



Where

Automation

Connects.

Technical Note

Connecting EtherNet/IP PanelViews to SLC 5/04 DH+ Processors

Document Code: TN143269-001

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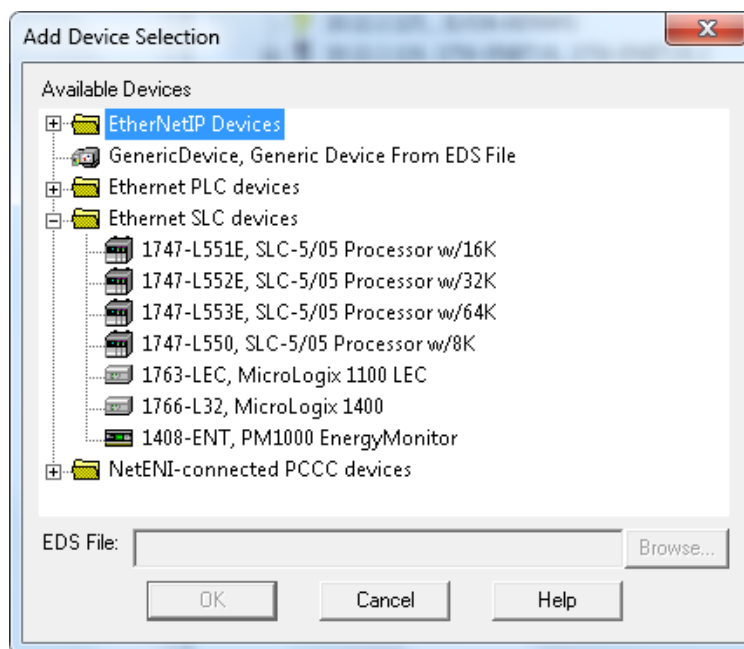
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Intro

ProSoft released a version of the AN-X2-AB-DHRIO gateway that allows users to upgrade/replace their old DH+ PanelViews with newer EtherNet/IP PanelViews. Unfortunately, at its initial release it only worked on PLC5 networks and did not work on SLC networks. Since then we've been working with Rockwell to add some functionality to RSLinx Enterprise (RSLE) to support these SLC networks but it is not yet complete. When it is complete users can get the latest FTVIEW and PanelView firmware and upgrade their terminals without any PLC code change. Until that version is released, and for all previous versions (8.0 and below) we have a solution that will work, but may require a small amount of code change.

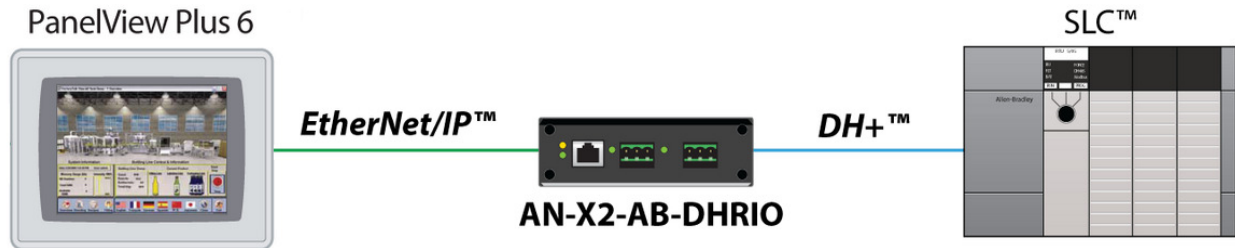
Why it doesn't work

There isn't an SLC 5/04 profile in RSLE.



And if we were to use the SLC 5/05 profile the software and the terminal think they are talking to an SLC 5/05.

When in reality, they are talking EtherNet/IP to our AN-X2-ABDHRIO gateway and DH+ to a SLC 5/04 PLC.



This is where the problem lies. Since the terminal thinks it's talking to an SLC 5/05 it optimizes network traffic by combining all the read messages for the screen in to one single message and this message gets rejected by the 5/04 processor.

Example

There are 3 values on the screen that need to be read; N7:0, N7:100, and N7:200. Instead of sending 3 separate read messages, one large read message for a length of 201 words is sent. When this happens the message fails because the packet is too large for the SLC 5/04 to handle.

Note: if there is a screen with more than 120 consecutive integers written to the SLC, these will need to be broken up in to two or more messages.

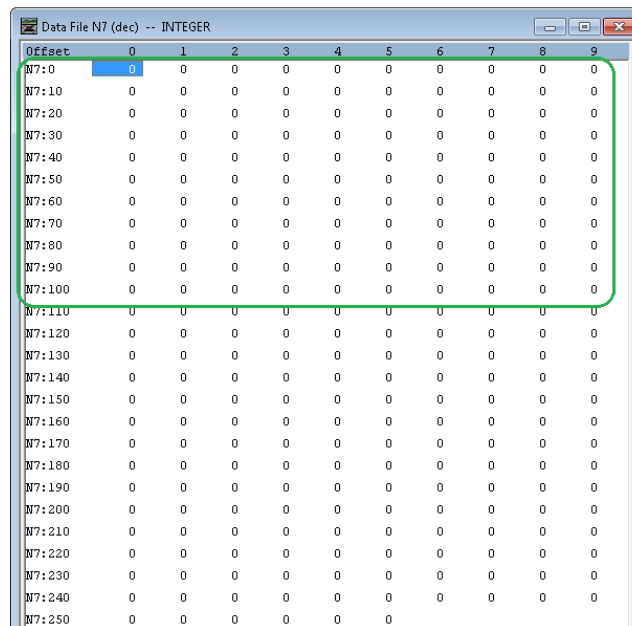
Solution

Follow the user manual to start the module set up. When you get to the section where you define the PLC Processor type, do not use the PLC 5/40C processor type as the manual suggests, instead use the SLC5/05 profile. Next, you'll have to make sure that the objects for any FTVIEW screen configuration do not span more than 120 integers. If they do, you'll need to modify the screen and some of the PLC code to pack all of the reads for each screen in to a 120 word (or less) array.

Example N7:0 – N7:119 **or** N7:135-N7:243. The length of the file numbers on each screen cannot exceed more than 120 contiguous words. If there are not 120 contiguous elements available, then a new file number would need to be created.

Here are some examples of what will work and what will not.

OK

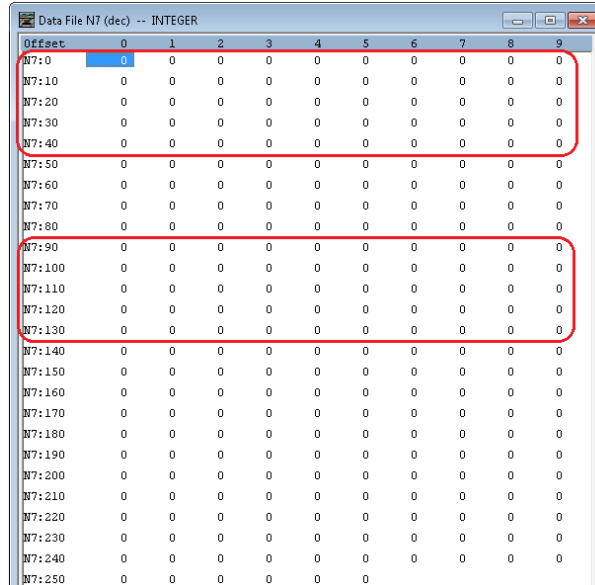


Offset	0	1	2	3	4	5	6	7	8	9
N7:0	0	0	0	0	0	0	0	0	0	0
N7:10	0	0	0	0	0	0	0	0	0	0
N7:20	0	0	0	0	0	0	0	0	0	0
N7:30	0	0	0	0	0	0	0	0	0	0
N7:40	0	0	0	0	0	0	0	0	0	0
N7:50	0	0	0	0	0	0	0	0	0	0
N7:60	0	0	0	0	0	0	0	0	0	0
N7:70	0	0	0	0	0	0	0	0	0	0
N7:80	0	0	0	0	0	0	0	0	0	0
N7:90	0	0	0	0	0	0	0	0	0	0
N7:100	0	0	0	0	0	0	0	0	0	0
N7:110	0	0	0	0	0	0	0	0	0	0
N7:120	0	0	0	0	0	0	0	0	0	0
N7:130	0	0	0	0	0	0	0	0	0	0
N7:140	0	0	0	0	0	0	0	0	0	0
N7:150	0	0	0	0	0	0	0	0	0	0
N7:160	0	0	0	0	0	0	0	0	0	0
N7:170	0	0	0	0	0	0	0	0	0	0
N7:180	0	0	0	0	0	0	0	0	0	0
N7:190	0	0	0	0	0	0	0	0	0	0
N7:200	0	0	0	0	0	0	0	0	0	0
N7:210	0	0	0	0	0	0	0	0	0	0
N7:220	0	0	0	0	0	0	0	0	0	0
N7:230	0	0	0	0	0	0	0	0	0	0
N7:240	0	0	0	0	0	0	0	0	0	0
N7:250	0	0	0	0	0	0				

Offset	0	1	2	3	4	5	6	7	8	9
N7:0	0	0	0	0	0	0	0	0	0	0
N7:10	0	0	0	0	0	0	0	0	0	0
N7:20	0	0	0	0	0	0	0	0	0	0
N7:30	0	0	0	0	0	0	0	0	0	0
N7:40	0	0	0	0	0	0	0	0	0	0
N7:50	0	0	0	0	0	0	0	0	0	0
N7:60	0	0	0	0	0	0	0	0	0	0
N7:70	0	0	0	0	0	0	0	0	0	0
N7:80	0	0	0	0	0	0	0	0	0	0
N7:90	0	0	0	0	0	0	0	0	0	0
N7:100	0	0	0	0	0	0	0	0	0	0
N7:110	0	0	0	0	0	0	0	0	0	0
N7:120	0	0	0	0	0	0	0	0	0	0
N7:130	0	0	0	0	0	0	0	0	0	0
N7:140	0	0	0	0	0	0	0	0	0	0
N7:150	0	0	0	0	0	0	0	0	0	0
N7:160	0	0	0	0	0	0	0	0	0	0
N7:170	0	0	0	0	0	0	0	0	0	0
N7:180	0	0	0	0	0	0	0	0	0	0
N7:190	0	0	0	0	0	0	0	0	0	0
N7:200	0	0	0	0	0	0	0	0	0	0
N7:210	0	0	0	0	0	0	0	0	0	0
N7:220	0	0	0	0	0	0	0	0	0	0
N7:230	0	0	0	0	0	0	0	0	0	0
N7:240	0	0	0	0	0	0	0	0	0	0
N7:250	0	0	0	0	0	0	0	0	0	0

Not Ok

Offset	0	1	2	3	4	5	6	7	8	9
N7:0	0	0	0	0	0	0	0	0	0	0
N7:10	0	0	0	0	0	0	0	0	0	0
N7:20	0	0	0	0	0	0	0	0	0	0
N7:30	0	0	0	0	0	0	0	0	0	0
N7:40	0	0	0	0	0	0	0	0	0	0
N7:50	0	0	0	0	0	0	0	0	0	0
N7:60	0	0	0	0	0	0	0	0	0	0
N7:70	0	0	0	0	0	0	0	0	0	0
N7:80	0	0	0	0	0	0	0	0	0	0
N7:90	0	0	0	0	0	0	0	0	0	0
N7:100	0	0	0	0	0	0	0	0	0	0
N7:110	0	0	0	0	0	0	0	0	0	0
N7:120	0	0	0	0	0	0	0	0	0	0
N7:130	0	0	0	0	0	0	0	0	0	0
N7:140	0	0	0	0	0	0	0	0	0	0
N7:150	0	0	0	0	0	0	0	0	0	0
N7:160	0	0	0	0	0	0	0	0	0	0
N7:170	0	0	0	0	0	0	0	0	0	0
N7:180	0	0	0	0	0	0	0	0	0	0
N7:190	0	0	0	0	0	0	0	0	0	0
N7:200	0	0	0	0	0	0	0	0	0	0
N7:210	0	0	0	0	0	0	0	0	0	0
N7:220	0	0	0	0	0	0	0	0	0	0
N7:230	0	0	0	0	0	0	0	0	0	0
N7:240	0	0	0	0	0	0	0	0	0	0
N7:250	0	0	0	0	0	0	0	0	0	0



Offset	0	1	2	3	4	5	6	7	8	9
N7:0	0	1	1	1	1	1	1	1	1	1
N7:10	0	1	1	1	1	1	1	1	1	1
N7:20	0	1	1	1	1	1	1	1	1	1
N7:30	0	1	1	1	1	1	1	1	1	1
N7:40	0	1	1	1	1	1	1	1	1	1
N7:50	0	1	1	1	1	1	1	1	1	1
N7:60	0	1	1	1	1	1	1	1	1	1
N7:70	0	1	1	1	1	1	1	1	1	1
N7:80	0	1	1	1	1	1	1	1	1	1
N7:90	0	1	1	1	1	1	1	1	1	1
N7:100	0	1	1	1	1	1	1	1	1	1
N7:110	0	1	1	1	1	1	1	1	1	1
N7:120	0	1	1	1	1	1	1	1	1	1
N7:130	0	1	1	1	1	1	1	1	1	1
N7:140	0	1	1	1	1	1	1	1	1	1
N7:150	0	1	1	1	1	1	1	1	1	1
N7:160	0	1	1	1	1	1	1	1	1	1
N7:170	0	1	1	1	1	1	1	1	1	1
N7:180	0	1	1	1	1	1	1	1	1	1
N7:190	0	1	1	1	1	1	1	1	1	1
N7:200	0	1	1	1	1	1	1	1	1	1
N7:210	0	1	1	1	1	1	1	1	1	1
N7:220	0	1	1	1	1	1	1	1	1	1
N7:230	0	1	1	1	1	1	1	1	1	1
N7:240	0	1	1	1	1	1	1	1	1	1
N7:250	0	1	1	1	1	1	1	1	1	1

Why does it work for PLC5's using the ControlNet profile? When using the PLC 5/40C profile, these processors have a DH+ port. When sending DH+ messages, RSLE knows that it's the DH+ protocol and sends messages that adhere to the limitations of DH+.

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