

Abstract: This procedure explains how to configure and communicate to an IPm controller through a secure PPP connection.

Using Sixnet I/O Tool Kit software this technical note will describe how to request and gather datalog information, configuration loads and Test I/O.

Software Used:

- Sixnet I/O Tool Kit version 3.1
- VT-MODEM Setup Wizard version 2.09
- Operating System: Windows® XP SP2

Hardware Used:

- (1) VT-IPM-1410 (any IPm can be used)
- (2) VT-MODEM-1 (any combination of modems can be used)
- (1) PC with Windows Operating System

Cables Used:

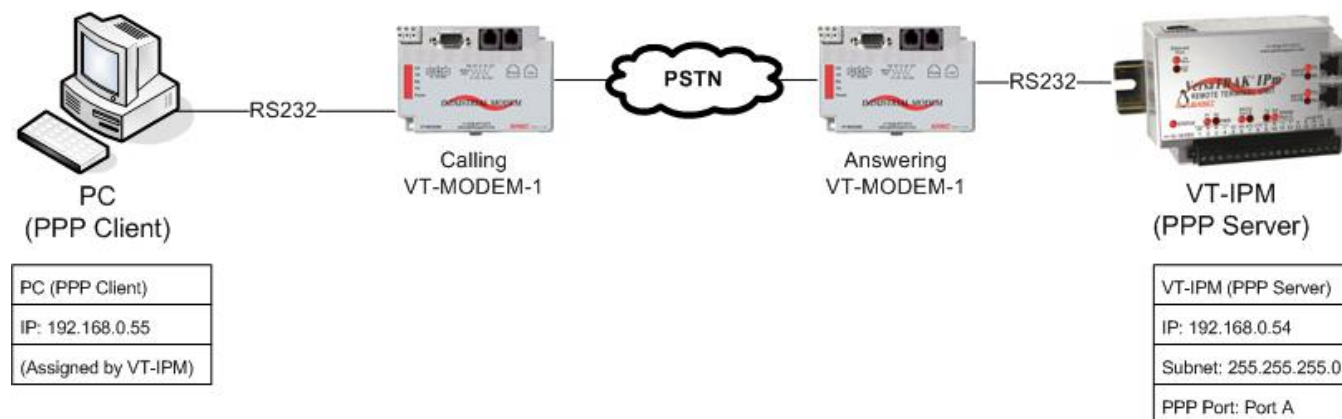
- Straight through Ethernet cable and RJ45 to DB9 adapter to connect IP to VT-MODEM-1
- VT-CABLE-MDM - Straight through serial cable to connect PC to VT-MODEM-1

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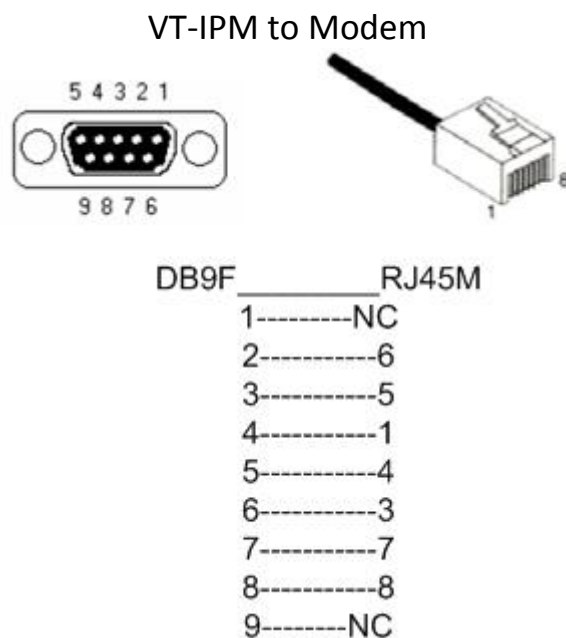
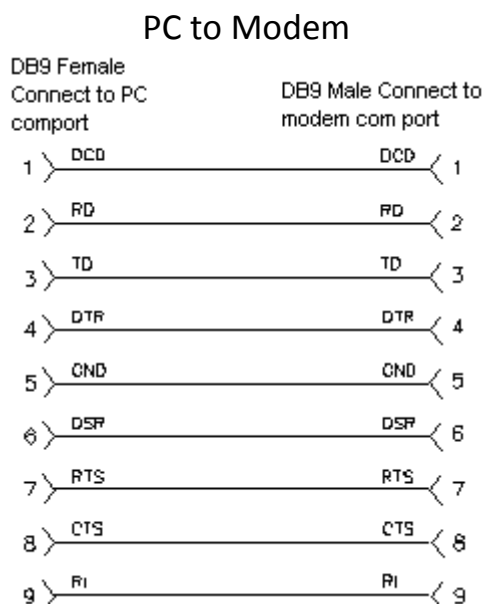
Configuration overview:

The Diagram below defines the connection necessary to communicate to the VT-IPM-1410 via PPP through modems. The configuration procedures below will define how to initiate the PPP connection, configure the IP and request data from the IPm. Since the IPm will be authenticating the PPP connection it is best to start with the IPm, and then configure the PC to call out, and lastly configure the modems.



RS232 cable pinouts:

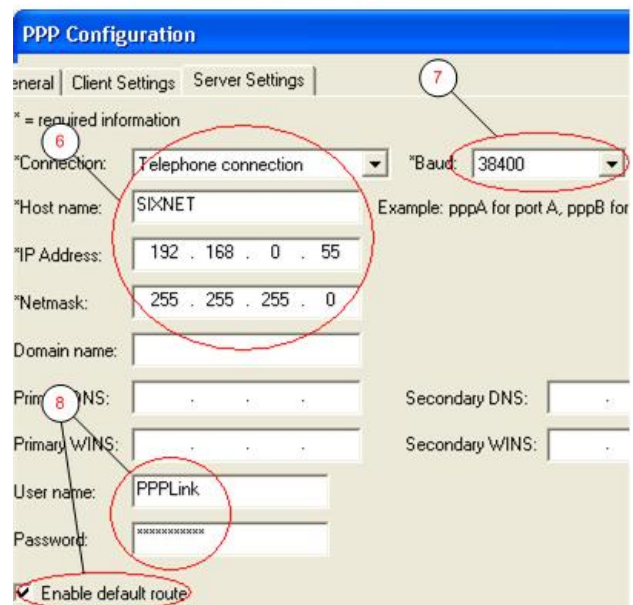
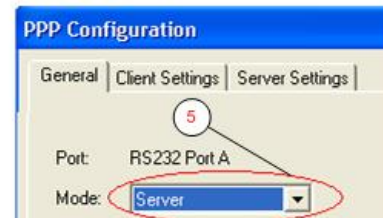
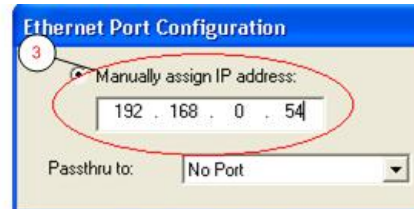
This section shows the cable pinouts used to connect the modems to the PC and VT-IPm.



Setup Procedure for the Sixnet RTU:

This procedure explains how to configure the Sixnet RTU.

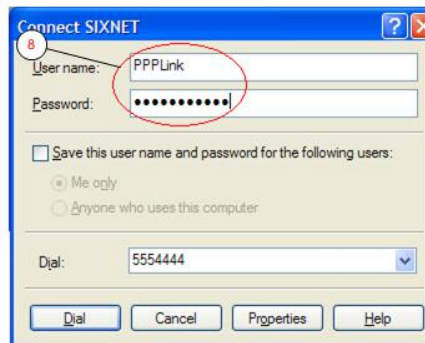
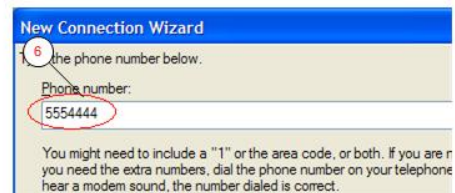
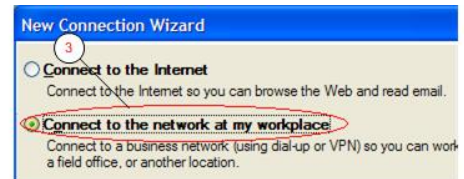
1. Select the IPm in your Sixnet I/O Tool Kit project file, and go to **Configure→Configure Station/Module**.
2. Go to the **Ports** tab, select the Ethernet port, and click on the **Configure Selected Port** button.
3. In the **Ethernet Port configuration** window configure an IP address. In this case **192.168.0.54** was used. Click on the **Advanced** button to set the subnet mask, **255.255.255.0** was used in this case.
4. Next, go the serial port configuration window for port A under the **Ports** tab. In the **Serial Port Configuration** screen select **PPP** as the port protocol. Leave the other parameters at default.
5. Click on the **Configure** button to configure the PPP settings. In the **PPP configuration** window under the **General** tab select the PPP mode. **Server** mode was used to set the modem to answer the call.
6. Click on the **Server Settings** tab to configure the PPP server settings. The **Connection** setting should be set to **Telephone connection**. In the **Host Name** setting set the desired Host name (**Sixnet** in this case). The **IP Address** and **Netmask** settings are what will be assigned to calling computer, so make sure it is a compatible subnet to the IP of the Ethernet port on the VT-IPm.
7. Set the desired serial port speed in the **Baud** field. In this case **38400** was used.
8. Set the **User name** and **Password** used to authenticate into the PPP connection by the PPP Client. In this case **PPPLink** and **Link2Sixnet** were used. Check the **Enable Default Route** checkbox.
9. When the new configuration is loaded to the VT-IPm it will properly initiate the modem to pass the PPP data correctly, so no further configuration is required.



Setup procedure for the PC:

This procedure explains how to configure the PC to callout.

1. Install the Sixnet VT-MODEM-1 (or desired modem) onto your computer as a Standard 33600 bps modem or using the driver that came with the modem. When the modem is installed the Windows driver will properly configure the calling modem, no further configuration is necessary. Please refer to the modem's user manual for more information.
2. Create a Windows Dial-Up Networking (DUN) connection in your Windows operating system to create the PPP connection. To do this go to **Control Panel→Network Connections**, then go to File→New Connection. When the **New Connection Wizard** pops up click **Next**.
3. Select the **Connect to the network at my workplace** selection, and click **Next**.
4. Select **Dial-up Connection**, and click **Next**.
5. Enter the desired connection name where the New Connection Wizard prompts you to enter a name. In this case **Sixnet** was entered. Click the **Next** button.
6. Enter the desired **phone number** where the New Connection Wizard prompts you for a **phone number**. Click **Next**.
7. Click the **Finish** button when the New Connection Wizard prompts you.
8. When you are finished the **Connect** window will pop-up to allow you start the connection. Enter the **User name** and **password** that was configured into the VT-IPm on page 3 of this document.



Initiating Communication from the PC:

This section describes how to initiate the PPP connection from windows and communicate to the IPm through using Sixnet software.

1. First, initiate the PPP connection by going to **Control Panel→Network Connections**. Double-click on the Windows Dial-Up Networking connection configured on page 4 of this document.
2. In the connect window enter the **user name** and **password** configured in the IPm (refer to page 3).
3. When the connection is established you will be able to use IP communications to talk to your IPm as if it were connected on a Local Area Network.
4. To configure the Sixnet I/O Tool Kit to talk to the modem go to **Device→Select** in the main window of the Sixnet I/O Tool Kit.
5. **Use Station's IP address** to communicate to the IPm. Perform any maintenance or data collection needed (Sixlog Host Tranfers, Test I/O and Loading).

