Omnitron Systems Technology, Inc.

Application Note

iConverter®
Managed Fiber Media Converter Product Family

iConverter Management Remote Modem Access

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iConverter® Management – Remote Modem Access

INTRODUCTION

The *iConverter* Management Modules, such as the 10/100M and NMM, can be remotely accessed via a remote serial connection. The remote serial connection is established by connecting an external serial modem to the Management module's Serial Console Port.

Listed below are the general rules to follow, including two specific modem examples.

CONFIGURING A MODEM FOR REMOTE ACCESS

Most standard external modems can be used to connect to the serial port of an *iConverter* Management Module. The following rules must be considered when configuring a modem for remote access.

1. The cable used to connect the modem serial port to the Management Module must be a null modem cable. This can be accomplished through the use of a null modem cable or with a straight through cable with a null modem adapter on the end of the cable.

2. The modem must be set to Auto Answer. This is accomplished through a DIP-switch on some modems or by setting the internal NVRAM on other modems. Set to ***ATS0=1***.

3. The modem must override the Data Terminal Ready signal as this signal is not supplied by the Management Module. This is done either with DIP-switches or by setting the internal NVRAM. Set to ***AT&D0***.

4. The character echo must be turned off to prevent the Management Module from receiving the data it is sending. This is done either with switches or by setting the internal NVRAM. Set to ***ATE0***.

5. The connection result codes from the modem (such as RING or CONNECT 2880) must be suppressed. This is done either with switches or by setting the internal NVRAM. Set to ***ATQ1***.

6. The serial connection from the modem to the Management Module must always be at 57600 baud. The Management Module serial port also needs to be set to 57600 baud. Some modems will attempt to adjust the serial connection to the negotiated line rate. This feature needs to be inhibited. The method of inhibiting varies with the type of modem used. For some modems the NVRAM setting of ***AT&B1*** will inhibit baud rate changes.

7. If NVRAM settings are used, the new configuration values must be written and saved in NVRAM and the modem must be set to use the NVRAM settings on power up. The method of saving settings varies between modems. Please consult the modem manual for the proper method. Most modems use the command ***AT&W0*** to save the setting to user profile 0.

CONFIGURATION OF A ZOOM MODEL 3049 MODEM (INCORPORATING A LUCENT CHIPSET)

All settings are made using NVRAM. This modem always connects to the PC using automatic baud detect.

1. Connect the modem to a PC serial port and set HyperTerminal to communicate at 57600, N, 8, E through the PC serial port to which the modem is connected. When ***AT&V*** is entered at the HyperTerminal window, the modem should display its current configuration to determine if all communication parameters are correct.

2. Set the NVRAM parameter to auto answer on one ring. Enter ***ATS0=1***.

3. Set the NVRAM parameter to disable Data Terminal Ready. Enter ***AT&D0***.

4. Set the NVRAM parameter to disable result codes. Enter ***ATQ1***.
5. Save the updated parameters to user profile 0. Enter ***AT&W0***.
6. Examine the parameters to ensure the correct settings. Enter ***AT&V***.

Turn the modem off and connect to the Management Module Serial Console Port. Connect the phone line to the proper jack on the modem. Turn on the power and dial into the modem through the phone line. The modem should answer the call and start the negotiation process to determine the best line speed. Once the connection is made, press the RETURN key and the Management Module should respond with the password entry screen.

CONFIGURATION OF A U.S. ROBOTICS MODEL 5686E MODEM

Most settings are made using DIP-switches. The switches will override NVRAM settings. Some settings must also be made in NVRAM. The default setting for this modem is to change the serial rate to the PC to match that of the line speed. When the modem is not online, the PC serial connection is detected by the modem using automatic baud detect.

1. Connect the modem to a PC serial port and use HyperTerminal to communicate at 57600, N, 8, E through the PC serial port to which the modem is connected. When ***ATI4*** is entered at the HyperTerminal window, the modem should display its current configuration to determine if all communication parameters are correct.
2. Set the NVRAM parameter to auto answer on one ring. Enter ***ATS0=1&W***. Note that the ***"&W"*** suffix saves the setting change to NVRAM.
3. Set the NVRAM parameter to disable baud rate changes. Enter ***AT&B1&W***.
4. Examine the parameters to ensure the correct settings. Enter ***ATI4***.
5. Set Switch 1 to Data Terminal Ready Override. Set the DIP-Switch to the down position.
6. Set Switch 2 to Verbal Result Codes. Set the DIP-Switch to the up position.
7. Set Switch 3 to Suppress Result Codes. Set the DIP-Switch to the up position.
8. Set Switch 4 to No Echo. Set the DIP-Switch to the down position.
9. Set Switch 5 to Auto Answer. Set the DIP-Switch to the up position.
10. Set Switch 6 to Carrier Detect Normal. Set the DIP-Switch to the up position.
11. Set Switch 7 to Load NVRAM defaults. Set the DIP-Switch to the up position.
12. Set Switch 8 to Smart Mode. Set the DIP-Switch to the down position.

Turn the modem off and connect to the Management Module Serial Console Port. Connect the phone line to the proper jack on the modem. Turn on the power and dial into the modem through the phone line. The modem should answer the call and start the negotiation process to determine the best line speed. Once the connection is made, press the RETURN key and the Management Module should respond with the password entry screen.