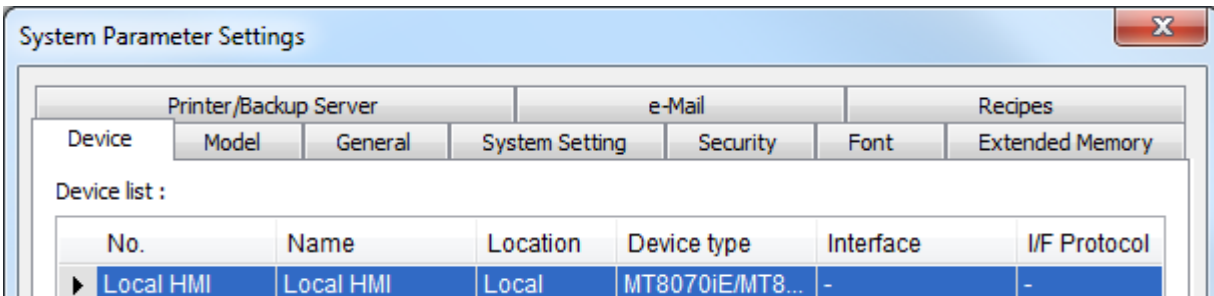


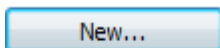
# Triangle Research FX Series V1.03

## EBPro Settings

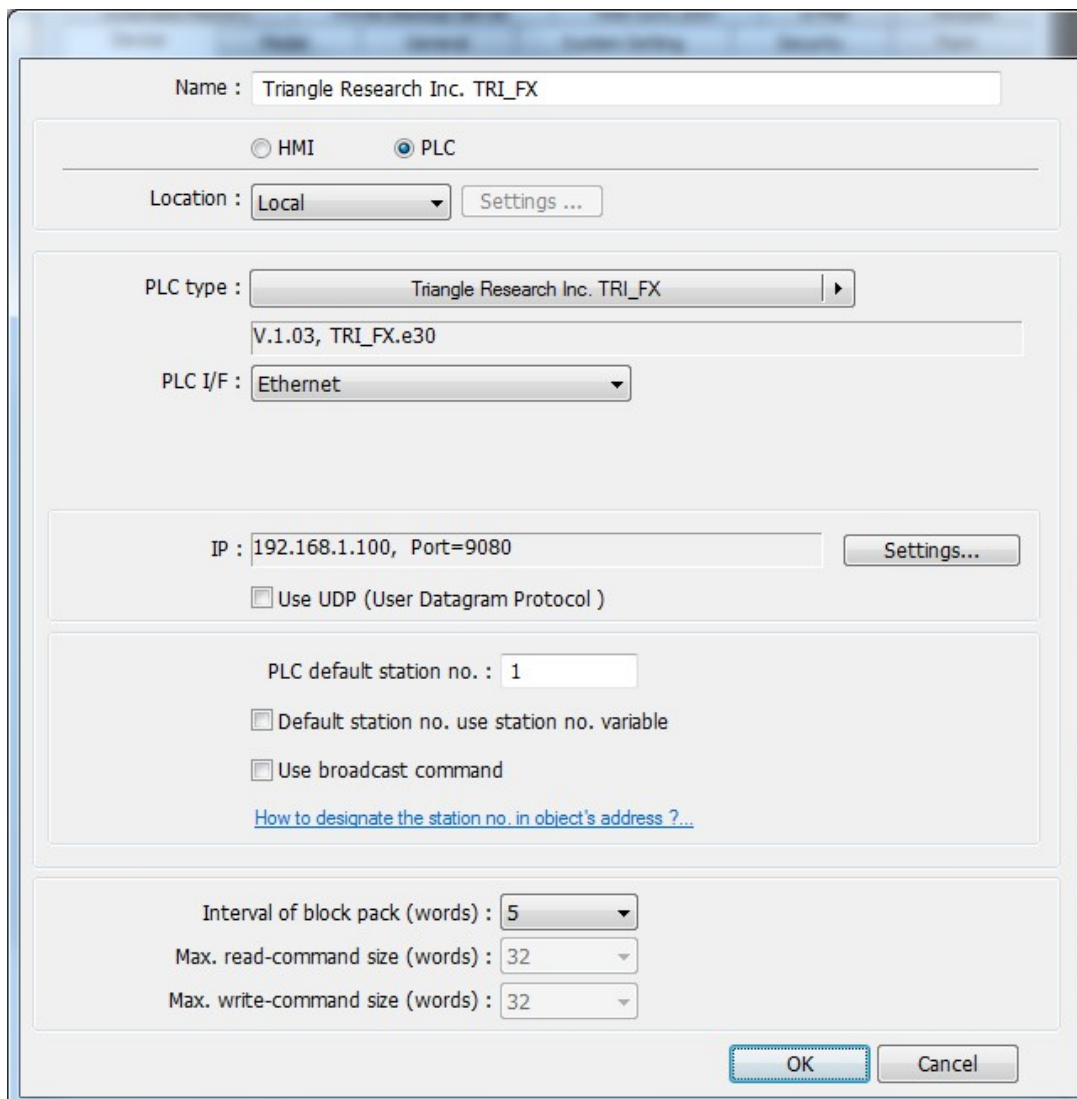
Communication parameters must be set the same as those of the PLC. The following settings are recommended. Go to **Edit Menu|System Parameters...**



Click



Select PLC type **TRI\_FX**. Set **PLC I/F** to proper type for your application. (Default IP settings shown)



Click

Default IP settings are shown below

**IP Address Settings**

IP address : 192 . 168 . 1 . 100

Port no. : 9080

Timeout (sec) : 3.0      Turn around delay (ms) : 10

Send ACK delay (ms) : 0      Parameter 1 : 0

Parameter 2 : 0      Parameter 3 : 0

The number of resending commands : 0

Typical RS232 Serial settings are shown below

**COM Port Settings**

COM : COM 1

Baud rate : 38400

Data bits : 8 Bits

Parity : None

Stop bits : 1 Bit

Timeout (sec) : 3.0

Turn around delay (ms) : 10

Send ACK delay (ms) : 0

Parameter 1 : 0

Parameter 2 : 0

Parameter 3 : 0

The number of resending commands : 0

\* OS version 20120920 or later support 14400 baud rate

Parameter	Recommended Setting	Notes
PLC I/F port	RS-232, RS-485 2W	Options: RS-232, RS-485 2W, Ethernet
Baud rate	38400*	Options: 9600, 19200, 38400, 57600, 115200 – Must match PLC port setting. For Ethernet, IP address must match PLC setting, use Port 9080
Parity	None*	Options: Odd, Even, None – Must match PLC port setting
Data bits	8*	Options: 7, 8 - Must match PLC port setting
Stop bits	1*	Options: 1, 2 – Must match PLC port setting
PLC default station No.**	1	Must match PLC port setting (0~255). Extended Addressing available. Read the help topic “Read Address” for further information on extended addressing.
Turn around delay	10	Command send out delay (0~999) Puts a delay between communication requests. (For example: Setting this parameter to 1000, puts a one second delay between communication requests from the touchscreen.) Range is 0 to 1000.

\*Settings given are the PLC defaults.

\*\*This is the PLC address to which communications are sent if Extended Address Mode is not used.

## Fx PLC Settings

Communication parameters must be the same as those of EBPro settings. (See recommendation above).

Compatible with Models:

Fx1616, Fx2424

## MT8000iE to Fx PLC Cable Wiring

**Fx Series CPU's** with RS232 9 Pin Female ports.

(D-Sub 9 Female/Male Socket to D-Sub 9 Male Socket Cable)

HMI COM1 RS-232 9P D-Sub Female	HMI COM2 RS-232 9P D-Sub Female	HMI COM3 RS-232 9P D-Sub Male	Fx Series RS-232 port
2 TD ->	4 TX ->	7 TX ->	2 RD
3 RD ->	6 RX ->	8 RX ->	3 TD
5 GND ->	5 GND ->	5 GND ->	5 GND
			Shield -> Earth Ground

## MT8050iE RS232 Wiring instructions

(D-Sub 9 Female Plug to D-Sub 9 Male Socket Cable)

HMI COM1 RS-232 9P D-Sub Female		Fx Series RS232 Port
6 TD ->		2 RD
9 RD ->		3 TD
5 GND ->		5 GND
		Shield -> Earth Ground

**Fx Series** with RS-485 screw terminal port.

(D-Sub 9 Female Plug to Flying Leads Cable)

HMI COM1 RS-485 9P D-Sub Male**	HMI COM3 RS-485 9P D-Sub Male	Fx Series RS485 Port
1 RXD/TXD - ->	6 RXD/TXD- ->	-> 1 RXD/TXD -
2 RXD/TXD + ->	9 RXD/TXD+ ->	-> 2 RXD/TXD +
		Shield -> Earth Ground

**Note:** Graphic representation may not reflect the actual appearance of the cable.

## Device Types

Device types are used to specify the type of data in projects. Read the help topic **Read Address** for further information on device types and addressing formats.

These device types are available when the PLC name: **TRI\_FX** is selected.

PLC name :

Type	Device Type	Format	Range	Notes
Bit	INPUT	bb	bbb: 1~256	Inputs as bits.
Bit	OUTPUT	bb	bbb: 1~256	Outputs as bits.
Bit	RELAY	bbb	bbb: 1~512	Internal relays as bits.
Bit	TMR_BIT	bb	bb: 1~64	Timer Completion coil status
Bit	CTR_BIT	bb	bb: 1~64	Counter Completion coil status
Word	DM	dddd	dddd: 1~4000	16 Bit Data words
DWord	DM32	dddd	dddd: 1~2000	32 bit Data words made from 2 DM words
DWord	FP	dddd	dddd: 1~1000	32 bit Floating Point Value
Word	TMR_PV	dd	dd: 1~64	Timer Present Value (Accumulator)
Word	CTR_PV	dd	dd: 1~64	Counter Present Value (Accumulator)
Word	TMR_SV	dd	dd: 1~64	Timer Set Value (Preset)
Word	CTR_SV	dd	dd: 1~64	Counter Set Value (Preset)
DWord	INTEGER	dd	dd: 1~26	Internal 32 bit Integers. 1~26 corresponds to A~Z
DWord	FLT_PT	dd	dd: 1~26	Internal 32 bit Floating Point Values. 1~26 corresponds to A~Z
Word	STRING	dd	dd: 1~26	Internal Strings. Supports first 32 characters only. 1~26 corresponds to A~Z\$
DWord	HSCPV	d	d: 1~3	High Speed Counter Present Values (Accumulator)
Word	ADC	dd	dd: 1~16	Analog Input Values
Word	DAC	dd	dd: 1~16	Analog Output Values
Word	TIME	d	d: 1~3	Internal RTC Time Values
Word	DATE	d	d: 1~4	Internal RTC Date Values
Word	EE_INT	dddddd	dddddd: 1~32767	EEPROM Data Words
Word	EE_STR	dddddd	dddddd: 1~16384	EEPROM String Values. Supports first 32 characters only of each string.
Word	IN_W	dd	dd: 1~96	Inputs as 16 bit words
Word	OUTW	dd	dd: 1~96	Outputs as 16 bit words
Word	RELW	dd	dd: 1~96	Relays as 16 bit words

**Note:** Internal Word LW8998 is used to return communication error codes. Display LW8998 with an ASCII Display object to see these codes.

Codes:

ASCII	Decimal	Hex	Description
OK	19279	4B4F	No communication errors at this time
ER	21061	5245	Communication command error
EF	17989	4645	PLC Communication Checksum does not match received data
CK	19267	4B43	HMI Communication Checksum does not match received data

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