SIEMENS SNU ASSY Single Node Upload Instructio.n Manual

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Contents

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About This Document

Purpose
This guide describes the installation of the SNU Assy for remote communication between Zeus and XLS control panels (PMI).

Target Audience
Field Engineers provide the basic installation of devices and systems for a specific customer at the customer site. They have the training appropriate to their function and to the products, devices, and systems to be installed. They are also familiar with the applied operating system(s) and the related network environment. Field engineers are responsible for infrastructure troubleshooting (for example, hardware, communication, network, and so on).

Liability Disclaimer
We have checked the contents of this manual for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in this manual are reviewed regularly and any necessary corrections included in subsequent editions. Suggestions for improvement are welcome.

SNU Assy Remote Zeus Access to PMIs (Single Point Upload)

The SNU Assy provides a solution for remote uploading from a single point of a PC running the Zeus configuration tool to remotely located XLS PMIs.
This is accomplished using a dedicated Ethernet network separate from all existing system networks (XNET, HNET, DNET) and any network that may be present during installation. It employs device servers that have three physical connections (power, Ethernet, and USB). Note that the communications between the Zeus PC and SNU Assy employs SSL for data security. Up to 64 PMIs can be attached to the dedicated Ethernet for access by the Zeus PC.
The physical connection between the PMI-1 and the SNU Assy requires a new cable, P/N S54430-A4-A1.
The physical connection between the PMI-2 and the SNU Assy is the existing USB port currently used for Zeus communication.

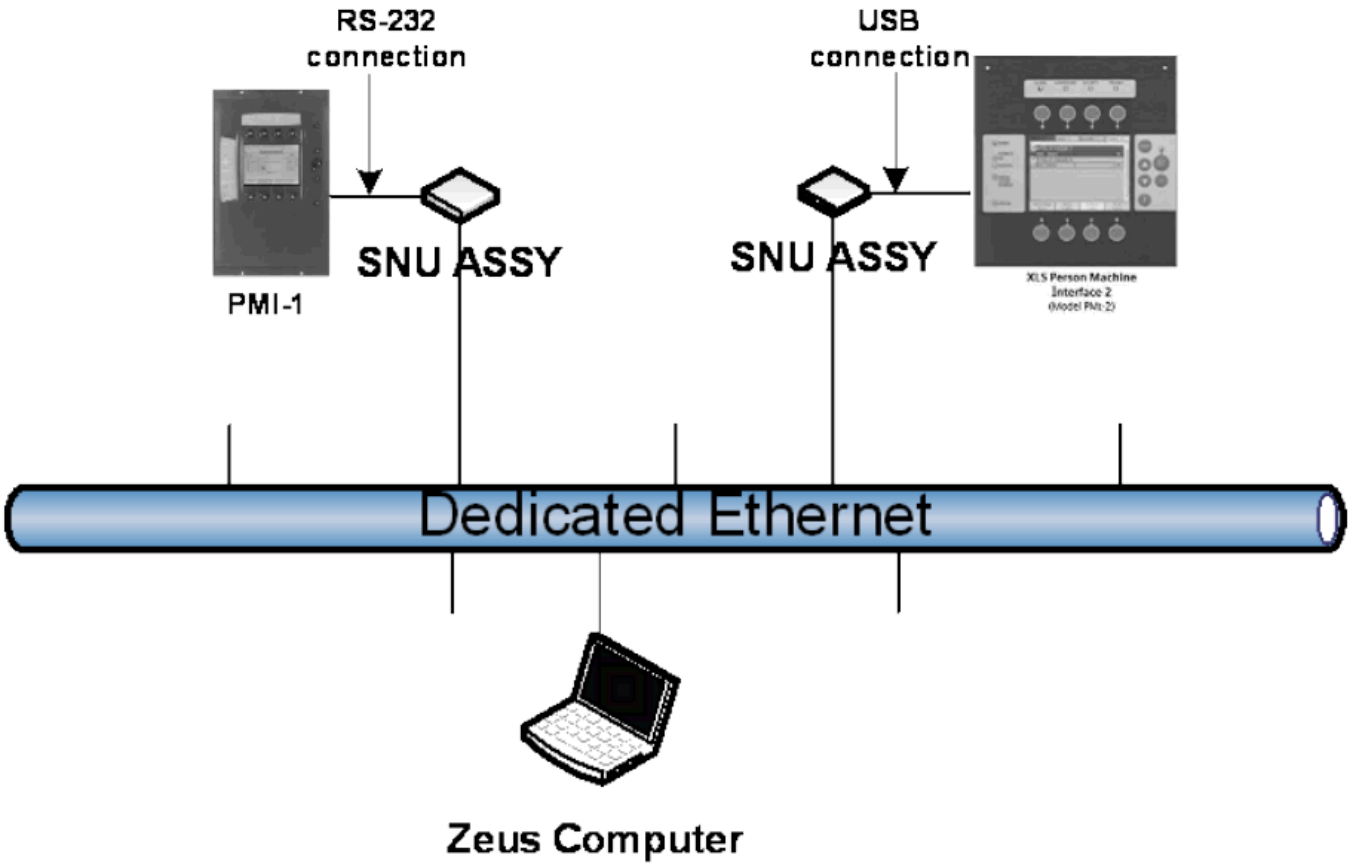

Figure 1 SNU Assy Architecture

The SNU Assy allows a Zeus user to perform operations remotely via the dedicated Ethernet network. This network can be used to perform the following operations:

- Transfer of configuration to a PMI
- Extraction of configuration from a PMI
- Transfer of audio files into the system
- Extraction of watchdog log
- Extraction of history logs
- Extraction of walktest logs
- Transfer of HNET module app firmware for updates
- Transfer of CAN firmware for updates
- Transfer of DAC firmware for updates

This Ethernet network is not part of the building LAN and no fire network access is provided.
The hardware is mounted in a separate enclosure from the PMIs. The enclosure shown on the left of the following figure contains the SNU Assy hardware, and the enclosure on the right represents the existing XLS PMI enclosure. Figure 2 represents a typical configuration at an XLS PMI location.
The Single Node Upload solution requires kit assembly and should be installed within 5 feet of the PMI it is connected to. See Figures 4 and 5 for installation requirements.

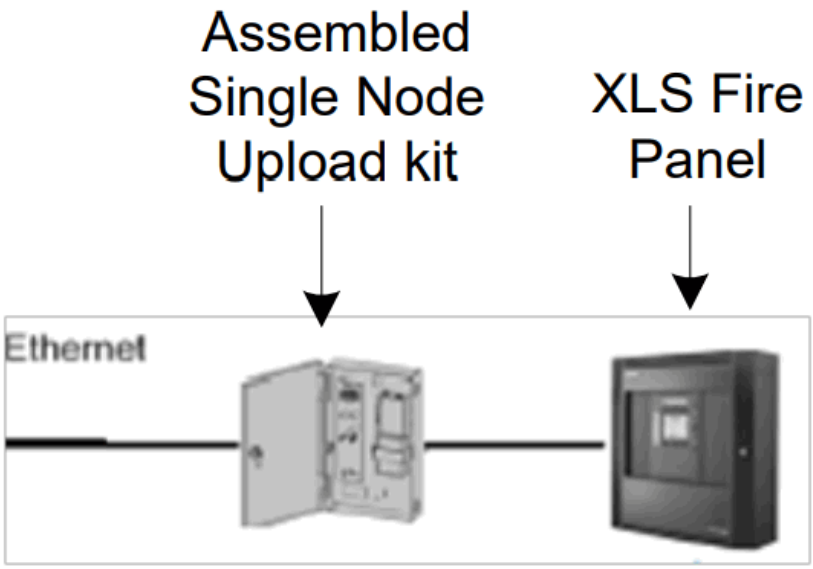

Figure 2 Typical Location Configuration

SNU Sales Kit – S54430-C19-A1

This kit contains the following parts:

- ENCL-01 enclosure with keyed door, P/N S54465-C63-A1
- PS-5A power supply (mounting screws included), P/N 500-492369
- SNU ASSY SINGLE NODE UPLOAD, P/N S54430-A3-A1

To assemble the kit, the following items are required but not included in the kit:

- 1 14-18 AWG cable (for PS-5A power supply)
- 1 Ethernet cable
- Ethernet switches / dedicated and properly engineered Ethernet hardware infrastructure to connect all the SNU Assy units and provide access connections as desired for the Zeus PC. This equipment must be installed in a locked enclosure.

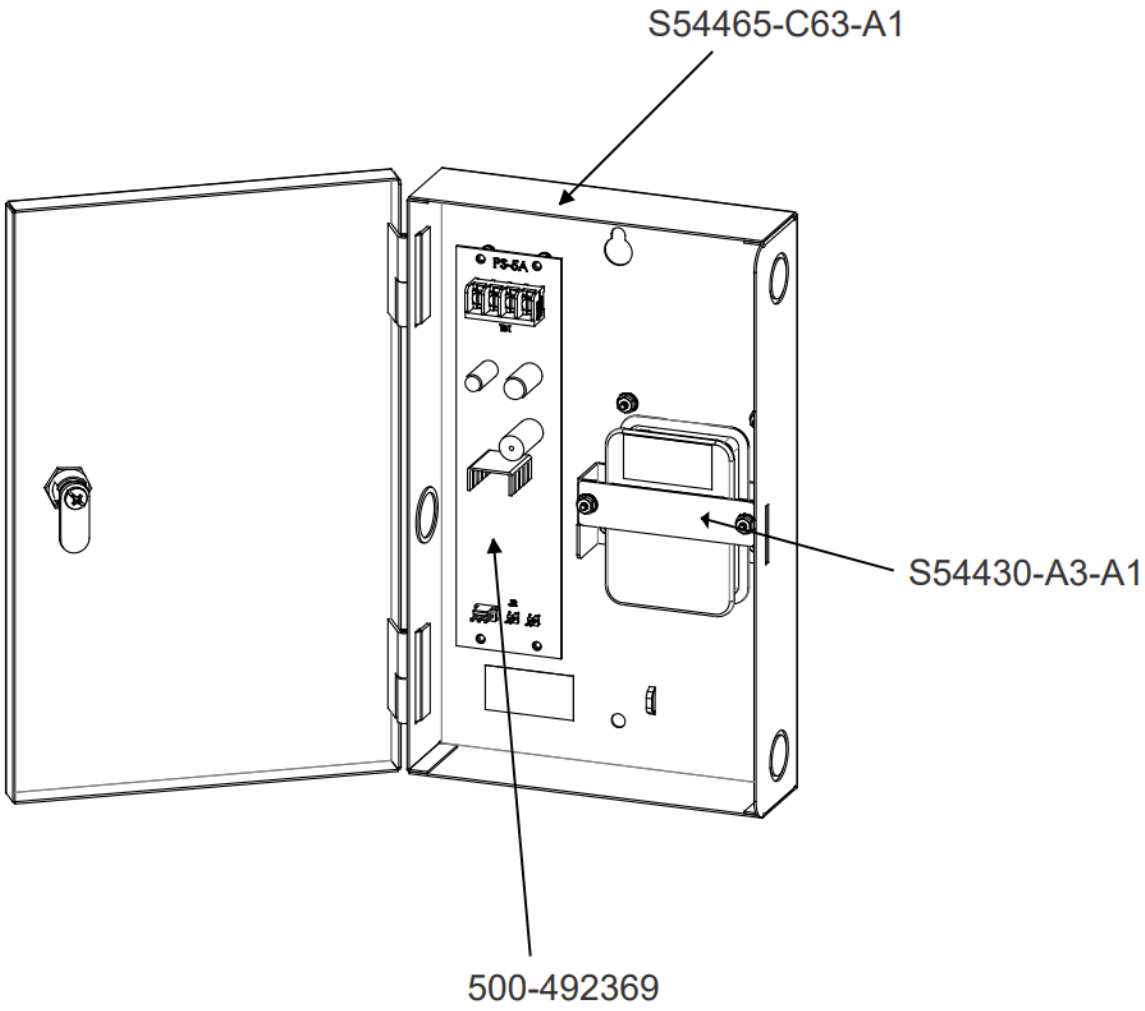

Figure 3 General View of SNU (without cables)

SNU Electrical Ratings

Electrical Parameter	Rating
24V screw terminal current	120mA
24V standby current	120mA
24V alarm current	120mA
24V backplane current	0 A
6.2V backplane current	0 A

The SNU Assy may be powered using any power supply listed for Fire with regulated outputs (including Siemens PAD-3, PAD-4, PSC-12, and PSX-12).
If a PSC-12 or PSX-12 is used to supply 24 VDC to the SNU Assy, the current values supplied here should be included in the corresponding standby and alarm currents on AC and battery in the PSC module properties screen in Zeus.

Installing the SNU Sales Kit

The SNU Assy kit installation workflow includes the following steps:

1. Mount the enclosure in the desired location (including conduit connection with XLS PMI enclosure for power and communication cables). Refer to Figures 7 and 8 for installation requirements.
2. Mount the PS-5A power supply in the enclosure with the (4) screws provided. See Figure 3.
3. Remove bracket and the (2) nuts and put them on the side. See Figure 4 (The bracket is not needed on this application).
4. Mount Raspberry bracket using the (2) nuts and remove the top bracket. See Figure 5.
5. Place the Raspberry unit as shown in Figure 6 and use bracket with the (2) nuts to keep the Raspberry in place.
6. Wire the power connection from the PS-5A to the Raspberry.
7. Wire the power connection from the PS-5A to DC source.
8. Connect Ethernet cable between Pi and PC for initial configuration.
9. Configure SNU Assy via web interface.
10. Connect Pi's Ethernet connection to the dedicated LAN.
11. Make appropriate connection between the Pi's USB port and the PMI.
12. Remove and restore power to the Pi (reboot).
13. Install virtual serial port client software on Zeus PC.
14. Connect to desired SNU Assy using IP address.
15. Perform desired Zeus operations as needed.

4.1 Wiring inside the enclosure

1. Connect the J3 terminal block to the Raspberry Pi using the provided cable.
2. Connect 24 VDC to TB1 of the PS-5A.
3. Connect one of the Raspberry Pi's USB ports to the PMI-2 upload port (J16) using cable provided.
4. If installing with a PMI-1, a separate cable needs to be purchased, P/N S54430-A4-A1. Connect the supplied USB to RS-232 adapter to the Zeus RS-232 programming cable. Then connect the cable assembly between the Pi's USB port and the PMI-1 upload port.
5. Do not connect the Pi module to the dedicated LAN until it is configured with the desired IP address (see later steps).
6. Once the Pi is configured with the desired IP address, connect the Pi's Ethernet connection to the dedicated LAN.
7. Refer to Figure 9 for routing of Power Limited and Non-Power Limited wiring.
   Note that the dedicated LAN must be properly engineered.

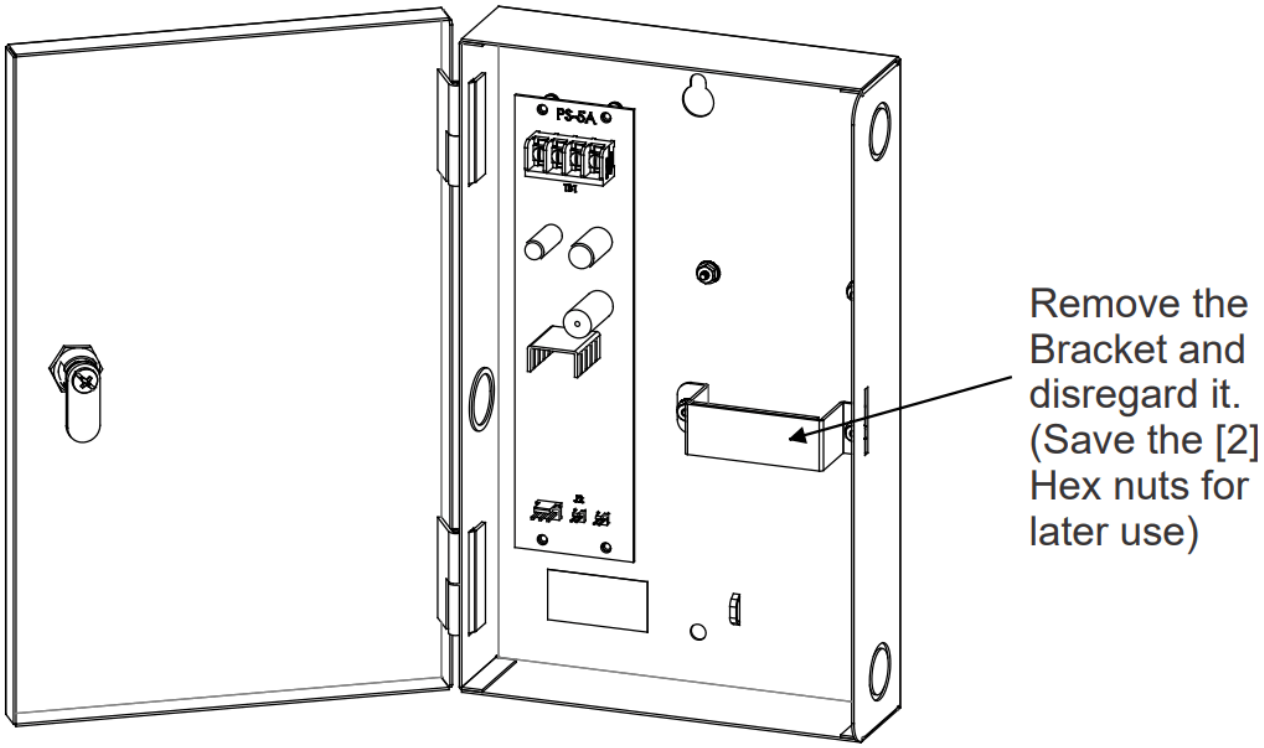

Figure 4 Remove Bracket and Nuts

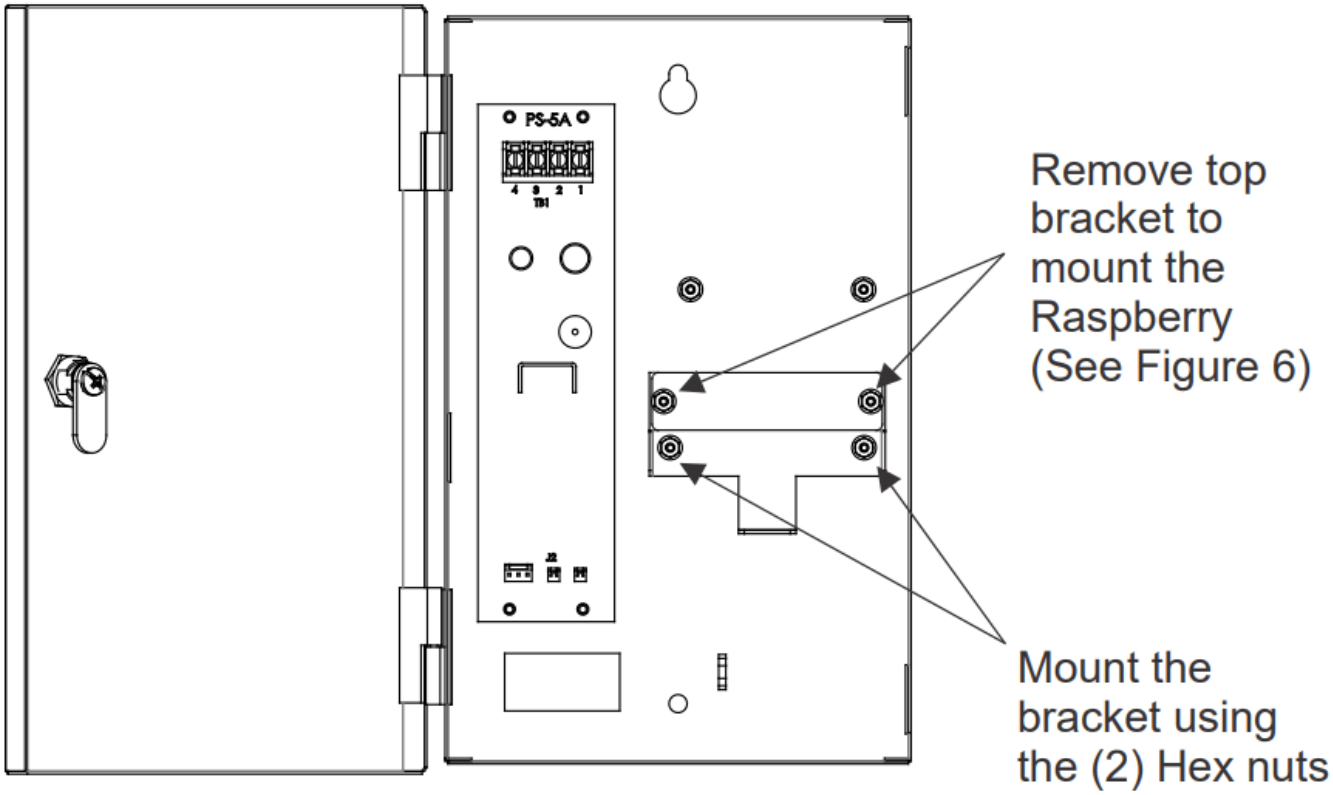

Figure 5 Mount the Bracket

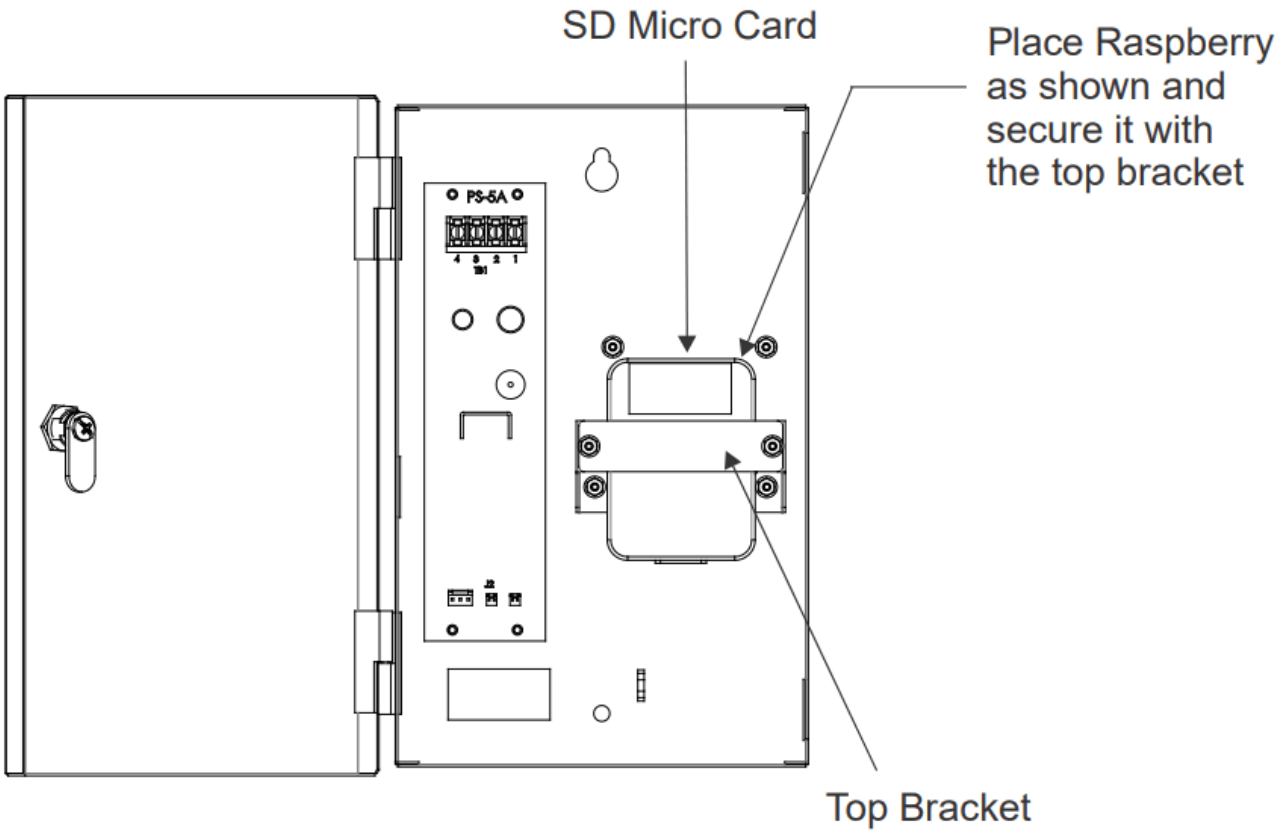

Figure 6 Mount the Raspberry

24 VDC input power and USB connection to PMI-2
Wiring restricted to the same room and within conduit.
Not to exceed 20 feet.
Power must be dedicated to this application.
No other fire hardware (i.e. SSD, Remote PMI, etc.) shall be powered using this 24V supply.
If 24 VDC is supplied from the PSC TB4, the power and USB connections must be in separate conduit.
If 24 VDC is supplied from the power limited output of the PSC (TB3), the power and USB connections may share the same conduit.

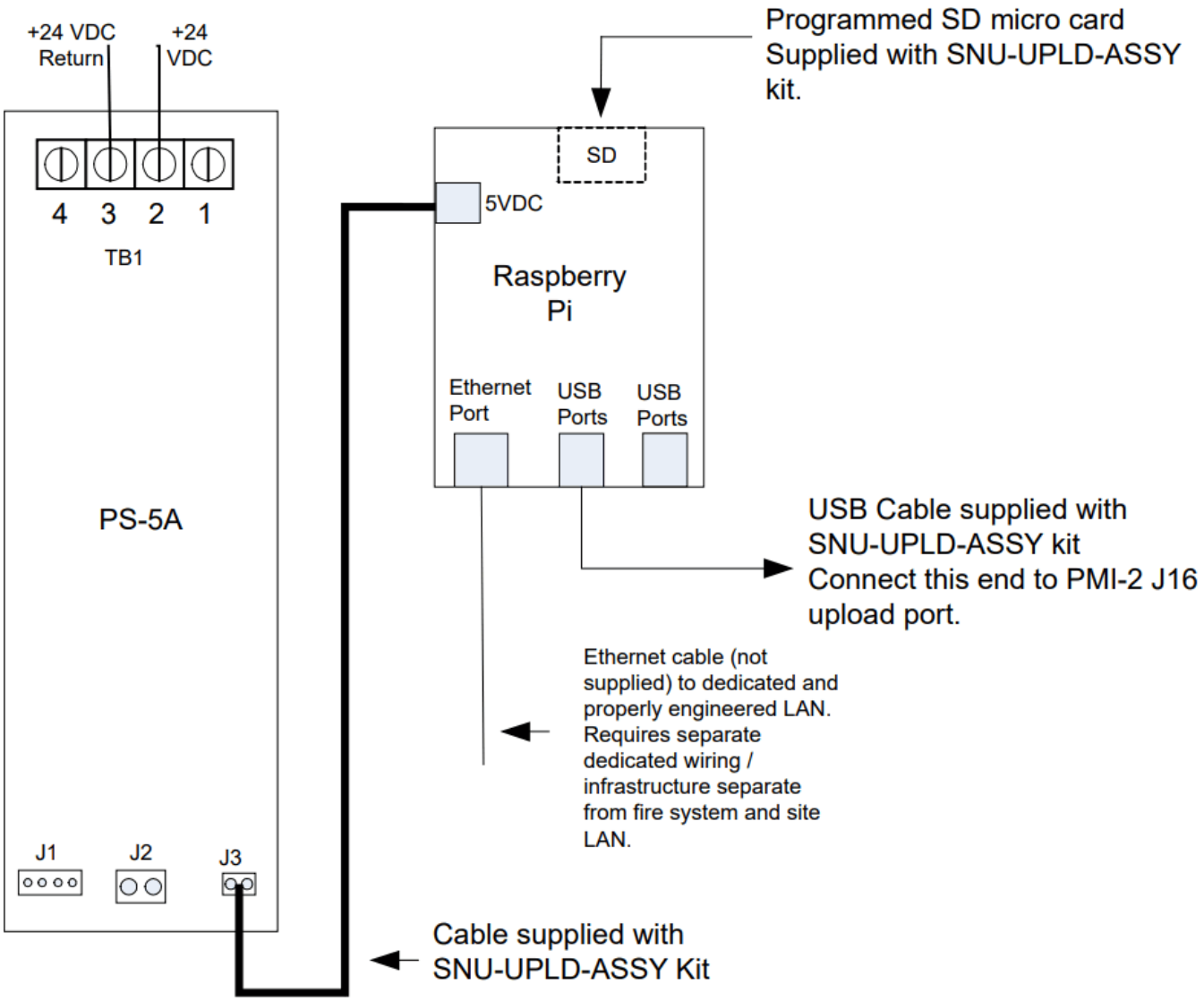

Figure 7 SNU Assy Wiring for PMI-2

24 VDC input power and RS-232 connection to PMI-1
Wiring restricted to the same room and within conduit.
Not to exceed 20 feet.
Power must be dedicated to this application.
No other fire hardware (i.e. SSD, Remote PMI, etc.) shall be powered using this 24V supply.
If 24 VDC is supplied from the PSC TB4, the power and RS-232 connections must be in separate conduit.
If 24 VDC is supplied from the power limited output of the PSC (TB3), the power and RS-232 connections may share the same conduit.

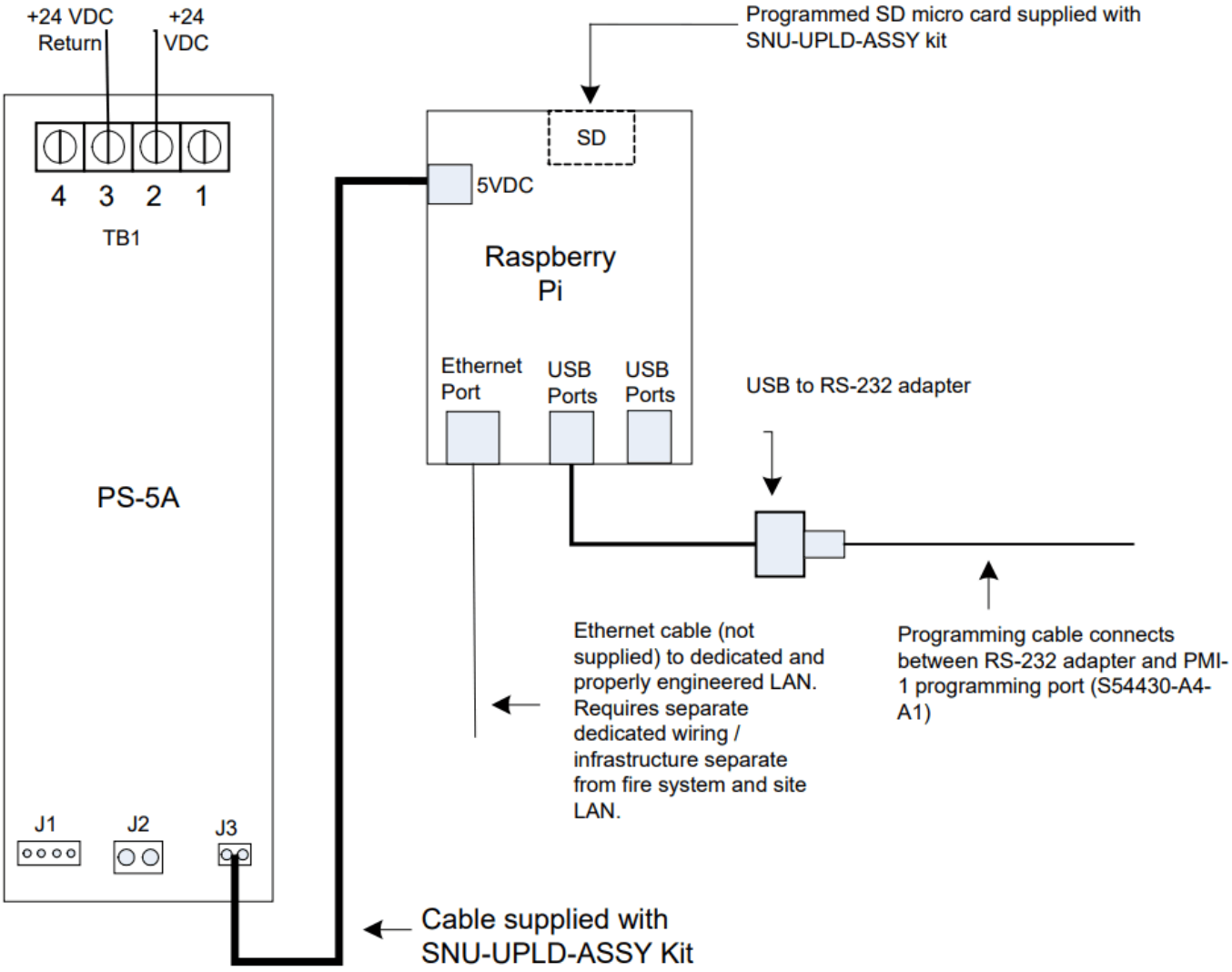

Figure 8 SNU Assy Wiring for PMI-1

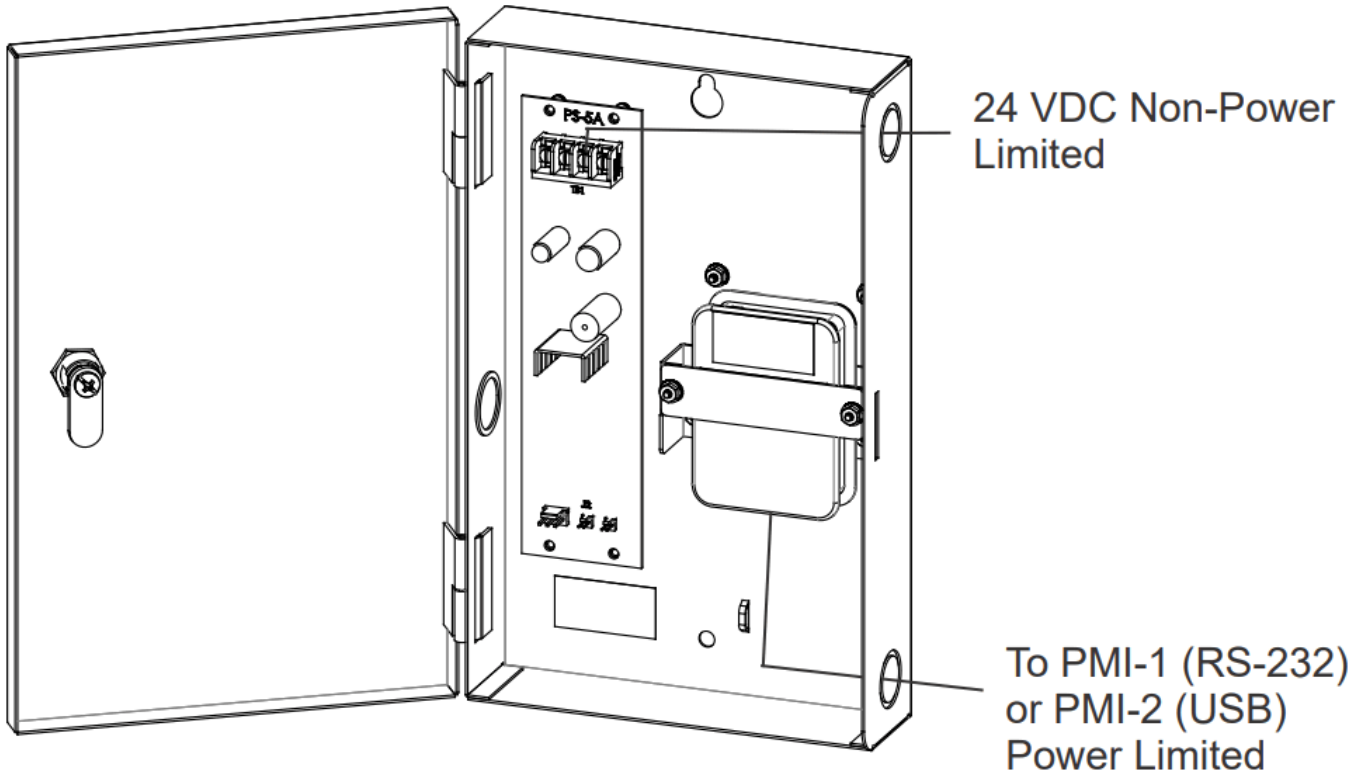

Figure 9 Power Limited Cable Routing

Configuring the SNU Assy

Note that this step must be performed prior to connection to the dedicated LAN.
The SNU Assy's Ethernet port should be connected to the Ethernet port that is usually used to program new firmware into the PMI-2 (Ethernet/USB dongle). The configuration process documented here assumes that this adapter is installed and working properly at Static IP 192.168.251.5.
Refer to Zeus help for proper installation and configuration of the Ethernet adapter used to program the PMI-2.
Note that some of the presented visuals may be slightly different depending on the browser being used.
Steps to configure the SNU Assy:

1. Be sure the SNU Assy module is not connected to the LAN. It should be connected in a point to point fashion with the Zeus PC using the PMI-2 Ethernet USB programming dongle.
2. Be sure power is applied to the SNU Assy.
3. Wait at least 60 seconds after powering the SNU Assy before proceeding to assure the boot process has completed.
4. Open a web browser on the Zeus PC and enter the default IP address (as shipped) for the SNU Assy in the URL address field. The default IP address is 192.168.251.101. Note that if you are reconfiguring an SNU Assy that has had its address changed already, enter the modified IP address to connect to the unit.
5. If the connection is working, the SNU Assy will request the browser to collect access credentials (see Figure 10).

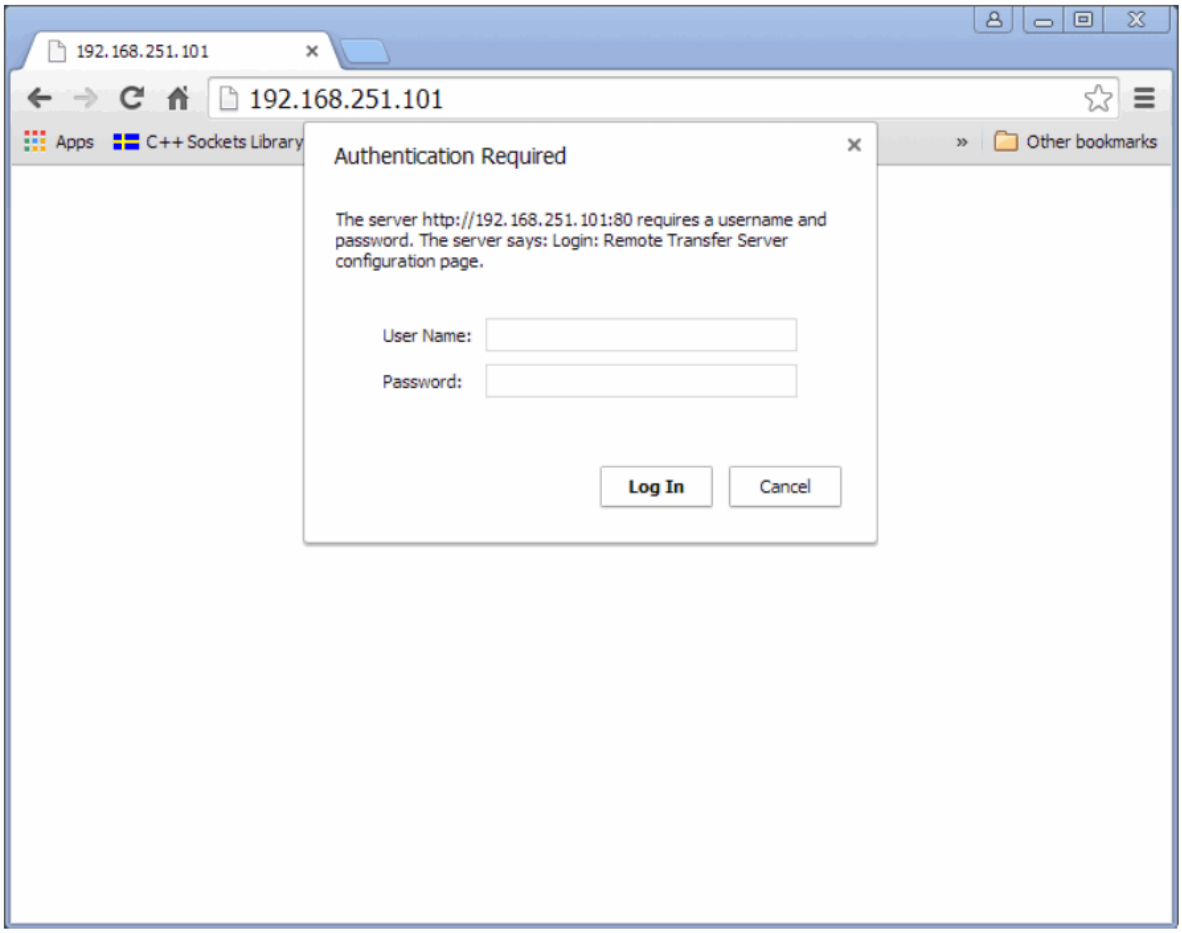

Figure 10 SNU Assy Access Credential Request

6. Enter the following credentials and select Log In: User name: siteadmin Password: $1eM3nS#99
7. Once a successful login is achieved, the SNU Assy programming page is presented (see Figure 7). Enter the last field of the IP address (see arrow) that is desired for the connected SNU Assy. The value must be between 101 and 164. It is highly recommended that the XLS node number be used and added to 100 for ease of access to all technicians. For example, node 1 should be given the address 101 for a full IP address of 192.168.251.101. Once the desired address is entered, press the submit settings button.

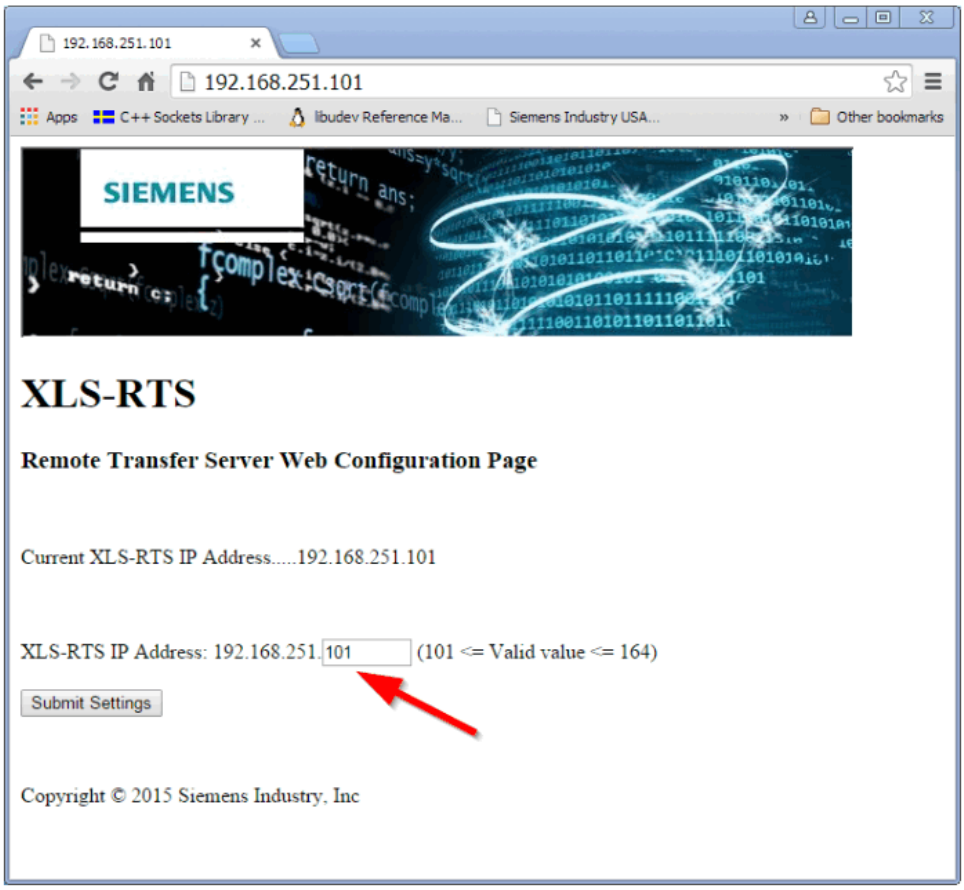

Figure 11 SNU Assy Configuration Page

8. The browser will load the page shown in Figure 12 (showing the IP address you entered) from the SNU Assy. The SNU Assy will take about 45-60 seconds to restart with the new IP address.

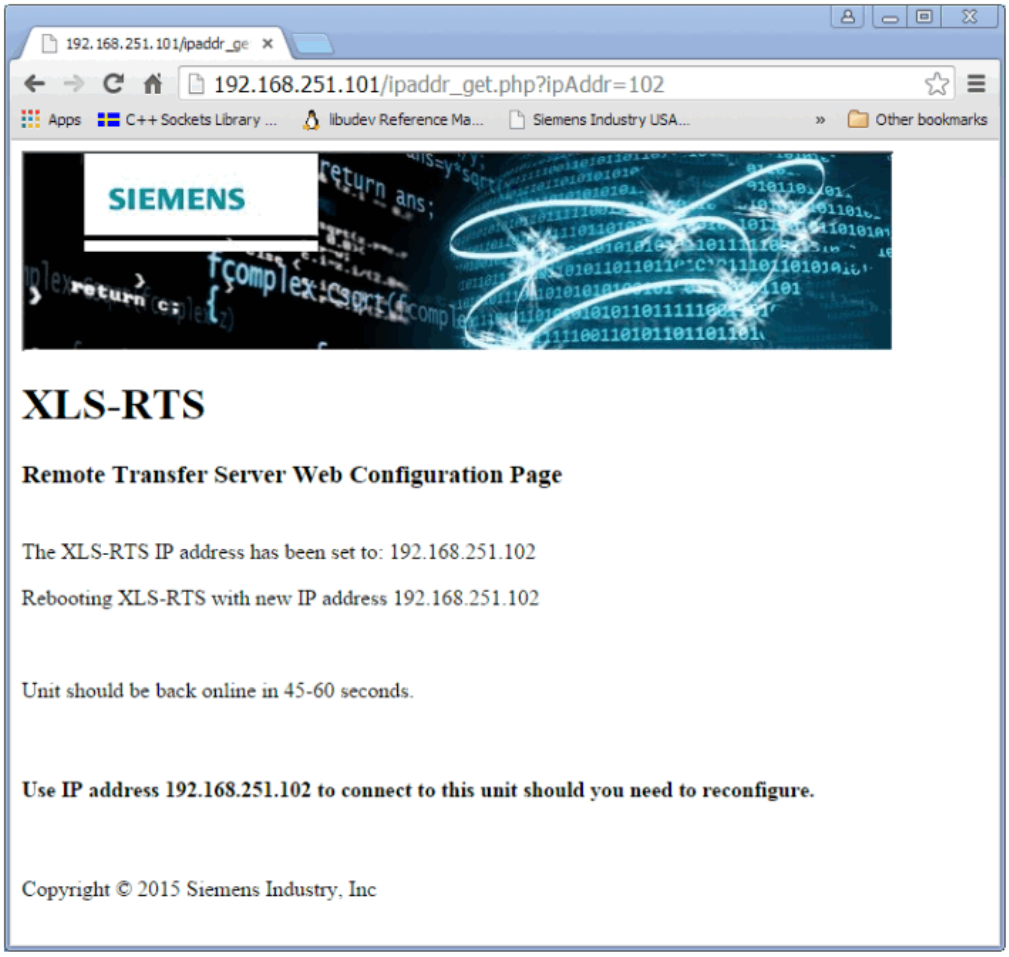

Figure 12 SNU Assy Programming Validation Page

9. Disconnect the SNU Assy from the PC and connect the unit's Ethernet cable to the dedicated LAN. The unit

and PMI are now accessible remotely via the LAN at the programmed IP address.

Installing and Using the Virtual Serial Port Software on the Zeus PC

The virtual serial port client software should be placed in the same directory as the Zeus.exe program.
The client software for the Zeus PC is available on the Siemens Tech support website.
The virtual client software program is called vhui64.exe and vhui32.exe. The version that is executed on the installed PC depends on the version of Windows being used – 32 or 64 bit. This can be determined via the Windows Control Panel.
Be sure the supplied version of the vhui.ini file is located in C:\Users\YourUsername\AppData\Roaming. You may need to change properties in order to see the AppData directory since it is typically hidden.
You may simply copy the file named Provided_vhui.ini to this location and rename it to vhui.ini. This is important to assure SSL is used for communication. If the file is not present, create a text file named vhui.ini in the indicated location and include the following:

```
[General]
AdminMode=0
AutoFind=0
AutoMinimize=0
AutoRefreshLookupPeriod=30
MainFrameWidth=400
MainFrameHeight=250
EnableSSL=1
ReverseLookup=1
ReverseLookupPort=7573
SSLPort=7574
HideMenuItems= [Settings]
IgnoredDevices= [Transport]
CompressionLimit=384
PingInterval=3
PingTimeout=10
[AutoShare] All=0
```

The remainder of these instructions assumes the virtual serial port client software is present on the Zeus PC. Although vhui64.exe is shown in these instructions, use the 32 bit version if the Zeus PC has a 32 bit version of Windows installed.

1. Copy the supplied vhui.ini to the following location (note that this path varies based on user and Windows installation).
   C:\Users\YourUsername\AppData\Roaming You may need to change properties in order to see the AppData directory since it is typically hidden.
2. Locate and run the program vhui64.exe.
3. The following will appear when the program starts:

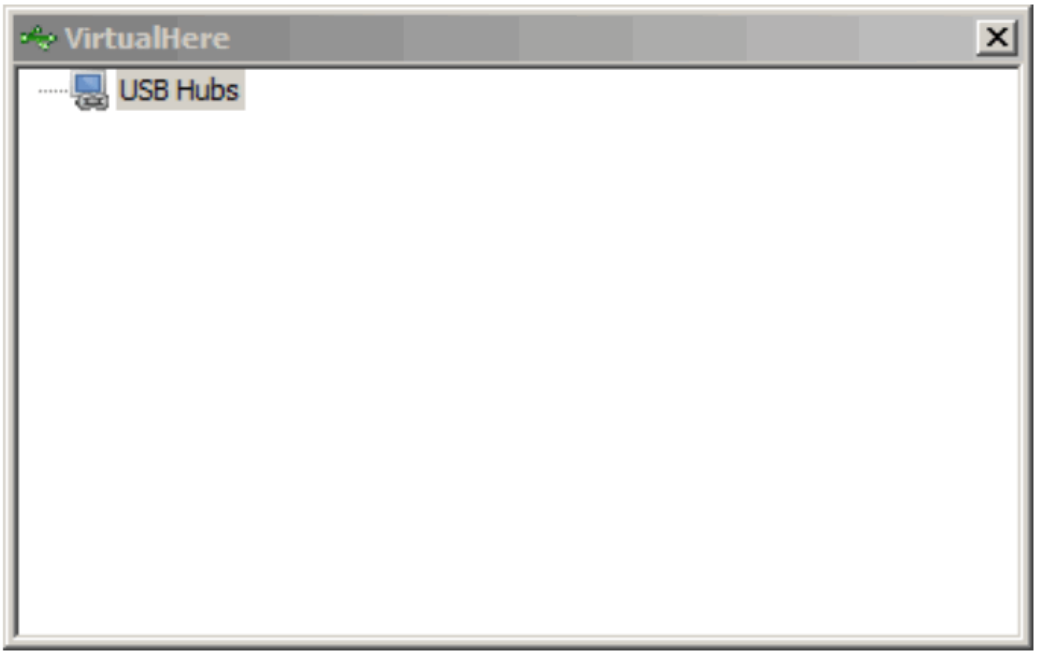

Figure 13 VirtualHere

4. Note that if the VirtualHere software suggests installing Bonjour, do not do so.
5. Right click USB Hubs and select Specify Hubs.

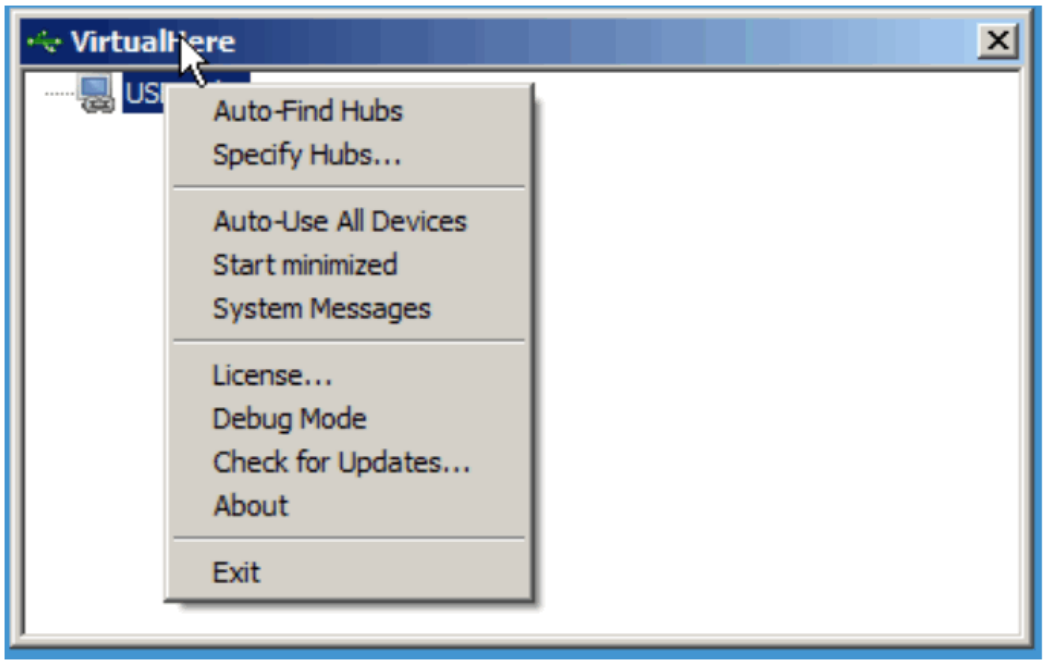

Figure 14 Select Specify Hubs

6. When the Specify Hubs dialog opens, select Add to add the SNU Assy addresses for any of the SNU Assy devices that are not listed. Enter the IP address of the SNU Assy that you want to communicate with and the port 7574. An example is shown in the following figure. Then click Ok and the client software should communicate with the SNU Assy.

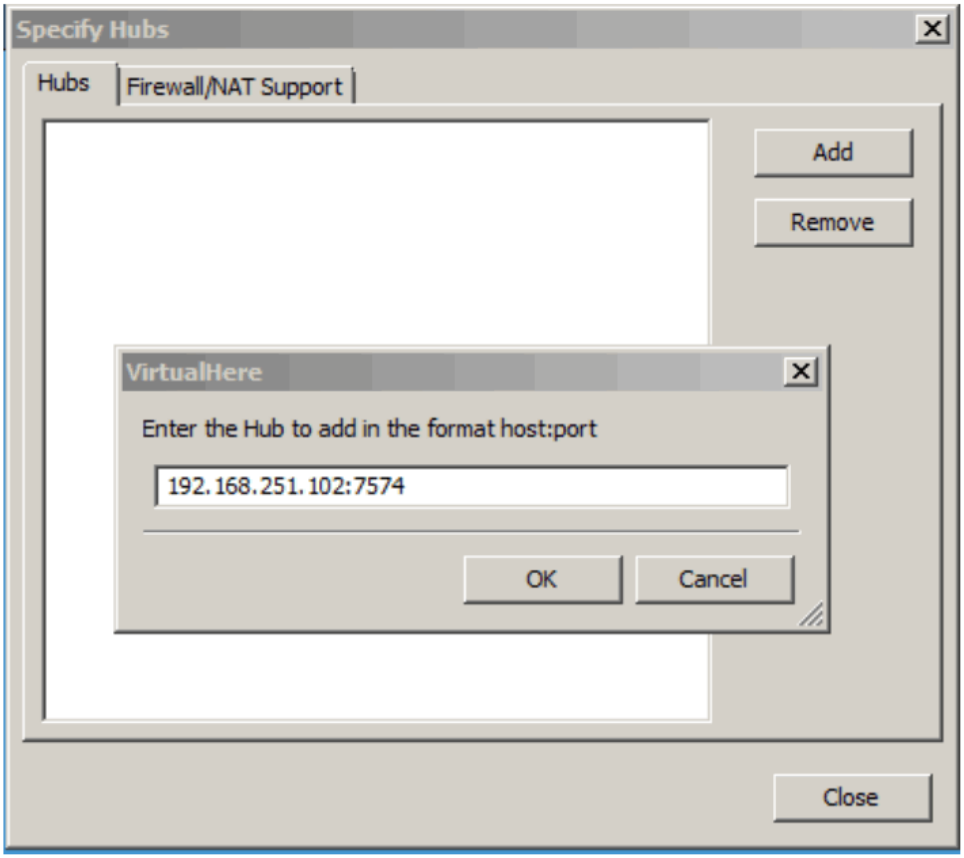

Figure 15 Enter the Hub

7. The dialog should resemble the following figure at this stage (other hubs may be listed if they have been configured. Click Close on the Specify Hubs dialog.

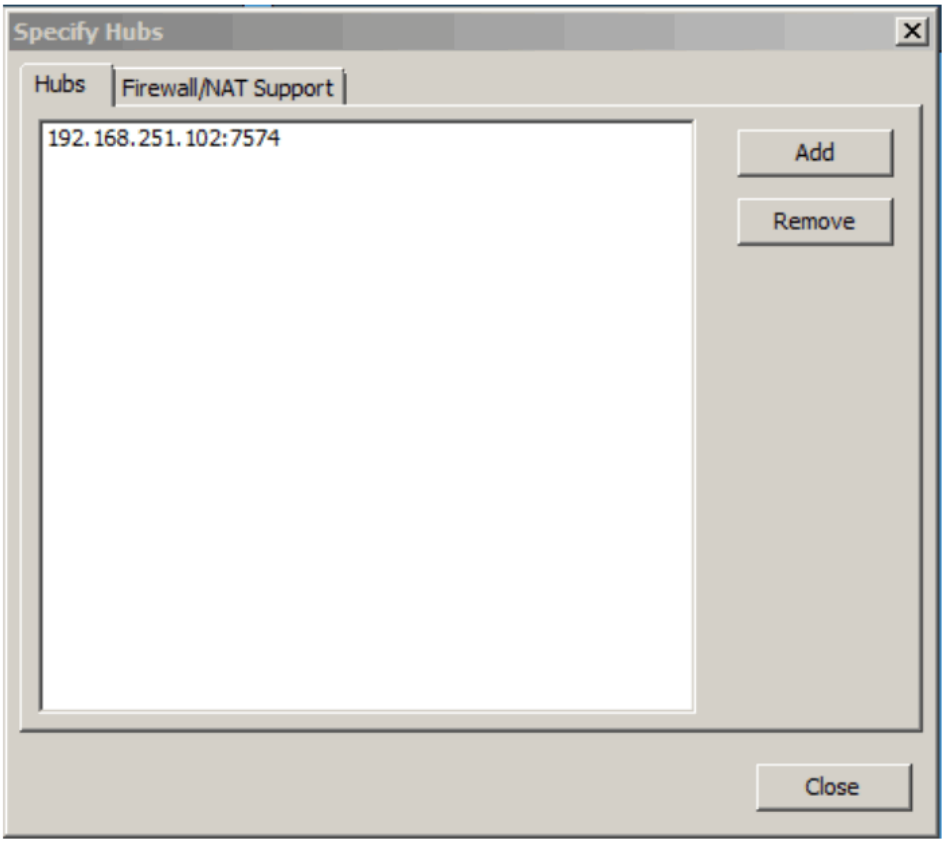

Figure 16 Specify Hubs Dialog

8. The hub will be listed under USB HUBS. Note that the device will initially show up when it is a PMI-2 connection as Gadget Serial v2.4. For a PMI1, the device will initially show up as a USB-Serial Controller.

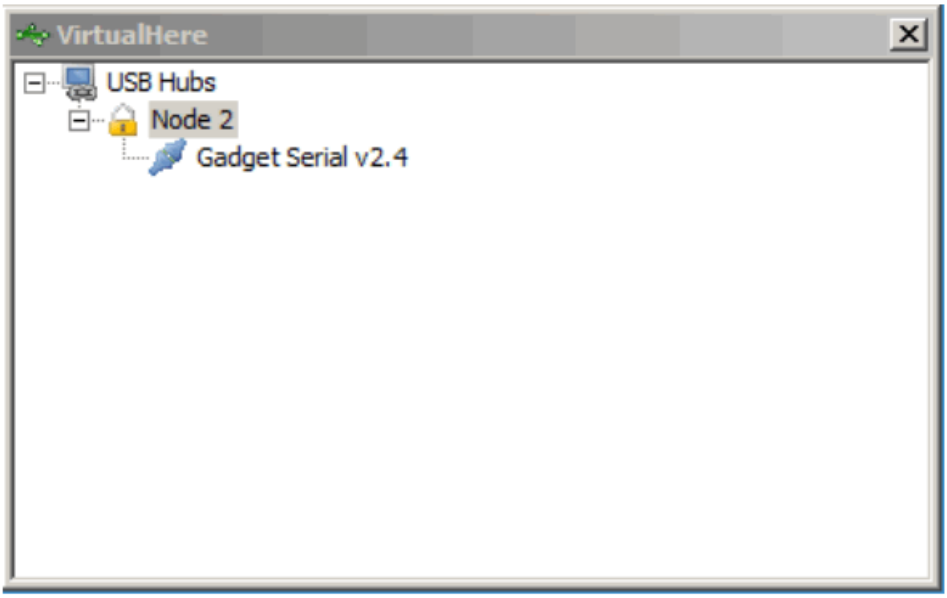

Figure 17 Gadget Serial v2.4

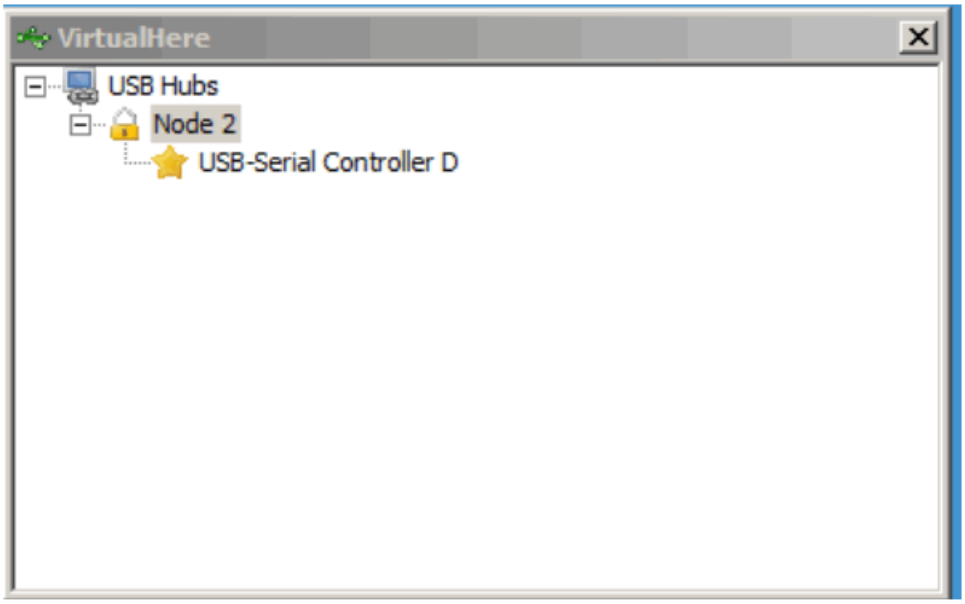

Figure 18 USB-Serial Controller

9. Right click and select Rename to name the unit. The new name will be saved on the SNU Assy SD card. You may also right click the USB port to rename it if desired. This example shows the hub renamed as Node 2 and the port renamed as PMI-1 programming port.

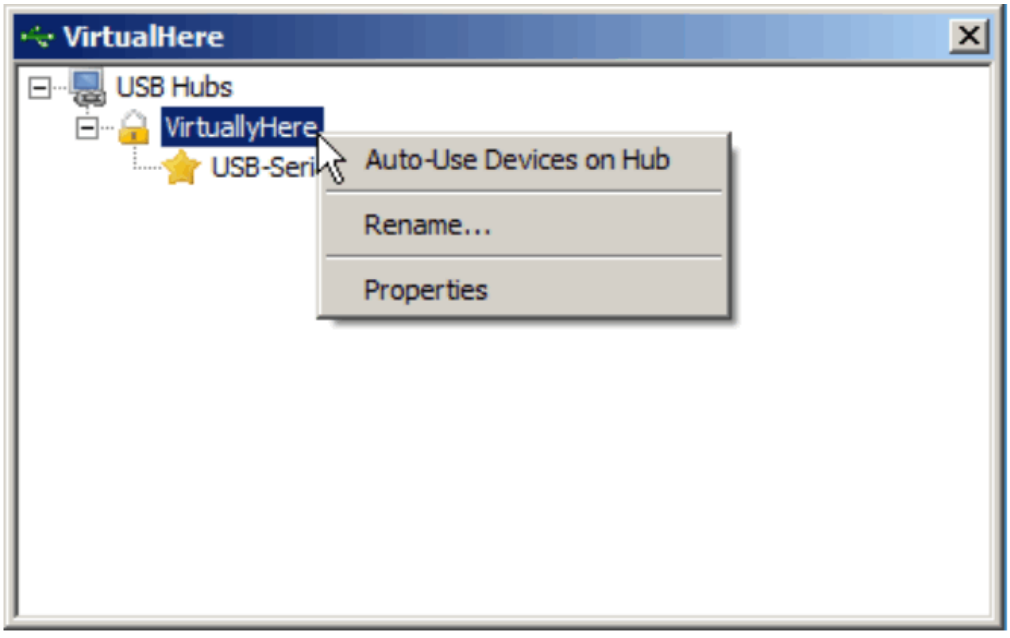

Figure 19 VirtualHere – Rename

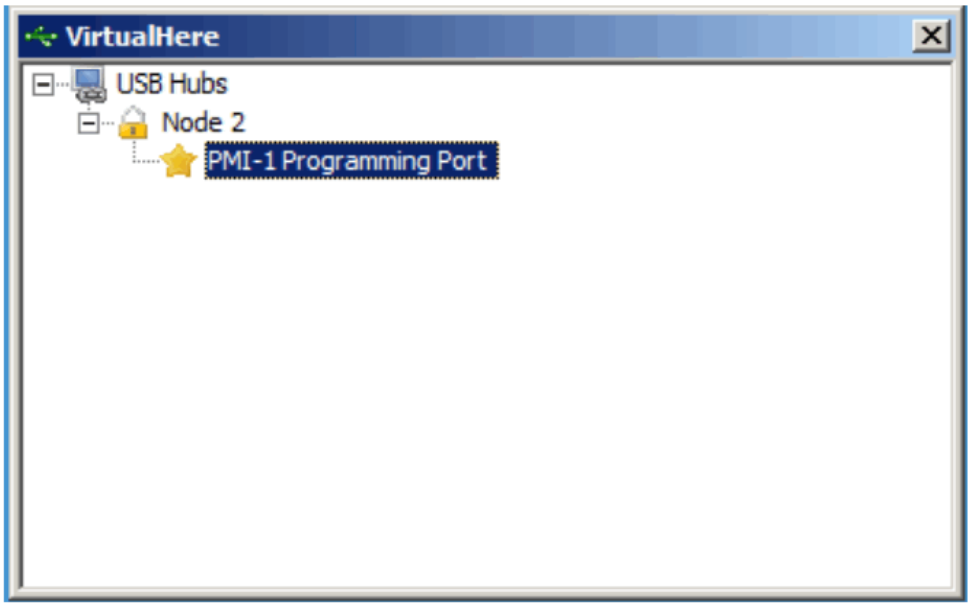

Figure 20 PMI-1 Programming Port

10. The last step before accessing the SNU Assy via the virtual serial port is to assign the local virtual port a com identifier. This is done by right clicking the port and selecting Use. Depending on whether this operation has been performed in the past or not, Windows may prompt you to install the VirtualHere drivers for the serial device. If so, select OK (see Figure 21). Then click Next (see Figure 22). Afterwards, click Install (see Figure 23) and then click Finish (see Figure 24). The port will now be listed under Ports (COM and LPT) in the Windows Device Manager. It is recommended to open the Device Manager before using the port so you can see which COM port is assigned to the device.

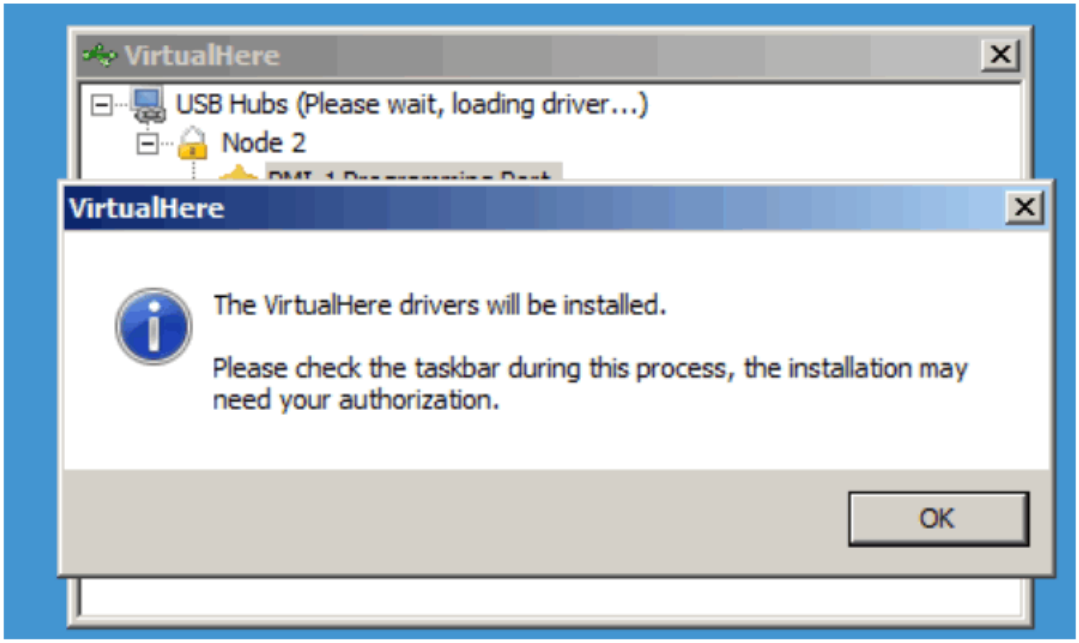

Figure 21 Installing the VirtualHere Drivers

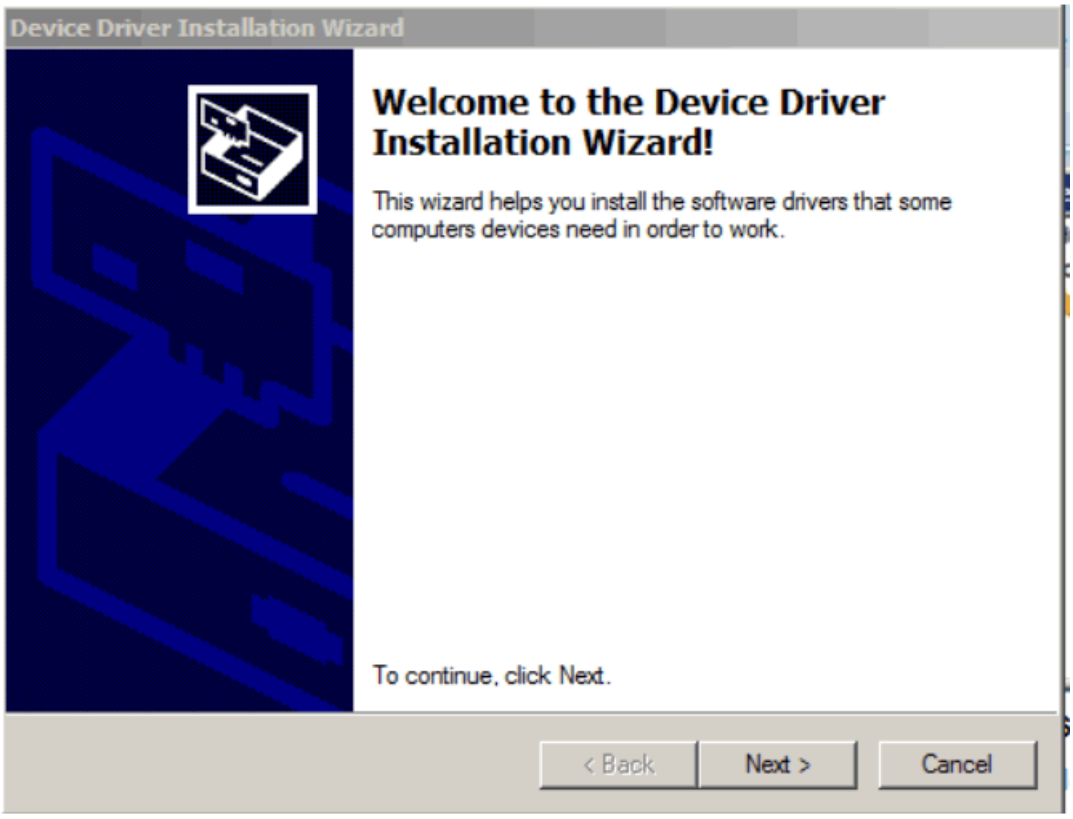

Figure 22 Device Driver Installation Wizard

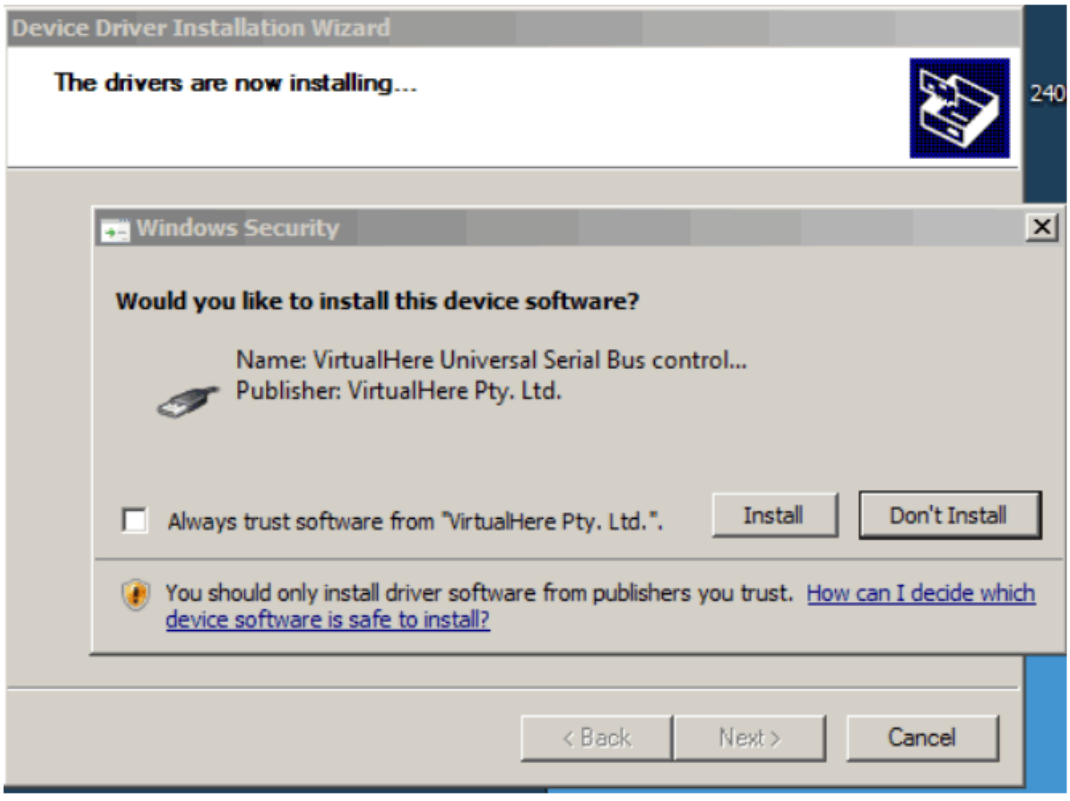

Figure 23 Install Device Software

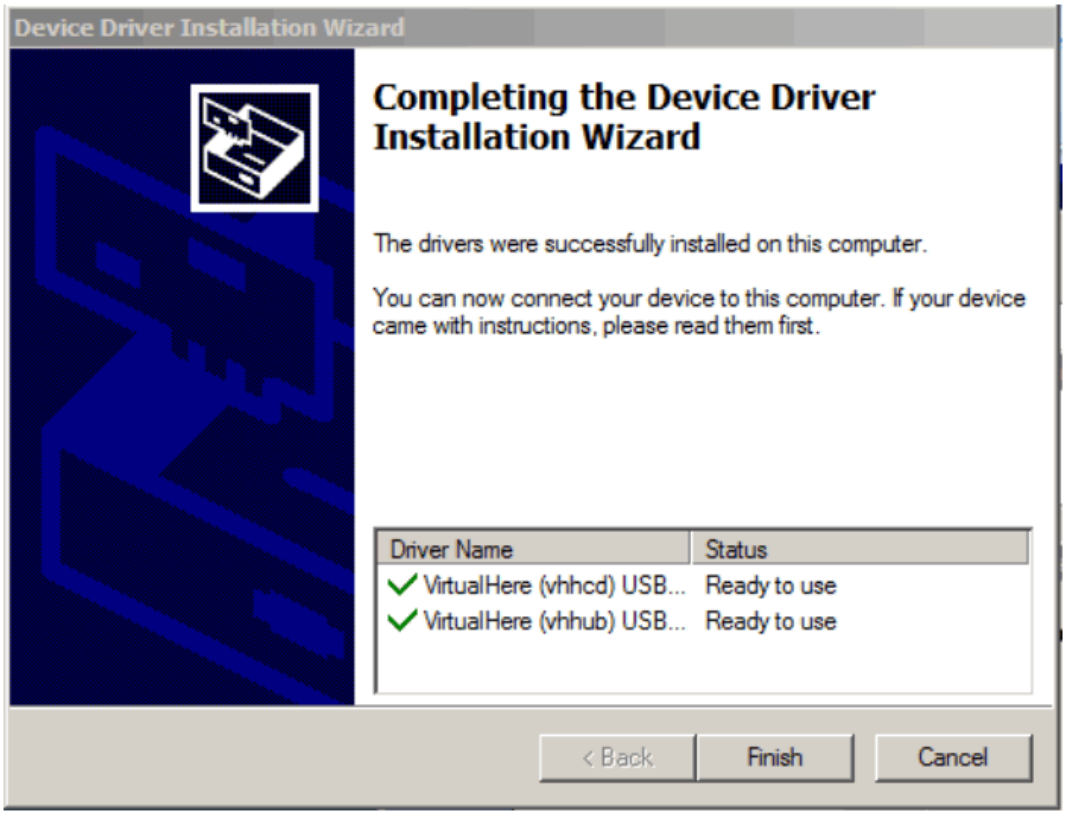

Figure 24 Completing the Device Driver Installation Wizard

11. This is an example of the before and after Use selection in Device Manager. Notice the addition of COM8 when the RS-232 adapter was connected via the Use operation. The following images show the Device Manager showing the PMI-2 COM port.

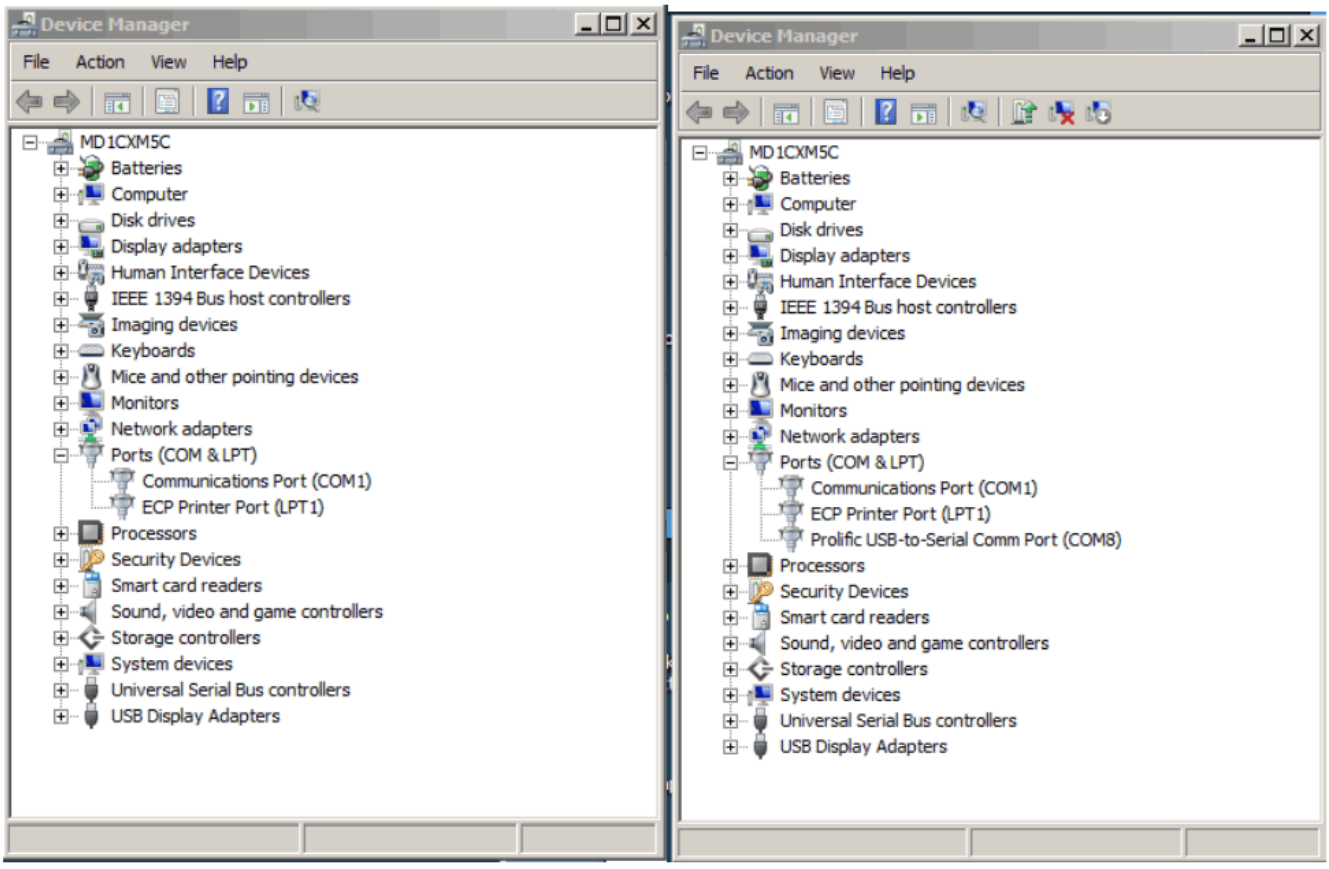

Figure 25 Device Manager – COM8

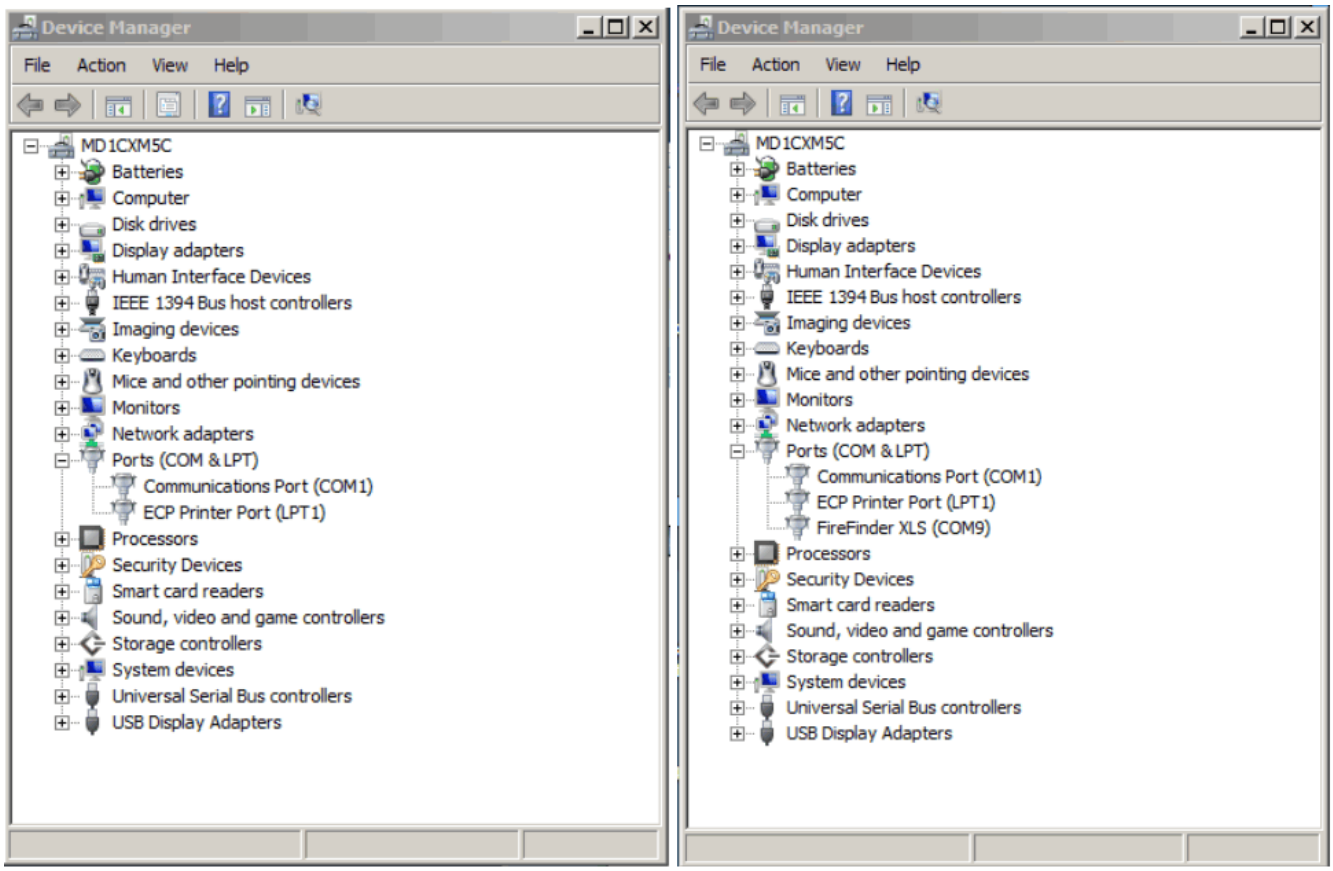

Figure 26 Device Manager – COM9

Closing VirtualHere client when all operations are complete

1. Note that even after clicking the X in the upper right corner of the VirtualHere program window, the client software will still be running. This is evident via an icon on the task bar towards the right (pointed to by the red arrow in the following figure). Note that it may not be visible if hide options are enabled in the task bar.

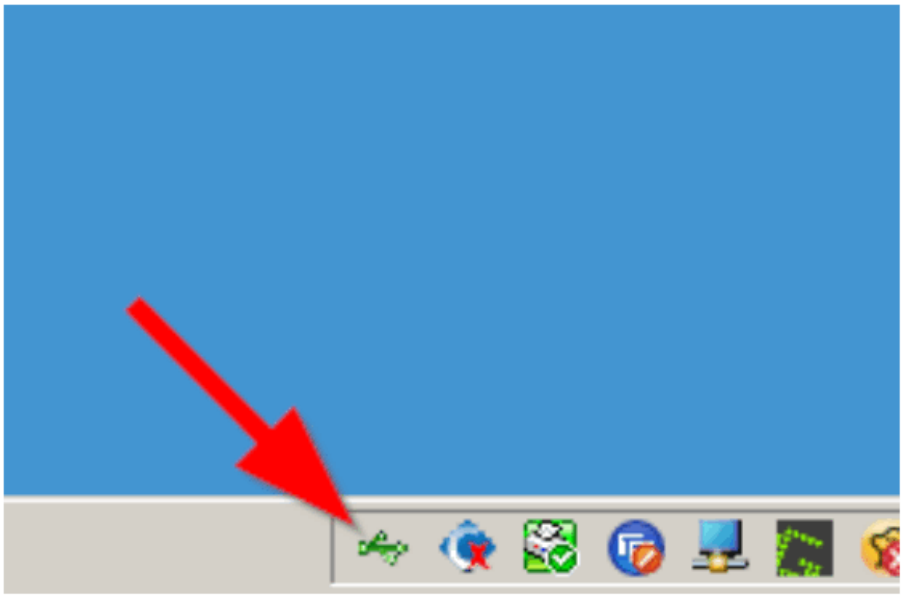

Figure 27 Client Software Still Running

2. Right click the icon and select Exit.

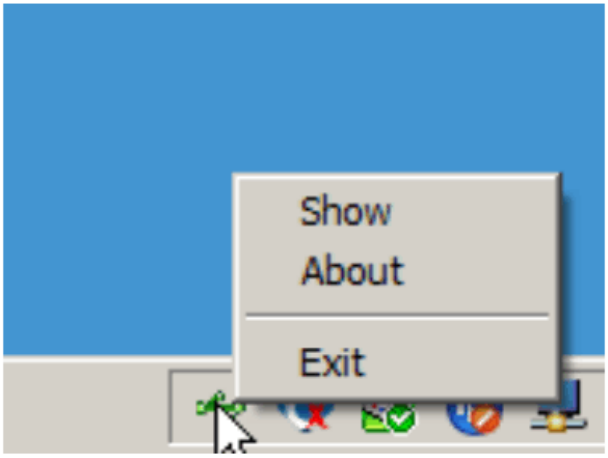

Figure 28

Icon – Exit

NOTE: When accessing a PMI-1 that has a TSP-40A connected, it is important to have access to a PMI that has the ability to acknowledge and reset the system. This is because the TSP-40A shares the same serial port on the PMI-1 used for Zeus access and a trouble will be posted indicating the TSP-40A is offline as a result of the Zeus connection.

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P/N A5Q00066312 Document ID A6V10525432_enUS_c
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Documents / Resources

	SIEMENS SNU ASSY Single Node Upload [pdf] Instruction Manual SNU ASSY Single Node Upload, SNU ASSY, Single Node Upload, Node Upload

References

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