

Technical Note



Migrating 5201-DFNT-104S to the Enhanced PLX32-EIP-104 Gateway module

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Document Brief

This document describes how to migrate an existing 5201-DFNT-104S EtherNet/IP to IEC 60870-5-104 Server module to a new Enhanced PLX32-EIP-104 module. The document will illustrate the steps involved in converting the current configuration files to configuration compatible with the PLX32-EIP-104 module.

The PLX32-EIP-104 module is designed to perform as a drop in replacement for the legacy 5201-DFNT-104S module. As such, no code or configuration changes are required to replace a legacy 5201-DFNT-104S module with an Enhanced PLX32-EIP-104 module.

The main differences between the 5201-DFNT-104S module and the Enhanced PLX32-EIP-104 module are as follows:

- 1) Configuration and Debug on the PLX32-EIP-104 is done via an Ethernet connection to the module instead of via an RS232 serial port connection that was available on the 5201-DFNT-104S.
- 2) The PLX32-EIP-104 module has 2 Ethernet ports, allowing for the option to configure the module to operate on dual subnets (EtherNet/IP on one IP address, IEC 60870-5-104 on another), or both protocols on the same Ethernet port or IP address.
- 3) The module now accepts multiple redundant connections (3) to the server for the IEC 60870-5-104 communication network.
- 4) The module now accepts Class 1 I/O connections on the EtherNet/IP communication network.

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I. What you will need...

1. A Computer with the following applications installed:
 - a. ProSoft Configuration Builder, version 4.5.0.0 or higher
2. 5201-DFNT-104S Configuration file.
 - a. An offline version of the file saved on a PC can be used
 - b. If you need to upload the configuration file from a module you will need a Serial Debug port connecting cable – This is a combination of ProSoft Cable#9, Cable#15 (supplied with 5201-DFNT-104S at time of purchase) and an RS232-USB Conversion cable (if PC does not have a built in RS-232 Serial port).

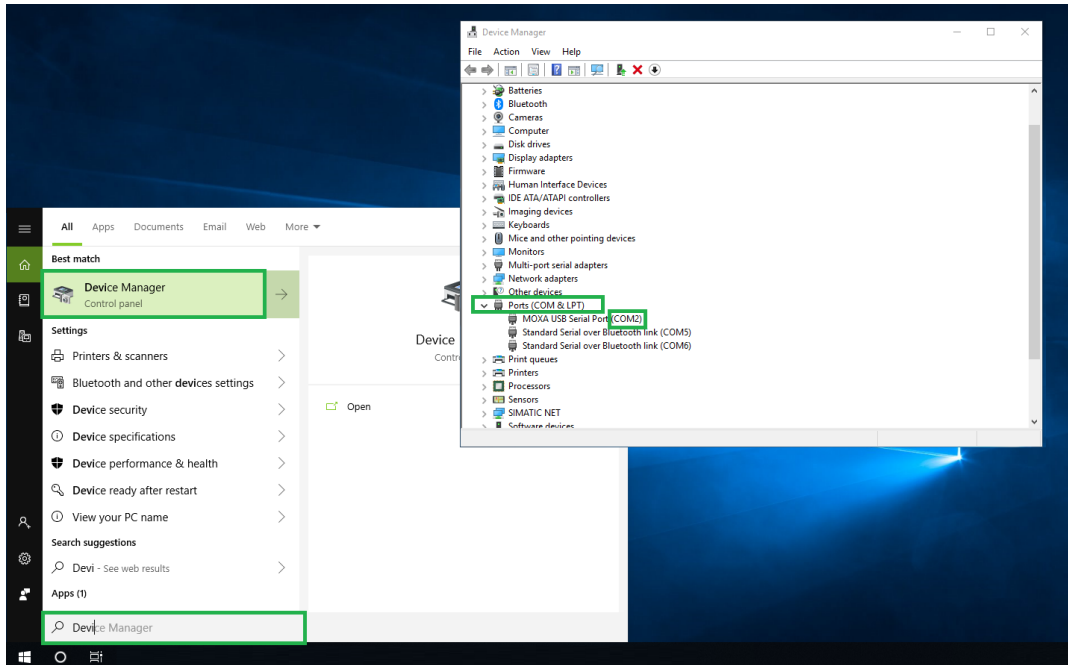


II. Obtain Configuration file for 5201-DFNT-104S module

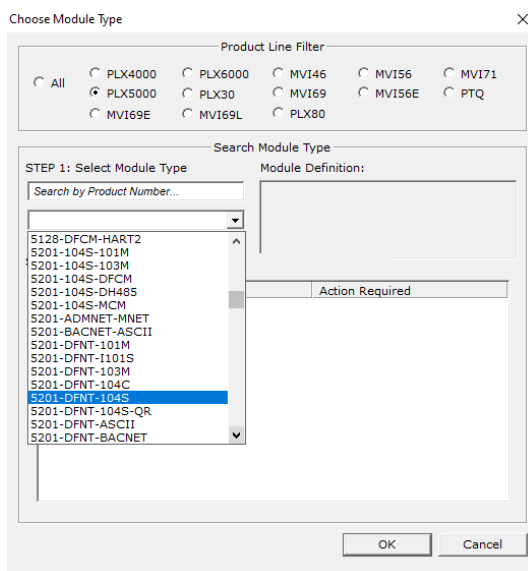
To convert from the 5201-DFNT-104S module to the PLX32-EIP-104 module, you will need to open the configuration file in ProSoft Configuration Builder (PCB). If you have the current offline configuration file for the 5201-DFNT-104S module, you may move on to the next step, however if you wish to upload the configuration file from a module follow the below described steps.

Connect one end of Cable#9 to the Debug Port of the 5201-DFNT-104S module and connect the USB end of the RS232-USB converter to your PC.

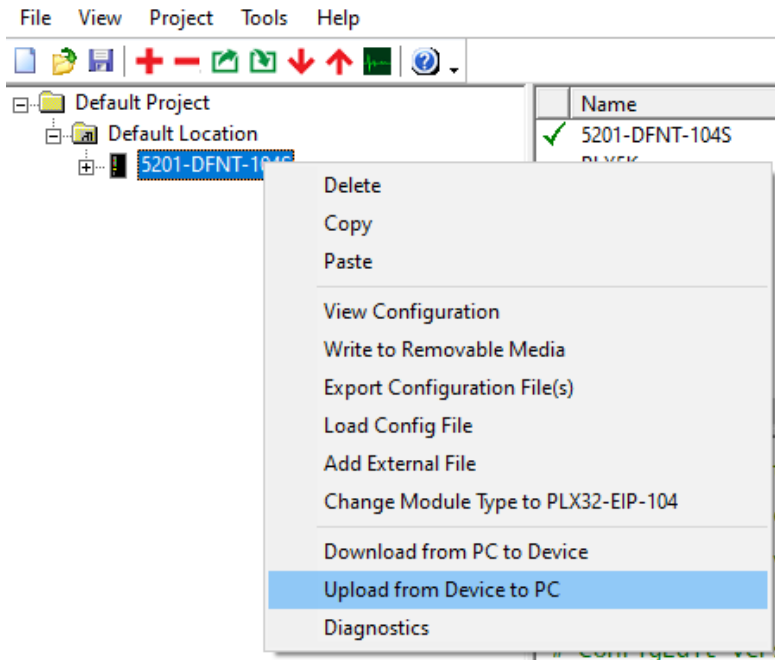
If you need to know what COM port is being used by your PC you can look in the device manager and it will show you the COM port being used, as shown below:



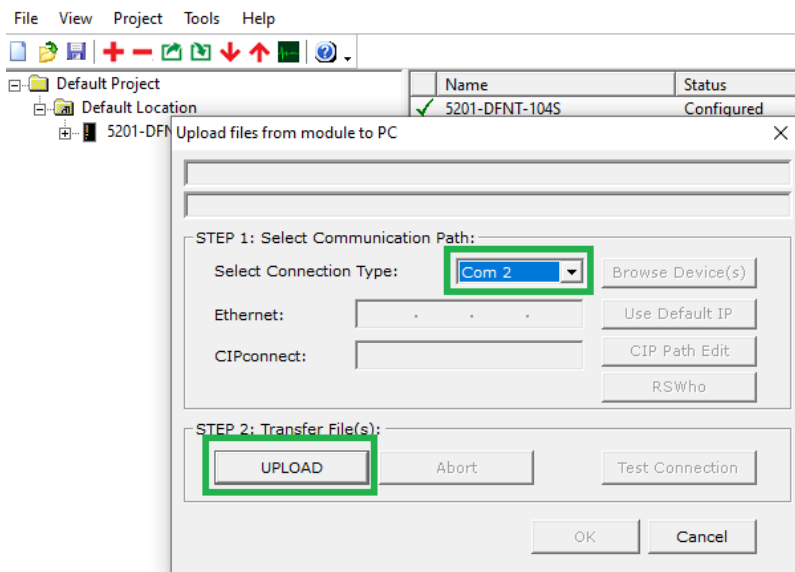
Startup ProSoft Configuration Builder (PCB), select the 5201-DFNT-104S module from the select module tree.



Once you have the module selected, right click the module name and select “Upload from Device to PC” from the pop-up tree.



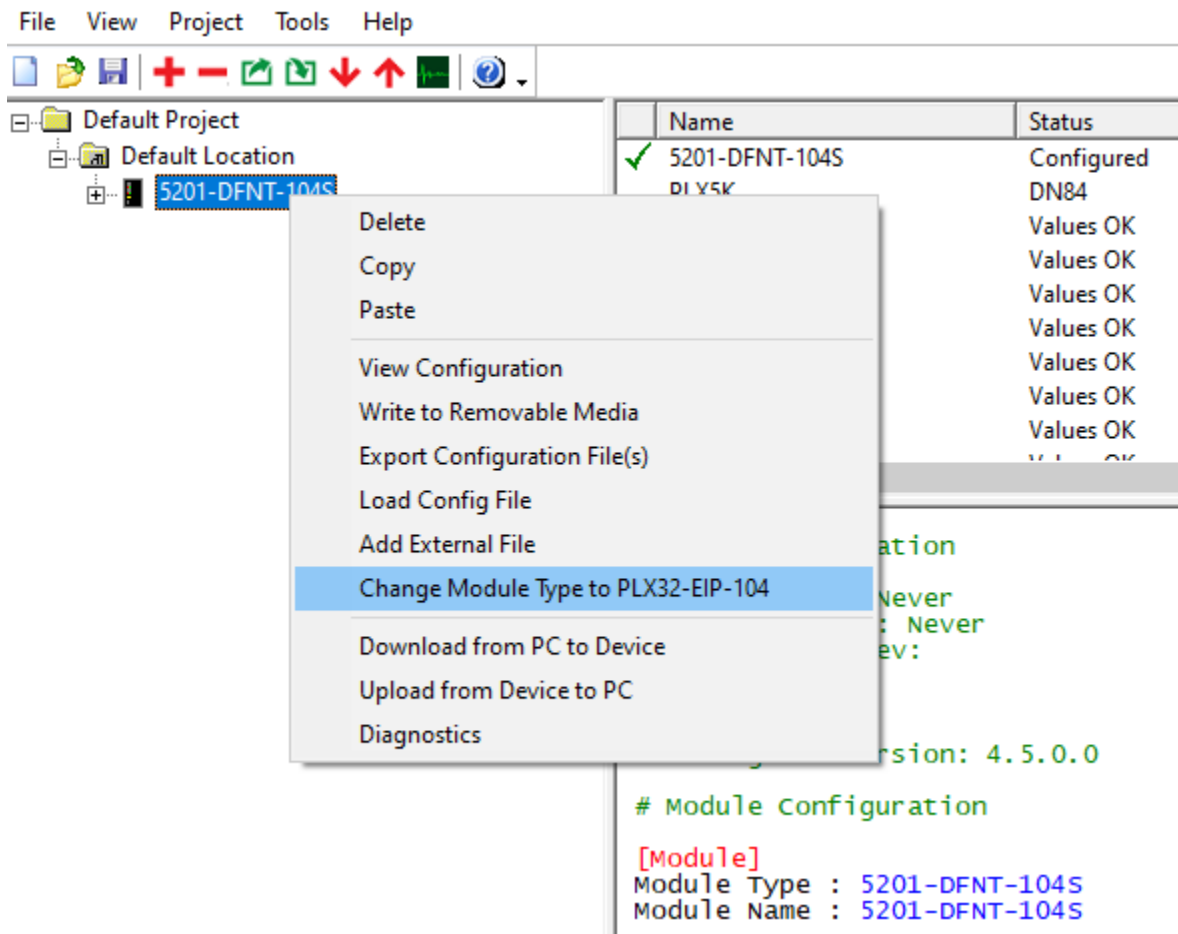
From the window below, check the com port and select “UPLOAD”



This will upload the configuration from the 5201-DFNT-104S module. Now would be a good time to “Save” the PCB file (or .ppf file).

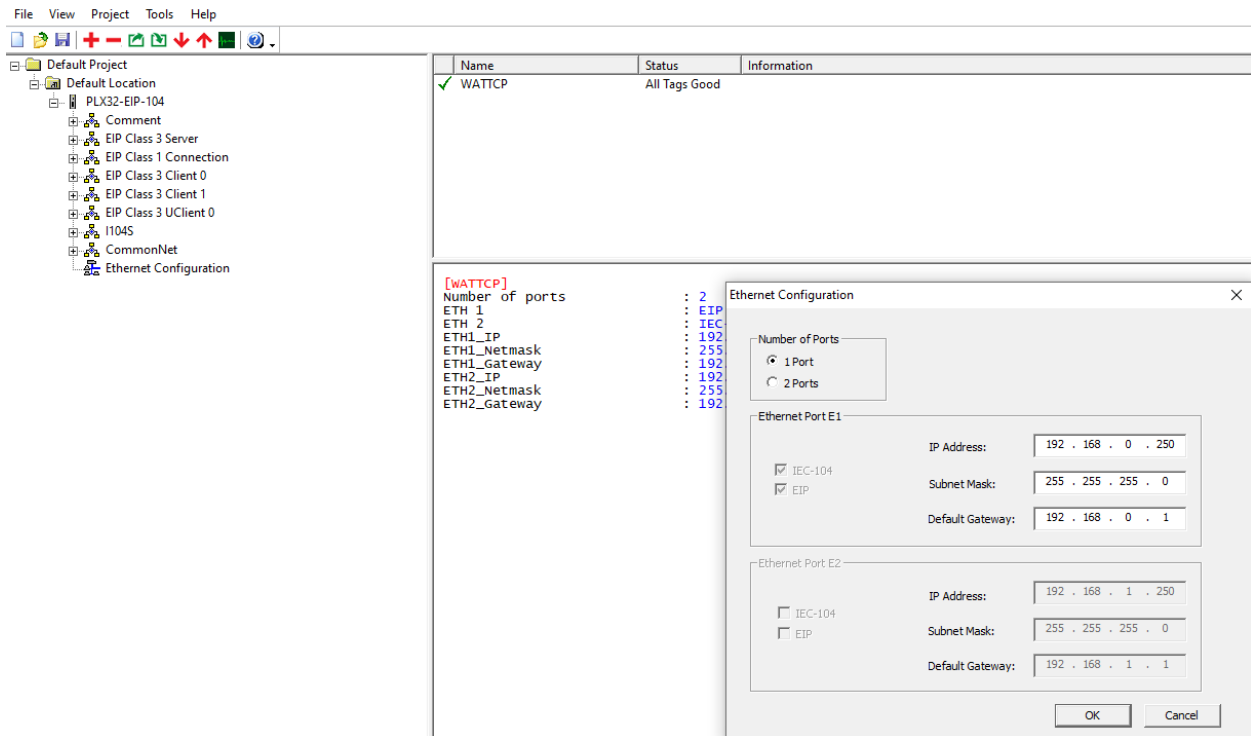
III. Convert 5201-DFNT-104S configuration to PLX32-EIP-104

To convert the configuration file from you 5201-DFNT-104S simply open the configuration file in version 4.5.0.0 (or greater) of PCB, select the module and right mouse click. Select "Change Module Type to PLX32-EIP-104" as shown below



This will automatically convert the configuration file to the PLX32-EIP-104.

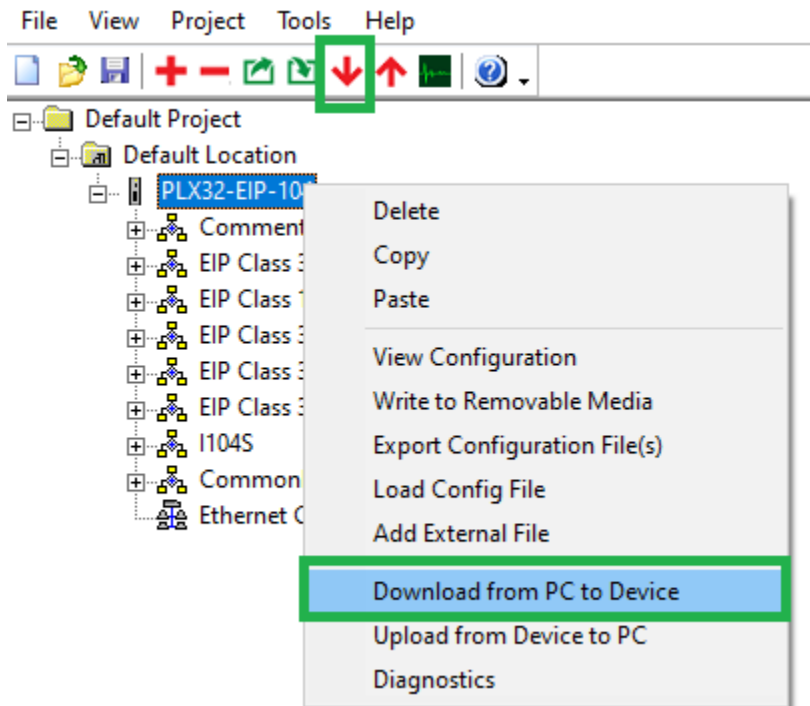
The configuration of the Ethernet port of the PLX32-EIP-104 module should automatically be converted over from the 5201-DFNT-104S project folder and will now be shown in the “Ethernet Configuration” tab as shown below:



The PLX32-EIP-104 module uses this IP address for downloading of the configuration file and diagnostics as well as communication with Ethernet devices. The default IP address of the module is the 192.168.0.250 as shown above.

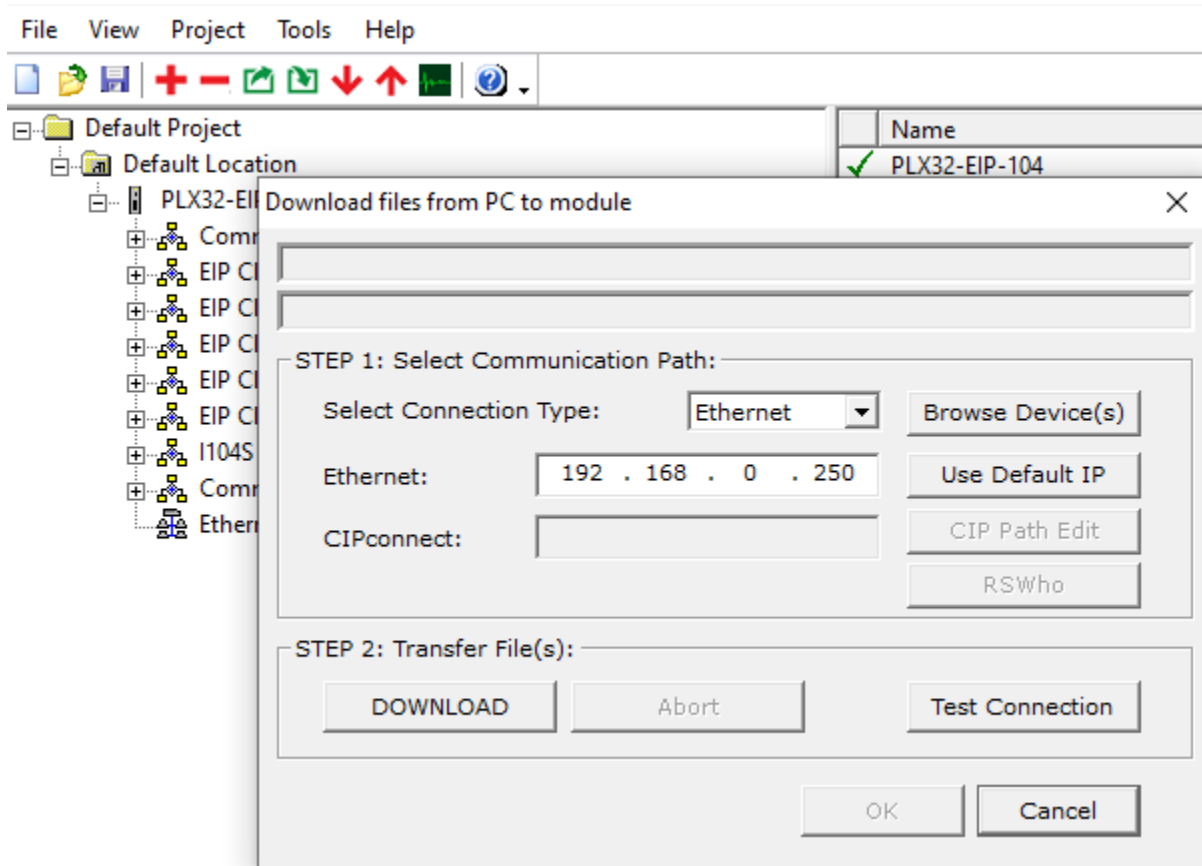
IV. Download Configuration file to PLX32-EIP-104 module

You can now download the new configuration file to the module. Select the module and right mouse click to bring up the following window:



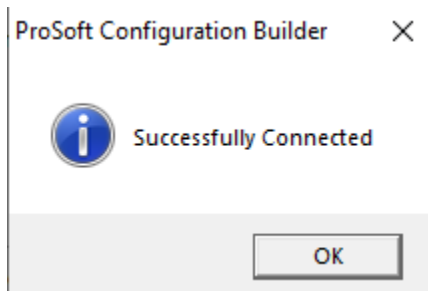
(NOTE: Instead of right mouse click you can also select the download shortcut from the toolbar menu also shown above).

You will see the following window:

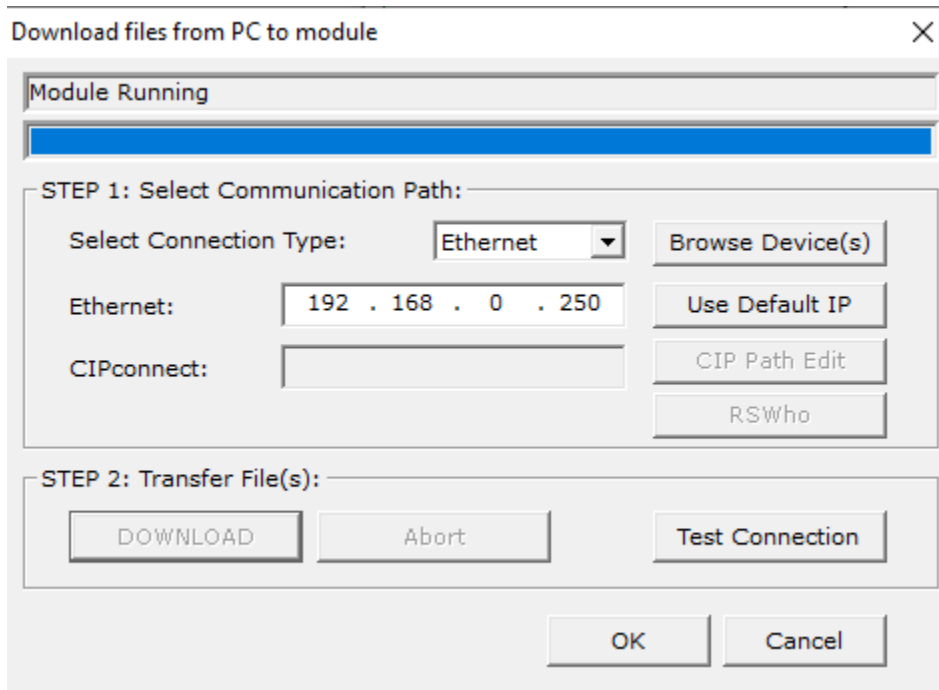


If the module is factory defaults and you are changing the IP address of the module you can select the “Use Default IP” and this will copy the default IP address to the Ethernet settings.

Test Connection will give you the following if you are successfully able to talk to the module:



When successfully connected you can download the file to the module. When complete you will see the following:



Your module has now been configured and the legacy 5201-DFNT-104S has now been converted over to the Enhanced PLX32-EIP-104 module.