




Management Information Base

This chapter lists all the MIBs covered by the Cisco Cable DVB/DAVIC Management Program. It includes an explanation of each parameter in the MIB with possible values, default setting, and descriptive text.

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System

Table 5-1 System MIBs

Parameter	MIB	Description
MIB version	<i>rcmMibVersion</i>	Shows the MIB version used by the Cisco DVB CAR100. This is a read-only field.
Reset now	<i>rcmResetNow</i>	<p>This field can have three states:</p> <ul style="list-style-type: none"> • ready (1) • reset (2) • terminate (13) <p>After selecting reset (2), the Cisco DVB CAR100 will return to ready (1).</p> <p>To end the DVB interface, set the parameter to terminate (13). This option is included to enable you to remotely turn off a Cisco DVB CAR100, which can be useful if, for example, the unit is creating "noise" upstream.</p> <p>After using terminate (13), access using the DVB interface will not be possible until the next reset (that is, a power reset).</p> <p> Note If you intend to terminate a subscriber's cable modem connection, Cisco recommends informing the subscriber first: advise the subscriber not to turn it on again and explain how you plan to resolve the issue.</p> <p>After a reset, parameters revert to their last saved values.</p>
Host Name	<i>rcmHostname</i>	This field contains the network name of the cable modem. To change the name, enter a new name (up to 128 characters), and then press Set .
Mac Address	<i>rcmMacAddress</i>	This field shows the MAC address of the cable modem at the Ethernet interface. This is a read-only field.
IP Address	<i>rcmIpAddress</i>	This is the IP address for the Ethernet connection to the Cisco DVB CAR100. To change the address, enter a new one and press Set . Default: 192.168.128.2. Active after saveSettings .

Parameter	MIB	Description
Net Mask	<i>rcmNetmask</i>	This is the IP subnet mask of the Ethernet side of the cable modem. To change the mask, enter a new one and press Set . Default: 255.255.255.0. Active after saveSettings .
Reset Count	<i>rcmResetCount</i>	This field shows how often a reset has been performed since it was last reset to the factory-default settings. Read-only field.
Read Community	<i>rcmReadCommunity</i>	In this field, enter the same community name as set in the MIB browser application to enable read access to the Cisco DVB CAR100. Allows access by <i>get</i> , <i>get-next</i> , and <i>get-bulk</i> (SNMP commands). To change the community name, type in the new name. Default: public. Max. 128 characters.
Write Community	<i>rcmWriteCommunity</i>	In this field, enter the same community name as set in the MIB browser application to enable write access to the cable modem. Allows access by <i>set</i> , <i>get</i> , <i>get-next</i> , and <i>get-bulk</i> (SNMP commands). To change the community, type in the new community name. Default: private. Max. 128 characters.
Date and Time	<i>rcmDateandTime</i>	Shows system data if SNTP is enabled (that is, your network is connected to an SNTP server). The format is YYYY-MM-DD,HH,MM:SS:S If your network is not connected to an SNTP server, this MIB might not appear. Cisco recommends synchronizing the date and time of the Cisco DVB CAR100 with your management PC. This MIB can be from 18 to 22 characters. Read-only field.
Uptime	<i>rcmUpTime</i>	This field shows the time (in hundreds of seconds) since the cable modem was reinitialised the last time. Read-only field.

Parameter	MIB	Description
Serial Number	<i>rcmSerialNo</i>	This field shows the serial number of the cable modem. Read-only field.
Network Manager IP Address	<i>rcmNmIpAddress</i>	This is the network manager's IP address where traps are sent if implemented. If set to 0.0.0.0, traps are not implemented. Default: 0.0.0.0.
Settings	<i>rcmSettings</i>	In this field, you can set and read settings from the Cisco DVB CAR100's Flash memory or set it back to the default factory settings. Values available: <ul style="list-style-type: none"> • ready (1) • readSettings (2)—read settings from Flash memory • saveSettings (3)—write settings to Flash memory • factory defaults (4)—return to factory defaults If you want to save changes to Flash memory, set this parameter to saveSettings (3). After changing this parameter, the cable modem automatically performs a reset, and then sets this parameter to ready (1) again. Default: ready (1).

Parameter	MIB	Description
LED state	<i>rcmLedState</i>	<p>This indicates the status of the main and cable LEDs. The settings, which—apart from ready (5)—can only be read by means of a direct Ethernet connection, are:</p> <ul style="list-style-type: none"> • 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) <p>Note that the frequency-search-started (2) and frequency-search-started-again (11) have a very similar LED blink pattern.</p> <p>During power-up (1) and resetting (2) the cable modem might not respond.</p>
Software Update Community	<i>rcmSwUpdateCommunity</i>	<p>The software update community string is a password to protect against accidental software upgrade. This password must be matched to get write access to software upgrades.</p> <p>If you change the software upgrade password from the factory default (that is, default) and then lose or forget the new password, there is no backdoor solution. You will have effectively rendered the Cisco DVB CAR100 unconfigurable.</p> <p>This password can also be used to set/get the read and write passwords.</p> <p>Default: default.</p>

**Caution**

If you change the software upgrade password from the factory default (that is, default) and then lose or forget the new password, there is no backdoor solution. You will have effectively rendered the Cisco DVB CAR100 unconfigurable.

Software

The following table shows the commands available for upgrading the Cisco DVB CAR100's software and information about software versions.


**Note**

To perform a software upgrade, you must address the cable modem using an extra security password: see “Setting Community String Passwords” on page 3 of Chapter 4, “Configuring the Cisco DVB CAR100”.

For step-by-step instructions see the “Performing a Software Upgrade” section on page 4-7.

Table 5-2 Software MIBs

Parameter	MIB	Description
Server	<i>rcmSwServer</i>	This field shows the IP address of the TFTP server used for software upgrades. Default: 0.0.0.0.
Filename	<i>rcmSwFilename</i>	In this field, enter the name of the file you want to download with TFTP, and include the path to the file if necessary. Max. 128 characters.
Admin status	<i>rcmSwAdminStatus</i>	In this field, you can force the cable modem to upgrade the software image from a connected TFTP server. This field has the following values: <ul style="list-style-type: none"> • upgradeNow (1): The cable modem starts a TFTP software image download using rcmSwServer and rcmSwFilename. • allowSwUpgrade (2): Having received a software image successfully, the cable modem sets its state to allowSwUpgrade. • ignoreSwUpgrade(3): If the software upgrade failed, the cable modem is set to this state. You can only set the state upgradeNow (1). Use the value for rcmSwCommunity as the community string to set this value. Default value: allowSwUpgrade .
Fallback version	<i>rcmSwFallBackVer</i>	This field shows the software fallback version (Image 1) if an upgrade fails. Read-only field. Max. 128 characters.
Upgrade version	<i>rcmSwUpgradeVer</i>	This field shows the software version of the latest upgrade (Image 2). If the upgrade has been successful, this field will show the new running version after the next reboot. If an upgrade fails, the field shows: Upgrade failed . Read-only field. Max. 128 characters.
Running version	<i>rcmSwRunningVer</i>	This field shows the software version currently being used. Read-only field.

Parameter	MIB	Description
Software Bootload Version	<i>rcmSwBootloadVer</i>	This is the version of bootloader currently being used in the Cisco DVB CAR100. Other information such as a time stamp for the bootloader might be included. Read-only field.
Software Type	<i>rcmSwType</i>	Use this MIB to define whether the Cisco DVB CAR100 runs as a single PC version (Cisco DVB CAR100-PC) or if it is LAN enabled (Cisco DVB CAR100-LAN). Select one of the following: <ul style="list-style-type: none"> lan one-pc Click Set . Changes to this field will become active after you have performed a saveSettings and rebooted the cable modem.  Note Before upgrading from the DVB CAR100-PC to the CAR100-LAN, make sure you have the necessary number of CAR100-LAN licenses.

Hardware

The following table explains the fields available in this section.

Parameter	MIB	Description
CPU Type	<i>rcmHwCPUType</i>	This indicates which CPU is being used in the Cisco DVB CAR100. Read-only field.
CPU Part Number	<i>rcmHwCPUPartnum</i>	This indicates the CPU's part number read from the Internal Memory Map Register (IMMR). It can be relevant for software upgrades of Cisco DVB CAR100. Read-only field.
CPU Mask Number	<i>rcmHwCPUMasknum</i>	This is another variable of the CPU read from the Internal Memory Map Register (IMMR). It can be relevant for software upgrades of Cisco DVB CAR100. Read-only field.

Events

The following table explains the fields available in this section. Note that if no events have been recorded only the first parameter, Memory Policy, will appear.

Parameter	MIB	Description
Memory Policy	<i>rcmEventMemPol</i>	<p>The Memory Policy field offers three options:</p> <ul style="list-style-type: none"> • wrap (1)—Wrap around: events will be overwritten in chronological order when the event log is full. • stop (2)—Stops events being logged when the log is full • oneHour (3)—Items older than one hour will be overwritten; a conditional form of wrap (1). <p>Default: wrap (1).</p>
Event Table	<i>rcmEventTable</i>	A list of events logged. If no events have been logged, this field and the ones below might not appear on your MIB browser.
Event Entry	<i>rcmEventEntry</i>	<p>There are five categories (described below) that combine to provide a set of data describing a logged event.</p> <ul style="list-style-type: none"> • rcmEventIndex • rcmEventType • rcmEventTime • rcmEventCode • rcmEventDescription
Event Index	<i>rcmEventIndex</i>	Increases by one for each new log message.
Event Type	<i>rcmEventType</i>	<p>Events are classified into three groups:</p> <ul style="list-style-type: none"> • error (1) • warning (2) • information (3)
Event Time	<i>rcmEventTime</i>	System time when the event occurred.

Parameter	MIB	Description
Event Code	<i>rcmEventCode</i>	The code number of the event.
Event Description	<i>rcmEventDescription</i>	<p>An implementation-dependent description of the event that activated this log entry. These include:</p> <p><i>illegal snmpset attempt, wrong community name</i>—Appears when using an existing snmpset but the wrong community name.</p> <p><i>SNMP terminating DVB-interface and turning off master and cable LEDs</i>—Appears when using snmpset to terminate the cable modem.</p> <p><i>Initiating download procedure</i>—This message can be followed after some time by one or more of the following:</p> <p><i>Filename error ... downloaded aborted,</i></p> <p><i>Invalid tftp host address,</i></p> <p><i>tftp_get failed,</i></p> <p><i>Downloaded file OK</i></p> <p>The last message means the file has been downloaded, checked, accepted, and burned to Flash memory.</p>

Interfaces

This section describes the DVB parameters, connections, downstream and upstream commands and the Ethernet interface indices.

Table 5-3 DVB Parameters

Parameter	MIB	Description
Firmware version	<i>rcmDvbFwVer</i>	This field shows the firmware version of the cable modem. Read-only field.
Mode	<i>rcmDvbMode</i>	<p>In this field, you can set the cable modem to unidirectional and bidirectional mode.</p> <ul style="list-style-type: none"> • one-way (1)—Not currently supported • two-way (2)—Bidirectional, with return channel <p>For some Cisco DVB CAR100s, this value cannot be changed.</p>

Parameter	MIB	Description
High State	<i>rcmDvbHighState</i>	This field shows that the MAC protocol has signed on. <ul style="list-style-type: none"> • ready (1) • not ready (2) Read-only field.
Low State	<i>rcmDvbLowState</i>	This field shows the DVB Low State Level (QAM) and Forward Error Correction (FEC) Lock after having found a valid downstream. <ul style="list-style-type: none"> • ready (1) • not ready (2) Read-only field.

DVB Connections

The following table explains the fields available in this section:

Parameter	MIB	Description
Max. connections	<i>rcmDvbConMax</i>	This field shows the maximum number of possible connections for this unit. Always shows 5. Read-only field.

DVB Downstream

The following table explains the fields available in this section:

Parameter	MIB	Description
QAM Lock	<i>rcmDvbDsQamLock</i>	This field shows the modulation lock status: <ul style="list-style-type: none"> • locked (1) • unlocked (2) Read-only field.
FEC Lock	<i>rcmDvbDsFecLock</i>	This field shows the Forward Error Correction (FEC) lock status: <ul style="list-style-type: none"> • locked (1) • unlocked (2) This field must show locked. Otherwise the cable modem does not work. Read-only field.
Uncorrectable RS Errors	<i>rcmDvbDsUnCorrectRs</i>	This field shows the number of uncorrectable Reed Solomon errors in the downstream. Read-only field.
Correctable RS Errors	<i>rcmDvbDsCorrectRs</i>	This field shows that the number of corrected Reed Solomon errors in the downstream. Read-only field.

Parameter	MIB	Description
MAC messages received	<i>rcmDvbDsMacMessRx</i>	This field shows the MAC messages received Read-only field.
Downstream Input Level	<i>rcmDvbDsInputLevel</i>	Estimated input level in 0.1 dB relative to 1 dB microvolt. Read-only field.
Downstream SNR Estimate	<i>rcmDvbDsInputLevel</i>	Estimated Signal Noise Ratio estimate in 0.1 dB Read-only field.
Frequency	<i>rcmDvbDsFrequency</i>	This field shows the downstream frequency in Hz. This frequency is found during the startup procedure of the unit and programmed in the memory. For more information, see the “Setting Downstream Channel Frequencies” section on page 4-6. Read-only field.
QAM Mode	<i>rcmDvbDsQAMMode</i>	This field shows the QAM mode. The following values will appear: <ul style="list-style-type: none"> • qpsk (2) • qam8 (3) • qam16 (4) • qam32 (5) • qam64 (6) • qam128 (7) • qam256 (8) The only QAM modes that the Cisco DVB CAR100 uses are qpsk (2) and qam64 (6). Read-only field.
Symbol rate	<i>rcmDvbDsSymbolRate</i>	This field shows the downstream symbol rate in Kbaud. Read-only field.
Default Freq 1	<i>rcmDvbDsDefaultFreq1</i>	Here you can set the second autoprogrammed downstream frequency (in Hz) the cable modem will look for after start-up. The change will be active after saveSettings . For more information, see the “Setting Downstream Channel Frequencies” section on page 4-6. Default: 682 000 000 Hz.

Parameter	MIB	Description
Default Freq 2	<i>rcmDvbDsDefaultFreq2</i>	<p>Here you can set the third autoprogrammed downstream frequency (in Hz) the cable modem will look for after startup. The change will be active after saveSettings.</p> <p>For more information, see the “Setting Downstream Channel Frequencies” section on page 4-6.</p> <p>Default: 578 000 000 Hz.</p>
Default Freq 3	<i>rcmDvbDsDefaultFreq3</i>	<p>Here you can set the fourth autoprogrammed downstream frequency (in Hz) the cable modem will look for after startup. The change will be active after saveSettings.</p> <p>For more information, see the “Setting Downstream Channel Frequencies” section on page 4-6.</p> <p>Default: 770 000 000 Hz.</p>
Default Freq 4	<i>rcmDvbDsDefaultFreq4</i>	<p>Here you can set the fifth auto-programmed downstream frequency (in Hz) the cable modem will look for after start-up. The change will be active after saveSettings.</p> <p>For more information, see the “Setting Downstream Channel Frequencies” section on page 4-6.</p> <p>Default: 290 000 000 Hz.</p>
Programmed Freq	<i>rcmDvbDsDefaultFreqP</i>	<p>This is the first auto-programmed downstream frequency (in Hz) the cable modem will look for after start-up. The change will be active after saveSettings.</p> <p>For more information, see the “Setting Downstream Channel Frequencies” section on page 4-6.</p> <p>Default: 554 000 000 Hz.</p>
Downstream MultiCast	<i>rcmDvbDsMultiCast</i>	<p>To enable downstream multicast on the DVB interface, set this field to enable (1).</p> <p>Two options are available:</p> <ul style="list-style-type: none"> • enable (1) • disable (2) <p>Changing this field will have effect before resetting.</p> <p>Default: enable.</p>

Parameter	MIB	Description
Downstream Threshold	<i>rcmDvbDsThreshold</i>	<p>This is the threshold value for the Cisco DVB CAR100 to sign on. If downstream power level is below this, the cable modem will not connect to the headend.</p> <p>The unit used is 0.1 dB relative to 1 dB microvolt.</p> <p>The range is 0 to 500.</p> <p>Default: 350.</p>
Allowed Symbol Rates	<i>rcmDvbDsAllowedSymbolRates</i>	<p>This MIB allows you to exclude two specific symbol rates, and three options are therefore available:</p> <ul style="list-style-type: none"> • exclude -6875 (1) • exclude -6900 (2) • all (3) <p>Default: all.</p> <p>Changes are active after performing a saveSettings.</p>

Table 5-4 DVB Upstream MIBs

Parameter	MIB	Description
Frequency	<i>rcmDvbUpFrequency</i>	<p>This field shows the upstream frequency in Hz. This frequency is controlled by the Cisco DVB CAR100 and can be changed there.</p> <p>Read-only field.</p>
Multicast	<i>rcmDvbUpMulticast</i>	<p>To enable upstream multicast on the DVB interface, set this field to enable (1).</p> <p>Two options are available:</p> <ul style="list-style-type: none"> • enable (1) • disable (2) <p>Changing this field will have effect before resetting.</p> <p>Default: disable.</p>

Table 5-5 Ethernet MIBs

Parameter	MIB	Description
Speed	<i>rcmEthSpeed</i>	This field shows the Ethernet speed in megabits per second (Mbps). Default value: 10 Mbps. Read-only field.
State	<i>rcmEthState</i>	This field shows the current Ethernet state <ul style="list-style-type: none"> • ready (1) • other (2) Read-only field.

Table 5-6 Ethernet RX/TX MIBs

Parameter	MIB	Description
RX OK	<i>rcmEthRxOk</i>	This field shows the number of bytes received without errors on the Ethernet interface. Read-only field.
RX Errors	<i>rcmEthRxError</i>	This field shows the number of Ethernet frames received with errors on the Ethernet interface Read-only field.
TX Bytes	<i>rcmEthTx</i>	This field shows the number of bytes sent from the Ethernet interface. Read-only field.

IP Tables

IP Tables Overview

In this section of the MIB are:

- IP routing table—Read-only and not dynamically updated as it is currently static.
- Net to media table—IP translation table to physical addresses for the Ethernet interface toward connected PCs
- Network Address Translation (NAT) at port level (NAPT), containing IP address translation as a security feature toward the connected PCs.

The IP routing table contains an entry for each route presently known to this entity. In this section, you can view the destination IP addresses of a route and routing metrics.

Table 5-7 IP MIBs

Parameter	MIB	Description
Destination	<i>rcmIpRouteDest</i>	The destination IP address of this route. An entry with a value of 0.0.0.0 is considered a default route. Multiple routes to a single destination can appear in the table, but access to such multiple entries is dependent on the table-access mechanisms defined by the network management protocol being used.
Interface Index	<i>rcmIpRouteIfIndex</i>	The index value that uniquely identifies the local interface through which the next hop of this route should be reached. The interface identified by a particular value of this index is the same interface identified by the same value of ifIndex (read-only).
Metric 1	<i>rcmIpRouteMetric1</i>	The primary routing metric for this route. The semantics of this metric are determined by the routing protocol specified in the route's rcmIpRouteProto value. If this metric is not used, its value should be set to -1 (read-only).
Metric 2	<i>rcmIpRouteMetric2</i>	An alternate routing metric for this route. The semantics of this metric are determined by the routing protocol specified in the route's rcmIpRouteProto value. If this metric is not used, its value should be set to -1 (read-only).
Metric 3	<i>rcmIpRouteMetric3</i>	An alternate routing metric for this route. The semantics of this metric are determined by the routing protocol specified in the route's rcmIpRouteProto value. If this metric is not used, its value should be set to -1 (read-only).
Metric 4	<i>rcmIpRouteMetric4</i>	An alternate routing metric for this route. The semantics of this metric are determined by the routing protocol specified in the route's rcmIpRouteProto value. If this metric is not used, its value should be set to -1 (read-only).
Next Hop	<i>rcmIpRouteNextHop</i>	The IP address of the next hop of this route. (In the case of a route bound to an interface realized via a broadcast media, the value of this field is the agent's IP address on that interface (read-only).

Parameter	MIB	Description
Type	<i>rcmIpRouteType</i>	<p>Possible values:</p> <ul style="list-style-type: none"> • other (1)—None of the following • invalid (2)—An invalidated route / route to direct • direct (3)—Connected (sub) network • indirect (4)—Route to a non-local host/network/subnetwork <p>The type of route. Note that the values direct (3) and indirect (4) refer to the notion of direct and indirect routing in the IP architecture.</p> <p>Setting this object to the value invalid (2) invalidates the corresponding entry in the rcmIpRouteTable object. That is, it effectively disassociates the destination identified with that entry from the route identified with said entry. It is an implementation-specific matter as to whether the agent removes an invalidated entry from the table. Accordingly, management stations must be prepared to receive from agents tabular information that corresponds to entries not currently in use. Proper interpretation of such entries requires examination of the relevant rcmIpRouteType object.</p> <p>Read-only field.</p>
Protocol	<i>rcmIpRouteProto</i>	<p>Possible values:</p> <ul style="list-style-type: none"> • other (1)—None of the following • local (2)—Non-protocol information, e.g. manually configured entries • netmgt (3)—Set via a network management protocol • icmp (4)—Obtained via ICMP, e.g. redirect • The following values are all gateway routing protocols: egp (5), ggp (6), hello (7), rip (8), is-is (9), es-is (10), ciscoIgrp (11), bbnSpflgp (12), ospf (13), bgp (14) <p>This indicates the routing mechanism by which this route was learned. Inclusion of values for gateway routing protocols is not intended to imply that hosts should support those protocols.</p> <p>Read-only field.</p>
Age	<i>rcmIpRouteAge</i>	<p>The number of seconds since this route was last updated or otherwise determined to be correct. Note that no semantics of <i>too old</i> can be implied except through knowledge of the routing protocol by which the route was learned.</p> <p>Read-only field.</p>

Parameter	MIB	Description								
Mask	<i>rcmIpRouteMask</i>	<p>Indicates the mask to be connected (using a logical AND) to the destination address before being compared to the value in the rcmIpRouteDest field. For those systems that do not support arbitrary subnet masks, an agent constructs the value of the rcmIpRouteMask by determining whether the value of the correspondent rcmIpRouteDest field belong to a class A, B, or C network, and then using one of:</p> <table border="0"> <thead> <tr> <th>Mask</th> <th>Network</th> </tr> </thead> <tbody> <tr> <td>255.0.0.0</td> <td>class A</td> </tr> <tr> <td>255.255.0.0</td> <td>class B</td> </tr> <tr> <td>255.255.255.0</td> <td>class C</td> </tr> </tbody> </table> <p>If the value of the rcmIpRouteDest is 0.0.0.0 (a default route), then the mask value is also 0.0.0.0. It should be noted that all IP routing subsystems implicitly use this mechanism.</p> <p>Read-only field.</p>	Mask	Network	255.0.0.0	class A	255.255.0.0	class B	255.255.255.0	class C
Mask	Network									
255.0.0.0	class A									
255.255.0.0	class B									
255.255.255.0	class C									
Metric 5	<i>rcmIpRouteMetric5</i>	<p>An alternate routing metric for this route. The semantics of this metric are determined by the routing protocol specified in the route's rcmIpRouteProto value. If this metric is not used, its value should be set to -1.</p> <p>Read-only field.</p>								
Information	<i>rcmIpRouteInfo</i>	<p>A reference to MIB definitions specific to the particular routing protocol responsible for this route, as determined by the value specified in the route's rcmIpRouteProto value. If this information is not present, its value should be set to the OBJECT IDENTIFIER (0 0), which is a syntactically valid object identifier, and any conformant implementation of ASN.1 and BER must be able to generate and recognize this value.</p> <p>Read-only field.</p>								

Net to Media Table—IP Translation Table to Physical Addresses

IP address translation is used on the Ethernet side of the Cisco DVB CAR100 toward connected PCs.

It maps IP addresses to physical addresses and contains the IP address to physical address (MAC address) equivalences.

Table 5-8 Net to Media Table MIBs

Parameter	MIB	Description
Table	<i>rcmIpNetToMediaTable</i>	The IP address translation table used for mapping IP addresses to physical addresses.
Entry	<i>rcmIpNetToMediaEntry</i>	Each entry contains one IpAddress to physical address equivalence.
Interface Index	<i>rcmIpNetToMediaIfIndex</i>	The interface on which this entry's equivalence is effective. The interface identified by a particular value of this index is the same interface identified by the same value of ifIndex (Integer).
Physical Address	<i>rcmIpNetToMediaPhysAddress</i>	The media-dependent physical address (Integer).
Net Address	<i>rcmIpNetToMediaNetAddress</i>	The IP address corresponding to the media-dependent physical address (Integer).
Type	<i>rcmIpNetToMediaType</i>	The type of mapping. Possible values: other (1) invalid (2)—None of the following dynamic (3)—An invalidated mapping static (4) Setting this object to the value invalid (2) invalidates the corresponding entry in the rcmIpNetToMediaTable . It is an implementation-specific matter as to whether the agent removes an invalidated entry from the table. Accordingly, management stations must be prepared to receive from agents tabular information corresponding to entries not currently in use. Proper interpretation of such entries requires examination of the relevant rcmIpNetToMediaType object.

Network Address Translation

Use these commands to set up public IP addresses for the addressed cable modem. Up to eight public IP addresses can be set up for each cable modem.



Note

Make sure the headend is correctly set up to support public IP addresses on the cable modems, either by turning NAT off in the headend or by making a corresponding routing entry to the cable modem.

Table 5-9 NAT MIBs

Parameter	MIB	Description
Status	<i>rcmIpNaptStatus</i>	<p>In this field you can set the port level NAT to the following:</p> <ul style="list-style-type: none"> • on (1) • off (2) <p>When set to on (1), public IP addresses are allowed on the Ethernet side of the cable modem.</p> <p>Default: on.</p> <p>Changes are active after saveSettings.</p>
IP 1	<i>rcmIpNaptIP1</i>	<p>Enter the first public IP address which is allowed in this cable modem.</p> <p>The public IP address must be on the same subnet as all other IP addresses on the Ethernet side of the cable modem.</p> <p>To undo the public IP address, enter 0.0.0.0 as the IP address.</p> <p>Default: 0.0.0.0.</p> <p>Changes are active after saveSettings.</p>
IP 2 ... 8	<i>rcmIpNaptIP2 ... 8</i>	<p>Enter the respective IP addresses—up to eight public IP addresses can be set up.</p> <p>The public IP address used as such must be on the same subnet as all other IP addresses on the Ethernet side of the cable modem.</p> <p>To undo the public IP address, enter 0.0.0.0 as the IP address.</p> <p>Default: 0.0.0.0.</p> <p>Changes are active after saveSettings.</p>

Protocols Tested with NAT Forwarding

The following protocols have been verified for NAT forwarding:

- SNMP
- TFTP
- FTP
- Web/HTML
- Telnet
- DNS
- TCP/UDP traffic that does not carry a source or destination IP address in the application data stream, with the exception of IP multicast.

C-Table

In the event of a unit failure, the Cisco DVB CAR100 will attempt to write information to its memory. Typically this data can be viewed, saved, or deleted. The data is stored in rcm C-Table, which is managed using rcm C-Action.

Table 5-10 C-Table MIBs

Parameter	MIB	Description
C-Action	<i>rcmC-Action</i>	Double-click on rcmC-Action to access the following options: <ul style="list-style-type: none"> • ready (1) • full (2) • delete (3) • save (4) Default: ready (1).
C-Counter 1	<i>rcmC-Counter1</i>	Counter 1
C Table	<i>rcmC-Table</i>	Features four lists of C-info (see below).
C Index	<i>rcmC-Index</i>	Shows the line number.
C Info 1	<i>rcmC-Info1</i>	C-information 1.
C Info 2	<i>rcmC-Info2</i>	C-information 2.
C Info 3	<i>rcmC-Info3</i>	C-information 3.
C Info 4	<i>rcmC-Info4</i>	C-information 4.



Tips

To view all C-info use the command:

```
snmpwalk -v1 1.2.3.4 public .1.3.6.1.4.1.2942.3.1.10
```

To view first C-info:

```
snmpwalk -v1 1.2.3.4 public .1.3.6.1.4.1.2942.3.1.10.2.1.2
```