 // Positioning Mode
```

```
SetData(mode, "MITSUBISHI MR J3 A", Mode, 1, 1)
```

```
short speed
```

```
GetData(speed, "Local HMI", LW, 2, 1)
```

```
SetData(speed, "MITSUBISHI MR J3 A", Speed, 0, 1)
```

```
short acc
```

```
GetData(acc, "Local HMI", LW, 3, 1)
```

```
SetData(acc, "MITSUBISHI MR J3 A", Acc, 0, 1)
```

```
short dist
```

```
GetData(dist, "Local HMI", LW, 4, 1)
```

```
SetData(dist, "MITSUBISHI MR J3 A", M_dist, 0, 1)
```

```
short rot_P
```

```
rot_P = 1 // Set to 0: Forward Rotation 1: Reverse Rotation
```

```
SetData(rot_P, "MITSUBISHI MR J3 A", Rot_P, 0, 1)
```

```
short rotat
```

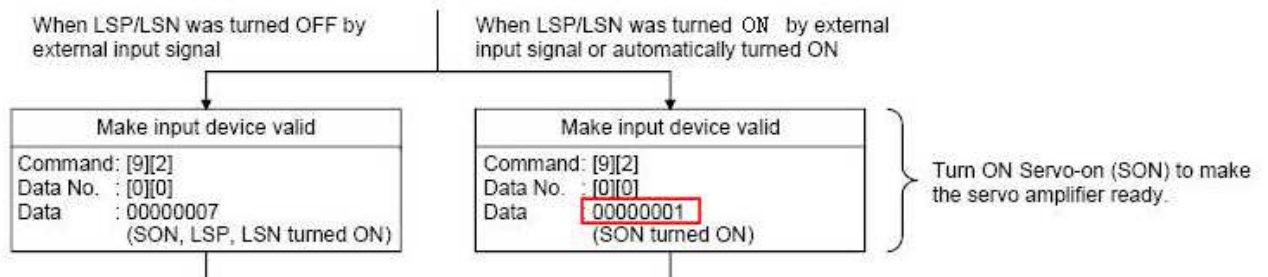
```
rotat = 1 // See Note 3.
```

```
SetData(rotat, "MITSUBISHI MR J3 A", Rotation, 0, 1)
```

```
SetData(rot_P, "MITSUBISHI MR J3 A", P_start, 0, 1) // Start Positioning.
```



```
end macro_command
```

### Note 3. Original Factory Manual





## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			CN3 RS485 4W RJ45 Male
1 RX-			4 TX-
2 RX+			5 TX+
3 TX-			6 RX-
4 TX+			3 RX+
5 GND			7 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			CN3 RS485 4W RJ45 Male
1 RX-			4 TX-
2 RX+			5 TX+
3 TX-			6 RX-
4 TX+			3 RX+
5 GND			7 GND
			

## Driver Version:

Version	Date	Description
V1.00	Sep/01/2011	Driver released.

# MITSUBISHI MR-MQ100 (Ethernet)

Supported Series: MITSUBISHI MR-MQ100-Ethernet

Website: <http://www.mitsubishi-automation.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI MR-MQ100 (Ethernet)		
PLC I/F	Ethernet		
Port no.	Set identically to the PLC setting		Advised to set port no. to 4999
Parameter1	1		Network No.
PLC sta. no.	255		

## PLC Setting:

The screenshot shows the MELSOFT Series MT Developer2 software interface. The 'Project' tree on the left shows the 'System Setting' folder expanded, with 'Basic Setting' highlighted (1). The 'Basic Setting' dialog is open, with the 'Built-in Ethernet Port Setting' tab selected (2). The IP Address Setting section shows the IP Address set to 192.168.1.11. The 'Open Setting' button is highlighted (3). The 'Built-in Ethernet Port Open Setting' dialog is also open, showing a table of protocols and host station port numbers. The 'Protocol' column is highlighted (4).

	Protocol	Open System	Host Station Port No.
1	UDP	MELSOFT Connection	
2	TCP	MC Protocol	1387
3	TCP	MC Protocol	2000
4	TCP	MC Protocol	3000
5	TCP	MELSOFT Connection	
6	TCP	MELSOFT Connection	
7	TCP	MELSOFT Connection	
8	TCP	MELSOFT Connection	
9	TCP	MELSOFT Connection	
10	TCP	MELSOFT Connection	
11	TCP	MELSOFT Connection	
12	TCP	MELSOFT Connection	
13	TCP	MELSOFT Connection	
14	TCP	MELSOFT Connection	
15	TCP	MELSOFT Connection	
16	TCP	MELSOFT Connection	

Host station port No.: Please input in HEX.

1. Click [Basic Setting].
2. [Built-in Ethernet Port Setting].
3. Click [Open Setting] and then set the IP address and communication data code.
4. Set the MC Protocol-TCP Port No. (Hex)

## Device Address:


Bit/Word	Device type	Format	Range	Memo
B	SM	DDDD	0 ~ 2255	Special Relay
B	X	HHHH	0 ~ 1fff	Input
B	Y	HHHH	0 ~ 1fff	Output
B	M	DDDDD	0 ~ 61439	Internal Relay
B	F	DDDDD	0 ~ 32767	Annunciator
B	B	HHHH	0 ~ efff	Link Relay
B	D_Bit	DDDDDDh	0 ~ 4184063f	
W	SD	DDDD	0 ~ 2255	Special Register
W	D	DDDDDD	0 ~ 4184063	Data Register
W	W	HHHHHH	0 ~ 3fd7ff	Link Register
W	#	DDDDD	0 ~ 12287	Motion Register

Note: ddd: Decimal, hhh: Hexadecimal, ooo: Octal.

## Wiring Diagram:

Direct connect (crossover cable):


HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-





Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-

### Driver Version:

Version	Date	Description
V1.10	Jun/08/2011	Added register: D_Bit

## MITSUBISHI Q00/Q00UJ/Q01/QJ71

Supported Series: Mitsubishi Q series PLC with QJ71C24 communication module, Q00, Q00J, Q00UJ, Q01, Q02H, Q06H, Q12H, Q25H, Q12PH, Q25PH CPU port.

Website: <http://www.mitsubishi-automation.com>

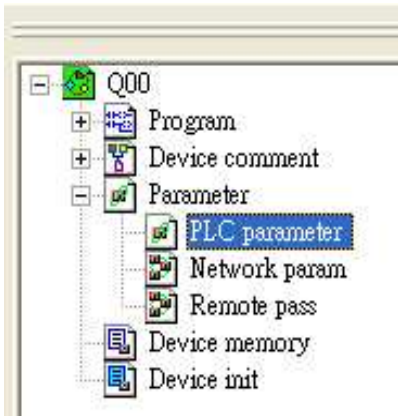
### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI Q00/Q00UJ/Q01/QJ71		
PLC I/F	RS232	RS485 4W, RS232	
Baud rate	9600	9600~115200	
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	0		

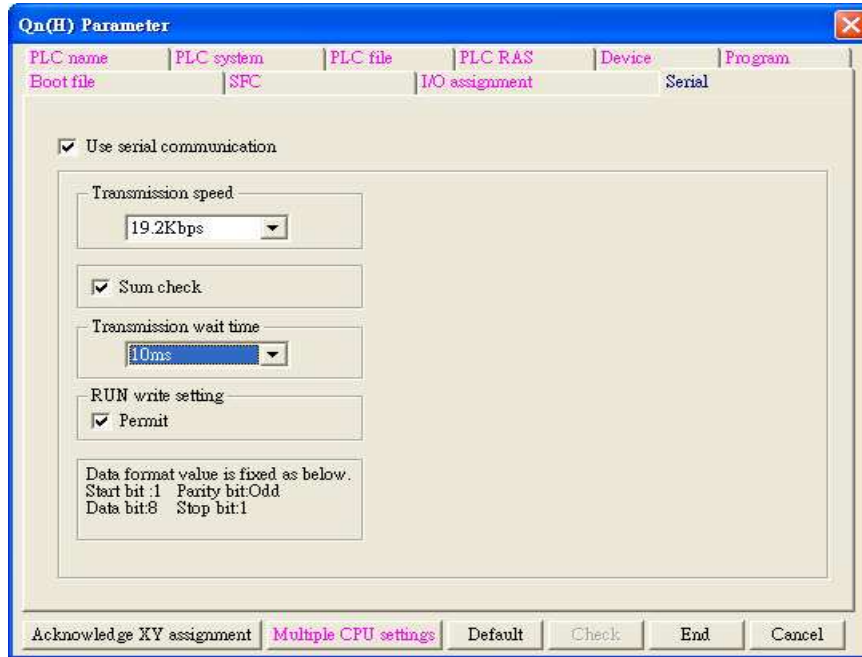
Online simulator	YES
Extend address mode	NO

### PLC Setting:

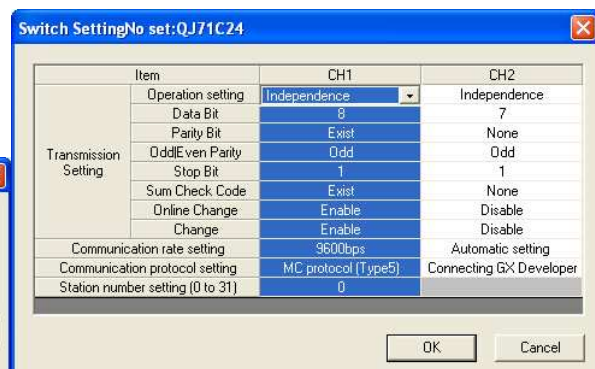
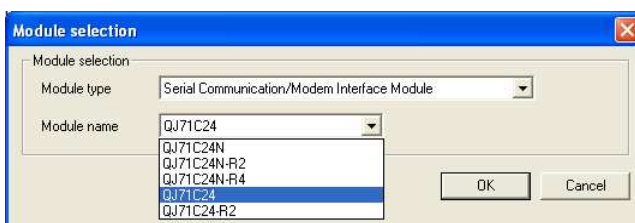
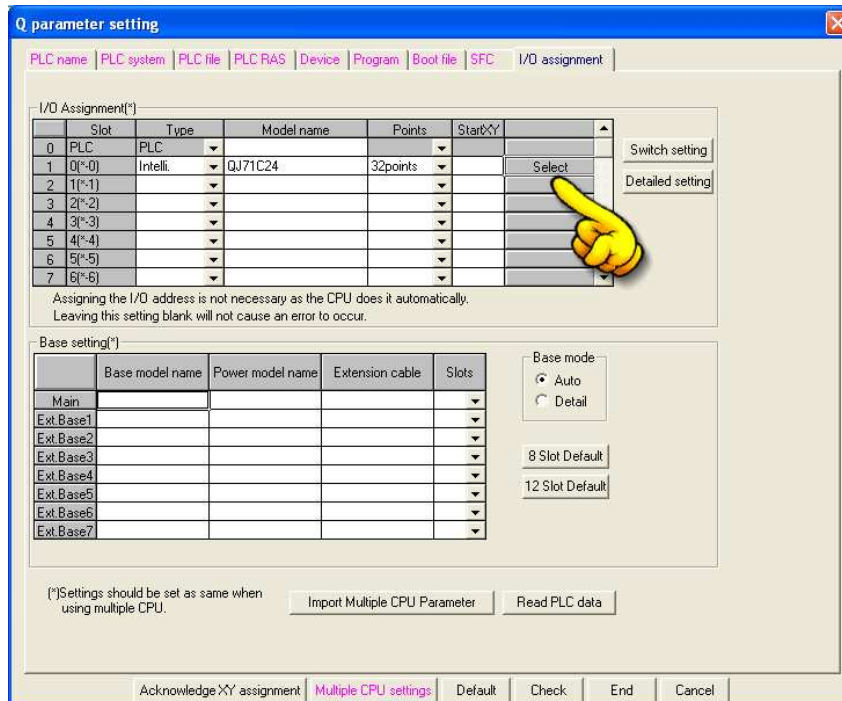
Q00, Q01 CPU port setting:



1. In GX Developer "PLC data list" click [PLC parameter].
2. In "PLC parameter" go to [Serial] page.
3. Select [Use serial communication].
4. Set [Transmission speed] to 9600~115200.
5. Select [Sum check].
6. Set [Transmission wait time] to 10ms.
7. Permit [RUN write setting].
8. Click [End] to close the dialog.
9. Write the PLC Parameter to PLC.
10. Reset PLC, the parameter will be activated.



QJ71 setting:





## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	HHHH	0 ~ 1fff	Input Relay
B	Y	HHHH	0 ~ 1fff	Output Relay
B	M	DDDD	0 ~ 8191	Internal Relay
B	L	DDDD	0 ~ 8191	Latch Relay
B	F	DDDD	0 ~ 2047	Annunciator
B	V	DDDD	0 ~ 2047	Edge Relay
B	B	HHHH	0 ~ 1fff	Link Relay
B	TC	DDDD	0 ~ 2047	Timer Coil
B	SS	DDDD	0 ~ 2047	Retentive Timer Contact
B	SC	DDDD	0 ~ 2047	Retentive Timer Coil
B	CS	DDDD	0 ~ 1023	Counter Contact
B	CC	DDDD	0 ~ 1023	Counter Coil
B	SB	HHH	0 ~ 7ff	Special Link Relay
B	S	DDDD	0 ~ 8191	Step Relay
B	DX	HHHH	0 ~ 1fff	Direct Input
B	DY	HHHH	0 ~ 1fff	Direct Output
B	TS	DDDD	0 ~ 2047	Timer Contact
B	SM	DDDD	0 ~ 2047	
B	D_Bit	DDDDh	0 ~ 12287f	
W	W	HHHH	0 ~ 2fff	Link Register
W	TN	DDDD	0 ~ 2047	Timer Current Value
W	SN	DDDD	0 ~ 2047	Retentive Timer Current Value
W	CN	DDDD	0 ~ 1023	Counter Current Value
W	R	DDDDD	0 ~ 32767	File Register
W	SW	HHH	0 ~ 7ff	Special Link Register
W	Z	DD	0 ~ 15	Index Register
W	ZR	HHHH	0 ~ ffff	File Register
W	D	DDDDD	0 ~ 12287	Data Register
W	SD	DDDD	0 ~ 2047	



## Wiring Diagram:

### QJ71C24 CH.2 RS422 Terminal

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			QJ71C24 CH.2 RS422 Terminal
1 RX-			SDB
2 RX+			SDA
3 TX-			RDB
4 TX+			RDA
5 GND			GND
			





MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			QJ71C24 CH.2 RS422 Terminal
1 RX-			SDB
2 RX+			SDA
3 TX-			RDB
4 TX+			RDA
5 GND			GND
			



### QJ71C24 CH.2 RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	QJ71C24 CH.1 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			1 DCD
			4 DTR
			6 DSR
			7 RTS
			circuit
			circuit





			8 CTS
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			QJ71C24 CH.1 RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			1 DCD
			4 DTR
			6 DSR
			7 RTS
			8 CTS
			circuit
			circuit
			


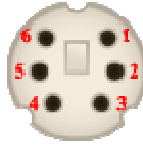
**9P D-Sub to 6P Mini-DIN: Q00, Q01 CPU port RS232**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P Mini-DIN Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	5 GND
			




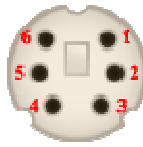
MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P Mini-DIN Male
9 RX			3 TXD
6 TX			4 RXD
5 GND			5 GND


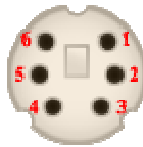
			
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### 9P D-Sub to 6P Mini-DIN: Q00UJ CPU port RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P Mini-DIN Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	5 GND
			1 RTS
			6 CTS
			circuit
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P Mini-DIN Male
9 RX			3 TXD
6 TX			4 RXD
5 GND			5 GND
			1 RTS
			6 CTS
			circuit
			

### Driver Version:

Version	Date	Description
V1.80	Jun/08/2011	Added register: D_Bit
V1.90	Sep/23/2011	Fixed bit communication incorrect.

# MITSUBISHI Q00J

Supported Series: MITSUBISHI Q00J CPU

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI Q00J		
PLC I/F	RS232		CPU port
Baud rate	115200	9600,19200,38400, 57600,115200	
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.			

## Device Address:




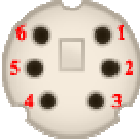
Bit/Word	Device type	Format	Range	Memo
B	SM	DDDD	0 ~ 1023	
B	X	HHH	0 ~ 7ff	
B	Y	HHH	0 ~ 7ff	
B	M	DDDD	0 ~ 8191	
B	L	DDDD	0 ~ 2047	
B	F	DDDD	0 ~ 1023	
B	V	DDDD	0 ~ 1023	
B	B	HHH	0 ~ 7ff	
B	SB	HHH	0 ~ 3ff	
B	D_Bit	DDDDh	0 ~ 11135f	
W	SD	DDDD	0 ~ 1023	
W	D	DDDD	0 ~ 11135	
W	W	HHH	0 ~ 7ff	
W	SW	HHH	0 ~ 3ff	
W	Z	D	0 ~ 9	
W	C	DDD	0 ~ 511	
W	T	DDD	0 ~ 511	




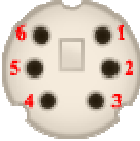
## Wiring Diagram:

### 9P D-Sub to 6P Mini-DIN: Q00 CPU port RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P Mini-DIN Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P Mini-DIN Male
9 RX			3 TXD
6 TX			4 RXD
5 GND			5 GND
			

MT8-Mitsubishi-Q-3M cable can connect MT8000 with Mitsubishi Q series directly.

## Driver Version:

Version	Date	Description
V1.20	Jun/08/2011	Added register D_bit

## MITSUBISHI Q00U/Q01U/Q02U/QnUD/QnUDH

Supported Series: MITSUBISHI Q00U, Q01U, Q02U, Q03UD, Q04UDH, Q06UDH, Q10UDH, Q13UDH, Q20UDH, Q26UDH CPU.

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI Q00U/Q01U/Q02U/QnUD/QnUDH		
PLC I/F	RS232	RS485 4W, RS232	CPU port direct connect
Baud rate	115200	115200 only	9600,19200,38400,57600,115200 For Q00UJ, only 9600 is available
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	No		

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	SM	DDDD	0 ~ 2047	
B	X	HHHH	0 ~ 1fff	Input Relay
B	Y	HHHH	0 ~ 1fff	Output Relay
B	M	DDDD	0 ~ 8191	Internal Relay
B	L	DDDD	0 ~ 8191	Latch Relay
B	F	DDDD	0 ~ 2047	Annunciator
B	V	DDDD	0 ~ 2047	Edge Relay
B	B	HHHH	0 ~ 1fff	Link Relay
B	SB	HHH	0 ~ 7ff	Special Link Relay
B	D_Bit	DDDDh	0 ~ 12287f	
W	SD	DDDD	0 ~ 2047	
W	D	DDDD	0 ~ 12287	Data Register
W	W	HHHH	0 ~ 1fff	Link Register
W	SW	HHH	0 ~ 7ff	Special Link Register
W	Z	DD	0 ~ 19	Index Register

Bit/Word	Device type	Format	Range	Memo
W	R	DDDDD	0 ~ 32767	
W	C	DDDD	0 ~ 1023	Counter Current Value
W	T	DDDD	0 ~ 2047	Timer Current Value




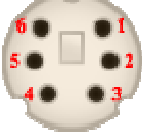
### Note:

EasyBuilder doesn't support MITSUBISHI Q02U CPU to do on-line simulation on PC. When using Q02U driver, HMI needs 10 seconds to initiate PLC Q02U driver. Before the completion of initiation, it is recommended not to wire data to PLC, this could cause "PLC no response" ; Incorrect wiring or data could cause PLC to be locked. If PLC is locked, please restart PLC or reinstall PLC module.

### Wiring Diagram:


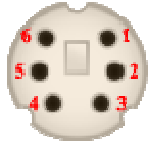
#### 9P D-Sub to 6P Mini-DIN: Q02 CPU port RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P Mini-DIN Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	5 GND
			1 RTS
			6 CTS
			circuit
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P Mini-DIN Male
9 RX			3 TXD
6 TX			4 RXD
5 GND			5 GND
			1 RTS
			6 CTS
			circuit

			
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### Driver Version:

Version	Date	Description
V1.60	Jun/08/2011	Added register D_bit

# MITSUBISHI Q00UJ/QnU/QnUD/QnUDH/QnUDEH (mini USB)

Supported Series: MITSUBISHI Q00UJ, Q00U, Q01U, Q02U, Q03UDE, Q03UD, Q04UDEH, Q04UDH, Q06UDEH, Q06UDH, Q10UDEH, Q10UDH, Q13UDEH, Q13UDH, Q20UDEH, Q20UDH, Q26UDEH, Q26UDH USB Port.

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI Q00UJ/QnU/QnUD/QnUDH/QnUDEH (mini USB)		
PLC I/F	USB		CPU port direct connect

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	SM	DDDD	0 ~ 2047	
B	X	HHHH	0 ~ 1fff	Input Relay
B	Y	HHHH	0 ~ 1fff	Output Relay
B	M	DDDD	0 ~ 8191	Internal Relay
B	L	DDDD	0 ~ 8191	Latch Relay
B	F	DDDD	0 ~ 2047	Annunciator
B	V	DDDD	0 ~ 2047	Edge Relay
B	B	HHHH	0 ~ 1fff	Link Relay
B	SB	HHH	0 ~ 7ff	Special Link Relay
B	D_Bit	DDDDh	0 ~ 12287f	
W	SD	DDDD	0 ~ 2047	
W	D	DDDDD	0 ~ 12287	Data Register
W	W	HHHH	0 ~ 1fff	Link Register
W	SW	HHH	0 ~ 7ff	Special Link Register
W	Z	DD	0 ~ 19	Index Register
W	R	DDDDD	0 ~ 32767	
W	C	DDDD	0 ~ 1023	Counter Current Value
W	T	DDDD	0 ~ 2047	Timer Current Value

**Note:**

EasyBuilder doesn't support MITSUBISHI Q02U CPU to do on-line simulation on PC. When using Q02U driver, HMI needs 10 seconds to initiate PLC Q02U driver. Before the completion of initiation, it is recommended not to wire data to PLC, this could cause "PLC no response" ; Incorrect wiring or data could cause PLC to be locked. If PLC is locked, please restart PLC or reinstall PLC module.

**Driver Version:**

Version	Date	Description
V1.30	Jun/08/2011	Added register D_bit

# MITSUBISHI Q02/02H

Supported Series; MITSUBISHI Q02/Q02H CPU port.

Website: <http://www.mitsubishi-automation.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI Q02/02H		
PLC I/F	RS232	RS485 4W, RS232	
Baud rate	115200	115200 only	
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	0		

Online simulator	YES	Extend address mode	NO
Broadcast command	NO		

## Device Address:




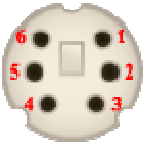
Bit/Word	Device type	Format	Range	Memo
B	X	HHHH	0 ~ 1fff	Input Relay
B	Y	HHHH	0 ~ 1fff	Output Relay
B	M	DDDD	0 ~ 8191	Internal Relay
B	L	DDDD	0 ~ 8191	Latch Relay
B	F	DDDD	0 ~ 2047	Annunciator
B	V	DDDD	0 ~ 2047	Edge Relay
B	B	HHHH	0 ~ 1fff	Link Relay
B	TC	DDDD	0 ~ 2047	Timer Coil
B	SS	DDDD	0 ~ 2047	Retentive Timer Contact
B	SC	DDDD	0 ~ 2047	Retentive Timer Coil
B	CS	DDDD	0 ~ 1023	Counter Contact
B	CC	DDDD	0 ~ 1023	Counter Coil
B	SB	HHH	0 ~ 7ff	Special Link Relay
B	S	DDDD	0 ~ 8191	Step Relay
B	DX	HHHH	0 ~ 1fff	Direct Input

Bit/Word	Device type	Format	Range	Memo
B	DY	HHHH	0 ~ 1fff	Direct Output
B	TS	DDDD	0 ~ 2047	Timer Contact
B	D_Bit	DDDDh	0 ~ 12287f	
W	W	HHHH	0 ~ 1fff	Link Register
W	TN	DDDD	0 ~ 2047	Timer Current Value
W	SN	DDDD	0 ~ 2047	Retentive Timer Current Value
W	CN	DDDD	0 ~ 1023	Counter Current Value
W	R	DDDDD	0 ~ 32767	File Register
W	SW	HHH	0 ~ 7ff	Special Link Register
W	Z	DD	0 ~ 15	Index Register
W	ZR	HHHH	0 ~ ffff	File Register
W	D	DDDDD	0 ~ 12287	Data Register

## Wiring Diagram:

### 9P D-Sub to 6P Mini-DIN: Q02 CPU port RS232

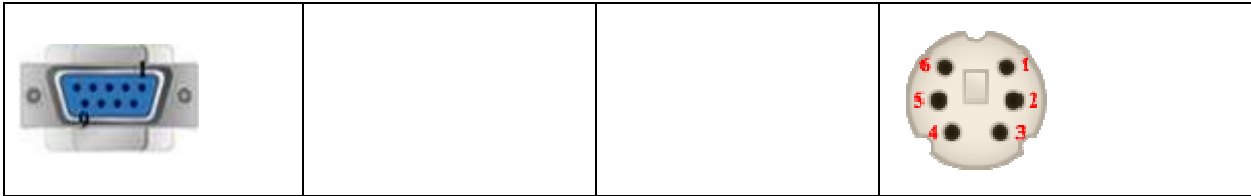
MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P Mini-DIN Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	5 GND
			1 RTS
			6 CTS
			circuit
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P Mini-DIN Male
9 RX			3 TXD
6 TX			4 RXD
5 GND			5 GND
			1 RTS
			6 CTS
			circuit





### Driver Version:

Version	Date	Description
V1.60	Jun/08/2011	Added register D_bit

# mitsubishi Q06H

Supported Series: Mitsubishi Q06H CPU port.

Website: <http://www.mitsubishi-automation.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI Q06H		
PLC I/F	RS232	RS485 4W, RS232	
Baud rate	115200	115200 only	
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	0		

Online simulator	YES	Extend address mode	NO
Broadcast command	NO		

## Device Address:




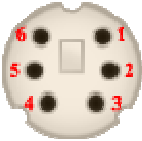
Bit/Word	Device type	Format	Range	Memo
B	X	HHHH	0 ~ 1fff	Input Relay
B	Y	HHHH	0 ~ 1fff	Output Relay
B	M	DDDD	0 ~ 8191	Internal Relay
B	L	DDDD	0 ~ 8191	Latch Relay
B	F	DDDD	0 ~ 2047	Annunciator
B	V	DDDD	0 ~ 2047	Edge Relay
B	B	HHHH	0 ~ 1fff	Link Relay
B	TC	DDDD	0 ~ 2047	Timer Coil
B	SS	DDDD	0 ~ 2047	Retentive Timer Contact
B	SC	DDDD	0 ~ 2047	Retentive Timer Coil
B	CS	DDDD	0 ~ 1023	Counter Contact
B	CC	DDDD	0 ~ 1023	Counter Coil
B	SB	HHH	0 ~ 7ff	Special Link Relay
B	S	DDDD	0 ~ 8191	Step Relay

Bit/Word	Device type	Format	Range	Memo
B	DX	HHHH	0 ~ 1fff	Direct Input
B	DY	HHHH	0 ~ 1fff	Direct Output
B	TS	DDDD	0 ~ 2047	Timer Contact
B	D_Bit	DDDDh	0 ~ 12287f	
W	W	HHHH	0 ~ 1fff	Link Register
W	TN	DDDD	0 ~ 2047	Timer Current Value
W	SN	DDDD	0 ~ 2047	Retentive Timer Current Value
W	CN	DDDD	0 ~ 1023	Counter Current Value
W	R	DDDDD	0 ~ 32767	File Register
W	SW	HHH	0 ~ 7ff	Special Link Register
W	Z	DD	0 ~ 15	Index Register
W	ZR	HHHH	0 ~ ffff	File Register
W	D	DDDDD	0 ~ 12287	Data Register

## Wiring Diagram:


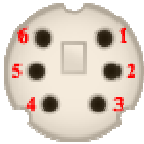
### 9P D-Sub to 6P Mini-DIN: Q02 CPU port RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 6P Mini-DIN Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	4 RXD
5 GND	5 GND	5 GND	5 GND
			1 RTS
			6 CTS
			circuit
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 6P Mini-DIN Male
9 RX			3 TXD
6 TX			4 RXD
5 GND			5 GND
			1 RTS
			circuit

			6 CTS
			

### Driver Version:

Version	Date	Description
V1.60	Jun/08/2011	Added register D_bit

## MITSUBISHI QJ71E71 (Ethernet)

Supported Series ; Mitsubishi Q type, MELSEC-Q series PLC (Q00J, Q00, Q01, Q02, Q02H, Q06H, Q12H, Q25H, Q12PH, Q25PH) QJ71E71-100 Ethernet module.

Website: <http://www.mitsubishi-automation.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MITSUBISHI QJ71E71 (Ethernet)		
PLC I/F	Ethernet		
Port no.	5002		
PLC sta. no.	2	1~99	

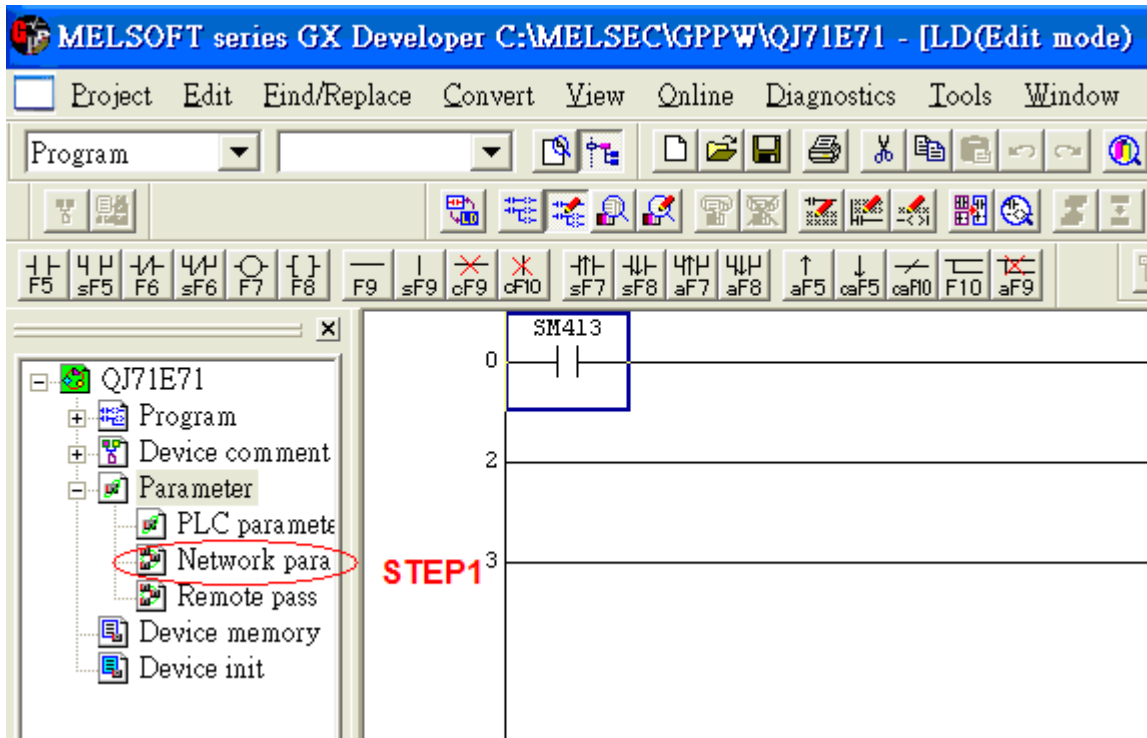
**Note:** MITSUBISHI QJ71E71 only supports PLC Network No. 1.

If PLC Network No. is not 1, please use “MITSUBISHI MELSEC-Q(Ethernet)” driver and fill in the Network No. in Parameter 1. Please refer to MITSUBISHI MELSEC-Q(Ethernet) for further information.

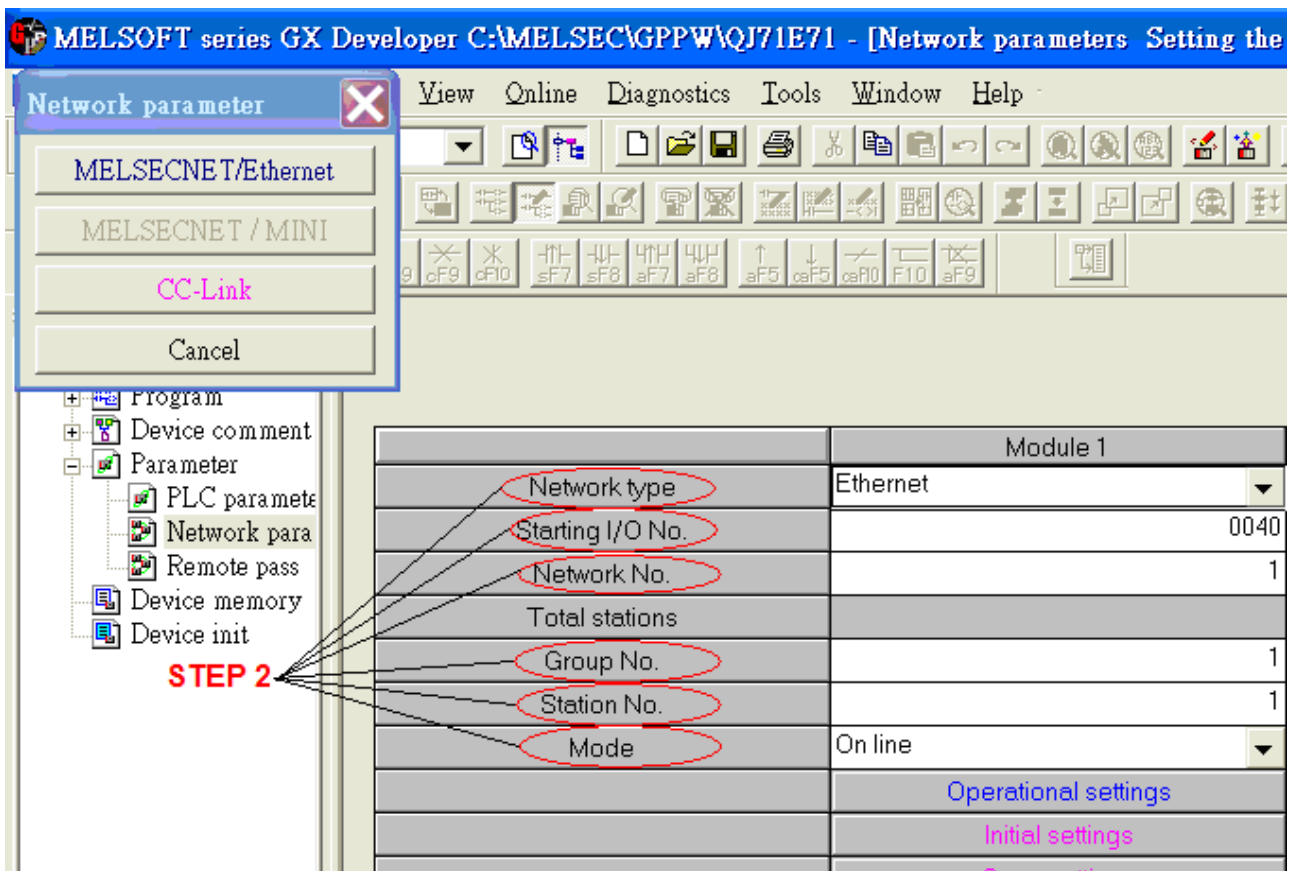
### PLC Setting:

QJ71E71-100 Ethernet module settings:

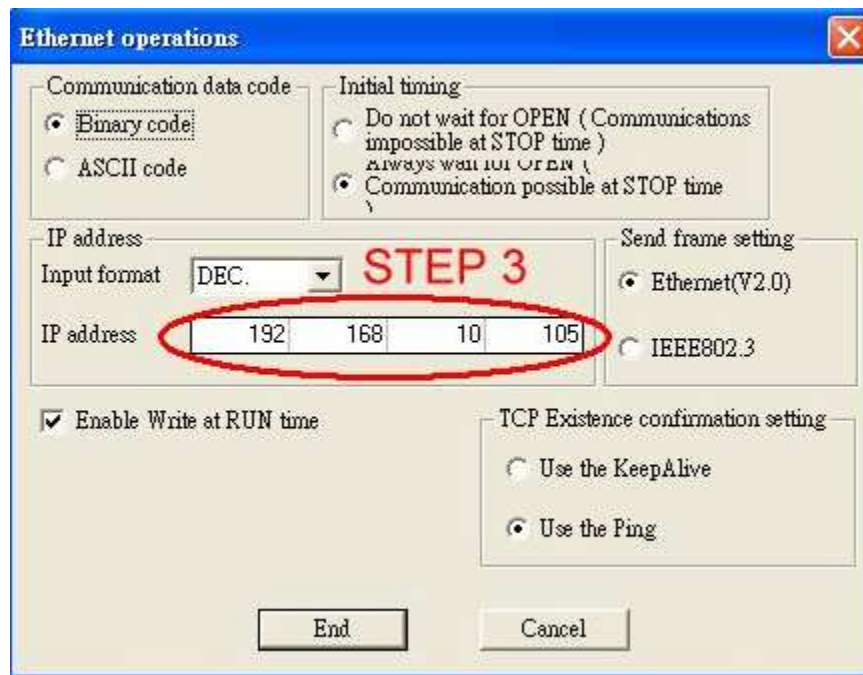
1. Use USB or RS232 of Q-CPU for setting PLC parameters.



2. Click [Operational settings] to set IP information.

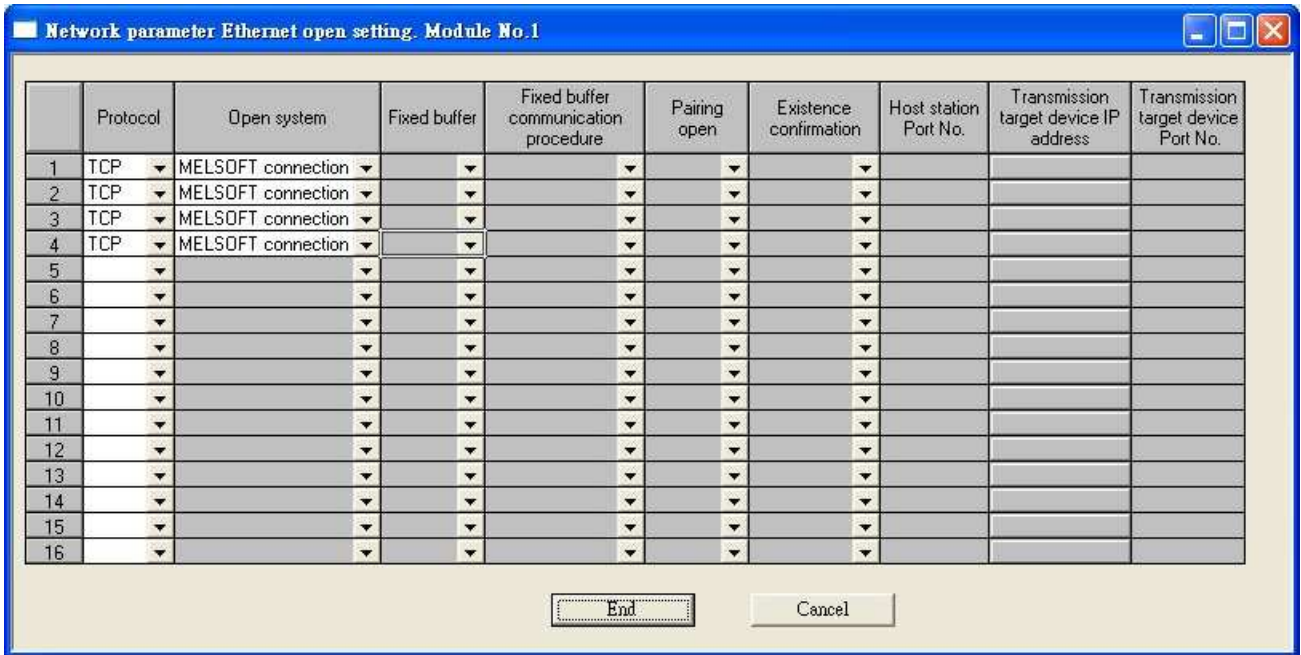


3. Select Ethernet (2.0) for communicating with HMI.

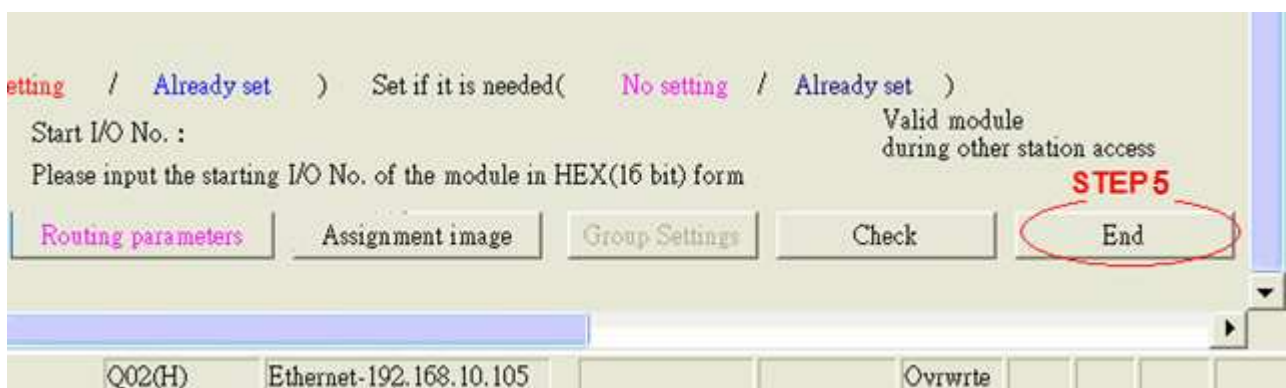


4. Click [Open settings] to set the system.

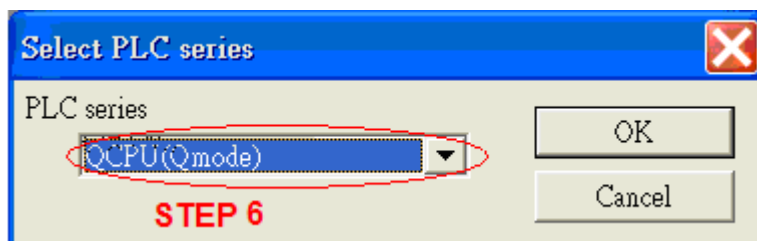
	Module 1	Module 2
Network type	Ethernet	None
Starting I/O No.	0040	
Network No.	1	
Total stations		
Group No.	1	
Station No.	1	
Mode	On line	
	<a href="#">Operational settings</a>	
	<a href="#">Initial settings</a>	
	<b>STEP 4</b> <a href="#">Open settings</a>	
	<a href="#">Router relay parameter</a>	
	<a href="#">Station No. &lt;-&gt; IP information</a>	
	<a href="#">FTP Parameters</a>	
	<a href="#">E-mail settings</a>	
	<a href="#">Interrupt settings</a>	



5. Press [END] to finish settings.

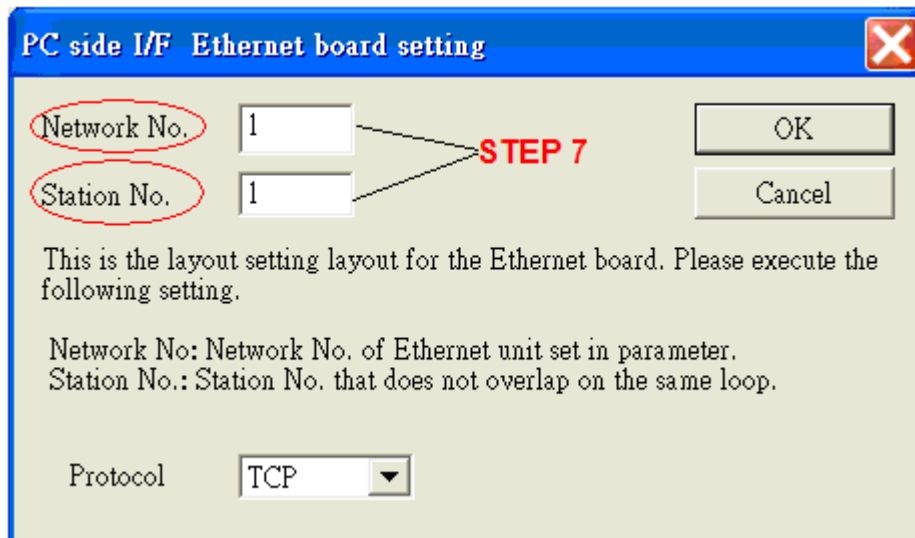


6. Restart PLC software and select [READ FROM PLC], select [QCPU(Qmode)] and press [OK].

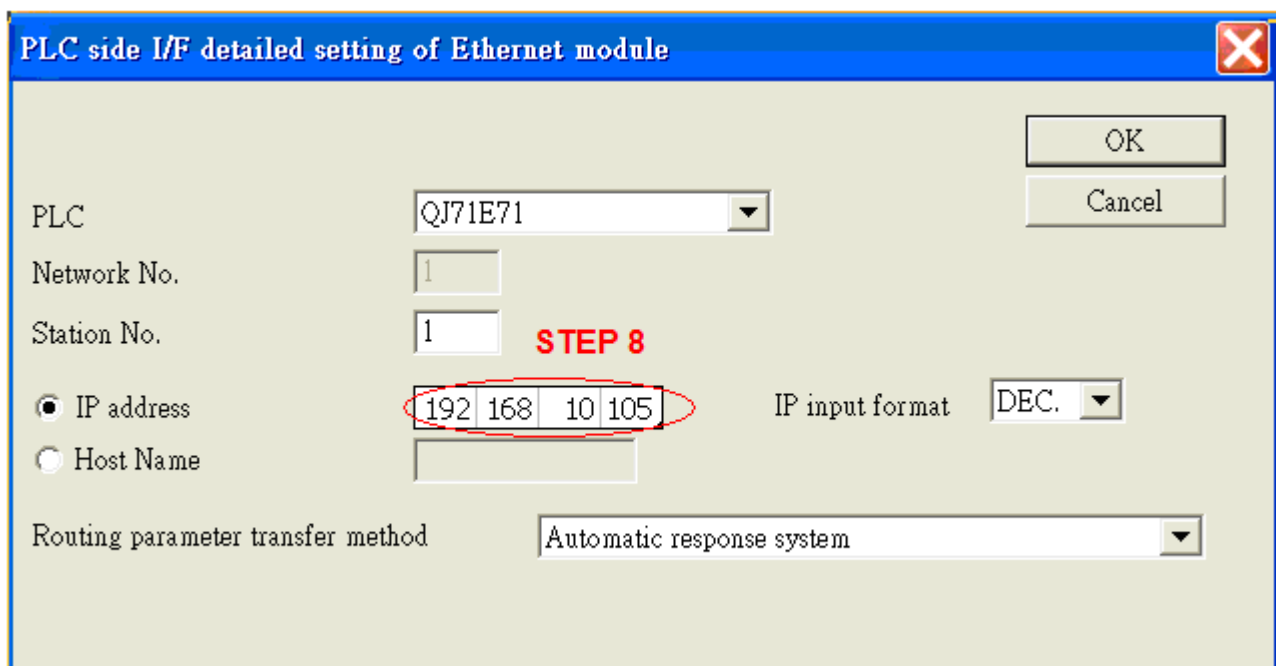


7. In [PC side I/F Ethernet board setting] set Network No. and Station No. (Station No.1 is PC Station No. not Ethernet module Station No., ranged from 2~64, the Network No. can not be the same as that of PC)

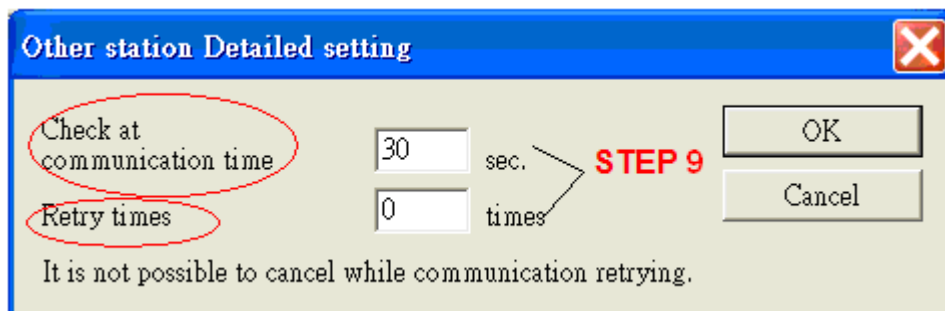




8. Select "Ethernet module" in PLC Side I/F to set QJ71E71 IP address.(IP address = Network Parameter IP address)



9. For "Other station", click [Other station(Single network)] for setting [Check at communication time] and [Retry times].



10. After finishing the settings above, click [Connection test] for testing the communication and sending the PLC program.

### Device Address:


Bit/Word	Device type	Format	Range	Memo
B	SM	DDDD	0 ~ 2047	
B	X	HHHH	0 ~ 1fff	Input Relay
B	Y	HHHH	0 ~ 1fff	Output Relay
B	M	DDDD	0 ~ 8191	Internal Relay
B	L	DDDD	0 ~ 8191	Latch Relay
B	F	DDDD	0 ~ 2047	Annunciator
B	V	DDDD	0 ~ 2047	Edge Relay
B	B	HHHH	0 ~ 1fff	Link Relay
B	TS	DDDD	0 ~ 2047	
B	TC	DDDD	0 ~ 2047	
B	SS	DDDD	0 ~ 2047	
B	SC	DDDD	0 ~ 2047	
B	CS	DDDD	0 ~ 1023	
B	CC	DDDD	0 ~ 1023	
B	SB	HHH	0 ~ 7ff	Special Link Relay
B	S	DDDD	0 ~ 8191	
B	DX	HHHH	0 ~ 1fff	Direct Input
B	DY	HHHH	0 ~ 1fff	Direct Output
B	D_Bit	DDDDh	0 ~ 12287f	
W	SD	DDDD	0 ~ 2047	
W	D	DDDDD	0 ~ 12287	Data Register
W	W	HHHH	0 ~ 1fff	Link Register
W	TN	DDDD	0 ~ 2047	
W	SN	DDDD	0 ~ 2047	

Bit/Word	Device type	Format	Range	Memo
W	CN	DDDD	0 ~ 1023	
W	SW	HHH	0 ~ 7ff	Special Link Register
W	Z	DD	0 ~ 15	Index Register
W	R	DDDDD	0 ~ 32767	File Register
W	ZR	HHHHH	0 ~ fe7ff	File Register

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V2.20	Jun/08/2011	Added register: D_bit

# MODBUS ASCII

Supported Series: MODBUS ASCII CONTROLLER

Website: <http://www.modbus.org>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS ASCII		
PLC I/F	RS485	RS232/RS485	
Baud rate	9600	9600/19200/38400/ 57600/115200	
Data bits	8	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1,2	
PLC sta. no.	1	0-255	

Online simulator	YES	Broadcast command	YES
Extend address mode	YES		

## PLC Setting:

Communication mode	Modbus ASCII protocol
--------------------	-----------------------

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	1x	DDDDD	1 ~ 65535	Input bit (read only)
B	0x	DDDDD	1 ~ 65535	Output bit
B	3x_Bit	DDDDDdd	100 ~ 6553515	Input Register bit (read only)
B	4x_Bit	DDDDDdd	100 ~ 6553515	Output Register bit
W	3x	DDDDD	1 ~ 65535	Input Register (read only)
W	4x	DDDDD	1 ~ 65535	Output Register
W	6x	DDDDD	1 ~ 65535	

Modbus RTU function code:

0x	0x01 Read coil	0x05 write single coil
1x	0x02 Read discrete input	N/A for write operation
3x	0x04 Read input register	N/A for write operation
4x	0x03 Read holding register	0x10 write multiple registers





3xbit is equivalent to 3x

4xbit is equivalent to 4x



## Wiring Diagram:

### Modbus ASCII Controller : RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Female
2 RX	6 RX	8 RX	TXD
3 TX	4 TX	7 TX	RXD
5 GND	5 GND	5 GND	GND
			RTS
			CTS
			circuit
			



MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Female
9 RX			TXD
6 TX			RXD
5 GND			GND
			RTS
			CTS
			circuit
			



### Modbus ASCII Controller : RS485 4W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male




1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			

**MT6050i/MT8050i**

COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Female
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			

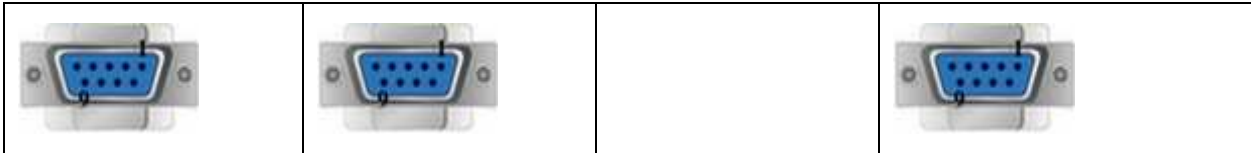
**Modbus ASCII Controller : RS485 2W**

## MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		D-
2 RX+	9 Data+		D+
5 GND	5 GND		GND
			

**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Female
1 RX-	7 Data-		D-
2 RX+	8 Data+		D+
5 GND	5 GND		GND



## Driver Version:

Version	Date	Description
V1.40	Apr/17/2009	



# MODBUS RTU

Supported Series : MODBUS RTU CONTROLLER

Website : <http://www.modbus.org>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS RTU		
PLC I/F	RS485	RS232/RS485	
Baud rate	9600	9600~115200	
Data bits	8	7, 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1, 2	
PLC sta. no.	1	0-255	

Online simulator	YES	Broadcast command	YES
Extend address mode	YES		

## PLC Setting:

Communication mode	Modbus RTU protocol
--------------------	---------------------

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	0x	DDDDD	1 ~ 65535	Output bit
B	1x	DDDDD	1 ~ 65535	Input bit (read only)
B	3x_Bit	DDDDDdd	100 ~ 6553515	Input Register bit (read only)
B	4x_Bit	DDDDDdd	100 ~ 6553515	Output Register bit
B	6x_Bit	DDDDDdd	100 ~ 6553515	Output Register bit
B	0x_multi_coils	DDDDD	1 ~ 65535	Write multiple coils
W	3x	DDDDD	1 ~ 65535	Input Register (read only)
W	4x	DDDDD	1 ~ 65535	Output Register
DW	5x	DDDDD	1 ~ 65535	4x double word swap
W	6x	DDDDD	1 ~ 65535	4x single word write
W	4x 32Bit	DDDDD	1 ~ 65535	4x High/Low byte swap

## NOTE:

Address type “5x” is mapping to Hold Reg. The communication protocol of 5x is almost the same as “4x” except that “5x” swaps double word.

If 4x contains the following information:

Address	1	2	3	4	5	6	...
Data in word	0x1	0x2	0x3	0x4	0x5	0x6	
Data	0x20001		0x40003		0x60005		

For 5x, it will be:

Address	1	2	3	4	5	6	...
Data in word	0x2	0x1	0x4	0x3	0x6	0x5	
Data	0x10002		0x30004		0x50006		

Modbus RTU function code:

0x	0x01	Read coil	0x05	write single coil
0x_multi_coils	0x01	Read coil	0x0f	write multiple coils
1x	0x02	Read discrete input	N/A	for write operation
3x	0x04	Read input register	N/A	for write operation
4x	0x03	Read holding register	0x10	write multiple registers
5x	0x03	Read holding register	0x10	write multiple registers

(Note: reverse word order in double word format)

3xbit is equivalent to 3x

4xbit is equivalent to 4x





6x	0x03	Read holding register	0x06	write single register
----	------	-----------------------	------	-----------------------

(Note: 6x is limited to device of one word only)



## Wiring Diagram:

### MODBUS RTU CONTROLLER : RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub FeMale
2 RX	6 RX	8 RX	TXD
3 TX	4 TX	7 TX	RXD
5 GND	5 GND	5 GND	GND
			RTS
			CTS
			circuit
			



MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub FeMale
9 RX			TXD
6 TX			RXD
5 GND			GND
			RTS
			CTS
			circuit
			



### MODBUS RTU CONTROLLER : RS485 4W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND




			
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**MT6050i/MT8050i**




COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Female
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			

**MODBUS RTU CONTROLLER : RS485 2W**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		D-
2 RX+	9 Data+		D+
5 GND	5 GND		GND
			

**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Female
1 RX-	7 Data-		D-
2 RX+	8 Data+		D+
5 GND	5 GND		GND
			

## Driver Version:

Version	Date	Description
V1.90	May/05/2010	Fixed when receiving data over 8 bytes from MODBUS RTU, LW-9570 fails to calculate correctly.

## MODBUS RTU (0x/1x Range Adjustable)

Supported Series : MODBUS RTU CONTROLLER

Website : <http://www.modbus.org>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS RTU (0x/1x Range Adjustable)		
PLC I/F	RS485	RS232/RS485	
Baud rate	9600	9600/19200/38400/57600/115200	
Data bits	8	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1,2	
PLC sta. no.	1	0-255	

Online simulator	YES
Extend address mode	YES

### PLC Setting:

Communication mode	Modbus RTU protocol
--------------------	---------------------

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	0x	DDDDD	1 ~ 65535	Output bit
B	1x	DDDDD	1 ~ 65535	Input bit (read only)
B	3x_Bit	DDDDDdd	100 ~ 6553515	Input Register bit (read only)
B	4x_Bit	DDDDDdd	100 ~ 6553515	Output Register bit
B	6x_Bit	DDDDDdd	100 ~ 6553515	Output Register bit
B	0x_multi_coils	DDDDD	1 ~ 65535	Write multiple coils
W	3x	DDDDD	1 ~ 65535	Input Register (read only)
W	4x	DDDDD	1 ~ 65535	Output Register
DW	5x	DDDDD	1 ~ 65535	4x double word swap

W	6x	DDDDD	1 ~ 65535	4x single word write
W	4x_32Bit	DDDDD	1 ~ 65535	4x High/Low byte swap

## NOTE:

Address type “5x” is mapping to Hold Reg. The communication protocol of “5x” is almost the same as “4x” except that “5x” swaps double words.

If 4x contains the following information:

Address	1	2	3	4	5	6	...
Data in word	0x1	0x2	0x3	0x4	0x5	0x6	
Data	0x20001		0x40003		0x60005		

For 5x, it will be:

Address	1	2	3	4	5	6	...
Data in word	0x2	0x1	0x4	0x3	0x6	0x5	
Data	0x10002		0x30004		0x50006		

Modbus RTU function code:

0x	0x01	Read coil	0x05	Write single coil
0x_multi_coils	0x01	Read coil	0x0f	Write multiple coils
1x	0x02	Read discrete input		N/A for writing operation
3x	0x04	Read input register		N/A for writing operation
4x	0x03	Read holding register	0x10	Write multiple registers
5x	0x03	Read holding register	0x10	Write multiple registers

(Note: reverse word order in double words format)


3xbit is equivalent to 3x

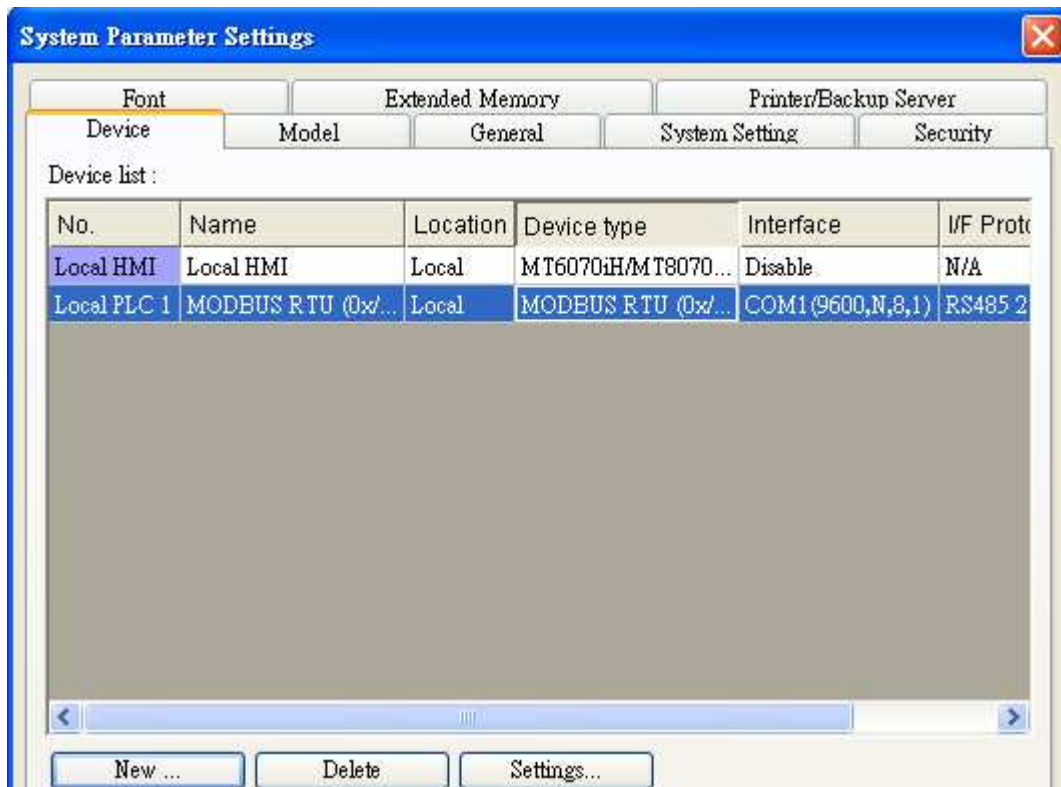
4xbit is equivalent to 4x

6x	0x03	Read holding register	0x06	Write single register
----	------	-----------------------	------	-----------------------

(Note: 6x is limited to device of one word only)

## Setting Instructions:

- Go to [System Parameter Settings]  , click [New] to add a new device -Modbus RTU (0x 1x range adjustable) , as shown below:



2. After adding Modbus RTU (0x 1x Range Adjustable) driver, [Add Address Range Limit] button will be enabled as below. Users can set maximum read/write command size here.

- Max.read-command size (words): Pull down to select PLC reading range.

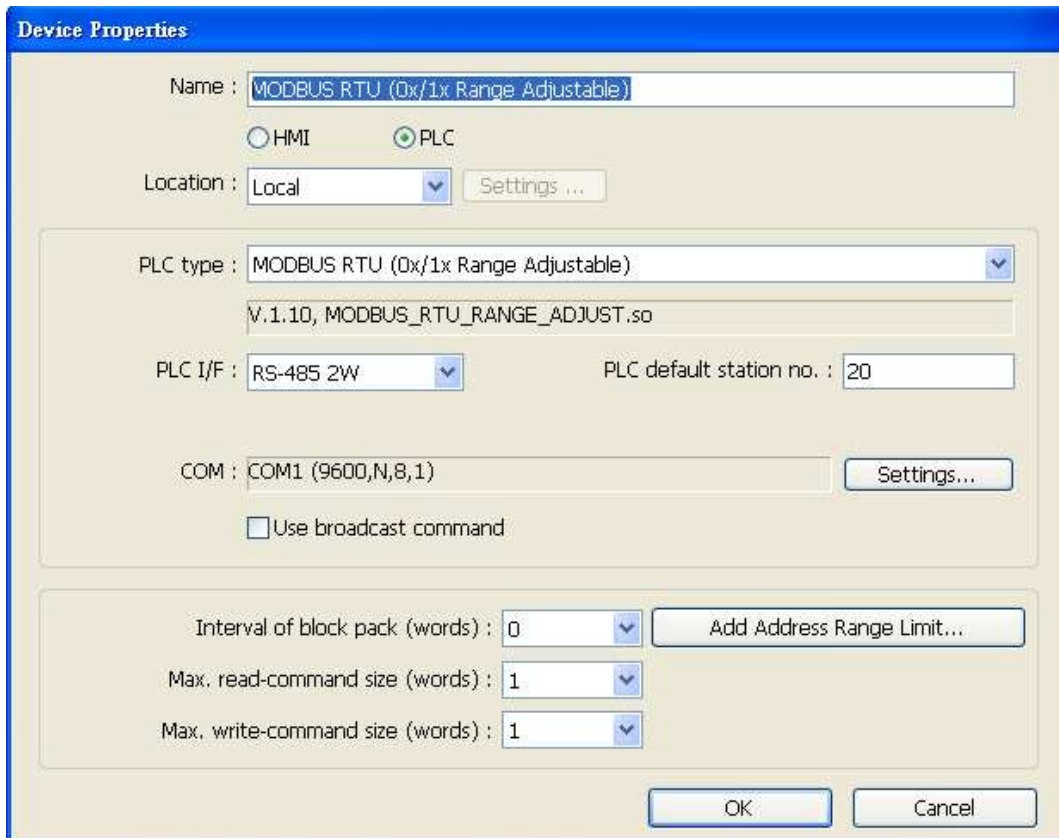
Max. read-command size (words) :

- Max.write-command size (words): Pull down to select PLC writing range.

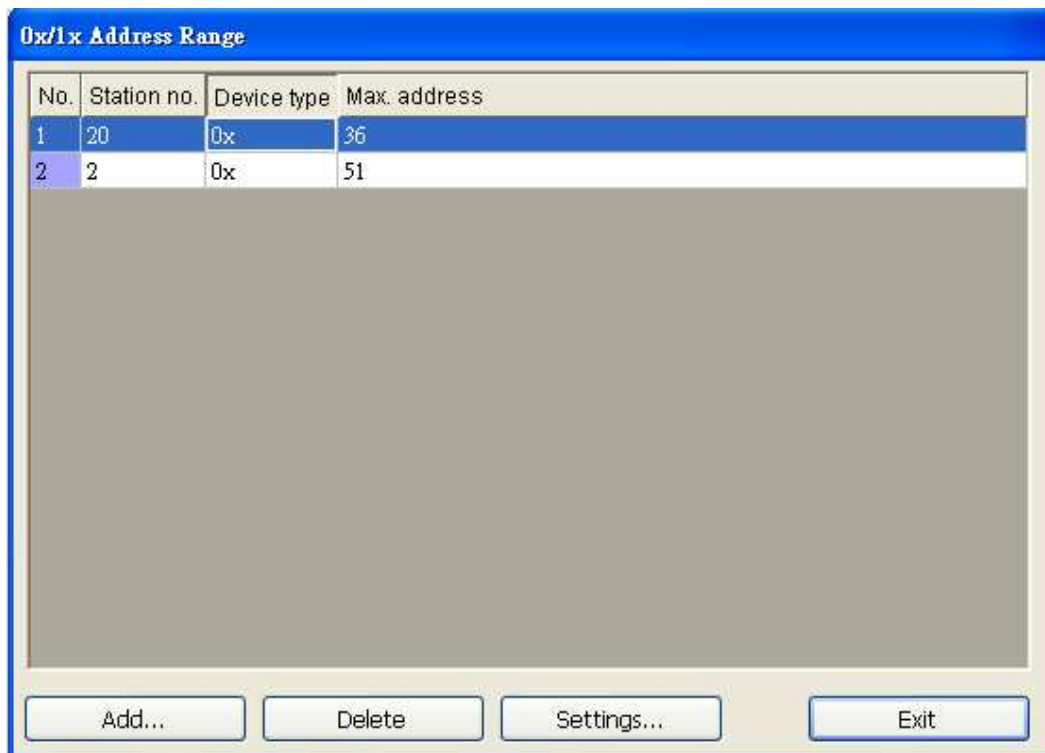
Max. write-command size (words) :

Note: Setting [Add Address Range Limit] is enabled only when bit address is not a multiple of 16bit.





3. Click [Add Address Range Limit] button, Users can define 0x and 1x address range in [0x 1x Address Range] dialog box, referring to bit range of the device used.



Add : Set [Station No.], [Device Type], [Max. Address] then click [OK] to finish adding as below:



Delete : The selected items will be deleted.

Settings : Set [Station No.], [Device Type], [Max. Address] then click [OK] to finish adding as below:

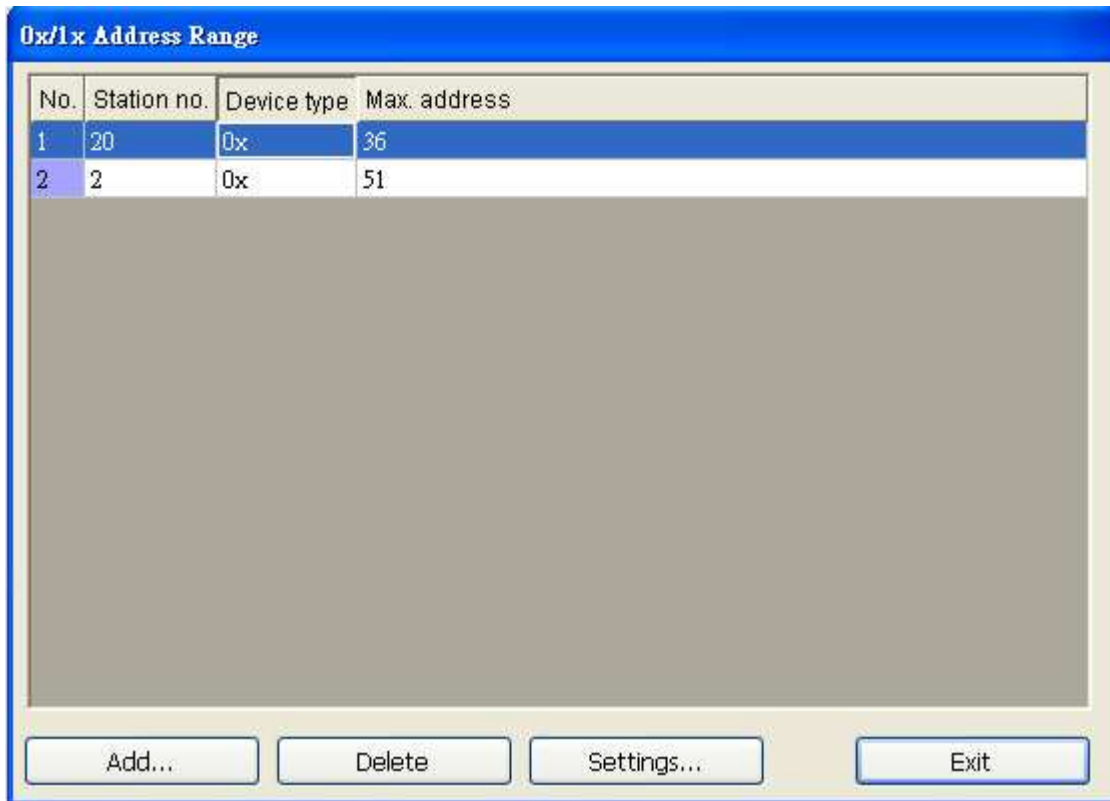


Example :

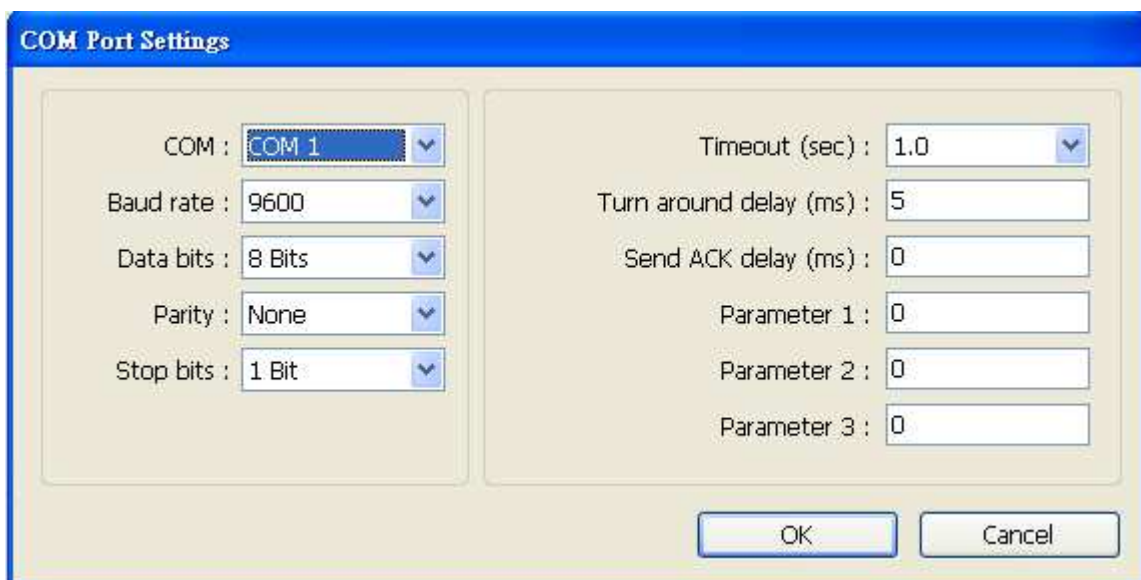
Take D2 and D8 of SCON as example, the settings depend on maximum bit range of different PLC types. Set [Station No.] and address first.

For D2, set [Station No.] to **20**, [Device Type] **0x**, [Max. Address] **36**.

For D8, set [Station No.] to **2**, [Device Type] **0x**, [Max. Address] **51**.



Note: If connecting with 2 or more PLC, click [Settings] in [Device Properties], and set 4 to [Turn around delay] as below.







After completing all settings above, the communication is enabled.



## Wiring Diagram:

### MODBUS RTU CONTROLLER : RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Female
2 RX	6 RX	8 RX	TXD
3 TX	4 TX	7 TX	RXD
5 GND	5 GND	5 GND	GND
			RTS
			CTS
			circuit
			



MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Female
9 RX			TXD
6 TX			RXD
5 GND			GND
			RTS
			CTS
			circuit
			



### MODBUS RTU CONTROLLER : RS485 4W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND




			
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**MT6050i/MT8050i**




COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Female
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			

**MODBUS RTU CONTROLLER : RS485 2W**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		D-
2 RX+	9 Data+		D+
5 GND	5 GND		GND
			

**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Female
1 RX-	7 Data-		D-
2 RX+	8 Data+		D+
5 GND	5 GND		GND
			

**Driver Version:**

Version	Date	Description
V1.10	Aug/25/2010	

## MODBUS RTU (zero-based addressing)

Supported Series : MODBUS RTU CONTROLLER

Website : <http://www.modbus.org>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS RTU (zero-based addressing)		
PLC I/F	RS485	RS232/RS485	
Baud rate	9600	9600~115200	
Data bits	8	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1,2	
PLC sta. no.	1	0-255	

Online simulator	YES	Broadcast command	YES
Extend address mode	YES		

### PLC Setting:

Communication mode	Modbus RTU protocol
--------------------	---------------------

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	0x	DDDDD	0 ~ 65535	Output bit
B	1x	DDDDD	0 ~ 65535	Input bit (read only)
B	3x_Bit	DDDDDdd	0 ~ 6553515	Input Register bit (read only)
B	4x_Bit	DDDDDdd	0 ~ 6553515	Output Register bit
B	0x_multi_coils	DDDDD	0 ~ 65535	Write multiple coils
W	3x	DDDDD	0 ~ 65535	Input Register (read only)
W	4x	DDDDD	0 ~ 65535	Output Register
DW	5x	DDDDD	0 ~ 65535	4x double word swap
W	6x	DDDDD	0 ~ 65535	4x single word write

## NOTE:

Address type “5x” is mapping to Hold Reg. The communication protocol of 5x is almost the same as “4x” except that “5x” swaps double words.

If 4x contains the following information:

Address	1	2	3	4	5	6	...
Data in word	0x1	0x2	0x3	0x4	0x5	0x6	
Data	0x20001		0x40003		0x60005		

For 5x, it will be:

Address	1	2	3	4	5	6	...
Data in word	0x2	0x1	0x4	0x3	0x6	0x5	
Data	0x10002		0x30004		0x50006		

Modbus RTU function code:

0x	0x01	Read coil	0x05	write single coil
0x_multi_coils	0x01	Read coil	0x0f	write multiple coils
1x	0x02	Read discrete input	N/A	for write operation
3x	0x04	Read input register	N/A	for write operation
4x	0x03	Read holding register	0x10	write multiple registers
5x	0x03	Read holding register	0x10	write multiple registers

(Note: reverse word order in double word format)

3xbit is equivalent to 3x

4xbit is equivalent to 4x

6x	0x03	Read holding register	0x06	write single register
----	------	-----------------------	------	-----------------------





(Note: 6x is limited to device of one word only)





## Wiring Diagram:

### MODBUS RTU CONTROLLER : RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Female
2 RX	6 RX	8 RX	TXD
3 TX	4 TX	7 TX	RXD
5 GND	5 GND	5 GND	GND
			RTS
			CTS
			circuit
			


MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Female
9 RX			TXD
6 TX			RXD
5 GND			GND
			RTS
			CTS
			circuit
			



### MODBUS RTU CONTROLLER : RS485 4W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND




			
---	--	--	---

**MT6050i/MT8050i**




COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Female
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			

**MODBUS RTU CONTROLLER : RS485 2W**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		D-
2 RX+	9 Data+		D+
5 GND	5 GND		GND
			

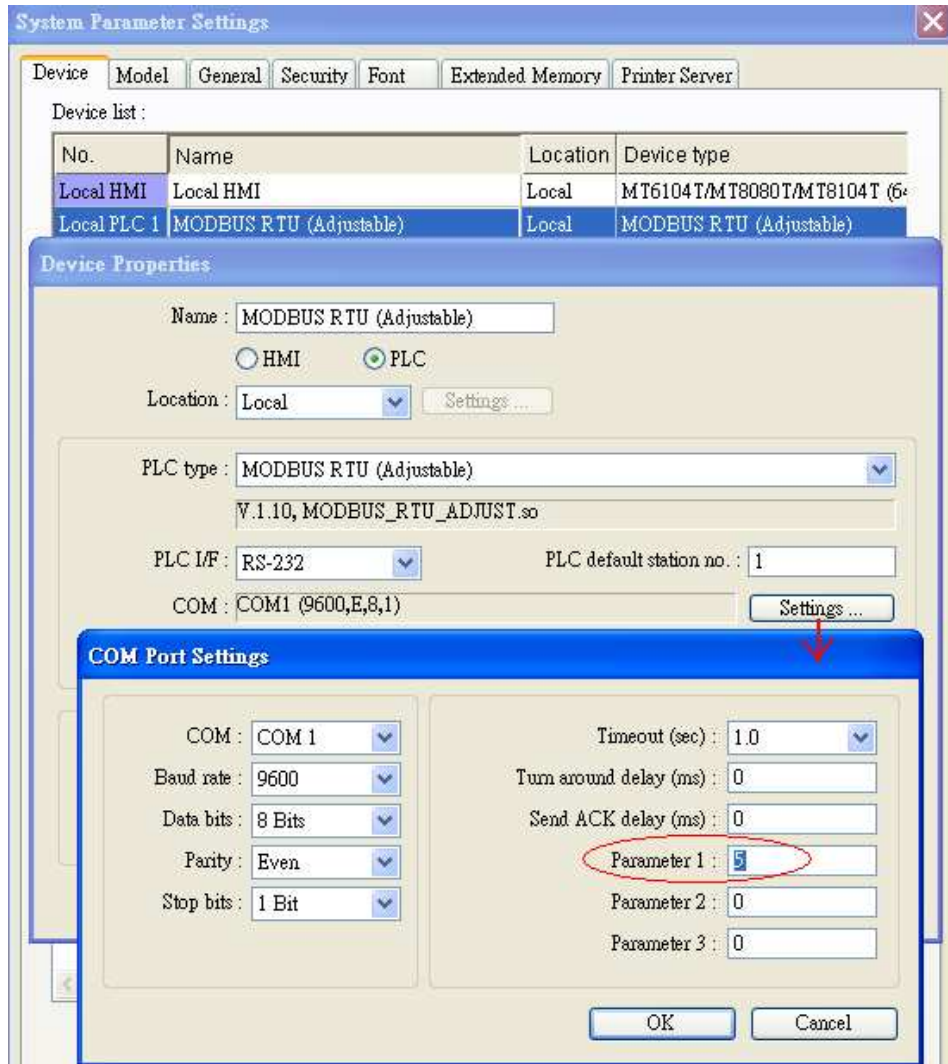
**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Female
1 RX-	7 Data-		D-
2 RX+	8 Data+		D+
5 GND	5 GND		GND
			

**Note:**

MODBUS RTU (adjustable) usage

Users can decide the address range via setting value on Parameter 1. For example, when users set 5 to Parameter 1, the address range will be 5 ~ 65535.



## Driver Version:

Version	Date	Description
V1.30	Aug/26/2009	

## MODBUS Server (Modbus RTU Slave)

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS Server		
PLC I/F	RS232	RS232, RS485	
Baud rate	9600	9600~115200 Ethernet	Ethernet supports UDP or TCP/IP protocol
Data bits	8	8	
Parity	Even	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	1	1-31	HMI Modbus Station No.
Port no.		502	

Online simulator	YES	Extend address mode	NO
Broadcast command	NO		

### PLC Setting:

Communication mode	Modbus RTU protocol
--------------------	---------------------

### Modbus Server UDP Protocol Setting:

MODBUS Server (Ethernet) supports UDP communication protocol. To use UDP mode, go to [System Parameter Settings] in editing software, in [Device list] click [New], for [PLC type] select "Modbus Server", [PLC I/F] set to [Ethernet], and select [Use UDP (User Datagram Protocol)] to finish setting.

**Device Properties**

Name : MODBUS Server

HMI  PLC

Location : Local [Settings ...]

1. PLC type : MODBUS Server

2. V.1.00, MODBUS\_SERVER.so

PLC I/F : Ethernet

IP : Port = 502 [Settings...]

3.  Use UDP (User Datagram Protocol)

Station no. : 1

Use broadcast command

Interval of block pack (words) : 5

Max. read-command size (words) : 120

Max. write-command size (words) : 120

OK Cancel

Modbus Server Port No. can be changed by clicking [Settings].

Modbus Server Port No. can not be set identically to HMI Port No. When doing so, the warning message below will be shown requesting users to change setting.



Note:

A maximum of 64 Clients can be connected simultaneously.

Modbus Server Port No. can't be identical to HMI Port No.

## Modbus Server TCP/IP Protocol Setting:

MODBUS Server (Ethernet) supports TCP/IP communication protocol. Go to [System Parameter Settings] in editing software, in [Device list] click [New], for [PLC type] select “Modbus Server”, [PLC I/F] set to [Ethernet] to finish setting.

**Device Properties**

Name : MODBUS Server

HMI  PLC

Location : Local

PLC type : MODBUS Server

V.1.00, MODBUS\_SERVER.so

PLC I/F : Ethernet

IP : Local,Port=8000(=HMI Port)

Use UDP (User Datagram Protocol )

Station no. : 1

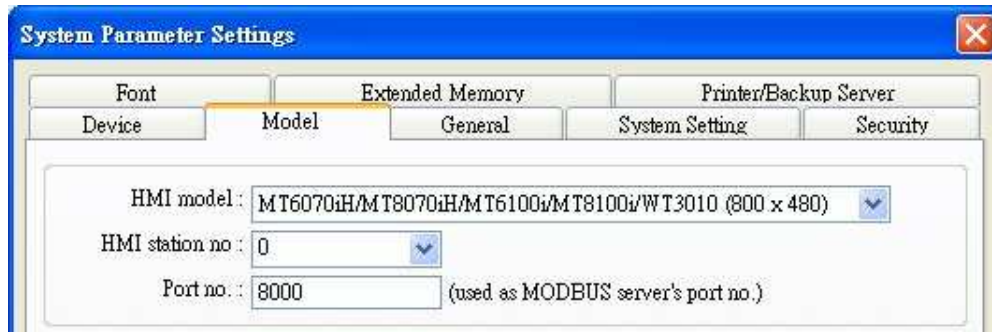
Use broadcast command

Interval of block pack (words) : 5

Max. read-command size (words) : 120

Max. write-command size (words) : 120

For Modbus Server TCP/IP, HMI Port No. is the same as Modbus Server Port No. To change Port No. go to [System Parameter Settings] / [Model], the default Port No. is “8000”, and it is allowed to change Modbus Server Port No. here.



### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	LB	dddd	0 ~ 9998	Mapping to 0x/1x 1 ~ 9999
W	LW	dddd	0 ~ 9998	Mapping to 3x/4x 1 ~ 9999
W	RW	dddd	0 ~ 55536	Mapping to 3x/4x 10000 ~ 65536

LB0 = 0x0001, LB1 = 0x0002, LW0 = 3x0001, LW1 = 3x0002

Modbus RTU Server doesn't support function code 06(preset single register), please use function code 16(0x10, preset multiple registers).

### Modbus Server Function Code:

0x	0x01	Read coil	0x05	write single coil
0x_multi_coils	0x01	Read coil	0x0f	write multiple coils
1x	0x02	Read discrete input	N/A	for write operation
3x	0x04	Read input register	N/A	for write operation
4x	0x03	Read holding register	0x10	write multiple registers



### Wiring Diagram:

#### MODBUS SERVER : RS232

MT6000/8000 series except MT6050i/MT8050i



COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Female	
2 RX	6 RX	8 RX	TXD	
3 TX	4 TX	7 TX	RXD	
5 GND	5 GND	5 GND	GND	
			RTS	circuit
			CTS	

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Female
9 RX			TXD
6 TX			RXD
5 GND			GND
			RTS
			CTS
			circuit
			

### MODBUS SERVER : RS485 4W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			




MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Female
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			




### MODBUS SERVER : RS485 2W

MT6000/8000 series except MT6050i/MT8050i



COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		D-
2 RX+	9 Data+		D+
5 GND	5 GND		GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Male
1 RX-	7 Data-		D-
2 RX+	8 Data+		D+
5 GND	5 GND		GND
			

Note: Setting more than one Modbus Server in HMI Device List is of no effect.

### Driver Version:

Version	Date	Description
V1.00	Dec/30/2008	Driver released

## MODBUS TCP/IP (Ethernet)

Supported Series: Modbus RTU TCP/IP device.

Website: <http://www.modbus.org>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS TCP/IP (Ethernet)		
PLC I/F	Ethernet		
Port no.	502		
PLC sta. no.	1	0~255	


### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	0x	DDDDD	1 ~ 65535	Input bit
B	1x	DDDDD	1 ~ 65535	Output bit
B	3x_bit	DDDDDdd	100 ~ 6553515	Input Register bit (read only)
B	4x_bit	DDDDDdd	100 ~ 6553515	Output Register bit
B	6x_bit	DDDDDdd	100 ~ 6553515	Output Register bit
B	0x_multi_coils	DDDDD	1 ~ 65535	Write multiple coils
W	3x	DDDDD	1 ~ 65535	Input Register
W	4x	DDDDD	1 ~ 65535	Output Register
DW	5x	DDDDD	1 ~ 65535	4x double word swap
W	6x	DDDDD	1 ~ 65535	4x single word write

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.50	Aug/26/2009	

## MODBUS TCP/IP (zero-based addressing)

Supported Series : Modbus RTU TCP/IP device.

Website: <http://www.modbus.org>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS TCP/IP (zero-based addressing)		
PLC I/F	Ethernet		
Port no.	502		
PLC sta. no.	1	0~255	


### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	0x	DDDDD	0 ~ 65535	Input bit
B	1x	DDDDD	0 ~ 65535	Output bit
B	3x_Bit	DDDDDdd	0 ~ 6553515	Input Register bit (read only)
B	4x_Bit	DDDDDdd	0 ~ 6553515	Output Register bit
B	6x_Bit	DDDDDdd	0 ~ 6553515	Output Register bit
B	0x_multi_coils	DDDDD	0 ~ 65535	Write multiple coils
W	3x	DDDDD	0 ~ 65535	Input Register
W	4x	DDDDD	0 ~ 65535	Output Register
DW	5x	DDDDD	0 ~ 65535	4x double word swap
W	6x	DDDDD	0 ~ 65535	4x single word write

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.40	Aug/27/2009	

## MODBUS TCP/IP 32Bit

Supported Series: Modbus RTU TCP/IP device.

Website: <http://www.modbus.org>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS TCP/IP 32Bit		
PLC I/F	Ethernet		
Port no.	502		
PLC sta. no.	1	0~255	


### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	0x	DDDDD	1 ~ 65535	Input bit
B	1x	DDDDD	1 ~ 65535	Output bit
B	3x_Bit	DDDDDdd	100 ~ 6553515	Input Register bit (read only)
B	4x_Bit	DDDDDdd	100 ~ 6553515	Output Register bit
B	6x_Bit	DDDDDdd	100 ~ 6553515	Output Register bit
B	0x_multi_coils	DDDDD	1 ~ 65535	Write multiple coils
W	3x	DDDDD	1 ~ 65535	Input Register
W	4x	DDDDD	1 ~ 65535	Output Register
DW	5x	DDDDD	1 ~ 65535	4x double word swap
W	6x	DDDDD	1 ~ 65535	4x single word write
W	4x_32Bit	DDDDD	1 ~ 65535	

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.10	Aug/27/2009	Driver released.

# Moeller XC-CPU101

Supported Series: MOELLER XC100/200 series

Website: <http://www.moeller.net>

## HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	Moeller XC-CPU101		
PLC I/F	RS232		
Baud rate	38400	4800 ~ 57600	
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1		

## Device Address:

Bit/Word	Device type	Format	Range	Note
B	QX	DDo	0 ~ 157	
B	IX	DDo	0 ~ 157	
W	MW	DDDD	0 ~ 4095	
W	QW	DD	0 ~ 15	
W	IW	DD	0 ~ 15	



## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 8P RJ45 Male
2 RX	6 RX	8 RX	5 TD
3 TX	4 TX	7 TX	8 RD
5 GND	5 GND	5 GND	4 GND
			



**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			RS232 8P RJ45 Male
9 RX			5 TD
6 TX			8 RD
5 GND			4 GND
			

**Driver Version:**

Version	Date	Description
1.00	Apr/01/2010	Driver released.

# Modicon Twido

Website : <http://www.modicon.com/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	MODBUS RTU		Supports Extended Address Mode.
PLC I/F	RS485	RS232/RS485	
Baud rate	19200	19200	
Data bits	8	8	Must set 8 for RTU mode
Parity	None	Even, Odd, None	
Stop bits	1	1	Must set 8 for RTU mode
PLC sta. no.	1	0-247	

## PLC Setting:

Communication mode	19200, None, 8, 1
Select	Modbus RTU Slave


## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	0x or 1x	dddd	0 ~ 9999	%Mi
W	3x or 4x	dddd	0 ~ 9999	%MWi




## Wiring Diagram:

### 9P D-Sub to 8P Mini-DIN : RS485 2W

MT6000/8000 series except MT6050i/MT8050i



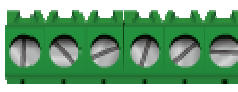
COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 8P Mini-DIN Male
1 RX-	6 Data-		2 B-
2 RX+	9 Data+		1 A+
5 GND	5 GND		5 DTP
			7 GND
			circuit
			

MT6050i/MT8050i




COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 8P Mini-DIN Male
1 RX-	7 Data-		2 B-
2 RX+	8 Data+		1 A+
5 GND	5 GND		5 DTP
			7 GND
			circuit
			

### 9P D-Sub to Terminal : RS485 2W

MT6000/8000 series except MT6050i/MT8050i





COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 3P Terminal
1 RX-	6 Data-		B-
2 RX+	9 Data+		A+
5 GND	5 GND		GND
			

## MT6050i/MT8050i



COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 3P Terminal
1 RX-	7 Data-		B-
2 RX+	8 Data+		A+
5 GND	5 GND		GND
			

**9P D-Sub to 9P D-Sub : RS232**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Port2 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TX
3 TX	4 TX	7 TX	2 RX
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			Port2 RS232 9P D-Sub Male
9 RX			3 TX
6 TX			2 RX
5 GND			5 GND
			

## OEMAX Series

Supported Series: OEMax NX7/NX7s Controllers.

Website: <http://www.oemax.co.kr>

### HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	OEMAX Series		
PLC I/F	RS232		
Baud rate	9600	9600, 19200, 38400	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	0		

### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	R	DDDdd	0 ~ 25515	
B	L	DDDdd	0 ~ 25515	
B	M	DDDDdd	0 ~ 199915	
B	K	DDDdd	0 ~ 25515	Keep Contact
B	F	DDDdd	0 ~ 99115	Special Contact
B	TC	DDD	0 ~ 255	Timer/Counter
W	W	DDDD	0 ~ 7999	Data Register
W	SV	DDD	0 ~ 255	Timer/Counter Set Value
W	PV	DDD	0 ~ 255	Timer/Counter Preset Value
W	SR	DDD	0 ~ 255	Special Register
W	WR	DDD	0 ~ 255	
W	WL	DDD	0 ~ 255	
W	WM	DDDD	0 ~ 1999	
W	WK	DDD	0 ~ 255	
W	WF	DDD	0 ~ 991	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Port1 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			Port1 RS232 9P D-Sub Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.00	Dec/30/2008	Driver released.

## OMRON C/CQM1 Series

Supported Series: OMRON C, CPM, CPL, CQM Series (Host Link Protocol)

Website: <http://oeiweb.omron.com/oei/Products-PLC.htm>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	OMRON C/CQM1 Series		
PLC I/F	RS232	RS232, RS422, RS485	
Baud rate	9600	9600, 19200	
Data bits	7	7 or 8	
Parity	Even	Even, Odd, None	
Stop bits	2	1 or 2	
PLC sta. no.	0	0-31	Host Link Station No.

Online simulator	YES	Broadcast command	YES
Extend address mode	YES		

### PLC Setting:

Communication mode	Host Link Protocol
--------------------	--------------------

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	IR	DDDDdd	0 ~ 409515	I/O and Internal Relay
B	HR	DDDDdd	0 ~ 409515	Hold Relay
B	LR	DDDDdd	0 ~ 409515	Link Relay
B	IR (Force Set/Reset)	DDDDdd	0 ~ 409515	
B	HR (Force Set/Reset)	DDDDdd	0 ~ 409515	
B	LR (Force Set/Reset)	DDDDdd	0 ~ 409515	
B	AR	DDDDdd	0 ~ 409515	Auxiliary Relay
W	AR_W	DDDD	0 ~ 4095	
W	IR W	DDDD	0 ~ 4095	



W	HR_W	DDDD	0 ~ 4095	
W	LR_W	DDDD	0 ~ 4095	
W	TC	DDD	0 ~ 255	
W	DM	DDDD	0 ~ 9999	Data Register

## Wiring Diagram:





**CPU Port (CPM2A,CQM1/1H,C200H/HS/ALPHA series)**

**Communication Module:**



**CPM1-CIF01 adapter (for CPM1/CPM1A/CPM2A series, CQM1/CQM1H series)**

**CPM1H-SCB41 communication module (for CQM1H-CPU51/61)**

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	2 SD	
3 TX	4 TX	7 TX	3 RD	
5 GND	5 GND	5 GND	9 GND	
			4 RS	circuit
			5 CS	
				

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			2 SD	
6 TX			3 RD	
5 GND			9 GND	
			4 RS	circuit
			5 CS	
				

**C200h-LK201,3G2A6-LK201 communication module**
**C200HW-COM02/03/04/05/06 communication module**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	2 SD	
3 TX	4 TX	7 TX	3 RD	
5 GND	5 GND	5 GND	7 GND	
			4 RS	circuit
			5 CS	
				

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			2 SD	
6 TX			3 RD	
5 GND			7 GND	
			4 RS	circuit
			5 CS	
				

**Driver Version:**

Version	Date	Description
V1.80	Apr/14/2010	

## OMRON CJ/CS/CP

Supported Series: OMRON CP1L, CP1H, CJ1M, CJ2M, CJ1H, CJM1G, CS1H and CS1G. (Host Link Protocol FINS command), this driver supports Extend Addressing Mode.

Website: <http://oeiweb.omron.com/oei/Products-PLC.htm>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	OMRON CJ/CS/CP		
PLC I/F	RS232	RS232, RS422, RS485	
Baud rate	9600	9600~115200	
Data bits	7	7 or 8	
Parity	Even	Even, Odd, None	
Stop bits	2	1 or 2	
PLC sta. no.	0	0-31	Host Link Station No.

Online simulator	YES	Extend address mode	YES
Broadcast command	NO		

### PLC Setting:

Communication mode	Host Link Protocol
--------------------	--------------------

### Device Address:





Bit/Word	Device type	Format	Range	Memo
B	CIO_Bit	DDDDdd	0 ~ 3276715	Channel I/O (CIO)
B	W_Bit	DDDDdd	0 ~ 3276715	Work Area (WR)
B	H_Bit	DDDDdd	0 ~ 3276715	Holding Area (HR)
B	D_Bit	DDDDdd	0 ~ 3276715	Data Memory (DM)
B	A_Bit	DDDDdd	0 ~ 3276715	Auxiliary Relay (AR)
B	T_Bit	DDDDdd	0 ~ 3276715	Timer (TIM)
B	C_Bit	DDDDdd	0 ~ 3276715	Counter (CNT)
B	C_flag	DDDD	0 ~ 4095	

Bit/Word	Device type	Format	Range	Memo
B	T_flag	DDDD	0 ~ 4095	
B	LR_Bit	DDDdd	0 ~ 19915	
W	T	DDDDD	0 ~ 32767	Timer (TIM)
W	H	DDDDD	0 ~ 32767	Holding Area (HR)
W	D	DDDDD	0 ~ 32767	Data Memory (DM)
W	A	DDDDD	0 ~ 32767	Auxiliary Relay (AR)
W	W	DDDDD	0 ~ 32767	Work Area (WR)
W	C	DDDDD	0 ~ 32767	Counter (CNT)
W	CIO	DDDDD	0 ~ 32767	Channel I/O (CIO)
W	EM0 ~ EMC	DDDDD	0 ~ 32767	Extend Memory
W	LR	DDD	0 ~ 199	



## Wiring Diagram:

### 9P D-Sub to 9P D-Sub:

MT6000/8000 series except MT6050i/MT8050i


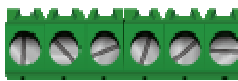
COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	2 SD	
3 TX	4 TX	7 TX	3 RD	
5 GND	5 GND	5 GND	9 GND	
			4 RS	circuit
			5 CS	
				

MT6050i/MT8050i


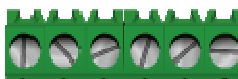
COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			2 SD	
6 TX			3 RD	
5 GND			9 GND	
			4 RS	circuit
			5 CS	
				

**CP1H/CP1L CP1W-CIF11 RS485 4W : 9P D-Sub to Terminals:**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			CP1W-CIF11 RS485 4W Terminal
1 RX-			SDA
2 RX+			SDB
3 TX-			RDA
4 TX+			RDB
5 GND			FG
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			CP1W-CIF11 RS485 4W Terminal
1 RX-			SDA
2 RX+			SDB
3 TX-			RDA
4 TX+			RDB
5 GND			FG
			

CP1W-CIF11: SW1 ON, others OFF.

**Driver Version:**

Version	Date	Description
V1.90	Feb/01/2011	Added registers: LR, LR_Bit

## OMRON CJ1/CS1 (Ethernet)

Supported Series: OMRON CJ1M, CJ1H, CJ1G, CS1H, and CS1G. (Ethernet FINS)

Website: <http://oeiweb.omron.com/oei/Products-PLC.htm>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	OMRON CJ1/CS1 (Ethernet)		
PLC I/F	Ethernet		
Port no.	9600		
PLC sta. no.	0		

### PLC Setting:

Communication mode	FINS Ethernet protocol
--------------------	------------------------

### Device Address:


Bit/Word	Device type	Format	Range	Memo
B	CIO_Bit	DDDDDDdd	0 ~ 3276715	Channel I/O (CIO)
B	W_Bit	DDDDDDdd	0 ~ 3276715	Work Area (WR)
B	H_Bit	DDDDDDdd	0 ~ 3276715	Holding Area (HR)
B	A_Bit	DDDDDDdd	0 ~ 3276715	Auxiliary Relay (AR) (Read only)
B	D_Bit	DDDDDDdd	0 ~ 3276715	Data Memory (DM)
B	T_Bit	DDDDDDdd	0 ~ 3276715	Timer (TIM)
B	C_Bit	DDDDDDdd	0 ~ 3276715	Counter (CNT)
B	C_Flag	DDDD	0 ~ 4095	
B	T_Flag	DDDD	0 ~ 4095	
W	CIO	DDDDDD	0 ~ 32767	Channel I/O (CIO)
W	W	DDDDDD	0 ~ 32767	Work Area (WR)
W	H	DDDDDD	0 ~ 32767	Holding Area (HR)
W	A	DDDDDD	0 ~ 32767	Auxiliary Relay (AR) (Read

				only)
W	C	DDDDD	0 ~ 32767	Counter (CNT)
W	T	DDDDD	0 ~ 32767	Timer (TIM)
W	D	DDDDD	0 ~ 32767	Data Memory (DM)
W	EM0 ~ EMC	DDDDD	0 ~ 32767	Extend Memory

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



**Driver Version:**

Version	Date	Description
V1.50	Jun/30/2010	



## OMRON E5CN

Supported Series: OMRON E5CN series temperature controller with communication options. E5EN/CN/GN/EZ/ZN series.

Website: <http://oeiweb.omron.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	OMRON E5CN		
PLC I/F	RS485 2W		
Baud rate	9600	9600/19200/38400/ 57600/115200	
Data bits	7	7,8	
Parity	Even	Even, Odd, None	
Stop bits	2	1,2	
PLC sta. no.	0	0-99	

Online simulator	YES	Broadcast command	YES
Extend address mode	YES		

### Device Address:




Bit/Word	Device type	Format	Range	Memo
B	Status_CH1	DD	0 ~ 31	Page40
B	Status_CH2	DD	0 ~ 31	
DW	C0	HHHH	0 ~ 270f	Read only (Hex) Page34
DW	C1	HHHH	0 ~ 270f	Read/Write (Hex) Page35
DW	C2	HHHH	0 ~ 270f	Read/Write (Hex) Page35
DW	C3	HHHH	0 ~ 270f	Read/Write (Hex) Page36
W	Code00_00	H	0	Communications writing OFF (disabled)
W	Code00_01	H	0	Communications writing ON(enabled)
W	Code01_00	H	0	Run
W	Code01_01	H	0	Stop
W	Code02_00	H	0	Multi-SP Set point 0

Bit/Word	Device type	Format	Range	Memo
W	Code02_01	H	0	Multi-SP Set point 1
W	Code02_02	H	0	Multi-SP Set point 2
W	Code02_03	H	0	Multi-SP Set point 3
W	Code03_00	H	0	AT cancel
W	Code03_01	H	0	AT execute
W	Code04_00	H	0	Write mode (Backup)
W	Code04_01	H	0	Write mode (Ram)
W	Code05_00	H	0	Save RAM data
W	Code06_00	H	0	Software reset
W	Code07_00	H	0	Move to setup area 1
W	Code08_00	H	0	Move to protect level
W	Code01_10	H	0	
W	Code01_11	H	0	
W	Code01_F0	H	0	
W	Code01_F1	H	0	
W	Code02_10	H	0	
W	Code02_11	H	0	
W	Code02_F0	H	0	
W	Code02_F1	H	0	
W	Code03_10	H	0	
W	Code03_11	H	0	
W	Code03_F0	H	0	
W	Code03_F1	H	0	
W	Code09_00	H	0	
W	Code09_01	H	0	
W	Code09_10	H	0	
W	Code09_11	H	0	
W	Code09_F0	H	0	
W	Code09_F1	H	0	
W	Code0A_00	H	0	
W	Code0B_00	H	0	
W	Code0C_00	H	0	
W	Code0C_01	H	0	
W	Code0C_02	H	0	
W	Code0C_0F	H	0	
W	Code0C_10	H	0	
W	Code0C_11	H	0	




Bit/Word	Device type	Format	Range	Memo
W	Code0C_12	H	0	
W	Code0C_1F	H	0	
W	Code0C_F0	H	0	
W	Code0C_F1	H	0	
W	Code0C_F2	H	0	
W	Code0C_FF	H	0	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		OMRON E5CN Terminal
1 RX-	6 Data-		12 B
2 RX+	9 Data+		11 A
5 GND	5 GND		GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		OMRON E5CN Terminal
1 RX-	7 Data-		12 B
2 RX+	8 Data+		11 A
5 GND	5 GND		GND
			

### Note:

For communication with OMRON E5EZ, please set communication settings to 9600, E, 7, 2, station no. 1.

### Driver Version:

Version	Date	Description
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V1.21	Dec/21/2010	
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## Panasonic FP

Supported Series: NAIS (Matsushita) FP series include FP-X, FP-Σ, FP0, FP1, FP2, FP2SH, FP10SH and FP3 Ethernet support FP-X with AFPX-COM5.

Website: <http://pewa.panasonic.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Panasonic FP		
PLC I/F	RS232	RS232/RS485	
Baud rate	9600	9600, 19200, 38400, 57600, 115200	
Data bits	8	7 or 8	
Parity	Odd	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	1	0-255	Must match the PLC port setting. FP3 must set to 0.

### Device Address:




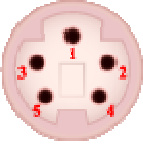
Bit/Word	Device type	Format	Range	Memo
B	X	DDDDh	0 ~ 9999f	Input (X)
B	Y	DDDDh	0 ~ 9999f	Output (Y)
B	R	DDDDh	0 ~ 9999f	Internal Relay (R)
B	L	DDDD	0 ~ 9999	Link Relay (L)
B	L_Bit	DDDDh	0 ~ 9999f	
B	T	DDDD	0 ~ 9999	Timer (T)
B	C	DDDD	0 ~ 9999	Counter (C)
W	SV	DDDD	0 ~ 9999	Timer/Counter Set Value (SV)
W	EV	DDDDD	0 ~ 65535	Timer/Counter Elapse Value (EV)
W	DT	DDDDD	0 ~ 99999	Data Register (DT)
W	LD	DDDD	0 ~ 8447	Link Register (LD)

W	WX	DDDD	0 ~ 9999	Input (WX) (read only)
W	WY	DDDD	0 ~ 9999	Output (WY)
W	WR	DDDD	0 ~ 9999	Internal Relay (WR)
W	WL	DDDD	0 ~ 9999	Link Relay (WL)
W	FL	DDDDD	0 ~ 99999	File Register (FL)


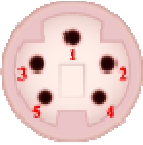
## Wiring Diagram:

### FP0, FP2, FP2SH, FPM CPU : 9P D-Sub to 5P Mini-DIN

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 5P Mini-DIN Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	1 GND
			

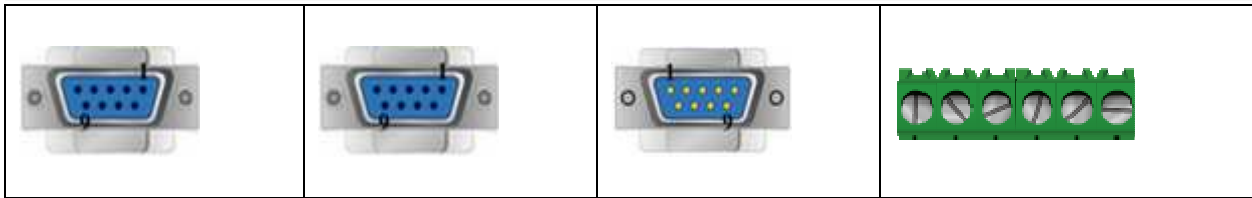
MT6050i/MT8050i


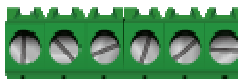
COM1 RS232 9P D-Sub Female			RS232 5P Mini-DIN Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			1 GND
			

### FP0 CPU : 9P D-Sub to 3P Terminal:

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 3P Terminal
2 RX	6 RX	8 RX	S
3 TX	4 TX	7 TX	R
5 GND	5 GND	5 GND	G


**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			RS232 3P Terminal
9 RX			S
6 TX			R
5 GND			G
			



**FP1, FP2, FP2SH, FP10SH CPU : 9P D-Sub to 9P D-Sub**

## MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	7 GND
			4 RTS
			5 CTS
			8 CD
			9 ER
			circuit
			circuit
			


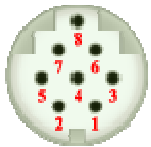
**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			7 GND
			4 RTS
			5 CTS
			8 CD
			circuit
			circuit


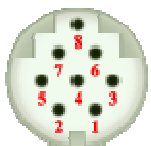
			9 ER
			

**FP1 CPU : 9P D-Sub to 8P MiniDIN**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 8P Hirose Male
1 RX-			2 TXDA
2 RX+			5 TXDB
3 TX-			3 RXDA
4 TX+			6 RXDB
5 GND			1 GND
			

MT6050i/MT8050i



COM1 RS485 4W 9P D-Sub Female			RS485 4W 8P Hirose Male
1 RX-			2 TXDA
2 RX+			5 TXDB
3 TX-			3 RXDA
4 TX+			6 RXDB
5 GND			1 GND
			

**FP3 CPU : 9P D-Sub to 15P D-Sub**



MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 15P D-Sub Male
1 RX-			9 TXDA
2 RX+			2 TXDB
3 TX-			10 RXDA



4 TX+			3 RXDB
5 GND			7 GND
			4 RTS+
			5 CTS+
			11 RTS-
			12 CTS-
			circuit
			circuit
			

**MT6050i/MT8050i**

COM1 RS485 4W 9P D-Sub Female			RS485 4W 15P D-Sub Male
1 RX-			9 TXDA
2 RX+			2 TXDB
3 TX-			10 RXDA
4 TX+			3 RXDB
5 GND			7 GND
			4 RTS+
			5 CTS+
			11 RTS-
			12 CTS-
			circuit
			circuit
			

**Driver Version:**

Version	Date	Description
V1.80	Apr/09/2010	Added registers: FL

## Panasonic FP (Ethernet)

Supported Series: NAIS (Matsushita) FP series include FP-X, FP-Σ, FP0, FP1, FP2, FP2SH, FP10SH and FP3 Ethernet support FP-X with AFPX-COM5.

Website: <http://pewa.panasonic.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Panasonic FP (Ethernet)		
PLC I/F	Ethernet		
Port no.	9094		
PLC sta. no.	1	0~255	


### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	DDDDh	0 ~ 9999f	Input (X)
B	Y	DDDDh	0 ~ 9999f	Output (Y)
B	R	DDDDh	0 ~ 9999f	Internal Relay (R)
B	L	DDDD	0 ~ 9999	Link Relay (L)
B	L_Bit	DDDDh	0 ~ 9999f	
B	T	DDDD	0 ~ 9999	Timer (T)
B	C	DDDD	0 ~ 9999	Counter (C)
W	SV	DDDD	0 ~ 9999	Timer/Counter Set Value (SV)
W	EV	DDDDD	0 ~ 65535	Timer/Counter Elapse Value (EV)
W	DT	DDDDD	0 ~ 99999	Data Register (DT)
W	LD	DDDD	0 ~ 8447	Link Register (LD)
W	WX	DDDD	0 ~ 9999	Input (WX) (read only)
W	WY	DDDD	0 ~ 9999	Output (WY)
W	WR	DDDD	0 ~ 9999	Internal Relay (WR)
W	WL	DDDD	0 ~ 9999	Link Relay (WL)
W	FL	DDDDD	0 ~ 99999	File Register (FL)

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-

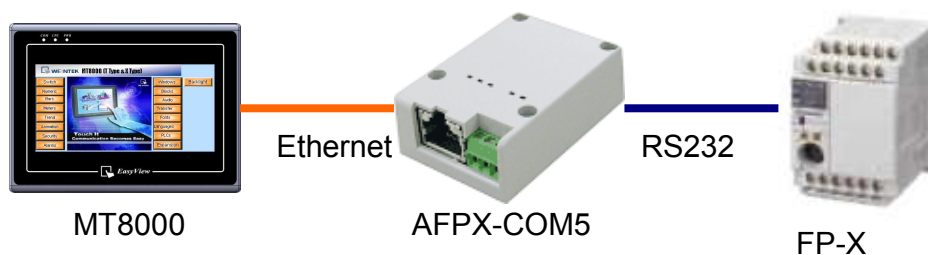


Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Ethernet Connection TCP Port: 9094



**Driver Version:**

Version	Date	Description
V1.80	Apr/12/2010	

## Panasonic FP2 (Ethernet)

Supported Series: NAIS (Matsushita) FP2 series include FP2, FP2SH, and FP10SH CPU.

Website: <http://pewa.panasonic.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Panasonic FP2 (Ethernet)		
PLC I/F	Ethernet		
Port no.	8500		
PLC sta. no.	2	0~255	


### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	DDDDh	0 ~ 9999f	Input (X)
B	Y	DDDDh	0 ~ 9999f	Output (Y)
B	R	DDDDh	0 ~ 9999f	Internal Relay (R)
B	L	DDDD	0 ~ 9999	Link Relay (L)
B	L_Bit	DDDDh	0 ~ 9999f	
B	T	DDDD	0 ~ 9999	Timer (T)
B	C	DDDD	0 ~ 9999	Counter (C)
W	SV	DDDD	0 ~ 9999	Timer/Counter Set Value (SV)
W	EV	DDDDD	0 ~ 65535	Timer/Counter Elapse Value (EV)
W	DT	DDDDD	0 ~ 99999	Data Register (DT)
W	LD	DDDD	0 ~ 8447	Link Register (LD)
W	WX	DDDD	0 ~ 9999	Input (WX) (read only)
W	WY	DDDD	0 ~ 9999	Output (WY)
W	WR	DDDD	0 ~ 9999	Internal Relay (WR)
W	WL	DDDD	0 ~ 9999	Link Relay (WL)

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.00	Mar/11/2010	Driver released.

# Panasonic MINAS A4

Supported Series: Panasonic MINAS A4 series Servo Drive.

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Panasonic MINAS A4		
PLC I/F	RS232		
Baud rate	9600		
Data bits	8		
Parity	None		
Stop bits	1		
Axis no.	0 (master station only)	0 ~ F (slave)	

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Command 20	D	0 ~ 7	States ( <a href="#">Note 3</a> )
B	Command 27	DD	0 ~ 31	Input Signal ( <a href="#">Note 3</a> )
B	Command 28	DD	0 ~ 31	Output Signal ( <a href="#">Note 3</a> )
W	Command 01	D	0	CPU Version (Numeric format: 16-bit Hex)
W	Command 05	DD	0 ~ 11	Driver Version (ASCII / 12 words)
W	Command 06	DD	0 ~ 11	Motor Version (ASCII / 12 words)
W	Command 21	D	0 ~ 1	command pulse counter (Numeric format: 32-bit Signed)
W	Command 22	D	0 ~ 1	feedback pulse counter (Numeric format: 32-bit Signed)
W	Command 24	D	0	present speed (Numeric format: 16-bit Unsigned)
W	Command 25	D	0	present torque (Numeric format: 16-bit Unsigned)
W	Command 26	D	0 ~ 1	present deviation counter (Numeric format: 32-bit Signed)
W	Command 84	D	0	write parameter to EEPROM ( <a href="#">Note 1</a> )

W	Command 90	D	0	present Alarm Data (Numeric format: 16-bit Unsigned)
W	Command 91	DD	1 ~ 14	Alarm History (Note 4) (Numeric format: 16-bit Unsigned)
W	Command 92	DD	1 ~ 14	Batch Alarm (Note 4) (Numeric format: 16-bit Unsigned)
W	Command 93	D	0	clear Alarm History (include EEPROM) (Note 1)
W	Command 94	D	0	Alarm Clear (Note 1)
W	Command 9B	D	0	Absolute Clear (Note 1)
W	Parameter	HH	0 ~ 7f	Individual Parameter (range: 0x00 ~ 0x7F) (Note 2)

### Note:

1. Command 84, Command 93, Command 94, and Command 9B are write only. (These commands are able to use Set Bit Object and execute the write command after triggering Set Bit Object.). Commands other than these four are read only.
2. Parameter read/write: Use device type to define address control from 00~7F.  
For example: "address\_00" is mapping to "Parameter\_00".  
(Please refer to Panasonic MINAS A4 Series User Manual.)
3. Device address type can define MINAS A4 Driver's command list.  
Command 20, Command 27, and Command 28 are Bit type, use "Operating range" to map communication order status.  
For example: "Command 20\_3" means "Read state\_CCW".  
(Please refer to Panasonic MINAS A4 Series User Manual.)
4. Command 91 and Command 92 are word type, use "Operating range" to map the record of 14 alarms.  
For example: "Command 91\_1" means "Read alarm data\_First alarm".

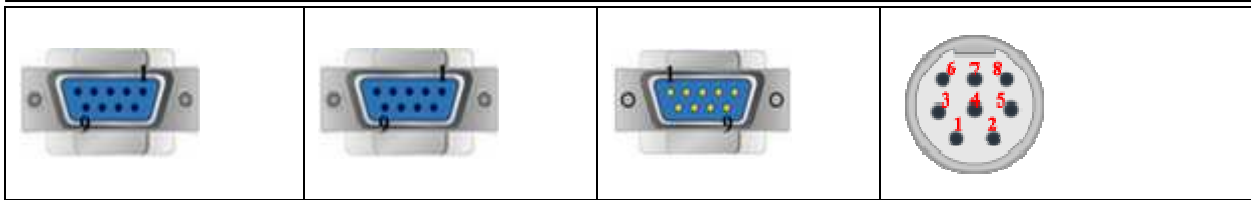
### Wiring Diagram:



#### MINAS A4 Driver CNX4 Port

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 8P Mini-DIN Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	5 RXD
5 GND	5 GND	5 GND	4 GND







**MT6050i/MT8050i**




COM1 RS232 9P D-Sub Female			RS232 8P Mini-DIN Male
9 RX			3 TXD
6 TX			5 RXD
5 GND			4 GND
			

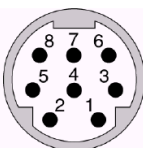
**MINAS A4 Driver CNX3/CNX4 Port**

## MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 8P Mini-DIN Male
1 RX-	6 Data-		7 D-
2 RX+	9 Data+		8 D+
5 GND	5 GND		
			

**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 8P Mini-DIN Male
1 RX-	7 Data-		7 D-
2 RX+	8 Data+		8 D+
5 GND	5 GND		
			

 <p>8P Mini-Din Female MINAS A4 Driver CNX3 / CNX4 Port</p>	MINAS A4 Driver CNX3 Port	MINAS A4 Driver CNX4 Port
	7 D-	3 TX
	8 D+	5 RX
	4 GND	4 GND
		7 D-
	8 D+	

RS485 cable / DVOP1970-005

MINAS A4 Driver 8p Mini-DIN Male		MINAS A4 Driver 8p Mini-DIN Male
7 D-	—	7 D-
8 D+	—	8 D+
4 GND	—	4 GND

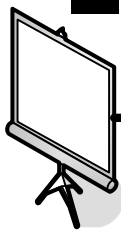
RS232 cable / DVOP1960

MINAS A4 Driver 9P D-SUB Female		MINAS A4 Driver 8p Mini-DIN Male
3 RXD	—	5 RXD
2 TXD	—	3 TXD
5 GND	—	4 GND

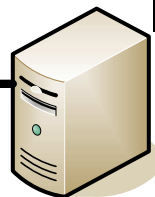
HMI connect with one Device

Weintek HMI

Com RS232



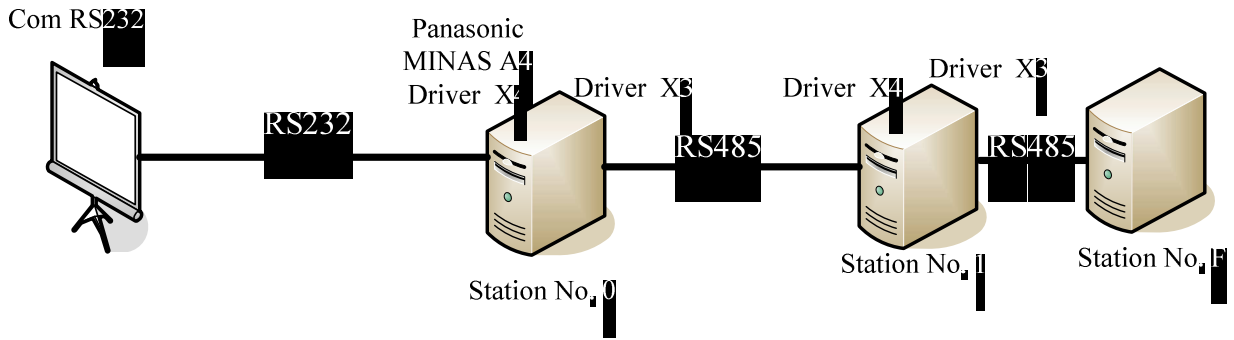
Panasonic  
MINAS A4  
Driver X2



Station No. 0

HMI connect with multi devices

Weintek HMI



**Driver Version:**

Version	Date	Description
V1.10	Jan/11/2010	

# Parker ACR9000

Supported Series: Parker ACR9000.

Website: <http://www.parkermotion.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Parker ACR9000		
PLC I/F	RS232	RS485 4W / RS232	
Baud rate	38400	1200 - 38400	
Data bits	8	7,8	
Parity	None	Even, Odd, None	
Stop bits	1	1,2	
PLC sta. no.	0		





Online simulator	YES	Extend address mode	
------------------	-----	---------------------	--

## Device Address:



Bit/Word	Device type	Format	Range	Memo
B	P_Low16bit	DDDDDDdd	0 ~ 9999915	
B	P_High16bit	DDDDDDdd	0 ~ 9999915	
W	P_Int32	DDDDDD	0 ~ 99999	
W	P_Float	DDDDDD	0 ~ 99999	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Parker AC9000 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			Parker AC9000 RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.00	Dec/30/2008	Driver released.

## Parker Compax3

Supported Series: Parker Compax3 Servo Drive.

Website: <http://www.parker.com>

### HMI Setting:

#### RS232

Parameters	Recommended	Options	Notes
PLC type	Parker Compax3		
PLC I/F	RS232		
Baud rate	115200		
Data bits	8	7 or 8	
Parity	None	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	0	0	Must be 0 for RS232

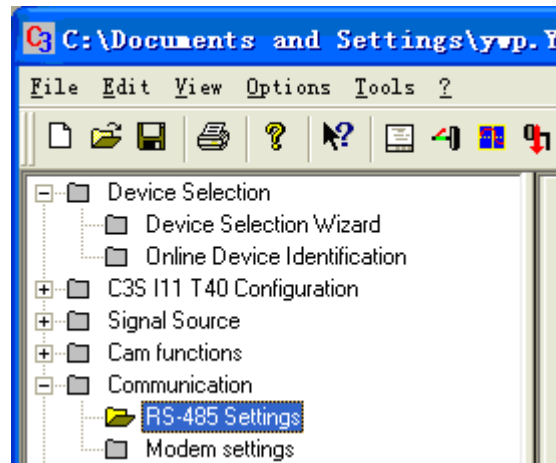
#### RS485

Parameters	Recommended	Options	Notes
PLC type	Parker Compax3		
PLC I/F	RS485 2W		
Baud rate	9600		
Data bits	8	7 or 8	
Parity	None	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	1	1-99	Range from 1 to 99 for RS485, according to the PLC setting.

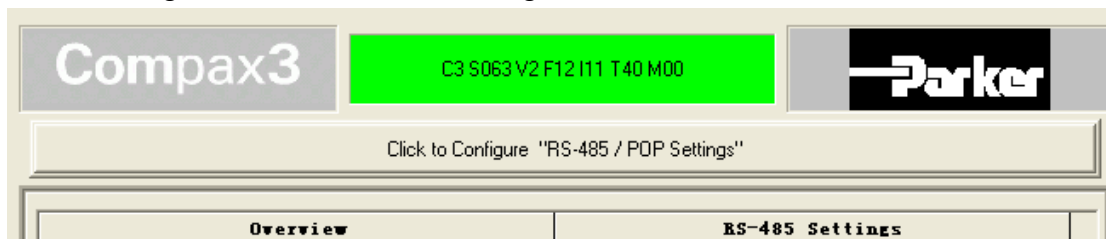
## PLC Setting:

How to set Compax 3 servo to RS485 mode?

1. Open C3 ServoManager2, select "Communication" => "RS-485 Settings".



2. Click to Configure "RS-485/POP Settings".



3. Set parameters as below:

The diagram shows a differential RS-485 signal pair (A and B) connected to a controller. The controller has TxD, RE, and RxD pins. The RxD pin is connected to line A, and the TxD pin is connected to line B. The RE pin is connected to ground. The signal lines are shown as twisted pairs connected to three yellow boxes representing other devices.

RS-485 Settings	
Master	General
Multicast Address	98
Device Address	1
Baud rate	9600
Connection Type	Two wire
Parity	No
Stop bits	1
Data bits	8

4. Download settings to Compax3 Servo.
5. Set EasyBuilder system parameter and connect with PLC for communication of HMI and Servo.





## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	R_Low16bit	DDDDDDDDh	0 ~ 99999999f	
B	R_High16bit	DDDDDDDDh	0 ~ 99999999f	
DW	Register_Int	DDDDDD	0 ~ 999999	For Register INT32, U32
DW	Register_float	DDDDDD	0 ~ 999999	For Register INT32, U32
W	Register_Short	DDDDDD	0 ~ 999999	For Register INT16, U16



## Wiring Diagram:

### Parker Compax3 PLC X10 : RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			




MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			






**Parker Compax3 PLC X10 : RS485 2W**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		3 RXD
2 RX+	9 Data+		7 TXD
5 GND	5 GND		5 GND
			1 nable RS485 9 +5V
			circuit
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Male
1 RX-	7 Data-		3 RXD
2 RX+	8 Data+		7 TXD
5 GND	5 GND		5 GND
			1 nable RS485 9 +5V
			circuit
			

**Driver Version:**

Version	Date	Description
V1.70	Mar/30/2009	

## Parker SLVD Series

Supported Series : Parker SLVD Servo, SLVD1N, SLVD2N, SLVD5N, SLVD7N, SLVD10N, SLVD15N, SLVD17N.

Website: <http://www.parker.com/portal/site/PARKER/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Parker SLVD Series		
PLC I/F	RS485 4W		
Baud rate	9600	9600/19200	
Data bits	8	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1,2	
PLC sta. no.	0		0-31

Online simulator	YES	Extend address mode	
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### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Par_Binary	DDDDdd	0 ~ 999915	Set bit parameter
W	Par_One_Word	DDDD	0 ~ 9999	Set 2 bytes parameter
DW	Par_Two_Word	DDDD	0 ~ 9999	Set 4 bytes parameter
W	Par_One_Byte	DDDD	0 ~ 9999	Set 1 byte parameter
W	RESET	D	0	
W	RUN	D	0	



## Wiring Diagram:

### Parker SLVD Servo Serial Link X1

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 15P D-Sub Male
1 RX-			7 TX-
2 RX+			12 TX+
3 TX-			2 RX-
4 TX+			1 RX+
			6 TER
			circuit
5 GND			
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS485 4W 15P D-Sub Male
1 RX-			7 TX-
2 RX+			12 TX+
3 TX-			2 RX-
4 TX+			1 RX+
			6 TER
			circuit
5 GND			
			

## Driver Version:

Version	Date	Description
V1.00	Jan/27/2010	Driver released.

## SAIA PCD PGU Mode

Supported Series : SAIA PCD series PGU mode.

Website : <http://www.saia-burgess.com/>

### HMI Setting:



Parameters	Recommended	Options	Notes
PLC type	SAIA PCD PGU Mode		PDS driver
PLC I/F	RS232	RS232, RS485	
Baud rate	9600	9600, 19200	
Data bits	7	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	1	0-255	

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Flag	DDDD	0 ~ 8191	
B	Output	DDD	0 ~ 511	
B	Input	DDD	0 ~ 511	
W	Register	DDDD	0 ~ 4095	
W	Counter	DDDD	0 ~ 1599	
W	Timer	DDDD	0 ~ 1599	
W	Reg_Float	DDDD	0 ~ 4095	support single float point
W	Reg_Word	DDDD	0 ~ 4095	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
2 RX			3 TXD
3 TX			2 RXD
5 GND			5 GND
7 RTS			6 DSR
			7 RTS
			8 CTS
			circuit
			

6 DSR (Of PGU Port): PGU connected.

## Driver Version:

Version	Date	Description
V1.02	Dec/30/2008	

## SAIA PCD S-BUS Mode

Supported Series: SAIA PCD series S-Bus mode.

Website: <http://www.saia-burgess.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SAIA PCD S-BUS Mode		PDS driver
PLC I/F	RS232	RS232, RS485	
Baud rate	9600	9600, 19200, 38400	
Data bits	8	7,8	
Parity	None	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	0	0-255	

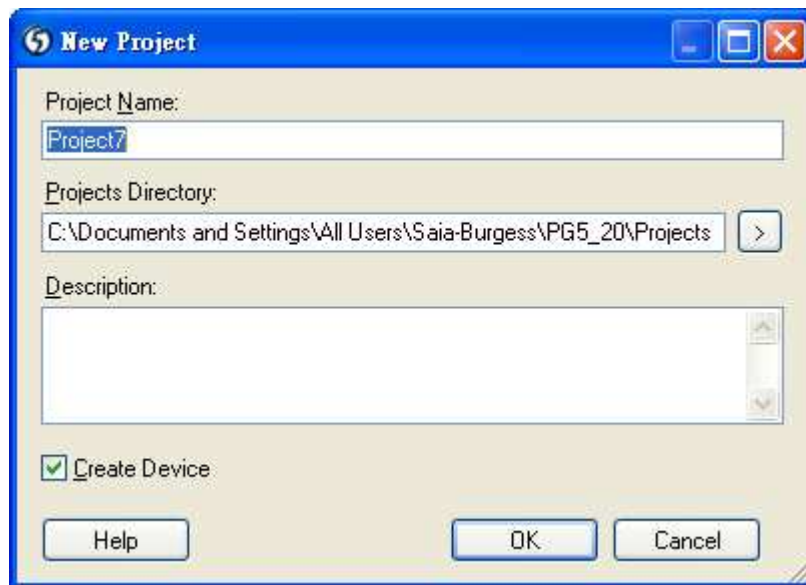
### PLC Setting:

Communication mode	9600,N,8,1 (default)
RS232	Port 0-Type: RS232
RS485 2W	S-BUS Mode: Data(S2), Port 1-Type: RS485

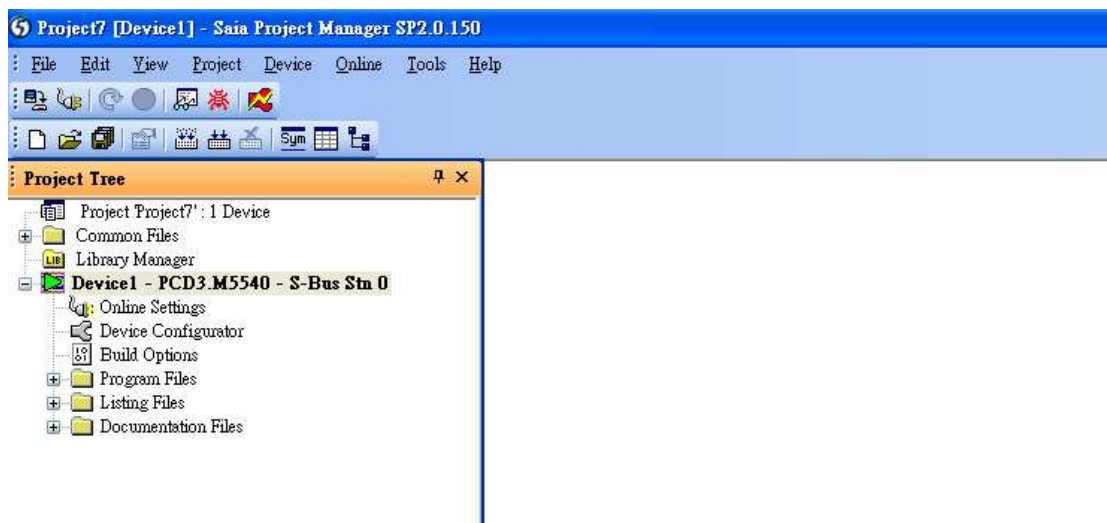
1. Open Saia Project Manager SP2.0.150 and create a new project.



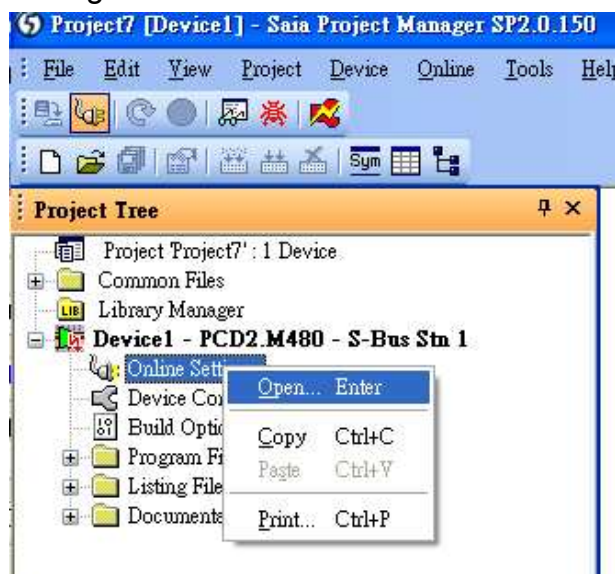
2. Give a project name.



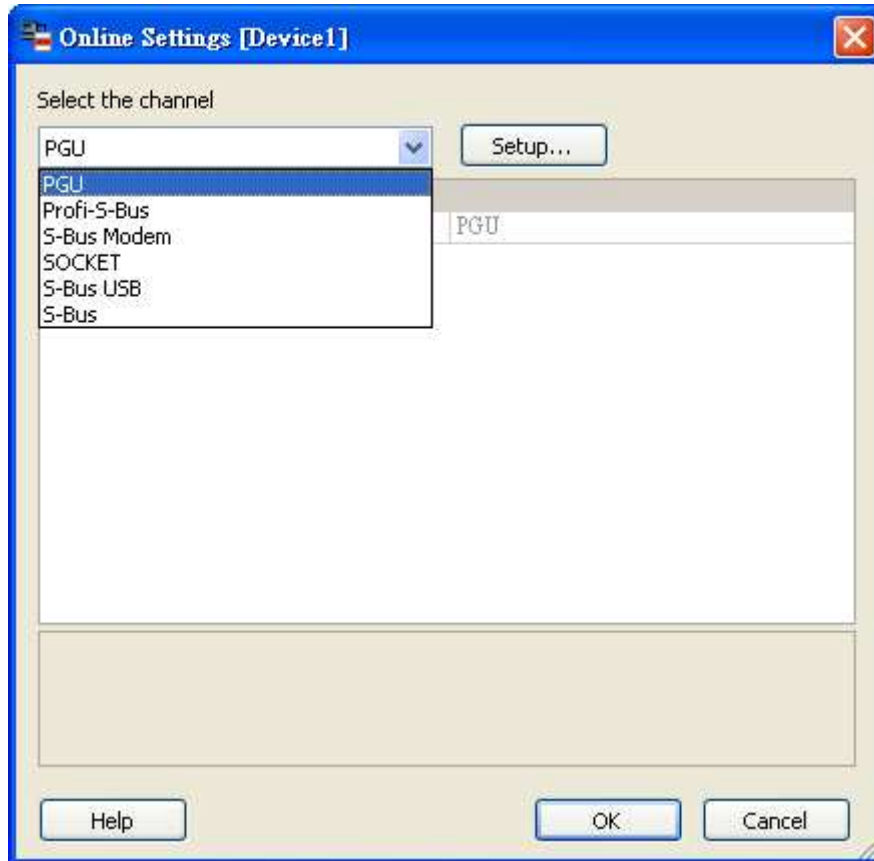
3. Create a new project as below.



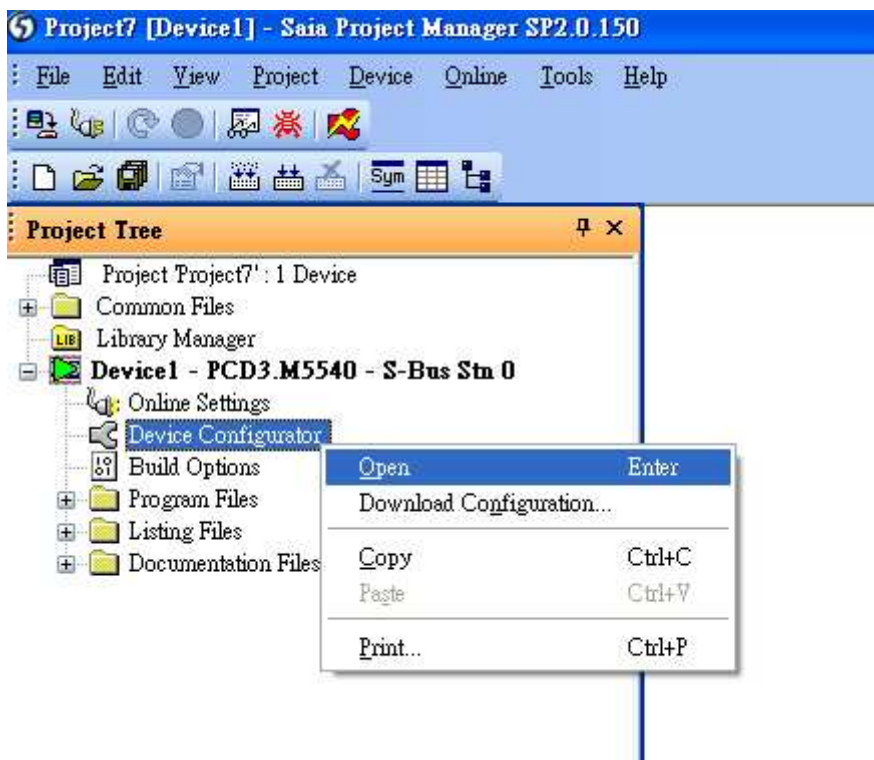
4. Go to "Online Setting".



5. Select "PGU".

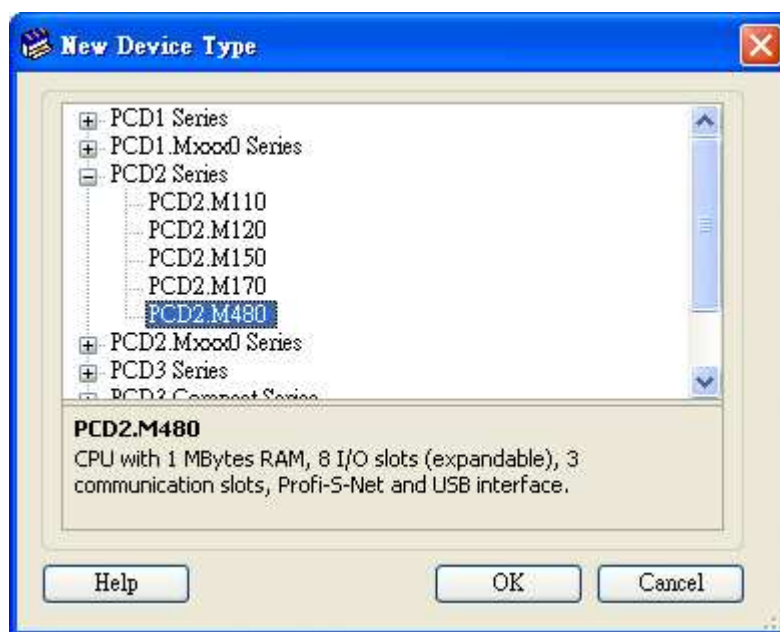
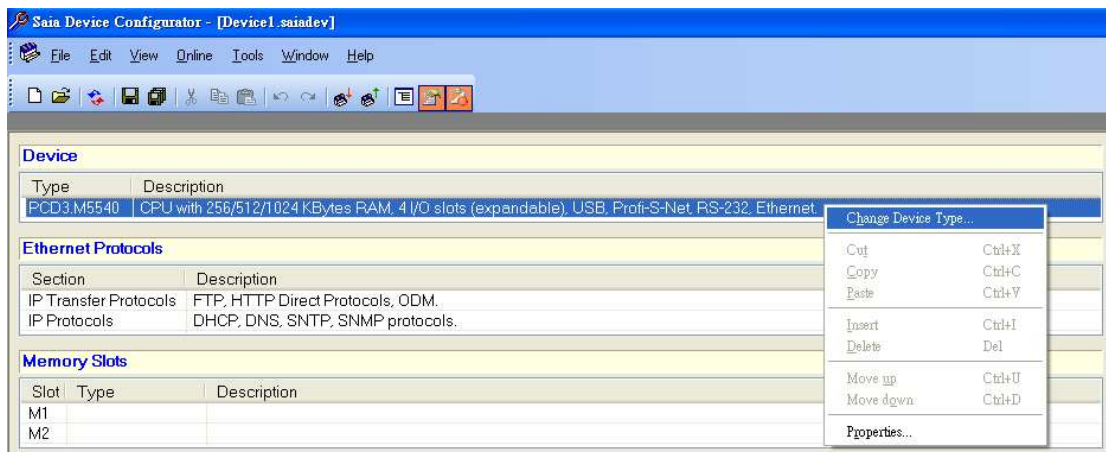


6. Go to "Device Configurator".

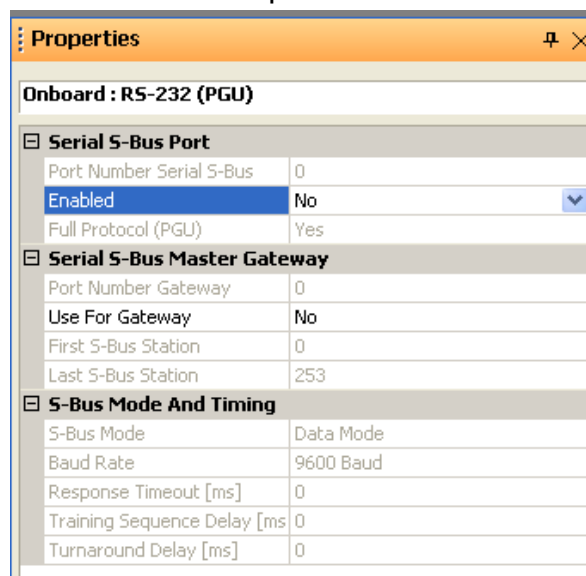




- Click "Change Device Type" to select your PLC model.



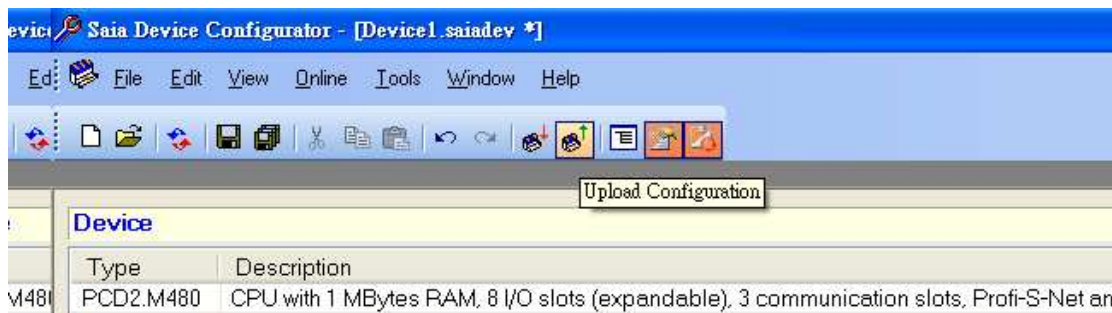
- Select RS232 (PGU) in Type and then right click mouse on Onboard Communications and select "Properties".



9. Select "Yes" in Series S-Bus Port: Enabled.

Properties		
<b>Onboard : RS-232 (PGU)</b>		
<b>Serial S-Bus Port</b>		
Port Number Serial S-Bus	0	
Enabled	<b>Yes</b>	
Full Protocol (PGU)	Yes	
<b>Serial S-Bus Master Gateway</b>		
Port Number Gateway	0	
Use For Gateway	No	
First S-Bus Station	0	
Last S-Bus Station	253	
<b>S-Bus Mode And Timing</b>		
S-Bus Mode	Data Mode	
Baud Rate	9600 Baud	
Response Timeout [ms]	0	
Training Sequence Delay [ms]	0	
Turnaround Delay [ms]	0	

10. Set parameters in S-Bus Mode and Timing then upload to PLC.

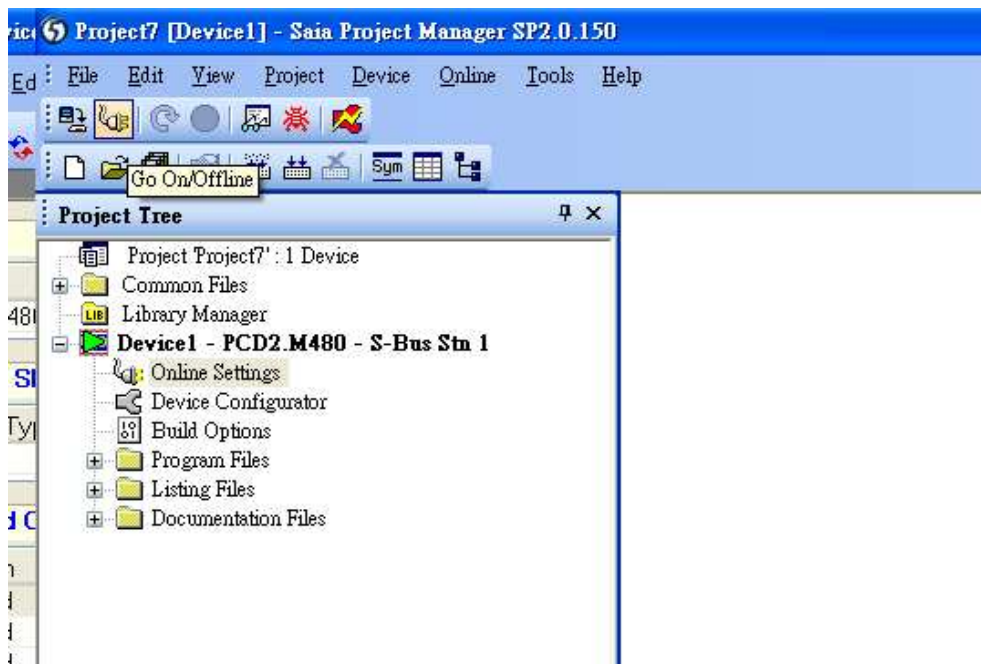
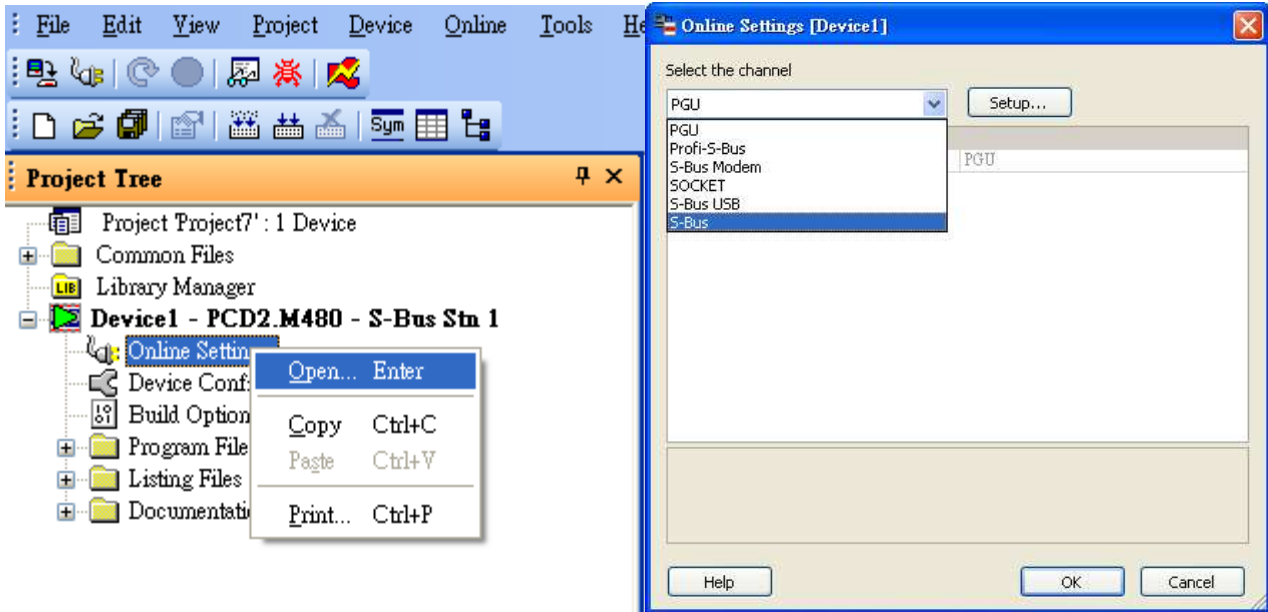


**Upload Configuration** ✖

Device configuration file name :  
 C:\Documents and Settings\All Users\Saia-Burgess\PG5\_20\Projects\Project7\Device1\Device1.s

Upload on :  
 PGU

11. Go to Online Settings >> Open to select S-Bus for finishing the PLC settings.







## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Flag	DDDD	0 ~ 8191	
B	Output	DDDD	0 ~ 1023	
B	Input	DDDD	0 ~ 1023	
B	Reg_Bit	DDDDdd	0 ~ 1638331	dd: Bit no. (00~31)
W	Register	DDDDD	0 ~ 16383	
W	Counter	DDDD	0 ~ 1599	
W	Timer	DDDD	0 ~ 1599	
W	Reg_Float	DDDDD	0 ~ 16383	support single float point



## Wiring Diagram:

### SAIA PCD PGU Port

MT6000/8000 series except MT6050i/MT8050i



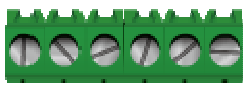
COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
			7 RTS	circuit
			8 CTS	
				

MT6050i/MT8050i



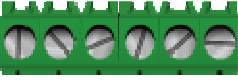
COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			3 TXD	
6 TX			2 RXD	
5 GND			5 GND	
			7 RTS	circuit
			8 CTS	
				

### SAIA PCD1 Port #1 (Port #0) Terminal

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		SAIA PCD1 Port #1 (Port #0) Terminal
1 RX-	6 Data-		11 (29)
2 RX+	9 Data+		12 (28)
5 GND	5 GND		
			

## MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		SAIA PCD1 Port #1 (Port #0) Terminal
1 RX-	7 Data-		11 (29)
2 RX+	8 Data+		12 (28)
5 GND	5 GND		
			

**Driver Version:**

Version	Date	Description
V1.20	Dec/22/2010	

## SAIA S-BUS (Ethernet)

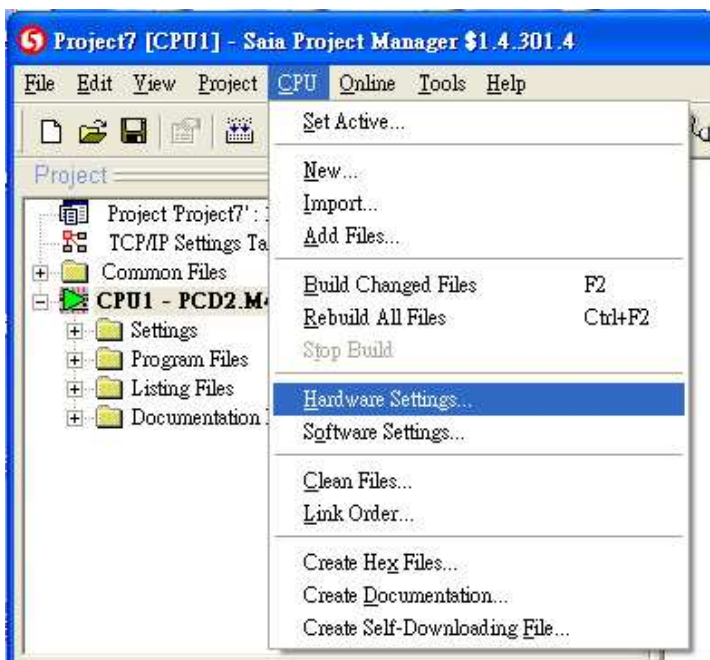
Supported Series : SAIA PCD series Ethernet-TCP/IP.

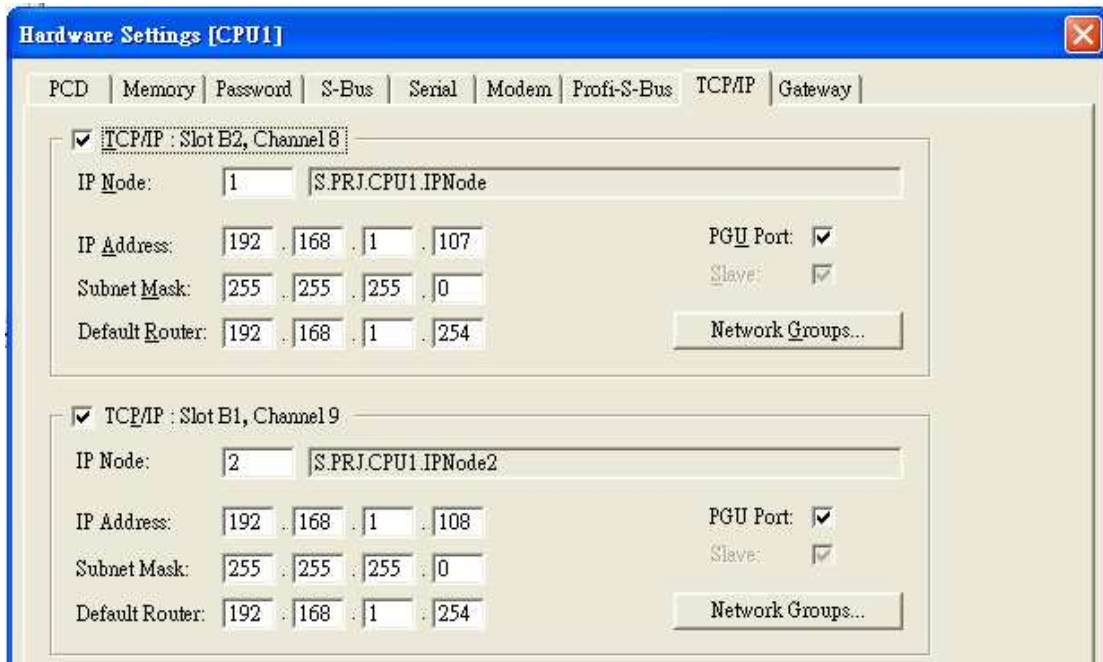
Website : <http://www.saia-burgess.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SAIA S-BUS (Ethernet)		
PLC I/F	Ethernet		
Port no.	5050		
PLC sta. no.	0		

### PLC Setting:





## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Flag	DDDD	0 ~ 8191	
B	Output	DDDD	0 ~ 1023	
B	Input	DDDD	0 ~ 1023	
B	Reg_Bit	DDDDdd	0 ~ 1638331	dd: Bit no. (00 ~ 31)
D	Register	DDDDD	0 ~ 16383	
D	Counter	DDDD	0 ~ 1599	
D	Timer	DDDD	0 ~ 1599	
D	Reg_Float	DDDDD	0 ~ 16383	support single float point

## Wiring Diagram:

Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



### Driver Version:

Version	Date	Description
V1.10	Nov/30/2010	Added registers: Reg_Bit



## Schleicher XCS 20C

Supported Series: Schleicher XCx-Systems Ethernet port. Schleicher XCS series, 20C model.

Website: <http://www.schleicher-electronic.com>

### HMI Setting:

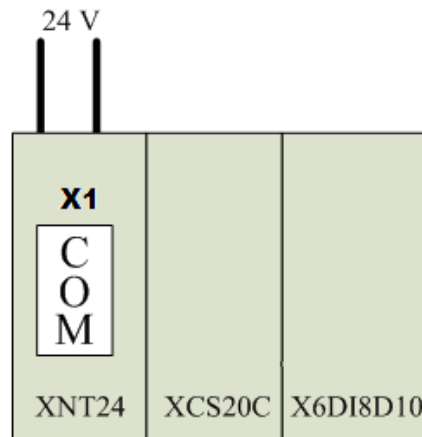
Parameters	Recommended	Options	Notes
PLC type	Schleicher XCS 20C		
PLC I/F	RS232		
Baud rate	38400		
Data bits	8		
Parity	N		
Stop bits	1		
PLC sta. no.	0		

### Device Address:





Bit/Word	Device type	Format	Range	Memo
B	IX	DDDDDo	0 ~ 655357	Input %IX
B	QX	DDDDDo	0 ~ 655357	Output %QX
B	MX	DDDDDo	0 ~ 655357	%MX
W	IW	DDDDD	0 ~ 65535	%IW
W	QW	DDDDD	0 ~ 65535	%QW
W	MW	DDDDD	0 ~ 65535	%MW
DW	ID	DDDDD	0 ~ 65535	%ID
DW	QD	DDDDD	0 ~ 65535	%QD
DW	MD	DDDDD	0 ~ 65535	%WD

- Word address must be even.



## Wiring Diagram:



MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Schleicher XCS20 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TD
3 TX	4 TX	7 TX	2 RD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			Schleicher XCS20 RS232 9P D-Sub Male
9 RX			3 TD
6 TX			2 RD
5 GND			5 GND
			

## Driver Version:

Version	Date	Description
V1.10	Feb/26/2010	

# Schleicher XCX 300

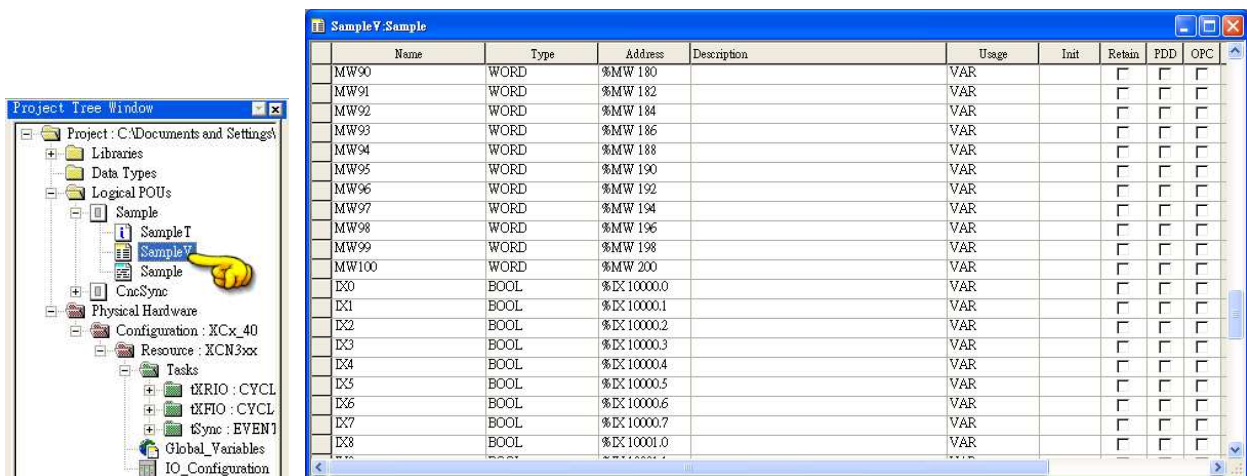
Website: <http://www.schleicher-electronic.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Schleicher XCX 300		
PLC I/F	Ethernet	RS232, RS422, Ethernet	
Port no.	20547		
PLC sta. no.	2		

## PLC Setting:

A variable must be created for HMI access.



Name	Type	Address	Description	Usage	Init	Retain	PDD	OPC
MW90	WORD	%MW 180		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW91	WORD	%MW 182		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW92	WORD	%MW 184		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW93	WORD	%MW 186		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW94	WORD	%MW 188		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW95	WORD	%MW 190		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW96	WORD	%MW 192		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW97	WORD	%MW 194		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW98	WORD	%MW 196		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW99	WORD	%MW 198		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW100	WORD	%MW 200		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX0	BOOL	%IX 10000.0		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX1	BOOL	%IX 10000.1		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX2	BOOL	%IX 10000.2		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX3	BOOL	%IX 10000.3		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX4	BOOL	%IX 10000.4		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX5	BOOL	%IX 10000.5		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX6	BOOL	%IX 10000.6		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX7	BOOL	%IX 10000.7		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IX8	BOOL	%IX 10001.0		VAR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	IX	DDDDDo	0 ~ 655357	Input %IX
B	QX	DDDDDo	0 ~ 655357	Output %QX
B	MX	DDDDDo	0 ~ 655357	%MX
W	IW	DDDDD	0 ~ 65535	%IW
W	QW	DDDDD	0 ~ 65535	%QW
W	MW	DDDDD	0 ~ 65535	%MW
DW	ID	DDDDD	0 ~ 65535	%ID


DW	QD	DDDDD	0 ~ 65535	%QD
DW	MD	DDDDD	0 ~ 65535	%WD

- Word address must be even.

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-







Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-





**Schleicher XCX300 RS232 Port**

MT6000/8000 series except MT6050i/MT8050i



COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Female
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Female
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			



**Schleicher XCX300 RS485 4W Terminal**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W Terminal
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS485 4W Terminal
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-

4 TX+			RX+
5 GND			GND
			

### Driver Version:

Version	Date	Description
V1.00	Nov/30/2009	Driver released.
V1.10	Jun/28/2010	Support RS232, RS422 interface connection.

## SEW Movilink

Supported Series: SEW Eurodrive series, model MOVITRAC-07 inverter, MovitracB.

Website: <http://sg.sew-eurodrive.com/>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SEW Movilink		
PLC I/F	RS485 2W		
Baud rate	9600		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	0	0~255	

### Device Address:




Bit/Word	Device type	Format	Range	Memo
B	INDEX_Bit	DDDDDDDDdd	0 ~ 2552500031	
W	INDEX	DDDDDDDD	0 ~ 25525000	

- The MOVITRAC-07 doesn't support Sub index ( other series may support ), please input 000.
- When input D and d, the correct format : Sub index 15, Index 8359, Format is 01508359.




### Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		Movitrac-07 RS485 2W
1 RX-	6 Data-		D- (Green)
2 RX+	9 Data+		D+ (Red)

5 GND	5 GND		
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		Movitrac-07 RS485 2W
1 RX-	7 Data-		D- (Green)
2 RX+	8 Data+		D+ (Red)
5 GND	5 GND		
			

### Driver Version:

Version	Date	Description
V1.31	Jun/25/2010	



# SEW MOVITRAC LTE

Website : <http://www.seweurodrive.com/index.php>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SEW MOVITRAC LTE		
PLC I/F	RS-485 2W		
Baud rate	115200		
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1		

Online simulator	YES	Extend address mode	NO
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## Device Address:

Bit/Word	Device type	Format	Range	Memo
W	P-1	D	0 ~ 1	Max. speed limit
W	P-2	D	0 ~ 1	Min. speed limit
W	P-3	D	0 ~ 1	Acceleration ramp time
W	P-4	D	0 ~ 1	Deceleration ramp time
W	P-5	D	0 ~ 1	Stop mode select
W	P-6	D	0 ~ 1	Energy optimizer
W	P-7	D	0 ~ 1	Motor rated voltage
W	P-8	D	0 ~ 1	Motor rated current
W	P-9	D	0 ~ 1	Motor rated frequency
W	P-10	D	0 ~ 1	Motor rated speed
W	P-11	D	0 ~ 1	Voltage boost
W	P-12	D	0 ~ 1	Terminal / Keypad control
W	P-13	D	0 ~ 1	Trip log
W	P-14	D	0 ~ 1	Extended menu access code
W	P-15	D	0 ~ 1	Digital input function set
W	P-16	D	0 ~ 1	Analog input V / mA



W	P-17	D	0 ~ 1	Output switching frequency
W	P-18	D	0 ~ 1	User relay output select
W	P-19	D	0 ~ 1	User relay output limit
W	P-20	D	0 ~ 1	Preset speed 1
W	P-21	D	0 ~ 1	Preset speed 2
W	P-22	D	0 ~ 1	Preset speed 3
W	P-23	D	0 ~ 1	Preset speed 4
W	P-24	D	0 ~ 1	Deceleration ramp time 2
W	P-25	D	0 ~ 1	Analog output function select
W	P-26	D	0 ~ 1	Skip frequency hysteresis band
W	P-27	D	0 ~ 1	Skip frequency
W	P-28	D	0 ~ 1	V/F characteristic adjustment voltage
W	P-29	D	0 ~ 1	V/F characteristic adjustment frequency
W	P-30	D	0 ~ 1	Terminal mode restart function
W	P-31	D	0 ~ 1	Keypad mode restart function
W	P-32	D	0 ~ 1	DC injection enable / duration
W	P-33	D	0 ~ 1	Spin start
W	P-34	D	0 ~ 1	Brake chopper enable
W	P-35	D	0 ~ 1	Analog input scaling factor
W	P-36	D	0 ~ 1	Comms address; SBus enable/baudrate select; Trip enable / delay
W	P-37	D	0 ~ 1	Access code definition
W	P-38	D	0 ~ 1	Parameter access lock
W	P-39	D	0 ~ 1	Analog input off-set
W	P-40	D	0 ~ 1	Display speed scaling factor
W	P-00-01	D	0 ~ 1	Analog input 1 value
W	P-00-02	D	0 ~ 1	Analog input 2 value

W	P-00-03	D	0 ~ 1	Speed reference input
W	P-00-04	D	0 ~ 1	Digital input status
W	P-00-05	D	0 ~ 1	Reserved
W	P-00-06	D	0 ~ 1	Reserved
W	P-00-07	D	0 ~ 1	Applied motor voltage
W	P-00-08	D	0 ~ 1	DC bus voltage log
W	P-00-09	D	0 ~ 1	Heatsink temperature
W	P-00-10	D	0 ~ 1	Hours run meter
W	P-00-11	D	0 ~ 1	Run time since last trip (1)
W	P-00-12	D	0 ~ 1	Run time since last trip (2)
W	P-00-13	D	0 ~ 1	Run time since last disable
W	P-00-14	D	0 ~ 1	Reserved
W	P-00-15	D	0 ~ 1	DC bus voltage log
W	P-00-16	D	0 ~ 1	Thermistor temperature log
W	P-00-17	D	0 ~ 1	Motor current
W	P-00-18	D	0 ~ 1	Software ID,IO and motor control
W	P-00-19	D	0 ~ 1	Drive serial number
W	P-00-20	D	0 ~ 1	Drive identifier




P-00-01 ~ P-00-20 read only.

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		PLC RS485 2W 8P RJ45 Male
1 RX-	6 Data-		5 -
2 RX+	9 Data+		4 +
5 GND	5 GND		
			

## MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		PLC RS485 2W 8P RJ45 Male
1 RX-	7 Data-		5 -
2 RX+	8 Data+		4 +
5 GND	5 GND		
			

**Driver Version:**

Version	Date	Description
V1.00	May/19/2011	Driver released.

# SHIMADEN MR13/FP93

Supported Series: MR13, FP93 devices

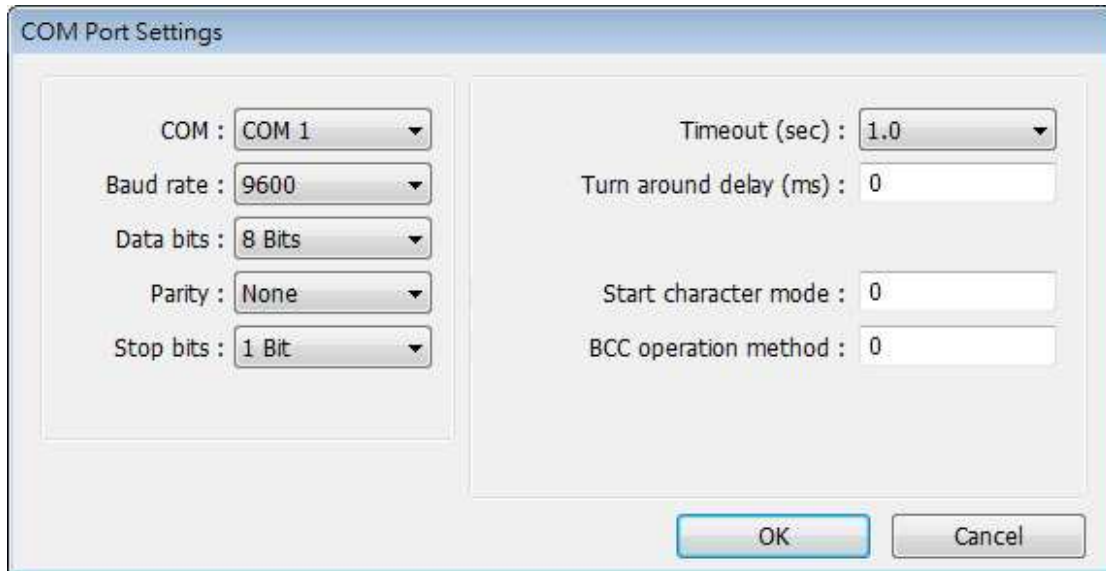
Website: <http://www.shimaden.co.jp>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SHIMADEN MR13/FP93		
PLC I/F	RS485		
Baud rate	9600	1200-19200	
Data bits	7	7 or 8	
Parity	E	None/Even	
Stop bits	1	1	
PLC sta. no.	1	1~255	
Start Character Mode	Select 3 : @_:_CR	0, 1 : STX_ETX_CR 2 : STX_ETX_CR LF 3 : @_:_CR	For FP93, select 0,1
BCC Operation Method	Select 3 : XOR	0, 1 : Addition 2 : Addition +2's complement 3 : XOR 4 : None	

### Note :

Address 018C is a communication control register, only when it is set to 1 can this register be allowed to write to other registers.






### Device Address:

Bit/Word	Device type	Format	Range	Memo
W	Channel 1	HHHH	0 ~ ffff	Read/Write 1 <sup>st</sup> Channel Register
W	Channel 2	HHHH	0 ~ ffff	Read/Write 2 <sup>nd</sup> Channel Register
W	Channel 3	HHHH	0 ~ ffff	Read/Write 3 <sup>rd</sup> Channel Register

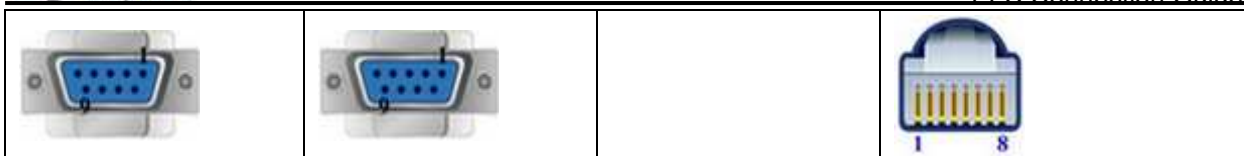
### Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		MR13/FP93 RS485 2W Terminal
1 RX-	6 Data-		25 -
2 RX+	9 Data+		24 +
5 GND	5 GND		23 GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		MR13/FP93 RS485 2W Terminal
1 RX-	7 Data-		25 -
2 RX+	8 Data+		24 +
5 GND	5 GND		23 GND



### MR13 Communication Parameter Settings

Data Address (hex)	Parameter	Details of Parameter	R /W
0100	PV Value	Within measuring range	R
0101	E_SV Execution SV Value	Within setting range	R
0102	OUT Control Output Value	Within range 0.0 ~ 100.0%	R
0103	Reserved		
0104	Action Flag	( See detailed explanation below. )	R
0105	Event Output Flag	( See detailed explanation below. )	R
0106	Reserved		
0107	Reserved		
0108	REM Value	Within setting range	R
0109	Reserved		
010A	Reserved		
010B	DI Input State Flag	( See detailed explanation below. )	R

Data Address (hex)	Parameter	Details of Parameter	R /W
0111	RANGE	Refer to the measuring range code list.	R
0112	Reserved		

0113	DP Decimal Point	Position of decimal point ( 0:Without decimal point 1:With decimal point )	R
0114	PV Sc_L Lower Limit	For Linear Input:-1999 ~ 9999 unit	R
0115	PV Sc_H Higher Limit	For Thermocouple, and RTD Input: Measuring range to be displayed.	R

Data Address (hex)	Parameter	Details of Parameter	R/W
0120	E_PRG	Program Action Flag	R
0121	Reserved		
0122	Reserved		
0123	E_PRT	The number of execution patterns ( When program is reset, value=7FFE H )	R
0124	E_STP	Execution step number ( When program is reset, value=7FFE H )	R
0125	E_TIM	Remaining time of execution step ( When program is reset, value=7FFE H )	R
0126	E_PID	Execution PID number ( When program is reset, value=7FFE H )	R



Data Address (hex)	Parameter	Details of Parameter	R/W
0184	AT Auto Tuning	0:No execution      1:Execution	W

018C	Operation	0:Local      1:COM	W
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0190	PROG RUN/RST Program Run/Reset	0 : RST, 1 : RUN  ( Writing is possible only in CH1 )	W
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0191	PROG HLD Program Hold	0 : Release, 1 : HLD  ( Writing is possible only in CH1 )	W
------	--------------------------	---	---

0300	SV	Local SV Value, within set value limiter	R/W
------	----	--	-----

Data Address (hex)	Parameter	Details of Parameter	R/W
030A	SV Limt_L Lower Limit	Within measuring range, On condition that SV Limt_L<SV Limt_H	R/W
030B	SV Limt_h Higher Limit		

0314	REM SC_L	Within measuring range  On condition that REM SC_L≠REM SC_H	R/W
0315	REM SC_H		
0316	REM Bias	Range: -1999 ~ 5000 unit	R/W
0317	REM Filt	Range: 0 ~ 100 seconds	R/W

031A	REM-CH	Remote channel assignment	R/W
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		0 : OFF , 1 : CH1 , 2 : CH2 , 3 : CH3	
--	--	--	--

Data Address (hex)	Parameter	Details of Parameter	R/W
0320	SV Follow SW	CH2 & CH3 SV follow setting flag 1: Follow 0:No	R/W
0321	SV Follow	Follow type deviation SV set value: 1999 ~ 5000 unit	R/W

0400	FIX P	Control Output Proportional Baud Range: 0.0 ~ 999.9%(0.0:OFF)	R/W
0401	FIX I	Control Output Integral Time Range: 0 ~ 6000 Seconds (0.0:OFF)	R/W
0402	FIX D	Control Output Derivative Time Range 0 ~ 3600 Seconds (0.0:OFF)	R/W
0403	FIX MR	Manual Reset Range: -50.0 ~ 50.0%	R/W
0404	FIX DF	Hysteresis Range: 1 ~ 999 unit	R/W
0405	FIX OUT Limt_L	Control Output Lower Limit Output Limiter Range: 0.0 ~ 99.9%	R/W
0406	FIX OUT Limt_H	Control Output Higher Limit Output Limiter Range: 0.1 ~ 100.0%	R/W
0407	FIX SF	Control Output Target Value Function Range: OFF , 0.01 ~ 1.00	R/W
0408	Prog P1	PROG mode PB1 Range: 0.0 ~ 999.9% (0.0:OFF)	R/W

0409	Prog I1	PROG mode IT1 Range: 0 ~ 6000 seconds (0.0:OFF)	R/W
040A	Prog D1	PROG mode DT1 Range: 0 ~ 3600 seconds (0.0:OFF)	R/W
040B	Prog MR1	PROG mode MR1 Range: -50.0 ~ 50.0%	R/W
040C	Prog DF1	PROG mode DF1 Range: 1 ~ 999 unit	R/W
040D	Prog O_Lmt_L1	PROG mode lower limit side output limiter 1 Range: 0.0 ~ 99.9%	R/W
040E	Prog O_Lmt_H1	PROG mode higher limit side output limiter 1 Range: 0.1 ~ 100.0%	R/W
040F	Prog SF1	PROG mode target value function 1 Range: OFF,0.01 ~ 1.00	R/W
0410	Prog P2	PROG mode PB2 Range: 0.0 ~ 999.9% (0.0:OFF)	R/W
0411	Prog I2	PROG mode IT2 Range: 0 ~ 6000 seconds (0.0:OFF)	R/W
0412	Prog D2	PROG mode DT2 Range: 0 ~ 3600 seconds (0.0:OFF)	R/W
0413	Prog MR2	PROG mode MR2 Range: -50.0 ~ 50.0%	R/W
0414	Prog DF2	PROG mode DF2 Range: 1 ~ 999 unit	R/W
0415	Prog O_Lmt_L2	PROG mode lower limit side output	R/W

		limiter 2 Range: 0.0 ~ 99.9%	
0416	Prog O_Lmt_H2	PROG mode higher limit side output limiter 2 Range: 0.1 ~ 100.0%	R/W
0417	Prog SF2	PROG mode target value function 2 Range: OFF,0.01 ~ 1.00	R/W
0418	Prog P3	PROG mode PB3 Range: 0.0 ~ 999.9% (0.0:OFF)	R/W
0419	Prog I3	PROG mode IT3 Range: 0 ~ 6000 seconds (0.0:OFF)	R/W
041A	Prog D3	PROG mode DT3 Range: 0 ~ 3600 seconds (0.0:OFF)	R/W
041B	Prog MR3	PROG mode MR3 Range: -50.0 ~ 50.0%	R/W
041C	Prog DF3	PROG mode DF3 Range: 1 ~ 999 unit	R/W
041D	Prog O_Lmt_L3	PROG mode lower limit side output limiter 3 Range: 0.0 ~ 99.9%	R/W
041E	Prog O_Lmt_H3	PROG mode higher limit side output limiter 3 Range: 0.1 ~ 100.0%	R/W
041F	Prog SF3	PROG mode target value function 3 Range: OFF,0.01 ~ 1.00	R/W
0500	EV1_MODE	0:Not assigned 1:Higher limit deviation value 2:Lower limit deviation value 3:Out of range between higher &	R/W

		lower limits 4:Within range between higher & lower limits 5:Higher limit absolute value 6:Lower limit absolute value 7:Scaleover 8:Program RUN    9:Program END 10:Program STEP Only when Subaddress=EV1_CH.	
0501	EV1 Set Point	1.Higher limit deviation value alarm: 0 ~ 1999 unit 2.Lower limit deviation value alarm: 0 ~ -1999 unit 3.Out of range between higher & lower limits value alarm: 0 ~ 1999 unit 4.Within range between higher and lower limits value alarm: 0 ~ 1999 unit 5.Higher limit absolute value alarm: Within measuring range 6.Lower limit absolute value alarm: Within measuring range Only when Subaddress=EV1_CH.	R/W
0502	EV1 Diffrent	Alarm hysteresis 1 ~ 999 unit Only when Subaddress=EV1_CH.	R/W
0503	EV1 Inhibit	Alarm stand by 1 ~ 4 Only when Subaddress=EV1_CH.	R/W
0504	EV1 Delay	Alarm delay time 0 ~ 9999 seconds Only when Subaddress=EV1_CH.	R/W
0506	EV1_CH	Channel number setting	R/W

		1:CH1, 2:CH2, 3:CH3	
0510	EV2_MODE	0:Not assigned 1:Higher limit deviation value 2:Lower limit deviation value 3:Out of range between higher & lower limits 4:Within range between higher & lower limits 5:Higher limit absolute value 6:Lower limit absolute value 7:Scaleover 8:Program RUN 9:Program END 10:Program STEP Only when Subaddress=EV2_CH.	R/W
0511	EV2 Set Point	1.Higher limit deviation value alarm: 0 ~ 1999 unit 2.Lower limit deviation value alarm: 0 ~ -1999 unit 3.Out of range between higher & lower limits value alarm: 0 ~ 1999 unit 4.Within range between higher and lower limits value alarm: 0 ~ 1999 unit 5.Higher limit absolute value alarm: Within measuring range 6.Lower limit absolute value alarm: Within measuring range Only when Subaddress=EV2_CH.	R/W
0512	EV2 Diffrent	Alarm hysteresis 1 ~ 999 unit Only when Subaddress=EV2_CH.	R/W
0513	EV2 Inhibit	Alarm stand by 1 ~ 4	R/W

		Only when Subaddress=EV2_CH.	
0514	EV2 Delay	Alarm delay time 0 ~ 9999 seconds Only when Subaddress=EV2_CH.	R/W
0516	EV2_CH	Channel number setting 1:CH1, 2:CH2, 3:CH3	R/W
0520	EV3_MODE	0:Not assigned 1:Higher limit deviation value 2:Lower limit deviation value 3:Out of range between higher & lower limits 4:Within range between higher & lower limits 5:Higher limit absolute value 6:Lower limit absolute value 7:Scaleover 8:Program RUN 9:Program END 10:Program STEP Only when Subaddress=EV3_CH.	R/W
0521	EV3 Set Point	1.Higher limit deviation value alarm: 0 ~ 1999 unit 2.Lower limit deviation value alarm: 0 ~ -1999 unit 3.Out of range between higher & lower limits value alarm: 0 ~ 1999 unit 4.Within range between higher and lower limits value alarm: 0 ~ 1999 unit 5.Higher limit absolute value alarm: Within measuring range 6.Lower limit absolute value alarm: Within measuring range	R/W

		Only when Subaddress=EV3_CH	
0522	EV3 Diffrent	Alarm hysteresis 1 ~ 999 unit Only when Subaddress=EV3_CH.	R/W
0523	EV3 Inhibit	Alarm stand by 1 ~ 4 Only when Subaddress=EV3_CH.	R/W
0524	EV3 Delay	Alarm delay time 0 ~ 9999 seconds Only when Subaddress=EV3_CH.	R/W

0526	EV3_CH	Channel number setting 1:CH1, 2:CH2, 3:CH3	R/W
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0580	DI	DI setting flag 0:NON 1:FLW 2:RUN 3:HLD 4:ADV	R/W
------	----	---	-----

05B0	MEM	1:EEP Program Memory 0:RAM Random Memory	R/W
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0600	Out Actn	Output characteristic setting flag 0:Rev Act. 1:Dir Act	R/W
0601	Out Cyc	Control output cycle (Unit:0.5 seconds) Range: 0.5 ~ 120.0 seconds	R/W
0602	Reserved		
0603	SOFTSW	Soft start setting flag 0:OFF 1:ON	

0610	AT Point	AT pointer Range: 0 ~ 5000 unit	R/W
0611	Key Lock	0:OFF 1:LOCK1 2:LOCK2 3:LOCK3	R/W



- When Out\_Cyc is written, writing data is adjusted to 0.5 sec as one unit.
- The write command lock by keylock is the same as the screen lock. (Refer to the manual of the instrument.)
- If there is a change in EV1\_CH, EV2\_CH, EV3\_CH, the related parameters are initialized.

0701	PV Bias	PV bias Range: -1999 ~ 1999 unit	R/W
0702	PV Filt	PV filter Range: 0 ~ 100 seconds	R/W

0710	PFLW	Setting of CH2, CH3 PV input follow 0:OFF 1:ON	R/W
0711	CH_P	Selection of CH2, CH3 PV display or not 0-0 Window 0: Without 1: With	R/W

0800	FP_MOD	Selection between FIX and PROG 0:FIX 1:PROG (Writing possible only in CH1)	R/W
0801	PV_ST	Setting of PV start 0:OFF 1:ON (Writing possible only in CH1)	R/W

0882	STP	The number of steps 1 ~ 9 (Writing possible only in CH1)	R/W
0883	RPT	The number of execution repetitions 1 ~ 9999 (Writing possible only in CH1)	R/W
0884	ST_SV	Start SV (Writing possible only in CH1)	R/W

- For CH1, PFLW (window 1~30), CH\_P (window1-29 ) display- - - .The read value is:

7FFEh, To a write command, error ( 0BH ) is returned.

08A0	Step1 SV	Step No. 1 SV Value (Writing possible only in CH1)	R/W
08A1	Step1 Time	Step No. 1 Step Time (Writing possible only in CH1)	R/W
08A2	Step1 PID No	Step No. 1 PID No.	R/W
08A3	Reserved		
08A4	Step2 SV	Step No. 2 SV Value (Writing possible only in CH1)	R/W
08A5	Step2 Time	Step No. 2 Step Time (Writing possible only in CH1)	R/W
08A6	Step2 PID No	Step No. 2 PID No.	R/W
08A7	Reserved		
08A8	Step3 SV	Step No. 3 SV Value (Writing possible only in CH1)	R/W
08A9	Step3 Time	Step No. 3 Step Time (Writing possible only in CH1)	R/W
08AA	Step3 PID No	Step No. 3 PID No.	R/W
08AB	Reserved		
08AC	Step4 SV	Step No. 4 SV Value (Writing possible only in CH1)	R/W
08AD	Step4 Time	Step No. 4 Step Time (Writing possible only in CH1)	R/W
08AE	Step4 PID No	Step No. 4 PID No.	R/W
08AF	Reserved		
08B0	Step5 SV	Step No. 5 SV Value (Writing possible only in CH1)	R/W
08B1	Step5 Time	Step No. 5 Step Time	R/W

		(Writing possible only in CH1)	
08B2	Step5 PID No	Step No. 5 PID No.	R/W
08B3	Reserved		
08B4	Step6 SV	Step No. 6 SV Value (Writing possible only in CH1)	R/W
08B5	Step6 Time	Step No. 6 Step Time (Writing possible only in CH1)	R/W
08B6	Step6 PID No	Step No. 6 PID No.	R/W
08B7	Reserved		
08B8	Step7 SV	Step No. 7 SV Value (Writing possible only in CH1)	R/W
08B9	Step7 Time	Step No. 7 Step Time (Writing possible only in CH1)	R/W
08BA	Step7 PID No	Step No. 7 PID No.	R/W
08BB	Reserved		
08BC	Step8 SV	Step No. 8 SV Value (Writing possible only in CH1)	R/W
08BD	Step8 Time	Step No. 8 Step Time (Writing possible only in CH1)	R/W
08BE	Step8 PID No	Step No. 8 PID No.	R/W
08BF	Reserved		
08C0	Step9 SV	Step No. 9 SV Value (Writing possible only in CH1)	R/W
08C1	Step9 Time	Step No. 9 Step Time (Writing possible only in CH1)	R/W
08C2	Step9 PID No	Step No. 9 PID No.	R/W

### Driver Version:

Version	Date	Description
V1.20	Apr/08/2011	



## SIEMENS S7-1200 (Ethernet)

Supported Series: SIEMENS S7-1200 series Ethernet.

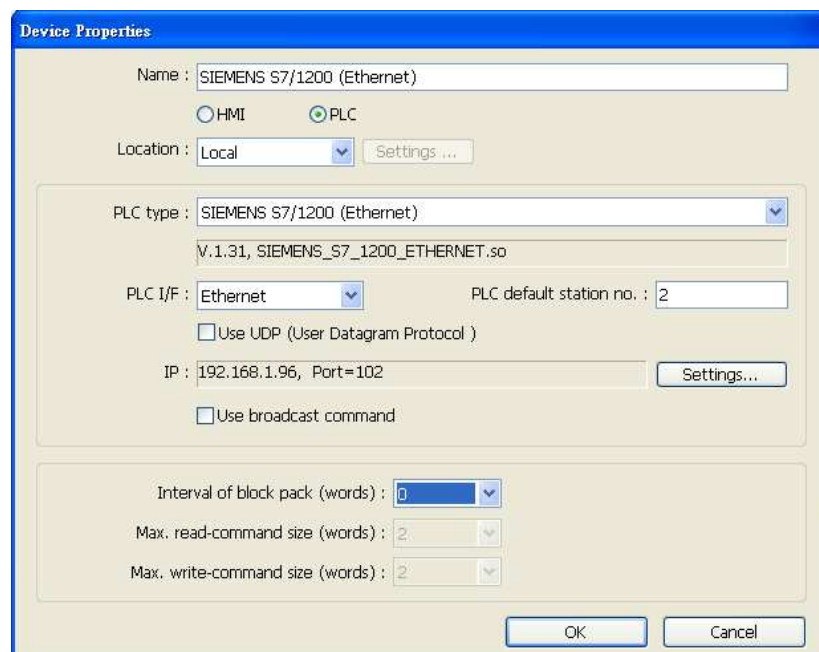
Website: <http://www.ad.siemens.com>

### HMI Setting:

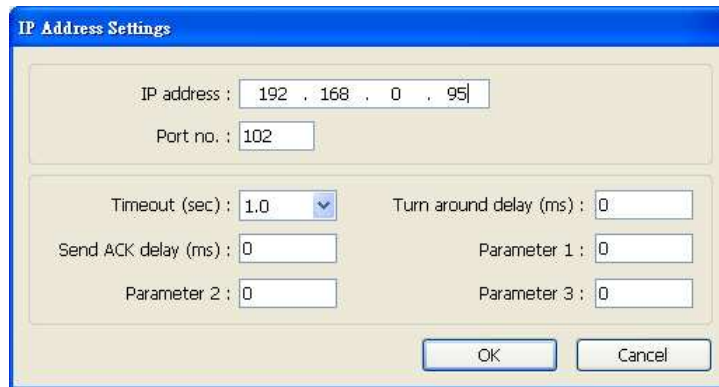
Parameters	Recommended	Options	Notes
PLC type	SIEMENS S7-1200 (Ethernet)		
PLC I/F	Ethernet		
Port no.	102		
PLC sta. no.	2		
Interval of block pack	0		
On-line simulator	Yes	Multi-PLC connect	Yes

### PLC Setting:

1. In S7-1200 program software create PLC program and tag and then download to PLC.
2. Select Go offline, EasyBuilder will connect to PLC and get tag data. In PLC type select "SIEMENS S7-1200 (Ethernet)". Set Interval of block pack (words) to 0.



- Click “Settings...”, input PLC IP address.

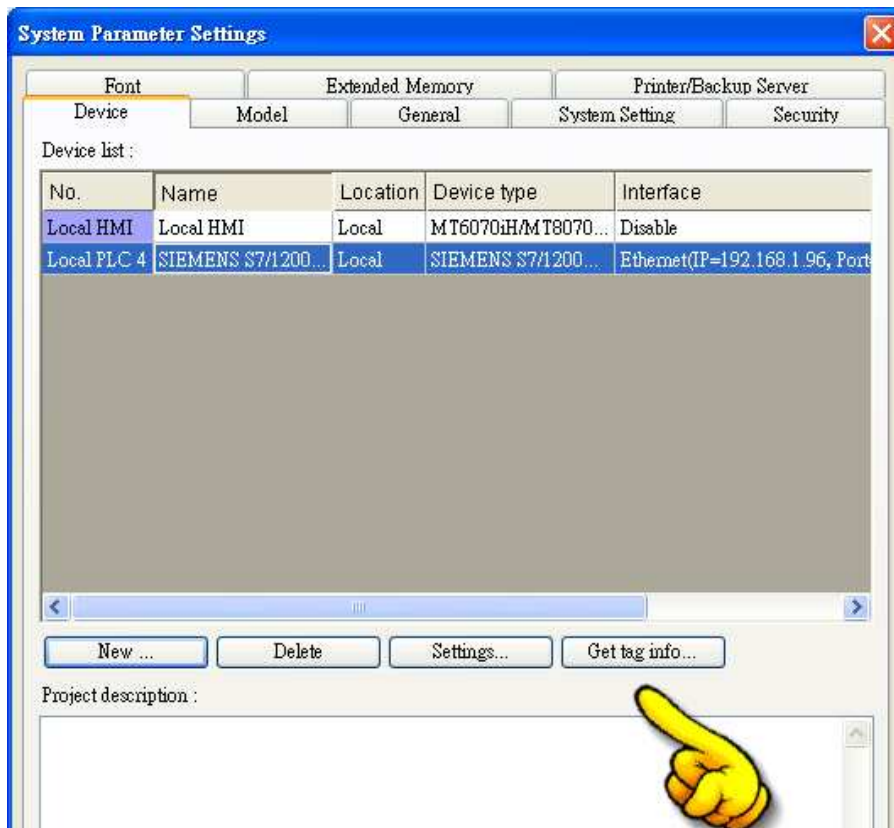


The IP Address Settings dialog box contains the following fields:

- IP address: 192 . 168 . 0 . 95
- Port no.: 102
- Timeout (sec): 1.0 (dropdown menu)
- Turn around delay (ms): 0
- Send ACK delay (ms): 0
- Parameter 1: 0
- Parameter 2: 0
- Parameter 3: 0

Buttons: OK, Cancel

- Check the PLC that is not connected to any PC. Click “Get tag info...”, it will show a successful message.


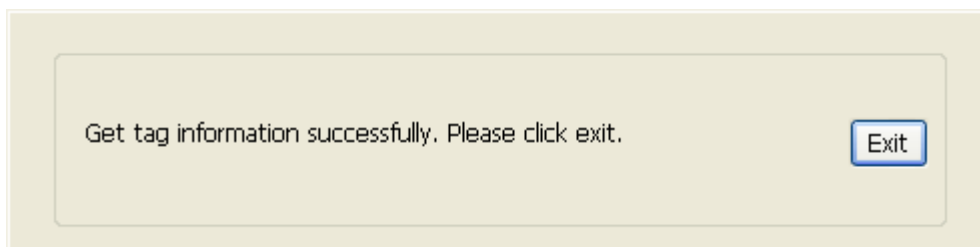


The System Parameter Settings dialog box has tabs for Font, Extended Memory, and Printer/Backup Server. The Device list table is as follows:

No.	Name	Location	Device type	Interface
Local HMI	Local HMI	Local	MT6070:H/MT8070...	Disable
Local PLC 4	SIEMENS S7/1200...	Local	SIEMENS S7/1200...	Ethernet(IP=192.168.1.96, Port

Buttons: New ..., Delete, Settings..., Get tag info...

Project description:

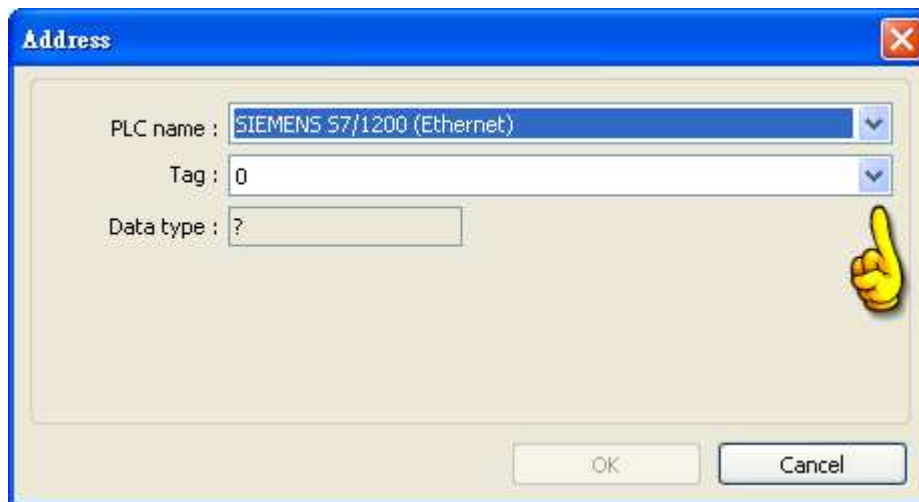
Get tag information successfully. Please click exit.

Exit

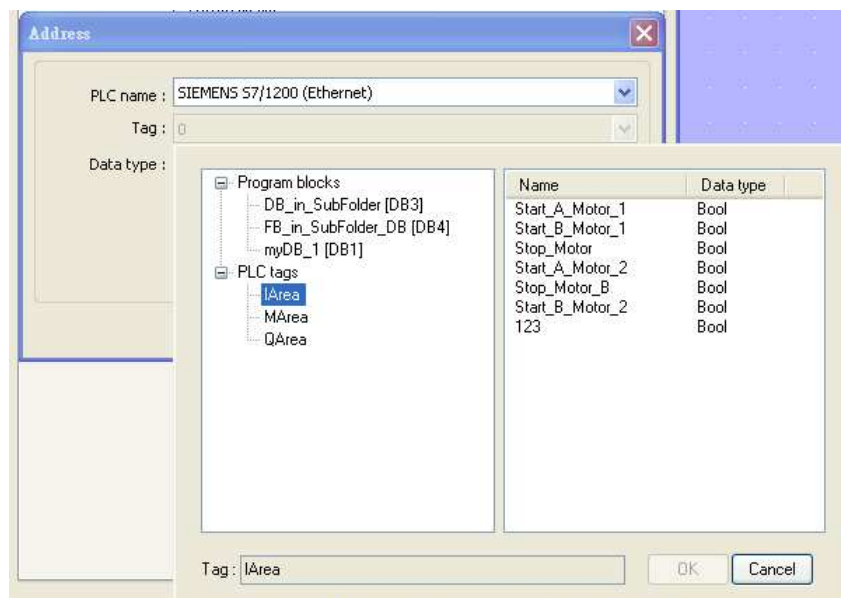
5. Create an object and click read address "Setting..."



6. In PLC name select S7-1200 then click Tag.



7. Select PLC tag.




## Support Device Type:

S7-1200 data type	EasyBuilder data format	Memo
Bool	bit	
Byte	16-bit BCD, Hex, Binary, Unsigned	8-bit
SInt	16-bit BCD, Hex, Binary, Unsigned	8-bit
Word	16-bit BCD, Hex, Binary, Unsigned	16-bit
Int	16-bit BCD, Hex, Binary, Signed	16-bit
UInt	16-bit BCD, Hex, Binary, Unsigned	16-bit
DWord	32-bit BCD, Hex, Binary, Unsigned	32-bit
Dint	32-bit BCD, Hex, Binary, Signed	32-bit
Real	32-bit Float	32-bit
UDInt	32-bit BCD, Hex, Binary, Unsigned	32-bit
Array	Word array for ASCII input and ASCII display	Length=word

## Wiring Diagram:

Direct connect (crossover cable):


HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-

Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+



5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-
		

### Driver Version:

Version	Date	Description
V1.70	Oct/7/2011	Add data type: Byte,SInt,UInt,UDInt

## SIEMENS S7-200

Supported Series: SIEMENS S7-200 series PLC  
(CPU212/214/215/216/221/222/224/226/226XM)

Website: <http://www.ad.siemens.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIEMENS S7-200		
PLC I/F	RS485 2w	RS485 2w	
Baud rate	9600	9600, 19200, 187.5K	The HMI which has a sticker "MPI187.5" on the rear cover supports 187.5K
Data bits	8	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1, 2	
PLC sta. no.	2	1 ~ 126	
Turn around delay (ms)	5		
Reserved 1	30		ACK delay time

Online simulator	YES	Extend address mode	NO
Broadcast command	NO		

### PLC Setting:

Communication mode	Set station number to 2
--------------------	-------------------------

### Device Address:




Bit/Word	Device type	Format	Range	Memo
B	I	DDDDo	0 ~ 40957	Input (I)
B	Q	DDDDo	0 ~ 40957	Output (O)
B	M	DDDDo	0 ~ 40957	Bit Memory
B	VW_Bit	DDDDDo	0 ~ 102397	V Memory Bit Address
W	VB	DDDDD	0 ~ 10239	

W	VW	DDDDD	0 ~ 10239	V Memory
W	VW_Odd	DDDDD	0 ~ 10239	V Memory
DW	VD	DDDDD	0 ~ 10239	V Memory Double Word
DW	VD_Odd	DDDDD	0 ~ 10239	V Memory Double Word
W	VW_String	DDDDD	0 ~ 10239	String
W	VW_String_Odd	DDDDD	0 ~ 10239	String
W	VD_String	DDDDD	0 ~ 10239	String
W	VD_String_Odd	DDDDD	0 ~ 10239	String
W	MB	DDDDD	0 ~ 10239	Byte Memory
W	MW	DDDDD	0 ~ 10239	Word Memory
W	MD	DDDDD	0 ~ 10239	Word Memory
W	MW_Odd	DDDDD	0 ~ 10239	Word Memory
W	T	DDD	0 ~ 127	Timer
W	C	DDD	0 ~ 127	Counter




- Double word and floating point value must use VD device type.

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		8 D-
2 RX+	9 Data+		3 D+
5 GND	5 GND		5 GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Male
1 RX-	7 Data-		8 D-
2 RX+	8 Data+		3 D+
5 GND	5 GND		5 GND
			

**Driver Version:**

Version	Date	Description
V2.30	Aug/17/2009	

## SIEMENS S7-200 (Ethernet)

Supported Series: SIEMENS S7-200 Ethernet Series PLC  
(CPU212/214/215/216/221/222/224/226/226XM)

Website: <http://www.ad.siemens.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIEMENS S7-200 (Ethernet)		
PLC I/F	Ethernet		
Port no.	102		
PLC sta. no.	1	0-31	

### Device Address:


Bit/Word	Device type	Format	Range	Memo
B	I	DDDDo	0 ~ 40957	Input (I)
B	Q	DDDDo	0 ~ 40957	Output (O)
B	M	DDDDo	0 ~ 40957	Bit Memory
B	VW_Bit	DDDDDo	0 ~ 102397	V Memory Bit Address
W	VW	DDDDD	0 ~ 10239	V Memory
DW	VD	DDDDD	0 ~ 10239	V Memory Double Word
W	VW_String	DDDDD	0 ~ 10239	String
DW	VD_String	DDDDD	0 ~ 10239	String

- Double word and floating point value must use VD device type.

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.20	Dec/30/2008	

## SIEMENS S7-200 PPI

Supported Series: SIEMENS S7-200 series PLC  
(CPU212/214/215/216/221/222/224/226/226XM)

Website: <http://www.ad.siemens.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIEMENS S7-200 PPI		
PLC I/F	RS485 2w	RS485 2w	
Baud rate	9600	9600, 19200, 187.5K	Only MT6000/8000V2 support baud rate 187.5 K
Data bits	8	7,8	
Parity	Even	Even, Odd, None	
Stop bits	1	1, 2	
Turn around delay (ms)	5		
ACK delay time (ms)	30		
PLC sta. no.	2	1 ~ 126	

Online simulator	YES	Extend address mode	YES
Broadcast command	NO		

### PLC Setting:

PLC setting	PLC sta. no. can not be the same as HMI sta. no.
-------------	--

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDDo	0 ~ 40957	Input (I)
B	Q	DDDDo	0 ~ 40957	Output (O)
B	M	DDDDo	0 ~ 40957	Bit Memory
B	VW_Bit	DDDDDo	0 ~ 102397	V Memory Bit Address
W	VB	DDDDD	0 ~ 10239	

W	VW	DDDDD	0 ~ 10239	V Memory
W	VW_Odd	DDDDD	0 ~ 10239	V Memory
DW	VD	DDDDD	0 ~ 10239	V Memory Double Word
DW	VD_Odd	DDDDD	0 ~ 10239	V Memory Double Word
W	VW_String	DDDDD	0 ~ 10239	String
W	VW_String_Odd	DDDDD	0 ~ 10239	String
W	VD_String	DDDDD	0 ~ 10239	String
W	VD_String_Odd	DDDDD	0 ~ 10239	String
W	MB	DDDDD	0 ~ 10239	Byte Memory
W	MW	DDDDD	0 ~ 10239	Word Memory
W	MW_Odd	DDDDD	0 ~ 10239	Word Memory
W	T	DDD	0 ~ 127	Timer
W	C	DDD	0 ~ 127	Counter

- Double Word and floating point value must use VD device type.

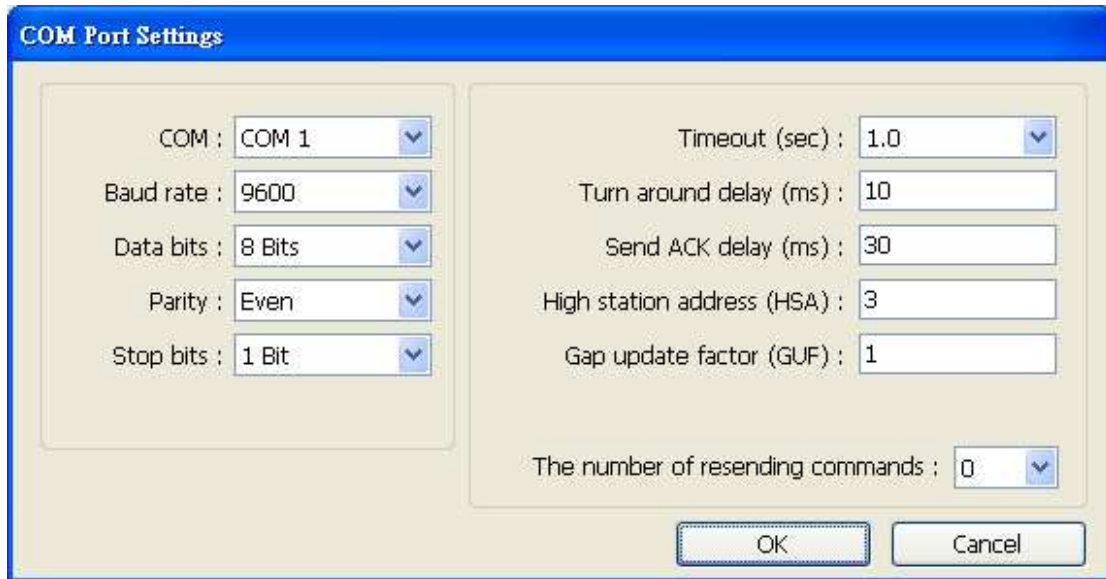
## Multi-HMIs-Multi-PLCs Communication Setting:



For S7-200 PLC, Multi-HMIs-Multi-PLCs communication can be achieved using S7/200 PPI driver, please refer to the settings below.

IN EB8000 COM Port Settings, two important parameters must be set:



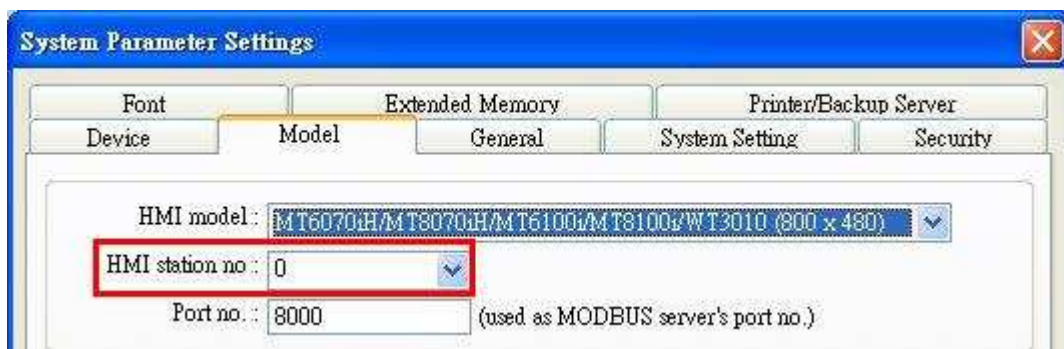


### 1. [High station address (HSA)]:

Setting Max. Station Number of HMI in PPI network.

For the effectiveness of system operation, it is highly recommended that the HMI station number starts from zero and go on sequentially. If there are 4 HMI in PPI network, set station no. from 0~3, and [High station address (HSA)] to 3.

Set HMI station number in [System Parameters] / [Model] / [HMI station no.]:



### 2. [Gap update factor(GUF)]:

The condition to pass a Token. In PPI network only HMI can hold a Token, PLC can only be controlled.

When the HMI that holds Token communicates with PLC for a number of times that equals to the value set here, HMI will pass the Token (control of PLC) to the next HMI. For example, if GUF is set to "1", HMI will pass the control of PLC to the next HMI when read or write the value in an address.

If GUF is set to a bigger value, the HMI that holds Token will control the PLC for a longer time and therefore the Token won't be passed to another HMI and cause failure in communicating with PLC.




A complete communication means HMI reads / writes PLC value for one time.

## Note:




- HMI sta. no. can not be the same as PLC sta. no.
- Highly recommended that HMI sta. no. starts from 0 and go on sequentially for the effectiveness of operation.
- Available for EB8000V4.50 and later.

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		8 D-
2 RX+	9 Data+		3 D+
5 GND	5 GND		5 GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Male
1 RX-	7 Data-		8 D-
2 RX+	8 Data+		3 D+
5 GND	5 GND		5 GND
			

## Driver Version

Version	Date	Description
V1.00	Aug/15/2011	Driver released.

## SIEMENS S7-300

Supported Series: SIEMENS S7-300 series PLC

Website: <http://www.ad.siemens.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIEMENS S7-300		
PLC I/F	RS232		
Baud rate	19200, 38400, 187.5K	9600~187.5K	Must be same as the PLC setting. The HMI which has a sticker MPI187.5 on the rear cover supports 187.5K.
Data bits	8		
Parity	Odd		
Stop bits	1		
PLC sta. no.	2		Must be same as the PLC setting.

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDDo	0 ~ 40957	Input (I)
B	Q	DDDDo	0 ~ 40957	Output (O)
B	M	DDDDo	0 ~ 40957	Bit Memory
B	DBnBit	FFFFDDDDo	0 ~ 409681927	Data Register Bit
B	DB0Bit ~ DB99Bit	DDDDo	0 ~ 81927	
W	IW	DDDD	0 ~ 4095	Input (I)
W	QW	DDDD	0 ~ 4095	Output (O)
W	MW	DDDD	0 ~ 4095	Bit Memory
W	MD	DDDD	0 ~ 4094	
W	MB	DDDD	0 ~ 4095	Bit Memory Byte
W	DBBn	FFFFDDDD	0 ~ 40968192	Data Register Byte
W	DBn	FFFFDDDD	0 ~ 40968192	Data Register (must be even)
DW	DBDn	FFFFDDDD	0 ~ 40968192	Data Register Double

				Word (must be multiple of 4)
DW	DBn_String	FFFFDDDD	0 ~ 40968192	Data Register Double Word (must be multiple of 4)
DW	DBDn_String	FFFFDDDD	0 ~ 40968192	Data Register Double Word (must be multiple of 4)
W	DB0-DB99	DDDD	0 ~ 8192	Data Register (must be even)

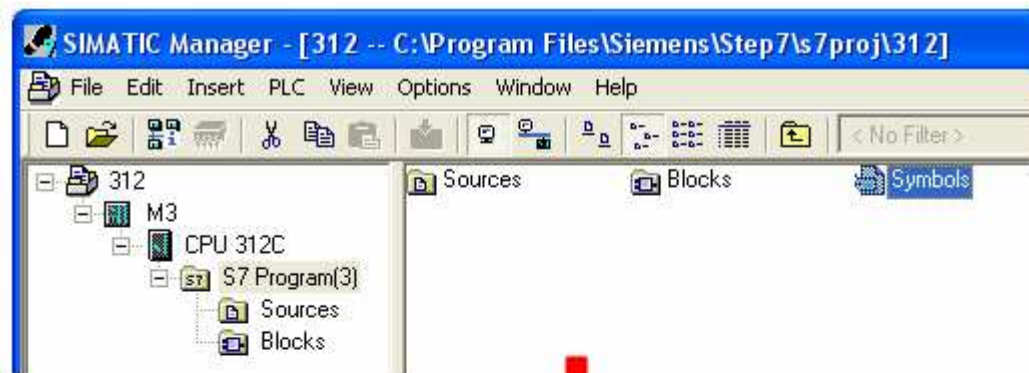
\* Double word and floating point value must use DBDn device type.

## How to Import Tag:

SIEMENS STEP 7 program allows building files of user-defined tag (\*.dif file and \*.AWL file), and import these files in EasyBuilder8000/EasyBuilderPro -> System Parameter Settings. The following describes how to build and import these two types of files.

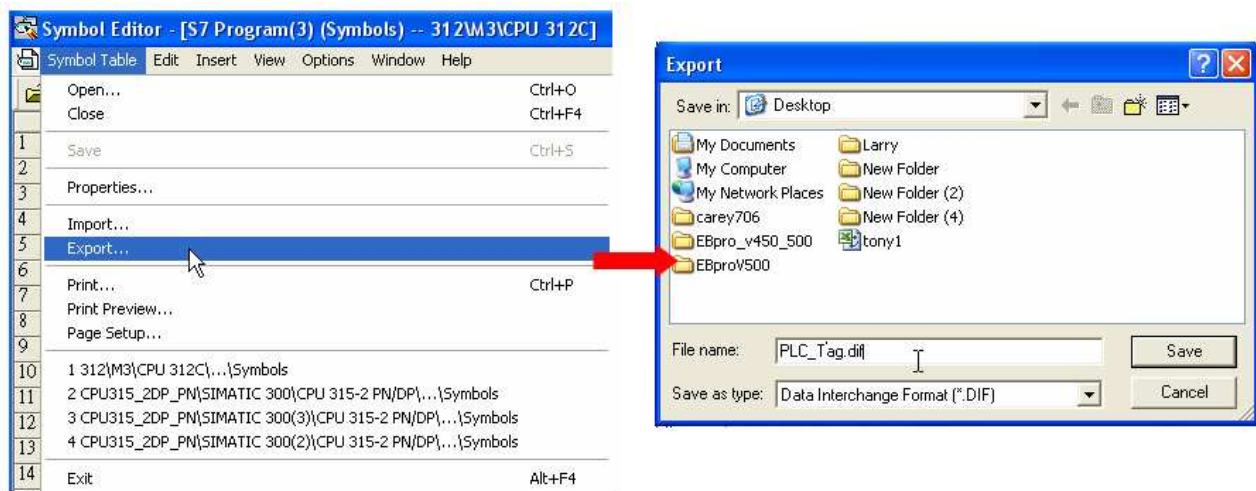
### 1. Building \*.dif File

- a、 In “Symbols” create user-defined tag.



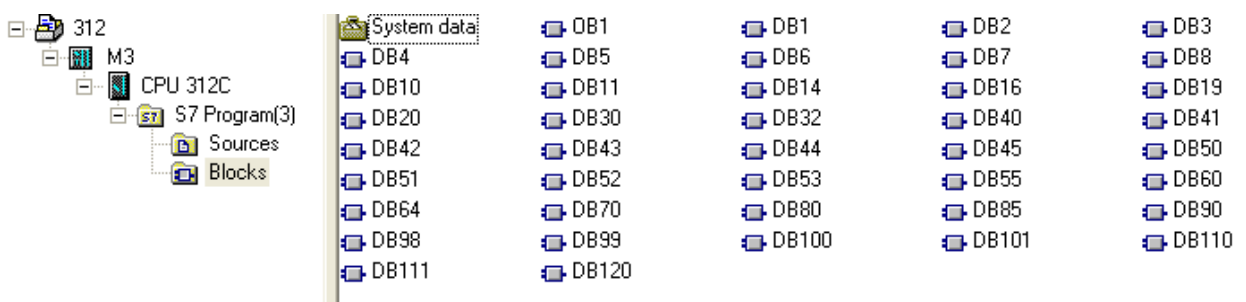
	Status	Symbol	Address	Data type	Comment
1		I0.0	I 0.0	BOOL	
2		I0.1	I 0.1	BOOL	
3		I0.2	I 0.2	BOOL	
4		I0.3	I 0.3	BOOL	
5		I0.4	I 0.4	BOOL	
6		I0.5	I 0.5	BOOL	
7		I0.6	I 0.6	BOOL	
8		I0.7	I 0.7	BOOL	

b. Click **Export** to export the edited file and click **Save**.

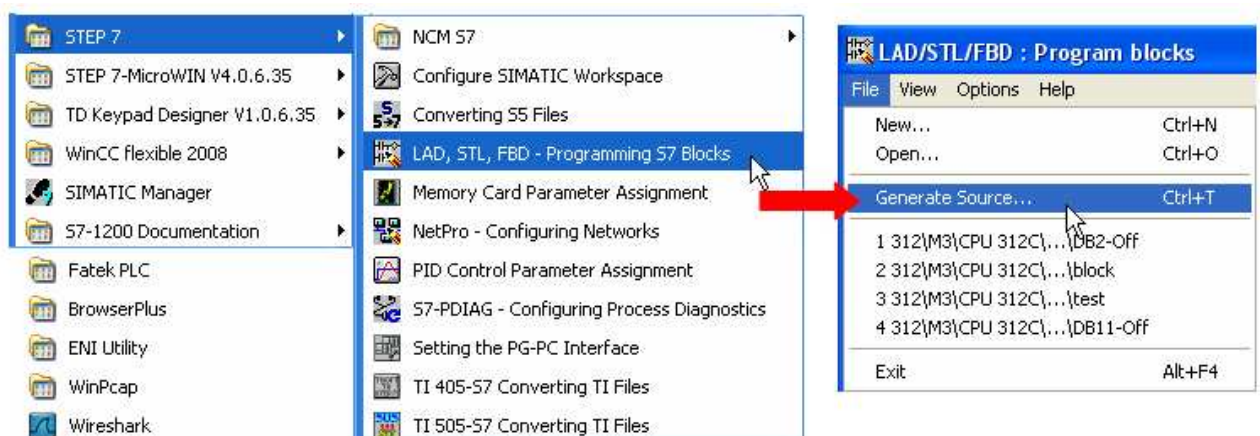


## 2. Building \*.AWF File

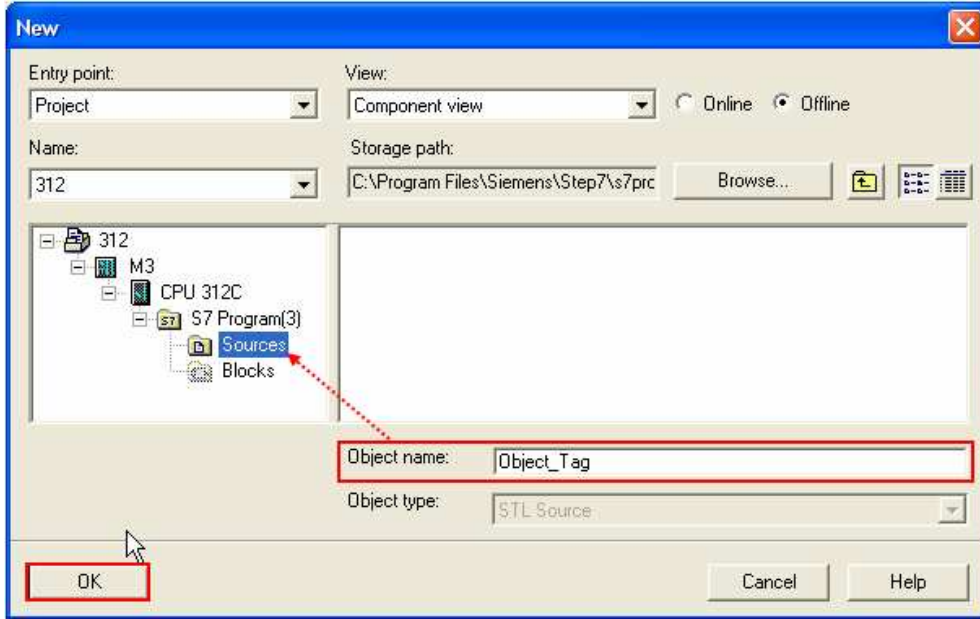
a. In **Blocks** create items as shown below:



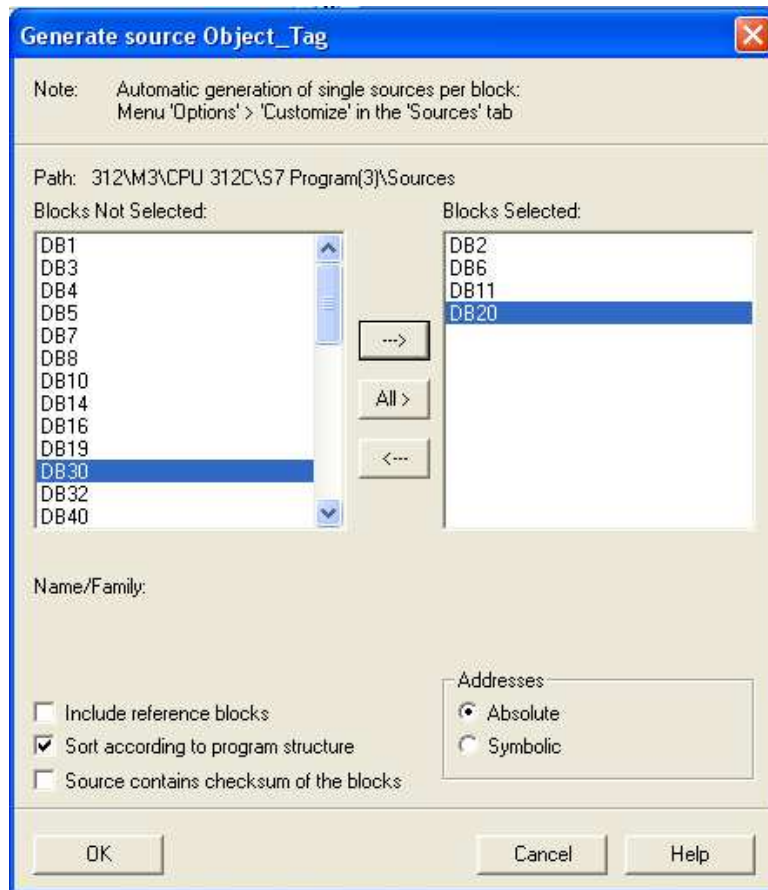
b. Open **LAD/STL, FBD – Programming S7 Blocks**, click **File -> Generate Source**.



- c. Select **Sources** as storage path, specify the file name then click **OK**.

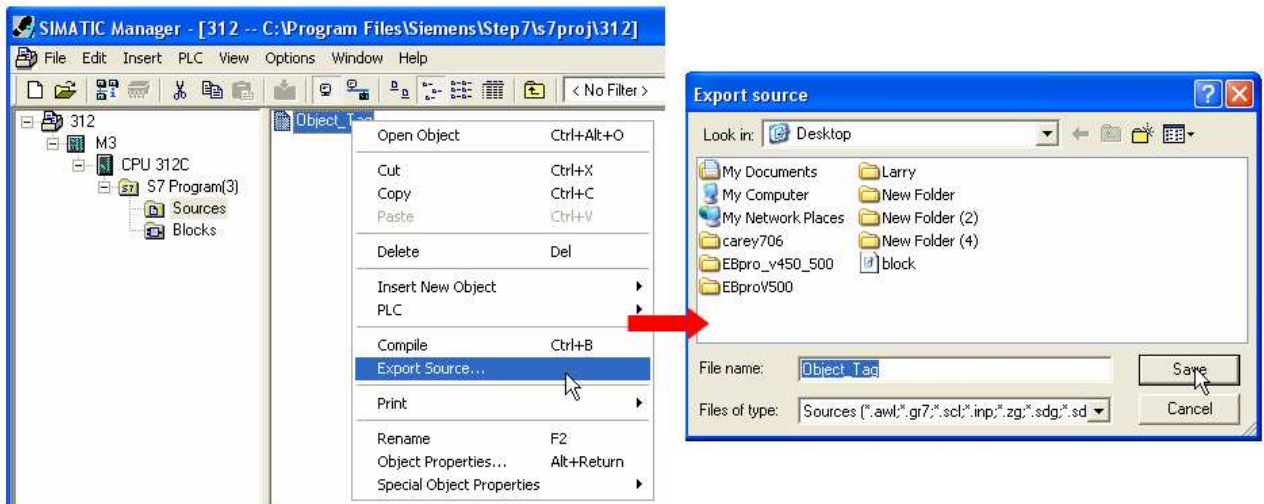


- d. Select the objects to be exported then click **OK**.

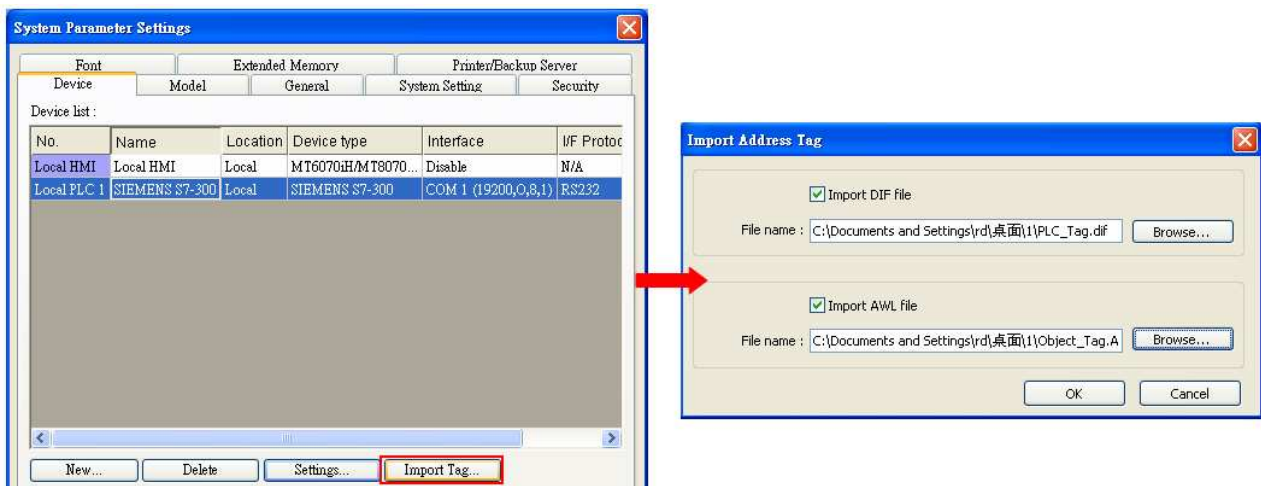




- e、 Under **Sources** there will be names of the saved files, select **Export Source** to build **\*.AWL** file.



The generated **\*.dif** and **\*.AWL** files can be imported in EasyBuilder8000/EasyBuilderPro **System Parameter Settings**, by clicking **Import Tag**.







Tag information successfully imported.





## Wiring Diagram:

### Siemens S7-300 PC Adapter : 9P D-Sub to 9P D-Sub:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
			7 RTS	circuit
			8 CTS	
				

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			3 TXD	
6 TX			2 RXD	
5 GND			5 GND	
			7 RTS	circuit
			8 CTS	
				

### Systeme Helmholz SSW7-TS : 9P D-Sub to 9P D-Sub



MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
			7 RTS	circuit
			8 CTS	
			4 DTR	circuit
			6 DSR	





MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			7 RTS
			8 CTS
			4 DTR
			6 DSR
			circuit
			circuit
			

### Driver Version:

Version	Date	Description
V3.10	May/24/2011	Added registers: MB & DBBn.

## SIEMENS S7-300/ET200S (Ethernet)

Supported Series: SIEMENS S7-300 Ethernet Series PLC, Ethernet module CP-343-1, CPU315-2 PN/DP, CPU317-2 PN/DP, CPU319-3 PN/DP, and ET200S.

Website: <http://www.ad.siemens.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIEMENS S7-300/ET200S (Ethernet)		
PLC I/F	Ethernet		
Port no.	102		
PLC sta. no.	1	0-31	

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDDo	0 ~ 40957	Input (I)
B	Q	DDDDo	0 ~ 40957	Output (O)
B	M	DDDDo	0 ~ 40957	Bit Memory
B	DBnBit	FFFFDDDDo	0 ~ 409699997	
B	DB0Bit-DB99Bit	DDDDDo	0 ~ 655327	Data Register Bit
W	IW	DDDD	0 ~ 4095	Input (I)
W	QW	DDDD	0 ~ 4095	Output (O)
W	MW	DDDD	0 ~ 4095	Bit Memory
W	MD	DDDD	0 ~ 4094	Bit Memory Double Word
W	DBn	FFFFDDDD	0 ~ 40969999	Data Register (must be even)
DW	DBDn	FFFFDDDD	0 ~ 40969999	Data Register Double Word (must be multiple of 4)
DW	DBn_String	FFFFDDDD	0 ~ 40969999	
DW	DBDn_String	FFFFDDDD	0 ~ 40969999	
W	DB0 ~ DB99	DDDD	0 ~ 65532	Data Register (must be even)
W	MB	DDDD	0 ~ 4095	Bit Memory Byte

W	DBBn	FFFFDDDD	0 ~ 40969999	Data Register Byte
---	------	----------	--------------	--------------------

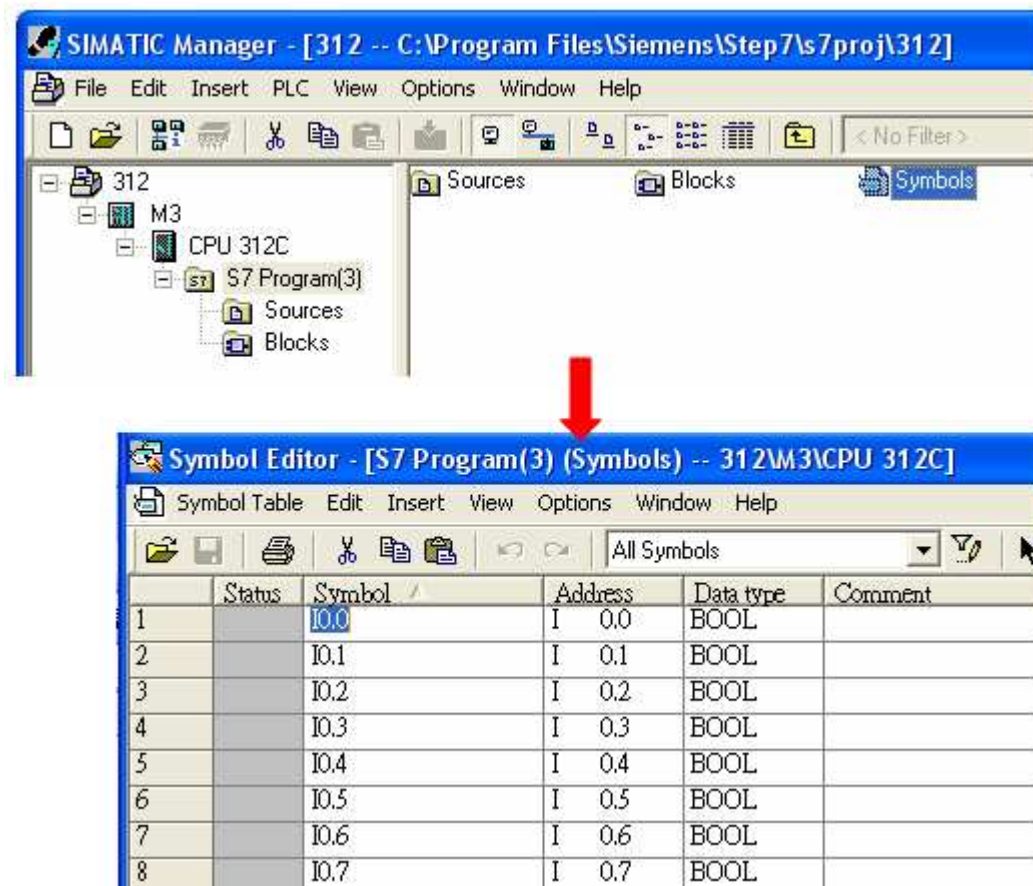
- Double word and floating point value must use DBDn device type.

## How to Import Tag:

SIEMENS STEP 7 program allows building files of user-defined tag (\*.dif file and \*.AWL file), and import these files in EasyBuilder8000/EasyBuilderPro -> System Parameter Settings. The following describes how to build and import these two types of files.

### 1. Building \*.dif File

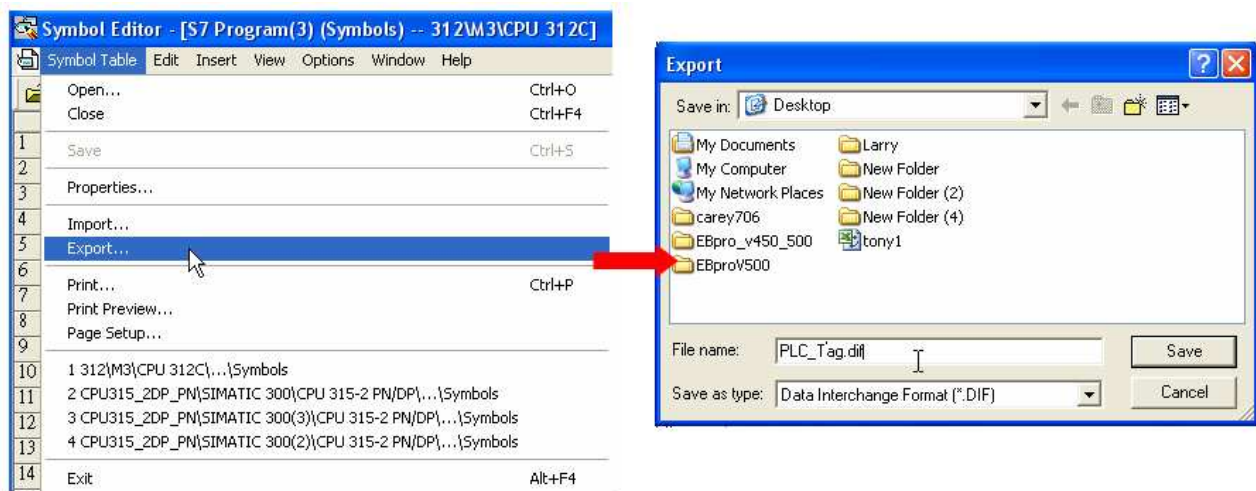
- a、 In “Symbols” create user-defined tag.



The top screenshot shows the SIMATIC Manager interface with the project tree on the left. The 'Symbols' folder is selected under the 'S7 Program(3)' folder. A red arrow points down to the bottom screenshot, which shows the Symbol Editor window. The Symbol Editor window displays a table of symbols with columns for Status, Symbol, Address, Data type, and Comment.

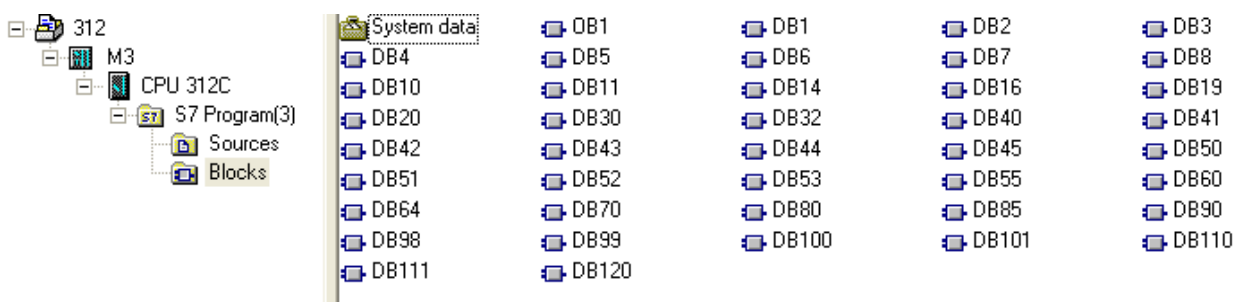
	Status	Symbol	Address	Data type	Comment
1		I0.0	I 0.0	BOOL	
2		I0.1	I 0.1	BOOL	
3		I0.2	I 0.2	BOOL	
4		I0.3	I 0.3	BOOL	
5		I0.4	I 0.4	BOOL	
6		I0.5	I 0.5	BOOL	
7		I0.6	I 0.6	BOOL	
8		I0.7	I 0.7	BOOL	

b. Click **Export** to export the edited file and click **Save**.

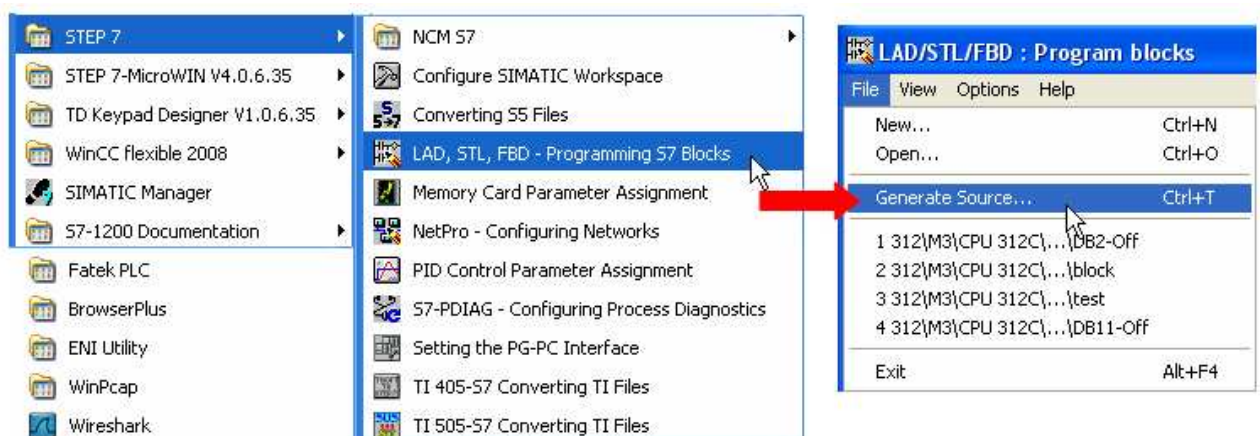


## 2. Building \*.AWF File

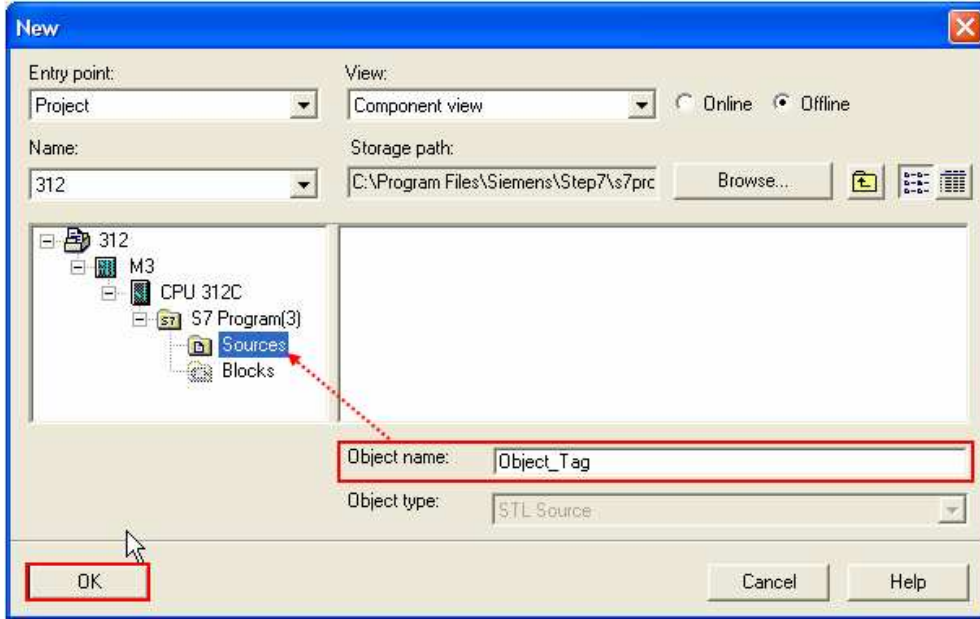
a. In **Blocks** create items as shown below:



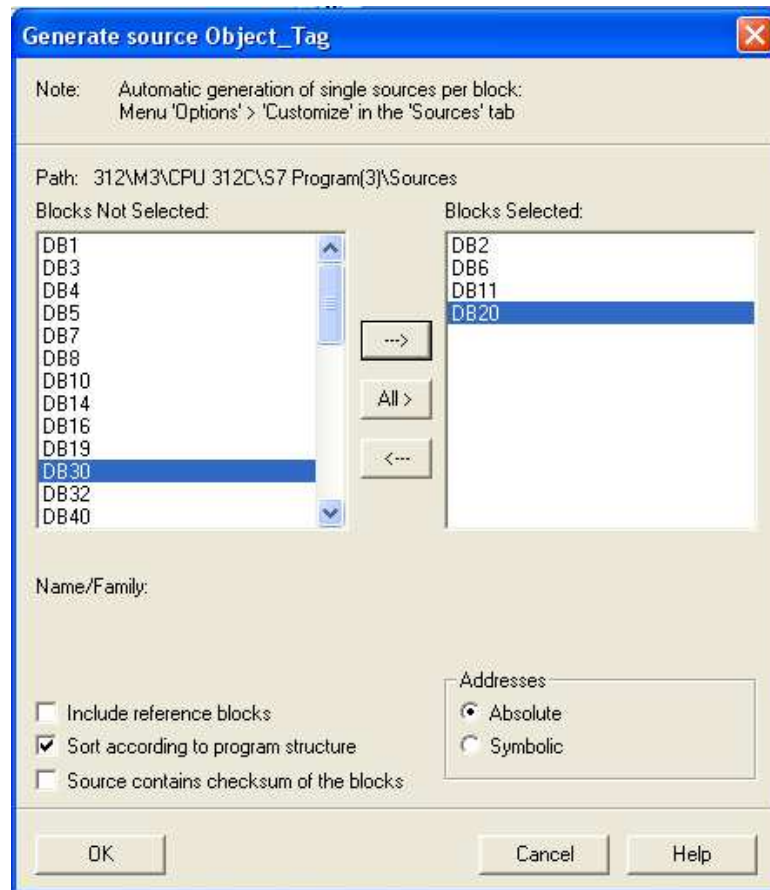
b. Open **LAD/STL, FBD – Programming S7 Blocks**, click **File -> Generate Source**.



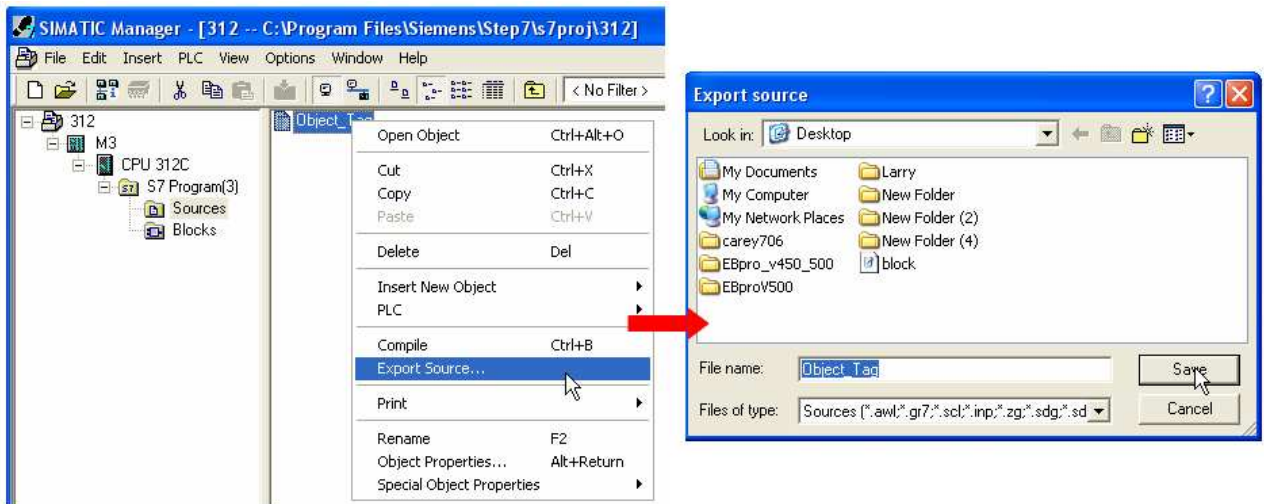
- c. Select **Sources** as storage path, specify the file name then click **OK**.



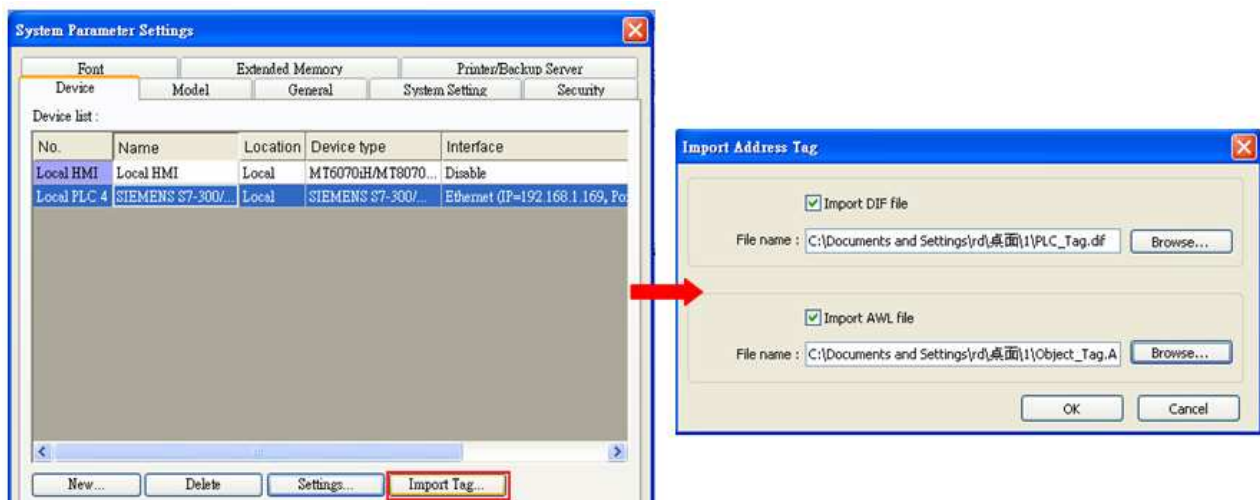
- d. Select the objects to be exported then click **OK**.



- e、 Under **Sources** there will be names of the saved files, select **Export Source** to build **\*.AWL** file.



The generated **\*.dif** and **\*.AWL** files can be imported in EasyBuilder8000/EasyBuilderPro **System Parameter Settings**, by clicking **Import Tag**.



Tag information successfully imported.






## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V2.10	May/21/2011	Added registers: MB & DBBn.

## SIEMENS S7-300 MPI

Supported Series: SIEMENS S7-300 series PLC

Website: <http://www.siemens.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIEMENS S7-300 MPI		
PLC I/F	RS-485 2W		
Baud rate	187.5K		Only HMI with a sticker "MPI 187.5K" on the rear cover supports MPI communication.
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	2	2 ~ 31	

Online simulator	NO	Extend address mode	Yes
Broadcast command	NO		

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDDo	0 ~ 40957	Input (I)
B	Q	DDDDo	0 ~ 40957	Output (O)
B	M	DDDDo	0 ~ 40957	Bit Memory
B	DBnBit	FFFFDDDDo	0 ~ 409699997	Data Register Bit
B	DB0Bit ~ DB99Bit	DDDDDo	0 ~ 655327	Data Register Bit
W	IW	DDDD	0 ~ 4095	Input (I)
W	QW	DDDD	0 ~ 4095	Output (O)
W	MW	DDDD	0 ~ 4095	Bit Memory
W	MD	DDDD	0 ~ 4094	
W	MB	DDDD	0 ~ 4095	Bit Memory Byte



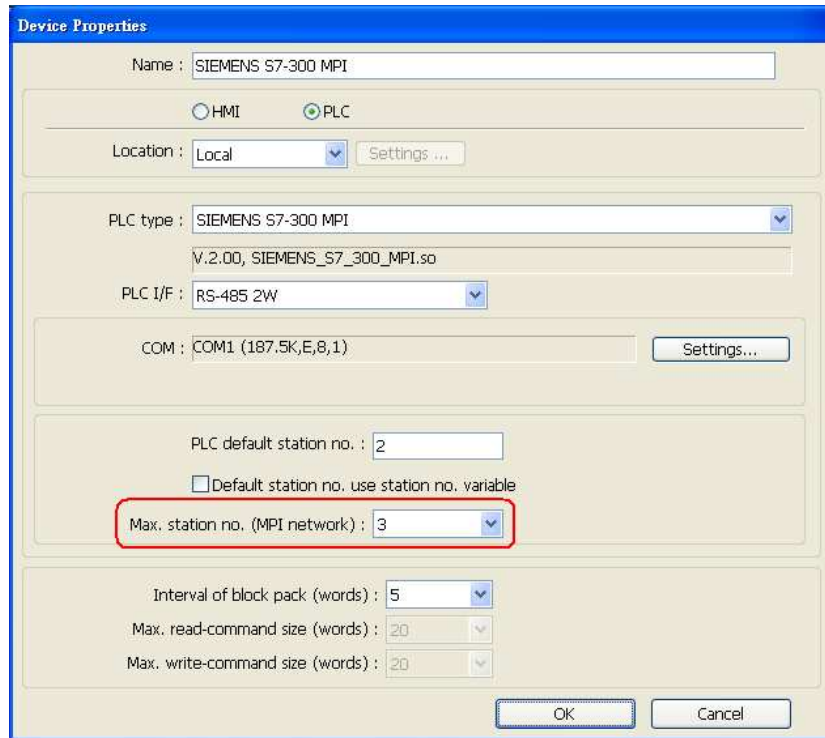
W	DBBn	FFFFDDDD	0 ~ 40969999	Data Register
W	DBn	FFFFDDDD	0 ~ 40969999	Data Register (must be even)
W	DBDn	FFFFDDDD	0 ~ 40969999	Data Register Double Word (multiple of 4)
W	DBn_String	FFFFDDDD	0 ~ 40969999	
W	DBDn_String	FFFFDDDD	0 ~ 40969999	
W	DB0 ~ DB99	DDDD	0 ~ 65532	Data Register (must be even)

\* Double word and floating point value must use DBDn device type.

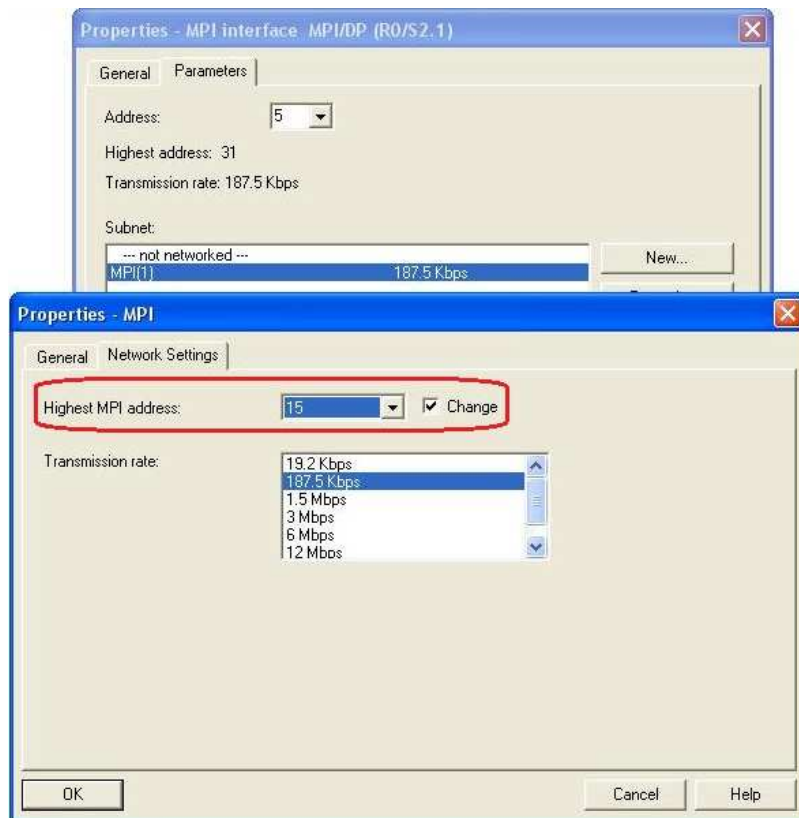
## Multi-HMIs-Multi-PLCs Communication Setting:



For SIEMENS S7-300 MPI driver in Multi-HMIs-Multi-PLCs communication, [Max. station no. (MPI network)] parameter must be correctly set. This setting is relevant to the station no. of the devices, as shown, two HMI (station no. 0, 1) and two PLC (station no. 2, 3) are in MPI network, Max. Station No. should be set to 3.



For the effectiveness of communication, users may set PLC device in STEP 7 as shown below. In Properties MPI / Network Settings, set Highest MPI address to the number closest to the actual device station number.



## Note:

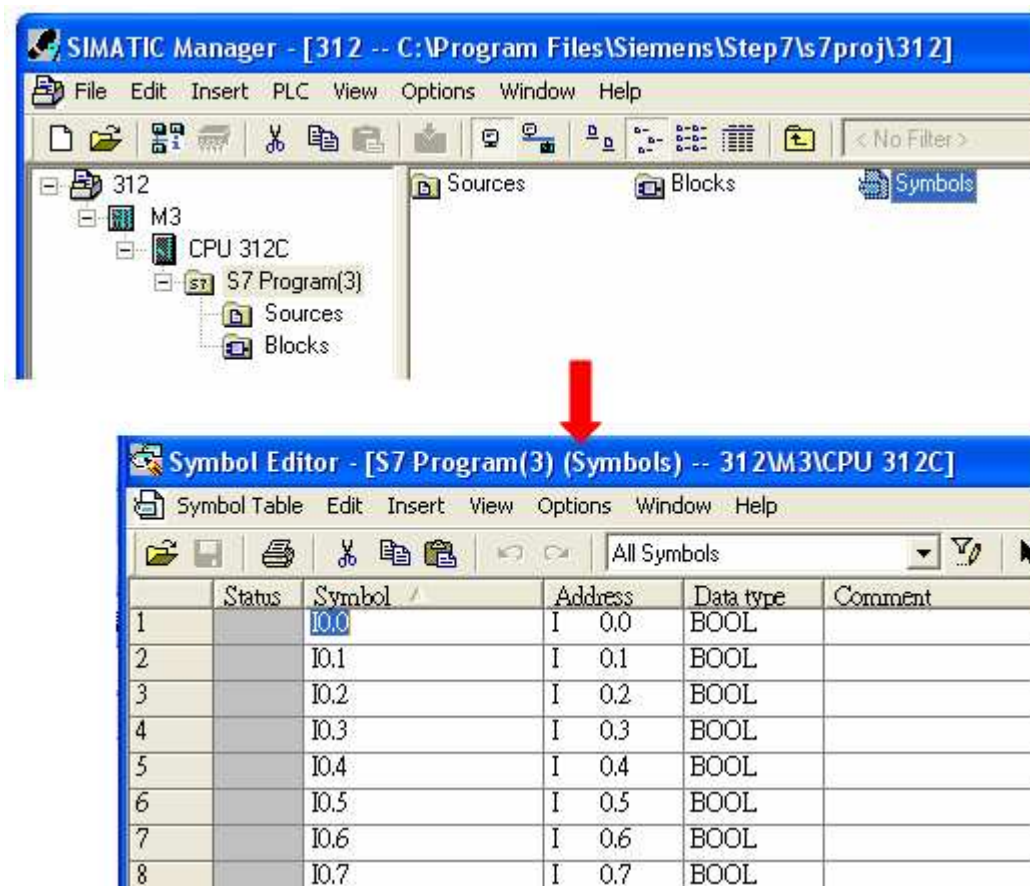
- HMI sta. no. can not be the same as PLC sta. no.
- Highly recommended that the device station numbers start from 0 sequentially and correctly set [Max. station no. (MPI network)].
- Available for EB8000V4.50 and later.

## How to Import Tag:

SIEMENS STEP 7 program allows building files of user-defined tag (\*.dif file and \*.AWL file), and import these files in EasyBuilder8000/EasyBuilderPro -> System Parameter Settings. The following describes how to build and import these two types of files.

### 1. Building \*.dif File

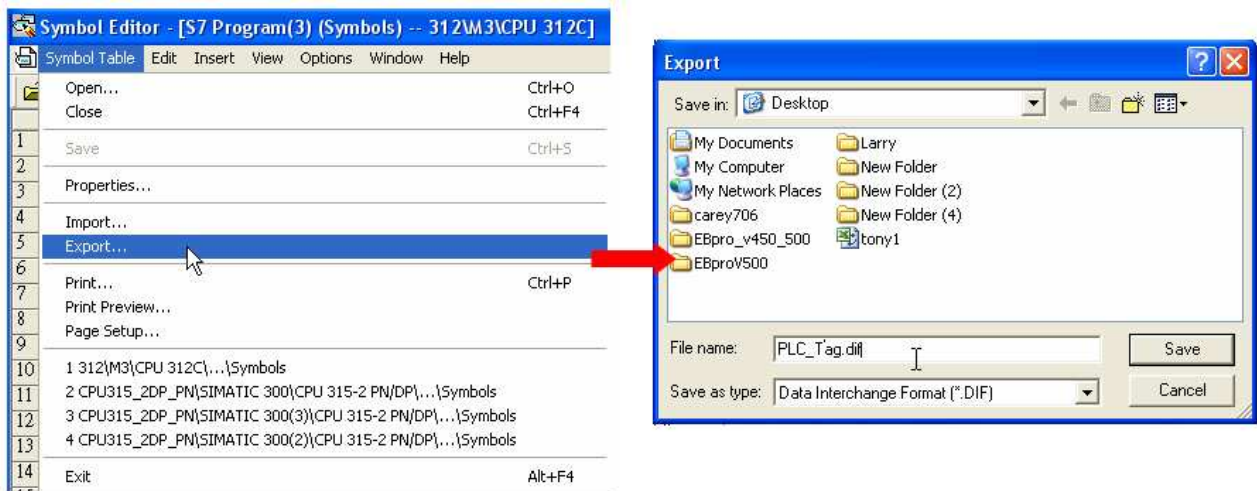
- a. In "Symbols" create user-defined tag.



The image shows two screenshots from the SIMATIC Manager software. The top screenshot shows the project tree for station 312, with the 'Symbols' folder selected. A red arrow points from this folder to the bottom screenshot, which is the Symbol Editor window. The Symbol Editor window displays a table of symbols with columns for Status, Symbol, Address, Data type, and Comment.

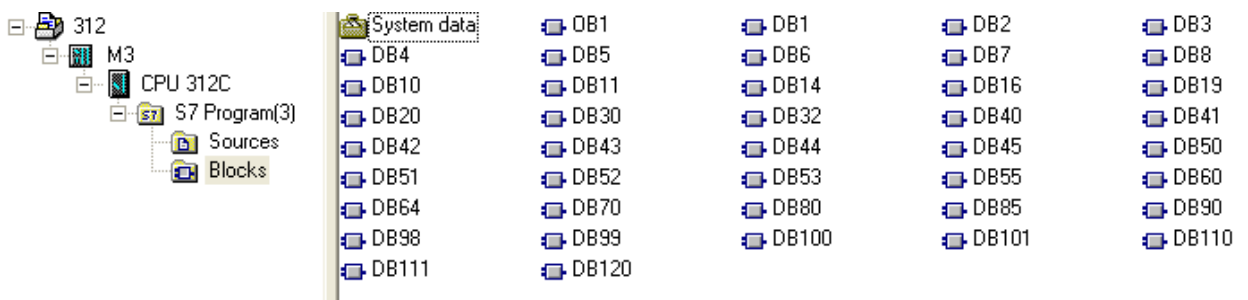
	Status	Symbol	Address	Data type	Comment
1		I0.0	I 0.0	BOOL	
2		I0.1	I 0.1	BOOL	
3		I0.2	I 0.2	BOOL	
4		I0.3	I 0.3	BOOL	
5		I0.4	I 0.4	BOOL	
6		I0.5	I 0.5	BOOL	
7		I0.6	I 0.6	BOOL	
8		I0.7	I 0.7	BOOL	

b. Click **Export** to export the edited file and click **Save**.

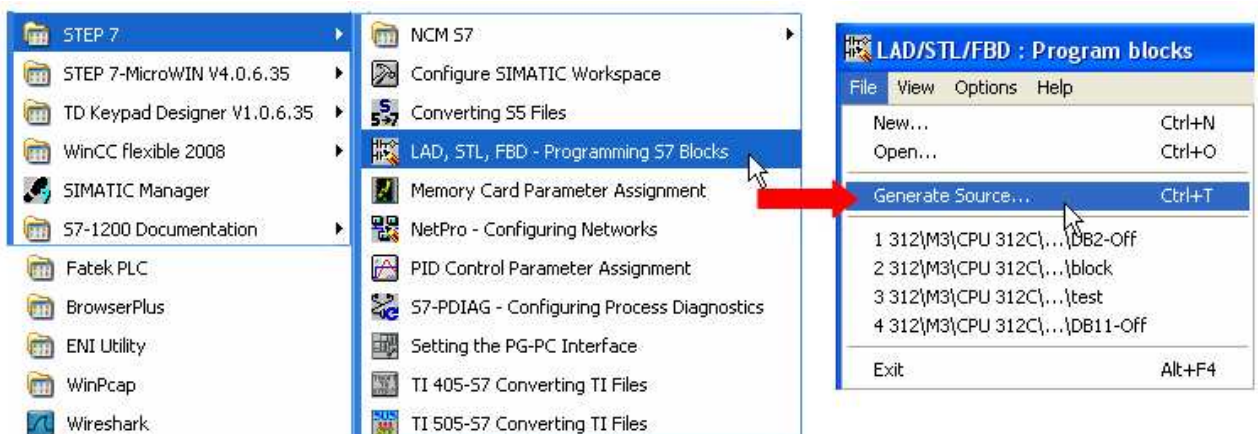


## 2. Building \*.AWF File

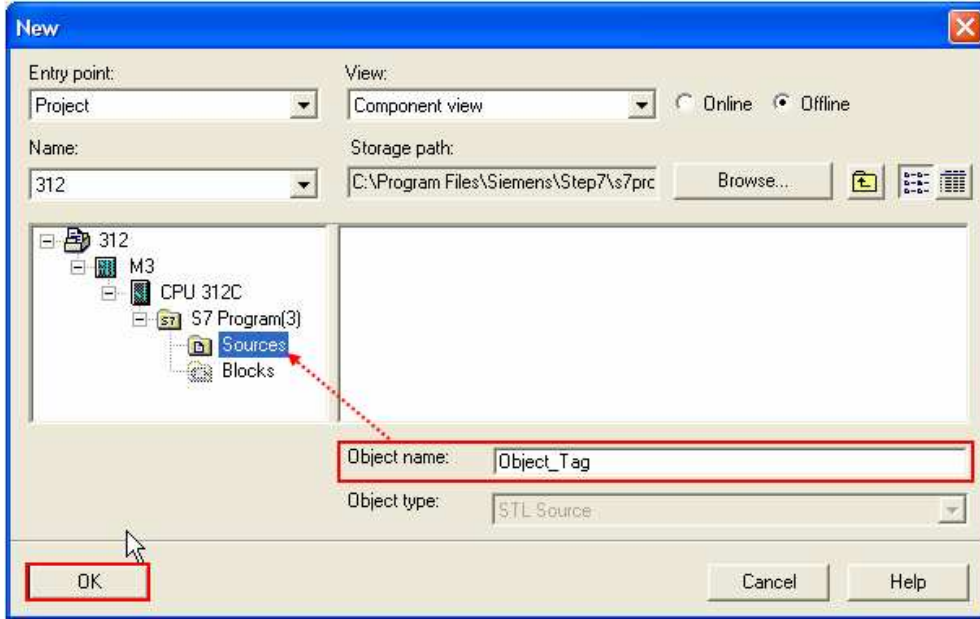
a. In **Blocks** create items as shown below:



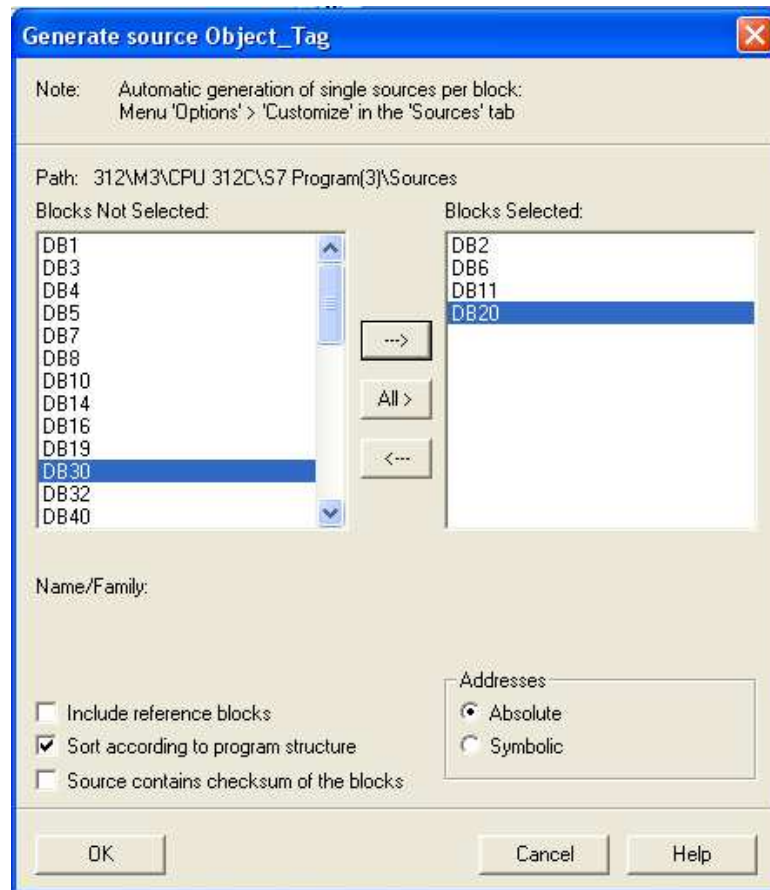
b. Open **LAD/STL, FBD – Programming S7 Blocks**, click **File -> Generate Source**.



c. Select **Sources** as storage path, specify the file name then click **OK**.

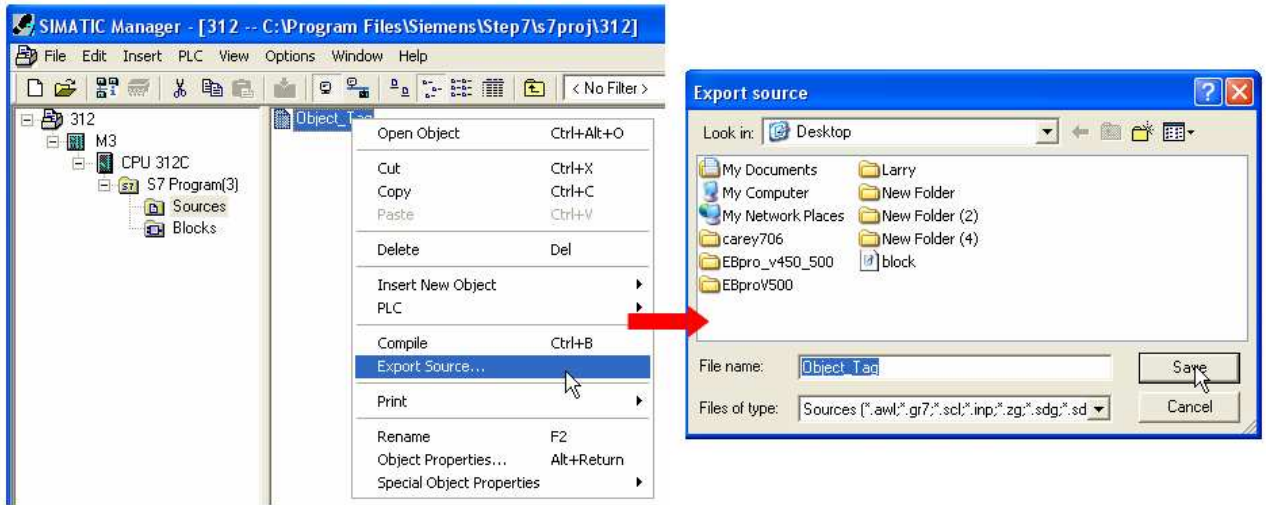


d. Select the objects to be exported then click **OK**.

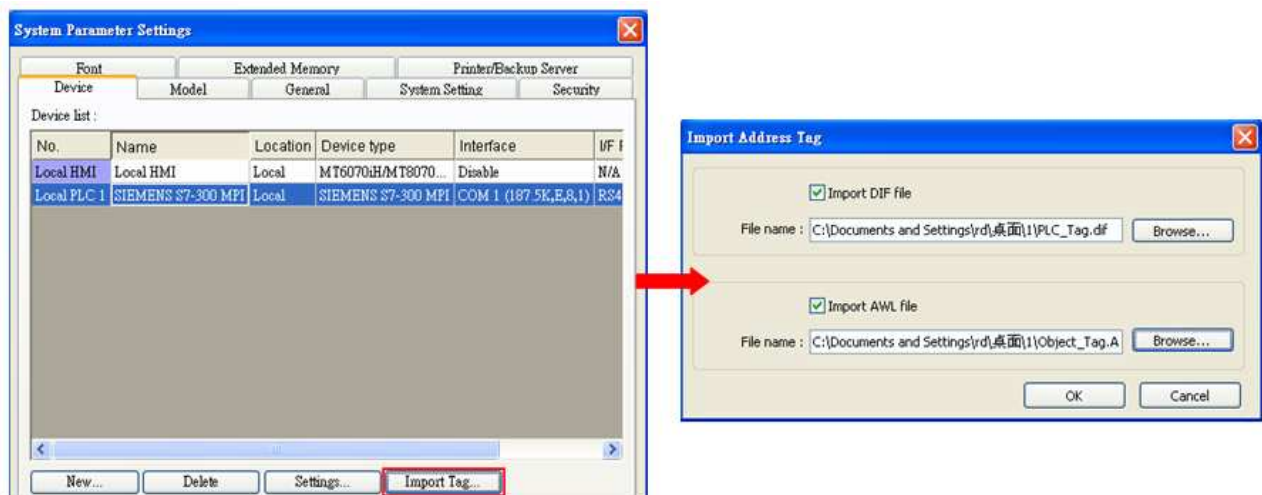




- e、 Under **Sources** there will be names of the saved files, select **Export Source** to build **\*.AWL** file.



The generated **\*.dif** and **\*.AWL** files can be imported in EasyBuilder8000/EasyBuilderPro **System Parameter Settings**, by clicking **Import Tag**.






Tag information successfully imported.






## Wiring Diagram:

### S7-200 PPI , S7-300 MPI :RS485 2W

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		8 D-
2 RX+	9 Data+		3 D+
5 GND	5 GND		5 GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Male
1 RX-	7 Data-		8 D-
2 RX+	8 Data+		3 D+
5 GND	5 GND		5 GND
			

## Driver Version:

Version	Date	Description
V1.90	May/26/2011	Added registers: MB & DBBn
V2.00	Aug/2/2011	i Series HMI support Multi HMIs-Multi PLCs communication.

## SIEMENS S7-400 (Ethernet)

Supported Series: SIEMENS S7-400 Ethernet PLC.

Website: <http://www.ad.siemens.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Siemens S7-400 (Ethernet)		
PLC I/F	Ethernet		
Port no.	102		
Link type	PG	PC, OP	
Rack	0	0-7	
CPU slot	3	2-31	
PLC sta. no.	0	0-31	

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	I	DDDDo	0 ~ 40957	Input (I)
B	Q	DDDDo	0 ~ 40957	Output (O)
B	M	DDDDo	0 ~ 40957	Bit Memory
B	DBnBit	FFFFDDDDo	0 ~ 409699997	
B	DB0Bit-DB99Bit	DDDDDo	0 ~ 655327	Data Register Bit
W	IW	DDDD	0 ~ 4095	Input (I)
W	QW	DDDD	0 ~ 4095	Output (O)
W	MW	DDDD	0 ~ 4095	Bit Memory
W	MD	DDDD	0 ~ 4094	
W	DBn	FFFFDDDD	0 ~ 40969999	Data Register (must be even)
DW	DBDn	FFFFDDDD	0 ~ 40969999	Data Register Double Word (must be multiple of 4)
DW	DBn_String	FFFFDDDD	0 ~ 40969999	
DW	DBDn_String	FFFFDDDD	0 ~ 40969999	




W	DB0 ~ DB99	DDDDD	0 ~ 65532	Data Register (must be even)
W	MB	DDDD	0 ~ 4095	Bit Memory Byte
W	DBBn	FFFDDDD	0 ~ 40969999	Data Register Byte

\* Double word and floating point value must use DBDn device type.

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



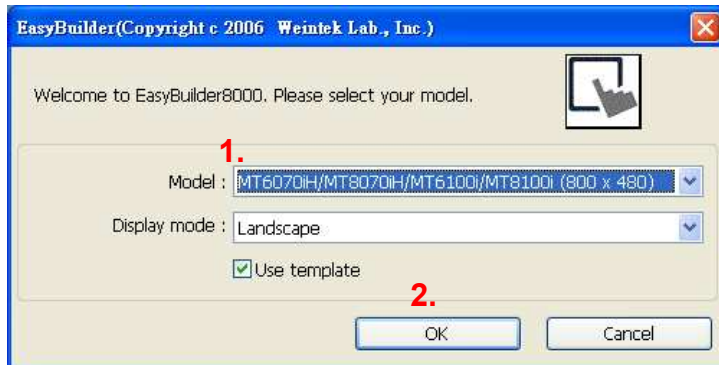
Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-

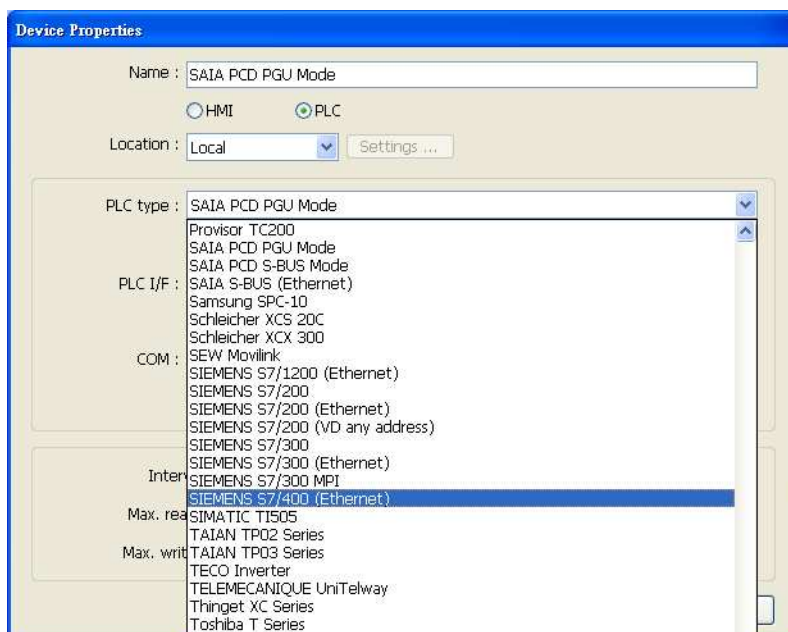


## EasyBuilder Device Setting Steps

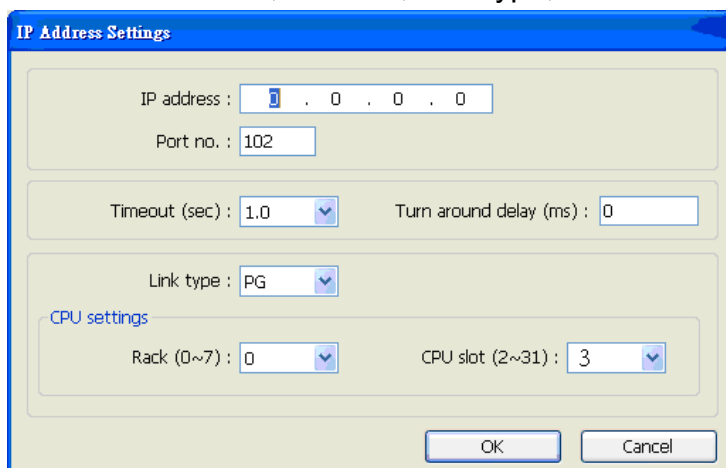
1. Open EasyBuilder, File/NEW, select HMI model and press [OK].



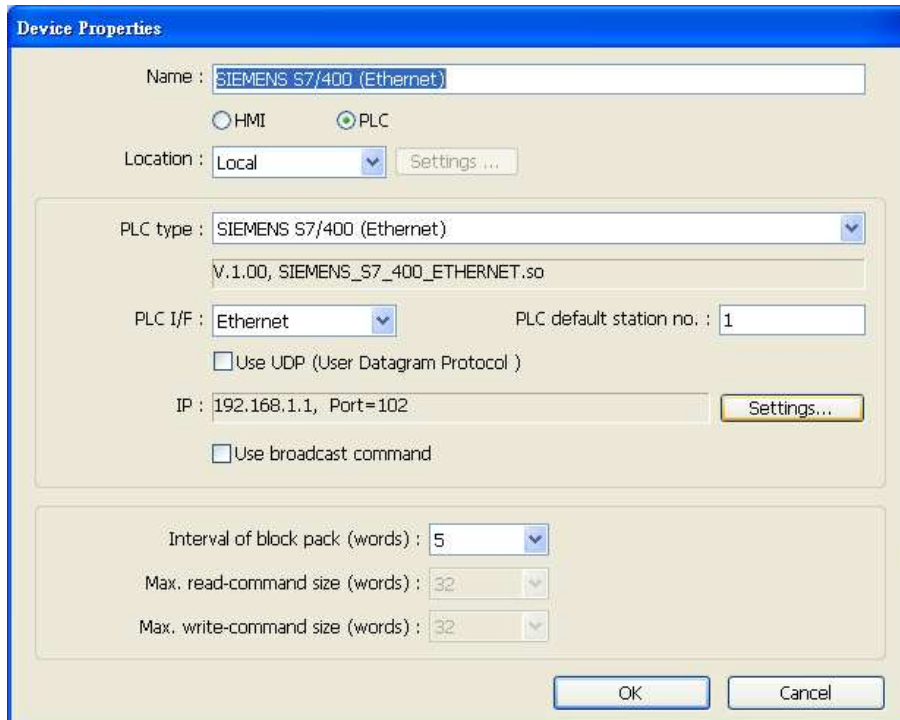
2. "System Parameter Settings" window is shown, click [New].
3. Select "SIEMENS S7-400(ETHERNET)".



4. Press [Settings].
5. Set S7-400 IP, Port no., Link type, Rack and CPU slot. (must match PLC settings)



6. The setting will be finished as below.

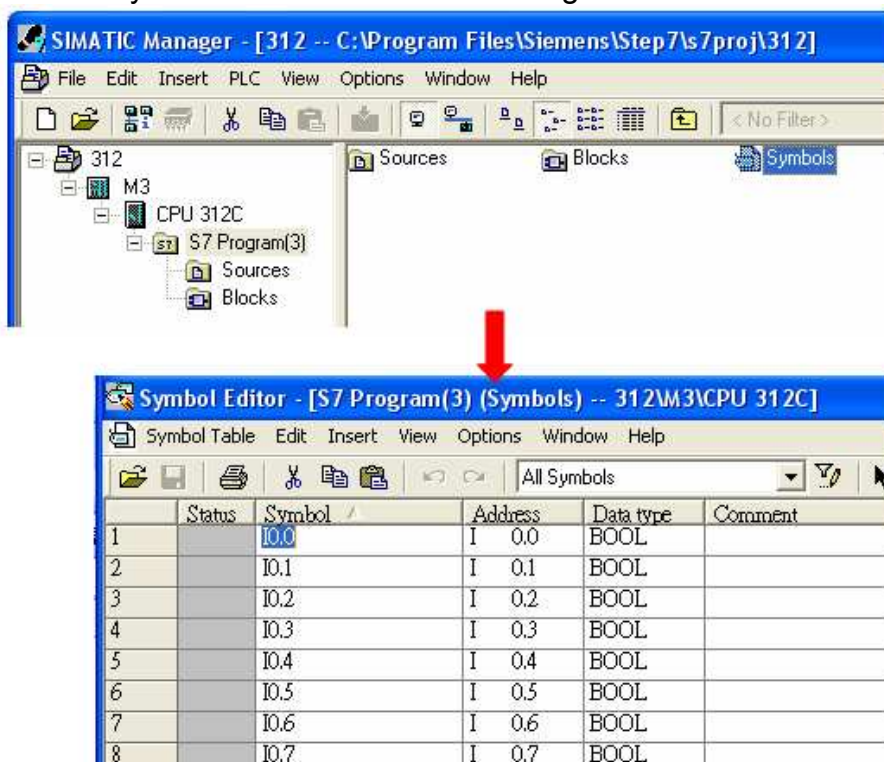


## How to Import Tag:

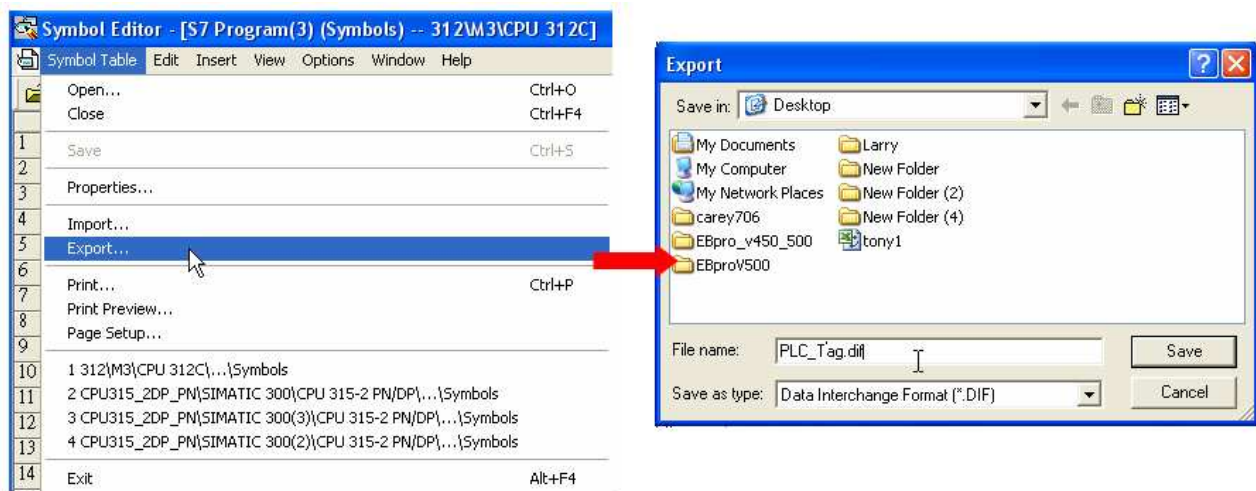
SIEMENS STEP 7 program allows building files of user-defined tag (\*.dif file and \*.AWL file), and import these files in EasyBuilder8000/EasyBuilderPro -> System Parameter Settings. The following describes how to build and import these two types of files.

### 1. Building \*.dif File

a. In "Symbols" create user-defined tag.

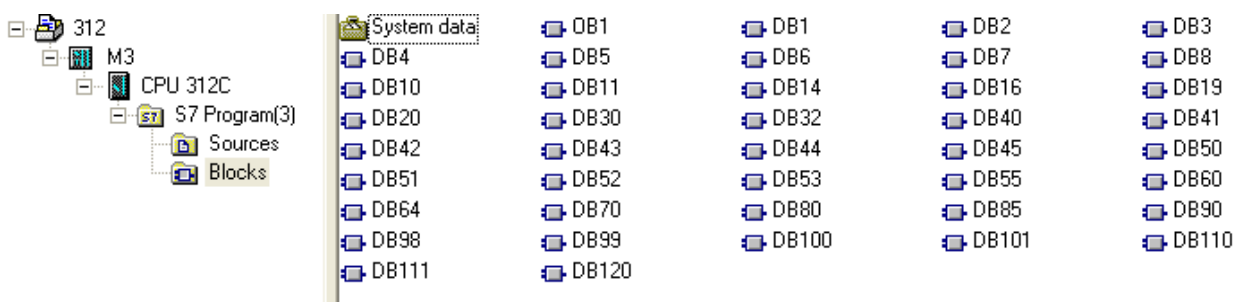


b. Click **Export** to export the edited file and click **Save**.

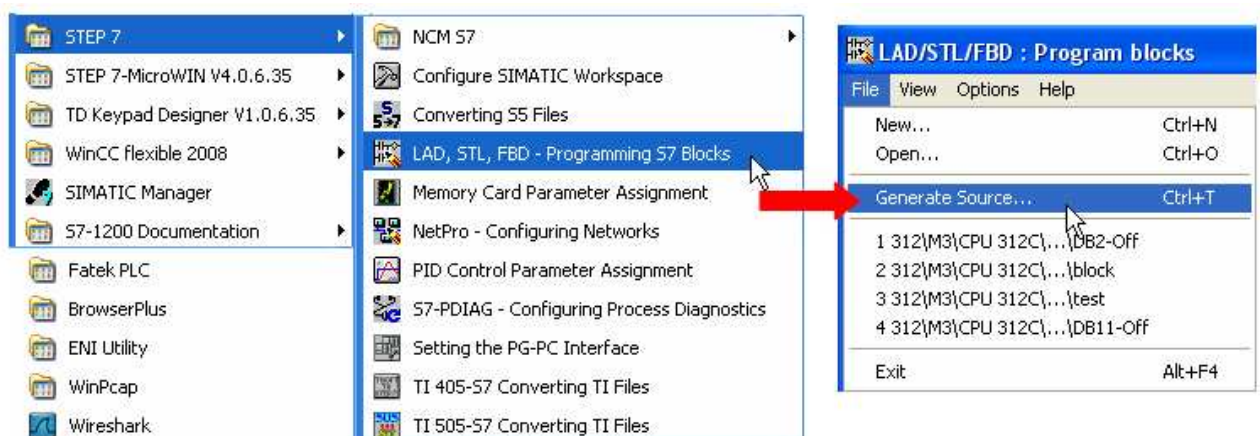


## 2. Building \*.AWF File

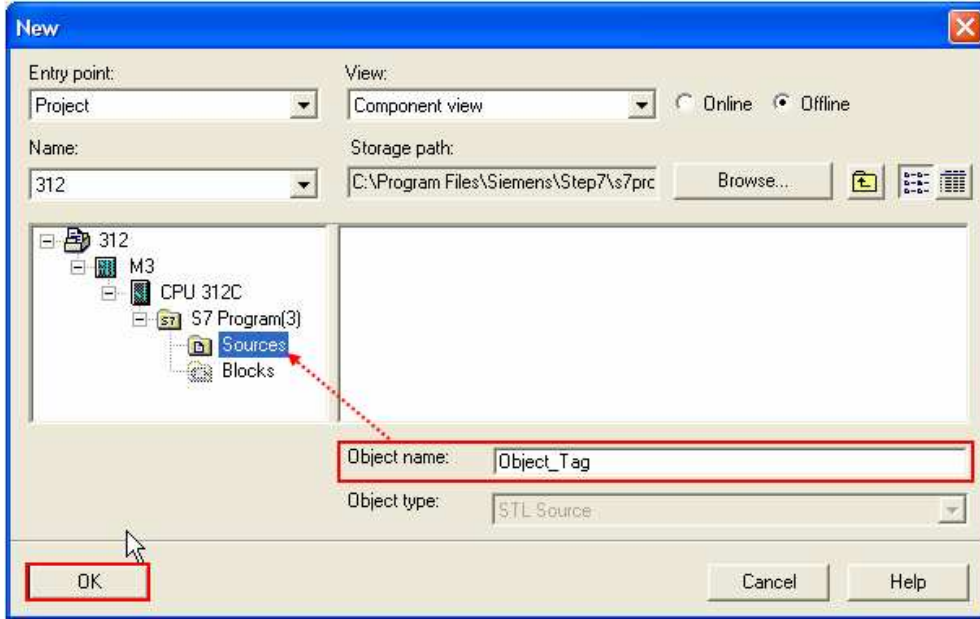
a. In **Blocks** create items as shown below:



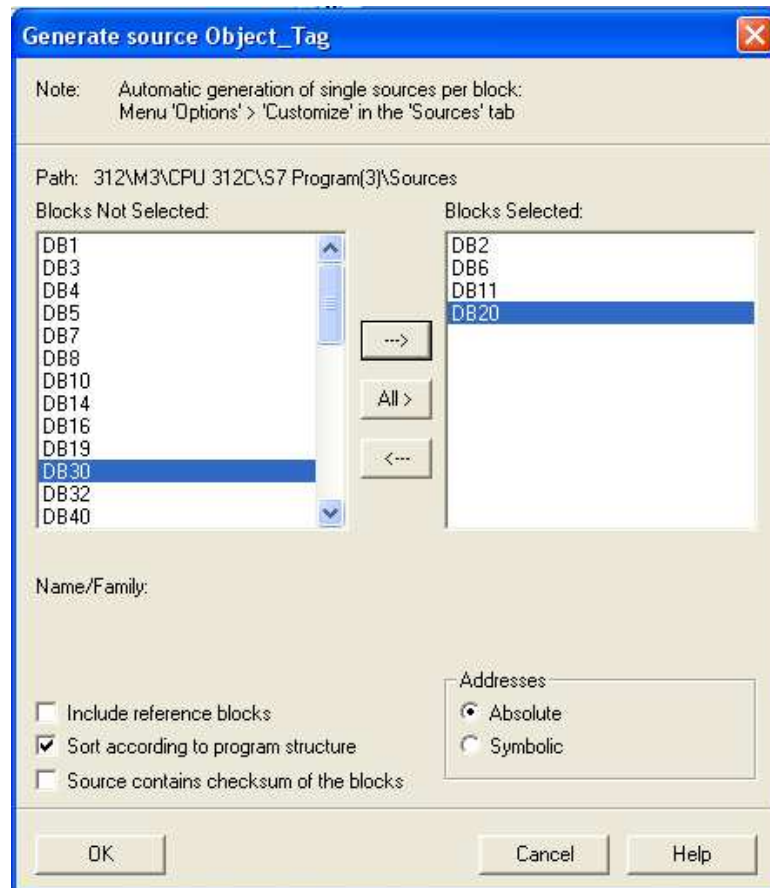
b. Open **LAD/STL, FBD – Programming S7 Blocks**, click **File -> Generate Source**.



c. Select **Sources** as storage path, specify the file name then click **OK**.

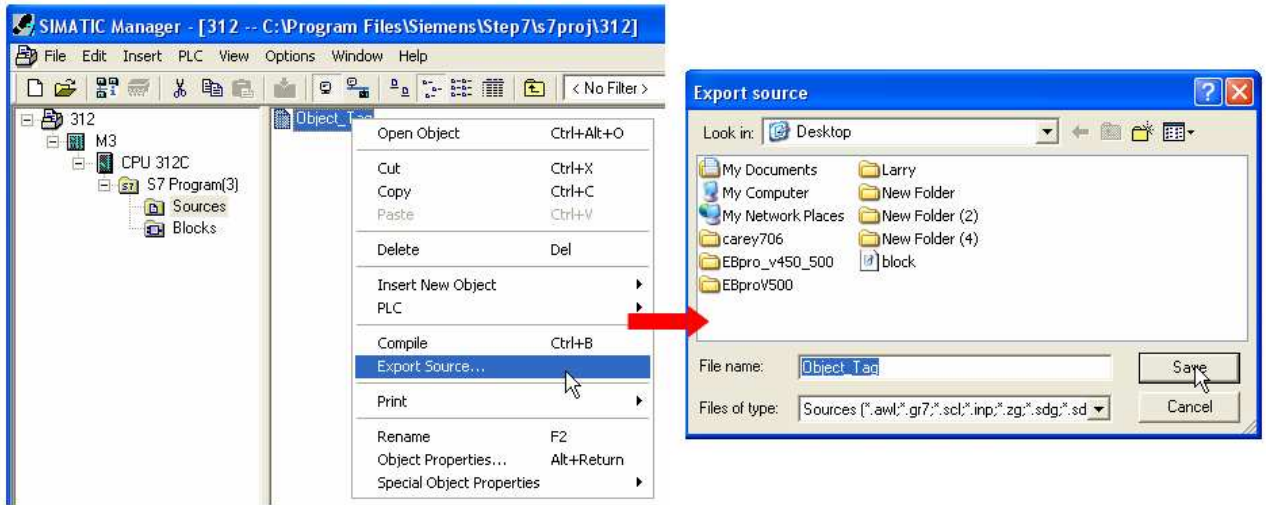


d. Select the objects to be exported then click **OK**.

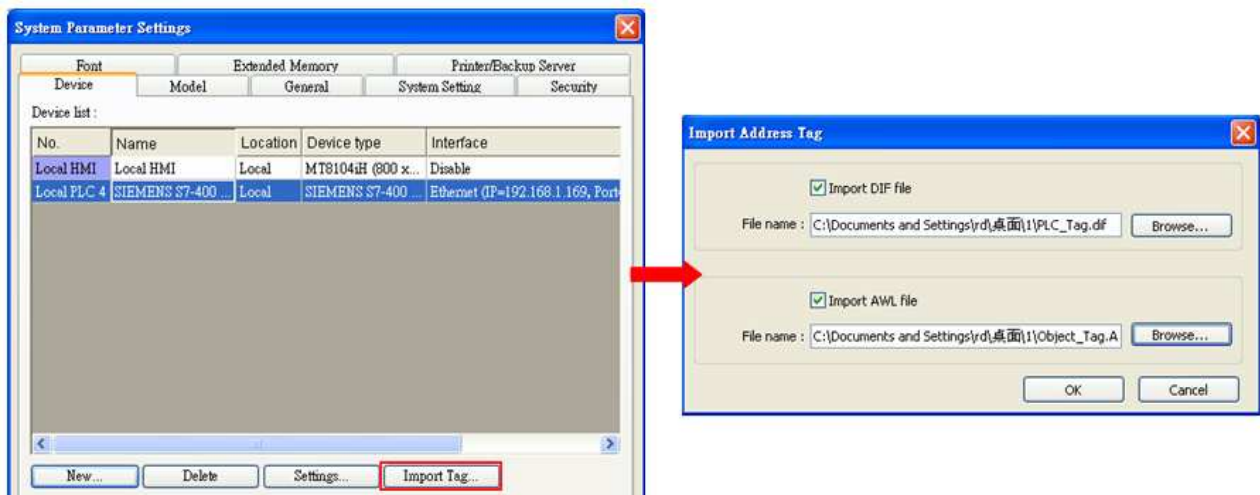




- e、 Under **Sources** there will be names of the saved files, select **Export Source** to build \*.AWL file.



The generated \*.dif and \*.AWL files can be imported in EasyBuilder8000/EasyBuilderPro **System Parameter Settings**, by clicking **Import Tag**.



Tag information successfully imported.



## Driver Version:

Version	Date	Description
V1.40	May/19/2011	Added registers: MB & DBBn

## SIMATIC TI505

Supported Series: SIMATIC TI505 Series PLCs: TI520, TI525, TI530, TI535, TI545, TI555, TI560, TI565, TI575. Use NITP protocol in a point-to-point, single master, single slave format.

Website: [http://www.ad.siemens.de/simatic/controller/index\\_76.htm](http://www.ad.siemens.de/simatic/controller/index_76.htm)

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIMATIC TI505		NITP protocol
PLC I/F	RS232	RS232,	
Baud rate	19200	19200	
Data bits	7	7	
Parity	Odd	Odd	
Stop bits	1	1	
PLC sta. no.	0	Does not apply	








### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	CR	DDDDD	1 ~ 65535	Internal Relay
B	X	DDDDD	1 ~ 65535	Discrete Input Coils
B	Y	DDDDD	1 ~ 65535	Discrete Output Coils
W	V	DDDDD	1 ~ 65535	User Data Registers
W	STW	DDDDD	1 ~ 65535	Status Word Registers
W	TCP	DDDDD	1 ~ 65535	Timer/Counter Preset
W	TCC	DDDDD	1 ~ 65535	Timer/Counter Current
W	WX	DDDDD	1 ~ 65535	Word Discrete Inputs
W	WY	DDDDD	1 ~ 65535	Word Discrete Outputs




## Wiring Diagram:

### SIMATIC TI505 RS232 : 9P D-Sub to 25P D-Sub

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 25P D-Sub Male	
2 RX	6 RX	8 RX	2 TXD	
3 TX	4 TX	7 TX	3 RXD	
5 GND	5 GND	5 GND	7 GND	
  			4 RTS	circuit
			5 CTS	
			6 DSR	circuit
			8 DCD	
			20 DTR	
   				





MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 25P D-Sub Male	
9 RX			2 TXD	
6 TX			3 RXD	
5 GND			7 GND	
			4 RTS	circuit
			5 CTS	
			6 DSR	circuit
			8 DCD	
			20 DTR	
 				





**SIMATIC TI505 RS232 : 9P D-Sub to 9P D-Sub**

MT6000/8000 series except MT6050i/MT8050i



COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
			7 RTS	7 RTS
			8 CTS	8 CTS
			1 DCD	1 DCD
			4 DTR	4 DTR
			6 DSR	
				

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			3 TXD	
6 TX			2 RXD	
5 GND			5 GND	
			7 RTS	circuit
			8 CTS	
			1 DCD	circuit
			4 DTR	
			6 DSR	
				

**SIMATIC TI505 RS485 4W : 9P D-Sub to 9P D-Sub**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male
1 RX-			7 DO (-)
2 RX+			1 DO (+)
3 TX-			8 DI (-)
4 TX+			5 DI (+)
5 GND			6 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Male
1 RX-			7 DO (-)
2 RX+			1 DO (+)
3 TX-			8 DI (-)
4 TX+			5 DI (+)
5 GND			6 GND
			

**Driver Version:**

Version	Date	Description
V1.10	Apr/22/2009	

# SIMATIC TI565/C400

Website: [http://www.ad.siemens.de/simatic/controller/index\\_76.htm](http://www.ad.siemens.de/simatic/controller/index_76.htm)

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	SIMATIC TI565/C400		
PLC I/F	RS232	RS232,	
Baud rate	19200	19200	
Data bits	7	7	
Parity	Odd	Odd	
Stop bits	1	1	
PLC sta. no.	0	Does not apply	




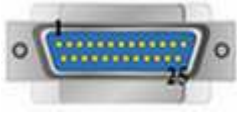
## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	CR	DDDDD	1 ~ 65535	Internal Relay
B	X	DDDDD	1 ~ 65535	Discrete Input Coils
B	Y	DDDDD	1 ~ 65535	Discrete Output Coils
B	V_Bit	DDDDDdd	100 ~ 6553515	User Data Registers
W	V	DDDDD	1 ~ 65535	User Data Registers
W	STW	DDDDD	1 ~ 65535	Status Word Registers
W	TCP	DDDDD	1 ~ 65535	Timer/Counter Preset
W	TCC	DDDDD	1 ~ 65535	Timer/Counter Current
W	WX	DDDDD	1 ~ 65535	Word Discrete Inputs
W	WY	DDDDD	1 ~ 65535	Word Discrete Outputs


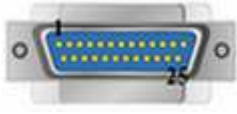
## Wiring Diagram:

### 9P D-Sub to 25P D-Sub: RS232

MT6000/8000 series except MT6050i/MT8050i








COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 25P D-Sub Male	
2 RX	6 RX	8 RX	2 TXD	
3 TX	4 TX	7 TX	3 RXD	
5 GND	5 GND	5 GND	7 GND	
  			4 RTS	circuit
			5 CTS	
			6 DSR	circuit
			8 DCD	
			20 DTR	
				

MT6050i/MT8050i




COM1 RS232 9P D-Sub Female			RS232 25P D-Sub Male	
9 RX			2 TXD	
6 TX			3 RXD	
5 GND			7 GND	
			4 RTS	circuit
			5 CTS	
			6 DSR	circuit
			8 DCD	
			20 DTR	
				

**9P D-Sub to 9P D-Sub: RS232**

MT6000/8000 series except MT6050i/MT8050i



COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
  			7 RTS	circuit
			8 CTS	
			1 DCD	circuit
			4 DTR	
			6 DSR	
   				

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			3 TXD	
6 TX			2 RXD	
5 GND			5 GND	
			7 RTS	circuit
			8 CTS	
			1 DCD	circuit
			4 DTR	
			6 DSR	
 				

**9P D-Sub to 9P D-Sub: RS-485 4W**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male
1 RX-			7 DO (-)
2 RX+			1 DO (+)
3 TX-			8 DI (-)
4 TX+			5 DI (+)
5 GND			6 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Male
1 RX-			7 DO (-)
2 RX+			1 DO (+)
3 TX-			8 DI (-)
4 TX+			5 DI (+)
5 GND			6 GND
			

**Driver Version:**

Version	Date	Description
V1.00	Aug/31/2011	Driver released.

## TAIAN TP02 Series

Supported Series: TAIAN TP02 series

Website: <http://www.taian-technology.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	TAIAN TP02 Series		
PLC I/F	RS485 4W/2W	RS485 4W/2W	MMI 422 port: 4W; RS485 terminals: 2W
Baud rate	19200	9600, 19200, 38400	
Data bits	7	7, 8	
Parity	Even	Even, Odd, None	
Stop bits	2	1, 2	
PLC sta. no.	1	0-255	

### PLC Setting:

RS422 port: WS041=120, WS042=1;

RS485 terminals: WS044=120, WS045=1.

### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	X	DDD	1 ~ 384	Input relay
B	Y	DDD	1 ~ 384	Output relay
B	C	DDDD	1 ~ 2048	Auxiliary relay
W	X	DDD	1 ~ 369	Input register (must be 1 or a multiple of plus 1)
W	Y	DDD	1 ~ 369	Output register (must be 1 or a multiple of plus 1)
W	V	DDDD	1 ~ 1024	Auxiliary register
W	D	DDDD	1 ~ 2048	Auxiliary register
W	WS	DDD	1 ~ 128	System register
W	C	DDDD	1 ~ 2033	Auxiliary relay register (must

Bit/Word	Device type	Format	Range	Memo
				be 1 or a multiple of plus 1)
W	WC	DDD	1 ~ 912	Constant register



## Wiring Diagram:

### TP02 Series MMI RS422 port : 9P D-Sub to 9P D-Sub

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male
1 RX-			8 TX-
2 RX+			3 TX+
3 TX-			7 RX-
4 TX+			2 RX+
5 GND			
			



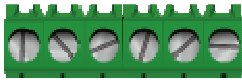
MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Male
1 RX-			8 TX-
2 RX+			3 TX+
3 TX-			7 RX-
4 TX+			2 RX+
5 GND			
			



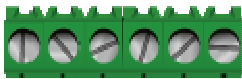


**TP02 Series RS485 Terminal : 9P D-Sub to 9P D-Sub**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W Terminal
1 RX-	6 Data-		T/R-
2 RX+	9 Data+		T/R+
5 GND	5 GND		
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W Terminal
1 RX-	7 Data-		T/R-
2 RX+	8 Data+		T/R+
5 GND	5 GND		
			

**Driver Version:**

Version	Date	Description
V1.10	Jan/25/2010	

## TAIAN TP03 Series

Supported Series: TECO (TAIAN TP03) series PLC.

Website: <http://www.teco.com.tw/sa/en/>

### HMI Setting:



Parameters	Recommended	Options	Notes
PLC type	TAIAN TP03 Series		
PLC I/F	RS485 4W		
Baud rate	19200	9600, 19200	
Data bits	8	8	
Parity	None	Even, Odd, None	
Stop bits	2	1	
PLC sta. no.	1	1-31	

### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	C	DDDD	0 ~ 9999	
B	M	DDDD	0 ~ 9999	
B	S	DDDD	0 ~ 9999	
B	T	DDDD	0 ~ 9999	
B	X	OOO	0 ~ 377	
B	Y	OOO	0 ~ 377	
W	D	DDDD	0 ~ 9999	
W	V	DDDD	0 ~ 9999	
W	Z	DDDD	0 ~ 9999	
W	T_Curent	DDDD	0 ~ 9999	
W	C_Curent	DDDD	0 ~ 9999	
W	T_Preset	DDDD	0 ~ 9999	
W	C_Preset	DDDD	0 ~ 9999	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			

MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Female			RS485 4W 8P Mini-DIN Male
1 RX-			4 TX-
2 RX+			7 TX+
3 TX-			1 RX-
4 TX+			2 RX+
5 GND			3 GND
			

## Driver Version:

Version	Date	Description
V1.10	Nov/13/2009	

# TECO Inverter

Supported Series: TECO Inverter series, 7300CV model.

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	TECO Inverter		
PLC I/F	RS232	RS232/RS485	
Baud rate	38400		
Data bits	8		
Parity	None		
Stop bits	1		
PLC sta. no.	1		

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	0x	DDDDD	1 ~ 65535	Output Bit
B	1x	DDDDD	1 ~ 65535	Input Bit (read only)
B	3x_Bit	DDDDDdd	100 ~ 6553515	Input Register Bit (read only)
B	4x_Bit	DDDDDdd	100 ~ 6553515	Output Register Bit
B	6x_Bit	DDDDDdd	100 ~ 6553515	
B	0x (0x0f)	DDDDD	1 ~ 65535	Write Multiple Coils
W	3x	DDDDD	1 ~ 65535	Input Register (read only)
W	4x	DDDDD	1 ~ 65535	Output Register
DW	5x	DDDDD	1 ~ 65535	4x Double Word Swap
W	6x	DDDDD	1 ~ 65535	4x Single Word Write

## Wiring Diagram:



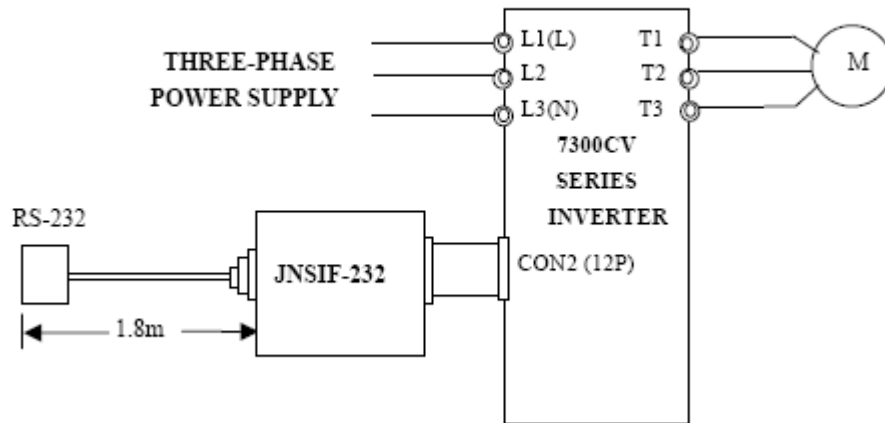
MT8000



JNSIF-232





**JNSIF-232Wiring Diagram:**



9P D-Sub to 9P D-Sub:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
2 RX			2 TX
3 TX			3 RX
5 GND			5 GND
7 RTS			7 VCC
			

**Driver Version:**

Version	Date	Description
V1.00	Jul/27/2009	Driver released.

# TELEMECANIQUE UniTelway

Supported Series: Modicon TSX Micro&Nano&Neza series PLC.

Website: <http://www.modicon.com>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	TELEMECANIQUE UniTelway		
PLC I/F	RS485 2W	RS232/RS485	
Baud rate	19200	9600~115200	
Data bits	8	7,8	Must set to 8 for this protocol
Parity	Odd	Even, Odd, None	
Stop bits	1	1, 2	
HMI sta. no.	5	1-8	
PLC sta. no.	0	0-3	

Online simulator	YES	Extend address mode	YES
Broadcast command	NO		

## PLC Setting:

Communication mode	UniTelWay protocol, set PLC as master
--------------------	---------------------------------------




## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	S	DDDDD	0 ~ 32767	Internal relay
B	M	DDDDD	0 ~ 32767	Auxiliary relay
B	MW.B	DDDDDdd	0 ~ 3276715	Data register bit
W	MW	DDDDD	0 ~ 32767	Data register




## Wiring Diagram:

### TSX37-XX/TSX07-XX CPU : 9P D-Sub to 9P D-Sub

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 8P Mini-DIN Male
1 RX-	6 Data-		2 D-
2 RX+	9 Data+		1 D+
5 GND	5 GND		7 GND
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 8P Mini-DIN Male
1 RX-	7 Data-		2 D-
2 RX+	8 Data+		1 D+
5 GND	5 GND		7 GND
			

## Driver Version:

Version	Date	Description
V1.30	Sep/24/2009	

# Topvert

Supported Series: TOPVERT G1/H1/P1 series.

Website: <http://www.toptek.biz/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Topvert		
PLC I/F	RS485 2W		
Baud rate	9600		
Data bits	7		
Parity	None		
Stop bits	2		
PLC sta. no.	1		

Online simulator	YES	Broadcast command	YES
Extend address mode	YES	Broadcast station no.	0

## PLC Setting:

Communication mode	Pr 7-15 = 0 (7, N, 2 ASCII)
--------------------	-----------------------------

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	PR_Bit	DDDDdd	0 ~ 6553515	G=Groups, F=Function no. dd=0~15 bit no.
W	PR	DDDD	0 ~ 65535	G=Groups, F=Function no.



## Note:

Max.read-command size (words): 16

Max.write-command size (words): 1

For G1/H1/P1 Series Inverter, if standard parameter address is in decimal=  $100 \cdot G + F$ :




G=Group (parameter group code 0~9); F=Function no. (parameter number 0~99)

For example: Pr5-20 (decimal Dec.) parameter address is expressed as  $100 \cdot 5 + 20 = 520$ .



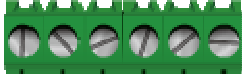
Parameter (PrX-XX)	Address (decimal)
0-00	$0 \cdot 100 + 0 = 0$
0-14	$0 \cdot 100 + 14 = 14$
1-00	$1 \cdot 100 + 0 = 100$

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W Terminal
1 RX-	6 Data-		SG-
2 RX+	9 Data+		SG+
5 GND	5 GND		
			

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W Terminal
1 RX-	7 Data-		SG-
2 RX+	8 Data+		SG+
5 GND	5 GND		
			

**Driver Version:**

Version	Date	Description
V1.00	Dec/08/2010	Driver released.

## Toshiba T Series

Supported Series: Toshiba T series, S2E.

Website: <http://www.tic.toshiba.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Toshiba T Series		
PLC I/F	RS232	RS232/RS485	In accordance with PLC port
Baud rate	9600	9600, 19200, 38400, 57600, 115200	
Data bits	8	7,8	
Parity	Odd	Even, Odd, None	
Stop bits	1	1, 2	
PLC sta. no.	0	0-255	Must be same as the PLC setting

Online simulator	YES	Extend address mode	YES
------------------	-----	---------------------	-----

### PLC Setting:

Communication mode	Must set PLC node ID
--------------------	----------------------

### Device Address:





Bit/Word	Device type	Format	Range	Memo
B	X	DDDDh	0 ~ 4095f	Input Bit
B	Y	DDDDh	0 ~ 4095f	Output Bit
B	R	DDDDh	0 ~ 8191f	Auxiliary Bit
B	S	DDDDh	0 ~ 4095f	Special Bit
B	L	DDDDh	0 ~ 4095f	
B	Z	DDDDh	0 ~ 8191f	
W	T	DDD	0 ~ 999	Timer Register
W	C	DDD	0 ~ 511	Counter Register

Bit/Word	Device type	Format	Range	Memo
W	D	DDDD	0 ~ 8191	Data Memory
W	SW	DDD	0 ~ 255	Special Register
W	XW	DDD	0 ~ 255	Input Register
W	YW	DDD	0 ~ 255	Output Register
W	RW	DDD	0 ~ 999	Auxiliary Register
W	LW	DDD	0 ~ 255	
W	W	DDDD	0 ~ 1023	
W	F	DDDD	0 ~ 8191	



## Wiring Diagram:

### Toshiba T1 PRG RS232 : 9P D-Sub to 8P Mini-DIN

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 8P Mini-DIN Male
2 RX	6 RX	8 RX	6 TXD
3 TX	4 TX	7 TX	8 RXD
5 GND	5 GND	5 GND	5 GND
			4 RTS
			7 CTS
			circuit
			

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			RS232 8P Mini-DIN Male
9 RX			6 TXD
6 TX			8 RXD
5 GND			5 GND
			4 RTS
			7 CTS
			circuit
			

**Toshiba T2 PRG RS232 : 9P D-Sub to 9P D-Sub**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
			7 RTS	circuit
			8 CTS	
				



MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			3 TXD	
6 TX			2 RXD	
5 GND			5 GND	
			7 RTS	circuit
			8 CTS	
				



**Toshiba T2 LINK Port RS485 4W : 9P D-Sub to 15P D-Sub**

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 15P D-Sub Male	
1 RX-			11 TXB	
2 RX+			3 TXA	
3 TX-			10 RXB	
4 TX+			2 RXA	
5 GND			7 SG	
			5 RTSA	circuit
			4 CTSA	
			13 RTSB	circuit
			12 CTSB	

			
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**MT6050i/MT8050i**

COM1 RS485 4W 9P D-Sub Female			RS485 4W 15P D-Sub Male
1 RX-			11 TXB
2 RX+			3 TXA
3 TX-			10 RXB
4 TX+			2 RXA
5 GND			7 SG
			5 RTSA
			4 CTSA
			13 RTSB
			12 CTSB
			circuit
			circuit
			

**Driver Version:**

Version	Date	Description
V1.20	May/13/2011	TOSHIBA T Series driver can now correctly read and write "L", "LW", "F" address types.

## Toshiba TC mini Series

Supported Series: TOSHIBA MACHINE CO., JAPAN

WebSite: <http://www.toshiba-machine.co.jp>

### HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	Provisor TC200		
PLC I/F	RS232	RS232	In accordance with PLC port
Baud rate	9600	9600, 19200	
Data bits	8	7,8	
Parity	None	Even, Odd, None	
Stop bits	1	1, 2	

### Device Address:



Bit/Word	Device type	Format	Range	Memo
B	R_bit	HHHh	0 ~ ffff	h : Bit no.(0~f)
B	X_bit	HHHh	0 ~ ffff	h : Bit no.(0~f)
B	Y_bit	HHHh	0 ~ ffff	h : Bit no.(0~f)
B	L_bit	HHHh	0 ~ ffff	h : Bit no.(0~f)
W	P	HHH	0 ~ fff	
W	V	HHH	0 ~ fff	
W	X	HHH	0 ~ fff	
W	Y	HHH	0 ~ fff	
W	D	HHH	0 ~ fff	
W	R	HHH	0 ~ fff	
W	L	HHH	0 ~ fff	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	TC mini series RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	5 GND
			7 RTS
			9 CTS
			circuit
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			TC mini series RS232 9P D-Sub Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			5 GND
			7 RTS
			9 CTS
			circuit
			



## Toshiba VF-S11

Supported Series: Toshiba Invertor Protocol (ASCII code).

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Toshiba VF-S11		
PLC I/F	RS485 2W	RS422, RS485	
Baud rate	9600	9600, 19200	
Data bits	8	7 or 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1 or 2	
PLC sta. no.	0	0-99	

Online simulator	YES	Extend address mode	YES
Broadcast command	YES		

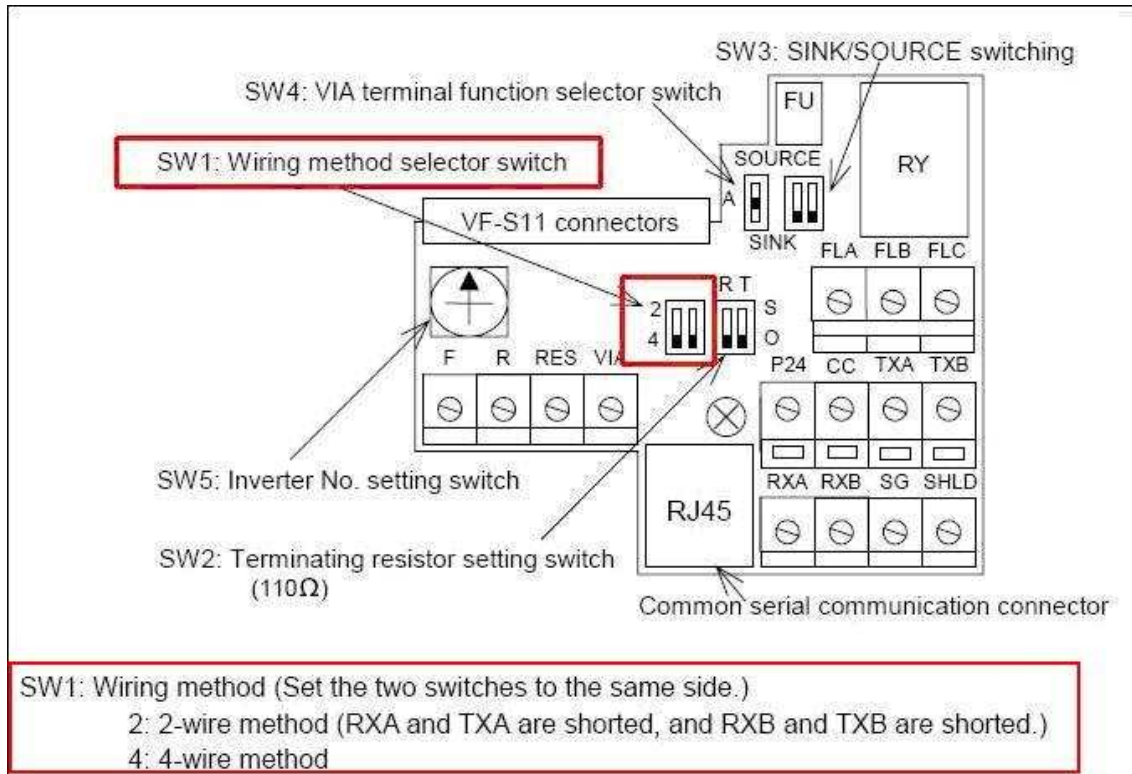
### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Cmd. No B	HHHHdd	0 ~ 270f15	
W	Cmd. No	HHHH	0 ~ ffff	Parameters and data memory

### Wiring Diagram:

Note:

Before connecting with VF-S11, make sure the SW1 of both sides are in the correct position. (SW1: wiring method selector switch)



## RS-485

MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 8P RJ45 Male
1 RX-	6 Data-		5 Data-
2 RX+	9 Data+		4 Data+
5 GND	5 GND		8 Gnd

MT6050i/MT8050i

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 8P RJ45 Male
1 RX-	7 Data-		5 Data-
2 RX+	8 Data+		4 Data+
5 GND	5 GND		8 Gnd

**Driver Version:**

Version	Date	Description
V1.20	Aug/31/2009	

## Trio (MODBUS RTU, TCP/IP)

Website : <http://www.triomotion.com>

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	Trio (MODBUS RTU, TCP/IP)		
PLC I/F	RS485	RS232/RS485/Ethernet	
Baud rate	9600	9600~115200	
Data bits	8	7, 8	
Parity	Even	Even, Odd, None	
Stop bits	1	1, 2	
Port no.	502		
PLC sta. no.	1	0-255	

Online simulator	YES	Broadcast command	YES
Extend address mode	YES		

### PLC Setting:

Communication mode	Modbus RTU protocol
--------------------	---------------------





### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	VR_Bit	DDDDdd	0 ~ 102315	
B	Table_Bit	DDDDDDdd	0 ~ 3199915	
W	VR	DDDD	0 ~ 1023	
W	Table	DDDDDD	0 ~ 31999	



## Wiring Diagram:

### Trio : RS232

MT6000/8000 series except MT6050i/MT8050i



COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	TXD	
3 TX	4 TX	7 TX	RXD	
5 GND	5 GND	5 GND	GND	
			RTS	circuit
			CTS	
				

MT6050i/MT8050i



COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			TXD	
6 TX			RXD	
5 GND			GND	
			RTS	circuit
			CTS	
				

### Trio : RS485 4W




MT6000/8000 series except MT6050i/MT8050i

COM1 RS485 4W 9P D-Sub Male			RS485 4W 9P D-Sub Male	
1 RX-			TX-	
2 RX+			TX+	
3 TX-			RX-	
4 TX+			RX+	
5 GND			GND	
				




**MT6050i/MT8050i**

COM1 RS485 4W 9P D-Sub Female			RS485 4W 9P D-Sub Male
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			GND
			

**Trio : RS485 2W**
**MT6000/8000 series except MT6050i/MT8050i**


COM1 RS485 2W 9P D-Sub Male	COM3 RS485 2W 9P D-Sub Male		RS485 2W 9P D-Sub Male
1 RX-	6 Data-		D-
2 RX+	9 Data+		D+
5 GND	5 GND		GND
			

**MT6050i/MT8050i**

COM1 RS485 2W 9P D-Sub Female	COM3 RS485 2W 9P D-Sub Female		RS485 2W 9P D-Sub Male
1 RX-	7 Data-		D-
2 RX+	8 Data+		D+
5 GND	5 GND		GND
			


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

Version	Date	Description
V1.00	May/27/2011	Driver released.

# VIGOR

Supported Series: VIGOR M Series and VB Series.

Website: <http://www.vigorplc.com.tw/>

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	VIGOR		
PLC I/F	RS232	RS232, RS485 4wires,	
Baud rate	19200		
Data bits	7		
Parity	Even		
Stop bits	1		
PLC sta. no.	1		

## Device Address:



Bit/Word	Device type	Format	Range	Memo
B	X	OOO	0 ~ 377	
B	Y	OOO	0 ~ 377	
B	M	DDDD	0 ~ 7999	
B	T	DDD	0 ~ 255	
B	C	DDD	0 ~ 255	
B	SM	DDDD	9000 ~ 9255	
W	TV	DDD	0 ~ 255	
W	CV	DDD	0 ~ 199	
W	D	DDDD	0 ~ 9255	
W	CV2	DDD	200 ~ 255	
W	SD	DDDD	9000 ~ 9255	




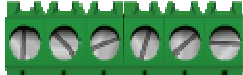
## Wiring Diagram:

### Vigor M series : RS485 4W Terminal

MT6000/8000 series except MT6050i/MT8050i





COM1 RS485 4W 9P D-Sub Male			Vigor M series RS485 4W 6P Terminal
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			SG
			

MT6050i/MT8050i



COM1 RS485 4W 9P D-Sub Female			Vigor M series RS485 4W 6P Terminal
1 RX-			TX-
2 RX+			TX+
3 TX-			RX-
4 TX+			RX+
5 GND			SG
			

### Vigor M series : RS232

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	Vigor M series RS232 9P D-Sub Male
2 RX	6 RX	8 RX	3 TXD
3 TX	4 TX	7 TX	2 RXD
5 GND	5 GND	5 GND	5 GND
			

**MT6050i/MT8050i**

COM1 RS232 9P D-Sub Female			Vigor M series RS232 9P D-Sub Male
9 RX			3 TXD
6 TX			2 RXD
5 GND			5 GND
			

**Driver Version:**

Version	Date	Description
V1.10	Dec/30/2008	

## XINJE XC Series

Supported Series: XINJE XC Series

Website: <http://www.xinje.com/0/index.html>

### HMI Setting:





Parameters	Recommended	Options	Notes
PLC type	XINJE XC Series		
PLC I/F	RS232	RS232	
Baud rate	19200		
Data bits	8		
Parity	Even		
Stop bits	1		
PLC sta. no.	1	0-255	Must match the PLC port setting.

### Device Address:


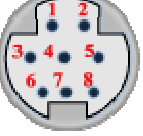
Bit/Word	Device type	Format	Range	Memo
B	M	DDDD	0 ~ 8511	
B	X	O000	0 ~ 1037	
B	Y	O000	0 ~ 1037	
B	S	DDDD	0 ~ 1023	
B	T	DDD	0 ~ 618	
B	C	DDD	0 ~ 634	
W	D	DDDD	0 ~ 8511	
W	TD	DDD	0 ~ 618	
W	CD	DDD	0 ~ 634	
W	FD_1	DDDD	0 ~ 5000	
W	FD_2	DDDD	8000 ~ 8511	

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 8P Mini-Din Male
2 RX	6 RX	8 RX	5 TX
3 TX	4 TX	7 TX	4 RX
5 GND	5 GND	5 GND	8 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 8P Mini-Din Male
9 RX			5 TX
6 TX			4 RX
5 GND			8 GND
			

Version	Date	Description
V1.00	Jul/02/2009	Driver released.

# YAMAHA ERCD

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	YAMAHA ERCD		
PLC I/F	RS232		
Baud rate	9600	1200-19200	
Data bits	8	7 or 8	
Parity	Odd	None/Even/Odd	
Stop bits	1	1 or 2	
PLC sta. no.	0		Needn't to set the station No.





## Device Address:

Bit/Word	Device type	Format	Range	Memo
Word	P	DDD	0 ~ 999	Read/Write, PNT point data
Word	SWI	D	0	Write only , RW0=program number , Switches program number to run
Word	ORG	D	0	Write only , returns to origin
Word	RESET	D	0	Write only , reset program
Word	RUN	D	0	Write only , starts automatic operation
Word	X_ADD	D	0	Write only , X+ command
Word	X_SUB	D	0	Write only , X- command
Word	MOVD	D	0	Write only , directly moves to specified position RW1=X-axis position(mm),



				RW2=speed
--	--	--	--	-----------

## Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TX	
3 TX	4 TX	7 TX	2 RX	
5 GND	5 GND	5 GND	5 GND	
			7 RTS	circuit
			8 CTS	
				

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male	
9 RX			3 TX	
6 TX			2 RX	
5 GND			5 GND	
			7 RTS	circuit
			8 CTS	
				

## Driver Version:

Version	Date	Description
V1.30	Jan/04/2010	

# YASKAWA MP Series Ethernet (Extension)

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	YASKAWA MP Series Ethernet (Extension)		
PLC I/F	Ethernet (UDP)		
Port no.	10000		
PLC sta. no.	1		

## PLC Setting:

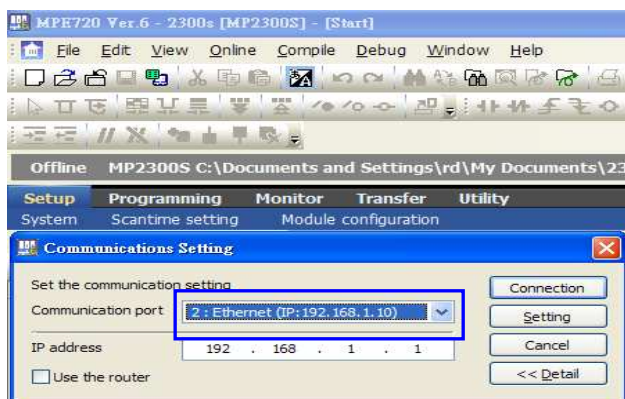
Yaskawa PLC Communication Parameter Settings

(1) PLC Factory Communication Parameter Settings:

Item	Set
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway IP Address	0.0.0.0
System Port No.	10000 (UDP)
TCP Zero Window Timer Value	3 (s)
TCP Retry Time	500 (ms)
TCP Close Time	60 (s)
IP Assemble Time	30 (s)
Max. Packet Length	1500 (bytes)

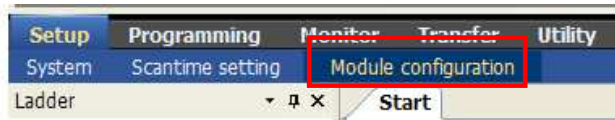
(2) Setting Steps:

1. Set IP for PLC.

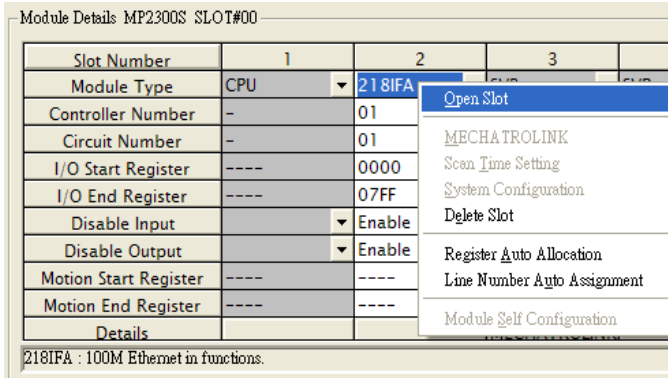




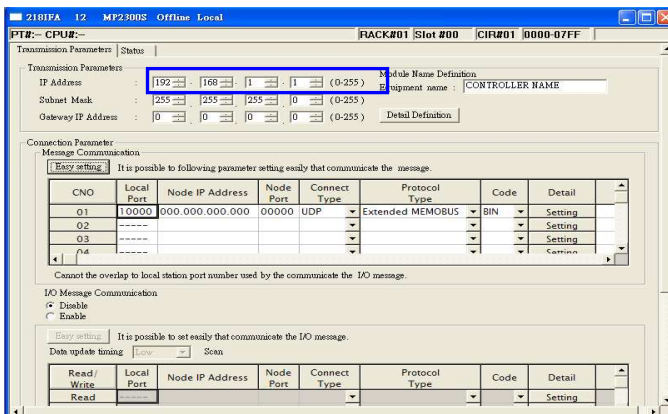
## 2. Communication parameter setting.



## 3. Go to Module Details and select [2181FA] for setting relevant parameters for Ethernet transmission.



## 4. The settings are shown below, PLC IP can't be repeated.

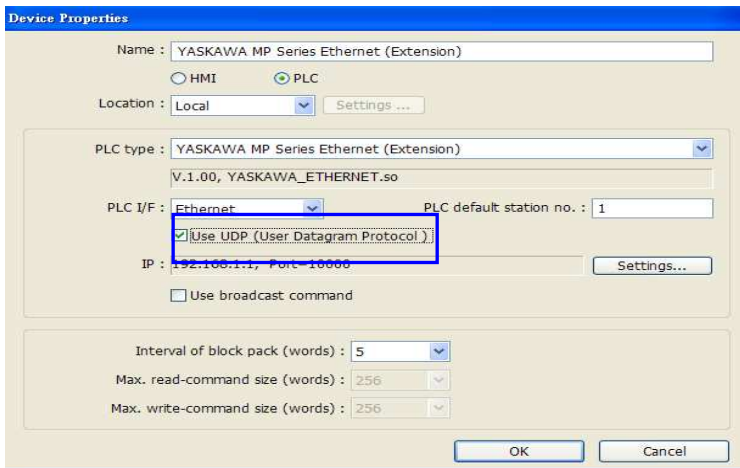


## 5. Download PLC communication parameters to PLC, and restart the controller.



### (3) HMI Settings:

1. Select Ethernet for PLC I/F.
2. Tick [UDP].
3. Set PLC IP and Port, the default Port is 10000.



## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	SB	DDDDh	0 ~ 8191f	
B	IB	HHHHh	0 ~ ffff	
B	OB	HHHHh	0 ~ ffff	
B	MB	DDDDDh	0 ~ 65534f	
W	SW	DDDD	0 ~ 8191	
W	IW	HHHH	0 ~ ffff	
W	OW	HHHH	0 ~ ffff	
W	MW	DDDDD	0 ~ 65534	

## Wiring Diagram:

Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



### Driver Version:

Version	Date	Description
V1.10	Jul/21/2011	Driver released.

# YASKAWA MP2300Siec

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	YASKAWA MP2300Siec		
PLC I/F	Ethernet		
Port no.	44818		
Assembly instance	Input::101 Output:111	Input::101~106 Output:111~116	
PLC sta. no.	1		

## PLC Setting:

### MP2300Siec-Motion Works IEC Express (YASKAWA) Settings:

**Step 1.** Before HMI communicates with MP2300Siec using Ethernet/IP, the Instance Input and Instance Output of MP2300Siec device must be set correctly. Multiple Instances are allowed to be built at one time, please click [Save] after setting.

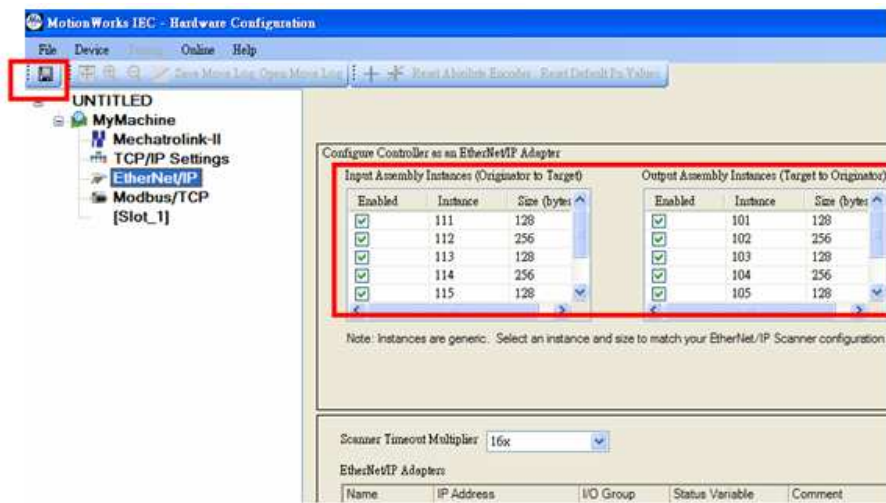


Fig. 1 Assembly Instances

**Step 2.** Global Variables will automatically add in E/IP Input and Output data, Input and Output data name and address type can be user-defined.



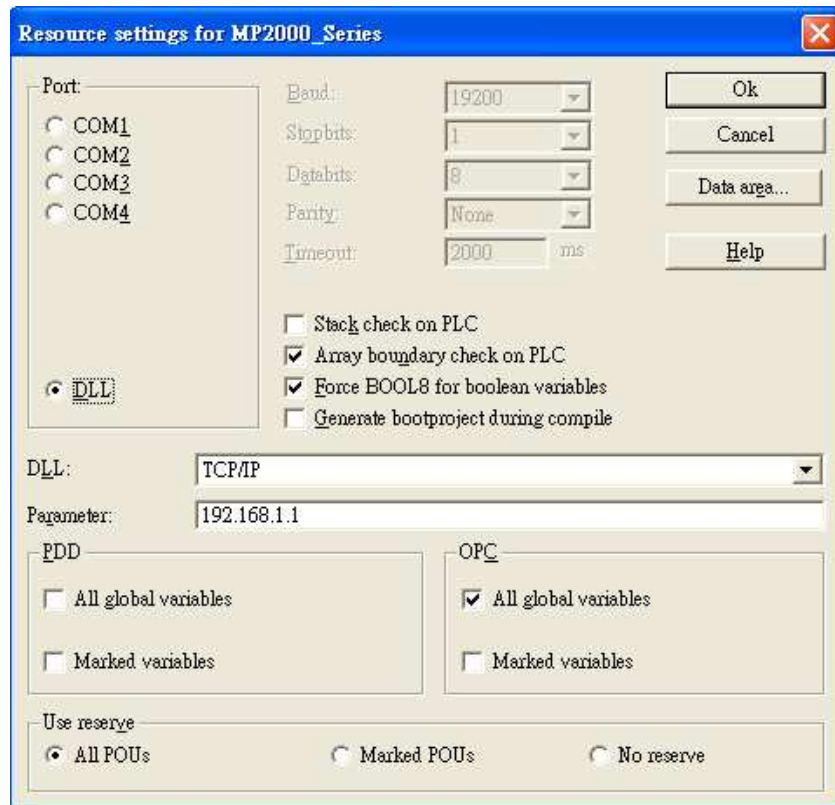


Fig. 4 Resource Settings

**Step 4.** Start compilation.

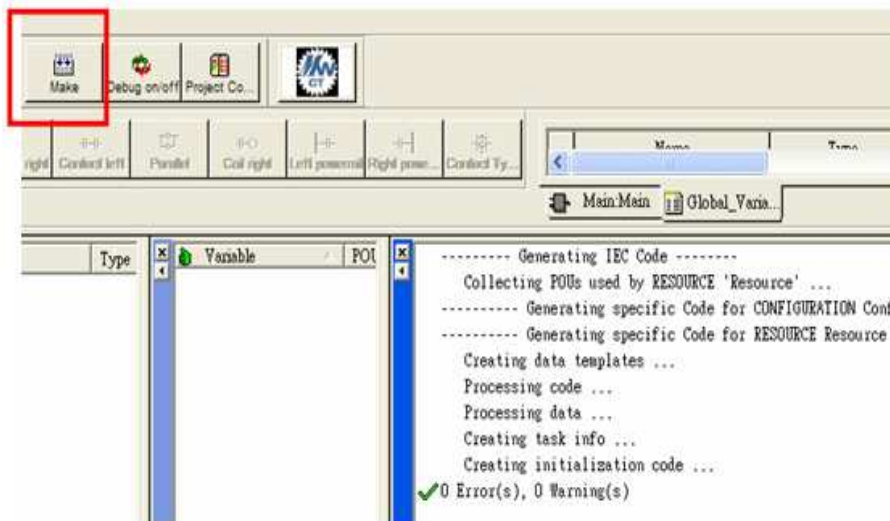


Fig. 5 Editing Screen

**Step 5.** Download project to device- MP2300Siec, and execute Cold.

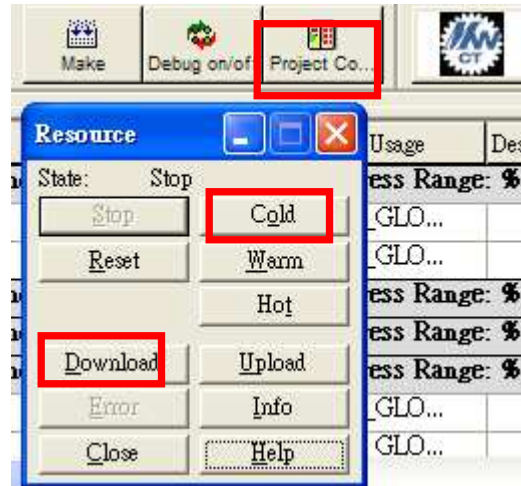


Fig. 6 Project Downloading

### EasyBuilder8000/EasyBuilder Pro Settings:

#### Step 1. System Parameter Settings

Open EasyBuilder8000/EasyBuilder Pro project, as shown in Fig. 7, Assembly Instance and Size must match the software default factory settings, and please don't select UDP. Fig.8 below shows how HMI Input / Output address is mapped to MP2300Siec device.

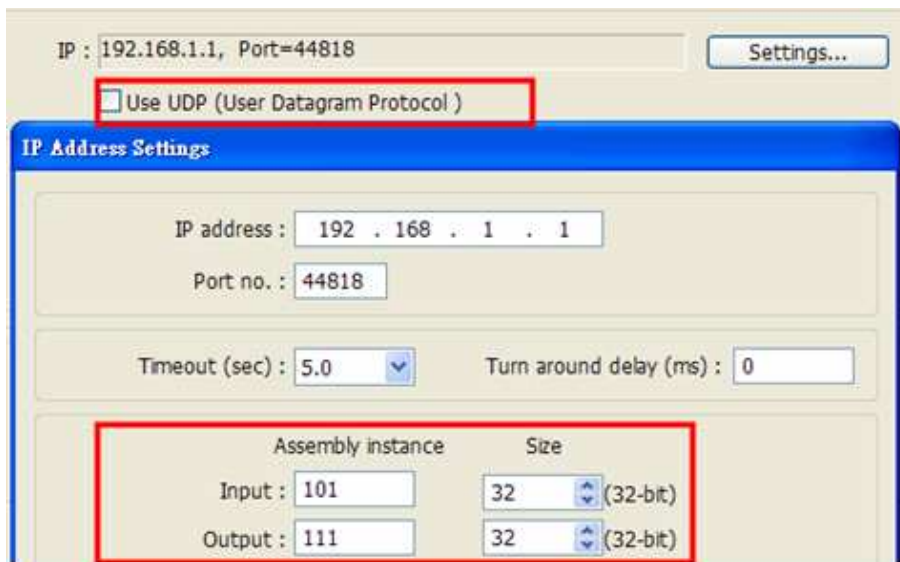


Fig. 7 Instance Setting



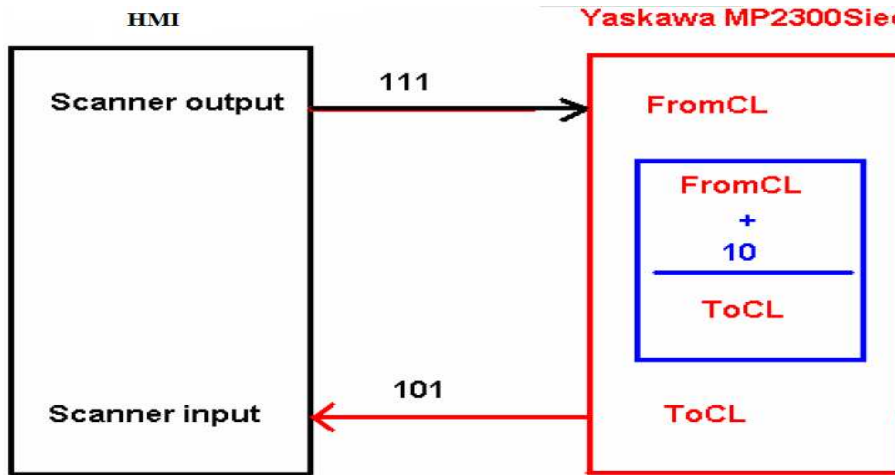


Fig.8 HMI and MP2300Siec I/O Mapping

**Step 2. Address Setting:**

Instance 101 and Instance 111 are defined as 128Bytes, on the project window , WORD objects can be used, with data typed defined as 32-Bit Unsigned, Input addresses set to 0、2、4、6.....62 for reading Instance 101 data.

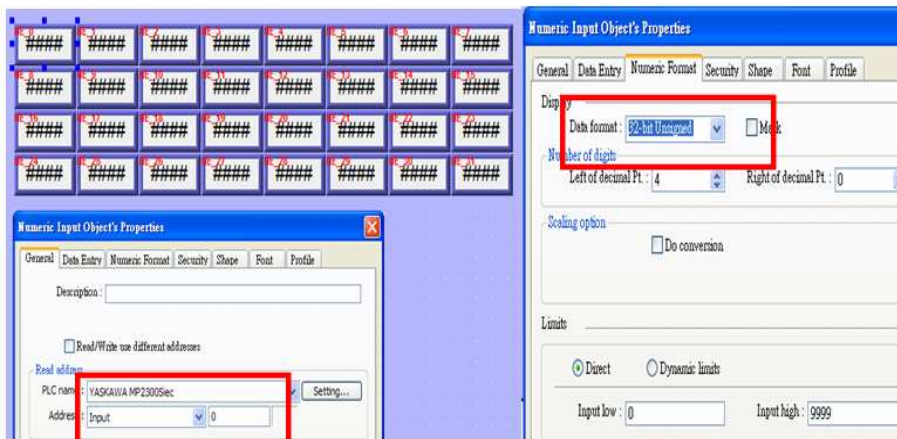


Fig. 9 Address Setting

**EasyBuilder8000/EasyBuilder Pro-Allen Bradley CompactLogix Tag Data Importing and Module Defined:**

**Step 1.** In EasyBuilder8000/EasyBuilder Pro project, when using Allen Bradley EIP driver to import CSV file (as in Fig. 10), please open AB Data Type Editor (Fig. 11), and right click on Module Defined to add New Data Type.



	A	B	C	D	E	F
1	remark	CSV-Import-Export				
2	remark	Date = Fri Jul 22 15:40:47 2011				
3	remark	Version = RSLogix 5000 v18.00				
4	remark	Owner = user				
5	remark	Company = abc				
6		0.3				
7	TYPE	SCOPE	NAME	DESCRIPTION	DATATYPE	SPECIFIER
8	TAG		MP2300Sec:C		AB:ETHERNET_MODULE:C:0	
9	TAG		MP2300Sec:I		AB:ETHERNET_MODULE_DINT_128Bytes:I:0	
10	TAG		MP2300Sec:O		AB:ETHERNET_MODULE_DINT_128Bytes:O:0	
11	TAG		Local:1:C		AB:Embedded_IQ16F:C:0	
12	TAG		Local:1:I		AB:Embedded_IQ16F:I:0	
13	TAG		Local:2:C		AB:Embedded_OB16:C:0	
14	TAG		Local:2:I		AB:Embedded_OB16:I:0	
15	TAG		Local:2:O		AB:Embedded_OB16:O:0	
16	TAG		Bits		BOOL[32]	
17	TAG		Timer1		TIMER	
18						
19						

Fig. 10 RSLogix 5000 (Allen Bradley Software) Export Free Tag CSV File

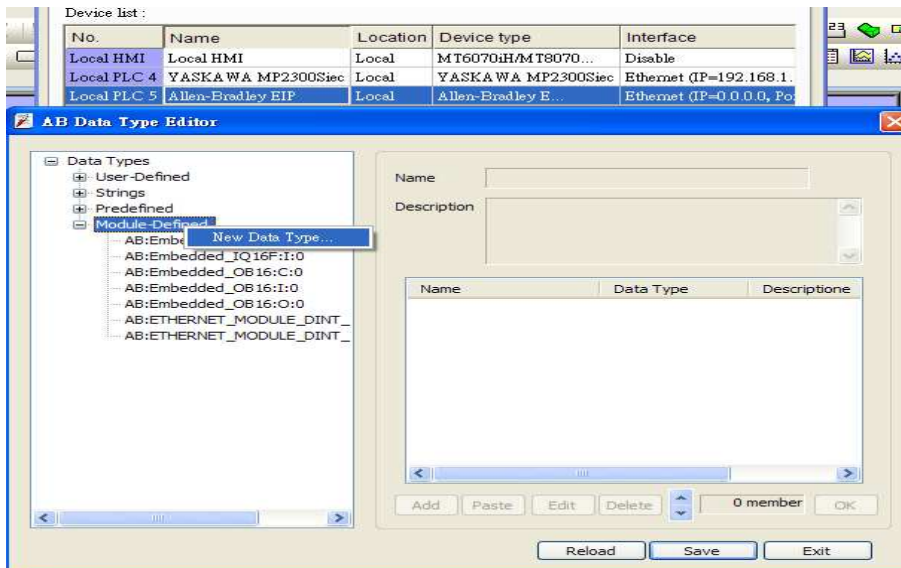


Fig.11 AB Data Type Editor

**Step 2.** As in Fig 12, in AB Data Type Editor add Name of the new data type. The Name must be set identically to the Data Type in Free Tag CSV file. As in Fig 14, Data Member Name must be set identically to the AB software (as Data in Fig. 13), then click [Save] (Fig. 15).

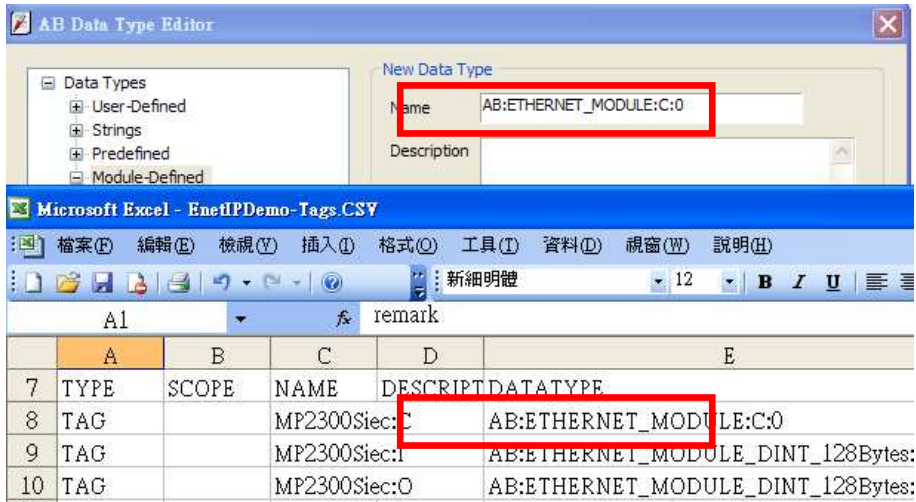


Fig.12 AB Data Type Editor

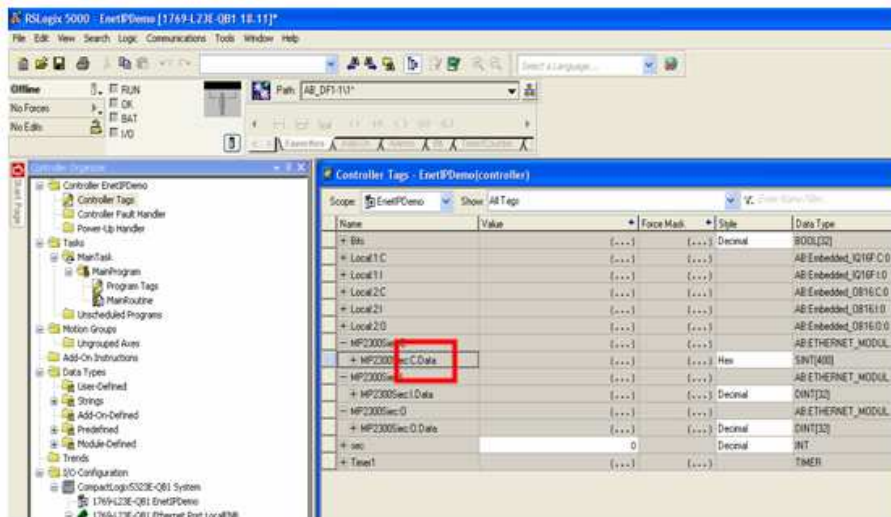


Fig.13 Tag Information

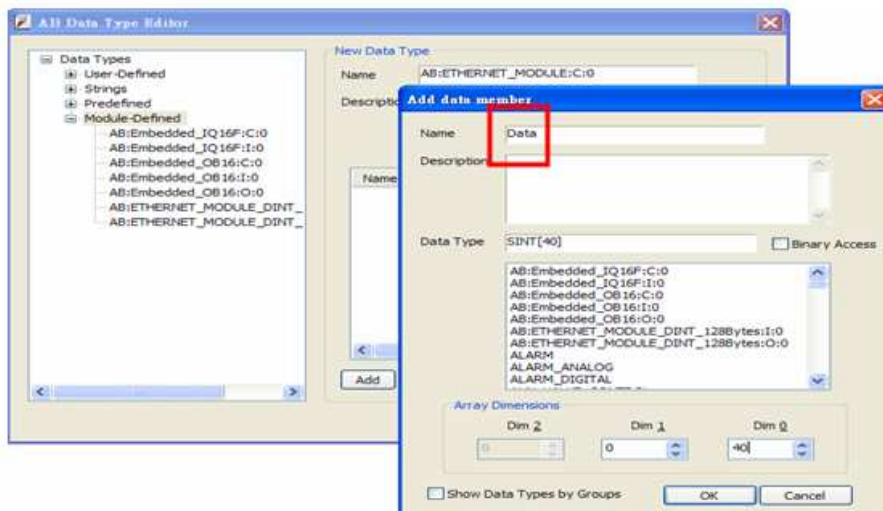


Fig.14 Add Data Member - Name Tag Information

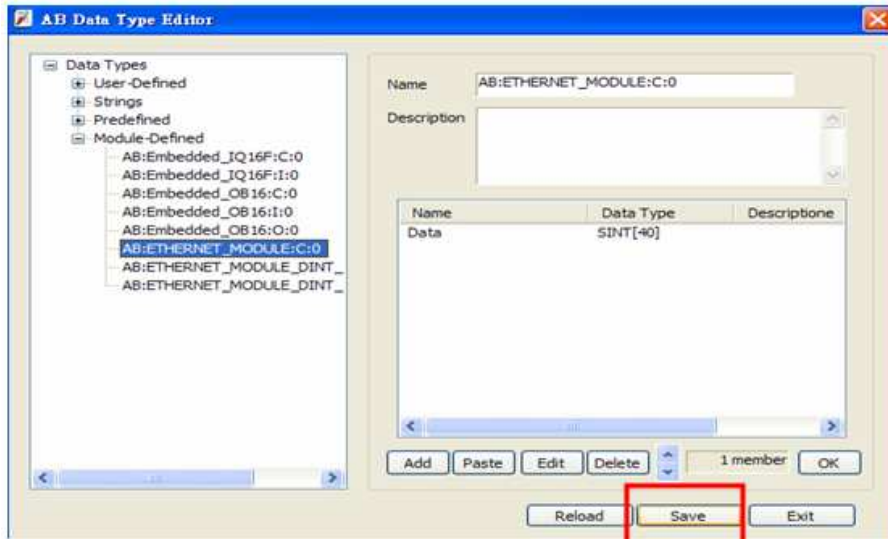


Fig. 15 Add Data Member-Settings - Save

**Step 3.** Import CSV file, Tag Information can be viewed from object address.

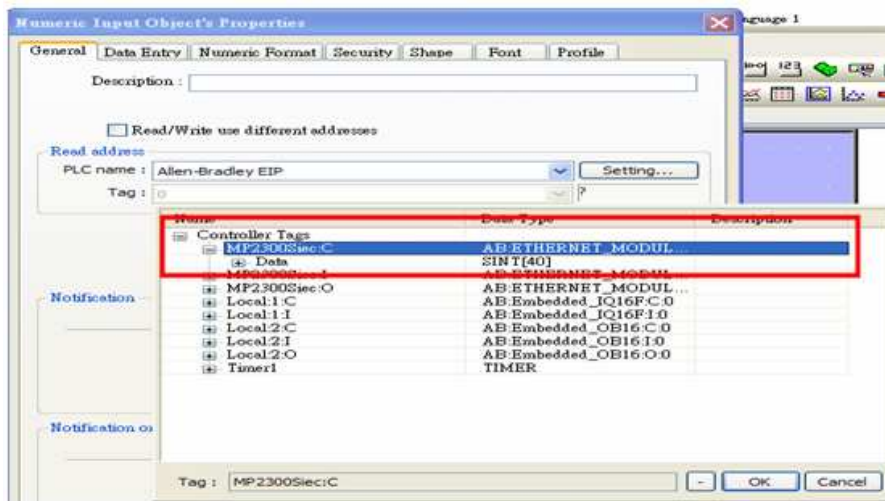


Fig.16 Tag Information


**Device Address:**

Bit/Word	Device type	Format	Range	Memo
B	Input_Bit	DDDDdd	0 ~ 6553515	
B	Output_Bit	DDDDdd	0 ~ 6553515	
DW	Input	DDDD	0 ~ 65535	
DW	Output	DDDD	0 ~ 65535	

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Note: The wiring diagrams above are drawn based on MT8100i structure, the actual placement of pins may vary according to HMI module.

## Driver Version:

Version	Date	Description
V1.00	Aug/24/2011	Driver released.

# YASKAWA SMC 3010

Supported Series: YASKAWA SMC Series Servo Motor Controller.

## HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	YASKAWA SMC 3010		
PLC I/F	RS232		
Baud rate	19200	9600, 19200	
Data bits	8		
Parity	None		
Stop bits	1		

## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	AF	D	0 ~ 1	
B	BN	D	0 ~ 1	Write only
B	BP	D	0 ~ 1	Write only
B	BV	D	0 ~ 1	Write only
B	CB	DDDD	0 ~ 9999	Write only
B	CM	D	0 ~ 1	Read only
B	DV	D	0 ~ 1	
B	EB	D	0 ~ 1	
B	OE	D	0 ~ 1	
B	RS	D	0 ~ 1	Write only
B	ST	D	0 ~ 1	Write only
B	TB	Do	0 ~ 17	Read only
B	V_Bit	DDDdd	0 ~ 99931	*2
B	D_arr_Bit	DDDdd	0 ~ 99931	
DW	AC	D	0 ~ 4	
DW	DC	D	0 ~ 4	
DW	BL	D	0 ~ 4	
W	CD	D	0 ~ 2	Write only
W	CE	D	0 ~ 2	
DW	DE	D	0 ~ 4	

Bit/Word	Device type	Format	Range	Memo
DW	DP	D	0 ~ 4	
W	DT	D	0 ~ 2	
W	EC	D	0 ~ 2	
DW	EM	D	0 ~ 4	
W	ER	D	0 ~ 2	
W	FA	D	0 ~ 2	
DW	FL	D	0 ~ 4	
W	FV	D	0 ~ 2	
DW	GR	D	0 ~ 4	
DW	JG	D	0 ~ 4	
DW	MM	D	0 ~ 4	
W	MT	D	0 ~ 2	
W	NA	D	0 ~ 2	
W	OP	D	0 ~ 2	
DW	PA	D	0 ~ 4	Write only
DW	PR	D	0 ~ 4	
DW	SP	D	0 ~ 4	
W	TC	D	0 ~ 2	Read only
W	TM	D	0 ~ 2	
W	TW	D	0 ~ 2	
DW	VA	D	0 ~ 4	
DW	VD	D	0 ~ 4	
DW	VS	D	0 ~ 4	
DW	IL	D	0 ~ 4	
DW	IT	D	0 ~ 4	
DW	KD	D	0 ~ 4	
DW	KI	D	0 ~ 4	
DW	KP	D	0 ~ 4	
DW	OF	D	0 ~ 4	
DW	TL	D	0 ~ 4	
DW	VR	D	0 ~ 4	
DW	VT	D	0 ~ 4	
DW	PF	D	0 ~ 4	*1
DW	VF	D	0 ~ 4	
DW	V	DDD	0 ~ 999	*2
F	F	DDD	0 ~ 999	*2
W	D_array	DDD	0 ~ 999	





Bit/Word	Device type	Format	Range	Memo
W	R_array	DDD	0 ~ 999	

### Note:



- \*1 PF is the communication parameter of SMC\_3010, the default is 10.4, if the value is not 10.4, all values will be displayed incorrectly.
- \*2 User defined integer variable V000~V999, floating point variable F000~F999.

### Wiring Diagram:

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	SMC3010 CN6 RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	5 GND
			7 RTS
			8 CTS
			circuit
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			SMC3010 CN6 RS232 9P D-Sub Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			5 GND
			7 RTS
			8 CTS
			circuit
			

### Driver Version:

Version	Date	Description
V1.30	Mar/29/2010	



## YASKAWA SMC 3010 (Ethernet)

Supported Series: YASKAWA SMC Series Servo Motor Controller.

### HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	YASKAWA SMC 3010 (Ethernet)		
PLC I/F	Ethernet		
Port no.	23		

### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	AF	D	0 ~ 1	
B	BN	D	0 ~ 1	Write only
B	BP	D	0 ~ 1	Write only
B	BV	D	0 ~ 1	Write only
B	CB	DDDD	0 ~ 9999	Write only
B	CM	D	0 ~ 1	Read only
B	DV	D	0 ~ 1	
B	EB	D	0 ~ 1	
B	OE	D	0 ~ 1	
B	RS	D	0 ~ 1	Write only
B	ST	D	0 ~ 1	Write only
B	TB	Do	0 ~ 17	Read only
B	V_Bit	DDDdd	0 ~ 99931	*2
B	D_arr_Bit	DDDdd	0 ~ 99931	
DW	AC	D	0 ~ 4	
DW	DC	D	0 ~ 4	
DW	BL	D	0 ~ 4	
W	CD	D	0 ~ 2	Write only
W	CE	D	0 ~ 2	
DW	DE	D	0 ~ 4	
DW	DP	D	0 ~ 4	
W	DT	D	0 ~ 2	
W	EC	D	0 ~ 2	



Bit/Word	Device type	Format	Range	Memo
DW	EM	D	0 ~ 4	
W	ER	D	0 ~ 2	
W	FA	D	0 ~ 2	
DW	FL	D	0 ~ 4	
W	FV	D	0 ~ 2	
DW	GR	D	0 ~ 4	
DW	JG	D	0 ~ 4	
DW	MM	D	0 ~ 4	
W	MT	D	0 ~ 2	
W	NA	D	0 ~ 2	
W	OP	D	0 ~ 2	
DW	PA	D	0 ~ 4	Write only
DW	PR	D	0 ~ 4	
DW	SP	D	0 ~ 4	
W	TC	D	0 ~ 2	Read only
W	TM	D	0 ~ 2	
W	TW	D	0 ~ 2	
DW	VA	D	0 ~ 4	
DW	VD	D	0 ~ 4	
DW	VS	D	0 ~ 4	
DW	IL	D	0 ~ 4	
DW	IT	D	0 ~ 4	
DW	KD	D	0 ~ 4	
DW	KI	D	0 ~ 4	
DW	KP	D	0 ~ 4	
DW	OF	D	0 ~ 4	
DW	TL	D	0 ~ 4	
DW	VR	D	0 ~ 4	
DW	VT	D	0 ~ 4	
DW	PF	D	0 ~ 4	*1
DW	VF	D	0 ~ 4	
DW	V	DDD	0 ~ 999	*2
W	F	DDD	0 ~ 999	*2
W	D_array	DDD	0 ~ 999	
W	R_array	DDD	0 ~ 999	

## Note:


\*1 PF is the communication parameter of SMC\_3010, the default is 10.4, if the value is not 10.4, all values will be displayed incorrectly.

\*2 User defined integer variable V000~V999, floating point variable F000~F999.

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



**Driver Version:**

Version	Date	Description
V1.10	Mar/29/2010	

## Yokogawa FA-M3

Supported Series : FA-M3 CPU SP35-5N, SP55-5N CPU port, F3LC11 Computer Link module.

Website : <http://www.yokogawa.com/itc/itc-index-en.htm>

### HMI Setting:

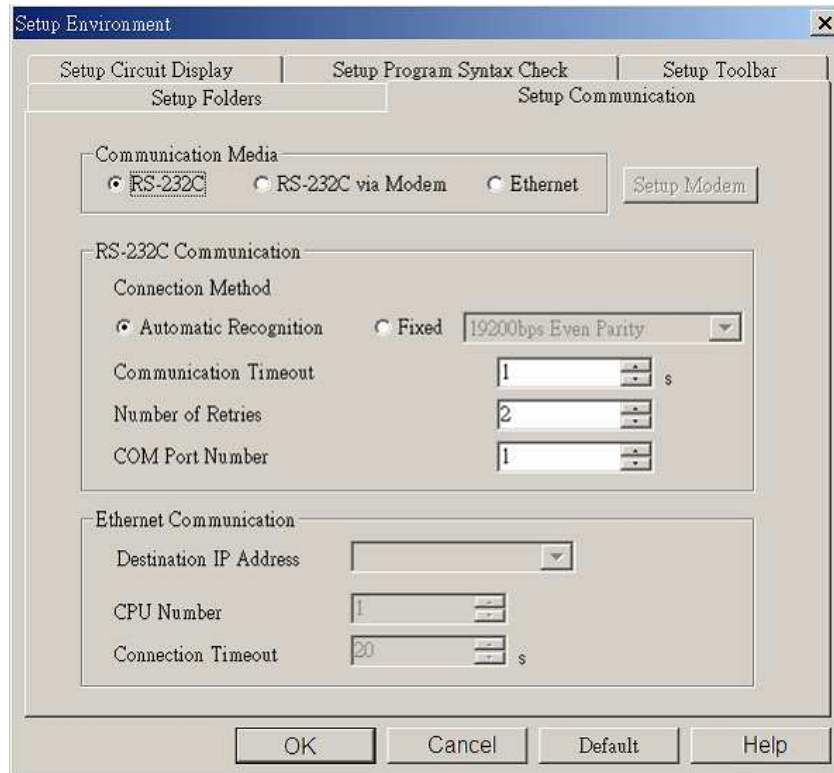
Parameters	Recommended	Options	Notes
PLC type	Yokogawa FA-M3		
PLC I/F	RS232		
Baud rate	19200	9600, 19200	
Data bits	8	8	
Parity	Even	Even, Odd, None	
Stop bits	1	1	
PLC sta. no.	1	1-31	

### PLC Setting:

Communication mode	Use Personal Communication Link Use checksum Use End Character
--------------------	--

### WideField communication setting:

For WideField communication setting, select [Tool]/ [Set Environment], the default is [Automatic]. Using the Automatic Recognition, WideField software will connect the current PLC and get the PLC communication setting. If the PLC communication configuration is already known, select the [Fixed] mode, It will connect with the PLC quickly.



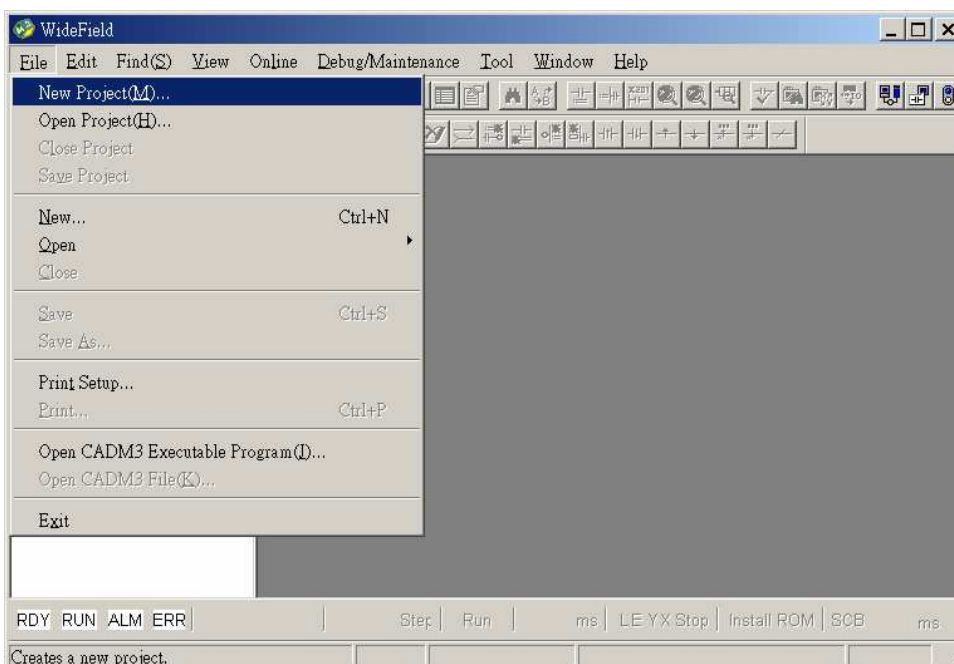
P.S Since Personal Computer link is used, when connecting to PLC it will delay about 20sec for testing communication.

## YOKOGAWA PLC Communcation Setting:

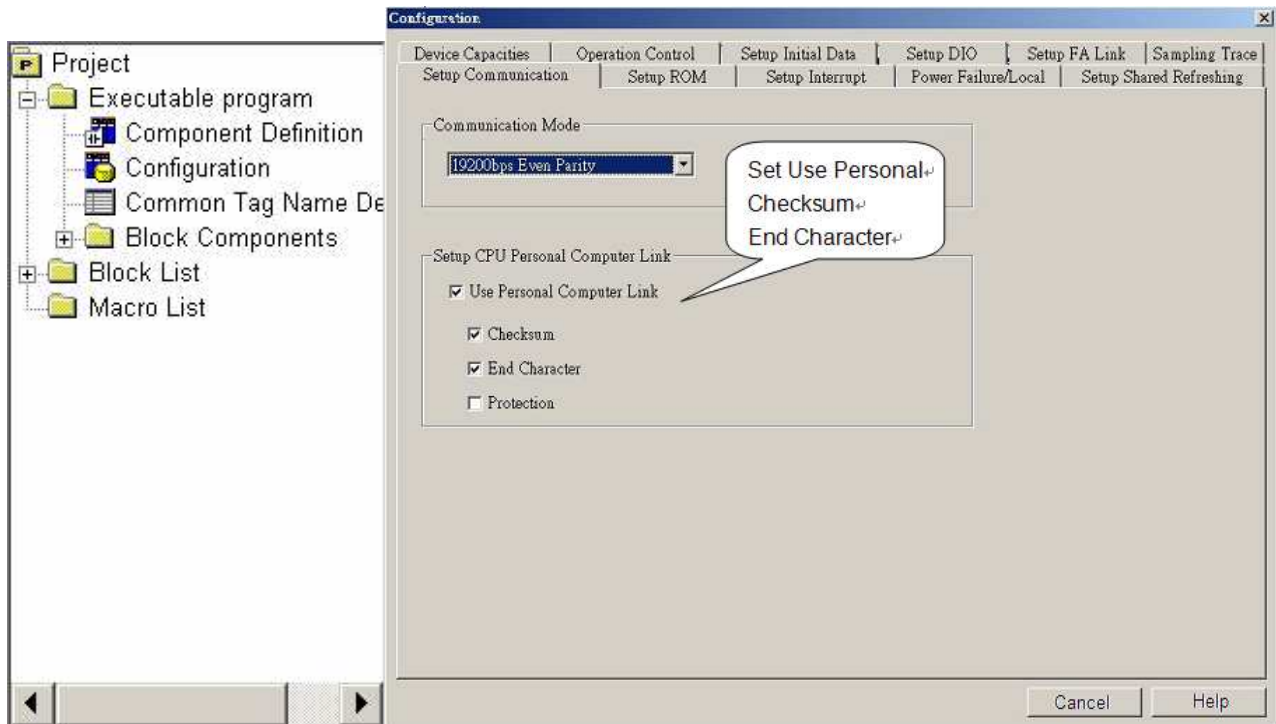
YOKOGAWA FA-M3

CPU SP55-5N (same SP35-5N)

[File] / [New Project] to create a new project.



Click [Configuration] to set up communication.







## Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	DDDDD	0 ~ 71664	
B	Y	DDDDD	0 ~ 71664	
B	I	DDDDD	1 ~ 16384	
B	M	DDDD	1 ~ 9984	
B	L	DDDDD	0 ~ 71024	
W	D	DDDDD	1 ~ 16384	
W	B	DDDDD	1 ~ 32768	
W	V	DDD	1 ~ 256	
W	W	DDDDD	1 ~ 71024	
W	Z	DDDD	1 ~ 1024	



## Wiring Diagram:

### 9P D-Sub to 9P D-Sub: Cable KM11

MT6000/8000 series except MT6050i/MT8050i





COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male
2 RX	6 RX	8 RX	2 TXD
3 TX	4 TX	7 TX	3 RXD
5 GND	5 GND	5 GND	5 GND
			

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			2 TXD
6 TX			3 RXD
5 GND			5 GND
			



### 9P D-Sub to 9P D-Sub: LC11

MT6000/8000 series except MT6050i/MT8050i

COM1 RS232 9P D-Sub Female	COM2 RS232 9P D-Sub Female	COM3 RS232 9P D-Sub Male	RS232 9P D-Sub Male	
2 RX	6 RX	8 RX	3 TXD	
3 TX	4 TX	7 TX	2 RXD	
5 GND	5 GND	5 GND	5 GND	
			7 RTS	circuit
			8 CTS	
				

MT6050i/MT8050i

COM1 RS232 9P D-Sub Female			RS232 9P D-Sub Male
9 RX			3 TXD

6 TX			2 RXD
5 GND			5 GND
			7 RTS
			8 CTS
			circuit
			

### Driver Version:

Version	Date	Description
V1.20	Oct/23/2009	



## Yokogawa FA-M3 (Ethernet)

Supported Series : FA-M3 CPU SP35-5N, SP55-5N with F3LE01-5T/F3LE11-0T Ethernet module.

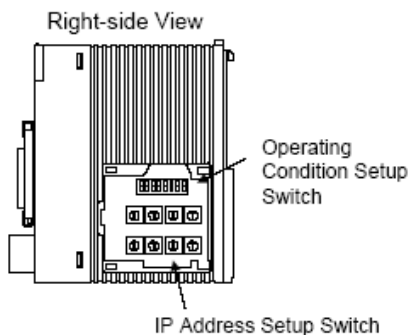
Website: <http://www.yokogawa.com/itc/itc-index-en.htm>

### HMI Setting:

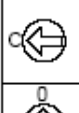
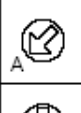

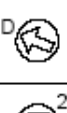
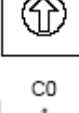
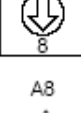
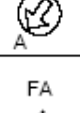
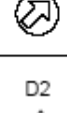
Parameters	Recommended	Options	Notes
PLC type	Yokogawa FA-M3 (Ethernet)		
PLC I/F	Ethernet		
Port no.	12289		
PLC sta. no.	1		

### PLC Setting:

Communication mode	Set IP Address, and set all condition setup switch to OFF.
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Example: Setting the IP address to 192.168.250.210

				
				
Hexa decimal	C0	A8	FA	D2
	↑	↑	↑	↑
Decimal	192	168	250	210


### Device Address:

Bit/Word	Device type	Format	Range	Memo
B	X	DDDDD	0 ~ 71664	
B	Y	DDDDD	0 ~ 71664	
B	I	DDDDD	1 ~ 16384	
B	M	DDDD	1 ~ 9984	
B	L	DDDDD	0 ~ 71024	
W	D	DDDD	1 ~ 8192	
W	B	DDDDD	1 ~ 32768	
W	V	DD	1 ~ 64	
W	W	DDDDD	1 ~ 71024	
W	Z	DDD	1 ~ 512	

## Wiring Diagram:


Direct connect (crossover cable):

HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	3 RX+
2 TX-	Orange	6 RX-
3 RX+	White/Green	1 TX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	2 TX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



Through a hub:

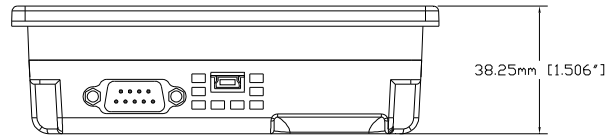
HMI RJ45 Male	Wire Color	PLC RJ45 Male
1 TX+	White/Orange	1 TX+
2 TX-	Orange	2 TX-
3 RX+	White/Green	3 RX+
4 BD4+	Blue	4 BD4+
5 BD4-	White/Blue	5 BD4-
6 RX-	Green	6 RX-
7 BD3+	White/Brown	7 BD3+
8 BD3-	Brown	8 BD3-



## Driver Version:

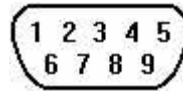
Version	Date	Description
V1.00	Dec/30/2008	Driver released.

# MT6050i/MT8050i Com Port Pin Assignment



*Bottom View*

## MT6050i/MT8050i



Pin assignment of the 9 Pin, Male,

Pin assignment of the 9 Pin, Male, SUB-D, COM1 [RS-232]/ [RS-485], COM3 [RS-485] Port. Only Com1[RS485 2W] support MPI 187.5K.

Pin#	Symbol	Com1[RS485]		Com1[RS232]	Com3[RS485]
		4 wire	2 wire		
1	Rx-	Rx-	Data-		
2	Rx+	Rx+	Data+		
3	Tx-	Tx-			
4	Tx+	Tx+			
5	GND	GND			
6	TxD			Transmit	
7	Data-				Data-
8	Data+				Data+
9	RxD			Receive	

## Wiring Diagram:

MT6050i COM1 [RS-232]

9P D-SUB Female

9	RXD
6	TXD
5	GND

PLC RS-232

Communication Com Port interface

TXD
RXD
GND

MT6050i COM1 [RS-485 2w]

9P D-SUB Female

1	Data-
2	Data+

PLC RS-485 2w

Communication Com Port interface

Data-
Data+

MT6050i COM3\* [RS-485 2w]

9P D-SUB Female

7	Data-
8	Data+

PLC RS-485 2w

Communication Com Port interface

Data-
Data+

\*RS485 2W COM3 is only available for MT6050iv2

MT6050i COM1 [RS-485 4w]

9P D-SUB Female

1	RX-
2	RX
3	TX-
4	TX+

PLC RS-485 2w

Communication Com Port interface

TX-
TX+
RX-
RX+