The HeatNet[™] Bridge is an OEM product called a ProtoCessor manufactured by FieldServer. The bridge comes pre-configured to correctly map the native Modbus registers to the appropriate protocol (BACnet, LonWorks, etc.). Every control network requires that each device have a unique address (IP, MAC, BACnet Node ID, etc.). The network is usually designed by a controls contractor and thus, we have no way of knowing the device addressing scheme being used. For this reason, it may be necessary to program the device in the field. The steps required are outline below.

This document assumes that you have a standalone (not connected to a network) computer (Desktop or Laptop) with an Ethernet network card. You will also need an Ethernet cable, the *RUIPING* utility, and the *RUINET* utility. The *RUIPING* and *RUINET* applications can be downloaded from the Literature Library on the HeatNet[™] product website (Hydrotherm, RBI, etc), or directly from the ProtoCessor web site (www.protocessor.com).

The ProtoCessor is shipped with a default IP address 192.168.1.24. The subnet mask is 255.255.255.0. You need to configure your computer so that it is on the same IP network as the ProtoCessor. The required steps are outlined in the following sections for Microsoft Windows 2000 and Windows XP. If you have already changed the IP Address and/or Subnet Mask, you will need to use the appropriate values. If you have forgotten, misplaced, or lost the correct IP Address and Subnet Mask, please consult the "Finding a Lost HeatNet™ Bridge" technical bulletin.

Windows 2000

Open the "*Windows Control Panel*" (Start->Settings->Control Panel) and double click "*Network and Dial-up Connections*" as shown in Figure 1 to open up the "*Network and Dial-up Connections*" window.

🐼 Control Panel			
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ool:	; <u>H</u> elp	<u></u>	
🖛 Back 👻 🤿 👻 🔂 🔞 Search	🖺 Folders - 🧭 🛯 🚰 👫 🗙 🔊 🗌	⊞ ▼	
Address 🗟 Control Panel			
	Name 🔺	Comment	
	🇳 Folder Options	Customizes the display of files and I	
	🛃 Fonts	Displays and manages fonts on you	
Control Panel	& Gaming Options	Adds, removes, or changes setting:	
	🦉 Internet Options	Configure your Internet display and	
Network and Dial-up Connections	; ঠ Java Plug-in	Java Plug-in Control Panel	
Connects to other computers, networks, and the Internet	∰Keyboard	Customizes your keyboard settings	
networks, and the internet	🧼 Mail	Microsoft Office Outlook Profiles	
Windows Update	O Mouse	Customizes your mouse settings	
Windows 2000 Support	Network and Dial-up Connections	Connects to other computers, netw	
	p Manager روج 🖉 NVIDIA nView De	NVIDIA nView UI control panel prop	
	Phone and Modem Options	Configures your telephone dialing re	
	unitary and the second	Configures energy-saving settings I	
	Printers	Adds, removes, and configures loca	
	QuickTime	Configures QuickTime software and 🖵	
	₹		
Connects to other computers, networks,	and the Internet	🖳 My Computer 🛛 🏼 🎢	

Figure 1 - Windows 200 - Control Panel

Right click on *"Local Area Connection"* and choose properties as shown in Figure 2 to open the *"Local Area Connection Properties"* dialog.

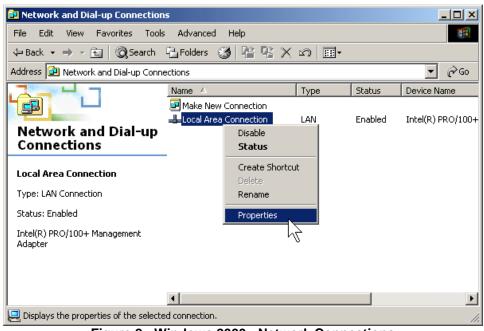


Figure 2 - Windows 2000 - Network Connections

Select *"Internet Protocol (TCP/IP)"* and click the *"Properties"* button as shown in Figure 3 to open the *"Internet Protocol (TCP/IP) Properties"* dialog.

ocal Area Connection Properties		? ×
General		
Connect using:		
Intel(R) PRO/100+ Manageme	ent Adapter	
		<u>C</u> onfigure
Components checked are used by th	is connection:	
Eile and Printer Sharing for M Sinternet Protocol (TCP/IP)	icrosoft Network	(5
Install Uninsta	ill F	
Transmission Control Protocol/Inte wide area network protocol that pr across diverse interconnected net	ovides commun	
Sho <u>w</u> icon in taskbar when conn	ected	
	ОК	Cancel

Figure 3 - Windows 2000 - Connection Properties

Write down the current settings so that they can be restored when you are no longer connected to the ProtoCessor. Choose *"Use the following IP address"*, set the *"IP Address"* to 192.168.1.99, and set the *"Subnet Mask"* to 255.255.255.0 as shown in Figure 4. Click the *"OK"* button to save your changes.

Internet Protocol (TCP/IP) Propert	ties ? 🗙
General	
You can get IP settings assigned aut this capability. Otherwise, you need to the appropriate IP settings.	
O <u>O</u> btain an IP address automatic	ally
$\neg \odot$ Use the following IP address: –	
IP address:	192.168.1.99
S <u>u</u> bnet mask:	255 . 255 . 255 . 0
Default gateway:	· · ·
C Obtain DNS server address aut	comatically
☐ Use the following DNS server a	addresses:
Preferred DNS server:	
<u>A</u> lternate DNS server:	· · ·
	Ad <u>v</u> anced
	OK Cancel

Figure 4 - Windows 2000 - TCP/IP Properties

Close all remaining dialogs and windows that were opened following the instructions in this section. Proceed to the *"Connecting the ProtoCessor"* section below.

Windows XP

Open the "Windows Control Panel" (Start->Control Panel) and double click "Network and Dial-up Connections" as shown in Figure 5. to open up the "Network Connections" window.

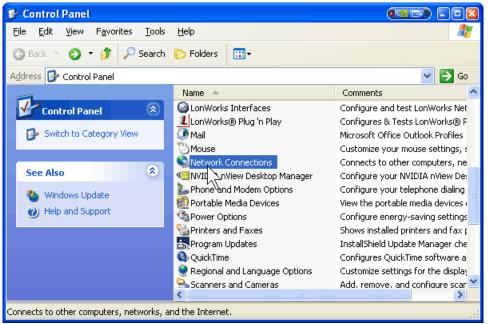


Figure 5 - Windows XP - Control Panel

Right click on *"Local Area Connection"* and choose properties as shown in Figure 6 to open the *"Local Area Connection Properties"* dialog.

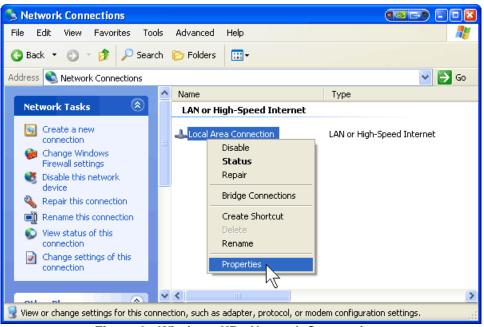


Figure 6 - Windows XP - Network Connections

Select *"Internet Protocol (TCP/IP)"* and click the *"Properties"* button as shown in Figure 7 to open the *"Internet Protocol (TCP/IP) Properties"* dialog.

🕹 Local Area Connection Properties 🛛 🔹 🔋
General Authentication Advanced
Connect using:
Intel(R) PR0/100 VM Network Conn Configure
This connection uses the following items:
Network Monitor Driver
¹ ThetBEUI Protocol ¹ Thtemet Protocol (TCP/IP)
Install
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Sho <u>w</u> icon in notification area when connected Notify <u>m</u> e when this connection has limited or no connectivity
OK Cancel
igure 7 - Windows XP - Connection Propertie

Write down the current settings so that they can be restored when you are no longer connected to the ProtoCessor. Choose *"Use the following IP address"*, set the *"IP Address"* to 192.168.1.99, and set the *"Subnet Mask"* to 255.255.255.0 as shown in Figure 8. Click the *"OK"* button to save your changes.

Internet Protocol (TCP/IP) Prope	rties 🔹 😢 🔀
General	
You can get IP settings assigned autor this capability. Otherwise, you need to a the appropriate IP settings.	
O <u>O</u> btain an IP address automaticall	y III
• Use the following IP address:	
<u>I</u> P address:	192.168.1.99
S <u>u</u> bnet mask:	255 . 255 . 255 . 0
<u>D</u> efault gateway:	· · ·
Obtain DNS server address autom	natically
Use the following DNS server add	resses:
Preferred DNS server:	
<u>A</u> lternate DNS server:	· · ·
	Ad <u>v</u> anced
	OK Cancel

Figure 8 - Windows XP - Internet Protocol Properties

Connecting the ProtoCessor

Connect your computer directly to the ProtoCessor using an Ethernet cable, power up the ProtoCessor (apply power to the HeatNet[™] product) and run the *RUINET.exe* application. You should see the bridge responding as shown in Figure 9. Please note that the bridge name may be different on your product. If the bridge is not responding, as shown in Figure 10 there are several possibilities:

- 1) The Microsoft Windows (or another OEM) Firewall is preventing communications with the bridge. Disable any firewalls and try again.
- 2) The IP network settings on your computer were not correctly set. Please double check the settings outlined in the preceding sections to verify that they are set correctly.
- 3) The computer has multiple network cards and you have not configured or are not plugged into the correct port.
- 4) The IP network settings (IP Address/Subnet) on the bridge have been changed from the default settings. Consult the "Finding a Lost HeatNet™ Bridge" technical bulletin.
- 5) The bridge is not powered or is defective. Please check for power, flashing lights, etc.

C:\Protocessor\ruiping.exe		- 🗆 ×
BRIDGE NAME	IP Address	SZW VERSION
KNSX-LonWorks TP/FT v2.00	192.168.1.24	B?U5.10b (B), PCC4002:U1.00a (A)
BRIDGE NAME	IP Address	S/W VERSION
=====================================	192.168.1.24	B?U5.10b (B), PCC4002:U1.00a (A)
BRIDGE NAME	IP Address	S/W VERSION
=====================================	192.168.1.24	B?U5.10b (B), PCC4002:U1.00a (A)
BRIDGE NAME	IP Address	S/W VERSION
KNSX-LonWorks TP/FT v2.00	192.168.1.24	B?V5.10b (B), PCC4002:V1.00a (A)
		•

Figure 9 - RUIPING - ProtoCessor Responding

C:\Protocessor\ru	uiping.exe _ 🗆 🗙
BRIDGE NAME	IP Address S/W VERSION
Timeout waiting f	for ping response on Fri Apr 13 08:22:53 2007
BRIDGE NAME	IP Address S/W VERSION
Timeout waiting f	for ping response on Fri Apr 13 08:22:56 2007
BRIDGE NAME	IP Address S/W VERSION
==============	
	·

Figure 10 - RUIPING - ProtoCessor not Responding

If the bridge is responding, close the FieldServer *RUIPING* application and run the FieldServer *RUINET* application as shown in Figure 11. Because you are plugged directly into the bridge there can only be one bridge on your network. The application may automatically switch to the "*Main Menu Screen*" as shown in Figure 12. If not, press "1". You are now ready to monitor and/or configure the bridge. Please consult our technical bulletins (or the Field Server documentation) for configuring the most common settings.

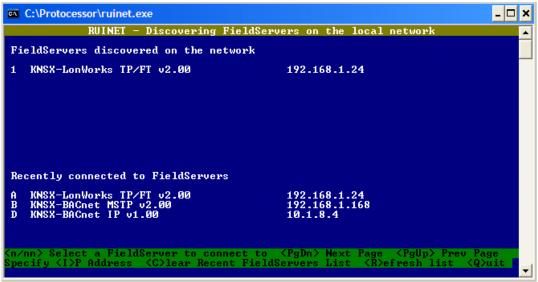


Figure 11 - RUINET - Field Server List Screen

C:\Protocessor\ruinet.exe	- 🗆 🗙
Main Menu	<u> </u>
B — FieldServer Information	
0 - Connection Overview N - Node Overview	
M - Map Descriptor Overview	
A - Data Array Overview	
E – System Errors F – Driver Messages	
D - Download Configuration to FieldServer	
U - Upload Configuration from FieldServer	
I - Change IP Address K - Change UI Display Mode	
! - Restart FieldServer	
Keys: Type Appropriate Key for Selection	
<q>uit <→> Next <←> Prev <ctrl→> Last <ctrl←> First <n> Goto</n></ctrl←></ctrl→></q>	-

Figure 12 - RUINET - Main Menu Screen