VT-MODEM Interfaces with the Modicon 612/00 PLC using Schneider ProWORXNxT Software

Abstract: The information in this document was determined by in-house testing and with the assistance of **Philips Brother Electrical Contractors of Glenmoore, Pennsylvania, Johnson Associates of Millsboro, Delaware, and United Electric Supply of New Castle, Delaware.** It explains the procedure for interfacing a SIXNET General Purpose Industrial Telephone Modem with the Modicon 612/00 PLC using Schneider ProWORXNxT2.0 control software. This setup will allow a remote computer to go on-line with a Modicon PLC via a telephone modem connection.

Hardware and Software Used:

- SIXNET Industrial Modem (Part Number: VT-MODEM-1US)
- SIXNET VT-MODEM Setup Wizard v1.15
- Serial cable (Part Number: VT-CABLE-MDM) (Incl. with VT-MODEM-1US)
- Modicon 612/00 CPU PLC
- PC serial port to Modicon RJ45 port cables (Modicon p/n's 110XCA28202 + 110XCA20300)
- Modem DB9 to Modicon RJ45 port cable (see pinout on page 5)
- Schneider ProWORXNxT 2.0 software (with XMIT instruction)
- Modem modicon_612-00.6ms config file (find in Modem Setup Wizard or create your own)
- Internal modem in PC
- **Analog** phone line connections at both ends (digital lines may not work). The phone line at the MicroLogix end must also be a direct-dial number from the outside (It is recommended that if possible the analog line should not be routed through a PBX system).

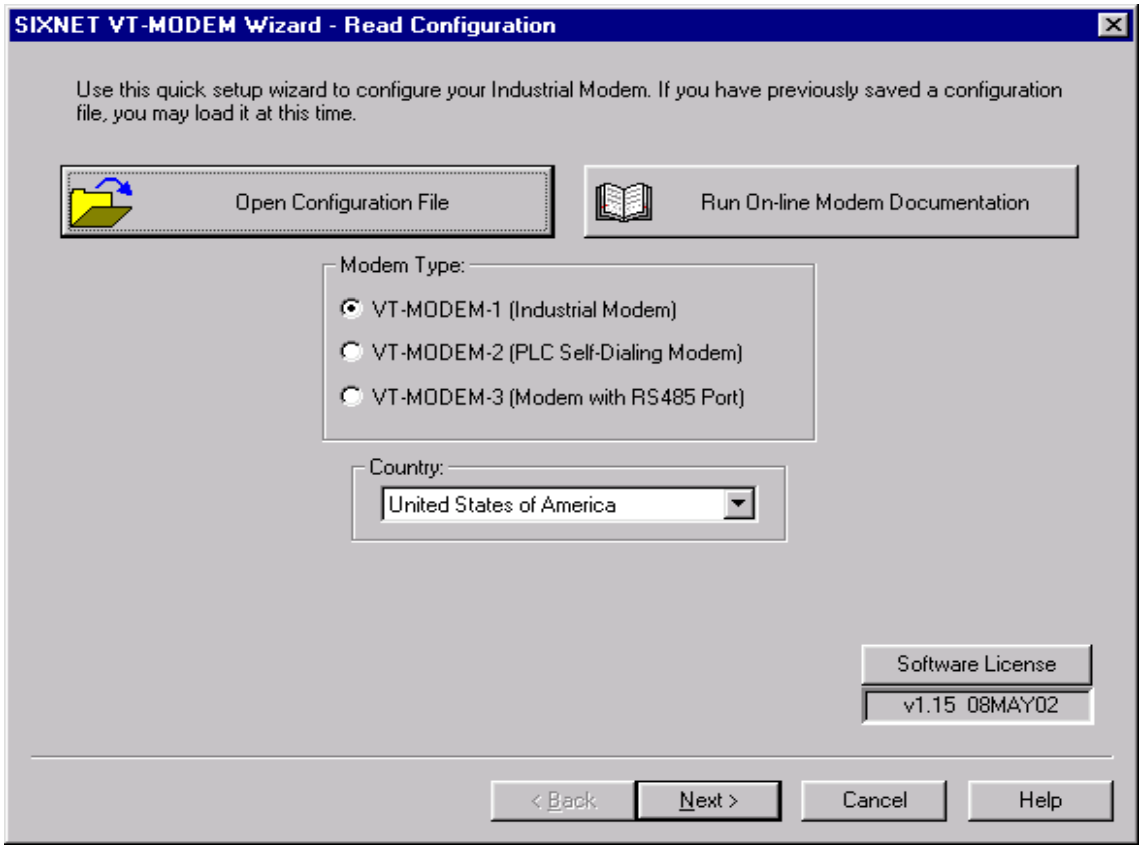
Receiving Modem (SIXNET VT-MODEM-1) Setup Procedure :

Use the VT-Modem Wizard to configure your modem:

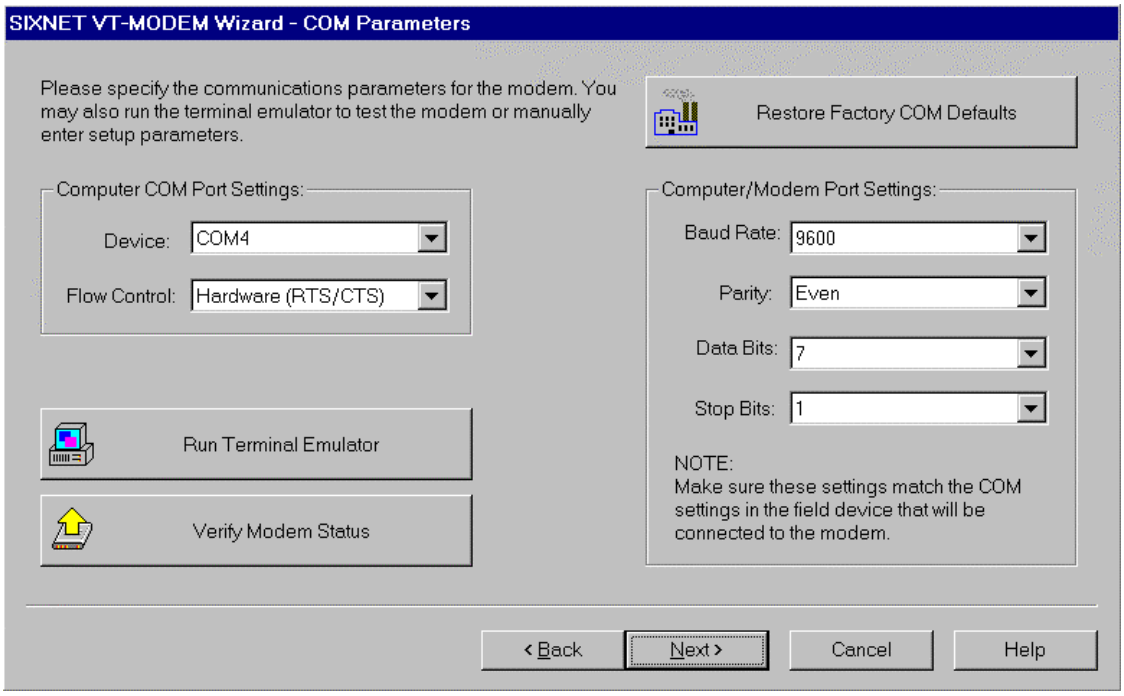
Connect modem to PC with VT-CABLE-MDM. Run the VT-Modem Setup Wizard. Click "Open Configuration File" and select "modicon_612-00.6ms", if available, and then click to last screen and write settings to modem (SCREEN SHOT 4). If "modicon_612-00.6ms" is not available:

Select VT-MODEM-1 at the "Read Configuration" screen (SCREEN SHOT 1). At the "Com Parameters" screen, select PC com port, baud rate 9600, hardware flow control, even parity, 7 data bits, 1 stop bit (SCREEN SHOT 2). At the "Modem Parameters" screen, select "no flow control" and "modem-to-modem speed fixed at 9600", and use all other defaults (SCREEN SHOT 3). Save configuration to file (SCREEN SHOTS 4 & 5), and then write modem settings to modem (SCREEN SHOT 4).

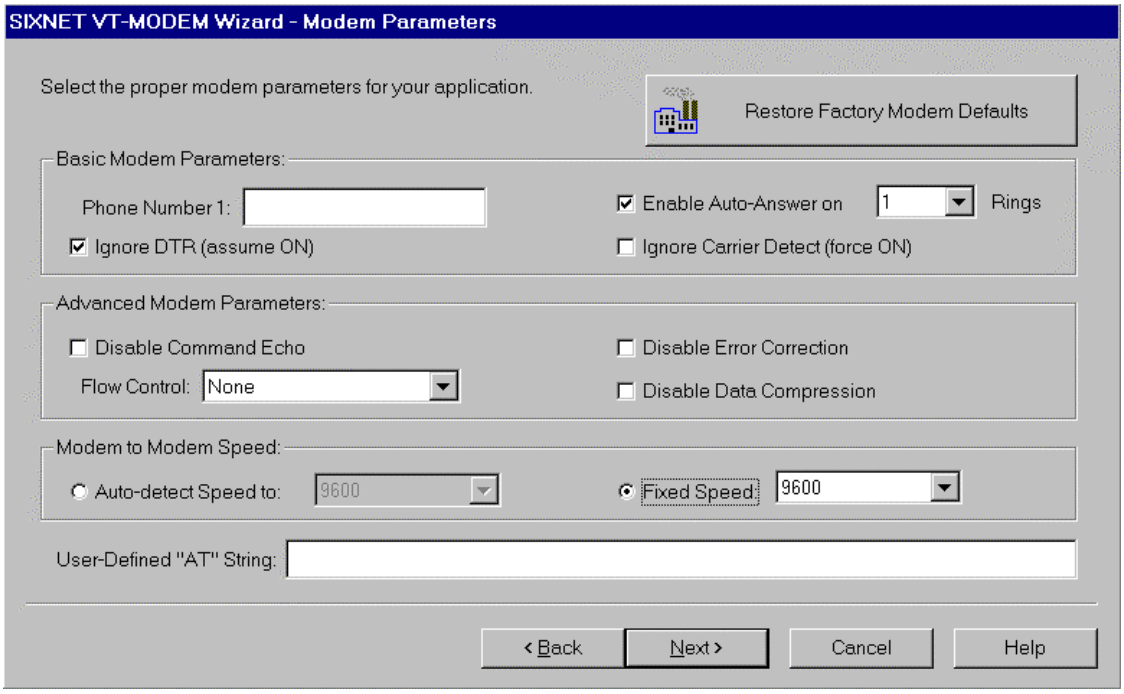
Connect modem to PLC using a cable conforming to the pinout shown on page 5. You are now ready to remotely program your Modicon PLC!



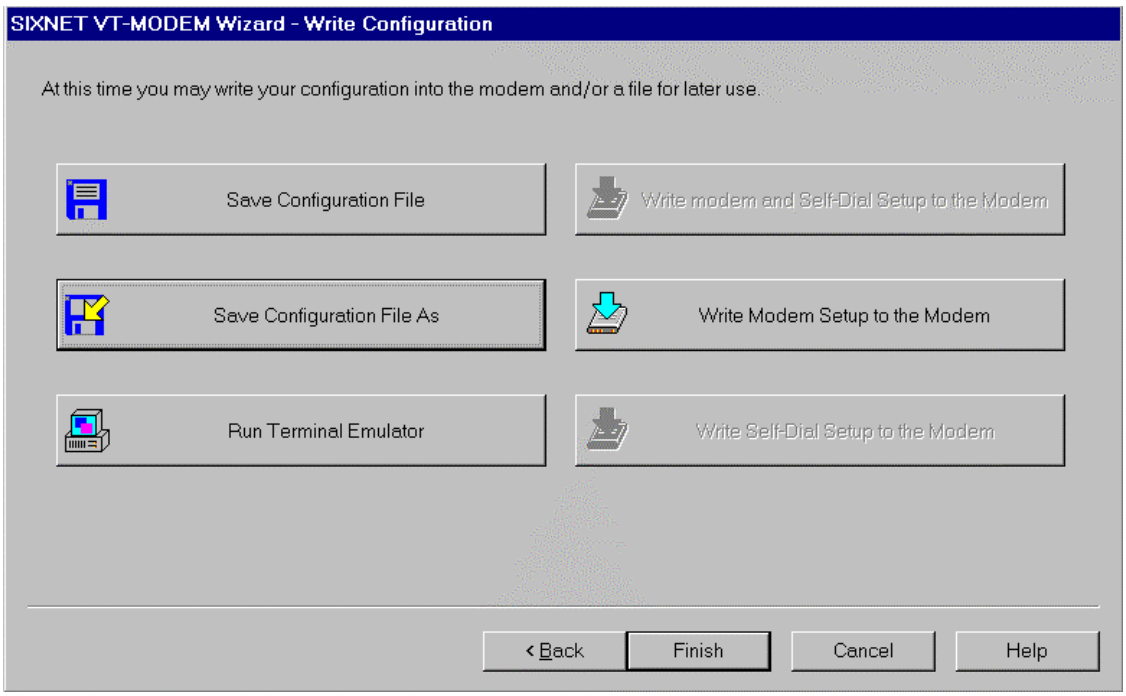
SCREEN SHOT 1



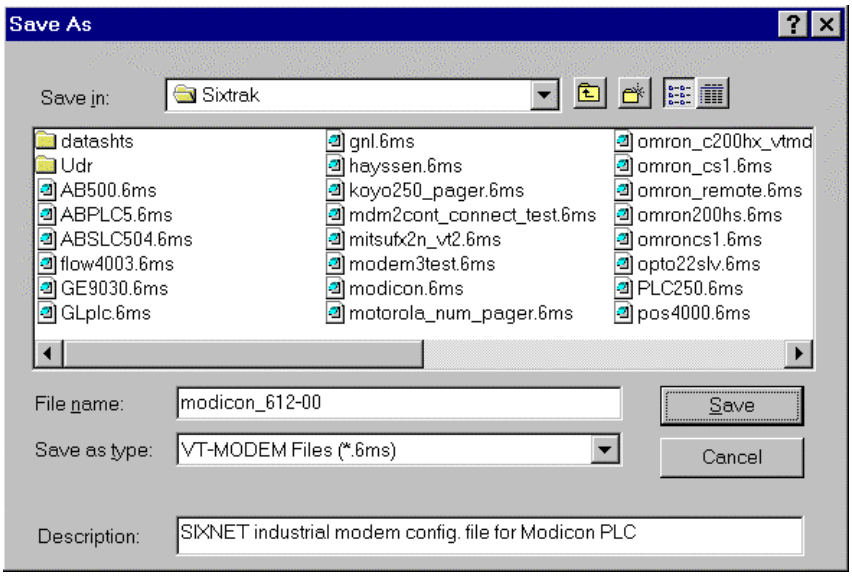
SCREEN SHOT 2



SCREEN SHOT 3



SCREEN SHOT 4



SCREEN SHOT 5

CABLE CONFIG: PLC-TO-MODEM

MODICON RJ45	MODEM DB9 PORT
PIN2: RXD	PIN2: RXD
PIN3: TXD	PIN3: TXD
PIN4,6: DTR,DSR TIED	PIN4,6: DTR,DSR TIED
PIN7: RTS	PIN7: RTS
PIN8: CTS	PIN8: CTS

CABLE CONFIG: MODICON-TO- PC

MODICON RJ45	PC COM (DB9) PORT
PIN1: NOT CONNECTED*	PIN1: DCD
PIN3: TXD	PIN2: RXD
PIN4: RXD	PIN3: TXD
PIN2: DSR	PIN4: DTR, PIN6: DSR
PIN5: GND	PIN5: GND
PIN7: CTS, PIN6: RTS	PIN7: RTS, PIN8: CTS
	PIN9: RI
PIN8: CHASSIS GND	CONNECTOR CASE

*CAUTION: Pin 1 receives 5V from the PLC