

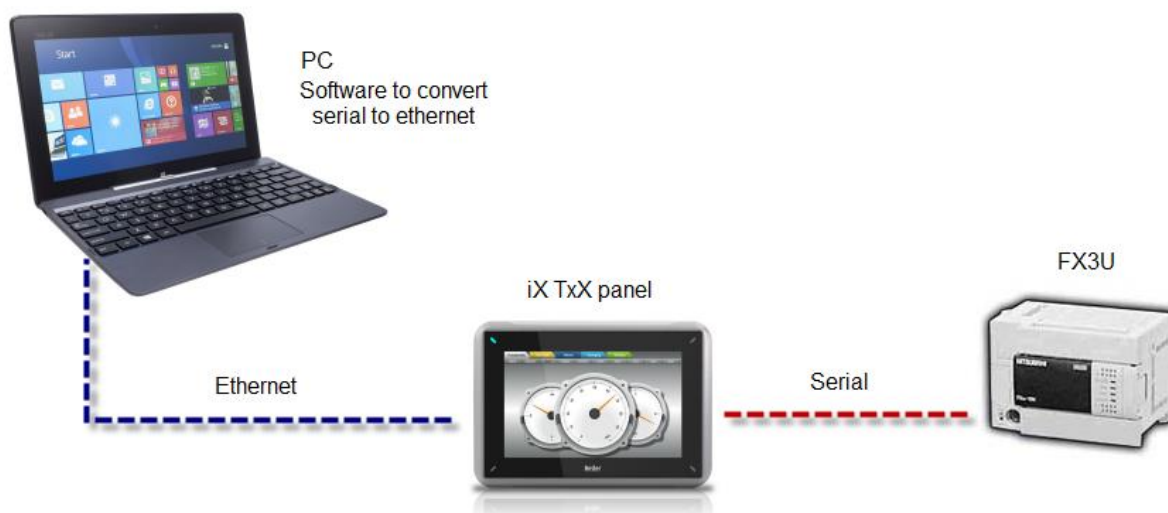


1 Function and area of use

This document explains how to set up transparent and passthrough mode in iX Developer 2.0.

This document will explain the two routing features, transparent and passthrough mode. Focus will be on Mitsubishi driver (FX) with serial communication.

Example of routing via Ethernet:



2 About this Start-Up document

This Start Up document should not be considered as a complete manual. It is an aid to be able to start up a normal application quickly and easily. For further information we refer to the manual for iX Developer 2.0. This document and other Start Up documents can be obtained from your closest distributor of operator terminals.

Please use the address *manual@beijer.se* for feedback on our Start Up documents.

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Software requirements:

- iX Developer 2.0
- Serial/IP

Hardware requirements:

- Mitsubishi FX

Set up routing in iX Developer 2.0

This chapter will explain how to set up transparent and passthrough- mode.

Transparent mode

The transparent mode function enables the HMI to continue to communicate with the controller while the routing takes place. The communication will be split between the HMI and the routing unit. Routing in this mode will affect the performance of the controller communication since two units will share the same communication.

If routing over Ethernet, the routing unit have to support Ethernet communication.

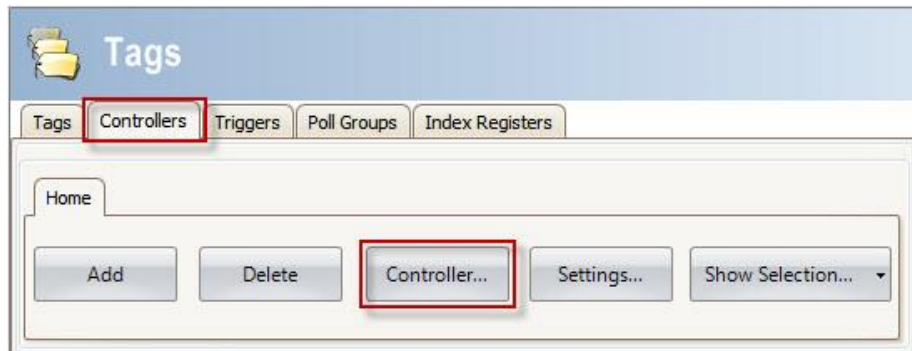
Note: When using transparent mode it might be wise to set the baudrate as high as possible because of the time delay.

Passthrough mode

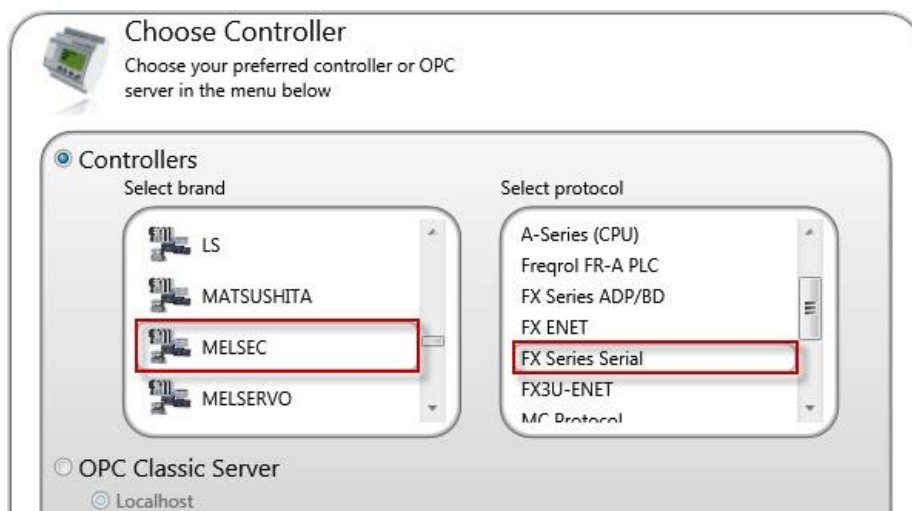
When Passthrough mode is activated and the routing unit communicates with the controller through the HMI, communication between the HMI and connected controller will stop. A HMI where communication in Passthrough mode is in progress becomes locked for the operator, and the text Passthrough is shown in the display.

2.1 Serial communication with controller

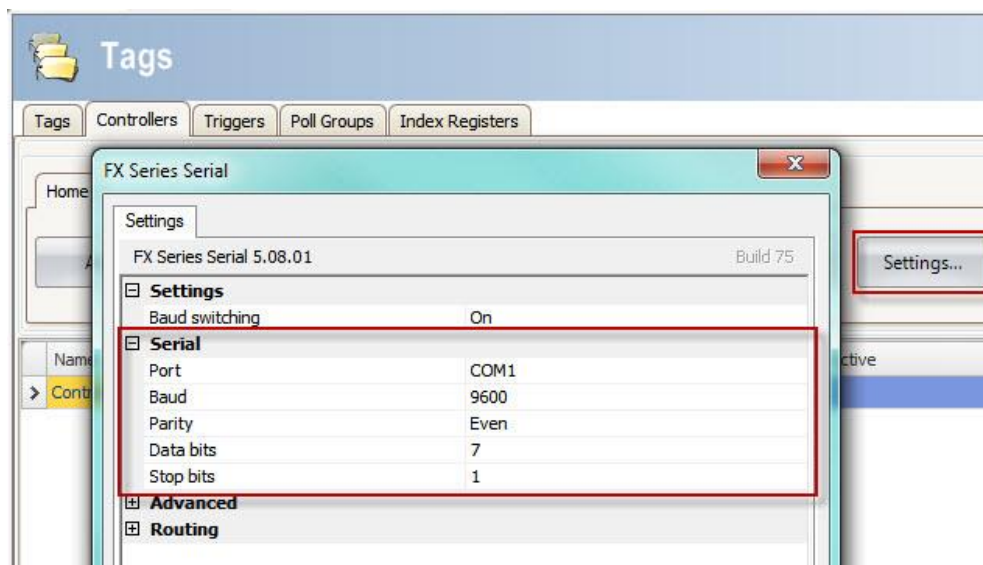
- Menu *Tags – Controllers* and click on *Controller...*



- Make sure that you have *FX Series Serial* selected in controller. Click *OK*.

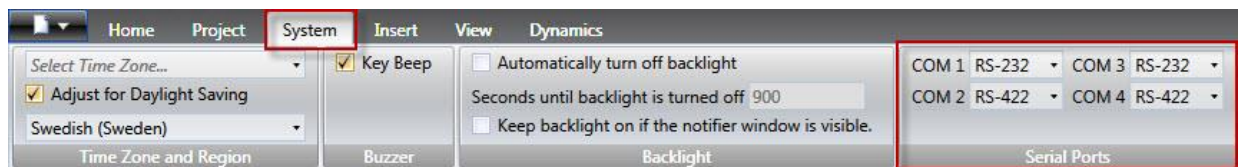


- Still under *Tags – Controllers*, click *Settings*.
- Under *Serial*, enter the settings for the communication between the application (panel) and the controller.



Parameter	Description
Port	Select which COM port to use for the connection.
Baud	Set the communication speed in baud for the selected COM port.
Parity	Set the parity for the selected COM port.
Data bits	Set the data bits for the selected COM port.
Stop bits	Set the stop bits for the selected COM port.

When running a panel project you can see settings for the serial ports under *System*. Example below is a TxA panel.



2.2 Serial routing

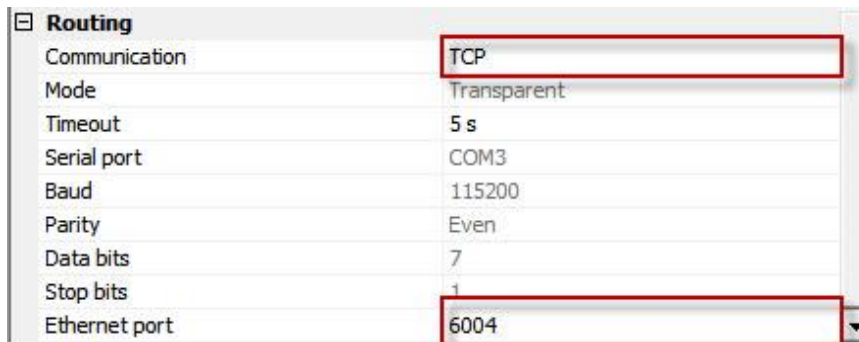
- Expand the branch *Routing*. This is where we set up the communication with the device that will communicate through the panel.
- Enter Serial as communication and select Transparent or Passthrough as mode. Enter the rest of the parameters equivalent to the device parameters. When done click *OK*.

Routing	
Communication	Serial
Mode	Transparent
Timeout	5 s
Serial port	COM3
Baud	9600
Parity	Even
Data bits	7
Stop bits	1
Ethernet port	6004

Parameter	Description
Communication	Enable routing communication by selecting the communication method.
Mode	The kind of routing mode used when communicating through the HMI.
Timeout	The number of seconds with no routing communication the HMI will wait before returning from the routing mode and start functioning normally again.
Serial port	The serial port used for running routing communication. NOTE: If the HMI is connected to the controller using a serial port a different port has to be selected in this setting.
Baud	Set the communication speed in baud for the selected COM port.
Parity	Set the parity for the selected COM port.
Data bits	Set the data bits for the selected COM port.
Stop bits	Set the stop bits for the selected COM port.
Ethernet port	The Ethernet port number used in the HMI for running routing communication.

2.3 Ethernet routing

- In Controller Settings, choose TCP as communication. Set Ethernet port or use default.
- Download the the new settings.

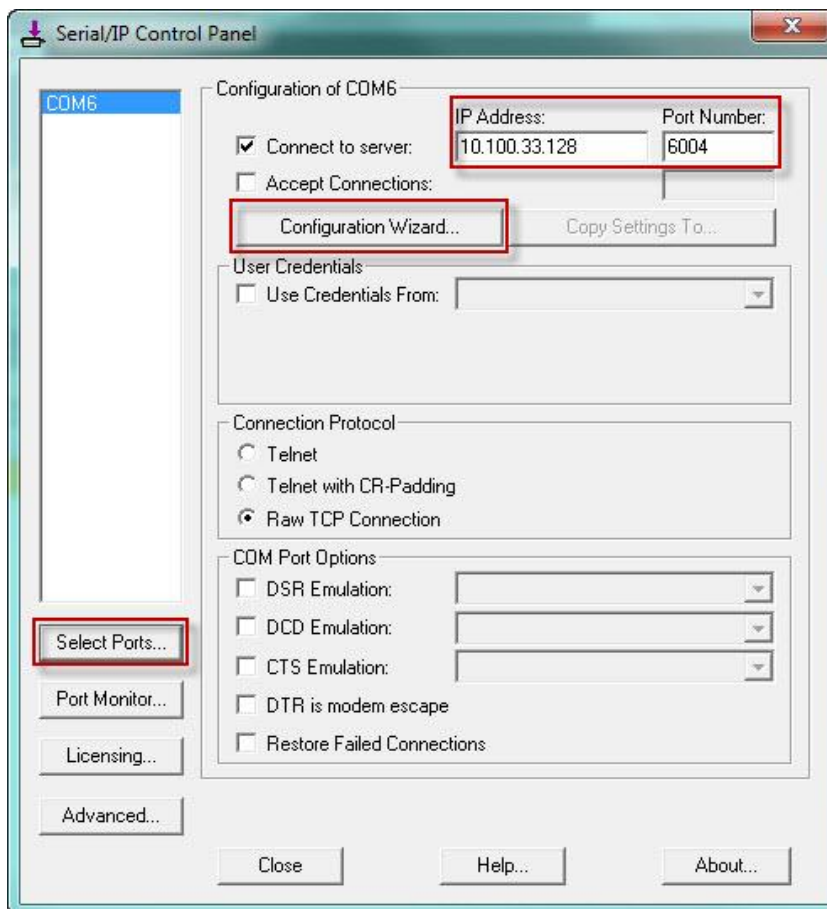


2.3.1 Settings in Serial/IP

Serial / IP is a software program that creates a virtual COM port for Ethernet communications. It can be used in different programming tools for transfer and monitoring of the PLC program via Ethernet.

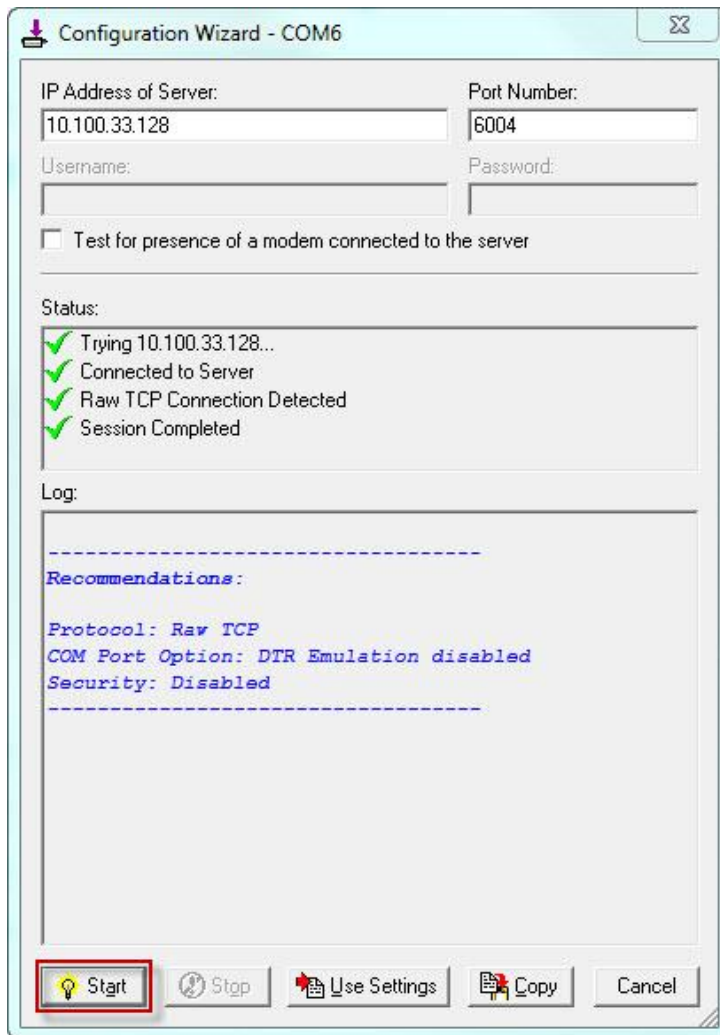
A 30-day trial version can be found on Beijer Electronics website.

- Open *Serial/IP*.
- Enter the terminal IP-address and port number (selected in the routing settings) and select a COM port higher than 5.



- Click on *Configuration Wizard*.

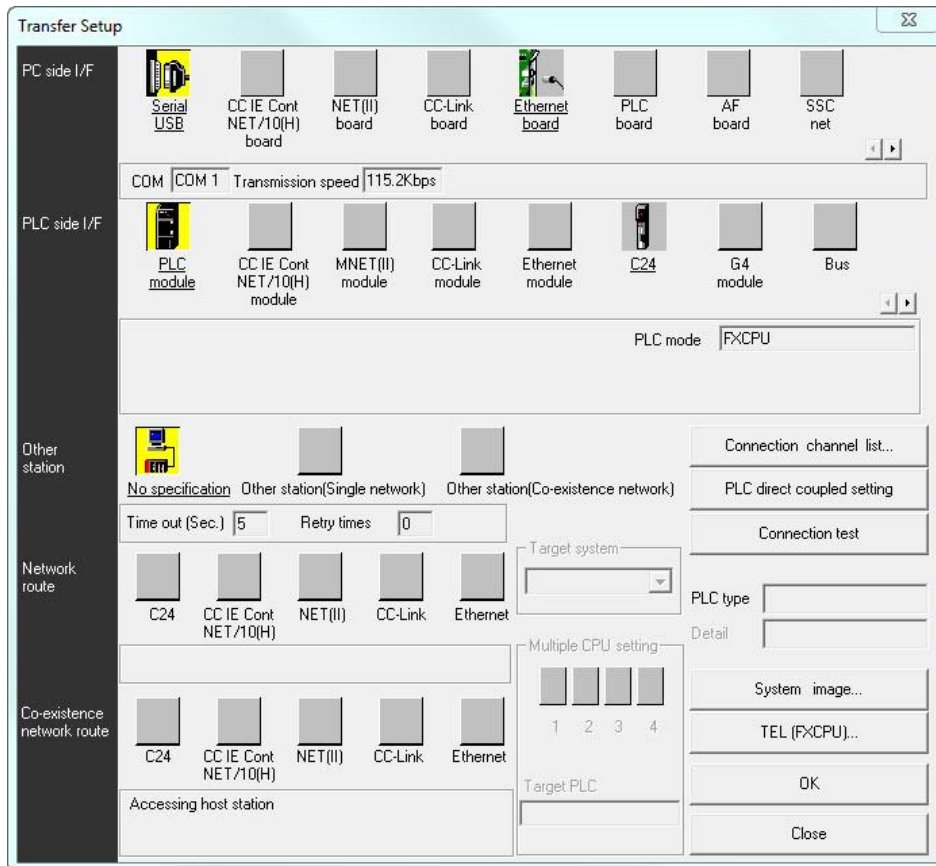
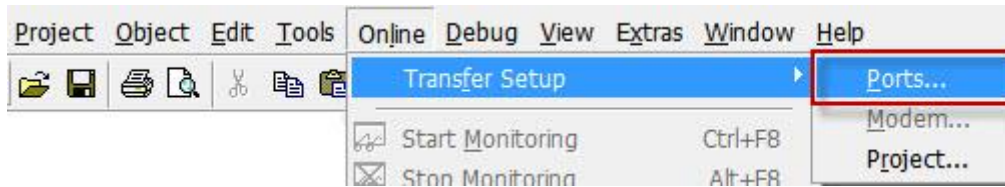
- Click on *Start*.



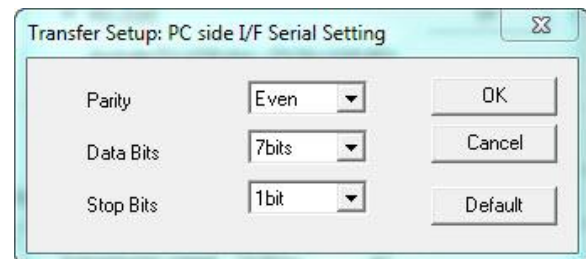
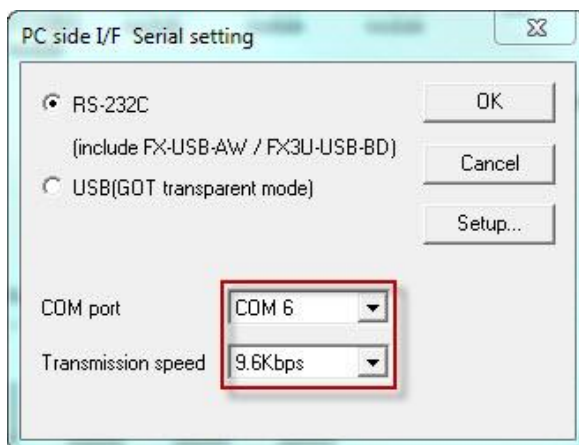
Serial/IP is now connected to the panel.

2.3.2 Settings in GX (IEC) Developer

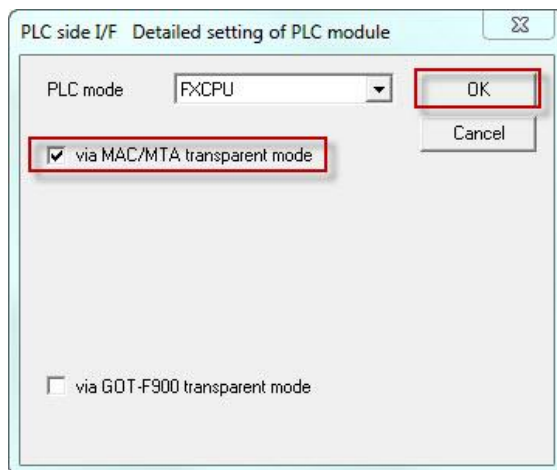
- Click on the menu *Ports* under *Online – Transfer Setup*.



- Double click on *Serial* in the top left corner and select the COM port and transfer speed used in *Serial/IP*. Click on *Setup* and verify the serial setup. Click *OK*.



- Double click on *PLC module* and select via *MAC/MTA transparent mode*. Click *OK*.



- Click on *Connection test*.

The configuration is done!