



APPENDIX **B**

Option Support

This appendix identifies the technology-specific options that Cisco BAC supports for each technology version and specifies the following attributes for each option:

- **Option No.**—Identifies the option number, as an integer or in dotted notation.
- **Description**—Describes the option.
- **Encoding**—Specifies the data format and the encoding of the option value. For detailed information on the encoding types, see [Encoding Types for Defined Options, page 5-26](#).
- **Validation**—Specifies a validation rule that restricts the allowable option values.
- **Multivalued**—Indicates whether multiple options can be specified in a single configuration file. For suboptions, this value specifies whether the option can be repeated within the parent option.
- **Version**—Identifies the technology versions that support the option number and encoding.

This appendix describes the options for these technologies:

- [DOCSIS Option Support, page B-1](#)
- [PacketCable Option Support, page B-22](#)
- [CableHome Option Support, page B-22](#)

DOCSIS Option Support

[Table B-1](#) describes DOCSIS options and identifies the specific version support for each option.

Table B-1 *DOCSIS Options and Version Support*

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|------------------------|------------------------|--------------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 0 | PAD | No length and no value | None | True | ✓ | ✓ | ✓ | ✓ |
| 1 | Downstream Frequency | Unsigned integer 32 | Multiples of 62500 | False | ✓ | ✓ | ✓ | ✓ |
| 2 | Upstream Channel ID | Unsigned integer 8 | None | False | ✓ | ✓ | ✓ | ✓ |
| 3 | Network Access Control | Boolean | None | False | ✓ | ✓ | ✓ | ✓ |
| 4 | Class of Service | Compound | None | True | ✓ | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|---------------------|--------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 4.1 | Class ID | Unsigned integer 8 | From 1 to 16 | False | ✓ | ✓ | ✓ | ✓ |
| 4.2 | Maximum Downstream Rate | Unsigned integer 32 | None | False | ✓ | ✓ | ✓ | ✓ |
| 4.3 | Maximum Upstream Rate | Unsigned integer 32 | None | False | ✓ | ✓ | ✓ | ✓ |
| 4.4 | Upstream Channel Priority | Unsigned integer 8 | Less than 8 | False | ✓ | ✓ | ✓ | ✓ |
| 4.5 | Guaranteed Minimum Upstream Channel Data Rate | Unsigned integer 32 | None | False | ✓ | ✓ | ✓ | ✓ |
| 4.6 | Maximum Upstream Channel Transmit Burst | Unsigned integer 16 | None | False | ✓ | ✓ | ✓ | ✓ |
| 4.7 | Class-of-Service Privacy Enable | Boolean | None | False | ✓ | ✓ | ✓ | ✓ |
| 6 | CM MIC Configuration Setting | Byte 16 | None | False | ✓ | ✓ | ✓ | ✓ |
| 7 | CMTS MIC Configuration Setting | Bytes | None | False | ✓ | ✓ | ✓ | ✓ |
| 9 | Software Upgrade Filename | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 10 | SNMP Write-Access Control | OIDCF | None | True | ✓ | ✓ | ✓ | ✓ |
| 11 | SNMP MIB Object | SNMPVarBind | None | True | ✓ | ✓ | ✓ | ✓ |
| 14 | CPE Ethernet MAC Address | MAC Address | None | True | ✓ | ✓ | ✓ | ✓ |
| 15 | Telephone Settings Option | Compound | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.2 | Service Provider Name | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.3 | Telephone Number (1) | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.4 | Telephone Number (2) | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.5 | Telephone Number (3) | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.6 | Connection Threshold | Unsigned integer 8 | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.7 | Login Username | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.8 | Login Password | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.9 | DHCP Authenticate | Boolean | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.10 | DHCP Server | IP Address | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.11 | RADIUS Realm | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|---------------------|-------------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 15.12 | PPP Authenticate | Unsigned integer 8 | None | False | ✓ | ✓ | ✓ | ✓ |
| 15.13 | Demand Dial Inactivity Timer Threshold | Unsigned integer 32 | None | False | ✓ | ✓ | ✓ | ✓ |
| 16 | SNMP IPv4 Address (No Longer Used) | IP Address | None | False | ✓ | ✓ | ✓ | ✓ |
| 17 | Baseline Privacy Configuration Setting | Compound | None | False | ✓ | ✓ | ✓ | ✓ |
| 17.1 | Authorize Wait Timeout | Unsigned integer 32 | From 1 to 30 | False | ✓ | ✓ | ✓ | ✓ |
| 17.2 | Reauthorize Wait Timeout | Unsigned integer 32 | From 1 to 30 | False | ✓ | ✓ | ✓ | ✓ |
| 17.3 | Authorization Grace Time | Unsigned integer 32 | From 1 to 1800 | False | ✓ | | | |
| 17.3 | Authorization Grace Time | Unsigned integer 32 | From 1 to 6047999 | False | | ✓ | ✓ | ✓ |
| 17.4 | Operational Wait Timeout | Unsigned integer 32 | From 1 to 10 | False | ✓ | ✓ | ✓ | ✓ |
| 17.5 | Rekey Wait Timeout | Unsigned integer 32 | From 1 to 10 | False | ✓ | ✓ | ✓ | ✓ |
| 17.6 | TEK Grace Time | Unsigned integer 32 | From 1 to 1800 | False | ✓ | | | |
| 17.6 | TEK Grace Time | Unsigned integer 32 | From 1 to 302399 | False | | ✓ | ✓ | ✓ |
| 17.7 | Authorize Reject Wait Timeout | Unsigned integer 32 | From 1 to 600 | False | ✓ | ✓ | ✓ | ✓ |
| 17.8 | SA Map Wait Timeout | Unsigned integer 32 | From 1 to 10 | False | | ✓ | ✓ | ✓ |
| 17.9 | SA Map Max Retries | Unsigned integer 32 | From 1 to 10 | False | | ✓ | ✓ | ✓ |
| 18 | Maximum Number of CPE | Unsigned integer 8 | None | False | ✓ | ✓ | ✓ | ✓ |
| 19 | TFTP Server Timestamp | Unsigned integer 32 | None | False | ✓ | ✓ | ✓ | ✓ |
| 20 | TFTP Server Provisioned Modem Address | IP Address | None | False | ✓ | ✓ | ✓ | ✓ |
| 21 | Software Upgrade TFTP Server | IP Address | None | False | ✓ | ✓ | ✓ | ✓ |
| 22 | Upstream Packet Classification Encoding | Compound | None | True | | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|--|----------------------------|-----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 22.1 | Classifier Reference | Unsigned integer 8 | From 1 to 255 | False | | ✓ | ✓ | ✓ |
| 22.2 | Classifier Identifier | Unsigned integer 16 | From 1 to 65535 | False | | ✓ | ✓ | ✓ |
| 22.3 | Service Flow Reference | Unsigned integer 16 | From 1 to 65535 | False | | ✓ | ✓ | ✓ |
| 22.4 | Service Flow Identifier | Unsigned integer 32 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 22.5 | Rule Priority | Unsigned integer 8 | None | False | | ✓ | ✓ | ✓ |
| 22.6 | Classifier Activation State | ActInact | None | False | | ✓ | ✓ | ✓ |
| 22.7 | Dynamic Service Change Action | Unsigned integer 8 | Less than 3 | False | | ✓ | ✓ | ✓ |
| 22.9 | IPv4 Packet Classification Encodings | Compound | None | False | | ✓ | ✓ | ✓ |
| 22.9.1 | IPv4 Type of Service Range and Mask | Unsigned integer 8 triplet | None | False | | ✓ | ✓ | ✓ |
| 22.9.2 | IP Protocol | Unsigned integer 16 | Less than 258 | False | | ✓ | ✓ | ✓ |
| 22.9.3 | IPv4 Source Address | IP Address | None | False | | ✓ | ✓ | ✓ |
| 22.9.4 | IPv4 Source Mask | IP Address | None | False | | ✓ | ✓ | ✓ |
| 22.9.5 | IPv4 Destination Address | IP Address | None | False | | ✓ | ✓ | ✓ |
| 22.9.6 | IPv4 Destination Mask | IP Address | None | False | | ✓ | ✓ | ✓ |
| 22.9.7 | TCP/UDP Source Port Start | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 22.9.8 | TCP/UDP Source Port End | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 22.9.9 | TCP/UDP Destination Port Start | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 22.9.10 | TCP/UDP Destination Port End | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 22.10 | Ethernet LLC Packet Classification Encodings | Compound | None | False | | ✓ | ✓ | ✓ |
| 22.10.1 | Destination MAC Address | MAC Address and Mask | None | False | | ✓ | ✓ | ✓ |
| 22.10.2 | Source MAC Address | MAC Address | None | False | | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|-------------|---|--|----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 22.10.3 | EtherType/DSAP/MacType | Unsigned integer 8 and unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 22.11 | IEEE 802.1P/Q Packet Classification Encodings | Compound | None | False | | ✓ | ✓ | ✓ |
| 22.11.1 | IEEE 802.1P User_Priority | Unsigned integer 8 pair | Less than 8 | False | | ✓ | ✓ | ✓ |
| 22.11.2 | IEEE 802.1Q VLAN_ID | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 22.12 | IPv6 Packet Classification Encodings | Compound | None | False | | | | ✓ |
| 22.12.1 | IPv6 Traffic Class Range and Mask | Unsigned integer 8 triplet | None | False | | | | ✓ |
| 22.12.2 | IPv6 Flow Label | Unsigned integer 32 | Greater than 0 | False | | | | ✓ |
| 22.12.3 | IPv6 Next Header Type | Unsigned integer 16 | Less than 258 | False | | | | ✓ |
| 22.12.4 | IPv6 Source Address | IPv6 address | None | False | | | | ✓ |
| 22.12.5 | IPv6 Source Prefix Length | Unsigned integer 8 | Less than 129 | False | | | | ✓ |
| 22.12.6 | IPv6 Destination Address | IPv6 address | None | False | | | | ✓ |
| 22.12.7 | IPv6 Destination Prefix Length | Unsigned integer 8 | Less than 129 | False | | | | ✓ |
| 22.13 | CM Interface Mask (CMIM) | Bytes | None | False | | | | ✓ |
| 22.43 | Vendor Specific Classifier Parameters | Compound | None | False | | ✓ | ✓ | ✓ |
| 22.43.8 | Vendor ID | OUI | None | False | | ✓ | ✓ | ✓ |
| 22.43.5 | L2VPN Encoding | Compound | None | False | | | ✓ | ✓ |
| 22.43.5.1 | VPNID Subtype | Bytes | None | False | | | ✓ | ✓ |
| 22.43.5.2 | NSI Encapsulation Subtype | Compound | None | False | | | ✓ | ✓ |
| 22.43.5.2.1 | Other Format Subtype 1 | No length and no value | None | False | | | ✓ | ✓ |
| 22.43.5.2.2 | IEEE 802.1Q Format Subtype 2 | Unsigned integer 16 | None | False | | | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|-------------|---|---------------------|-----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 22.43.5.2.3 | IEEE 802.1ad Format Subtype | Unsigned integer 32 | None | False | | | ✓ | ✓ |
| 22.43.5.2.4 | MPLS Peer Format Subtype | Inet Address Peer | None | False | | | ✓ | ✓ |
| 22.43.5.2.5 | L2TPv3 Peer Format Subtype | Inet Address Peer | None | False | | | ✓ | ✓ |
| 22.43.5.3 | Enable eSAFE DHCP Snooping | Bytes | None | False | | | ✓ | ✓ |
| 22.43.5.4 | CM Interface Mask | Bytes | None | False | | | ✓ | ✓ |
| 22.43.5.5 | Attachment Group ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 22.43.5.6 | Source Attachment Individual ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 22.43.5.7 | Target Attachment Individual ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 22.43.5.8 | Ingress User Priority | Unsigned integer 8 | From 0 to 7 | False | | | ✓ | ✓ |
| 22.43.5.9 | User Priority Range | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 22.43.5.4.3 | Vendor-Specific | Compound | None | False | | | ✓ | ✓ |
| 23 | Downstream Packet Classification Encoding | Compound | None | True | | ✓ | ✓ | ✓ |
| 23.1 | Classifier Reference | Unsigned integer 8 | From 1 to 255 | False | | ✓ | ✓ | ✓ |
| 23.2 | Classifier Identifier | Unsigned integer 16 | From 1 to 65535 | False | | ✓ | ✓ | ✓ |
| 23.3 | Service Flow Reference | Unsigned integer 16 | From 1 to 65535 | False | | ✓ | ✓ | ✓ |
| 23.4 | Service Flow Identifier | Unsigned integer 32 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 23.5 | Rule Priority | Unsigned integer 8 | None | False | | ✓ | ✓ | ✓ |
| 23.6 | Classifier Activation State | Boolean | None | False | | ✓ | ✓ | ✓ |
| 23.7 | Dynamic Service Change Action | Unsigned integer 8 | Less than 3 | False | | ✓ | ✓ | ✓ |
| 23.8 | Classifier Error Encodings | Compound | None | False | | ✓ | ✓ | ✓ |
| 23.9 | IPv4 Packet Classification Encodings | Compound | None | False | | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|--|----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 23.9.1 | IPv4 Type of Service Range and Mask | Unsigned integer 8 triplet | None | False | | ✓ | ✓ | ✓ |
| 23.9.2 | IP Protocol | Unsigned integer 16 | Less than 258 | False | | ✓ | ✓ | ✓ |
| 23.9.3 | IPv4 Source Address | IP Address | None | False | | ✓ | ✓ | ✓ |
| 23.9.4 | IPv4 Source Mask | IP Address | None | False | | ✓ | ✓ | ✓ |
| 23.9.5 | IPv4 Destination Address | IP Address | None | False | | ✓ | ✓ | ✓ |
| 23.9.6 | IPv4 Destination Mask | IP Address | None | False | | ✓ | ✓ | ✓ |
| 23.9.7 | TCP/UDP Source Port Start | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 23.9.8 | TCP/UDP Source Port End | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 23.9.9 | TCP/UDP Destination Port Start | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 23.9.10 | TCP/UDP Destination Port End | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 23.10 | Ethernet LLC Packet Classification Encodings | Compound | None | False | | | ✓ | ✓ |
| 23.10.1 | Destination MAC Address | MAC Address and Mask | None | False | | ✓ | ✓ | ✓ |
| 23.10.2 | Source MAC Address | MAC Address | None | False | | ✓ | ✓ | ✓ |
| 23.10.3 | Ethertype/DSAP/MacType | Unsigned integer 8 and unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 23.11 | IEEE 802.1P/Q Packet Classification Encodings | Compound | None | False | | ✓ | ✓ | ✓ |
| 23.11.1 | IEEE 802.1P User_Priority | Unsigned integer 8 pair | Less than 8 | False | | ✓ | ✓ | ✓ |
| 23.11.2 | IEEE 802.1Q VLAN_ID | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 23.12 | IPv6 Packet Classification Encodings | Compound | None | False | | | | ✓ |
| 23.12.1 | IPv6 Traffic Class Range and Mask | Unsigned integer 8 triplet | None | False | | | | ✓ |
| 23.12.2 | IPv6 Flow Label | Unsigned integer 32 | Greater than 0 | False | | | | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|-------------|---------------------------------------|------------------------|---------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 23.12.3 | IPv6 Next Header Type | Unsigned integer 16 | Less than 258 | False | | | | ✓ |
| 23.12.4 | IPv6 Source Address | IPv6 address | None | False | | | | ✓ |
| 23.12.5 | IPv6 Source Prefix Length | Unsigned integer 8 | Less than 129 | False | | | | ✓ |
| 23.12.6 | IPv6 Destination Address | IPv6 address | None | False | | | | ✓ |
| 23.12.7 | IPv6 Destination Prefix Length | Unsigned integer 8 | Less than 129 | False | | | | ✓ |
| 23.43 | Vendor Specific Classifier Parameters | Compound | None | False | | ✓ | ✓ | ✓ |
| 23.43.5 | L2VPN Encoding | Compound | None | False | | | ✓ | ✓ |
| 23.43.5.1 | VPNID Subtype | Bytes | None | False | | | ✓ | ✓ |
| 23.43.5.2 | NSI Encapsulation Subtype | Compound | None | False | | | ✓ | ✓ |
| 23.43.5.2.1 | Other Format Subtype 1 | No length and no value | None | False | | | ✓ | ✓ |
| 23.43.5.2.2 | IEEE 802.1Q Format Subtype 2 | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 23.43.5.2.3 | IEEE 802.1ad Format Subtype 3 | Unsigned integer 32 | None | False | | | ✓ | ✓ |
| 23.43.5.2.4 | MPLS Peer Format Subtype 4 | Inet Address Peer | None | False | | | ✓ | ✓ |
| 23.43.5.2.5 | L2TPv3 Peer Format Subtype 5 | Inet Address Peer | None | False | | | ✓ | ✓ |
| 23.43.5.3 | Enable eSAFE DHCP Snooping | Bytes | None | False | | | ✓ | ✓ |
| 23.43.5.4 | CM Interface Mask | Bytes | None | False | | | ✓ | ✓ |
| 23.43.5.5 | Attachment Group ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 23.43.5.6 | Source Attachment Individual ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 23.43.5.7 | Target Attachment Individual ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 23.43.5.8 | Ingress User Priority | Unsigned integer 8 | From 0 to 7 | False | | | ✓ | ✓ |
| 23.43.5.9 | User Priority Range | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 23.43.5.4.3 | Vendor-Specific 3 | Compound | None | False | | | ✓ | ✓ |
| 23.43.8 | Vendor ID | OUI | None | False | | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|---------------------|----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 24 | Upstream Service Flow Scheduling | Compound | None | True | | ✓ | ✓ | ✓ |
| 24.1 | Service Flow Reference | Unsigned integer 16 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 24.3 | Service Identifier | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 24.4 | Service Class Name | ZTASCII | None | False | | ✓ | ✓ | ✓ |
| 24.6 | Quality of Service Parameter Set Type | Bit Flag 8 | Less than 8 | False | | ✓ | ✓ | ✓ |
| 24.7 | Traffic Priority | Unsigned integer 8 | Less than 8 | False | | ✓ | ✓ | ✓ |
| 24.8 | Upstream Maximum Sustained Traffic Rate | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 24.9 | Maximum Traffic Burst | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 24.10 | Minimum Reserved Traffic Rate | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 24.11 | Assumed Minimum Reserved Rate Packet Size | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 24.12 | Timeout for active QoS Parameters | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 24.13 | Timeout for Admitted QoS Parameters | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 24.14 | Maximum Concatenated Burst | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 24.15 | Service Flow Scheduling Type | Service Flow | From 1 to 6 | False | | ✓ | ✓ | ✓ |
| 24.16 | Request/Transmission Policy | Bit Flag 32 | Less than 512 | False | | ✓ | ✓ | ✓ |
| 24.17 | Nominal Polling Interval | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 24.18 | Tolerated Poll Jitter | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 24.19 | Unsolicited Grant Size | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 24.20 | Nominal Grant Interval | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 24.21 | Tolerated Grant Jitter | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|-------------|---|-------------------------|--------------------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 24.22 | Grants per Interval | Unsigned integer 8 | Less than 128 | False | | ✓ | ✓ | ✓ |
| 24.23 | IPv4 Type of Service Overwrite | Unsigned integer 8 pair | None | False | | ✓ | ✓ | ✓ |
| 24.24 | Unsolicited Grant Time Reference | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 24.25 | Multiplier to Contention Request Backoff Window | Unsigned integer 8 | From 4 to 12 | False | | | | ✓ |
| 24.26 | Multiplier to Number of Bytes Requested | Unsigned integer 8 | Values 1, 2, 4, 8, or 16 | False | | | | ✓ |
| 24.27 | Maximum Requests per SID Cluster | Unsigned integer 8 | Less than 256 | False | | | | ✓ |
| 24.28 | Maximum Outstanding Bytes per SID Cluster | Unsigned integer 32 | Less than 4294967296 | False | | | | ✓ |
| 24.29 | Maximum Total Bytes Requested per SID Cluster | Unsigned integer 32 | Less than 4294967296 | False | | | | ✓ |
| 24.30 | Maximum Time in the SID Cluster | Unsigned integer 16 | Less than 65535 | False | | | | ✓ |
| 24.31 | Service Flow Required Attribute Mask | Bit Flag 32 | None | False | | | | ✓ |
| 24.32 | Service Flow Forbidden Attribute Mask | Bit Flag 32 | None | False | | | | ✓ |
| 24.33 | Service Flow Attribute Aggregation Mask | Bit Flag 32 | None | False | | | | ✓ |
| 24.34 | Application Identifier | Bit Flag 32 | None | False | | | | ✓ |
| 24.43 | Vendor Specific QoS Parameters | Compound | None | False | | ✓ | ✓ | ✓ |
| 24.43.8 | Vendor ID | OUI | None | False | | ✓ | ✓ | ✓ |
| 24.43.5 | L2VPN Encoding | Compound | None | False | | | ✓ | ✓ |
| 24.43.5.1 | VPNID Subtype | Bytes | None | False | | | ✓ | ✓ |
| 24.43.5.2 | NSI Encapsulation Subtype | Compound | None | False | | | ✓ | ✓ |
| 24.43.5.2.1 | Other Format Subtype 1 | No length and no value | None | False | | | ✓ | ✓ |
| 24.43.5.2.2 | IEEE 802.1Q Format Subtype 2 | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 24.43.5.2.3 | IEEE 802.1ad Format Subtype 3 | Unsigned integer 32 | None | False | | | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|-------------|---|---------------------|----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 24.43.5.2.4 | MPLS Peer Format Subtype | Inet Address Peer | None | False | | | ✓ | ✓ |
| 24.43.5.2.5 | L2TPv3 Peer Format Subtype | Inet Address Peer | None | False | | | ✓ | ✓ |
| 24.43.5.3 | Enable eSAFE DHCP Snooping | Bytes | None | False | | | ✓ | ✓ |
| 24.43.5.4 | CM Interface Mask | Bytes | None | False | | | ✓ | ✓ |
| 24.43.5.5 | Attachment Group ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 24.43.5.6 | Source Attachment Individual ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 24.43.5.7 | Target Attachment Individual ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 24.43.5.8 | Ingress User Priority | Unsigned integer 8 | From 0 to 7 | False | | | ✓ | ✓ |
| 24.43.5.9 | User Priority Range | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 24.43.5.4.3 | Vendor-Specific | Compound | None | False | | | ✓ | ✓ |
| 25 | Downstream Service Flow Scheduling | Compound | None | True | | ✓ | ✓ | ✓ |
| 25.1 | Service Flow Reference | Unsigned integer 16 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 25.3 | Service Identifier | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 25.4 | Service Class Name | ZTASCII | None | False | | ✓ | ✓ | ✓ |
| 25.6 | Quality of Service Parameter Set Type | Bit Flag 8 | Less than 8 | False | | ✓ | ✓ | ✓ |
| 25.7 | Traffic Priority | Unsigned integer 8 | Less than 8 | False | | ✓ | ✓ | ✓ |
| 25.8 | Downstream Maximum Sustained Traffic Rate | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 25.9 | Maximum Traffic Burst | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 25.10 | Minimum Reserved Traffic Rate | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 25.11 | Assumed Minimum Reserved Rate Packet Size | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 25.12 | Timeout for active QoS Parameters | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|-------------------------|----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 25.13 | Timeout for Admitted QoS Parameters | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 25.14 | Maximum Downstream Latency | Unsigned integer 32 | None | False | | ✓ | ✓ | ✓ |
| 25.23 | IPv4 Type of Service (DSCP) Overwrite | Unsigned integer 8 pair | None | False | | | | ✓ |
| 25.31 | Service Flow Required Attribute Mask | Bit Flag 32 | None | False | | | | ✓ |
| 25.32 | Service Flow Forbidden Attribute Mask | Bit Flag 32 | None | False | | | | ✓ |
| 25.33 | Service Flow Attribute Aggregation Mask | Bit Flag 32 | None | False | | | | ✓ |
| 25.34 | Application Identifier | Bit Flag 32 | None | False | | | | ✓ |
| 25.43 | Vendor Specific QoS Parameters | Compound | None | False | | ✓ | ✓ | ✓ |
| 25.43.8 | Vendor ID | OUI | None | False | | ✓ | ✓ | ✓ |
| 26 | Payload Header Suppression | Compound | None | True | | ✓ | ✓ | ✓ |
| 26.1 | Classifier Reference | Unsigned integer 8 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 26.2 | Classifier Identifier | Unsigned integer 16 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 26.3 | Service Flow Reference | Unsigned integer 16 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 26.4 | Service Flow Identifier | Unsigned integer 32 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 26.5 | Dynamic Service Change Action | SrvChangeAct | Less than 4 | False | | ✓ | ✓ | ✓ |
| 26.7 | Payload Header Suppression Field (PHSF) | Bytes | None | False | | ✓ | ✓ | ✓ |
| 26.8 | Payload Header Suppression Index (PHSI) | Unsigned integer 8 | Greater than 0 | False | | ✓ | ✓ | ✓ |
| 26.9 | Payload Header Suppression Mask (PHSM) | Bytes | None | False | | ✓ | ✓ | ✓ |
| 26.10 | Payload Header Suppression Size (PHSS) | Unsigned integer 8 | None | False | | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|--|---------------------|---------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 26.11 | Payload Header Suppression Verification (PHSV) | Verify | None | False | | ✓ | ✓ | ✓ |
| 26.13 | Dynamic Bonding Change Action | Unsigned integer 8 | Less than 2 | False | | | | ✓ |
| 26.43 | Vendor Specific PHS Parameters | Compound | None | False | | ✓ | ✓ | ✓ |
| 26.43.8 | Vendor ID | OUI | None | False | | ✓ | ✓ | ✓ |
| 28 | Maximum Number of Classifiers | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 29 | Privacy Enable | Boolean | None | False | | ✓ | ✓ | ✓ |
| 32 | Manufacturer CVC | Bytes | None | False | | ✓ | ✓ | ✓ |
| 33 | Co-signer CVC | Bytes | None | False | | ✓ | ✓ | ✓ |
| 34 | SnmpV3 Kickstart Value | Compound | None | False | | ✓ | ✓ | ✓ |
| 34.1 | SnmpV3 Kickstart Security Name | NVTASCII | None | False | | ✓ | ✓ | ✓ |
| 34.2 | SnmpV3 Kickstart Manager Public Number | Bytes | None | False | | ✓ | ✓ | ✓ |
| 35 | Subscriber Management Control | Bytes | None | False | | ✓ | ✓ | ✓ |
| 36 | Subscriber Management CPE IPv4 Table | IP Address N | None | False | | ✓ | ✓ | ✓ |
| 37 | Subscriber Management Filter Groups | Bytes | None | False | | ✓ | ✓ | ✓ |
| 38 | SNMPv3 Notification Receiver | Compound | None | True | | ✓ | ✓ | ✓ |
| 38.1 | SNMPv3 Notification Receiver IPv4 Address | IP address | None | False | | ✓ | ✓ | ✓ |
| 38.2 | SNMPv3 Notification Receiver UDP Port | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 38.3 | SNMPv3 Notification Receiver Trap Type | SNMP Trap Type | From 1 to 5 | False | | ✓ | ✓ | ✓ |
| 38.4 | SNMPv3 Notification Receiver Timeout | Unsigned integer 16 | None | False | | ✓ | ✓ | ✓ |
| 38.5 | SNMPv3 Notification Receiver Retries | Unsigned integer 16 | From 0 to 255 | False | | ✓ | ✓ | ✓ |
| 38.6 | Notification Receiver Filtering Parameters | OID | None | False | | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|---------------------|--------------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 38.7 | Notification Receiver Security Name | NVTASCII | None | False | | ✓ | ✓ | ✓ |
| 38.8 | SNMPv3 Notification Receiver IPv6 Address | IPv6 address | None | False | | | | ✓ |
| 39 | Enable 2.0 Mode | Boolean | None | False | | | ✓ | ✓ |
| 40 | Enable Test Modes | Boolean | None | True | | | ✓ | ✓ |
| 41 | Downstream Channel List | Compound | None | True | | | ✓ | ✓ |
| 41.1 | Single Downstream Channel | Compound | None | True | | | ✓ | ✓ |
| 41.1.1 | Single Downstream Channel Timeout | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 41.1.2 | Single Downstream Channel Frequency | Unsigned integer 32 | Multiples of 62500 | False | | | ✓ | ✓ |
| 41.2 | Downstream Frequency Range | Compound | None | True | | | ✓ | ✓ |
| 41.2.1 | Downstream Frequency Range Timeout | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 41.2.2 | Downstream Frequency Range Start | Unsigned integer 32 | Multiples of 62500 | False | | | ✓ | ✓ |
| 41.2.3 | Downstream Frequency Range End | Unsigned integer 32 | Multiples of 62500 | False | | | ✓ | ✓ |
| 41.2.4 | Downstream Frequency Range Step Size | Unsigned integer 32 | None | False | | | ✓ | ✓ |
| 41.3 | Default Scanning | Unsigned integer 16 | None | True | | | ✓ | ✓ |
| 42 | Multicast MAC Address | MAC Address | None | True | | | ✓ | ✓ |
| 43 | DOCSIS Extension Field (OUI FF-FF-FF) | Compound | None | True | ✓ | ✓ | ✓ | ✓ |
| 43.1 | CM Load Balancing Policy ID | Unsigned integer 32 | None | False | | | ✓ | ✓ |
| 43.2 | CM Load Balancing Priority | Unsigned integer 32 | None | False | | | ✓ | ✓ |
| 43.3 | CM Load Balancing Group ID | Unsigned integer 32 | None | False | | | ✓ | ✓ |
| 43.4 | CM Ranging Class ID Extension | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 43.5 | L2VPN Encoding | Compound | None | False | | | ✓ | ✓ |
| 43.5.1 | VPNID Subtype | Bytes | None | False | | | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|--|------------------------|-----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 43.5.2 | NSI Encapsulation Subtype | Compound | None | False | | | ✓ | ✓ |
| 43.5.2.1 | Other Format Subtype | No length and no value | None | False | | | ✓ | ✓ |
| 43.5.2.2 | IEEE 802.1Q Format Subtype | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 43.5.2.3 | IEEE 802.1ad Format Subtype | Unsigned integer 32 | None | False | | | ✓ | ✓ |
| 43.5.2.4 | MPLS Peer Format Subtype | Inet Address Peer | None | False | | | ✓ | ✓ |
| 43.5.2.5 | L2TPv3 Peer Format Subtype | InetAddress Peer | None | False | | | ✓ | ✓ |
| 43.5.3 | Enable eSAFE DHCP Snooping | Bytes | None | False | | | ✓ | ✓ |
| 43.5.4 | CM Interface Mask | Bytes | None | False | | | ✓ | ✓ |
| 43.5.5 | Attachment Group ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 43.5.6 | Source Attachment Individual ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 43.5.7 | Target Attachment Individual ID | Bytes | From 0 to 16 | False | | | ✓ | ✓ |
| 43.5.8 | Ingress User Priority | Unsigned integer 8 | From 0 to 7 | False | | | ✓ | ✓ |
| 43.5.9 | User Priority Range | Unsigned integer 16 | None | False | | | ✓ | ✓ |
| 43.5.43 | Vendor-Specific | Compound | None | False | | | ✓ | ✓ |
| 43.6 | Extended CMTS MIC Configuration Setting | Compound | None | False | | | | ✓ |
| 43.6.1 | Extended CMTS MIC HMAC type | Unsigned integer 8 | Values 1, 2, 43 | False | | | | ✓ |
| 43.6.2 | Extended CMTS MIC Bitmap | Bytes | None | False | | | | ✓ |
| 43.6.3 | Explicit Extended CMTS MIC Digest Subtype | Bytes | None | False | | | | ✓ |
| 43.7 | Source Address Verification (SAV) Authorization Encoding | Compound | None | False | | | ✓ | ✓ |
| 43.7.1 | Name of an SAV Group configured in the CMTS | ZTASCII | From 1 to 15 | False | | | ✓ | ✓ |
| 43.7.2 | SAV Static Prefix Subtype Encodings | Compound | None | False | | | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|----------------------|---------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 43.7.2.1 | SAV Static Prefix Address Subtype | IPv4 or IPv6 Address | None | False | | | ✓ | ✓ |
| 43.7.2.2 | SAV Static Prefix Length Subtype | Bit Flag 8 | Less than 129 | False | | | ✓ | ✓ |
| 43.8 | Vendor ID | OUI | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.9 | Cable Modem Mask Subtype Encodings | Compound | None | False | | | | ✓ |
| 43.9.1 | Cable Modem Required Attribute Mask | Bit flag 32 | None | False | | | | ✓ |
| 43.9.2 | Cable Modem Forbidden Attribute Mask | Bit flag 32 | None | False | | | | ✓ |
| 43.10 | IP Multicast Join Authorization Encoding | Suboptions | None | False | | | | ✓ |
| 43.10.1 | Name of an IP Multicast Profile configured in the CMTS | NVTASCII | From 1 to 15 | True | | | | ✓ |
| 43.10.2 | IP Multicast Join Authorization Static Session Rule Subtype Encodings | Compound | None | True | | | | ✓ |
| 43.10.2.1 | Rule Priority | Unsigned integer 8 | None | False | | | | ✓ |
| 43.10.2.2 | Authorization Action | Authorization action | None | False | | | | ✓ |
| 43.10.2.3 | Source Prefix Address Subtype | IPv4 or IPv6 address | None | False | | | | ✓ |
| 43.10.2.4 | Source Prefix Length Subtype | Bit flag 8 | Less than 129 | False | | | | ✓ |
| 43.10.2.5 | Group Prefix Address Subtype | IPv4 or IPv6 address | None | False | | | | ✓ |
| 43.10.2.6 | Group Prefix Length Subtype | Bit flag 8 | Less than 129 | False | | | | ✓ |
| 43.10.3 | Maximum Multicast Sessions Encoding | Unsigned integer 16 | None | False | | | | ✓ |
| 43 | DOCSIS Extension Field (OUI 00-00-0C) | Compound | None | True | ✓ | ✓ | ✓ | ✓ |
| 43.1 | Static Downstream Frequency | Unsigned integer 32 | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.2 | Sync Loss Timeout | Unsigned integer 32 | None | False | ✓ | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|---------------------|-----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 43.3 | Update Boot Monitor Image | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.4 | Power Backoff | Unsigned integer 16 | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.8 | Vendor ID | OUI | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.9 | Update Factory System Image | Boolean | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.10 | Phone Lines | Unsigned integer 8 | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.11 | IP Precedence Settings | Compound | None | True | ✓ | ✓ | ✓ | ✓ |
| 43.11.1 | IP Precedence Value | Unsigned integer 8 | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.11.2 | Rate Limit | Unsigned integer 32 | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.128 | IOS Configuration Filename | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.129 | IOS Config File Without Console Disable | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.131 | IOS CLI Command | NVTASCII | None | True | ✓ | ✓ | ✓ | ✓ |
| 43.132 | 1.0 Plus Flow Encodings | Compound | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.1 | 1.0 Plus Flow ID | Unsigned integer 8 | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.2 | Class ID | Unsigned integer 8 | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.3 | Unsolicited Grant Size | Unsigned integer 16 | From 1 to 65535 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.4 | Nominal Grant Interval | Unsigned integer 32 | From 1 to 65535 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.5 | Grants Per Interval | Unsigned integer 8 | From 0 to 127 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.6 | Embedded Voice Calls | Unsigned integer 8 | From 0 to 127 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.7 | Hold Queue Length | Unsigned integer 16 | From 0 to 4096 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.8 | Fair Queue | Compound | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.8.1 | Congestive Discard Threshold | Unsigned integer 16 | From 1 to 4096 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.8.2 | Number of Dynamic Conversation Queues | Unsigned integer 16 | From 16 to 4096 | False | ✓ | ✓ | ✓ | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|----------------------------|-----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 43.132.8.3 | Number of Reservable Conversation Queues | Unsigned integer 16 | From 0 to 1000 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.9 | Custom Queue List Length | Unsigned integer 8 | From 1 to 16 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.10 | Random Detection | Boolean | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.11 | Priority Group | Unsigned integer 8 | From 1 to 16 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.12 | Service Policy File | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.13 | Inactivity Timer | Unsigned integer 16 | From 1 to 10080 | False | ✓ | ✓ | ✓ | ✓ |
| 43.132.14 | COS Tag | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 43.133 | Downstream Sub Channel ID | Unsigned integer 8 | From 0 to 15 | False | ✓ | ✓ | ✓ | ✓ |
| 43.134 | SU Tag | NVTASCII | None | False | ✓ | ✓ | ✓ | ✓ |
| 45 | Downstream Unencrypted Traffic (DUT) Filtering Encoding | Compound | None | False | | | ✓ | ✓ |
| 45.1 | Downstream Unencrypted Traffic (DUT) Control | Boolean | None | False | | | ✓ | ✓ |
| 45.2 | Downstream Unencrypted Traffic (DUT) CMIM | Bytes | None | False | | | ✓ | ✓ |
| 53 | SNMPv1v2c Coexistence Configuration | Compound | None | True | | | | ✓ |
| 53.1 | SNMPv1v2c Community Name | ZTASCII | From 1 to 32 | False | | | | ✓ |
| 53.2 | SNMPv1v2c Transport Address Access | Compound | None | True | | | | ✓ |
| 53.2.1 | SNMPv1v2c Transport Address | Transport address and mask | None | False | | | | ✓ |
| 53.2.2 | SNMPv1v2c Transport Address Mask | Transport address and mask | None | False | | | | ✓ |
| 53.3 | SNMPv1v2c Access View Type | Access view type | None | False | | | | ✓ |
| 53.4 | SNMPv1v2c Access View Name | ZTASCII | From 1 to 32 | False | | | | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|----------------------------|-----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 54 | SNMPv3 Access View | Compound | None | True | | | | ✓ |
| 54.1 | SNMPv3 Access View Name | ZTASCII | From 1 to 32 | False | | | | ✓ |
| 54.2 | SNMPv3 Access View Subtree | OID | None | False | | | | ✓ |
| 54.3 | SNMPv3 Access View Mask | Bytes | From 1 to 16 | False | | | | ✓ |
| 54.4 | SNMPv3 Access View Type | Access view control | None | False | | | | ✓ |
| 55 | SNMP CPE Access Control | CPE access control | None | False | | | | ✓ |
| 56 | Channel Assignment Configuration Settings | Compound | None | True | | | | ✓ |
| 56.1 | Transmit Channel Assignment Configuration Setting | Unsigned integer 8 | None | False | | | | ✓ |
| 56.2 | Receive Channel Assignment Configuration Setting | Unsigned integer 32 | None | False | | | | ✓ |
| 58 | Software Upgrade IPv6 TFTP Server | IPv6 address | None | False | | | | ✓ |
| 59 | TFTP Provisioned Modem IPv6 Address | IPv6 address | None | False | | | | ✓ |
| 60 | Upstream Drop Packet Classification Encoding | Compound | None | True | | | | ✓ |
| 60.1 | Classifier Reference | Unsigned integer 8 | From 1 to 255 | False | | | | ✓ |
| 60.2 | Classifier Identifier | Unsigned integer 16 | From 1 to 65535 | False | | | | ✓ |
| 60.5 | Rule Priority | Unsigned integer 8 | None | False | | | | ✓ |
| 60.6 | Classifier Activation State | ActInact | None | False | | | | ✓ |
| 60.7 | Dynamic Service Change Action | Unsigned integer 8 | Less than 3 | False | | | | ✓ |
| 60.9 | IPv4 Packet Classification Encodings | Compound | None | False | | | | ✓ |
| 60.9.1 | IPv4 Type of Service Range and Mask | Unsigned integer 8 triplet | None | False | | | | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|----------------------------|----------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 60.9.2 | IP Protocol | Unsigned integer 16 | Less than 258 | False | | | | ✓ |
| 60.9.3 | IPv4 Source Address | IP address | None | False | | | | ✓ |
| 60.9.4 | IPv4 Source Mask | IP address | None | False | | | | ✓ |
| 60.9.5 | IPv4 Destination Address | IP address | None | False | | | | ✓ |
| 60.9.6 | IPv4 Destination Mask | IP address | None | False | | | | ✓ |
| 60.9.7 | TCP/UDP Source Port Start | Unsigned integer 16 | None | False | | | | ✓ |
| 60.9.8 | TCP/UDP Source Port End | Unsigned integer 16 | None | False | | | | ✓ |
| 60.9.9 | TCP/UDP Destination Port Start | Unsigned integer 16 | None | False | | | | ✓ |
| 60.9.10 | TCP/UDP Destination Port End | Unsigned integer 16 | None | False | | | | ✓ |
| 60.10 | Ethernet LLC Packet Classification Encodings | Compound | None | False | | | | ✓ |
| 60.10.1 | Destination MAC Address | MAC address and mask | None | False | | | | ✓ |
| 60.10.2 | Source MAC Address | MAC address | None | False | | | | ✓ |
| 60.10.3 | Ethertype/DSAP/MacType | Unsigned integer 8 and 16 | None | False | | | | ✓ |
| 60.11 | IEEE 802.1P/Q Packet Classification Encodings | Compound | None | False | | | | ✓ |
| 60.11.1 | IEEE 802.1P User_Priority | Unsigned integer 8 pair | Less than 8 | False | | | | ✓ |
| 60.11.2 | IEEE 802.1Q VLAN_ID | Unsigned integer 16 | None | False | | | | ✓ |
| 60.12 | IPv6 Packet Classification Encodings | Compound | None | False | | | | ✓ |
| 60.12.1 | IPv6 Traffic Class Range and Mask | Unsigned integer 8 triplet | None | False | | | | ✓ |
| 60.12.2 | IPv6 Flow Label | Unsigned integer 32 | Greater than 0 | False | | | | ✓ |
| 60.12.3 | IPv6 Next Header Type | Unsigned integer 16 | Less than 258 | False | | | | ✓ |
| 60.12.4 | IPv6 Source Address | IPv6 address | None | False | | | | ✓ |

Table B-1 DOCSIS Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | DOCSIS Version | | | |
|------------|---|------------------------|---------------|--------------|----------------|-----|-----|-----|
| | | | | | 1.0 | 1.1 | 2.0 | 3.0 |
| 60.12.5 | IPv6 Source Prefix Length | Unsigned integer 8 | Less than 129 | False | | | | ✓ |
| 60.12.6 | IPv6 Destination Address | IPv6 address | None | False | | | | ✓ |
| 60.12.7 | IPv6 Destination Prefix Length | Unsigned integer 8 | Less than 129 | False | | | | ✓ |
| 60.13 | CM Interface Mask (CMIM) | Bytes | None | False | | | | ✓ |
| 60.43 | Vendor Specific Classifier Parameters | Compound | None | False | | | | ✓ |
| 60.43.8 | Vendor ID | OUI | None | False | | | | ✓ |
| 61 | Subscriber Management CPE IPv6 Table | IPv6 Address N | None | False | | | | ✓ |
| 62 | Upstream Drop Classifier Group ID | Bytes | None | False | | | | ✓ |
| 63 | Subscriber Management Control Max CPE IPv6 Prefix | Unsigned integer 16 | None | False | | | | ✓ |
| 64 | CMTS Static Multicast Session Encoding | Compound | None | True | | | | ✓ |
| 64.1 | Static Multicast Group Encoding | IPv4 or IPv6 address | None | False | | | | ✓ |
| 64.2 | Static Multicast Source Encoding | IPv4 or IPv6 address | None | False | | | | ✓ |
| 64.3 | Static Multicast CMIM Encoding | Bytes | None | False | | | | ✓ |
| 255 | End-of-Data Marker | No length and no value | None | False | ✓ | ✓ | ✓ | ✓ |

PacketCable Option Support

Table B-2 identifies the PacketCable MTA options that Cisco BAC supports.

Table B-2 PacketCable MTA Options

| Option No. | Description | Encoding | Validation | Multi-valued | PacketCable Version | | |
|------------|--|--------------------------------|------------------|--------------|---------------------|-----|-----|
| | | | | | 1.0 | 1.1 | 1.5 |
| 11 | SNMP MIB Object | SNMPVarBind with 1-byte length | None | True | ✓ | ✓ | ✓ |
| 38 | SNMPv3 Notification Receiver | Suboptions | None | True | ✓ | ✓ | ✓ |
| 38.1 | SNMPv3 Notification Receiver IP Address | IP address | None | False | ✓ | ✓ | ✓ |
| 38.2 | SNMPv3 Notification Receiver UDP Port Number | Unsigned integer 16 | None | False | ✓ | ✓ | ✓ |
| 38.3 | SNMPv3 Notification Receiver Trap Type | SNMP trap type | From 1 to 5 | False | ✓ | ✓ | ✓ |
| 38.4 | SNMPv3 Notification Receiver Timeout | Unsigned integer 16 | None | False | ✓ | ✓ | ✓ |
| 38.5 | SNMPv3 Notification Receiver Retries | Unsigned integer 16 | From 0 to 255 | False | ✓ | ✓ | ✓ |
| 38.6 | Notification Receiver Filtering Parameters | OID | None | False | ✓ | ✓ | ✓ |
| 38.7 | Notification Receiver Security Name | NVTASCII | None | False | ✓ | ✓ | ✓ |
| 43 | Vendor-Specific Information | Suboptions | None | True | ✓ | ✓ | ✓ |
| 43.8 | Vendor ID | OUI | None | False | ✓ | ✓ | ✓ |
| 64 | SNMP MIB Object | SNMPVarBind with 2-byte length | None | True | ✓ | ✓ | ✓ |
| 254 | Telephony Config File Start/End | Unsigned integer 8 | Must be 1 or 255 | False | ✓ | ✓ | ✓ |

CableHome Option Support

Table B-3 identifies the non-secure CableHome options that Cisco BAC supports.

Table B-3 CableHome Options and Version Support

| Option No. | Description | Encoding | Validation | Multi-valued | CableHome Version 1.0 |
|------------|---------------------------|------------------------|------------|--------------|-----------------------|
| 0 | PAD | No length and no value | None | True | ✓ |
| 9 | Software Upgrade Filename | NVTASCII | None | False | ✓ |

Table B-3 CableHome Options and Version Support (continued)

| Option No. | Description | Encoding | Validation | Multi-valued | CableHome Version 1.0 |
|------------|---|------------------------|-------------|--------------|-----------------------|
| 10 | SNMP Write-Access Control | OIDCF | None | True | ✓ |
| 12 | Modem IP Address | IP address | None | False | ✓ |
| 14 | CPE Ethernet MAC Address | MAC address | None | True | ✓ |
| 21 | Software Upgrade TFTP Server | IP address | None | False | ✓ |
| 28 | SNMP MIB Object | SNMPVarBind | None | True | ✓ |
| 32 | Manufacturer CVC | Bytes | None | False | ✓ |
| 33 | Co-signer CVC | Bytes | None | True | ✓ |
| 34 | SnmpV3 Kickstart Value | Suboptions | None | False | ✓ |
| 34.1 | SnmpV3 Kickstart Security Name | NVTASCII | None | False | ✓ |
| 38 | SNMPv3 Notification Receiver | Suboptions | None | True | ✓ |
| 38.1 | SNMPv3 Notification Receiver IP Address | IP address | None | False | ✓ |
| 38.2 | SNMPv3 Notification Receiver UDP Port Number | Unsigned integer 16 | None | False | ✓ |
| 38.3 | SNMPv3 Notification Receiver Trap Type | SNMP trap type | From 1 to 5 | False | ✓ |
| 38.4 | SNMPv3 Notification Receiver Timeout | Unsigned integer 16 | None | False | ✓ |
| 38.5 | SNMPv3 Notification Receiver Retries | Unsigned integer 16 | None | False | ✓ |
| 38.6 | Notification Receiver Filtering Parameters | OID | None | False | ✓ |
| 38.7 | Notification Receiver Security Name | NVTASCII | None | False | ✓ |
| 43 | Vendor-Specific Information | Suboptions | None | True | ✓ |
| 43.1 | Vendor ID | OUI | None | False | ✓ |
| 53 | PS MIC. A 20-octet SHA-1 hash of PS config file | Bytes | None | False | ✓ |
| 255 | End-of-Data Marker | No length and no value | None | False | ✓ |

