

# Migrating 5201-MNET-104S to the Enhanced PLX32-MBTCP-104 Gateway module

Document Code: TN-PLX32-MBTCP-104 Date: September 30<sup>th</sup>, 2020 Revision: 1.00

**Document Brief** 

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

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

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

- 1) Configuration and Debug on the PLX32-MBTCP-104 is done via an Ethernet connection to the module instead of via an RS232 serial port connection that was available on the 5201-MNET-104S.
- The PLX32-MBTCP-104 module has 2 Ethernet ports, allowing for the option to configure the module to operate on dual subnets (Modbus TCP/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 Modbus TCP/IP Client driver now supports up to 10 client socket connections

## How to Contact Us

Asia Pacific Regional Office +60.3.7941.2888 support.ap@prosoft-technology.com

North Asia (China, Hong Kong) +86.21.5187.7337 support.ap@prosoft-technology.com Europe/Middle East/Africa Regional Office

+33.(0)5.34.36.87.20 support.emea@prosoft-technology.com

Latin America Regional Office +52.222.264.1814 support.la@prosoft-technology.com North America Corporate Office +1.661.716.5100 support@prosoft-technology.com



### 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-MNET-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-MNET-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-MNET-104S module

To convert from the 5201-MNET-104S module to the PLX32-MBTCP-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-MNET-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-MNET-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-MNET-104S module from the select module tree.

noose Mod	lule Type						
			- Produ	ct Line Filter			
			Produ	ict Line Filter			
	O PLX4000	O P	LX6000	O MVI46	C MVI56	O MVI71	
O All	PLX5000	0	1 X 30	C MVI69	C MVI56E	C PTO	
	Charles	2	0,000	C DI YOO			
	O MATRAE	- U P	IV169L	V PLXOU			
			Search	Module Type -			
STED 1	Soloct Module T			Module Definit	ion		
31LF 1.	Select Module 1	ype			1011.		_
Search L	y Product Numbe	r					
_							
			-				
5201-DF	NT-ISDA		~				
5201-DF	NT-MCM						
5201-D	IDENET 102M						
5201-DI	VPSNET-DECM			Acti	on Required		T
5201-D	VPSNET-DH485						1
5201-DI	VPSNET-MCM						
5201-M	VET-I101S						
5201-M	VET-103M						
5201-M	NET-104C		_				
5201-M	VET-ASCII						
5201-M	VET-BACNET						
5201-M	NET-BSCH						
5201-M	NET-DFCM						
5201-M	NET-DFNT		~				
						1	
					ОК	Cancel	



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

File View Project Tools	Help				
📄 🤌 🖩 🕇 🕂 🖄	↓ ↑  □				
E- Default Project					
🗄 🔚 Default Location					
<u>⊕</u> <u>5201-MNET 10.0</u>	Delete				
	Сору				
	Paste				
	View Configuration				
	Write to Removable Media				
	Export Configuration File(s)				
	Load Config File				
	Add External File				
	Change Module Type to PLX32-MBTCP-104				
	Download from PC to Device				
	Upload from Device to PC				
	Diagnostics				

From the window below, select the com port and select "UPLOAD"

<u> </u>			Name
🖻 📠 Default Locatio	n	√	5201-MNET-104S
🗄 📔 5201-MN U	pload files from module to PC		
1	STEP 1: Select Communication	n Path:	
	Select Connection Type:	Com 2 💌	Browse Device(s)
	Ethernet:		Use Default IP
	CIPconnect:		CIP Path Edit
			RSWho
	-STEP 2: Transfer File(s):		
		Abort	Test Connection
	UPLOAD		

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



#### III. Convert 5201-MNET-104S configuration to PLX32-MBTCP-104

To convert the configuration file from you 5201-MNET-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-MBTCP-104" as shown below

File View Project Tools Help		
🗋 🤌 🖩 🕇 🗕 🖄 🕐 🛧 🚾 🥘 -		
🖃 💼 Default Project	Name	Status
🗄 📠 Default Location	✓ 5201-MNET-104S	Configured
S201-MNET 1000     Delete     Copy     Paste     View Configuration     Write to Removable Media     Export Configuration File(s)     Load Config File	MNET Client 0 1104S CommonNET WATTCP	NI4S Values OK Values OK Values OK Values OK Values OK
Add External File	dule Infor	mation
Change Module Type to PLX	(32-MBTCP-104 ast change:	Never
Download from PC to Devic Upload from Device to PC Diagnostics	e st Downloa plication S Rev: Dader Rev: C Address:	d: Never Rev: Version: 4.5.0.0
	# Module Confi [Module] Module Type : Module Name :	guration 5201-MNET-1045 5201-MNET-1045

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



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



The PLX32-MBTCP-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-MBTCP-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:

📄 Default Project			1	Name	_
🖻 📠 Default Locatio	n		1	PLX32-MBTCP-104	
🖻 🖬 PLX32-M D	ownload files from PC to	module			>
🗄 💑 Comr					
🗄 💑 MBTC					_
⊕ 💑 MBTC					
i MBTC	-STEP 1: Select Comm	unication Path:			
	Select Connection 1	Type: Ethorpot	-	Browso Dovice(a)	
	Select Connection	jetnemet	<u> </u>	Browse Device(s)	
H. S. MBIC	Ethernet:	192 . 168 . 0 . 2	50	Use Default IP	
	CIPconnect:			CIP Path Edit	
i∃ <mark>&amp;</mark> MBTC	1			RSWho	
+	-STEP 2: Transfer File(	s):			
⊡ 💑 Comr	DOWNLOAD	Abort		Test Connection	
्र Ether					

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:

ProSoft Configuration Builder		
Successfully Connected		
ОК		



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

Download files from PC to module					
Module Running					
STEP 1: Select Communication Path:					
Select Connection	Type: Ethernet 💌	Browse Device(s)			
Ethernet:	192 . 168 . 0 . 250	Use Default IP			
CIPconnect:		CIP Path Edit			
		RSWho			
STEP 2: Transfer File(s):					
DOWNLOAD	Abort	Test Connection			
	OK	Cancel			

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