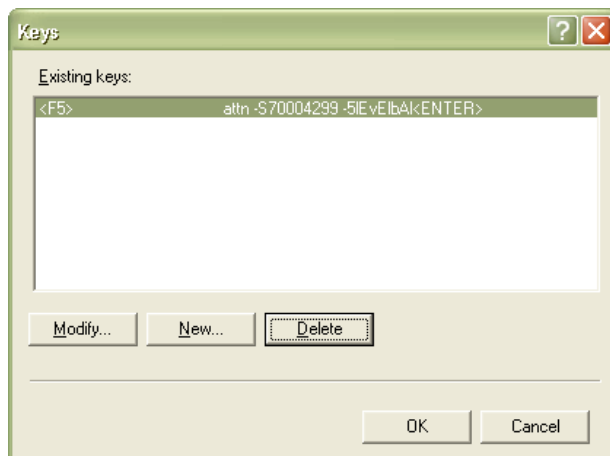


460MX Gateway User Guide (QuadLogic Meters to BACnet/IP Client)

The 460MX Gateway allows you to manipulate data, moving it bi-directionally across devices with different protocols. In our case the Gateway device will move the data bi-directionally between the Modbus and the BACnet protocols. In order for this to happen, we will have to activate Modbus in the meter and make sure it is working properly. Here are the steps to activating Modbus in QuadLogic meters.

1. Verify if the meter is in Hunt mode by looking at Serial # Registers in the LCD screen of the meter.
2. Using HyperTerminal Private Edition, go to View->Key Macros. Establish a new function key to login into the meter. The login syntax is “attn -S7000##### -5IEvElbAl”, where 7000##### is the serial number of the meter.

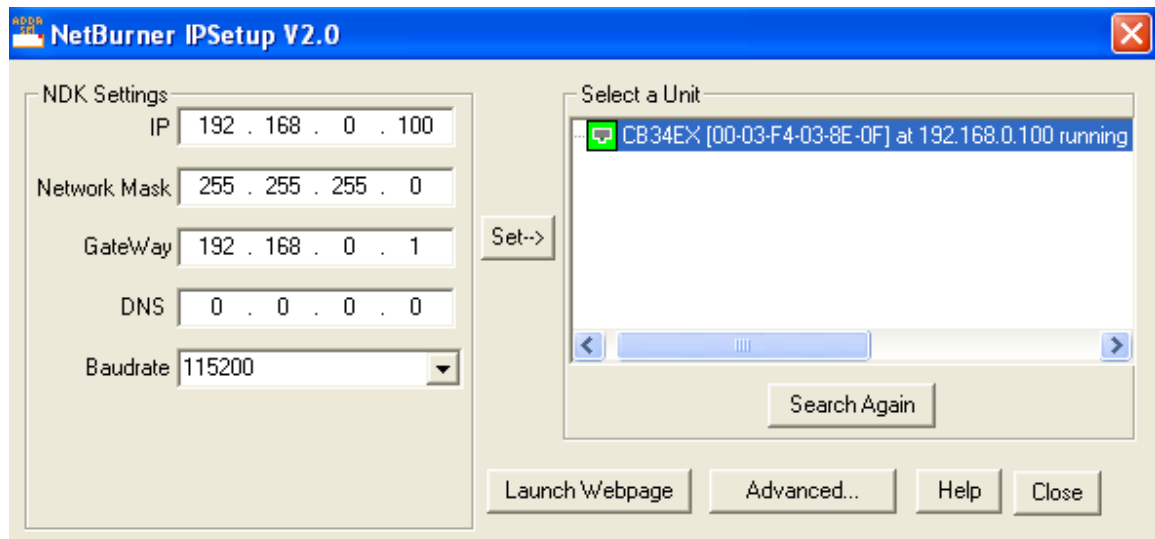
Note: You may download HTPE at this site: <http://www.hilgraeve.com/hpte/download.html>



3. Press the connect button in your HyperTerminal session. Start pressing the function key that will log you in the meter. Since the meter is on Hunt mode, it will scan through the 9600, 19200, and 38400 baud rates. Once it gets to 19200, you will be able to login when your function key is pressed.
4. Once logged in, change the poll address (modbus ID number) of the meter to the desired poll address by typing in “attn -p###<enter>” in the CIP# prompt, where ### is the desired poll number. Save the change by typing in “attn -W1234<enter>”. Type in “attn -d<enter>” to verify the Modbus address.
5. Change the baudrate of the meter to 19200 by typing “stty 19200<enter 2x>” at the CIP# prompt. To activate modbus, type in “stty -M1<enter 2x>”. Save the changes by typing “stty -W1234<enter 2x>”. To check if the meter is set to 19200, type in “stty” and you should see a line saying “hold 19200 baud 8 bits no parity no echo no modem modbus”.
6. Type in “halt” at the CIP# prompt. This should restart the meter with the new setting.
7. Exit out of the meter by typing attn or exit.
8. Follow the same procedures for the other meters.

After verifying that the Modbus is working properly, you need to configure the Gateway. But before you can configure the Gateway itself you must configure the network settings to connect the Gateway. The following steps will connect the Gateway properly.

- 1- Connect the 7-30 Vdc power source to the device.
- 2- Using the crossover cable connect the device to the PC.
- 3- Insert the provided CD-ROM.
- 4- Run the **IPSetup** program from the CD-ROM.



- 5- Configure the **IP Address** for your subnet.
- 6- Click **Set**.
- 7- Click **Launch Webpage**. The main page should then appear.



**REAL
TIME
AUTOMATION**

Part # 460MX

RTA 460 EDX Gateway

Revision 1.11.10

Status and Summary

Visualization

Utilities

Description	MC-5c	Edit
460MX Network Settings	IP address: 192.168.0.100 Subnet mask: 255.255.255.0 Default gateway: 192.168.0.1 MAC address: 00-03-F4-03-8E-0F	Edit
Selected Communication Modules	Modbus RTU Master RS-485 Full Duplex (4 wire) on Port 0 19200 baud, no parity, 8 data bits, 1 stop bit BACnet IP Server Device Instance: 50 Device Name: power meter 1 Description: Location: Number of Objects to Expose: AI: 0, AO: 0, BI: 0, BO: 0	Edit
Server Module Configuration	BACnet IP Server No configurable parameters	Edit
Client Module Configuration	Modbus RTU Master 2 devices configured	Edit

Adding Master Modules(Quadlogic Meter):

- 1- From the main page, click **Edit** in **Client Module Configuration** row.
- 2- There are multiple options for external devices.
- 3- Select [Add QuadLogic MiniCloset-5 Multi-Tenant Meter or Add QuadLogic Single Meter] from the list of devices.

RTA 460MX - External Device Configuration

[Main Page](#)

Master and Client Module Remote Device List

- [Add EATON IQ 250/260 Power Meter](#)
- [Add Janitza UMG96S Power Meter](#)
- [Add Carlo Gavazzi WM14 Power Meter](#)
- [Add PowerLogic 820U Power Meter](#)
- [Add QuadLogic MiniCloset-5 Multi-Tenant Meter](#)
- [Add Generic Remote Modbus RTU Slave](#)

- 4- Enter a name for the device in the **device label** field to help distinguish between multiple devices.
- 5- In the **slave address** (the poll address) enter the address that corresponds to your Modbus Slave device.

Verifying Application Parameters

- 1- On the Main Page click on the **status and Summary** button located on the left hand side of the screen.
- 2- The 460MX device Summary and status page will be shown.

Device: Device 5 - Modbus RTU Master, Slave 25 - QuadLogic MC5

Show:

- Summary
- Status
- Only Non-Zero Values

[Main Page](#)

[Refresh](#)

[Reset Status Counters](#)

Device Status					
Program		Description	Value Dec	Value Hex	Explanation
Addr	Tag				
%IW1496		StatusBits	49152	C000	Enabled Connected
%IW1497		IncomingReadMsgCount	168	A8	
%IW1498		IncomingWriteMsgCount	0	0	
%IW1499		OutgoingMsgCount	0	0	
%IW1500		TimeoutMsgCount	0	0	

Input Buffer Area					Output Buffer Area				
Program		Reg#	Value Dec	Value Hex	Program		Reg#	Value Dec	Value Hex
Addr	Tag				Addr	Tag			
%IW1506		40001	693731585	2959 FFFF8101					
%IW1508		40003	693731585	2959 FFFF8101					
%IW1510		40005	20330794	0136 392A					
%IW1512		40007	20330794	0136 392A					
%IW1514		40009	1258291225	4B00 0019					
%IW1516		40363	117.550	42EB 19A6					
%IW1518		40365	117.488	42EA FA11					
%IW1520		40367	117.549	42EB 190C					
%IW1522		40355	59.980	426F EC07					
%IW1524		40363	117.550	42EB 19A6					
%IW1526		40365	117.488	42EA FA11					
%IW1528		40367	117.549	42EB 190C					
%IW1530		40369	117.550	42EB 19A6					
%IW1540		40379	117.488	42EA FA11					

- 3- The device drop down menu allows you to switch between the different devices and display their status.
- 4- Under “**show**” you can choose to show only values that are greater than zero. Summary should be left unchecked, as this feature has not yet been implemented.

If the device is not physically connected correctly or if the device parameters are incorrect the **Device Status** will display **Enable Not Connected**.

