



Hardware Note for Establishing a PPP Session to the Cisco 6732 AMM with the EIA/TIA-232 (RS-232) Cable

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Introduction

The Cisco 6732 provides two interfaces that are used to access Element Management System (EMS) provisioning and maintenance.

- The first interface is the recommended Ethernet interface on the main control card MCC line interface module (LIM) and alarm maintenance module AMM line interface module.
- The second interface is an EIA/TIA-232 interface located on the AMM line interface module.



Note

EIA/TIA-232 is also known as RS-232.



By connecting the appropriate cable (RJ-45 for Ethernet or DB-9 for EIA/TIA-232) to the port, you can access the AMM LIM interface. You can use both ports on the AMM LIM simultaneously. Because the AMM LIM is the only card providing the EIA/TIA-232 interface, this option is not available on the Cisco 6705 or the Cisco 6732 utilizing only the MCC LIM.

The EMS software works the same if you are using the Ethernet or the EIA/TIA-232 port; however, access through the EIA/TIA-232 port is slower than the Ethernet port.

There is no additional configuration required for either the Cisco 6732 or the EMS application to utilize the EIA/TIA-232 capability. By setting up the PC to use standard Windows Dial-up Networking, it is possible for the EMS to access the Cisco 6732 by using Point to Point Protocol (PPP) through the EIA/TIA-232 interface port.

The implementation of this EIA/TIA-232 interface provides additional flexibility including:

- An additional port for accessing the Cisco 6732
- Access to the Cisco 6732 from a PC that has no Ethernet capability
- Modem access in cases where remote maintenance or access is required by using a dial-up line.

Hardware Requirements

- Cisco 6732 Multiservice Access Platform chassis with AMM LIM
- Windows 95/98/NT computer with a modem
- Cable, DB9 M/F
(EIA/TIA-232 cable with DB9 female connector on one end and a DB9 male connector on the other)

Software Requirements

Any version of EMS software.

About Initial Modem Setup



Note

Your IT department or someone with an extensive background in Windows Dial-Up Networking, comport set up, or modem set up must perform the initial modem setup.

Have your information systems group set up your computer if:

- You do not know how to activate the PC comport that you are using
- You do not know how to create a modem from the Windows Control Panel
- You do not know how to connect your comport modem to dial-up networking
- You do not know how to set up dial up networking.
- You need administrative rights to change IP addressing on your computer.

**Note**

Perform the initial setup procedure only at initial setup. Repeat the initial startup procedure only if the Windows operating system is reinstalled on your system.

Getting Started

- Step 1** Ensure the com port that you are using is enabled on your computer.
- Step 2** If the modem and dial-up networking are already set up, start with the “Changing the IP Address” section on page 5.

Setting Up the Modem

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- Step 1** Verify the following parameters are defined:
- Standard Modem Types
 - Standard 9600 bps Modem
 - 8 databits, no parity, and 1 stop bit
 - No flow control
- Step 2** Select **yes** when the message asking if the modem installation requires an update of the dial-up networking appears.

Setting Up the Phone Book

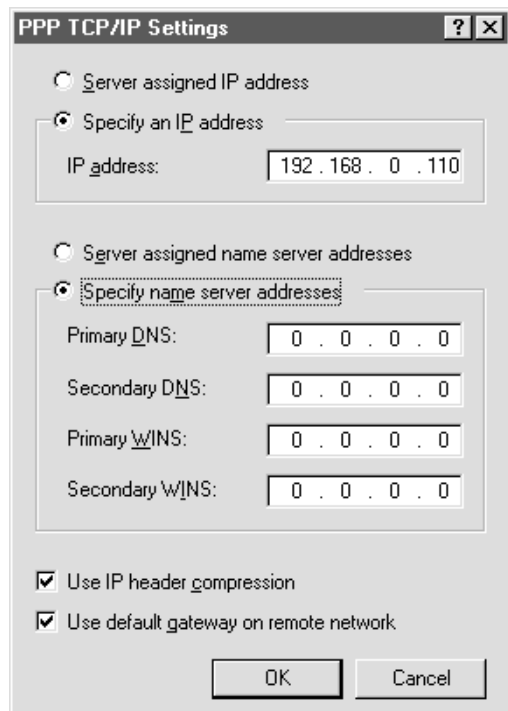
**Note**

If the Phone Book parameters are already established, use these steps for verification.

- Step 1** In the New Phonebook Entry window, verify the following information:
- Entry name: enter any name you choose
 - Phone number: enter *fbxmcc* as the number to be dialed
 - Dial using: select the modem that was set up earlier in this procedure.
- Step 2** In the Dial-up server type field, select one of the following options:
- **PPP:Windows NT**
 - **PPP:Windows 95 Plus,**
 - **PPP:Internet.**
- Step 3** Verify **TCP/IP** is the Network protocol.
- Step 4** Select **Enable software compression.**
- Step 5** Select **Enable PPP LCP extensions.**

- Step 6** In the PPP TCP/IP Settings window (Dialup Networking> Edit Phonebook Entry> PPP TCP/IP Settings) verify the following information:
- The IP address field is the same address as the EMS host PC.
 - **Specify name server addresses** is selected.
 - All the fields contain 0s. See Figure 1.
 - **Use IP header compression** is selected.
 - **Use default gateway on remote network** is selected.

Figure 1 TCP/IP Settings



About Modem Connections after the Initial Setup

The AMM EIA/TIA-232 port provides a PPP connection or a limited Hayes AT command support connection. Use the PPP connection.



Note

The EIA/TIA-232 port on the AMM is not a connection for a dumb terminal.

If using the Hayes commands, the only command that is valid and recognized by the AMM is **ATD fbxmcc**.

Once you enter the ATD fbxmcc command, the AMM switches to PPP mode.

After the initial setup procedure is completed, you can access the Cisco 6732 by selecting the name you created when you set up the phonebook entry. See “Setting Up the Phone Book” section on page 3. This dials-up the Cisco 6732 and completes a connection by using PPP. You can start the EMS on the PC and begin a session.

About Setting Up Your Cisco 6732 Connection

You must perform “Changing the IP Address”, “Disabling the Ethernet Card”, and “Connecting to the Cisco 6732” every time you connect your computer to a Cisco 6732 using the EIA/TIA-232 cable.



Note

You must have admin rights to perform the following steps.

Changing the IP Address

Step 1 Connect the EIA/TIA-232 cable from the comport on the PC to the AMM SM LIM EIA/TIA-232 port of the Cisco 6732.



Note

The comport must be the same one you selected in the initial setup procedure. See the “Getting Started” section on page 3.

Step 2 In the Network Icon properties window, select **Specify an IP address** and enter the following information:

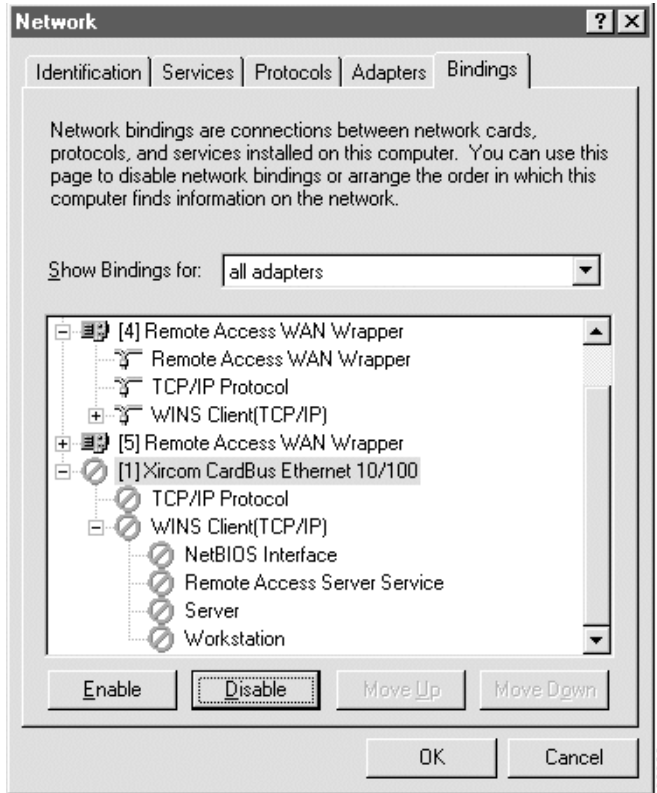
- a. IP address of the PC hosting the EMS program (use this form - nnn.nnn.nnn.nnn). This is the same network IP address as the MCC.
- b. Subnet Mask value = <the subnet that you are using>
- c. Default Gateway address (same as the IP address of the Cisco 6732 being accessed).

Step 3 Select **OK** to return to the **Network** window.

Disabling the Ethernet Card

- Step 1 In the Network Neighborhood Icon Bindings window, select the Ethernet card you are using and click **Disable**.

Figure 2 Disable Ethernet Adapter



- Step 2 Click **OK**.

Connecting to the Cisco 6732

- Step 1 Open Dial-up Networking.
 Step 2 In the “Phonebook entry to dial” field, select the name you created for the EIA/TIA-232 dialin.
 Step 3 Enter the phone number “*fbxmcc*”.
 Step 4 Click **Dial**.
 Step 5 Click the **OK** button.



Note No Password or Domain is required in this window.

- Step 6 Start EMS and servers.

**Note**

EMS operating over the EIA/TIA-232 port operates slower than when connected to the Ethernet port.

Reactivating the Ethernet Card

To return your system to a normal operating environment after you have disconnected the EIA/TIA-232 cable, you must reactivate the Ethernet card.

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- Step 1** From the Control Panel, double click the **Network Icon**.
 - Step 2** Click the Network Neighborhood–Bindings tab.
 - Step 3** In the “Show Bindings for:” field, select **all adapters**.
 - Step 4** Select the Ethernet card you previously disabled
 - Step 5** Click **Enable**.
 - Step 6** Click **OK**.
 - Step 7** To start your computer, click **Yes**.
 - Step 8** Return your PC to the previous IP address settings.

Obtaining Documentation

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

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- WWW: www.cisco.com
- Telnet: [cco.cisco.com](telnet://cco.cisco.com)
- Modem using standard connection rates and the following terminal settings: VT100 emulation; 8 data bits; no parity; and 1 stop bit.
 - From North America, call 408 526-8070
 - From Europe, call 33 1 64 46 40 82

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In North America, TAC can be reached at 800 553-2447 or 408 526-7209. For other telephone numbers and TAC e-mail addresses worldwide, consult the following web site:
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