Cisco DVB CAR100 Statistics

Introduction

Cisco DVB CAR100 Statistics is an application designed to monitor the performance and status of the Cisco DVB CAR100 Cable Access Router, software version 1.1. It is intended for use on the Ethernet side of the client PC and not for remote diagnostics over the hybrid fiber-coaxial (HFC) network—although it can be used for this purpose.

For detailed information on how to install and configure the Cisco DVB CAR100, please refer to the *Cisco DVB CAR100 Cable Access Router Configuration and Setup Guide* (text part number: 78-10686).

Note The software is designed for use with the Cisco DVB CAR100 cable access router, software version 1.1 or newer. If used with older versions, invalid or faulty readouts may result.

Installing the Application

To install Cisco DVB CAR100 Statistics, follow these instructions:

Step 1 Copy the program folder onto your hard disk.

Step 2 Open the folder and read the file **readme.txt**.

Step 3 Click the relevant version: **Windows 9x** or **Windows NT**.

Step 4 Double-click **setup.exe** and follow the screen instructions.

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Upgrading Cisco DVB CAR100 Statistics Using Windows NT

To install Cisco DVB CAR100 Statistics, follow these instructions:

Step 1 Open the folder of the version that you want to install: Windows 9x or Windows NT.

Step 2 Double-click **setup.exe**.

Step 3 Choose the option **Remove Cisco Cable Modem Statistics Software** and click **Finish**.

Step 4 Double-click **setup.exe** again and follow the on-screen instructions.

Upgrading Cisco DVB CAR100 Statistics Using Windows 95/98

To install Cisco DVB CAR100 Statistics using Windows 95/98, follow these instructions:

Step 1 From the Windows **Start** menu, choose **Settings>Control Panel>Add/Remove Programs.**

Step 2 Choose **Cisco Cable Modem Statistics Software** and click **Delete**.

Step 3 Double-click **setup.exe** and follow the on-screen instructions.

Uninstalling Cisco DVB CAR100 Statistics

To uninstall Cisco DVB CAR100 Statistics, follow these instructions:

Step 1 From the Windows **Start** menu, choose **Settings>Control Panel>Add/Remove Programs.**

Step 2 Select **Cisco Cable Modem Statistics Software** and click **Remove**.

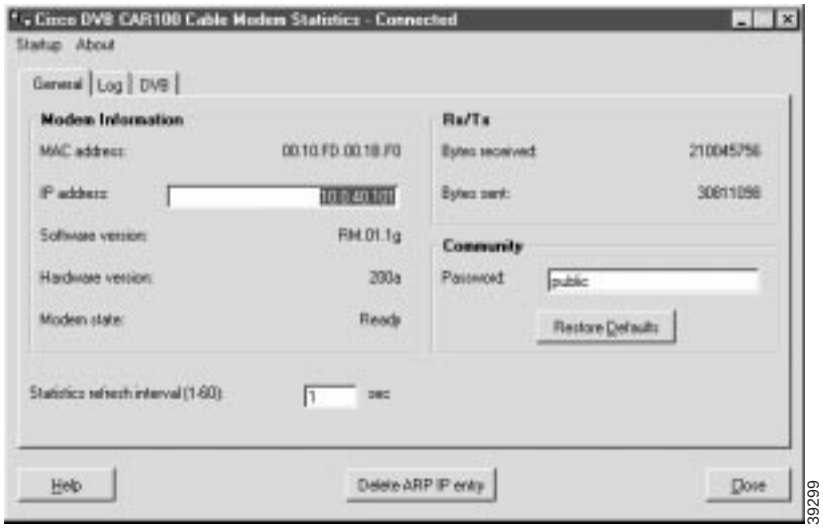
Getting Started with the Cisco DVB CAR100 Statistics

To use the application, follow these instructions:

Step 1 Ensure that your management PC is connected to the Cisco DVB CAR100 via an Ethernet interface. (See the *Cisco DVB CAR100 Cable Access Router Installation and Configuration Guide* for detailed instructions.)

Step 2 Start the application by, for example, double-clicking on the desktop shortcut or choose it from the **Start** menu. The following screen appears:

Figure 1 Statistics Application - General Tab



Step 3 If the General tab is not already selected, click the **General** tab (default).

Step 4 Enter the Ethernet IP (default is 192.168.128.2) of the Cisco DVB CAR100 and the read community password (default is public).

Step 5 Define how often you want the statistics to be updated in the range from 1 to 60 seconds (default is 5 seconds).

Using Cisco DVB CAR100 Statistics

Cisco DVB CAR100 Statistics provides data from selected Management Information Bases (MIBs) generated by the Cisco DVB CAR100.

This data is provided on three tabs:

- General
- Log
- DVB

Regardless of the tab you are using, it always possible to click the **Help** button to view the readme.txt file, the **Close** button to shut down the application, and the **Delete ARP IP entry** button. Address Resolution Protocol (ARP) is a protocol that maps IP addresses to physical hardware addresses (MAC addresses). If you use the application for different modems with the same IP address, you can press the **Delete ARP IP entry** to delete the local ARP entry for the specified IP address.

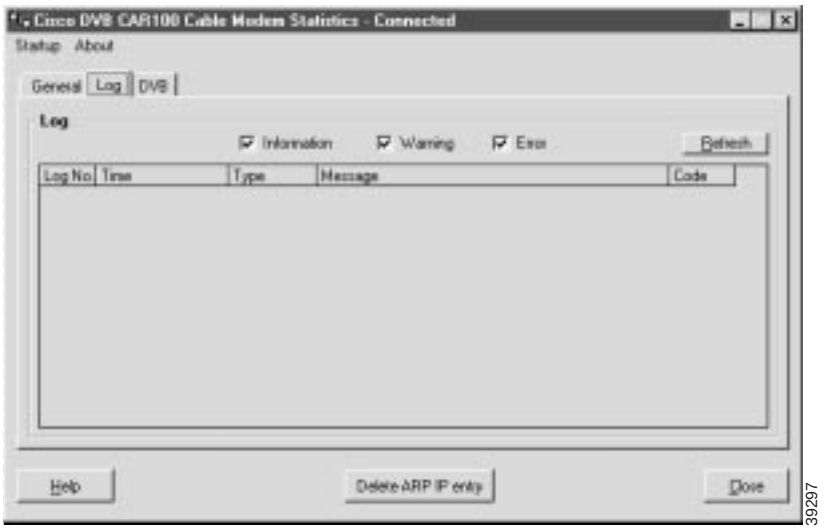
General Tab

- Here you can enter the Ethernet IP address and the read community password for a specific Cisco DVB CAR100 and define the application's statistics update interval.

- This tab provides the MAC address of the cable modem, and the software and hardware versions. It also displays the current status for the device. The options are:
  - **terminated-all-leds-off** (0)
  - **power-up** (1)
  - **frequency-search-started** (2)
  - **sending-bootp-request** (4)
  - **ready** (5)
  - **resetting** (6)
  - **frequency-search-started-again** (11)

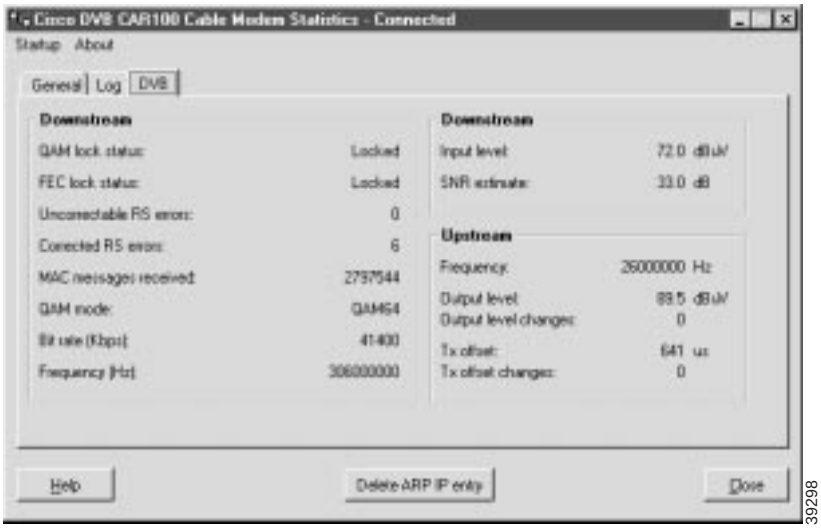
The tab also indicates how many Ethernet bytes have been sent and received by the unit.

Figure 2 Statistics Application - Log Tab



- Click the check boxes to enable or disable which categories of messages you want to view: **information**, **warning**, and **error**. The default is that all three are enabled.
- All messages are displayed chronologically and are listed with their log number, the time the event occurred, what type it is, the message itself, and the message's code number.
- Click the **Refresh** button to retrieve log entries from the cable modem.

Figure 3 Statistics Application - DVB Tab



The data listed in the following two tables is taken from MIBs generated by the Cisco DVB CAR100:

Table 1 MIB File information - Downstream

Parameter	MIB	Description
QAM Lock	*rcmDvbDsQamLock*	This field shows the modulation lock status: • locked (1) • unlocked (2) Read-only field.
FEC Lock	*rcmDvbDsFecLock*	This field shows the Forward Error Correction (FEC) lock status: • locked (1) • unlocked (2) This field must show locked. Otherwise, the cable modem does not work. Read-only field.
Uncorrectable RS Errors	*rcmDvbDsUnCorrectRs*	This field shows the number of uncorrectable Reed Solomon errors in the Downstream section. *** See the sentence just above the table. *** Read-only field.
Corrected RS Errors	*rcmDvbDsCorrectRs*	This field shows that the number of corrected Reed Solomon errors in the Downstream section. Read-only field.
MAC messages received	*rcmDvbDsMacMessRx*	This field shows the number of MAC messages received. Read-only field.

Table 1 MIB File information - Downstream (continued)

Parameter	MIB	Description
QAM Mode	*rcmDvbDsQAMMode*	This field shows the QAM mode. The following values appear: • qpsk (2) • qam8 (3) • qam16 (4) • qam32 (5) • qam64 (6) • qam128 (7) • qam256 (8) The only QAM modes that Cisco DVB CAR100 Statistics uses are qpsk (2) and qam64 (6). Read-only field.
Bite rate		This field shows the downstream bite rate in Kbaud. This value is derived from multiplying the QAM and symbol rates together. Read-only field.
Frequency	*rcmDvbDsFrequency*	This field shows the downstream frequency in Hz. This frequency is found during the procedure of the unit and is stored in Flash memory. Read-only field.
Downstream Input Level	*rcmDvbDsInputLevel*	Estimated input level in 0.1 dB relative to 1 dB microvolt. Read-only field.
Downstream SNR Estimate	*rcmDvbDsInputLevel*	Estimated Signal Noise Ratio in 0.1 dB. Read-only field.

The Upstream section contains the following information:

Table 2 MIB File Information - Upstream

Parameter	MIB	Description
Frequency	*rcmDvbUpFrequency*	This field shows the upstream frequency in Hz. This frequency is controlled by the Interactive Network Adapter (INA) and can be changed there. Read-only field.
Output Level	*rcmDvbUpOutputLevel*	Output level in 0.1 dB relative to 1E-06 V Read-only field.
Output level changes	*N/A*	This is a counter that registers each time the value changes from the last polled value. The counter is reset when the modem is not in the Ready state.

Table 2 MIB File Information - Upstream (continued)

Parameter	MIB	Description
Tx Offset	*rcmDvbUpTxOffset*	Offset in 1E-05s. Read-only field.
Tx offset changes	*N/A*	This is a counter that registers each time the values changes from the last polled value. The counter is reset when the modem is not in the Ready state.

Note Cisco DVB CAR100 Statistics cannot be used to change any settings on the Cisco DVB CAR100. For information on how to write new settings or perform a software upgrade, refer to the *Cisco DVB CAR100 Cable Access Router Configuration and Setup Guide*.