

# How to Communicate between a PanelView Plus and a MicroLogix

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This technote details how to communicate between a PanelView Plus 1000 and a MicroLogix 1500 LRP.

## Steps:

- Setting up your hardware
- Setting up your MicroLogix
- Setting up your PanelView Plus

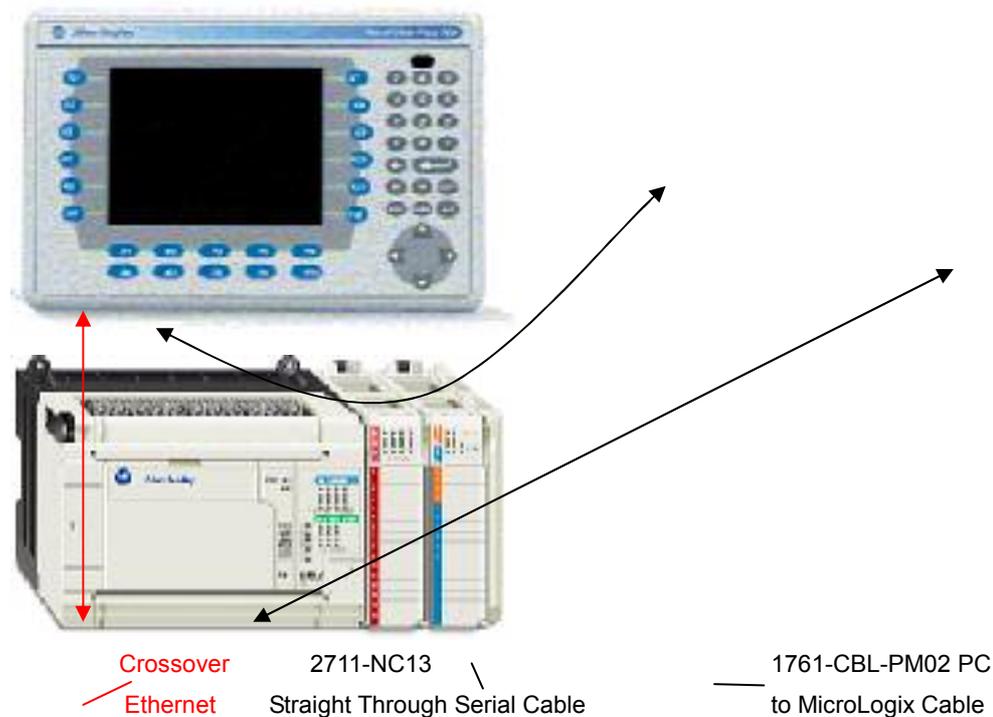
## Setting up your hardware:

This is a recommended configuration of the system, and the one used in this technote.

The parts used in this configuration are:

- 2711P-B10C4B2 PanelView Plus 1000
- 1764-LRP MicroLogix 1500 LRP
- PC with one Ethernet and one COMM port
- Crossover Ethernet cable
- 2711-NC13 Straight-Through RS-232 Serial Cable\*
- 1761-CBL-PM02 PC to MicroLogix Cable

\* Please note that a Straight-Through serial cable must be used to communicate with the COMM port of a PanelView Plus. This is because the PanelView Plus is considered a Data Communication Equipment (DCE) device.





If you want to connect your PanelView Plus to the 8pin mini DIN port (channel 0) found on any of the MicroLogix, then you can use the cable 2711-NC21, which is a 8pin mini DIN to 9 pin D-Shell straight-through cable. This technote uses a MicroLogix 1500 LRP because the two COMM ports of the MicroLogix means the user can go online to the MicroLogix while it is still connected to the PanelView Plus. Please see technote G19107 – “PanelView, MicroLogix & SLC RS232 Cables” for more information on different cabling connections for a MicroLogix and a PanelView Plus.

### **Setting up your MicroLogix:**

#### RSLinx:

- Open RSLinx
- Go to the “Communications -> Configure Drivers...” screen.
- Stop and delete all of your DF1 drivers.
- From the available drivers select RS232 DF1 devices, “Add New...”
- Press the Auto-Configure button then OK.
- You now should have a link to your MicroLogix.

#### RSLogix 500:

- Open RSLogix 500.
- Open the .RSS project you wish to use for your MicroLogix. Or you can use this one.



PANELTST.RSS

(Double click)

- Go to the Comms -> Who Active Go Online dialog, and select the MicroLogix you wish to download to.
- Download your program and go online.
- Leaving the MicroLogix in remote run mode, close RSLogix 500.
- In RSLinx, Go to “Communications -> Configure Drivers...” and Stop the DF1 driver. This allows RSVIEW Studio to communicate with the MicroLogix via its own, built in RSLinx Enterprise.

### **Setting up your PanelView Plus:**

#### PanelView:

- The PanelView Plus needs an IP address in the same subnet as the PC.
- To obtain your PC's IP address, go to “Start -> Run” type “cmd” and press ok. In the command prompt, type “ipconfig” and hit enter. Make a note of your IP address and subnet mask.
- Go to the main configuration screen of your PanelView Plus.
- Hit Terminal Settings -> Networks and Communications -> Network Connections -> Network

Adaptors -> Built in Ethernet Controller. Press the "IP Address" Button.

- IP Address: Same as your PC, EXCEPT for the last number. If there are any other devices on the network, make sure it has a different IP address to these too.
- Subnet Mask: Same as your PC.
- Gateway: Leave as default (0.0.0.0)
- Reset your PanelView Plus to apply the changes to your IP address.

#### RSView Studio:

Open the RSView ME project you wish to use, or create a new one.

- First, set up communications. In the application explorer, double click on "RSLinx Enterprise -> Communication setup".
- Choose the "Create a New Configuration" option.
- Delete any drivers except the Ethernet one.
- Under the Local Tab, create a Serial DF1 driver (right click on the name of your computer and select "Add Driver".)
- Select the Comm port you're using, select "SLC or MicroLogix" under the Device field. Select "auto-Configuration" and hit OK.
- If you open the new driver, you should see our MicroLogix Device. You should also be able to see the PanelView Plus under the Ethernet driver. If not, for either device, check RSLinx has still stopped the driver, check the cabling then check the devices have power. Recheck your IP settings.
- The Local tab is now configured, which has the settings for connecting the PC to the other devices. Now you need to configure the Target tab, which has settings for connecting the PanelView Plus to its devices. Right click on the computer icon of the Target Tab, and select "Add Driver". Use the Serial DF1 driver again. The device is again a SLC or MicroLogix. Use Auto-Configure.
- Unlike the local tab, you have to add devices yourself on the Target tab. Right click on the DF1 driver and select "Add device". The MicroLogix is located under "PCCC DH485 devices -> SLC DH485 Devices -> 1761-xxxx xA MicroLogix 1500 LRP, MicroLogix 1500 LRP". You can call it whatever you want, but unless you changed the node number of the MicroLogix, the node number will still be 1.
- Now we have to create shortcuts, so our program knows how to access its variables. Still in the Communication setup, click the Add button. This adds a shortcut for our application which we can link to different devices. General practice is to give it the same name as you named your processor in RSLogix 500. With the new shortcut selected, also select the MicroLogix in the Target tab. Hit the apply button to save the link. You have to repeat this for the Local tab as well: select your shortcut name and your MicroLogix at the same time then hit Apply then OK.
- In the Application explorer, right click on "Displays" and select "New".
- For the MicroLogix application above, B9:0/0, N7:0, N7:1, N7:2 are the addresses the PanelView wishes to communicate with. Create a Momentary Push Button, two Numeric Input Enables, one Numeric Display, and a Shutdown Button.
- Double Click the Momentary Push Button, select the Connections Tab, and hit the ellipse (...) next to "Value". If "PANELTST" isn't available, right click and select "refresh" from the folders list. Select "PANELTST -> Online -> B9 -> B9:0" from the list. This isn't the exact bit address, so it needs to be edited. Hit OK, and then double click on the "Tag/Expression" info for "Value". Add "/0" to the end of the bit address, making it "{:[PANELTST]B9:0/0}". You can repeat this for the "Indicator"

connection if you want to implement this feature.

- Using a similar process as described in the previous dot point, Add Connections to N7:0 and N7:1 for the two Numeric Input Enables, and a connection to N7:2 for the Numeric Display. To display the Numeric value on the Numeric Inputs, under the “label” tab, select “insert variable -> numeric -> ellipse (...) -> N7:0 -> OK”.
- Hit the Play button to test your screen. The shutdown button shouldn’t do anything in test mode.
- Save the new display as “Main”.
- In the application explorer, double click “Startup”. Select “initial graphic” and then “Main” from the enabled dropdown list.
- From the Menu Bar select “Application -> Create Runtime Application...” and save it as whatever you like.
- Hit the “Transfer Utility” Icon. Select the file you want to download, and from the bottom window select the PanelView from the Ethernet Driver. Hit the Download Button.
- On the PanelView, load the application and run it.
- The RSView ME application that will communicate with the MicroLogix is available here:



Communicating with a MicroLogix.apa (Double-click)