

Motion Coordinator Application Note



Number:MC-1042, Revision X, 2/28/2007

Subject: Connecting to Sixnet Modem

Introduction

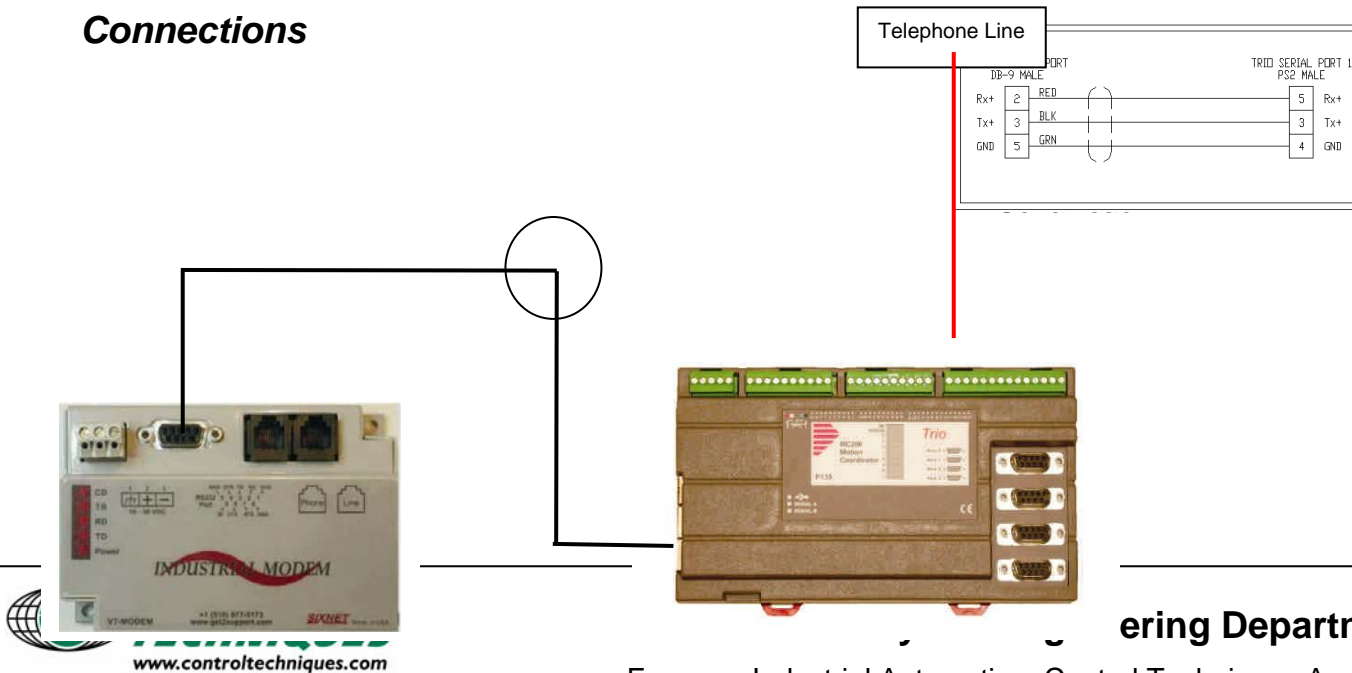
WARNING: Commanding a Trio Motion Controller from a remote location is potentially dangerous. Experienced engineers should only carry out connecting in this manner and limit the purpose to non-intrusive diagnostics and monitoring. Trio Motion Technology accepts no responsibility for loss or damage caused by connecting in this manner. No technical support or otherwise will be given to this type of connection.

This technical bulletin note describes the procedure required to set up a SIXNET VT Industrial Modem to a Trio motion controller and connect with Motion Perfect 2 software. The following describes the application of the SIXNET dial-up modems to establish remote communications with a Trio *Motion* Coordinator™. When a connection is established it is possible to remotely monitor the *Motion* Coordinator™ to allow simple diagnostics and of a commissioned system.

Supplies

- 1 - Trio MC2xx series controller
- 2 - Sixnet VT-Modem-1 Industrial Modem
- 1 - Sixnet Modem to Trio Motion Controller Serial Cable
- 1 - Sixnet Modem to PC standard serial cable (9pin female to 9 pin male)
- 2 - Standard telephone cords (RJ11)

Connections



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SIXNET Modem Setup

Connect the SIXNET VT-Modem-1 to your PC's com port via the supplied 9 pin to 9 pin serial cable and start the MODEM Setup Wizard.

On the COM screen select

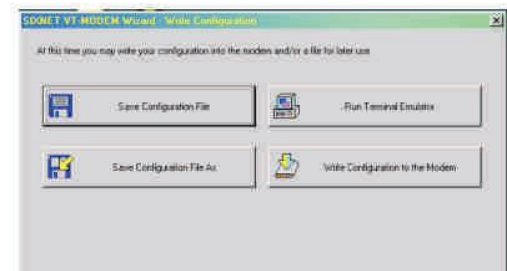
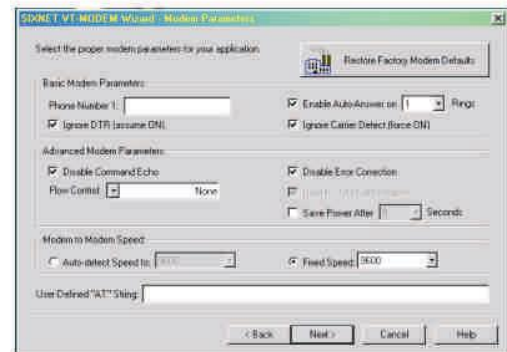
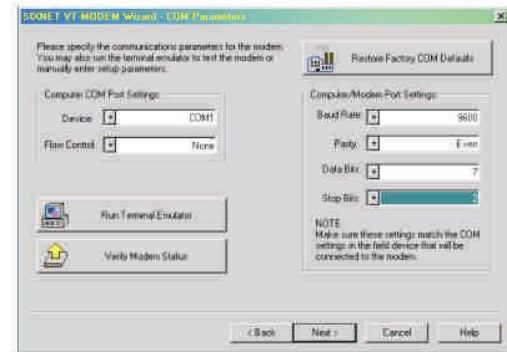
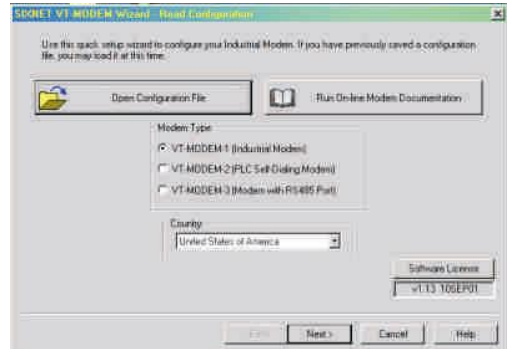
- Device – COM1
- Flow Control – None
- Baud Rate – 9600
- Parity – Even
- Data Bits - 7
- Stop Bit – 2

On the Modem Parameters Screen

1. Phone Number 1 – Blank
2. Ignore DTR – Checked
3. Enable auto answer on 1 ring
4. Ignore carrier detect (Force On) - Checked
5. Disable Command Echo – Checked
6. Disable Error correction – Checked
7. Disable Data Compression – Checked
8. Flow Control – None
9. Fixed speed – Checked at 9600
10. User Defined AT string – leave blank.

On the Write Configuration Screen

1. Save the Configuration file.
2. Write Configuration File to Modem



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3. Run Terminal Emulator

At the terminal emulator enter the following AT Commands.

AT&C0 'Forces carrier detect High
AT&D0 'Forces DTR high
ATQ1 'Disables sending results code
ATE0 'Disables command Echo
AT&W0 'Stores current configuration to channel 0

Establishing a connection

Troubleshooting.

Ensure that the modem is powered and ready for connection. At the terminal show PC side Modem TD light flashes. Also verify the when the controller power is cycled, the controller side modem TD light flashes. Also when the TD light flashes on the PC side modem the RD light flashes on the Controller modem and vice versa.

Verify two-way communication using Windows HyperTerminal connected to each modem and check characters are being sent both ways.

Ensure that the Motion controller and the Modem is powered and connected to the telephone line.

Although not essential, all testing was done with an identical SIXNET modem connected to the PC. This modem was configured in exactly the same way as the first. A cheaper (non-industrial) external modem could be used in its place however is important that the modem, amongst other things, be put in pass through mode and the appropriate AT commands for that modem be issued.

With the PC side modem powered and connected to COM1 of the PC, start Motion Perfect (version 2.1.0.2 or later). Motion perfect will attempt to establish a connection. The connection will fail as we have not dialed and connected the modems yet