Cable Commands: show ch through show cr

show checkpoint

To display information about the Checkpoint Facility (CF) subsystem on a Cisco CMTS, use the **show checkpoint** command in privileged EXEC mode.

show checkpoint {**clients** [*client-id*]| **entities**| **statistics**}

Cisco cBR Series Converged Broadband Router

show checkpoint [**domain default**]{**clients** [*client-id*]| **entities** [*entity-id*]| **statistics [buffer-usage]**}

Syntax Description

domain default	Specifies the RF domain. The **default** keyword specifes the default RF domain. This option is supported only on the Cisco cBR router.
clients	Displays a list of current checkpoint clients.
client-id	(Optional) Particular client statistics.
entities	Displays a list of current checkpoint entities.
statistics	Displays the current status for checkpoint operations.
buffer-usage	Displays the checkpoint client statistics using a large number of buffers.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.2(11)BC3	This command was introduced to support High Availability (HA) redundancy operations.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Router. The **domain default** and **buffer-usage** keywords were added. This option is supported only on the Cisco cBR router.

Usage Guidelines

The Checkpoint Facility (CF) subsystem manages the passing of messages from the Active to Standby interfaces. It also handles sequencing and throttling, as needed during redundancy operations. Checkpoint clients, such as line cards and other subsystems, register with the CF subsystem so that they can update the Protect card or standby processor with state changes as necessary.

The **show checkpoint** command displays information about the clients (other processes on the CMTS that are sending checkpoint messages), entities, and run-time status for checkpoint operations.

The **show checkpoint clients** *client-id* command displays information about the client with a particular client ID.

Examples

The following shows typical output for the **show checkpoint clients** command:

```
Router# show checkpoint clients
                          Check Point List of Clients
 CHKPT on ACTIVE server.
Client Name    Client ID     Msg Send     Msg len  Bundling
                            (number of)   (Total)
------------------------------------------------------------
CHKPT DevTest         3         0           0             On
CHKPT EXAMPLE         2         0           0             On
CR10K RP CHKPT       20         0           0             On
Router#
```

The following shows typical output for the **show checkpoint clients** command with the *client-id* parameter:

```
Router# show checkpoint clients 1
------------------------------------------------------------------------------
Client Name            Client     Entity     Bundle
                          ID         ID       Mode
------------------------------------------------------------------------------
CHKPT Test client          1         --        On
  Total API Messages Sent:                     0
  Total Transport Messages Sent:               0
  Length of Sent Messages:                     0
  Total Blocked Messages Sent:                 0
  Length of Sent Blocked Messages:             0
  Total Non-blocked Messages Sent:             0
  Length of Sent Non-blocked Messages:         0
  Total Messages Received:                     0
  Total Rcv Message Len:                       0
  Total Bytes Allocated:                       0
  Buffers Held:                                0
  Huge Buffers Requested:                      0
  Transport Frag Count:                        0
  Transport Frag Peak:                         0
  Transport Sends w/Flow Off:                  0
  Send Errs:                                   0
  Send Peer Errs:                              0
  Rcv Xform Errs:                              0
  Xmit Xform Errs:                             0
  Incompatible Messages:                       0
  Client Unbundles to Process Memory:          T
Router#
```

The following shows typical output for the **show checkpoint entities** command:

```
 Router# show checkpoint entities

Check Point List of Entities
CHKPT on ACTIVE server.
------------------------------------------------------------------------------
Entity Name Entity
ID
------------------------------------------------------------------------------
UBR10k HA Entity Gro 4
```

```
Total API Messages Sent: 0
Total IPC Sent: 0
Total Message Len: 0
Total Bytes Allocated: 0
```

The following shows typical output for the **show checkpoint statistics** command:

```
Router# show checkpoint statistics

             Check Point Status
 CHKPT on ACTIVE server.
Number of chkpt messages currently in hold queue 0
CHKPT MAX MTU size = 1422
IPC MAX MTU size = 4096
CHKPT Pending msg timer  = 100 ms
Router#
```

Examples

This example shows the output of the **show checkpoint client** command on the Cisco cBR router:

```
Router#show checkpoint clients

                        Check Point List of Clients
                        For domain 0
-------------------------------------------------------------------------------
Client Name            Client     Entity     Bundle
                          ID         ID       Mode
-------------------------------------------------------------------------------
CHKPT Test client          1         --       Off

  Total Messages Received:                      0
  Total Rcv Message Len:                        0
  Total API Messages Sent:                      0
  Total Transport Messages Sent:                0
  Length of Sent Messages:                      0
  Total Blocked Messages Sent:                  0
  Length of Sent Blocked Messages:              0
  Total Non-blocked Messages Sent:              0
  Length of Sent Non-blocked Messages:          0
  Total Bytes Allocated:                        0
  Buffers Held:                                 0
  Buffers Held Peak:                            0
  Huge Buffers Requested:                       0
  Transport Frag Count:                         0
  Transport Frag Peak:                          0
  Transport Sends w/Flow Off:                   0
  Send Errs:                                    0
  Send Peer Errs:                               0
  Rcv Xform Errs:                               0
  Xmit Xform Errs:                              0
  Incompatible Messages:                        0
  Client Unbundles to Process Memory:           T
-------------------------------------------------------------------------------
Client Name            Client     Entity     Bundle
                          ID         ID       Mode
-------------------------------------------------------------------------------
Network RF Client          3         --       Off

  Total Messages Received:                      0
  Total Rcv Message Len:                        0
  Total API Messages Sent:                      0
  Total Transport Messages Sent:                0
  Length of Sent Messages:                      0
  Total Blocked Messages Sent:                  0
  Length of Sent Blocked Messages:              0
  Total Non-blocked Messages Sent:              0
  Length of Sent Non-blocked Messages:          0
  Total Bytes Allocated:                        0
  Buffers Held:                                 0
  Buffers Held Peak:                            0
```

```
  Huge Buffers Requested:                       0
  Transport Frag Count:                         0
  Transport Frag Peak:                          0
  Transport Sends w/Flow Off:                   0
  Send Errs:                                    0
  Send Peer Errs:                               0
  Rcv Xform Errs:                               0
  Xmit Xform Errs:                              0
  Incompatible Messages:                        0
  Client Unbundles to Process Memory:           T
------------------------------------------------------------------------------
Client Name            Client     Entity     Bundle
                           ID         ID       Mode
------------------------------------------------------------------------------
Frame Relay                 6         --       Off

  Total Messages Received:                      0
  Total Rcv Message Len:                        0
  Total API Messages Sent:                      0
  Total Transport Messages Sent:                0
  Length of Sent Messages:                      0

Router#
```

This example displays the output of the **show checkpoint client** for a specific Client ID:

```
Router#show checkpoint clients 1
------------------------------------------------------------------------------
Client Name            Client     Entity     Bundle
                           ID         ID       Mode
------------------------------------------------------------------------------
CHKPT Test client           1         --       Off

  Total Messages Received:                      0
  Total Rcv Message Len:                        0
  Total API Messages Sent:                      0
  Total Transport Messages Sent:                0
  Length of Sent Messages:                      0
  Total Blocked Messages Sent:                  0
  Length of Sent Blocked Messages:              0
  Total Non-blocked Messages Sent:              0
  Length of Sent Non-blocked Messages:          0
  Total Bytes Allocated:                        0
  Buffers Held:                                 0
  Buffers Held Peak:                            0
  Huge Buffers Requested:                       0
  Transport Frag Count:                         0
  Transport Frag Peak:                          0
  Transport Sends w/Flow Off:                   0
  Send Errs:                                    0
  Send Peer Errs:                               0
  Rcv Xform Errs:                               0
  Xmit Xform Errs:                              0
  Incompatible Messages:                        0
  Client Unbundles to Process Memory:           T
Router#
```

This example displays the output of the **show checkpoint entities** for a specific Client ID:

```
Router#show checkpoint entities

                        Check Point List of Entities
                        For domain 0
------------------------------------------------------------------------------
Entity ID         Entity Name
------------------------------------------------------------------------------
        4         UBR HA Entity Group

  Total API Messages Sent:             0
  Total Messages Sent:                 0
  Total Sent Message Len:              0
```

```
  Total Bytes Allocated:               0
  Total Messages Received:             0
  Total Rcv Message Len:               0
  Total Number of Members:             2

  Member(s) of entity 4 are:
    Client ID          Client Name
-----------------------------------------
          151          UBRCCE PLFM CHKPT
          153          UBRCCE SUP CHKPT



Router#
```

This example displays the output of the **show checkpoint statistics** for a specific Client ID:

```
Router#show checkpoint statistics

             Check Point Status
             For domain 0in ACTIVE

  Number Of Msgs In Hold Q:              0
  CHKPT MAX Message Size:                0
  TP MAX Message Size:               65248
  CHKPT Pending Msg Timer:             100 ms

  FLOW_ON  total:                        0
  FLOW_OFF total:                        0
  Current FLOW status is:               ON
  Total API Messages Sent:               0
  Total Messages Sent:                   0
  Total Sent Message Len:                0
  Total Bytes Allocated:                 0
  Total Messages Received:               0
  Total Rcv Message Len:                 0
  Rcv  Msg Q Peak:                       0
  Hold Msg Q Peak:                       0
  Buffers Held Peak:                     0
  Current Buffers Held:                  0
  Huge Buffers Requested:                0
Router#
```

This example shows the output of the **buffer-usage** option for the **statistics** keyword on the default domain of the Cisco cBR router:

```
Router#show checkpoint domain default statistics buffer-usage
-----------------------------------------
 Checkpoint Client using Large No. Buffers
 For Domain 0
-----------------------------------------
-------------------------------------------------------------------------------
Client Name           Client     Entity     Bundle
                         ID         ID       Mode
-------------------------------------------------------------------------------
UBRCCE SUP CHKPT          153          4        On

  Total Messages Received:                    103
  Total Rcv Message Len:                     2856
  Total API Messages Sent:                   3380
  Total Transport Messages Sent:               --
  Length of Sent Messages:                1654929
  Total Blocked Messages Sent:                  0
  Length of Sent Blocked Messages:              0
  Total Non-blocked Messages Sent:           3380
  Length of Sent Non-blocked Messages:    1654929
  Total Bytes Allocated:                 16102840
  Buffers Held:                                 0
```

```
  Buffers Held Peak:                          85
  Huge Buffers Requested:                      0
  Transport Frag Count:                        0
  Transport Frag Peak:                         0
  Transport Sends w/Flow Off:                372
  Send Errs:                                   0
  Send Peer Errs:                              0
  Rcv Xform Errs:                              0
  Xmit Xform Errs:                             0
  Incompatible Messages:                       0
  Client Unbundles to Process Memory:          T
------------------------------------------------------------------------------
Client Name            Client     Entity     Bundle
                           ID         ID       Mode
------------------------------------------------------------------------------
Archive                    87         --       Off

  Total Messages Received:                    11
  Total Rcv Message Len:                     276
  Total API Messages Sent:                    39
  Total Transport Messages Sent:              39
  Length of Sent Messages:                 15550
  Total Blocked Messages Sent:                 0
  Length of Sent Blocked Messages:             0
  Total Non-blocked Messages Sent:            39
  Length of Sent Non-blocked Messages:     15550
  Total Bytes Allocated:                   18046
  Buffers Held:                                0
  Buffers Held Peak:                          33
  Huge Buffers Requested:                      0
  Transport Frag Count:                        0
  Transport Frag Peak:                         0
  Transport Sends w/Flow Off:                  0
  Send Errs:                                   0
  Send Peer Errs:                              0
  Rcv Xform Errs:                              0
  Xmit Xform Errs:                             0
  Incompatible Messages:                       0
  Client Unbundles to Process Memory:          T
------------------------------------------------------------------------------
Client Name            Client     Entity     Bundle
                           ID         ID       Mode
------------------------------------------------------------------------------
CCM                      108         --        On

  Total Messages Received:                   541
  Total Rcv Message Len:                   35952

Router#
```

Related Commands

These related commands are not supported on Cisco cBR Series Converged Broadband Router.

Command	Description
hccp authentication	Changes the minimum time between frequency hops.
hccp check version	Exits bypass version mode, and returns to normal HCCP operation.
hccp ds-switch	Specifies the downstream upconverter module for a Working CMTS or Protect CMTS (deprecated command).

Command	Description
hccp protect	Allows you to configure a Cisco CMTS to be a Protect CMTS for a specified Working CMTS in a 1+1 redundancy environment.
hccp working	Allows you to designate a Cisco CMTS to be a Working CMTS in a 1+1 redundancy environment.
show hccp	Displays information for all cable interfaces on which one or more HCCP groups and authentication modes have been configured.
show hccp interface	Displays group information for a specific cable interface on which one or more groups and authentication modes have been configured.

show cmts ipc-cable client base

To display the interprocess communication (IPC) session status, the service information for all the slots and subslots on the line cards, and statistics for each session on the Cisco uBR10012 router, use the **show cmts ipc-cable client base** command in user EXEC or privileged EXEC mode.

show cmts ipc-cable client base {**client**| **service**| **stats**}

Syntax Description

client	Displays the IPC session status information.
service	Displays all the IPC services for the slots and subslots on the Cisco uBR10012 router.
stats	Displays the IPC layer statistics information for every session.

Command Default

None

Command Modes

User EXEC (>) or

Privileged EXEC (#)

Command History

Release	Modification
12.2(33)SCB	This command was introduced.
12.2(33)SCF	The **service** keyword was added to this command.
IOS-XE 3.15.0S	This command was removed.

Usage Guidelines

The **show cmts ipc-cable client base client** command displays the IPC session information for a group of messages that are exchanged between a route processor (RP) and a line card or between two line cards. This information includes the client ID, client name, IPC transport information, slot and subslot information, session state to identify whether the session is ready for message exchange, number of messages that are pending, and number of messages dropped.

The **show cmts ipc-cable client base service** command displays the IPC service information for all the slots and subslots on the Cisco uBR10012 router. This information includes IPC port information, such as type of service and port ID, retry and timeout information of the IPC messages, and watermark information in the request queue.

The **show cmts ipc-cable client base stats** command displays the IPC layer error statistics for every session and is used for internal debugging purposes. The error statistics information includes the client ID, client

name, transport type, slot and subslot information, client buffer, IPC layer state, error counter information for the sent and received messages, and IPC In Service Software Upgrade (ISSU) register information.

Examples

The following is a sample output of the **show cmts ipc-cable client base client** command:

```
Router# show cmts ipc-cable client base client
Client Id: 0     Name: CLNT DOCSIS
Slot/Subslot Seat    ISSU Sid Connection State Ready Transport Msg-Pending Msg-D
ropped ISSU MTU
5/0          0x70000 17       RP-CLC     Up    Yes   IPC       0           0
       32
6/1          0x50000 65540    RP-CLC     Up    Yes   IPC       0           0
       32
8/0          0x60000 589827   RP-CLC     Up    Yes   IPC       0           0
       32
Client Id: 1     Name: CLNT HCCP
Slot/Subslot Seat    ISSU Sid Connection State Ready Transport Msg-Pending Msg-D
ropped ISSU MTU
5/0          0x70000 17       RP-CLC     Up    Yes   IPC       0           0
       32
6/1          0x50000 65540    RP-CLC     Up    Yes   IPC       0           0
       32
8/0          0x60000 589827   RP-CLC     Up    Yes   IPC       0           0
       32
Client Id: 2     Name: CLNT PKTCBL
Slot/Subslot Seat    ISSU Sid Connection State Ready Transport Msg-Pending Msg-D
ropped ISSU MTU
5/0          0x70000 17       RP-CLC     Up    Yes   IPC       0           0
       32
6/1          0x50000 65540    RP-CLC     Up    Yes   IPC       0           0
       32
8/0          0x60000 589827   RP-CLC     Up    Yes   IPC       0           0
       32
Client Id: 3     Name: CLNT PNEGO
Slot/Subslot Seat    ISSU Sid Connection State Ready Transport Msg-Pending Msg-D
ropped ISSU MTU
5/0          0x70000 17       RP-CLC     Up    Yes   IPC       0           0
       32
6/1          0x50000 65540    RP-CLC     Up    Yes   IPC       0           0
       32
8/0          0x60000 589827   RP-CLC     Up    Yes   IPC       0           0
       32
Client Id: 4     Name: CLNT PLATFORM
Slot/Subslot Seat    ISSU Sid Connection State Ready Transport Msg-Pending Msg-D
ropped ISSU MTU
5/0          0x70000 17       RP-CLC     Up    Yes   IPC       0           0
       32
6/1          0x50000 65540    RP-CLC     Up    Yes   IPC       0           0
       32
!
.
.
.
```

The table below describes the significant fields shown in the display:

Table 1: show cmts ipc-cable client base client Field Descriptions

Field	Description
Client Id	ISSU client ID.
Name	Client session name.
Slot/subslot	Slot and subslot.

Field	Description
Seat	IPC seat number for the session.
ISSU Sid	ISSU application client session service identifier.
Connection	Connection type.
State	Connection state that is established.
Ready	Readiness of the session.
Transport	Transport stream that is used.
Msg-Pending	Total number of messages waiting for acknowledgement.
Msd-Dropped	Total number of messages dropped.
ISSU MTU	IPC Maximum Transmission Unit (MTU) of the ISSU session.

The following is a sample output of the **show cmts ipc-cable client base service** command:

```
Router# show cmts ipc-cable client base service
CMTS IPC service 1/0: default
        ipc_port_info  = 0x69390F4      ipc_port_id = A0000
        retry_max = 20  retry_period = 1        rpc_timeout = 120
        context = 0x6939164     pid = 399       name = ReqXmt 1/0: default
in_transit = 0  reqQ size = 0   inband = False
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = True      block_done = False
CMTS IPC service 3/0: default
        ipc_port_info  = 0x6939084      ipc_port_id = B0000
        retry_max = 20  retry_period = 1        rpc_timeout = 120
        context = 0x6937FE4     pid = 405       name = ReqXmt 3/0: default
in_transit = 0  reqQ size = 0   inband = False
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = True      block_done = False
CMTS IPC service 5/0: default
        ipc_port_info  = 0x465C0C14     ipc_port_id = D000A
        retry_max = 20  retry_period = 1        rpc_timeout = 120
        context = 0x6937874     pid = 420       name = ReqXmt 5/0: default
in_transit = 0  reqQ size = 0   inband = False
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = True      block_done = True
CMTS IPC service 5/0: inband
        ipc_port_info  = 0xE6C7F50      ipc_port_id = D000B
        retry_max = 20  retry_period = 1        rpc_timeout = 20
        context = 0x6937644     pid = 424       name = ReqXmt 5/0: inband
in_transit = 0  reqQ size = 0   inband = True
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = False     block_done = False
CMTS IPC service 5/0: expedite
        ipc_port_info  = 0x34C3FA4      ipc_port_id = D000C
        retry_max = 3   retry_period = 1        rpc_timeout = 5
        context = 0x69380C4     pid = 353       name = ReqXmt 5/0: expedite
in_transit = 0  reqQ size = 0   inband = False
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = True      block_done = False
```

```
CMTS IPC service 5/0: non critical
        ipc_port_info  = 0x4CFFBD34     ipc_port_id = D000D
        retry_max = 3   retry_period = 10       rpc_timeout = 30
        context = 0x6937954     pid = 419       name = ReqXmt 5/0: non critical
in_transit = 0  reqQ size = 0   inband = False
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = False     block_done = False
CMTS IPC service 5/1: default
        ipc_port_info  = 0x6938134      ipc_port_id = C000A
        retry_max = 20  retry_period = 1        rpc_timeout = 120
        context = 0x69387C4     pid = 226       name = ReqXmt 5/1: default
in_transit = 0  reqQ size = 0   inband = False
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = True      block_done = True
CMTS IPC service 5/1: inband
        ipc_port_info  = 0x34C1F4C      ipc_port_id = C000B
        retry_max = 20  retry_period = 1        rpc_timeout = 20
in_transit = 0  reqQ size = 0   inband = True
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = False     block_done = False
CMTS IPC service 5/1: expedite
        ipc_port_info  = 0x2DFFF38      ipc_port_id = C000C
        retry_max = 3   retry_period = 1        rpc_timeout = 5
        context = 0x465B73D4    pid = 96        name = ReqXmt 5/1: expedite
        in_transit = 0  reqQ size = 0   inband = False
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = True      block_done = False
CMTS IPC service 5/1: non critical
        ipc_port_info  = 0x2E00100      ipc_port_id = C000D
        retry_max = 3   retry_period = 10       rpc_timeout = 30
        context = 0x465BE054    pid = 164       name = ReqXmt 5/1: non critical
in_transit = 0  reqQ size = 0   inband = False
        reqQ watermark low = 200        med = 500       high = 1000
        resume_send = False     block_done = False
```

The table below describes the significant fields shown in the display:

Table 2: show cmts ipc-cable client base service Field Descriptions

Field	Description
CMTS IPC service 1/0: default	Slot and subslot. Describes the type of service—default, inband, expedite, or non-critical.
ipc_port_info	IPC port information.
ipc_port_id	IPC port ID.
retry_max	Maximum retries in Cisco IOS software IPC layer.
retry_period	Time period of the retry interval in the IOS IPC layer.
rpc_timeout	RPC timeout value.
context	Context value.
pid	Program identifier value.
name	Type of IPC service.
in_transit	Indicates total number of messages waiting for acknowledgement

Field	Description
inband	Inband service type.
reqQ size	Size of the request queue.
reqQ watermark	Threshold value of the queue.
resume_send	IPC message sent is resumed.
block_done	IPC message is blocked.

The following is a sample output of the **show cmts ipc-cable client base stats** command:

```
Router# show cmts ipc-cable client base stats
Client Id: 0            Name: CLNT DOCSIS
Slot/subslot: 5 /0      Transport Type = RP-CLC
IPC getbuffer fail      : 0
IPC layer is down       : 0
Sender msg has error    : 0
Rcvd msg fail parser    : 0
Sender drop - Misc.     : 0
SID mgmt Q drop-No CM   : 0
SID mgmt Q drop-Misc    : 0
SID mgmt Q full         : 0
SID mgmt Q drop-IF down: 0
IPC timeout             : 0
IPC - no watch boolean : 0
Rcvd client no callback          : 0
CR10K IPC Header transform error : 0
CR10K IPC ISSU send nego failed  : 0
CR10K IPC ISSU not compatible    : 0
CR10K IPC ISSU start nego failed : 0
CR10K IPC ISSU register failed   : 0
```

The table below describes the significant fields shown in the display:

Table 3: show cmts ipc-cable client base stats Field Descriptions

Field	Description
Client Id	ISSU client ID.
Name	Client session name.
Slot/subslot	Slot and subslot.
Transport Type	Transport type.

Related Commands

Command	Description
show cable ipc-stats	Displays the statistics of all IPC messages on the Cisco CMTS router.

show controller gigabitethernet

To display information about the Gigabit Ethernet interface used by the Downstream External PHY Interface (DEPI), use the **show controller gigabitethernet** command in privileged EXEC mode.

show controller gigabitethernet *slot/subslot/*{*bay*| *port*}

Syntax Description

slot	The slot where a SIP or cable line card resides. • Cisco uBR7246VXR router—The valid range is from 3 to 6. • Cisco uBR7225VXR router—The valid range is from 1 to 2. • Cisco uBR10012 router—The valid range for: ◦ Cable line card is from 5 to 8 ◦ SIP is 1 and 3
subslot	The subslot where a SIP or cable line card resides. • Cisco uBR10012 router—The valid value for: ◦ Cable line card in slot 5 to 8 is 0 or 1 ◦ SPAs in a SIP in slot 1 or 3, prior to Cisco IOS Release 12.2(33)SCB is 0 or 1. For Cisco IOS Release 12.2(33)SCB and later, subslot is not specified.
bay	The bay in a SIP where a SPA is located. Valid values are 0 (upper bay) and 1 (lower bay).
port	Specifies the port number. • Cisco uBR7246VXR router and Cisco uBR7225VXR router—The valid range is from 0 to 1. • Cisco uBR10012 router—The valid value for: ◦ Slot 1 and 3 is 0 ◦ Slot 5 to 8 is from 0 to 4

Command Default None

Command Modes Privilege EXEC (#)

Command History

Release	Modification
12.2(33)SCE	This command was introduced.
IOS-XE 3.15.0S	This command was replaced by the **show controllers TenGigabitEthernet** command.

Examples This is a sample output for the **show controller gigabitethernet** command:

```
Router# show controller gigabitethernet 6/1/0
DEPI INTERFACE : GigabitEthernet6/1/0
slot           : 6
subunit        : 256
unit           : 0
slotunit       : 24
type           : 27
fci            : 0x65D
ph_state       : 0x6
MAC            : 0013.5f06.7f74
status         : 0x210040
status2        : 0x80200010
state          : 0x4
encsz          : 14
oir            : 0x0
max_pak_size   : 1524
visible_bw     : 10000
visible_bw_def : 10000
IB CHANNEL     : 3074
Port0 Status   : 1
Port1 Status   : 1
DS             : 11B7A40C
```

The table below describes the significant fields shown in the display:

Table 4: show controller gigabitethernet Field Descriptions

Field	Description
visible_bw	Configured bandwidth for bypass traffic
IB CHANNEL	Ironbus channel ID for bypass traffic
Port0 Status	Status of GigE port 0
Port1 Status	Status of GigE port 1

Related Commands

Command	Description
show controller ethernet	Displays the hardware status of the backplane ethernet (BPE) device.

show controller integrated-cable

To view information about the Cisco UBR-MC20X20V or Cisco uBR-MC88V line card or Cisco cBR Series Converged Broadband Router statistics, use the **show controller integrated-cable** command in privileged EXEC mode.

show controller integrated-cable {*slot/port*| *slot/subslot/port*} [**all**| **association**| **bpi-entry** *bpi-index*| **brief**| **config**| **counters** {**rf-channel** [*rf-channel*]| **wb-channel** [*wb-channel*]}| **errors**| **fpga_version**| **iofpga**| **mapping** {**rf-channel** [*rf-channel*]| **wb-channel** [*wb-channel*]}| **registers**| **rf-channel** [*rf-channel*]| **status**| **wideband-channel** [*wb-channel*]]

Cisco cBR Series Converged Broadband Routers

show controllers integrated-cable *slot/subslot/port* {**acfe** { **cluster** *index*} |**all** | **association** | **bandwidth** { **rf-channel** [*rf-channel*] |**wb-channel** [*wb-channel*] } | **counter** {**ofdm-channel** | **rf-channel** [*rf-channel*] |**wb-channel** [*wb-channel*] } | **mapping** { **rf-channel** [*rf-channel*] |**wb-channel** [*wb-channel*] } | **rf-channels** *grouplist* **verbose** | **rf-port** | **wideband-channel**}

Syntax Description

slot/port | *slot/subslot/port*	Identifies the cable interface on the Cisco uBR7225VXR, Cisco uBR7246VXR, or Cisco uBR10012 router. • *slot* —Slot where the line card resides. ◦ Cisco uBR7225VXR router: The valid range is from 1 to 2. ◦ Cisco uBR7246VXR router: The valid range is from 3 to 6. ◦ Cisco uBR10012 router: The valid range is from 5 to 8. ◦ Cisco cBR Series Converged Broadband Routers: The valid range is from 0 to 3 and from 6 to 9. • *subslot* —Subslot where the line card resides. Available slots are 0 or 1. This option is available on the Cisco uBR10012 router. For Cisco cBR Series Converged Broadband Routers, the available slot is 0. • *port* —Downstream port number on the line card. ◦ Cisco uBR10012 router: The valid range is from 0 to 4. ◦ Cisco uBR7246VXR and Cisco uBR7225VXR routers: The valid port value is 0 or 1. ◦ Cisco cBR Series Converged Broadband Routers: The valid range is from 0 to 7.
all	(Optional) Displays the complete information about the line card statistics.
(For Cisco cBR Series Converged Broadband Routers only) **acfe**	(Optional) Displays controller acfe information.
association	(Optional) Displays the controller association information.
bpi-entry	(Optional) Displays the controller Baseline Privacy Interface (BPI) information. • *bpi-index*—BPI index number. The valid range is from 0 to 24575.

brief	(Optional) Displays brief information about the line card statistics.
(For Cisco cBR Series Converged Broadband Routers only) **bandwidth**	(Optional) Displays information about RF and Wideband channels.
config	(Optional) Displays statistics about the JIB hardware and downstream PHY configuration.
counters	(Optional) Displays information about the RF and wideband (WB) channel counters.
(For Cisco cBR Series Converged Broadband Routers only) **counter**	(Optional) Displays information about channel counters.
rf-channel	Displays the RF channel information.
rf-channel	(Optional) RF channel number. The valid range is from 0 to 3.
wb-channel	Displays the wideband channel information.
wb-channel	(Optional) Wideband channel number. The valid range is from 0 to 5.
errors	(Optional) Displays information about the error counters, such as DOCSIS processor error counters, BPI error counters, and queue manager error counters.
fpga_version	(Optional) Displays the FPGA version information.
iofpga	(Optional) Displays the IOFPGA information.
mapping	(Optional) Displays mapping statistics of the RF and WB channels.
registers	(Optional) Displays the list of JIB hardware downstream register values.
(For Cisco cBR Series Converged Broadband Routers only) **rf-channel**	(Optional) Displays information about RF channels.
(For Cisco cBR Series Converged Broadband Routers only) **rf-port**	(Optional) Displays information about RF port.
status	(Optional) Displays the JIB hardware and downstream PHY status.
wideband-channel	(Optional) Displays the controller wideband cable information.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.2(33)SCC	This command was introduced.
12.2(33)SCD	The command was modified. Added support for the Cisco uBR-MC88V line card on Cisco uBR7246VXR and Cisco uBR7225VXR universal broadband routers.
12.2(33)SCE	This command was modified. The following optional keywords were added: • fgpa_version • iofpga • rf-channel • wideband-channel
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

Usage Guidelines

This command allows the user to view the following line card statistics:

- Controller association
- JIB hardware downstream configuration
- Channel counters
- Errors
- Mapping of WB and RF channels
- JIB hardware downstream registers
- JIB hardware downstream status

Examples

The following example shows a typical display of the **show controller integrated-cable** command and the **all** keyword:

```
Router# show controllers integrated-Cable 6/0/0 all
Integrated Cable Controller 6/0/0:
----------------------------------
  Channel 1  Annex = B  Modulation = 256 QAM
  Channel 2  Annex = B  Modulation = 256 QAM
  Channel 3  Annex = B  Modulation = 256 QAM
  Channel 4  Annex = B  Modulation = 256 QAM
JIB3_DS BPI registers (base address 0xF8880000)
bpi_int_isr_0                      [0x00000000] = 0x00000000
```

```
bpi_int_ier_0                        [0x00000004] = 0x0000000F
glb_int_isr_0                        [0x00000010] = 0x00000000
glb_int_ier_0                        [0x00000014] = 0x000003FF
glb_int_isr_1                        [0x00000020] = 0x00000000
glb_int_ier_1                        [0x00000024] = 0x000003FF
bpi_int_fesr_0                       [0x00000040] = 0x00000000
bpi_tst_tp_sel_reg                   [0x00000050] = 0x00000000
bpi_tst_tp_reg                       [0x00000054] = 0x00000000
bpi_cnt_good_packet_in_cnt           [0x00000064] = 0x61308806
bpi_cnt_bad_packet_in_cnt            [0x00000068] = 0x00006538
bpi_cnt_good_packet_out_cnt          [0x0000006C] = 0x61308806
bpi_cnt_bad_packet_out_cnt           [0x00000070] = 0x00006538
bpi_ecc_sbit_err_cnt                 [0x00000074] = 0x00000000
glb_sw_rev_id                        [0x00000078] = 0x00020002
glb_hw_rev_id                        [0x0000007C] = 0x00010008
frz_reg                              [0x00000080] = 0x00000000
frz_en                               [0x00000084] = 0x00000001
glb_dcm_status                       [0x00000088] = 0x00000007
glb_sw_rst                           [0x0000008C] = 0x00000000
JIB3_DS ERP registers (base address 0xF8881000)
erp_irq_src_reg                      [0x00000000] = 0x00000000
erp_irq_en_reg                       [0x00000004] = 0x80000FFF
erp_tp_sel_reg                       [0x00000050] = 0x00000000
erp_tp_reg                           [0x00000054] = 0x00000000
erp_cfg_reg                          [0x00000060] = 0x00000000
erp_err_record_reg                   [0x00000064] = 0x00000000
erp_err_addr_record_reg              [0x00000068] = 0x00000000
erp_err_wd_record_reg                [0x0000006C] = 0x00000000
erp_proc_err_addr_record_reg         [0x00000090] = 0x00000000
JIB3_DS RX SPI registers (base address 0xF8882000)
rxspi_irq_src_reg                    [0x00000000] = 0x00000000
rxspi_irq_en_reg                     [0x00000004] = 0x000001FF
rxspi_ferr_src_reg                   [0x00000040] = 0x00000000
rxspi_testpoint_sel_reg              [0x00000050] = 0x00000000
rxspi_testpoint_reg                  [0x00000054] = 0x00000000
rxspi_rst_cntl_reg                   [0x00000060] = 0x00000000
rxspi_cntl_status_reg                [0x00000064] = 0x00000005
rxspi_cfg_cntl_reg                   [0x00000068] = 0x00000021
rxspi_afthres_reg                    [0x0000006C] = 0x01C00180
rxspi_cal_dur_reg                    [0x00000070] = 0x00030000
rxspi_non_drop_err_cnt_reg           [0x00000088] = 0x00000000
rxspi_drop_byte_cnt_reg              [0x0000008C] = 0x00000000
rxspi_rx_byte_cnt_reg[0]             [0x000000B0] = 0xFFFFFFFF
rxspi_rx_byte_cnt_reg[1]             [0x000000B4] = 0xFFFFFFFF
rxspi_rx_byte_cnt_reg[2]             [0x000000B8] = 0x14B49467
rxspi_rx_pkt_cnt_reg[0]              [0x000000C0] = 0x3FF2F36C
rxspi_rx_pkt_cnt_reg[1]              [0x000000C4] = 0x20F3AFA9
rxspi_rx_pkt_cnt_reg[2]              [0x000000C8] = 0x004A4A35
rxspi_fifo_pkt_drop_cnt_reg[0]       [0x000000E0] = 0x00000000
rxspi_fifo_pkt_drop_cnt_reg[1]       [0x000000E4] = 0x00000000
rxspi_fifo_pkt_drop_cnt_reg[2]       [0x000000E8] = 0x00000000
rxspi_calendar_table_reg[0]          [0x00000800] = 0x00000000
rxspi_calendar_table_reg[1]          [0x00000804] = 0x00000001
rxspi_calendar_table_reg[2]          [0x00000808] = 0x00000002
rxspi_calendar_table_reg[3]          [0x0000080C] = 0x00000003
JIB3_DS TX SPI registers (base address 0xF8883000)
txspi_irq_src_reg                    [0x00000000] = 0x00000000
txspi_irq_en_reg                     [0x00000004] = 0x0000001F
txspi_ferr_src_reg                   [0x00000040] = 0x00000000
txspi_testpoint_sel_reg              [0x00000050] = 0x00000000
txspi_testpoint_reg                  [0x00000054] = 0x00000000
txspi_rst_cntl_reg                   [0x00000060] = 0x00000000
txspi_cntl_status_reg                [0x00000064] = 0x00000009
txspi_cfg_cntl_reg                   [0x00000068] = 0x00000001
txspi_afthres_reg                    [0x0000006C] = 0x01EC01E8
txspi_cal_dur_reg                    [0x00000070] = 0x00040000
txspi_train_cntl_reg                 [0x00000074] = 0x00000000
txspi_nonfatalerr_cnt_reg            [0x00000080] = 0x00000000
txspi_eop_abort_pkt_cnt_reg[0]       [0x00000090] = 0x00000000
txspi_eop_abort_pkt_cnt_reg[1]       [0x00000094] = 0x00000000
txspi_eop_abort_pkt_cnt_reg[2]       [0x00000098] = 0x00000000
txspi_eop_abort_pkt_cnt_reg[3]       [0x0000009C] = 0x00000000
txspi_eop_abort_byte_cnt_reg[0]      [0x000000A0] = 0x00000000
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txspi_eop_abort_byte_cnt_reg[1]     [0x000000A4] = 0x00000000
txspi_eop_abort_byte_cnt_reg[2]     [0x000000A8] = 0x00000000
txspi_eop_abort_byte_cnt_reg[3]     [0x000000AC] = 0x00000000
txspi_tx_byte_cnt_reg[0]            [0x000000C0] = 0x00000000
txspi_tx_byte_cnt_reg[1]            [0x000000C4] = 0x00000000
txspi_tx_byte_cnt_reg[2]            [0x000000C8] = 0x00000000
txspi_tx_byte_cnt_reg[3]            [0x000000CC] = 0x00000000
txspi_tx_pkt_cnt_reg[0]             [0x00000100] = 0x00000000
txspi_tx_pkt_cnt_reg[1]             [0x00000104] = 0x00000000
txspi_tx_pkt_cnt_reg[2]             [0x00000108] = 0x00000000
txspi_tx_pkt_cnt_reg[3]             [0x0000010C] = 0x00000000
txspi_calendar_table_reg[0]         [0x00000800] = 0x00000000
txspi_calendar_table_reg[1]         [0x00000804] = 0x00000001
txspi_calendar_table_reg[2]         [0x00000808] = 0x00000002
txspi_calendar_table_reg[3]         [0x0000080C] = 0x00000003
txspi_calendar_table_reg[4]         [0x00000810] = 0x00000004
JIB3_DS DOC registers (base address 0xF8884000)
doc_int_err0                        [0x00000000] = 0x00000000
doc_int_err0_ier                    [0x00000004] = 0xFFBFBFFD
doc_int_err1                        [0x00000010] = 0x00000000
doc_int_err1_ier                    [0x00000014] = 0x003FFFF8
doc_int_fesr                        [0x00000040] = 0x00000000
doc_test_sel                        [0x00000050] = 0x00000000
doc_testpoint                       [0x00000054] = 0x00000000
doc_cfg_ctrl                        [0x00000060] = 0x031A0000
doc_err_cap_ctrl                    [0x00000064] = 0x001F0001
doc_err_cap_addr                    [0x00000068] = 0x00000000
doc_err_cap_data                    [0x0000006C] = 0x000080F7
doc_seg_num                         [0x00000070] = 0x00000001
doc_wb_chan_stats_sel               [0x00000074] = 0x00000077
doc_wb_pkt_cnt                      [0x00000078] = 0x00000000
doc_wb_byte_cnt                     [0x0000007C] = 0x00000000
doc_wb_police_sel                   [0x00000080] = 0x00000000
doc_wb_police_data                  [0x00000084] = 0x00000000
doc_wb_police_intv                  [0x00000088] = 0x00000000
doc_nb_chan_stats_sel               [0x0000008C] = 0x0000004C
doc_nb_pkt_cnt                      [0x00000090] = 0x00000000
doc_nb_byte_cnt                     [0x00000094] = 0x00000000
doc_nb_police_sel                   [0x00000098] = 0x00000000
doc_nb_police_data                  [0x0000009C] = 0x00000000
doc_nb_police_intv                  [0x000000A0] = 0x00000000
doc_int_doc_cnt                     [0x000000D4] = 0x00000000
doc_int_ecc_sbiterr_cnt             [0x000000D8] = 0x00000000
doc_pkt_good_in_cnt                 [0x000000DC] = 0x6130ED6F
doc_pkt_good_out_cnt                [0x000000E0] = 0x61308837
doc_pkt_err_in_cnt                  [0x000000E4] = 0x00000000
doc_pkt_err_out_cnt                 [0x000000E8] = 0x00006538
doc_pkt_drop_cnt                    [0x000000EC] = 0x00000000
doc_efc_all_cnt                     [0x000000F0] = 0x00000000
doc_efc_hi_cnt                      [0x000000F4] = 0x00000000
doc_efc_me_cnt                      [0x000000F8] = 0x00000000
doc_efc_lo_cnt                      [0x000000FC] = 0x00000000
doc_efc_ch_sel                      [0x00000100] = 0x00000000
doc_efc_debug_ctrl                  [0x00000104] = 0x00000000
doc_rldram_ext_ecc                  [0x00000114] = 0x00000000
doc_rldram_cfg                      [0x00000118] = 0x00101544
doc_rldram_ctrl                     [0x0000011C] = 0x00100389
doc_rldram_status                   [0x00000120] = 0x039D7403
doc_rldram_blk_clr                  [0x00000124] = 0x0B7FFFFF
doc_rldram_cal_match_win_h          [0x00000128] = 0x00000000
doc_rldram_cal_match_win_l          [0x0000012C] = 0x1FFFFFFF
doc_rldram_ecc_err_rec_addr         [0x00000130] = 0x00000000
doc_magic_num_err_pkt_ctrl          [0x00000150] = 0x00000000
doc_magic_num_err_pkt_addr          [0x00000154] = 0x00000000
doc_magic_num_err_pkt_data          [0x00000158] = 0x00000000
JIB3_DS RIF registers (base address 0xF8885000)
rif_int_err0                        [0x00000000] = 0x00000000
rif_int_ier0                        [0x00000004] = 0x00000007
rif_int_fesr0                       [0x00000040] = 0x00000000
rif_tp_sel                          [0x00000050] = 0x00000000
rif_tp                              [0x00000054] = 0x00000000
rif_cfg_ctrl                        [0x00000060] = 0x00000000
rif_cnt_in_mpeg_cnt                 [0x00000064] = 0xFFFFFFFF
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rif_cnt_out_good_mpeg_cnt           [0x00000068] = 0xFFFFFFFF
rif_cnt_out_bad_mpeg_cnt            [0x0000006C] = 0x00000000
rif_cnt_drop_mpeg_cnt               [0x00000070] = 0x00000000
rif_1bit_ecc_err_stat               [0x00000074] = 0x00000000
JIB3_DS RTN registers (base address 0xF8886000)
return_int_isr                      [0x00000000] = 0x00000000
return_int_ier                      [0x00000004] = 0x000001FF
return_int_fesr                     [0x00000040] = 0x00000000
return_tp_sel                       [0x00000050] = 0x00000000
return_tp                           [0x00000054] = 0x00000000
return_ctrl_reg                     [0x00000060] = 0x00000000
return_pif_loopback_chnl            [0x00000064] = 0x00000000
return_sniffer_nonbonded_en         [0x00000068] = 0x00000000
return_sniffer_bonded_en            [0x0000006C] = 0x00000000
return_spi_chnl_sel                 [0x00000070] = 0x0000013A
return_err_drop_en                  [0x00000074] = 0x0000000F
return_snf_macda_cfg_addr           [0x00000078] = 0x00000000
return_snf_macda_cfg_data_hi        [0x0000007C] = 0x00000000
return_snf_macda_cfg_data_lo        [0x00000080] = 0x00000000
return_in_pifrx_good_cnt            [0x000000A0] = 0x00000000
return_in_pifrx_bad_cnt             [0x000000A4] = 0x00000000
return_in_piflp_good_cnt            [0x000000A8] = 0xFFFFFFFF
return_in_piflp_bad_cnt             [0x000000AC] = 0x00000000
return_in_sniffer_good_cnt          [0x000000B0] = 0x61308845
return_in_sniffer_bad_cnt           [0x000000B4] = 0x00006538
return_in_spi_loop_good_cnt         [0x000000B8] = 0x00000000
return_in_spi_loop_bad_cnt          [0x000000BC] = 0x00000000
return_out_spi0_cnt                 [0x000000C0] = 0x00000000
return_out_spi1_cnt                 [0x000000C4] = 0x00000000
return_out_spi2_cnt                 [0x000000C8] = 0x00000000
return_out_spi3_cnt                 [0x000000CC] = 0x00000000
return_out_spi4_cnt                 [0x000000D0] = 0x00000000
return_pifrx_if_par_err_drop_cnt    [0x000000D4] = 0x00000000
return_pifrx_if_len_err_drop_cnt    [0x000000D8] = 0x00000000
return_piflp_if_err_drop_cnt        [0x000000DC] = 0x00000000
return_piflp_if_chnl_drop_cnt       [0x000000E0] = 0x00000000
return_snf_pb_err_drop_cnt          [0x000000E4] = 0x00006538
return_snf_pkt_type_err_drop_cnt    [0x000000E8] = 0x61308845
return_spilp_if_err_drop_cnt        [0x000000EC] = 0x00000000
return_pifrx_traffic_mux_drop_cnt   [0x000000F0] = 0x00000000
return_piflp_traffic_mux_drop_cnt   [0x000000F4] = 0x00000000
return_snf_traffic_mux_drop_cnt     [0x000000F8] = 0x00000000
return_spilp_traffic_mux_drop_cnt   [0x000000FC] = 0x00000000
return_pifrx_fifo_overflow_drop_cnt [0x00000100] = 0x00000000
return_piflp_fifo_overflow_drop_cnt [0x00000104] = 0x00000000
return_snf_fifo_overflow_drop_cnt   [0x00000108] = 0x00000000
return_spilp_fifo_overflow_drop_cnt [0x0000010C] = 0x00000000
return_pifrx_if_par_err_cnt         [0x00000110] = 0x00000000
return_pifrx_if_len_err_cnt         [0x00000114] = 0x00000000
return_pifrx_fifo_ecc_1berr_cnt     [0x00000118] = 0x00000000
return_piflp_fifo_ecc_1berr_cnt     [0x0000011C] = 0x00000000
return_snf_fifo_ecc_1berr_cnt       [0x00000120] = 0x00000000
return_spilp_fifo_ecc_1berr_cnt     [0x00000124] = 0x00000000
JIB3_DS DLM registers (base address 0xF8890000)
dlm_int_isr_0                       [0x00000000] = 0x00000005
dlm_int_ier_0                       [0x00000004] = 0x00000000
dlm_cnt_local_ts_reg                [0x00000064] = 0x5B00EB07
dlm_cfg_tss_comp_reg                [0x00000068] = 0x00000027
dlm_cfg_tss_ctrl_reg                [0x0000006C] = 0x00000000
dlm_cfg_tss_cmd_reg                 [0x00000070] = 0x00000000
dlm_cnt_ts_load_cnt                 [0x000000BC] = 0x00000000
dlm_cnt_ts_chk_failed_cnt           [0x000000C4] = 0x00000000
dlm_cnt_tss_perr_cnt                [0x000000C8] = 0x00000000
dlm_cnt_load_ts_reg                 [0x000000D0] = 0x003F52EF
JIB3_DS SEQ registers (base address 0xF8892000)
seq_int_err0                        [0x00000000] = 0x0000000F
seq_int_ier0                        [0x00000004] = 0x000FFFFF
seq_int_err3                        [0x00000030] = 0x00000000
seq_int_ier3                        [0x00000034] = 0x00000001
seq_int_fatal_err                   [0x00000040] = 0x00000000
seq_tp_sel                          [0x00000050] = 0x00000000
seq_tp                              [0x00000054] = 0x00000000
seq_cfg_en                          [0x00000060] = 0x00000001
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seq_cfg_sync_timer_sel              [0x00000064] = 0x00000004
seq_cfg_sync_timer_data             [0x00000068] = 0x00000000
seq_cfg_sync_sa_sel                 [0x0000006C] = 0x00000004
seq_cfg_sync_sa_data_lo             [0x00000070] = 0x70CC0B91
seq_cfg_sync_sa_data_hi             [0x00000074] = 0x00000000
seq_cfg_tkb_timer_sel               [0x00000078] = 0x00000014
seq_cfg_tkb_timer_data              [0x0000007C] = 0x00000000
seq_cfg_tkb_max                     [0x00000080] = 0x00000000
seq_hwdbg_dpv_proc_table_addr       [0x00000090] = 0x00000000
seq_hwdbg_dpv_ptr_mod_table         [0x00000094] = 0x00000000
seq_hwdbg_dpv_timestamp_table       [0x00000098] = 0x00000000
seq_hwdbg_dpv_hcs_table             [0x0000009C] = 0x00000000
seq_cnt_blkram_oecc_err_stat        [0x000000A4] = 0x00000000
seq_cnt_tran_mpeg_stat              [0x000000A8] = 0xFFFFFFFF
seq_cnt_tran_mpeg_sync_stat         [0x000000AC] = 0x00000000
seq_cnt_tran_only_sync_stat         [0x000000B0] = 0x00000000
seq_cnt_tran_dpv_stat               [0x000000B8] = 0x00000000
JIB3_DS QM registers (base address 0xF8893000)
qm_int_isr0                         [0x00000000] = 0x00000000
qm_int_ier0                         [0x00000004] = 0x0000007F
qm_int_isr1                         [0x00000010] = 0x00000000
qm_int_ier1                         [0x00000014] = 0x000FFFFF
qm_int_fat_err_isr                  [0x00000040] = 0x00000000
qm_tst_tp_sel                       [0x00000050] = 0x00000000
qm_tst_tp                           [0x00000054] = 0x00000000
qm_cfg_chnl_rst_0                   [0x00000060] = 0x00000000
qm_cfg_ctl                          [0x0000006C] = 0x00000011
qm_cfg_sqf_fac_addr                 [0x0000008C] = 0x00000014
qm_cfg_sqf_fac_data                 [0x00000090] = 0x00000000
qm_cfg_bond_chnl_map_addr           [0x00000094] = 0x00000020
qm_cfg_bond_chnl_map_data_lo        [0x00000098] = 0x00000000
qm_cfg_flt_thr_addr                 [0x000000A4] = 0x0000024F
qm_cfg_flt_thr_data                 [0x000000A8] = 0x00000000
qm_cfg_repl_addr                    [0x000000AC] = 0x0000002D
qm_cfg_repl_data_lo                 [0x000000B0] = 0x00000000
qm_hwdbg_buf_mag_addr               [0x000000BC] = 0x00000000
qm_hwdbg_wptr_data_lo               [0x000000C0] = 0x00000C60
qm_hwdbg_wptr_data_mi               [0x000000C4] = 0x00016080
qm_hwdbg_wptr_data_hi               [0x000000C8] = 0x000012A0
qm_hwdbg_rptr_data_lo               [0x000000CC] = 0x00000C60
qm_hwdbg_rptr_data_mi               [0x000000D0] = 0x00016080
qm_hwdbg_rptr_data_hi               [0x000000D4] = 0x000012A0
qm_hwdbg_qulen_data_lo              [0x000000D8] = 0x00000000
qm_hwdbg_qulen_data_mi              [0x000000DC] = 0x00000000
qm_hwdbg_qulen_data_hi              [0x000000E0] = 0x00000000
qm_hwdbg_contex_data                [0x000000E4] = 0x00000000
qm_cfg_dir_stat_addr                [0x000000E8] = 0x0000004E
qm_cnt_dir_pkt_stat                 [0x000000EC] = 0x00000000
qm_cnt_dir_byte_stat                [0x000000F0] = 0x00000000
qm_cfg_qam_stat_addr                [0x000000F4] = 0x0000004C
qm_cnt_qam_chnl_pkt_stat            [0x000000F8] = 0x00000000
qm_cnt_qam_chnl_byte_stat           [0x000000FC] = 0x00000000
qm_cnt_qam_chnl_sync_stat           [0x00000100] = 0x00000000
qm_cnt_bpram_ovrflw_stat            [0x00000108] = 0x00000000
qm_cnt_que_ovrflw_stat              [0x0000010C] = 0x00000000
qm_cnt_good_bpi_pkt_stat            [0x00000110] = 0x6130886C
qm_cnt_bad_bpi_pkt_stat             [0x00000114] = 0x000000FF
qm_cnt_bpram_out_good_pkt_stat      [0x0000011C] = 0xC38C8639
qm_cnt_bpram_out_dir_pkt_stat       [0x00000120] = 0x213DFA0E
qm_cnt_bpram_out_bonded_pkt_stat    [0x00000124] = 0x3486CDA6
qm_cnt_replicated_pkt_stat          [0x00000128] = 0x8399F7DB
qm_cnt_bpram_bad_type_pkt_stat      [0x00000134] = 0x00000000
qm_cnt_bpram_bad_eop_pkt_stat       [0x00000138] = 0x00000000
qm_cnt_bpram_bad_dir_pkt_stat       [0x0000013C] = 0x00000000
qm_cnt_bpram_bad_bonded_pkt_stat    [0x00000140] = 0x00000000
qm_cnt_bpram_oecc_err_pkt_stat      [0x00000144] = 0x00000000
qm_cnt_bpram_bad_pkt_stat           [0x00000148] = 0x000000FF
qm_cnt_wr_good_pkt_stat             [0x0000014C] = 0xC38C863A
qm_cnt_wr_bad_pkt_stat              [0x00000150] = 0x00000000
qm_cnt_drop_bad_pkt_stat            [0x00000154] = 0x000000FF
qm_cnt_drop_ovrflw_pkt_stat         [0x00000158] = 0x00000000
qm_cnt_rd_pkt_stat                  [0x0000015C] = 0xC38C8664
qm_cnt_rd_mpeg_stat                 [0x00000160] = 0xFFFFFFFF
```

```
qm_cnt_rd_mpeg_sync_stat            [0x00000164] = 0x06A0FC65
qm_cnt_rd_mpeg_only_sync_stat       [0x00000168] = 0x0620376C
qm_cnt_tran_pkt_stat                [0x00000170] = 0xC38C8664
qm_cnt_tran_oecc_err_pkt_stat       [0x00000174] = 0x00000000
qm_cnt_tran_mpeg_stat               [0x00000178] = 0xFFFFFFFF
qm_cnt_tran_mpeg_sync_stat          [0x0000017C] = 0x06A0FC65
qm_cnt_tran_mpeg_only_sync_stat     [0x00000180] = 0x0620376C
qm_cnt_tran_dpv_stat                [0x00000188] = 0x00000000
qm_rldram_ext_ecc                   [0x00000198] = 0x00000000
qm_rldram_cfg                       [0x0000019C] = 0x00101544
qm_rldram_ctrl                      [0x000001A0] = 0x00100389
qm_rldram_status                    [0x000001A4] = 0x03DF7C03
qm_rldram_cal_match_win_h           [0x000001A8] = 0x00000000
qm_rldram_cal_match_win_l           [0x000001AC] = 0x7FFFFFFF
JIB3_DS PG registers (base address 0xF8898000)
pg_mod                              [0x00000050] = 0x00000000
pg_dhs                              [0x00000054] = 0x00000000
pg_ipg                              [0x0000005C] = 0x00000000
pg_num                              [0x00000058] = 0x00000000
pg_payload_length                   [0x00000060] = 0x00000000
pg_payload_value                    [0x00000064] = 0x00000000
pg_pkt_hdr_prog_0                   [0x00000068] = 0x00000000
pg_pkt_hdr_prog_1                   [0x0000006C] = 0x00000000
pg_pkt_hdr_1                        [0x00000070] = 0x00000000
pg_pkt_hdr_2                        [0x00000074] = 0x00000000
pg_pkt_hdr_3                        [0x00000078] = 0x00000000
pg_pkt_hdr_4                        [0x0000007C] = 0x00000000
pg_pkt_hdr_5                        [0x00000080] = 0x00000000
pg_pkt_hdr_6                        [0x00000084] = 0x00000000
JIB3_DS PMBIST registers (base address 0xF8899000)
pmbist_ena_addr                     [0x00000060] = 0x00000002
pmbist_din_addr                     [0x00000064] = 0x00000000
pmbist_dout_addr                    [0x0000006C] = 0x00008101
pmbist_trgt_select_addr             [0x00000074] = 0x00000000
pmbist_ff_status                    [0x00000078] = 0x00000000
pmbist_num_wr_fr_pmbist             [0x0000007C] = 0x00000000
pmbist_num_rd_fr_pmbist             [0x00000080] = 0x00000000
pmbist_um_wr_2cmd_ff                [0x00000084] = 0x00000000
pmbist_num_rd_2cmd_ff               [0x00000088] = 0x00000000
pmbist_num_rd_rtn_pmbist            [0x0000008C] = 0x00000000
pmbist_num_wr_2dram                 [0x00000090] = 0x00000000
pmbist_num_rd_2dram                 [0x00000094] = 0x00000000
pmbist_num_rd_fr_dram               [0x00000098] = 0x00000000

DS PHY Configuration of Controller 0:
---------------------
  Base Frequency = 555000000Hz
  RF-Power = 52.0dBmV
  Annex = B Modulation = 256QAM
  Channel Status Interleave
  ------- ------ ----------
     0   Active     32
     1   Active     32
     2   Active     32
     3   Active     32
  DS_PHY PLL set for Annex-B
  DS PHY Device Information:
  -------------------
    Remora Version = 3.10
    UPX SW Version = 0x10D
    Upconverter Type:Unknown
    UPX Part Number =
  Device Status:
  --------------
    UPX Alarm Status = 0x3FF
    UPX Alarm Mask   = 0x19000
Remora registers (base address 0xF8900000)
-----------------------------------------
Remora General Registers (0xF8900000):
--------------------------------------
revision                            [0x00000000] = 0x00000003
hw_fpga_rev_id                      [0x00000004] = 0x0000000A
erp_scratch_pad0                    [0x00000008] = 0x00000000
```

```
erp_scratch_pad1                      [0x0000000C] = 0x00000000
Remora Reset and DCM Lock Registers (0xF8900100):
-------------------------------------------------
reset_ctrl                            [0x00000100] = 0x00000000
dcm_lock                              [0x00000104] = 0x0000000F
Remora Configuration Registers (0xF8900200):
--------------------------------------------
port_cfg[0]                           [0x00000200] = 0x00155549
port_cfg[1]                           [0x00000204] = 0x00155548
port_cfg[2]                           [0x00000208] = 0x00155548
port_cfg[3]                           [0x0000020C] = 0x00155548
port_cfg[4]                           [0x00000210] = 0x00155548
core_config_status                    [0x00000214] = 0x00000020
port_rm2tififo_prog_flags[0]          [0x00000218] = 0xBBA20C0D
port_rm2tififo_prog_flags[1]          [0x0000021C] = 0xBBA20C0D
port_rm2tififo_prog_flags[2]          [0x00000220] = 0xBBA20C0D
port_rm2tififo_prog_flags[3]          [0x00000224] = 0xBBA20C0D
port_rm2tififo_prog_flags[4]          [0x00000228] = 0xBBA20C0D
Remora DFT/Pattern Inject Registers (0xF8900300):
-------------------------------------------------
alt_sym_tst_mode                      [0x00000300] = 0x00005A69
alt_sym_tst_en_reg                    [0x00000304] = 0x00000000
qdr_mem_test_en_reg                   [0x00000308] = 0x00000000
qdr_mem_test_rd_wr_reg                [0x0000030C] = 0x00000A12
ready_for_data_input                  [0x00000318] = 0x0000001F
Remora ECC Registers (0xF8900400):
----------------------------------
debug_cfg                             [0x00000400] = 0x00000000
sniff_frame_cnt                       [0x00000404] = 0x00000000
ecc_parity_conf_reg                   [0x00000408] = 0x00000003
ecc_uncorrect_data_log_reg            [0x0000040C] = 0x00002814
ecc_uncorrect_log_reg                 [0x00000410] = 0x00000020
ecc_correctable_data_log_reg          [0x00000414] = 0x00002C14
ecc_correctable_log_reg               [0x00000418] = 0x00000028
qdr_ecc_corr_cnt_reg                  [0x0000041C] = 0x00000000
fatal_err_log                         [0x00000420] = 0x00000000
err_inj_reg                           [0x00000424] = 0x00000000
Remora QDR Registers (0xF8900500):
----------------------------------
qdr_phy_idelayctrl_rst_reg            [0x00000500] = 0x00000000
qdr_phy_idelayctrl_rdy_err_reg        [0x00000504] = 0x00000261
qdr_phy_cal_tap_dly_reg               [0x00000508] = 0x00000ADB
qdr_phy_idelayctrl_ctrl_reg           [0x0000050C] = 0x00000002
qdr_init_ctrl_reg                     [0x00000510] = 0x801FFFFF
Remora Interrupt Status Registers (0xF8900600):
-----------------------------------------------
glb_int_stat_reg                      [0x00000600] = 0x00000000
int_stat_gr_reg[0]                    [0x00000604] = 0x00000000
int_stat_gr_reg[1]                    [0x00000608] = 0x00000000
int_stat_gr_reg[2]                    [0x0000060C] = 0x00000000
int_stat_gr_reg[3]                    [0x00000610] = 0x00000000
int_stat_gr_reg[4]                    [0x00000614] = 0x00000000
misc_int_stat_reg                     [0x00000618] = 0x00000001
fatal_err_src_reg                     [0x0000061C] = 0x00000000
port_local_interrupt_enable[0]        [0x00000620] = 0x0001FFFF
port_local_interrupt_enable[1]        [0x00000624] = 0x0001FFFF
port_local_interrupt_enable[2]        [0x00000628] = 0x0001FFFF
port_local_interrupt_enable[3]        [0x0000062C] = 0x0001FFFF
port_local_interrupt_enable[4]        [0x00000630] = 0x0001FFFF
misc_int_en_reg                       [0x00000634] = 0x00001FF8
fatal_err_en_reg                      [0x00000638] = 0x00000EFF
port_local_interrupt_override[0]      [0x0000063C] = 0x00000000
port_local_interrupt_override[1]      [0x00000640] = 0x00000000
port_local_interrupt_override[2]      [0x00000644] = 0x00000000
port_local_interrupt_override[3]      [0x00000648] = 0x00000000
port_local_interrupt_override[4]      [0x0000064C] = 0x00000000
misc_int_override                     [0x00000650] = 0x00000000
fatal_err_override                    [0x00000654] = 0x00000000
Remora Counts Registers (0xF8900800):
-------------------------------------
illegal_ch_num_pkt_drop_count         [0x00000800] = 0x00000000
fifo_full_mpeg_pkt_drop_count_hi      [0x00000804] = 0x00000000
fifo_full_mpeg_pkt_drop_count_lo      [0x00000808] = 0x00000000
```

```
channel_mpeg_pkt_count[0]           [0x0000080C] = 0x00000EE7
channel_mpeg_pkt_count[1]           [0x00000810] = 0x00000E8C
channel_mpeg_pkt_count[2]           [0x00000814] = 0x00000839
channel_mpeg_pkt_count[3]           [0x00000818] = 0x000009DF
channel_mpeg_pkt_count[4]           [0x0000081C] = 0x00000000
channel_mpeg_pkt_count[5]           [0x00000820] = 0x00000000
channel_mpeg_pkt_count[6]           [0x00000824] = 0x00000000
channel_mpeg_pkt_count[7]           [0x00000828] = 0x00000000
channel_mpeg_pkt_count[8]           [0x0000082C] = 0x00000000
channel_mpeg_pkt_count[9]           [0x00000830] = 0x00000000
channel_mpeg_pkt_count[10]          [0x00000834] = 0x00000000
channel_mpeg_pkt_count[11]          [0x00000838] = 0x00000000
channel_mpeg_pkt_count[12]          [0x0000083C] = 0x00000000
channel_mpeg_pkt_count[13]          [0x00000840] = 0x00000000
channel_mpeg_pkt_count[14]          [0x00000844] = 0x00000000
channel_mpeg_pkt_count[15]          [0x00000848] = 0x00000000
channel_mpeg_pkt_count[16]          [0x0000084C] = 0x00000000
channel_mpeg_pkt_count[17]          [0x00000850] = 0x00000000
channel_mpeg_pkt_count[18]          [0x00000854] = 0x00000000
channel_mpeg_pkt_count[19]          [0x00000858] = 0x00000000
port_re_timestamp_count[0]          [0x0000085C] = 0x97979796
port_re_timestamp_count[1]          [0x00000860] = 0x00000000
port_re_timestamp_count[2]          [0x00000864] = 0x00000000
port_re_timestamp_count[3]          [0x00000868] = 0x00000000
port_re_timestamp_count[4]          [0x0000086C] = 0x00000000
port_rx_fifo_overflow_drop_count[0] [0x00000870] = 0x00000000
port_rx_fifo_overflow_drop_count[1] [0x00000874] = 0x00000000
port_rx_fifo_overflow_drop_count[2] [0x00000878] = 0x00000000
port_rx_fifo_overflow_drop_count[3] [0x0000087C] = 0x00000000
port_rx_fifo_overflow_drop_count[4] [0x00000880] = 0x00000000
channel_jib_if_pkt_count[0]         [0x00000884] = 0x4AFC8612
channel_jib_if_pkt_count[1]         [0x00000888] = 0x44C96772
channel_jib_if_pkt_count[2]         [0x0000088C] = 0x42A048EA
channel_jib_if_pkt_count[3]         [0x00000890] = 0x43E61FF6
channel_jib_if_pkt_count[4]         [0x00000894] = 0x00000000
channel_jib_if_pkt_count[5]         [0x00000898] = 0x00000000
channel_jib_if_pkt_count[6]         [0x0000089C] = 0x00000000
channel_jib_if_pkt_count[7]         [0x000008A0] = 0x00000000
channel_jib_if_pkt_count[8]         [0x000008A4] = 0x00000000
channel_jib_if_pkt_count[9]         [0x000008A8] = 0x00000000
channel_jib_if_pkt_count[10]        [0x000008AC] = 0x00000000
channel_jib_if_pkt_count[11]        [0x000008B0] = 0x00000000
channel_jib_if_pkt_count[12]        [0x000008B4] = 0x00000000
channel_jib_if_pkt_count[13]        [0x000008B8] = 0x00000000
channel_jib_if_pkt_count[14]        [0x000008BC] = 0x00000000
channel_jib_if_pkt_count[15]        [0x000008C0] = 0x00000000
channel_jib_if_pkt_count[16]        [0x000008C4] = 0x00000000
channel_jib_if_pkt_count[17]        [0x000008C8] = 0x00000000
channel_jib_if_pkt_count[18]        [0x000008CC] = 0x00000000
channel_jib_if_pkt_count[19]        [0x000008D0] = 0x00000000
Remora Timestamp Registers (0xF8900900):
----------------------------------------
local_1024_ts_ctrl                  [0x00000900] = 0x00000039
local_1024_current_ts               [0x00000904] = 0xC354FFA0
local_1024_tcc_ts_latch             [0x00000908] = 0x7291125F
doc_ts_offset_ch_0_1                [0x0000090C] = 0x04AF04AF
doc_ts_offset_ch_2_3                [0x00000910] = 0x04AF04AF
doc_ts_offset_ch_4_5                [0x00000914] = 0x04F704F7
doc_ts_offset_ch_6_7                [0x00000918] = 0x04F704F7
doc_ts_offset_ch_8_9                [0x0000091C] = 0x04F704F7
doc_ts_offset_ch_10_11              [0x00000920] = 0x04F704F7
doc_ts_offset_ch_12_13              [0x00000924] = 0x04F704F7
doc_ts_offset_ch_14_15              [0x00000928] = 0x04F704F7
doc_ts_offset_ch_16_17              [0x0000092C] = 0x04F704F7
doc_ts_offset_ch_18_19              [0x00000930] = 0x04F704F7
Remora PRATE/SRATE Registers (0xF8900A00):
------------------------------------------
port_prate_regs[0].prate_ctrl       [0x00000A00] = 0x00000003
port_prate_regs[0].prate_m_prime_lo [0x00000A04] = 0x0005971E
port_prate_regs[0].prate_n_prime_lo [0x00000A08] = 0x08AA5B88
port_prate_regs[0].prate_m_prime_hi [0x00000A0C] = 0x00000000
port_prate_regs[1].prate_ctrl       [0x00000A10] = 0x00000003
port_prate_regs[1].prate_m_prime_lo [0x00000A14] = 0x00000191
```

```
port_prate_regs[1].prate_n_prime_lo [0x00000A18] = 0x00037E78
port_prate_regs[1].prate_m_prime_hi [0x00000A1C] = 0x00000000
port_prate_regs[2].prate_ctrl       [0x00000A20] = 0x00000003
port_prate_regs[2].prate_m_prime_lo [0x00000A24] = 0x00000191
port_prate_regs[2].prate_n_prime_lo [0x00000A28] = 0x00037E78
port_prate_regs[2].prate_m_prime_hi [0x00000A2C] = 0x00000000
port_prate_regs[3].prate_ctrl       [0x00000A30] = 0x00000003
port_prate_regs[3].prate_m_prime_lo [0x00000A34] = 0x00000191
port_prate_regs[3].prate_n_prime_lo [0x00000A38] = 0x00037E78
port_prate_regs[3].prate_m_prime_hi [0x00000A3C] = 0x00000000
port_prate_regs[4].prate_ctrl       [0x00000A40] = 0x00000003
port_prate_regs[4].prate_m_prime_lo [0x00000A44] = 0x00000191
port_prate_regs[4].prate_n_prime_lo [0x00000A48] = 0x00037E78
port_prate_regs[4].prate_m_prime_hi [0x00000A4C] = 0x00000000
port_srate_regs[0].srate_ctrl       [0x00000A50] = 0x00000003
port_srate_regs[0].srate_mn         [0x00000A54] = 0x004E0095
port_srate_regs[1].srate_ctrl       [0x00000A58] = 0x00000003
port_srate_regs[1].srate_mn         [0x00000A5C] = 0x0191032C
port_srate_regs[2].srate_ctrl       [0x00000A60] = 0x00000003
port_srate_regs[2].srate_mn         [0x00000A64] = 0x0191032C
port_srate_regs[3].srate_ctrl       [0x00000A68] = 0x00000003
port_srate_regs[3].srate_mn         [0x00000A6C] = 0x0191032C
port_srate_regs[4].srate_ctrl       [0x00000A70] = 0x00000003
port_srate_regs[4].srate_mn         [0x00000A74] = 0x0191032C
```

The following example shows a typical display of the **show controller integrated-cable** command and the **association** keyword:

```
Router# show controller integrated-Cable 7/1/0 association
WB Association Info for 7/1 No of WB 30
WB                      BG   Bundle  NB          NB chan  Reserved  Total
channel                 ID   num     channel     ID       CIR       CIR
Wideband-Cable7/1/0:0   1057 1       Cable7/1/0  121      0         21751500
                                     Multicast            0         21751500
Wideband-Cable7/1/3:0   1153 1       Cable7/1/3  133      0         12481000
                                     Multicast            0         12481000
```

The following example shows a typical display of the **show controller integrated-cable** command and the **brief** keyword:

```
Router# show controllers integrated-Cable 6/0/0  brief
Integrated Cable Controller 6/0/0:
-----------------------------------
  Channel 1  Annex = B  Modulation = 256 QAM
  Channel 2  Annex = B  Modulation = 256 QAM
  Channel 3  Annex = B  Modulation = 256 QAM
  Channel 4  Annex = B  Modulation = 256 QAM
Jib3-DS Device Information:
---------------------------
   Jib3-DS Version = 2.2.1.8
   SW Rev ID = 0x00020002 HW Rev ID = 0x00010008
   Device Type: Coldplay
   Driver State: 3
Channel Resources:
------------------
   Total Non-bonded Channels..........= 20
   Per-Controller Non-bonded Channels = 4
   Total Bonded Channels..............= 32
   Per-Controller Bonded Channels.....= 6
Slot-Wide Resources:
--------------------
   Number of PHS Rules...........= 12K (0x3000)
   Number of BPI Table Entries...= 24K (0x6000)
   Number of Service Flows.......= 64K (0x10000)
  DS PHY Device Information:
  --------------------
    Remora Version = 3.10
    UPX SW Version = 0x10D
    Upconverter Type:Unknown
    UPX Part Number =
  Device Status:
  --------------
```

```
    UPX Alarm Status = 0x3FF
    UPX Alarm Mask   = 0x19000
```

The following example shows a typical display of the **show controller integrated-cable** command and the **bpi-entry** keyword:

```
Router# show controller integrated-cable 7/1/4 bpi-entry 3
BPI index:3 segment:0 key_no:3 said:2 key_seq:7 AES
Even  5A4B-68E8-5948-FD84-F5E2-1D28-311C-37D8
  Iv  4E33-379E-6FCF-9A8E-01CB-AC95-5B4D-AE76
 Odd  A871-76EA-1D3E-02F8-5EDA-8A8E-1F15-52E6
  Iv  6F62-765C-C9E7-DB8A-6FA5-91E8-BE41-3075
```

Effective from Cisco IOS Release 12.2(33)SCD, the BPI key information stored on the Cisco UBR-MC20X20V line card is displayed using the show controller integrated-cable command with the bpi-entry keyword.

The following is a sample output of the**show controller integrated-cable** command with the **bpi-entry** keyword:

```
Router# show controller integrated-cable 6/0/0 bpi-entry 1
BPI Index: 1 Segment: 0
 Even Key: Valid, Odd Key: Valid
 Key Sequence Number: 1 Security Association: 0x2
 Key Type: DES
 Even Key: 1CE8-45A1-1903-E5  IV: 1513-236D-1FF7-046E
  Odd Key: 10EC-6DB2-5441-EC  IV: 07C7-1089-0E34-026B
```

The following example provides information about all controllers using the **show controller integrated-cable**command and the **wideband** keyword:

```
Router# show controller integrated-cable 7/1/4 wideband
WB                    BG    WB Host       Primary
channel               ID    Slot/Subslot  BG
Wideband-Cable7/1/4:0   1185  7/1           Yes
Wideband-Cable7/1/4:1   1186  7/1           Yes
Wideband-Cable7/1/4:2   1187  7/1           Yes
Wideband-Cable7/1/4:3   1188  7/1           Yes
Wideband-Cable7/1/4:4   1189  7/1           Yes
Wideband-Cable7/1/4:5   1190  7/1           Yes
```

The following example provides information about all controllers using the**show controller integrated-cable** command and the **config** keyword:

```
Router# show controllers integrated-Cable 6/0/0 config
Integrated Cable Controller 6/0/0:
----------------------------------
  Channel 1  Annex = B  Modulation = 256 QAM
  Channel 2  Annex = B  Modulation = 256 QAM
  Channel 3  Annex = B  Modulation = 256 QAM
  Channel 4  Annex = B  Modulation = 256 QAM
Jib3-DS Device Information:
---------------------------
   Jib3-DS Version = 2.2.1.8
   SW Rev ID = 0x00020002 HW Rev ID = 0x00010008
   Device Type: Coldplay
   Driver State: 3
Channel Resources:
------------------
   Total Non-bonded Channels..........= 20
   Per-Controller Non-bonded Channels = 4
   Total Bonded Channels..............= 32
   Per-Controller Bonded Channels.....= 6
Slot-Wide Resources:
--------------------
   Number of PHS Rules............= 12K (0x3000)
   Number of BPI Table Entries...= 24K (0x6000)
   Number of Service Flows.......= 64K (0x10000)

Sniffer Configuration:
----------------------
Non-Bonded Channel Mask = 0x00000000
```

```
Bonded Channel Mask.....= 0x00000000
Sniff All Enable........= False
Configured Sniffer MAC Addresses:
Entry     MAC Address     Enabled
-----   --------------   -------
0       0000.0000.0000     False
1       0000.0000.0000     False
2       0000.0000.0000     False
3       0000.0000.0000     False
4       0000.0000.0000     False
5       0000.0000.0000     False
6       0000.0000.0000     False
7       0000.0000.0000     False
8       0000.0000.0000     False
9       0000.0000.0000     False
10      0000.0000.0000     False
11      0000.0000.0000     False
12      0000.0000.0000     False
13      0000.0000.0000     False
14      0000.0000.0000     False
15      0000.0000.0000     False

Replication Table:
------------------
Replication Entry Index   Channel Mask
-----------------------   ------------
41                        0x0000000F
42                        0x0000000F
43                        0x0000000F
44                        0x0000000F

Configured Bonding Groups:
--------------------------
Bonded Channel   Channels in Bonding Group
--------------   -------------------------
00               0, 1, 2, 3

Sync Configuration:
-------------------
Channel   MAC Address      Interval
-------   --------------   --------
0         001d.70cc.0b90      10 ms
1         001d.70cc.0b90      10 ms
2         001d.70cc.0b90      10 ms
3         001d.70cc.0b90      10 ms

DS PHY Configuration of Controller 0:
---------------------
  Base Frequency = 555000000Hz
  RF-Power = 52.0dBmV
  Annex = B Modulation = 256QAM
  Channel Status Interleave
  ------- ------ ----------
     0   Active     32
     1   Active     32
     2   Active     32
     3   Active     32
  DS_PHY PLL set for Annex-B
```

The following example provides information about all controllers using the **show controller integrated-cable** command and the **counters** keyword:

```
Router# show controller integrated-Cable card 7/1 counters rf-channel
Controller  RF    MPEG       MPEG       MPEG       Sync       MAP/UCD
Chan  Packets    bps        Mbps       Packets    Packets
                  Tx                               Tx         Tx
7/1/0       0     510617849   1411052    1.411052   45424209   894786143
7/1/0       1     511430476   1415614    1.415614   45424208   894786138
7/1/0       2     510750271   1412707    1.412707   45424208   894786121
7/1/0       3     512009268   1416818    1.416818   45424207   894786108
7/1/1       0     268915155   743427     0.74347    45424206   223046013
7/1/1       1     0           0          0.0        0          0
```

```
7/1/1       2     0          0          0.0        0          0
7/1/1       3     0          0          0.0        0          0
7/1/2       0     0          0          0.0        0          0
7/1/2       1     0          0          0.0        0          0
7/1/2       2     0          0          0.0        0          0
7/1/2       3     0          0          0.0        0          0
7/1/3       0     269847377   746886     0.746886   45424206   223769698
7/1/3       1     269850587   746936     0.746936   45424205   223769696
7/1/3       2     269851105   746886     0.746886   45424204   223769690
7/1/3       3     269868256   747036     0.747036   45424199   223769663
7/1/4       0     0          0          0.0        0          0
7/1/4       1     0          0          0.0        0          0
7/1/4       2     0          0          0.0        0          0
7/1/4       3     0          0          0.0        0          0
Router# show controllers integrated-Cable 6/0/0 counters wb-channel
Controller      WB channel       Tx packets       Tx octets
6/0/0           0                881249714         466143984373
6/0/0           1                0                0
6/0/0           2                0                0
6/0/0           3                0                0
6/0/0           4                0                0
6/0/0           5                0                0
```

The following example provides information about all controllers using the **show controller integrated-cable** command and the **errors** keyword:

```
Router# show controllers integrated-Cable 6/0/0 errors
Rx SPI Error Counters:
----------------------
Non-Droppable Errors Channel 0 = 00  FIFO Pkt Drop Count Channel 0 = 00000000
Non-Droppable Errors Channel 1 = 00  FIFO Pkt Drop Count Channel 1 = 00000000
Non-Droppable Errors Channel 2 = 00  FIFO Pkt Drop Count Channel 2 = 00000000
Non-Droppable Errors Channel 3 = 00  Dropped Bytes                 = 00000000
Tx SPI Error Counters:
----------------------
DIP2 Errors              = 00        Illegal Src Pattern Errs  = 00
EOP Abort Pkts Channel 0 = 00000000  EOP Abort Bytes Channel 0 = 00000000
EOP Abort Pkts Channel 1 = 00000000  EOP Abort Bytes Channel 1 = 00000000
EOP Abort Pkts Channel 2 = 00000000  EOP Abort Bytes Channel 2 = 00000000
EOP Abort Pkts Channel 3 = 00000000  EOP Abort Bytes Channel 3 = 00000000
DOCSIS Processor Error Counters:
--------------------------------
EFC and Stats Errors = 00000000  DOCSIS Engine Errors = 00025934
PHS Errors           = 00000000  Parser Errors        = 00000000
Output Packet Errors = 00000000  Dropped Packets      = 00000000
Input Packet Errors  = 00000000  ECC Errors           = 00000000
BPI Error Counters:
-------------------
Bad Input Pkts  = 22  Single-bit ECC Errors = 0
Bad Output Pkts = 22
Queue Manager Error Counters:
-----------------------------
BPRAM Bad End of Packets..= 00000000  Bonded Map Errors............= 00000000
BPRAM Overflows...........= 00000000  BPRAM Bad Packet Type Errors = 00000000
Directed Map Error Counts = 00000000  BPRAM ECC Errors.............= 00000000
RLDRAM ECC Errors.........= 00000000  Queue Overflows..............= 00000000
Sequencer Error Counters:
-------------------------
BlkRAM ECC Errors = 00000000
ERP Error Counters:
-------------------
Processor Bus Errored Address = 0x00000000
Return Interface Error Counters:
--------------------------------
Phys If Rx FIFO Oflow Drops = 00000000  Phys If LB FIFO Oflow Drops = 00000000
Sniffer FIFO Oflow Drops....= 00000000  Phys If Rx Parity Errors....= 00000000
Phys If Length Errors.......= 00000000  Phys If Rx FIFO ECC Errors..= 00000000
Phys If LB FIFO ECC Errors..= 00000000  Sniffer FIFO ECC Errors.....= 00000000
SPI LB FIFO ECC Errors......= 00000000
Jib3-DS (Coldplay) interrupt events
      count
 current   total    bursts  Event name
```

```
      21     25921       0  DOCSIS Processing Block: DSID Valid Error
Internal error packet buffer:
-----------------------------
IPH Header:
Packet type..... = 0x00
Flags.............. = 0x00
Packet Length..... = 33015 (0x80F7)
DOCSIS Header Length = 11
Replication Index... = 0
Stats Index........ = 0x0546
Flags2............. = 0x01040000
Service Flow....... = 0x00000000
Packet Body:
0x010500E1 0x4411C0FA 0x00895500 0x118072C7
0x6A001D70 0xCC0BE208 0x0045B800 0xCA000000
0x003F1121 0x42AC2200 0x63AC2200 0x82C004C0
0x0200B600 0x008000F1 0x318FF541 0x1BA16AE2
0xB303AF17 0x1652643F 0x4498F48E 0xE278F16B
0x167521EC 0x3CBF34DD 0xDCBEA10E 0x0B5AA70C
0xE6B9B77F 0x8E3590ED 0x4EC9388A 0x9B886A51
Internal magic number error packet buffer:
------------------------------------------
No magic number errored packet available
```

The following example provides information about all controllers using the **show controller integrated-cable** command and the **fpga_version** keyword:

```
Router# show controllers integrated-Cable 7/0/0 fpga_version
2020 CARD FPGA VERSION
CORABI FPGA               :  0.53
SPARROW FPGA              :  0.309
WAXBILL FPGA              :  1.7D
COLDPLAY FPGA             :  2.2.1.D
REMORA FPGA               :  0.1.0.14
FAUNA FPGA                :  0.8.0.3
FLORA FPGA                :  0.6.0.7
```

The following example provides information about all controllers using the **show controller integrated-cable** command and the **iofpga** keyword:

```
Router# show controllers integrated-Cable 7/0/0 iofpga
SPARROW PHY IOFPGA Registers - Address 0xF8800000:
    OFFSET    REGISTER                          VALUE
      0x00    Revision                          0x00000309
      0x08    DS RF Control                     0x80000003
      0x0C    FFT Process Low                   0x80007006
      0x1C    DCM Lock status                   0x00077411
      0x20    UPX SPI Control                   0x00000000
      0x24    UPX SPI Respond                   0x00000703
      0xB0    BCM 3140 SPI Start                0x00000000 0x00000000 0x00000000 0x00000000
 0x00000000
      0xC4    BCM 3140 SPI Done                 0x00000000 0x00000000 0x00000000 0x00000000
 0x00000000
      0xD8    BCM3140 Reset                     0x000003FF
      0x100   FATAL Interrupt                   0x00002000
      0x104   FATAL Interrupt Enable            0x001FD8FF
      0x108   HIGH Priority Interrupt           0x00000000
      0x10C   HIGH Priority Interrupt Enable    0x00000000
      0x110   Low Priority Interrupt            0x00100000
      0x114   Low Priority Interrupt Enable     0x03E03C00
      0x118   CPU LB Data Parity Error          0x00000000
      0x200   Fauna ERP Interrupt Status        0x00000000
      0x204   Flora ERP Interrupt Status        0x00000000
      0x208   Coldplay ERP Interrupt Status     0x00000000
      0x20C   Remora ERP Interrupt Status       0x00000000
      0x210   VGA SPI RF Channel Selection      0x00000000
      0x214   VGA SPI RW Gain                   0x0000009E
      0x218   VGA SPI Write Gain(raven)         0x00000000
      0x220   VGA Enable                        0x000FFFFF
      0x300   Fauna Reset                       0x00000003
      0x304   Flora Reset                       0x00000003
      0x308   Coldplay Reset                    0x00000003
```

```
      0x30C   Remora Reset                     0x00000007
      0x310   Upstream LED                     0x00003C00
      0x380   Downstream Density License LED   0x00000000
** Sparrow PHY I/O FPGA counters ****
Spurious FFT Interrupts: 0        Spurious FFT CHIP ID: 0        FFT RDY CLEAR Err: 0

FFT Data Ready: 2A6
UPX:  SPI 0        Non-fatal 0        Boot OK 3
BCM3140: SPIA 0        SPIB 0        SPIC 0        SPID 0        SPIE 0
Non fatal US JIB Flora:    1         US JIB Fauna: 1
Non fatal DS JIB Coldplay: 1
Non fatal Remora FPGA:  1
US Port (BCM3140 channels):
0: 0       1: 0       2: 0       3: 0
4: 0       5: 0       6: 0       7: 0
8: 0       9: 0       10: 0       11: 0
12: 0       13: 0       14: 0       15: 0
16: 0       17: 0       18: 0       19: 0
```

The following example provides information about all controllers using the **show controller integrated-cable** command and the **mapping** keyword:

```
Router# show controllers integrated-Cable 6/0/0 mapping rf-channel
Ctrlr    RF       MC          MC Rem.    WB         WB         WB Rem.
         channel  BW %        Ratio      channel    BW %       Ratio
6/0/0    0        33          1          6/0/0:0     63        1
6/0/0    1        33          1          6/0/0:0     63        1
6/0/0    2        33          1          6/0/0:0     63        1
6/0/0    3        33          1          6/0/0:0     63        1
Router# show controllers integrated-Cable 6/0/0 mapping wb-channel
Load for five secs: 18%/1%; one minute: 11%; five minutes: 13%
Time source is NTP, *15:07:17.566 EDT Sun Mar 21 2010
Ctrlr    WB       RF          BW %       Remaining
         channel  channel                 Ratio
6/0/0    0        6/0/0:0     63         1
                  6/0/0:1     63         1
                  6/0/0:2     63         1
                  6/0/0:3     63         1
```

The following example provides information about all controllers using the **show controller integrated-cable** command and the **registers** keyword:

```
Router# show controllers integrated-Cable 6/0/0 registers
JIB3_DS BPI registers (base address 0xF8880000)
bpi_int_isr_0                        [0x00000000] = 0x00000000
bpi_int_ier_0                        [0x00000004] = 0x0000000F
glb_int_isr_0                        [0x00000010] = 0x00000000
glb_int_ier_0                        [0x00000014] = 0x000003FF
glb_int_isr_1                        [0x00000020] = 0x00000000
glb_int_ier_1                        [0x00000024] = 0x000003FF
bpi_int_fesr_0                       [0x00000040] = 0x00000000
bpi_tst_tp_sel_reg                   [0x00000050] = 0x00000000
bpi_tst_tp_reg                       [0x00000054] = 0x00000000
bpi_cnt_good_packet_in_cnt           [0x00000064] = 0x00045B37
bpi_cnt_bad_packet_in_cnt            [0x00000068] = 0x0000000D
bpi_cnt_good_packet_out_cnt          [0x0000006C] = 0x00045B37
bpi_cnt_bad_packet_out_cnt           [0x00000070] = 0x0000000D
bpi_ecc_sbit_err_cnt                 [0x00000074] = 0x00000000
glb_sw_rev_id                        [0x00000078] = 0x00020002
glb_hw_rev_id                        [0x0000007C] = 0x00010008
frz_reg                              [0x00000080] = 0x00000000
frz_en                               [0x00000084] = 0x00000001
glb_dcm_status                       [0x00000088] = 0x00000007
glb_sw_rst                           [0x0000008C] = 0x00000000
JIB3_DS ERP registers (base address 0xF8881000)
erp_irq_src_reg                      [0x00000000] = 0x00000000
erp_irq_en_reg                       [0x00000004] = 0x80000FFF
erp_tp_sel_reg                       [0x00000050] = 0x00000000
erp_tp_reg                           [0x00000054] = 0x00000000
erp_cfg_reg                          [0x00000060] = 0x00000000
erp_err_record_reg                   [0x00000064] = 0x00000000
erp_err_addr_record_reg              [0x00000068] = 0x00000000
```

```
erp_err_wd_record_reg               [0x0000006C] = 0x00000000
erp_proc_err_addr_record_reg        [0x00000090] = 0x00000000
JIB3_DS RX SPI registers (base address 0xF8882000)
rxspi_irq_src_reg                   [0x00000000] = 0x00000000
rxspi_irq_en_reg                    [0x00000004] = 0x000001FF
rxspi_ferr_src_reg                  [0x00000040] = 0x00000000
rxspi_testpoint_sel_reg             [0x00000050] = 0x00000000
rxspi_testpoint_reg                 [0x00000054] = 0x00000000
rxspi_rst_cntl_reg                  [0x00000060] = 0x00000000
rxspi_cntl_status_reg               [0x00000064] = 0x00000005
rxspi_cfg_cntl_reg                  [0x00000068] = 0x00000021
rxspi_afthres_reg                   [0x0000006C] = 0x01C00180
rxspi_cal_dur_reg                   [0x00000070] = 0x00030000
rxspi_non_drop_err_cnt_reg          [0x00000088] = 0x00000000
rxspi_drop_byte_cnt_reg             [0x0000008C] = 0x00000000
rxspi_rx_byte_cnt_reg[0]            [0x000000B0] = 0x01A499EF
rxspi_rx_byte_cnt_reg[1]            [0x000000B4] = 0x00CF4ED0
rxspi_rx_byte_cnt_reg[2]            [0x000000B8] = 0x0001F030
rxspi_rx_pkt_cnt_reg[0]             [0x000000C0] = 0x0001D242
rxspi_rx_pkt_cnt_reg[1]             [0x000000C4] = 0x0002828C
rxspi_rx_pkt_cnt_reg[2]             [0x000000C8] = 0x00000684
rxspi_fifo_pkt_drop_cnt_reg[0]      [0x000000E0] = 0x00000000
rxspi_fifo_pkt_drop_cnt_reg[1]      [0x000000E4] = 0x00000000
rxspi_fifo_pkt_drop_cnt_reg[2]      [0x000000E8] = 0x00000000
rxspi_calendar_table_reg[0]         [0x00000800] = 0x00000000
rxspi_calendar_table_reg[1]         [0x00000804] = 0x00000001
rxspi_calendar_table_reg[2]         [0x00000808] = 0x00000002
rxspi_calendar_table_reg[3]         [0x0000080C] = 0x00000003
JIB3_DS TX SPI registers (base address 0xF8883000)
txspi_irq_src_reg                   [0x00000000] = 0x00000000
txspi_irq_en_reg                    [0x00000004] = 0x0000001F
txspi_ferr_src_reg                  [0x00000040] = 0x00000000
txspi_testpoint_sel_reg             [0x00000050] = 0x00000000
txspi_testpoint_reg                 [0x00000054] = 0x00000000
txspi_rst_cntl_reg                  [0x00000060] = 0x00000000
txspi_cntl_status_reg               [0x00000064] = 0x00000009
txspi_cfg_cntl_reg                  [0x00000068] = 0x00000001
txspi_afthres_reg                   [0x0000006C] = 0x01EC01E8
txspi_cal_dur_reg                   [0x00000070] = 0x00040000
txspi_train_cntl_reg                [0x00000074] = 0x00000000
txspi_nonfatalerr_cnt_reg           [0x00000080] = 0x00000000
txspi_eop_abort_pkt_cnt_reg[0]      [0x00000090] = 0x00000000
txspi_eop_abort_pkt_cnt_reg[1]      [0x00000094] = 0x00000000
txspi_eop_abort_pkt_cnt_reg[2]      [0x00000098] = 0x00000000
txspi_eop_abort_pkt_cnt_reg[3]      [0x0000009C] = 0x00000000
txspi_eop_abort_byte_cnt_reg[0]     [0x000000A0] = 0x00000000
txspi_eop_abort_byte_cnt_reg[1]     [0x000000A4] = 0x00000000
txspi_eop_abort_byte_cnt_reg[2]     [0x000000A8] = 0x00000000
txspi_eop_abort_byte_cnt_reg[3]     [0x000000AC] = 0x00000000
txspi_tx_byte_cnt_reg[0]            [0x000000C0] = 0x00000000
txspi_tx_byte_cnt_reg[1]            [0x000000C4] = 0x00000000
txspi_tx_byte_cnt_reg[2]            [0x000000C8] = 0x00000000
txspi_tx_byte_cnt_reg[3]            [0x000000CC] = 0x00000000
txspi_tx_pkt_cnt_reg[0]             [0x00000100] = 0x00000000
txspi_tx_pkt_cnt_reg[1]             [0x00000104] = 0x00000000
txspi_tx_pkt_cnt_reg[2]             [0x00000108] = 0x00000000
txspi_tx_pkt_cnt_reg[3]             [0x0000010C] = 0x00000000
txspi_calendar_table_reg[0]         [0x00000800] = 0x00000000
txspi_calendar_table_reg[1]         [0x00000804] = 0x00000001
txspi_calendar_table_reg[2]         [0x00000808] = 0x00000002
txspi_calendar_table_reg[3]         [0x0000080C] = 0x00000003
txspi_calendar_table_reg[4]         [0x00000810] = 0x00000004
JIB3_DS DOC registers (base address 0xF8884000)
doc_int_err0                        [0x00000000] = 0x00000000
doc_int_err0_ier                    [0x00000004] = 0xFFBFBFFD
doc_int_err1                        [0x00000010] = 0x00000000
doc_int_err1_ier                    [0x00000014] = 0x003FFFF8
doc_int_fesr                        [0x00000040] = 0x00000000
doc_test_sel                        [0x00000050] = 0x00000000
doc_testpoint                       [0x00000054] = 0x00000000
doc_cfg_ctrl                        [0x00000060] = 0x031A0000
doc_err_cap_ctrl                    [0x00000064] = 0x001F0001
doc_err_cap_addr                    [0x00000068] = 0x00000020
```

```
doc_err_cap_data                    [0x0000006C] = 0x000080F7
doc_seg_num                         [0x00000070] = 0x00000001
doc_wb_chan_stats_sel               [0x00000074] = 0x00000077
doc_wb_pkt_cnt                      [0x00000078] = 0x00000000
doc_wb_byte_cnt                     [0x0000007C] = 0x00000000
doc_wb_police_sel                   [0x00000080] = 0x00000001
doc_wb_police_data                  [0x00000084] = 0x00000000
doc_wb_police_intv                  [0x00000088] = 0x00000000
doc_nb_chan_stats_sel               [0x0000008C] = 0x0000004C
doc_nb_pkt_cnt                      [0x00000090] = 0x00000000
doc_nb_byte_cnt                     [0x00000094] = 0x00000000
doc_nb_police_sel                   [0x00000098] = 0x00000001
doc_nb_police_data                  [0x0000009C] = 0x00000000
doc_nb_police_intv                  [0x000000A0] = 0x00000000
doc_int_doc_cnt                     [0x000000D4] = 0x00000000
doc_int_ecc_sbiterr_cnt             [0x000000D8] = 0x00000000
doc_pkt_good_in_cnt                 [0x000000DC] = 0x00045B5C
doc_pkt_good_out_cnt                [0x000000E0] = 0x00045B39
doc_pkt_err_in_cnt                  [0x000000E4] = 0x00000000
doc_pkt_err_out_cnt                 [0x000000E8] = 0x00000023
doc_pkt_drop_cnt                    [0x000000EC] = 0x00000000
doc_efc_all_cnt                     [0x000000F0] = 0x00000000
doc_efc_hi_cnt                      [0x000000F4] = 0x00000000
doc_efc_me_cnt                      [0x000000F8] = 0x00000000
doc_efc_lo_cnt                      [0x000000FC] = 0x00000000
doc_efc_ch_sel                      [0x00000100] = 0x00000000
doc_efc_debug_ctrl                  [0x00000104] = 0x00000000
doc_rldram_ext_ecc                  [0x00000114] = 0x00000000
doc_rldram_cfg                      [0x00000118] = 0x00101544
doc_rldram_ctrl                     [0x0000011C] = 0x00100389
doc_rldram_status                   [0x00000120] = 0x039D7403
doc_rldram_blk_clr                  [0x00000124] = 0x0B7FFFFF
doc_rldram_cal_match_win_h          [0x00000128] = 0x00000000
doc_rldram_cal_match_win_l          [0x0000012C] = 0x1FFFFFFF
doc_rldram_ecc_err_rec_addr         [0x00000130] = 0x00000000
doc_magic_num_err_pkt_ctrl          [0x00000150] = 0x00000000
doc_magic_num_err_pkt_addr          [0x00000154] = 0x00000001
doc_magic_num_err_pkt_data          [0x00000158] = 0x00000000
JIB3_DS RIF registers (base address 0xF8885000)
rif_int_err0                        [0x00000000] = 0x00000000
rif_int_ier0                        [0x00000004] = 0x00000007
rif_int_fesr0                       [0x00000040] = 0x00000000
rif_tp_sel                          [0x00000050] = 0x00000000
rif_tp                              [0x00000054] = 0x00000000
rif_cfg_ctrl                        [0x00000060] = 0x00000000
rif_cnt_in_mpeg_cnt                 [0x00000064] = 0x000A6226
rif_cnt_out_good_mpeg_cnt           [0x00000068] = 0x000A6226
rif_cnt_out_bad_mpeg_cnt            [0x0000006C] = 0x00000000
rif_cnt_drop_mpeg_cnt               [0x00000070] = 0x00000000
rif_1bit_ecc_err_stat               [0x00000074] = 0x00000000
JIB3_DS RTN registers (base address 0xF8886000)
return_int_isr                      [0x00000000] = 0x00000000
return_int_ier                      [0x00000004] = 0x000001FF
return_int_fesr                     [0x00000040] = 0x00000000
return_tp_sel                       [0x00000050] = 0x00000000
return_tp                           [0x00000054] = 0x00000000
return_ctrl_reg                     [0x00000060] = 0x00000000
return_pif_loopback_chnl            [0x00000064] = 0x00000000
return_sniffer_nonbonded_en         [0x00000068] = 0x00000000
return_sniffer_bonded_en            [0x0000006C] = 0x00000000
return_spi_chnl_sel                 [0x00000070] = 0x0000013A
return_err_drop_en                  [0x00000074] = 0x0000000F
return_snf_macda_cfg_addr           [0x00000078] = 0x0000000F
return_snf_macda_cfg_data_hi        [0x0000007C] = 0x00000000
return_snf_macda_cfg_data_lo        [0x00000080] = 0x00000000
return_in_pifrx_good_cnt            [0x000000A0] = 0x00000000
return_in_pifrx_bad_cnt             [0x000000A4] = 0x00000000
return_in_piflp_good_cnt            [0x000000A8] = 0x000A6224
return_in_piflp_bad_cnt             [0x000000AC] = 0x00000000
return_in_sniffer_good_cnt          [0x000000B0] = 0x00045B3A
return_in_sniffer_bad_cnt           [0x000000B4] = 0x00000023
return_in_spi_loop_good_cnt         [0x000000B8] = 0x00000000
return_in_spi_loop_bad_cnt          [0x000000BC] = 0x00000000
```

```
return_out_spi0_cnt                 [0x000000C0] = 0x00000000
return_out_spi1_cnt                 [0x000000C4] = 0x00000000
return_out_spi2_cnt                 [0x000000C8] = 0x00000000
return_out_spi3_cnt                 [0x000000CC] = 0x00000000
return_out_spi4_cnt                 [0x000000D0] = 0x00000000
return_pifrx_if_par_err_drop_cnt    [0x000000D4] = 0x00000000
return_pifrx_if_len_err_drop_cnt    [0x000000D8] = 0x00000000
return_piflp_if_err_drop_cnt        [0x000000DC] = 0x00000000
return_piflp_if_chnl_drop_cnt       [0x000000E0] = 0x00000000
return_snf_pb_err_drop_cnt          [0x000000E4] = 0x00000023
return_snf_pkt_type_err_drop_cnt    [0x000000E8] = 0x00045B3A
return_spilp_if_err_drop_cnt        [0x000000EC] = 0x00000000
return_pifrx_traffic_mux_drop_cnt   [0x000000F0] = 0x00000000
return_piflp_traffic_mux_drop_cnt   [0x000000F4] = 0x00000000
return_snf_traffic_mux_drop_cnt     [0x000000F8] = 0x00000000
return_spilp_traffic_mux_drop_cnt   [0x000000FC] = 0x00000000
return_pifrx_fifo_overflow_drop_cnt [0x00000100] = 0x00000000
return_piflp_fifo_overflow_drop_cnt [0x00000104] = 0x00000000
return_snf_fifo_overflow_drop_cnt   [0x00000108] = 0x00000000
return_spilp_fifo_overflow_drop_cnt [0x0000010C] = 0x00000000
return_pifrx_if_par_err_cnt         [0x00000110] = 0x00000000
return_pifrx_if_len_err_cnt         [0x00000114] = 0x00000000
return_pifrx_fifo_ecc_1berr_cnt     [0x00000118] = 0x00000000
return_piflp_fifo_ecc_1berr_cnt     [0x0000011C] = 0x00000000
return_snf_fifo_ecc_1berr_cnt       [0x00000120] = 0x00000000
return_spilp_fifo_ecc_1berr_cnt     [0x00000124] = 0x00000000
JIB3_DS DLM registers (base address 0xF8890000)
dlm_int_isr_0                       [0x00000000] = 0x00000004
dlm_int_ier_0                       [0x00000004] = 0x00000000
dlm_cnt_local_ts_reg                [0x00000064] = 0x8D7DF4CD
dlm_cfg_tss_comp_reg                [0x00000068] = 0x00000027
dlm_cfg_tss_ctrl_reg                [0x0000006C] = 0x00000000
dlm_cfg_tss_cmd_reg                 [0x00000070] = 0x00000000
dlm_cnt_ts_load_cnt                 [0x000000BC] = 0x00000000
dlm_cnt_ts_chk_failed_cnt           [0x000000C4] = 0x00000000
dlm_cnt_tss_perr_cnt                [0x000000C8] = 0x00000000
dlm_cnt_load_ts_reg                 [0x000000D0] = 0x003F52EF
JIB3_DS SEQ registers (base address 0xF8892000)
seq_int_err0                        [0x00000000] = 0x0000000F
seq_int_ier0                        [0x00000004] = 0x000FFFFF
seq_int_err3                        [0x00000030] = 0x00000000
seq_int_ier3                        [0x00000034] = 0x00000001
seq_int_fatal_err                   [0x00000040] = 0x00000000
seq_tp_sel                          [0x00000050] = 0x00000000
seq_tp                              [0x00000054] = 0x00000000
seq_cfg_en                          [0x00000060] = 0x00000001
seq_cfg_sync_timer_sel              [0x00000064] = 0x00000014
seq_cfg_sync_timer_data             [0x00000068] = 0x00000000
seq_cfg_sync_sa_sel                 [0x0000006C] = 0x00000014
seq_cfg_sync_sa_data_lo             [0x00000070] = 0x00000000
seq_cfg_sync_sa_data_hi             [0x00000074] = 0x00000000
seq_cfg_tkb_timer_sel               [0x00000078] = 0x00000015
seq_cfg_tkb_timer_data              [0x0000007C] = 0x00000000
seq_cfg_tkb_max                     [0x00000080] = 0x00000000
seq_hwdbg_dpv_proc_table_addr       [0x00000090] = 0x00000001
seq_hwdbg_dpv_ptr_mod_table         [0x00000094] = 0x00000000
seq_hwdbg_dpv_timestamp_table       [0x00000098] = 0x00000000
seq_hwdbg_dpv_hcs_table             [0x0000009C] = 0x00000000
seq_cnt_blkram_oecc_err_stat        [0x000000A4] = 0x00000000
seq_cnt_tran_mpeg_stat              [0x000000A8] = 0x000A6224
seq_cnt_tran_mpeg_sync_stat         [0x000000AC] = 0x00000000
seq_cnt_tran_only_sync_stat         [0x000000B0] = 0x00000000
seq_cnt_tran_dpv_stat               [0x000000B8] = 0x00000000
JIB3_DS QM registers (base address 0xF8893000)
qm_int_isr0                         [0x00000000] = 0x00000000
qm_int_ier0                         [0x00000004] = 0x0000007F
qm_int_isr1                         [0x00000010] = 0x00000000
qm_int_ier1                         [0x00000014] = 0x000FFFFF
qm_int_fat_err_isr                  [0x00000040] = 0x00000000
qm_tst_tp_sel                       [0x00000050] = 0x00000000
qm_tst_tp                           [0x00000054] = 0x00000000
qm_cfg_chnl_rst_0                   [0x00000060] = 0x00000000
qm_cfg_ctl                          [0x0000006C] = 0x00000011
```

```
qm_cfg_sqf_fac_addr                 [0x0000008C] = 0x00000015
qm_cfg_sqf_fac_data                 [0x00000090] = 0x00000000
qm_cfg_bond_chnl_map_addr           [0x00000094] = 0x00000020
qm_cfg_bond_chnl_map_data_lo        [0x00000098] = 0x00000000
qm_cfg_flt_thr_addr                 [0x000000A4] = 0x00000250
qm_cfg_flt_thr_data                 [0x000000A8] = 0x00000000
qm_cfg_repl_addr                    [0x000000AC] = 0x00000000
qm_cfg_repl_data_lo                 [0x000000B0] = 0x00000000
qm_hwdbg_buf_mag_addr               [0x000000BC] = 0x00000001
qm_hwdbg_wptr_data_lo               [0x000000C0] = 0x00014F60
qm_hwdbg_wptr_data_mi               [0x000000C4] = 0x000033A0
qm_hwdbg_wptr_data_hi               [0x000000C8] = 0x00000AA0
qm_hwdbg_rptr_data_lo               [0x000000CC] = 0x00014F60
qm_hwdbg_rptr_data_mi               [0x000000D0] = 0x000033A0
qm_hwdbg_rptr_data_hi               [0x000000D4] = 0x00000AA0
qm_hwdbg_qulen_data_lo              [0x000000D8] = 0x00000000
qm_hwdbg_qulen_data_mi              [0x000000DC] = 0x000000E7
qm_hwdbg_qulen_data_hi              [0x000000E0] = 0x00000000
qm_hwdbg_contex_data                [0x000000E4] = 0x00000000
qm_cfg_dir_stat_addr                [0x000000E8] = 0x0000004E
qm_cnt_dir_pkt_stat                 [0x000000EC] = 0x00000000
qm_cnt_dir_byte_stat                [0x000000F0] = 0x00000000
qm_cfg_qam_stat_addr                [0x000000F4] = 0x0000004C
qm_cnt_qam_chnl_pkt_stat            [0x000000F8] = 0x00000000
qm_cnt_qam_chnl_byte_stat           [0x000000FC] = 0x00000000
qm_cnt_qam_chnl_sync_stat           [0x00000100] = 0x00000000
qm_cnt_bpram_ovrflw_stat            [0x00000108] = 0x00000000
qm_cnt_que_ovrflw_stat              [0x0000010C] = 0x00000000
qm_cnt_good_bpi_pkt_stat            [0x00000110] = 0x00045B3C
qm_cnt_bad_bpi_pkt_stat             [0x00000114] = 0x0000000D
qm_cnt_bpram_out_good_pkt_stat      [0x0000011C] = 0x000BD95D
qm_cnt_bpram_out_dir_pkt_stat       [0x00000120] = 0x00028918
qm_cnt_bpram_out_bonded_pkt_stat    [0x00000124] = 0x00000029
qm_cnt_replicated_pkt_stat          [0x00000128] = 0x000A0738
qm_cnt_bpram_bad_type_pkt_stat      [0x00000134] = 0x00000000
qm_cnt_bpram_bad_eop_pkt_stat       [0x00000138] = 0x00000000
qm_cnt_bpram_bad_dir_pkt_stat       [0x0000013C] = 0x00000000
qm_cnt_bpram_bad_bonded_pkt_stat    [0x00000140] = 0x00000000
qm_cnt_bpram_oecc_err_pkt_stat      [0x00000144] = 0x00000000
qm_cnt_bpram_bad_pkt_stat           [0x00000148] = 0x0000000D
qm_cnt_wr_good_pkt_stat             [0x0000014C] = 0x000BD95D
qm_cnt_wr_bad_pkt_stat              [0x00000150] = 0x00000000
qm_cnt_drop_bad_pkt_stat            [0x00000154] = 0x0000000D
qm_cnt_drop_ovrflw_pkt_stat         [0x00000158] = 0x00000000
qm_cnt_rd_pkt_stat                  [0x0000015C] = 0x000BD933
qm_cnt_rd_mpeg_stat                 [0x00000160] = 0x000A6226
qm_cnt_rd_mpeg_sync_stat            [0x00000164] = 0x00008140
qm_cnt_rd_mpeg_only_sync_stat       [0x00000168] = 0x00007E93
qm_cnt_tran_pkt_stat                [0x00000170] = 0x000BD95E
qm_cnt_tran_oecc_err_pkt_stat       [0x00000174] = 0x00000000
qm_cnt_tran_mpeg_stat               [0x00000178] = 0x000A6226
qm_cnt_tran_mpeg_sync_stat          [0x0000017C] = 0x00008140
qm_cnt_tran_mpeg_only_sync_stat     [0x00000180] = 0x00007E93
qm_cnt_tran_dpv_stat                [0x00000188] = 0x00000000
qm_rldram_ext_ecc                   [0x00000198] = 0x00000000
qm_rldram_cfg                       [0x0000019C] = 0x00101544
qm_rldram_ctrl                      [0x000001A0] = 0x00100389
qm_rldram_status                    [0x000001A4] = 0x03DF7C03
qm_rldram_cal_match_win_h           [0x000001A8] = 0x00000000
qm_rldram_cal_match_win_l           [0x000001AC] = 0x7FFFFFFF
JIB3_DS PG registers (base address 0xF8898000)
pg_mod                              [0x00000050] = 0x00000000
pg_dhs                              [0x00000054] = 0x00000000
pg_ipg                              [0x0000005C] = 0x00000000
pg_num                              [0x00000058] = 0x00000000
pg_payload_length                   [0x00000060] = 0x00000000
pg_payload_value                    [0x00000064] = 0x00000000
pg_pkt_hdr_prog_0                   [0x00000068] = 0x00000000
pg_pkt_hdr_prog_1                   [0x0000006C] = 0x00000000
pg_pkt_hdr_1                        [0x00000070] = 0x00000000
pg_pkt_hdr_2                        [0x00000074] = 0x00000000
pg_pkt_hdr_3                        [0x00000078] = 0x00000000
pg_pkt_hdr_4                        [0x0000007C] = 0x00000000
```

```
pg_pkt_hdr_5                          [0x00000080] = 0x00000000
pg_pkt_hdr_6                          [0x00000084] = 0x00000000
JIB3_DS PMBIST registers (base address 0xF8899000)
pmbist_ena_addr                       [0x00000060] = 0x00000002
pmbist_din_addr                       [0x00000064] = 0x00000000
pmbist_dout_addr                      [0x0000006C] = 0x00008101
pmbist_trgt_select_addr               [0x00000074] = 0x00000000
pmbist_ff_status                      [0x00000078] = 0x00000000
pmbist_num_wr_fr_pmbist               [0x0000007C] = 0x00000000
pmbist_num_rd_fr_pmbist               [0x00000080] = 0x00000000
pmbist_um_wr_2cmd_ff                  [0x00000084] = 0x00000000
pmbist_num_rd_2cmd_ff                 [0x00000088] = 0x00000000
pmbist_num_rd_rtn_pmbist              [0x0000008C] = 0x00000000
pmbist_num_wr_2dram                   [0x00000090] = 0x00000000
pmbist_num_rd_2dram                   [0x00000094] = 0x00000000
pmbist_num_rd_fr_dram                 [0x00000098] = 0x00000000
Remora registers (base address 0xF8900000)
-----------------------------------------
Remora General Registers (0xF8900000):
--------------------------------------
revision                              [0x00000000] = 0x00000003
hw_fpga_rev_id                        [0x00000004] = 0x0000000A
erp_scratch_pad0                      [0x00000008] = 0x00000000
erp_scratch_pad1                      [0x0000000C] = 0x00000000
Remora Reset and DCM Lock Registers (0xF8900100):
-------------------------------------------------
reset_ctrl                            [0x00000100] = 0x00000000
dcm_lock                              [0x00000104] = 0x0000000F
Remora Configuration Registers (0xF8900200):
--------------------------------------------
port_cfg[0]                           [0x00000200] = 0x00155549
port_cfg[1]                           [0x00000204] = 0x00155548
port_cfg[2]                           [0x00000208] = 0x00155548
port_cfg[3]                           [0x0000020C] = 0x00155548
port_cfg[4]                           [0x00000210] = 0x00155548
core_config_status                    [0x00000214] = 0x00000020
port_rm2tififo_prog_flags[0]          [0x00000218] = 0xBBA20C0D
port_rm2tififo_prog_flags[1]          [0x0000021C] = 0xBBA20C0D
port_rm2tififo_prog_flags[2]          [0x00000220] = 0xBBA20C0D
port_rm2tififo_prog_flags[3]          [0x00000224] = 0xBBA20C0D
port_rm2tififo_prog_flags[4]          [0x00000228] = 0xBBA20C0D
Remora DFT/Pattern Inject Registers (0xF8900300):
-------------------------------------------------
alt_sym_tst_mode                      [0x00000300] = 0x00005A69
alt_sym_tst_en_reg                    [0x00000304] = 0x00000000
qdr_mem_test_en_reg                   [0x00000308] = 0x00000000
qdr_mem_test_rd_wr_reg                [0x0000030C] = 0x00000A12
ready_for_data_input                  [0x00000318] = 0x0000001F
Remora ECC Registers (0xF8900400):
----------------------------------
debug_cfg                             [0x00000400] = 0x00000000
sniff_frame_cnt                       [0x00000404] = 0x00000000
ecc_parity_conf_reg                   [0x00000408] = 0x00000003
ecc_uncorrect_data_log_reg            [0x0000040C] = 0x00002814
ecc_uncorrect_log_reg                 [0x00000410] = 0x00000020
ecc_correctable_data_log_reg          [0x00000414] = 0x00002C14
ecc_correctable_log_reg               [0x00000418] = 0x00000028
qdr_ecc_corr_cnt_reg                  [0x0000041C] = 0x00000000
fatal_err_log                         [0x00000420] = 0x00000000
err_inj_reg                           [0x00000424] = 0x00000000
Remora QDR Registers (0xF8900500):
----------------------------------
qdr_phy_idelayctrl_rst_reg            [0x00000500] = 0x00000000
qdr_phy_idelayctrl_rdy_err_reg        [0x00000504] = 0x00000261
qdr_phy_cal_tap_dly_reg               [0x00000508] = 0x00000ADB
qdr_phy_idelayctrl_ctrl_reg           [0x0000050C] = 0x00000002
qdr_init_ctrl_reg                     [0x00000510] = 0x801FFFFF
Remora Interrupt Status Registers (0xF8900600):
-----------------------------------------------
glb_int_stat_reg                      [0x00000600] = 0x00000000
int_stat_gr_reg[0]                    [0x00000604] = 0x00000000
int_stat_gr_reg[1]                    [0x00000608] = 0x00000000
int_stat_gr_reg[2]                    [0x0000060C] = 0x00000000
```

```
int_stat_gr_reg[3]                  [0x00000610] = 0x00000000
int_stat_gr_reg[4]                  [0x00000614] = 0x00000000
misc_int_stat_reg                   [0x00000618] = 0x00000001
fatal_err_src_reg                   [0x0000061C] = 0x00000000
port_local_interrupt_enable[0]      [0x00000620] = 0x0001FFFF
port_local_interrupt_enable[1]      [0x00000624] = 0x0001FFFF
port_local_interrupt_enable[2]      [0x00000628] = 0x0001FFFF
port_local_interrupt_enable[3]      [0x0000062C] = 0x0001FFFF
port_local_interrupt_enable[4]      [0x00000630] = 0x0001FFFF
misc_int_en_reg                     [0x00000634] = 0x00001FF8
fatal_err_en_reg                    [0x00000638] = 0x00000EFF
port_local_interrupt_override[0]    [0x0000063C] = 0x00000000
port_local_interrupt_override[1]    [0x00000640] = 0x00000000
port_local_interrupt_override[2]    [0x00000644] = 0x00000000
port_local_interrupt_override[3]    [0x00000648] = 0x00000000
port_local_interrupt_override[4]    [0x0000064C] = 0x00000000
misc_int_override                   [0x00000650] = 0x00000000
fatal_err_override                  [0x00000654] = 0x00000000
Remora Counts Registers (0xF8900800):
-------------------------------------
illegal_ch_num_pkt_drop_count       [0x00000800] = 0x00000000
fifo_full_mpeg_pkt_drop_count_hi    [0x00000804] = 0x00000000
fifo_full_mpeg_pkt_drop_count_lo    [0x00000808] = 0x00000000
channel_mpeg_pkt_count[0]           [0x0000080C] = 0x00001118
channel_mpeg_pkt_count[1]           [0x00000810] = 0x0000106B
channel_mpeg_pkt_count[2]           [0x00000814] = 0x00000913
channel_mpeg_pkt_count[3]           [0x00000818] = 0x00000A6D
channel_mpeg_pkt_count[4]           [0x0000081C] = 0x00000000
channel_mpeg_pkt_count[5]           [0x00000820] = 0x00000000
channel_mpeg_pkt_count[6]           [0x00000824] = 0x00000000
channel_mpeg_pkt_count[7]           [0x00000828] = 0x00000000
channel_mpeg_pkt_count[8]           [0x0000082C] = 0x00000000
channel_mpeg_pkt_count[9]           [0x00000830] = 0x00000000
channel_mpeg_pkt_count[10]          [0x00000834] = 0x00000000
channel_mpeg_pkt_count[11]          [0x00000838] = 0x00000000
channel_mpeg_pkt_count[12]          [0x0000083C] = 0x00000000
channel_mpeg_pkt_count[13]          [0x00000840] = 0x00000000
channel_mpeg_pkt_count[14]          [0x00000844] = 0x00000000
channel_mpeg_pkt_count[15]          [0x00000848] = 0x00000000
channel_mpeg_pkt_count[16]          [0x0000084C] = 0x00000000
channel_mpeg_pkt_count[17]          [0x00000850] = 0x00000000
channel_mpeg_pkt_count[18]          [0x00000854] = 0x00000000
channel_mpeg_pkt_count[19]          [0x00000858] = 0x00000000
port_re_timestamp_count[0]          [0x0000085C] = 0xA6A5A6A6
port_re_timestamp_count[1]          [0x00000860] = 0x00000000
port_re_timestamp_count[2]          [0x00000864] = 0x00000000
port_re_timestamp_count[3]          [0x00000868] = 0x00000000
port_re_timestamp_count[4]          [0x0000086C] = 0x00000000
port_rx_fifo_overflow_drop_count[0] [0x00000870] = 0x00000000
port_rx_fifo_overflow_drop_count[1] [0x00000874] = 0x00000000
port_rx_fifo_overflow_drop_count[2] [0x00000878] = 0x00000000
port_rx_fifo_overflow_drop_count[3] [0x0000087C] = 0x00000000
port_rx_fifo_overflow_drop_count[4] [0x00000880] = 0x00000000
channel_jib_if_pkt_count[0]         [0x00000884] = 0x00038EA2
channel_jib_if_pkt_count[1]         [0x00000888] = 0x00031ADE
channel_jib_if_pkt_count[2]         [0x0000088C] = 0x0001B869
channel_jib_if_pkt_count[3]         [0x00000890] = 0x00020053
channel_jib_if_pkt_count[4]         [0x00000894] = 0x00000000
channel_jib_if_pkt_count[5]         [0x00000898] = 0x00000000
channel_jib_if_pkt_count[6]         [0x0000089C] = 0x00000000
channel_jib_if_pkt_count[7]         [0x000008A0] = 0x00000000
channel_jib_if_pkt_count[8]         [0x000008A4] = 0x00000000
channel_jib_if_pkt_count[9]         [0x000008A8] = 0x00000000
channel_jib_if_pkt_count[10]        [0x000008AC] = 0x00000000
channel_jib_if_pkt_count[11]        [0x000008B0] = 0x00000000
channel_jib_if_pkt_count[12]        [0x000008B4] = 0x00000000
channel_jib_if_pkt_count[13]        [0x000008B8] = 0x00000000
channel_jib_if_pkt_count[14]        [0x000008BC] = 0x00000000
channel_jib_if_pkt_count[15]        [0x000008C0] = 0x00000000
channel_jib_if_pkt_count[16]        [0x000008C4] = 0x00000000
channel_jib_if_pkt_count[17]        [0x000008C8] = 0x00000000
channel_jib_if_pkt_count[18]        [0x000008CC] = 0x00000000
channel_jib_if_pkt_count[19]        [0x000008D0] = 0x00000000
```

```
Remora Timestamp Registers (0xF8900900):
----------------------------------------
local_1024_ts_ctrl                  [0x00000900] = 0x00000039
local_1024_current_ts               [0x00000904] = 0xF5D27575
local_1024_tcc_ts_latch             [0x00000908] = 0x7291125F
doc_ts_offset_ch_0_1                [0x0000090C] = 0x04AF04AF
doc_ts_offset_ch_2_3                [0x00000910] = 0x04AF04AF
doc_ts_offset_ch_4_5                [0x00000914] = 0x04F704F7
doc_ts_offset_ch_6_7                [0x00000918] = 0x04F704F7
doc_ts_offset_ch_8_9                [0x0000091C] = 0x04F704F7
doc_ts_offset_ch_10_11              [0x00000920] = 0x04F704F7
doc_ts_offset_ch_12_13              [0x00000924] = 0x04F704F7
doc_ts_offset_ch_14_15              [0x00000928] = 0x04F704F7
doc_ts_offset_ch_16_17              [0x0000092C] = 0x04F704F7
doc_ts_offset_ch_18_19              [0x00000930] = 0x04F704F7
Remora PRATE/SRATE Registers (0xF8900A00):
------------------------------------------
port_prate_regs[0].prate_ctrl       [0x00000A00] = 0x00000003
port_prate_regs[0].prate_m_prime_lo [0x00000A04] = 0x0005971E
port_prate_regs[0].prate_n_prime_lo [0x00000A08] = 0x08AA5B88
port_prate_regs[0].prate_m_prime_hi [0x00000A0C] = 0x00000000
port_prate_regs[1].prate_ctrl       [0x00000A10] = 0x00000003
port_prate_regs[1].prate_m_prime_lo [0x00000A14] = 0x00000191
port_prate_regs[1].prate_n_prime_lo [0x00000A18] = 0x00037E78
port_prate_regs[1].prate_m_prime_hi [0x00000A1C] = 0x00000000
port_prate_regs[2].prate_ctrl       [0x00000A20] = 0x00000003
port_prate_regs[2].prate_m_prime_lo [0x00000A24] = 0x00000191
port_prate_regs[2].prate_n_prime_lo [0x00000A28] = 0x00037E78
port_prate_regs[2].prate_m_prime_hi [0x00000A2C] = 0x00000000
port_prate_regs[3].prate_ctrl       [0x00000A30] = 0x00000003
port_prate_regs[3].prate_m_prime_lo [0x00000A34] = 0x00000191
port_prate_regs[3].prate_n_prime_lo [0x00000A38] = 0x00037E78
port_prate_regs[3].prate_m_prime_hi [0x00000A3C] = 0x00000000
port_prate_regs[4].prate_ctrl       [0x00000A40] = 0x00000003
port_prate_regs[4].prate_m_prime_lo [0x00000A44] = 0x00000191
port_prate_regs[4].prate_n_prime_lo [0x00000A48] = 0x00037E78
port_prate_regs[4].prate_m_prime_hi [0x00000A4C] = 0x00000000
port_srate_regs[0].srate_ctrl       [0x00000A50] = 0x00000003
port_srate_regs[0].srate_mn         [0x00000A54] = 0x004E0095
port_srate_regs[1].srate_ctrl       [0x00000A58] = 0x00000003
port_srate_regs[1].srate_mn         [0x00000A5C] = 0x0191032C
port_srate_regs[2].srate_ctrl       [0x00000A60] = 0x00000003
port_srate_regs[2].srate_mn         [0x00000A64] = 0x0191032C
port_srate_regs[3].srate_ctrl       [0x00000A68] = 0x00000003
port_srate_regs[3].srate_mn         [0x00000A6C] = 0x0191032C
port_srate_regs[4].srate_ctrl       [0x00000A70] = 0x00000003
port_srate_regs[4].srate_mn         [0x00000A74] = 0x0191032C
TW_UBR10k_34.13#
```

The following example provides information about all controllers using the **show controller integrated-cable** command and the **status** keyword:

```
Router# show controllers integrated-Cable 6/0/0 status
Load for five secs: 9%/0%; one minute: 11%; five minutes: 13%
Time source is NTP, *15:07:31.309 EDT Sun Mar 21 2010
Jib3-DS Status:
---------------
   Rx SPI.............: OK
   Tx SPI.............: OK
   DCM Status.........: OK
   ERP Status.........: OK
   DOCSIS RLDRAM Status: OK
   QM RLDRAM Status....: OK
  DS PHY Device Information:
  --------------------
    Remora Version = 3.10
    UPX SW Version = 0x10D
    Upconverter Type:Unknown
    UPX Part Number =
  Device Status:
  --------------
```

```
    UPX Alarm Status = 0x3FF
    UPX Alarm Mask   = 0x19000
```

The following example shows a typical display of the **show controller integrated-cable** command on Cisco cBR Series Converged Broadband Routers:

```
Router# show controllers integrated-Cable 7/0/0 ?
  acfe              Show contrller acfe
  all               Show all M-CMTS information
  association       Show interface association info
  bandwidth         Show bandwidth of WB/RF channels
  counter           Show channel counters
  mapping           Show mapping of WB/RF channels
  rf-channel        Show rf channels
  rf-port           Show rf port
  wideband-channel  Show wideband channels
```

The table below describes the fields displayed in the show controller integrated-cable command output with various keywords (as described in preceding examples):

Table 5: show controller integrated-cable Field Descriptions

Field	Description
WB channel	Wideband channel number.
BG ID	Bonding group ID.
Bundle num	Bundle number.
NB channel	Narrowband channel number.
NB chan ID	Narrowband channel ID.
Reserved CIR	Reserved committed information rate (CIR) value.
Total CIR	Total committed information rate (CIR) value.
Controller Chan	Controller channel number.
RF Packets	RF packets.
MPEG bps	MPEG value in bps.
MPEG mbps	MPEG value in Mbps.
MPEG Packets	MPEG packets.
Sync Packets	Synchronization packets.
MAP/UCD	MAP/ UCD value
Tx Packets	Tx packets
Tx Octets	Tx octets
Offset	Memory offset

Field	Description
Register	Line card registers
Value	Register values.
BPI Index	Baseline Privacy Interface (BPI) index number.
Segment	Hardware segment being used by DOCSIS MAC.
Even Key	Current value of the Even Key in the BPI entry.
Odd Key	Current value of the Odd Key in the BPI entry.
Key Sequence Number	Key sequence number.
Security Association	Security association identifier.
Key Type	The type of key stored based on the encryption algorithm (Data Encryption Standard [DES] or Advanced Encryption Standard [AES]).

Related Commands

Command	Description
cable rf-bandwidth-percent	Enables static or dynamic bandwidth sharing for a modular cable (MC) interface.
cable upstream connector	Maps an upstream port to a physical port on the Cisco UBR-MC20X20V cable interface line card for use with a particular downstream.
show controller cable	Displays information about the interface controllers for a cable interface on the Cisco CMTS router.
show hw-module bay	Displays information about the wideband channels or RF channels on a Wideband SPA.
show interface cable	Displays the current configuration and status of a cable interface.

show controllers cable

To display information about the interface controllers on a cable interface on the Cisco CMTS router, use the **show controllers cable** command in user EXEC or privileged EXEC mode.

show controllers cable {*slot/port*| *slot/subslot/port*} [**downstream**| **upstream** [*port*]**[ipc] [mem-stat] [memory] [proc-cpu][tech-support]**]

Cisco IOS Release 12.2(33)SCE and Later

show controllers cable {*slot/cable-interface-index*| *slot/subslot/cable-interface-index*} [**downstream**| **upstream** [*upstream-index*]**[ipc] [mem-stat] [memory] [proc-cpu][tech-support]**]

Cisco cBR Series Converged Broadband Router

show controllers cable *slot/subslot/cable-interface-index* [**downstream**| **upstream** [*port*]]

Syntax Description

slot	Slot where the line card resides. • Cisco uBR7246VXR router—The valid range is from 3 to 6. • Cisco uBR7225VXR router—The valid range is from 1 to 2. • Cisco uBR7100 series router—The valid value is 1. • Cisco cBR routers—The valid values are 0 to 3 and 6 to 9.
subslot	(Cisco uBR10012 only) Secondary subslot of the cable interface line card. The valid slots are 0 or 1. For Cisco cBR routers—The valid values is 0.
port	Downstream port number. • Cisco uBR7225VXR router and Cisco uBR7246VXR router-The valid value is 0 or 1. • Cisco uBR10012 router-The valid range is from 0 to 4 (depending on the cable interface).

cable-interface-index	Downstream port of the Cisco uBR10-MC5X20 and Cisco uBR-MC28 line cards or MAC domain index of the Cisco uBR-MC20X20V and Cisco uBR-MC3GX60V line cards. • Cisco uBR7225VXR and Cisco uBR7246VXR routers—The valid port value is 0 or 1. • Cisco uBR10012 router—The valid range for the Cisco uBR-MC20X20V and Cisco uBR-MC5X20 line cards is from 0 to 4. The valid range for the Cisco uBR-MC3GX60V line card is from 0 to 14. • Cisco cBR routers—The valid values are 0 to 15.
downstream	(Optional) Displays the downstream interface status.
upstream	(Optional) Displays the upstream interface status.
port	(Optional) Specifies the desired upstream port. Valid values start with 0 for the first upstream port on the cable interface line card. For Cisco cBR routers—The valid values are 0 to 7.
upstream-index	(Optional) Specifies the desired index for the upstream port. Valid values for the Cisco uBR-MC20X20V and Cisco uBR-MC5X20 line cards range from 0 to 3.
ipc	(Optional) Displays the Inter-Process Communication (IPC) information between different line cards. This option is not supported on the Cisco cBR router.
mem-stat	(Optional) Displays the output from the **show memory statistics** command that contains a summary of memory statistics for a Broadband Processing Engine (BPE) cable interface line card. This option is not supported on the Cisco cBR router.
memory	(Optional) Displays the output from the **show memory** command that contains a summary of memory statistics, including the memory as it is allocated per process, for a BPE cable interface line card. This option is not supported on the Cisco cBR router.

proc-cpu	(Optional) Displays the output from the **show processes cpu** command that contains the processor status for a BPE cable interface line card. This option is not supported on the Cisco cBR router.
tech-support	(Optional, privileged EXEC mode only) Displays the output from the **show tech-support** command for a BPE cable interface line card. This option is not supported on the Cisco cBR router.

Command Modes

User EXEC (all options except **tech-support**), Privileged EXEC (#)

Command History

Release	Modification
11.3 NA	This command was introduced.
12.0(2)XC	This command was modified to show a number of additional fields.
12.1(5)EC1	Support was added for the Cisco uBR7100 series router, including information about the Cisco uBR7100 series integrated upconverter.
12.2(1)XF1	Support was added for the Cisco uBR10012 router.
12.0(16)SC2, 12.1(10)EC1, 12.2(4)BC1b	The algorithm for calculating the SNR value was enhanced for a more accurate value.
12.2(15)CX	Support was added for the Cisco uBR-MC28U/X cable interface line card, including the display of the number of packets dropped because they were for a Service Flow ID (SFID) of 0.
12.2(15)BC2b	The **mem-stat**, **memory**, and **proc-cpu keywords** were added to obtain processor information from the onboard processor on Broadband Processing Engine (BPE) cable interface line cards, such as the Cisco uBR-MC16U/X, Cisco uBR-MC28U/X, and Cisco uBR10-MC5X20S/U cards.
12.3(9a)BC	Added the optional **tech-support** keyword to optimize the collection of line card information without consuming the console session for a long period of time.
12.3(17a)BC	Added support for Dynamic Channel Change (DCC) for Load Balancing on the Cisco CMTS.
12.3(17a)BC2	Added support for the Cisco uBR10-MC5X20H interface line cards.
12.3(23)BC	The **downstream** keyword displays status and characteristics of modular cable interfaces associated with the Cisco uBR10-MC5X20 line card MAC domain host interface.

Release	Modification
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
12.2(33)SCC	The command output was modified to show logical channels information when multiple logical channels are configured.
12.2(33)SCE	The command syntax was modified. The *port* parameter was changed to *cable-interface-index* to indicate the MAC domain index for the Cisco UBR-MC20X20V and Cisco uBR-MC3GX60V cable interface line cards. The upstream *port* parameter was changed to *upstream-index*.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers. The **ipc**, **mem-stat**, **memory**, **proc-cpu**, **tech-support** keywords were removed.

Usage Guidelines

The **mem-stat**, **memory**, and **proc-cpu** keywords are used to obtain the relevant information from the onboard processor on BPE cable interface line cards, such as the Cisco uBR-MC16U/X, Cisco uBR-MC28U/X, and Cisco uBR10-MC5X20S/U/H cards. This allows you to obtain information that is specific to a line card, as opposed to having to run these commands on the entire router.

The *logical-index* is shown only when multiple logical channels are configured using the **cable upstream max-logical-chans** command.

Note The **mem-stat**, **memory**, and **proc-cpu** options are not available for cable interface line cards that do not contain an onboard processor (for example, the Cisco uBR-MC16C card).

Dynamic Channel Change (DCC) Support for Load Balancing

The following commands and fields illustrate the show controllers command used with DCC:

```
Router# show controllers cable x/y upstream | i DCC
DCC: 0 REQs  n2 RSPs  0 ACKs
Router# show controllers cx/y downstream| i DCC
DCC: n1  REQs  0 RSPs  n3 ACKs
n4 Successful DCCs  n5 DCC Failures
DCC end of transaction counts:
DCC unknown cause(e1) offline(e2) if down(e3) no cm(e4)
DCC no resource(e5) no retries(e6) reject(e7) unknown state (e8)
DCC rebuild err (e9) T15 timeout(e10) reinit MAC (e11) dcc succeeds(e12)
```

The fields in this example are as follows:

- n1—The number of DCC REQ messages traversing an interface, nonzero on downstream.
- n2—The number of DCC RSP messages traversing an interface, nonzero on upstream.
- n3—The number of DCC ACK messages traversing an interface, nonzero on downstream.
- n4—The number of successful DCC transactions, nonzero on downstream direction.
- n5—The number of failed DCC transactions, nonzero only on downstream direction

The above counters are DOCSIS-specific DCC counters, which can also be collected via SNMP MIB.

The following summary illustrates classified DCC transaction end counts originated from the interface with the above **show controllers** command example:

- e1—The number of DCC transactions ended with unknown causes.
- e2—The number of DCC transactions ended due to modems going offline.
- e3—The number of DCC transactions ended due to interface down.
- e4—The number of DCC transactions ended due to a nonexistent cable modem.
- e5—The number of DCC transactions ended due to insufficient resources on target.
- e6—The number of DCC transactions ended due to exhausted DCC-REQ retries.
- e7—The number of DCC transactions ended due to rejected DCC-REQ.
- e8—The number of DCC transactions ended due to unknown DCC state.
- e9—The number of DCC transactions ended due to failure to assign a cable modem on the target.
- e10—The number of DCC transactions ended due to T15 time out.
- e11—The number of DCC transactions ended due to CM MAC reinitialization.
- e12—The number of DCC transactions ended successfully.

This command is subject to the restrictions and prerequisites described in the *Configuring Load Balancing and Dynamic Channel Change (DCC) on the Cisco CMTS feature guide* on Cisco.com.

Examples

The following abbreviated example illustrates the initial information for the **tech-support** keyword for the Cisco uBR10012 router on which Cisco IOS Release 12.3(9a)BC is installed:

```
Router# show controllers cable 8/1/0 tech-support
------------------ show version ------------------
Cisco Internetwork Operating System Software
IOS (tm) 7200 Software (UBR10KCLC-LC-M), Experimental Version 12.3(20040708:1441
55) [bguckel-geo_cable-l2 102]
Copyright (c) 1986-2004 by cisco Systems, Inc.
Compiled Mon 19-Oct-04 11:28 by bguckel
Image text-base: 0x60008EB8, data-base: 0x60CB0000
ROM: System Bootstrap, Version 12.2(20011031:221132) [maheshj-cr10k-rommon 15],
DEVELOPMENT SOFTWARE
BOOTLDR: 7200 Software (UBR10KCLC-LC-M), Experimental Version 12.2(20011107:2331
03) [janez-v122_2_xf_throttle.Nov5A 101]
clc_8_1 uptime is 1 week, 9 hours, 54 minutes
System returned to ROM by power-on
System restarted at 08:59:44 UTC Wed Jul 21 2004
Running default software
cisco uBR10K CLC (NPE-CLC) processor (revision A) with 196608K/65536K bytes of m
emory.
Processor board ID
R7000 CPU at 262MHz, Implementation 39, Rev 2.1, 256KB L2 Cache
6 slot midplane, Version 1.0
.
```

The following is a sample output of the **show controllers cable downstream** command for downstream connection at slot 3 on a Cisco CMTS router:

```
Router# show controllers cable 3/0 downstream
Cable 3/0 Downstream is up
Frequency not set, Channel Width 6 MHz, 64-QAM, Symbol Rate 5.056941 Msps
```

```
FEC ITU-T J.83 Annex A, R/S Interleave I=12, J=17
```

The table below describes the fields shown in the **show controllers cable downstream** command display.

Table 6: show controllers cable downstream Field Descriptions

Field	Description
Cable	Slot and port number indicating the location of the Cisco cable interface line card.
Downstream is up	RF downstream interface is enabled.
Frequency	Transmission frequency of the RF downstream. (This information may not match the current transmission frequency, which is external on Cisco CMTS platforms that use an external upconverter.)
Channel Width	Width of the RF downstream channel.
QAM	Modulation scheme.
Symbol Rate	Transmission rate (in number of symbols per second).
FEC ITU-T	Motion Picture Experts Group (MPEG) framing standard.
Annex	Annex for the RF downstream channel.
R/S Interleave I/J	Reed Solomon framing based on ITU S.83-B.

For cable interfaces that include an integrated upconverter, the **show controllers cable** command includes the frequency and power settings for the integrated upconverter. The following example shows a typical output for the **show controllers cable** command that includes the information for the integrated upconverter:

```
Router# show controllers cable 1/0

Interface Cable1/0
Hardware is IMC11
 BCM3210 revision=0x56B2
 Cable1/0 Upconverter is Enabled Output is Enabled
  Model: 74-2094-01 Serial Number: 0WAV04480010 CLEI Code:      CLEI#
  HW Rev:    PC2D0107 SW Rev: 007, NVRAM Rev: 006 ECI number 123456
  Downstream Frequency 525.0000 MHz
  IF Power 0.3 dBmv  RF Power 51.0 dBmv
...
```

The following example is a sample output of the **show controllers cable** command with the cable interface index 0. on the Cisco UBR-MC3XG60V line card. The downstream channel ID and RFID are also displayed in the output:

```
Router# show controller cable 5/0/0
Interface Cable5/0/0
Hardware is M3G60
HCCP HA FLAGS:
```

```
  linestate: TRUE hccp_if_inited: FALSE hccphopready: TRUE
  hccp_keepalive: FALSE hccp_critical: FALSE ha_critical: FALSE
  drop_mac_msgs: FALSE current_active_segment: 0
HCCP HA UPStream FLAGS:
  US 1 first_time_up: FALSE    US 2 first_time_up: TRUE
  US 3 first_time_up: TRUE    US 4 first_time_up: TRUE
JIB Base: 0x20000000, JIB Revision: 0x00000002,  Release: 0x00000033
Cable5/0/0 JIB hardware status:
  JIB Downstream port   Enabled
  JIB Upstream   port 0 Enabled
  JIB Upstream   port 1 Disabled
  JIB Upstream   port 2 Disabled
  JIB Upstream   port 3 Disabled
JIB CURRENT ACTIVE BPI/PHS Segment: DS: 0 US: 0
S/W CURRENT ACTIVE BPI/PHS Segment: 0
 H/W Spectrum Management Information:
   Sextant FPGA Revision: 0x1B
   FFT Transform Revision: 0x2
   IRQ status 0x0, IRQ mask 0x1F
   time_stamp_lsb 0x739D, time_stamp_msb 0xB8D3
   time_stamp_gen_csr 0x100
   FFT Engine State: 1, Busy Count: 0,  Wrong State Count: 0
   FFT Device Trigger Time Miss Count: 0
   FFT Device Sample Overflow: 0, Transform Overflow: 0
   FFT Device TSRM Parity: 0, TSRM/TSG Comparison Error: 0, TSG Reload: 1
  Upconverter:  vcom
 Cable5/0/0 Upconverter is Disabled Output is Disabled
  Model: 74-3153-05 Serial Number: 0WAV10250089
  HW Rev:    PC2D0109 SW Rev: 204, NVRAM Rev: 021 ECI number FFFFFF
  Downstream Frequency 537.0000 MHz
  RF Power Disabled
 idb 0x6565E520 MAC regs 0x20000000 SDRAM 0x28000000
 mac ring entries 32 bandwidth ring entries 128 tx ring entries 128 MAP tx ri
entries 128
 MAC ring 0xC7A7E00 shadow 0x65745D08 head 8 count 1136840 full 0
 Bandwidth ring 0xC7A7EC0 shadow 0x65745E08 head 61 count 189 full 0
 PCI low priority ring 0xC7A8100 shadow 0x65746088 head 19 count 19 full 0
 US CCF ring 0xC7A8340 shadow 0x65746308 head 0 count 0 full 0
 FIB ring 0xC7A87C0 shadow 0x65746808 head 0 count 0 full 0
 IPC packets received 0
 Drops: Par 0 CRC 0 Len 0
 Force Drops IPC 0 Lo/Hi 0/0, 0/0
 snfr_fibipc_dmastatus 0x0
 Sniffer ring 0xC7A8580 shadow 0x65746588 head 0 count 0 full 0
 High priority Tx ring 0xC7A7140 shadow 0x65744388 head 6 tail 8 count 2 full
 Low priority Tx ring 0xC7A6D00 shadow 0x65743B08 head 0 tail 0 count 0 full
 TIB Tx ring 0xC7A7580 shadow 0x65744C08 head 105 tail 105 count 0 full 0 stu
0
 PCCF Tx ring 0xC7A79C0 shadow 0x65745488 head 0 tail 0 count 0 full 0 stuck
 JIB SDRAM Correctable ECC Count: 0
     SDRAM_CECC_INFO_REG_0: 0x0, SDRAM_CECC_INFO_REG_1: 0x0
 JIB SSRAM Correctable ECC Count: 0
 JIB Timestamp Mismatch Count: 0
 JIB Timestamp Reload Count: 0
 Timestamp is from TCC card
 throttled 0 enabled 0 disabled 0
 Rx: spurious 0 framing_err 0 hcs_err 0 no_buffer 0 short_pkt 0
     no_enqueue 0 no_enp 0 miss_count 0 latency 0
     invalid_sid 0 invalid_mac 0 bad_ext_hdr_pdu 0 concat 0 bad-concat 0
 Tx:  full 0 drop 0 stuck 0 latency 0
 MTx: full 0 drop 0 stuck 0 latency 0
 Slots 0 NoUWCollNoEngy 0 FECorHCS 0 HCS 0
 Req 186 ReqColl 0 ReqNoise 0 ReqNoEnergy 2198449112
 ReqData 0 ReqDataColl 0 ReqDataNoise 0 ReqDataNoEnergy 0
 Rng 1136720 RngColl 0 RngNoise 0
 FECBlks 1137342 UnCorFECBlks 0 CorFECBlks 0
 MAP FIFO overflow 0, Rx FIFO overflow 0, No rx buf 0
 DS FIFO overflow 0, US FIFO overflow 0, US stuck 0
 Bandwidth Requests= 0xBA
 Piggyback Requests= 0x3
 Ranging Requests= 0x115852
 Timing Offset = 0x0
 Master Clock Timestamp = 0xB8D5DBCD
```

```
 Bad bandwidth Requests= 0x0
 Bad REG_ACK= 0x0
 No REG_RESP buffer= 0x0
 Cable5/0/0 Downstream is up
  Frequency 537.0000 MHz, Channel Width 6 MHz, 64-QAM, Symbol Rate 5.056941 M
  FEC ITU-T J.83 Annex B, R/S Interleave I=32, J=4
  Downstream channel ID: 255
  Dynamic Services Stats (All Downstreams):
  DSA: 0  REQs  0 RSPs  0 ACKs
  0 Successful DSAs  0 DSA Failures
  DSC: 0  REQs  0 RSPs  0 ACKs
  0 Successful DSCs  0 DSC Failures
  DSD:  0 REQs  0 RSPs
  0 Successful DSDs  0 DSD Failures
  DBC: 0 REQs  0 RSPs(Rcvd)  0 ACKs
  0 Successful DBCs  0 DBC Failures  0 DBC Partial
  0 DBC Protocol Violations
  DCC: 0  REQs  0 RSPs  0 ACKs
  0 Successful DCCs  0 DCC Failures
  0 DCC Departs 0 DCC Arrives
  DCC end of transaction counts:
  DCC unknown cause(0) offline(0) if down(0) no cm(0)
  DCC no resource(0) no retries(0) reject(0) unknown state (0)
  DCC rebuild err (0) T15 timeout(0) wrong channel(0) reinit MAC (0)
  DCC dcc succeeds(0)
  DCC wcm(0)
  CM STATUS Stats:
  0 invalid_event  0 tlv_error
  0 disabled_event  0 invalid_state
  0 invalid_chid  0 prim_chid
 Local total modems 0, modems active 0, total DS flows 2
  NB DS Mo1/1/0:0, STATE: UP
   Frequency 55.0000 MHz 256-QAM,  ANNEX B, R/S Interleave I=32, J=4
   Network Delay 550 (usec)
   Bandwidth (Kbps): 13800,  Load Percent: 0
   Channel ID: 193, US MAP: 0x0001
   Total modems: 2, modems active : 2, total DS flows: 3
  NB DS Cable5/0/0, STATE: DOWN
   Frequency 537.0000 MHz 64-QAM,  ANNEX B, R/S Interleave I=32, J=4
   Network Delay 0 (usec)
   Bandwidth (Kbps): 20800,  Load Percent: 0
   Channel ID: 255, US MAP: 0x000F
// Output displaying the DS_chan_id and RFID IDs//
  DS_chan_id  RFID  Interface
  ---------------------------------------
    193       24    Mo1/1/0:0
  ---------------------------------------
  MDDs           Primary          Non-Primary
  -----------------------------------------------
  1/1/0:0        582033           0
  1/1/0:1        0                582030
  -----------------------------------------------
..
...
```

The following is a sample output of the **show controllers cable downstream** command for a downstream on the Cisco uBR-MC28U cable interface line card or a cable interface line card with integrated upconverter:

```
Router# show controllers cable 6/0 downstream

Interface Cable6/0
Hardware is MC28U (F-connector) with Integrated Up-converter
Primary rommon version is: 11.4
Secondary rommon version is: 6553.5
Current rommon is Primary
Late input drops = 0
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
JIB version 372
 H/W Spectrum Management Information:
   BCM3138 Chip State: 1 1 1 1, Serial Port State 1, Busy Count: 0 25 0 0
 Spectrum Management IPC Statistics:
```

```
  Tx Statistics
     Pkts: 48413, Lock Errs: 0, MB not Empty: 0, No Buffs: 0
  Rx Statistics
     Pkts: 46097, Timeout: 1, Unexpected: 0, No Buffs: 0, Lock Errs: 0
  Inuse band lower=0 upper=0 CNR=56
  candidate band lower=0 upper=0 Mod=0
  Inuse band lower=0 upper=0 CNR=52
  candidate band lower=0 upper=0 Mod=0
  Inuse band lower=0 upper=0 CNR=55
  candidate band lower=0 upper=0 Mod=0
  Inuse band lower=23000 upper=26200 CNR=55
  candidate band lower=23000 upper=26200 Mod=0
Cable6/0 Upconverter is Enabled Output is Enabled
 Model: 74-2094-05 Serial Number: 0WAV06530029 CLEI Code: FFFFFFFFFF
 HW Rev:    PC2D0108 SW Rev: 010, NVRAM Rev: 006 ECI number FFFFFF
 Downstream Frequency 471.0000 MHz
 RF Power 54.9 dBmv
```

The following is a sample output of the **show controllers cable downstream** command for the cable interface line card on slot 8, subslot 0, and port 0 on a Cisco CMTS router:

```
Router# show controllers cable 8/0/0 downstream

Cable8/0/0 Downstream is up
 Frequency 453.0000 MHz, Channel Width 6 MHz, 64-QAM, Symbol Rate 5.056941 Msps
 FEC ITU-T J.83 Annex B, R/S Interleave I=32, J=4
 Downstream channel ID: 191
 Dynamic Services Stats:
 DSA: 0  REQs  0 RSPs  0 ACKs
 0 Successful DSAs  0 DSA Failures
 DSC: 0  REQs  0 RSPs  0 ACKs
 0 Successful DSCs  0 DSC Failures
 DSD:  0 REQs  0 RSPs
 0 Successful DSDs  0 DSD Failures
 DCC: 0  REQs  0 RSPs  0 ACKs
 0 Successful DCCs  0 DCC Failures
 DCC end of transaction counts:
 DCC unknown cause(0) offline(0) if down(0) no cm(0)
 DCC no resource(0) no retries(0) reject(0) unknown state (0)
 DCC rebuild err (0) T15 timeout(0) wrong channel(0) reinit MAC (0)
 DCC dcc succeeds(0)
 DCC wcm(0)
Local total modems 800, modems active 800, total DS flows 801
 NB DS Mo3/0/1:0, STATE: UP
  Frequency 555.0000 MHz 64-QAM,  ANNEX B, R/S Interleave I=32, J=4
  Network Delay 550 (usec)
  Bandwidth (Kbps): 4315,  Load Percent: 0
  Channel ID: 48, US MAP: 0x0037
  Total modems: 4, modems active : 4, total DS flows: 5
 NB DS Mo3/0/1:1, STATE: UP
  Frequency 561.0000 MHz 64-QAM,  ANNEX B, R/S Interleave I=32, J=4
  Network Delay 550 (usec)
  Bandwidth (Kbps): 4315,  Load Percent: 0
  Channel ID: 49, US MAP: 0x0037
  Total modems: 2, modems active : 2, total DS flows: 3
 NB DS Mo3/0/1:2, STATE: UP
  Frequency 567.0000 MHz 64-QAM,  ANNEX B, R/S Interleave I=32, J=4
  Network Delay 550 (usec)
  Bandwidth (Kbps): 4315,  Load Percent: 0
  Channel ID: 50, US MAP: 0x0037
  Total modems: 1, modems active : 1, total DS flows: 2
 NB DS Mo3/0/1:3, STATE: UP
  Frequency 573.0000 MHz 64-QAM,  ANNEX B, R/S Interleave I=32, J=4
  Network Delay 550 (usec)
  Bandwidth (Kbps): 13485,  Load Percent: 0
  Channel ID: 51, US MAP: 0x0037
  Total modems: 3, modems active : 3, total DS flows: 4
```

The following example is a sample output of the **show controllers cable downstream** command for the Cisco uBR-MC3GX60V line card sharing downstreams with the Cisco Wideband SPA, in Cisco IOS Release 12.2(33)SCG:

```
Router# show controllers cable 8/0/0 downstream
  Dynamic Services Stats (All Downstreams):
  DSA: 0  REQs  0 RSPs  0 ACKs
  0 Successful DSAs  0 DSA Failures
  DSC: 0  REQs  0 RSPs  0 ACKs
  0 Successful DSCs  0 DSC Failures
  DSD:  0 REQs  29 RSPs
  0 Successful DSDs  0 DSD Failures
  DBC:  0 REQs  96 RSPs(Rcvd)  0 ACKs
  0 Successful DBCs  0 DBC Failures  0 DBC Partial
  96 DBC Protocol Violations
  0 Total DBC Pending Q-Size
  DCC: 0  REQs  0 RSPs  0 ACKs
  0 Successful DCCs  0 DCC Failures
  0 DCC Departs 0 DCC Arrives
  DCC end of transaction counts:
  DCC unknown cause(0) offline(0) if down(0) no cm(0)
  DCC no resource(0) no retries(0) reject(0) unknown state (0)
  DCC rebuild err (0) T15 timeout(0) wrong channel(0) reinit MAC (0)
  DCC dcc succeeds(0)
  DCC wcm(0)
  CM STATUS Stats:
  0 invalid_event  4 tlv_error
  0 disabled_event  598985 invalid_state
  0 invalid_chid  0 prim_chid
 Local total modems 0, modems active 0, total DS flows 3
  NB DS Mo1/1/0:0, STATE: UP
   Frequency 699.0000 MHz 256-QAM,  ANNEX B, R/S Interleave I=32, J=4
   Network Delay 550 (usec)
   Bandwidth (Kbps): 6000,  Load Percent: 0
   Channel ID: 5, US MAP: 0x000F
   Total modems: 51, modems active : 37, total DS flows: 158
  DS_chan_id  RFID  Interface
  ---------------------------------------
    5         24    Mo1/1/0:0
  ---------------------------------------
  MDDs            Primary          Non-Primary
  -----------------------------------------------
  1/1/0:0         1148012          0
  1/1/0:1         0                1148011
  1/1/0:2         0                1148011
  1/1/0:3         0                1148011
  1/3/0:0         0                1148011
  1/3/0:1         0                1148011
  1/3/0:2         0                1148011
  1/3/0:3         0                1148011
  7/0/0:0         0                1148011
  7/0/0:1         0                1148011
  7/0/0:2         0                1148011
  7/0/0:3         0                1148011
  8/0/2:0         0                1148011
  8/0/2:1         0                1148011
  8/0/2:2         0                1148011
  8/0/2:3         0                1148011
  -----------------------------------------------
```

The table below describes the fields shown in the **show controllers cable downstream** command display.

Table 7: show controllers cable downstream Field Descriptions

Field	Description
Downstream Frequency	Center frequency (in MHz) for which the integrated upconverter is configured.

Field	Description
IF Power	Power level (in dBmV) of the signal that the integrated upconverter is receiving from the cable interface line card in the Cisco uBR7100 series router.
RF Power	Power level (in dBmV) of the RF output signal that the integrated upconverter is transmitting on the DS0 RF port.
Dynamic Services Stats	Dynamic downstream service statistics for a specific cable interface.
CM STATUS Stats	Cable modem status statistics for a specific cable interface.
DS_chan_id	Downstream channel ID for a specific cable interface.
RFID	RF ID associated to a specific cable interface.
MDDs	MAC Domain Descriptor (MDD).
Primary	Primary MDD.
Non-Primary	Non-primary MDD.

The following is sample output from the **show controllers cable upstream** command for a Cisco CMTS router with a cable interface line card located in slot 4, port 0:

```
Router# show controllers cable 4/0 upstream 2

Cable4/0 Upstream 2 is administratively down
  Frequency 5.008 MHz, Channel Width 0.200 MHz, QPSK Symbol Rate 0.160 Msps
  Spectrum Group 4
  SNR measurement - 27.2340 dB
  Nominal Input Power Level 5 dBmV, Tx Timing Offset 0
  Ranging Backoff Start 16, Ranging Backoff End 16, Tx Backoff Start 16
  Tx Backoff End 16, Modulation Profile Group 1
  part_id=0x3137, rev_id=0x01, rev2_id=0xFF
  nb_agc_thr=0x0000, nb_agc_nom=0x0000
  Range Load Reg Size=0x58
  Request Load Reg Size=0x0E
  Minislot Size in number of Timebase Ticks is = 8
  Minislot Size in Symbols =8
  Bandwidth Requests = 0x0
  Piggyback Requests = 0x0
  Invalid BW Requests= 0x0
  Minislots Requested= 0x0
  Minislots Granted  = 0x0
  Minislot Size in Bytes = 2
  UCD Count = 0
  DES Ctrl Reg#0 = C00C0C43, Reg#1 = 0
Router#
```

The following example shows a sample output of the **show controllers cable upstream** command for a cable interface line card with *upstream-index* 0:

```
Router# show controller cable 5/0/0 upstream 0
 Cable5/0/0 Upstream 0 is up
  Frequency 15.000 MHz, Channel Width 1.600 MHz, Symbol Rate 1.280 Msps
  Modulations (QPSK) - Short QPSK, Long QPSK
  Mapped to non-shared connector 0 and receiver 0 //Output displaying the connector and
receiver used by the upstream channel //
  Spectrum Group is overridden
  US phy MER(SNR)_estimate for good packets - 31.5968 dB
  Nominal Input Power Level 0 dBmV, Tx Timing Offset 2000
  Ranging Backoff Start 3, Ranging Backoff End 6
  US timing offset adjustment type 2, value 505
  Ranging Insertion Interval automatic (60 ms)
  US throttling off
  Tx Backoff Start 3, Tx Backoff End 5
  Modulation Profile Group 21
  Concatenation is enabled
  Fragmentation is enabled
  part_id=0x0952, rev_id=0x00, rev2_id=0x00
  nb_agc_thr=0x0000, nb_agc_nom=0x0000
  Range Load Reg Size=0x58
  Request Load Reg Size=0x0E
  Minislot Size in number of Timebase Ticks is = 4
  Minislot Size in Symbols = 32
  Bandwidth Requests = 0xBC
  Piggyback Requests = 0x3
  Invalid BW Requests= 0x0
```

The following example shows a typical output of the **show controllers cable upstream** command for a cable interface line card that includes onboard hardware-based spectrum management capabilities:

```
Router# show controllers cable 3/0 upstream 3

Cable6/0 Upstream 3 is up
  Frequency 24.600 MHz, Channel Width 3.200 MHz, 64-QAM Symbol Rate 2.560 Msps
  This upstream is mapped to physical port 3
  Spectrum Group 14, Last Frequency Hop Data Error: NO(0)
  MC28U CNR measurement - better than 50 db
  Nominal Input Power Level 0 dBmV, Tx Timing Offset 2815
  Ranging Backoff automatic (Start 0, End 3)
  Ranging Insertion Interval automatic (60 ms)
  Tx Backoff Start 0, Tx Backoff End 4
  Modulation Profile Group 241
  Concatenation is enabled
  Fragmentation is enabled
  part_id=0x3138, rev_id=0x02, rev2_id=0x00
  nb_agc_thr=0x0000, nb_agc_nom=0x0000
  Range Load Reg Size=0x58
  Request Load Reg Size=0x0E
  Minislot Size in number of Timebase Ticks is = 2
  Minislot Size in Symbols = 32
  Bandwidth Requests = 0x23C800
  Piggyback Requests = 0x489FB8
  Invalid BW Requests= 0x0
  Minislots Requested= 0x4499EBE
  Minislots Granted  = 0x6C67B7
  Minislot Size in Bytes = 24
  Map Advance (Dynamic) : 2454 usecs
  UCD Count = 429798
  ATDMA mode enabled
Multicast/Broadcast RateLimit Dropped Pkts : 0
```

The following example shows a typical output of the **show controllers cable upstream** command for the Cisco uBR10-MC5X20H cable interface line card that is configured with multiple logical channels:

```
Router# show controllers cable 7/1/0 upstream 0
```

```
Cable7/1/0 Upstream 0 is up
 Frequency 30.000 MHz, Channel Width 1.600 MHz, Symbol Rate 1.280 Msps
 Modulations - Short QPSK, Long QPSK
 This upstream is mapped to physical port 0
 Spectrum Group is overridden
 US phy MER(SNR)_estimate for good packets - 30.2024 dB
 Nominal Input Power Level 3 dBmV, Tx Timing Offset 1419
 Ranging Backoff Start 0, Ranging Backoff End 1
 US timing offset adjustment type 0, value 0
 Ranging Insertion Interval automatic (60 ms)
 US throttling off
 Tx Backoff Start 3, Tx Backoff End 5
 Modulation Profile Group 21
 Concatenation is disabled
 Fragmentation is enabled
 part_id=0x3140, rev_id=0x03, rev2_id=0x00
 nb_agc_thr=0x0000, nb_agc_nom=0x0000
 Range Load Reg Size=0x58
 Request Load Reg Size=0x0E
 Minislot Size in number of Timebase Ticks is = 4
 Minislot Size in Symbols = 32
 Bandwidth Requests = 0x25
 Piggyback Requests = 0x3
 Invalid BW Requests= 0x0
 Minislots Requested= 0x5B4
 Minislots Granted  = 0x28
 Minislot Size in Bytes = 8
 Map Advance (Dynamic) : 2418 usecs
 Map Count = 11744156
 Remote Map Counts: (none)
 UCD Count = 12067
 Remote UCD Counts: (none)
 PHY: us errors 0  us recoveries 0
 MAC PHY TSS: tss error start 0  tss error end 0
 MAC PHY Status: bcm3140 status 0  lookout status 0
 MAP/UCD Replication Instructions:
Cable7/1/0 Upstream 8 is administratively down
 Frequency 30.000 MHz, Channel Width 1.600 MHz, Symbol Rate 1.280 Msps
 Modulations - Short QPSK, Long QPSK
 This upstream is mapped to physical port 0
 Spectrum Group is overridden
 MER(SNR) - Unknown - no modems online.
 Nominal Input Power Level 3 dBmV, Tx Timing Offset 0
 Ranging Backoff Start 3, Ranging Backoff End 6
 US timing offset adjustment type 0, value 0
 Ranging Insertion Interval automatic (60 ms)
 US throttling off
 Tx Backoff Start 3, Tx Backoff End 5
 Modulation Profile Group 21
 Concatenation is disabled
 Fragmentation is enabled
 part_id=0x3140, rev_id=0x03, rev2_id=0x00
 nb_agc_thr=0x0000, nb_agc_nom=0x0000
 Range Load Reg Size=0x58
 Request Load Reg Size=0x0E
 Minislot Size in number of Timebase Ticks is = 4
 Minislot Size in Symbols = 32
 Bandwidth Requests = 0x0
 Piggyback Requests = 0x0
 Invalid BW Requests= 0x0
 Minislots Requested= 0x0
 Minislots Granted  = 0x0
 Minislot Size in Bytes = 8
 Map Advance (Dynamic) : 2280 usecs
 Map Count = 0
 Remote Map Counts: (none)
 UCD Count = 0
 Remote UCD Counts: (none)
 PHY: us errors 0  us recoveries 0
 MAC PHY TSS: tss error start 0  tss error end 0
 MAC PHY Status: bcm3140 status 0  lookout status 0
 MAP/UCD Replication Instructions:
```

For Broadband Processing Engine (BPE) cards and other cable interfaces that include onboard upconverters, the **show controllers cable** command also displays the upconverter status and configuration information. The following excerpt from the show controllers cable command output shows the information that is displayed for the Cisco uBR10-MC5X20S cable interface line card:

```
Router# show controllers cable 5/1/4

Interface Cable5/1/4
Hardware is MC520S
JIB version 66
 Cable5/1/4 Upconverter is Enabled Output is Enabled
  Model: 74-2094-04 Serial Number: 0WAV0649000L CLEI Code: FFFFFFFFFF
  HW Rev:    PC2D0108 SW Rev: 010, NVRAM Rev: 006 ECI number FFFFFF
  Downstream Frequency 255.0000 MHz
  RF Power 49.8 dBmv
...
```

The following example is a sample output of the **show controllers cable upstream** command for the Cisco uBR-MC3GX60V line card sharing downstreams with the Cisco Wideband SPA, in Cisco IOS Release 12.2(33)SCG:

```
Router# show controllers cable 8/0/0 upstream
 Cable8/0/0 Upstream 0 is up
  Frequency 15.000 MHz, Channel Width 0.800 MHz, Symbol Rate 0.640 Msps
  Modulations (16-QAM) - Short 16-QAM, Long 16-QAM
  Mapped to shared connector 0 and receiver 0
  Spectrum Group is overridden
  US phy MER(SNR)_estimate for good packets - 36.1280 dB
  Nominal Input Power Level -4 dBmV, Tx Timing Offset 5734
  Ranging Backoff Start 3, Ranging Backoff End 6
  US timing offset adjustment type 0, value 0
  Ranging Insertion Interval automatic (60 ms)
  US throttling off
  Tx Backoff Start 3, Tx Backoff End 5
  Modulation Profile Group 21
  Concatenation is enabled
  Fragmentation is enabled
  part_id=0x3142, rev_id=0xB1, rev2_id=0x00
  nb_agc_thr=0x0000, nb_agc_nom=0x0000
  Range Load Reg Size=0x58
  Request Load Reg Size=0x0E
  Minislot Size in number of Timebase Ticks is = 8
  Minislot Size in Symbols = 32
  Bandwidth Requests = 0xC7957
  Piggyback Requests = 0x19899
  Invalid BW Requests= 0x4BF
  Minislots Requested= 0xF2E365
  Minislots Granted  = 0xE240A
  Minislot Size in Bytes = 16
  Map Advance (Dynamic) : 3389 usecs
  Map Count Internal = 1134448325
  No MAP buffer= 0x0   No Remote MAP buffer= 0x0
  Map Counts: Controller 1/1/0 = 1134446105
  UCD Counts:
    Controller 1/1/0:0 = 1150386
  UCD procedures on lch 0
  UCD ucd-succeeds(2) ucd-shut(0) init-state-err(0)
  UCD init-tss-err(0) init-timeout(0) init-start-err(0)
  UCD ucd-ccc-time(0) ucd-timeout(0) ucd-tss-err(0)
  UCD ucd-state-err(0) ucd-process(0) ucd-retries(0)
  UCD stale-tss(0)
  PHY: us errors 0  us recoveries 0 (enp 0)
  MAC PHY TSS: tss error start 0  tss error end 0
  MAC PHY Status: bcm3140 status 0  lookout status 0
  PHY: TSS late 0  discontinuous 0
  PHY: TSS mis-match 0  not-aligned 0
  PHY: TSS missed snapshots from phy 0
  MAP/UCD Replication Instructions:
    Controller 1/1/0 index = 361, bitmap = 0x0001
```

```
 Cable8/0/0 Upstream 1 is up
  Frequency 16.000 MHz, Channel Width 0.800 MHz, Symbol Rate 0.640 Msps
  Modulations (16-QAM) - Short 16-QAM, Long 16-QAM
  Mapped to shared connector 0 and receiver 1
  Spectrum Group is overridden
  US phy MER(SNR)_estimate for good packets - 36.1280 dB
  Nominal Input Power Level -4 dBmV, Tx Timing Offset 2330
  Ranging Backoff Start 3, Ranging Backoff End 6
  US timing offset adjustment type 0, value 0
  Ranging Insertion Interval automatic (60 ms)
  US throttling off
  Tx Backoff Start 3, Tx Backoff End 5
  Modulation Profile Group 21
  Concatenation is enabled
  Fragmentation is enabled
  part_id=0x3142, rev_id=0xB1, rev2_id=0x00
  nb_agc_thr=0x0000, nb_agc_nom=0x0000
  Range Load Reg Size=0x58
  Request Load Reg Size=0x0E
  Minislot Size in number of Timebase Ticks is = 8
  Minislot Size in Symbols = 32
  Bandwidth Requests = 0xC0BFF
  Piggyback Requests = 0x18BFB
  Invalid BW Requests= 0x1B248
  Minislots Requested= 0xE50E2A
  Minislots Granted  = 0xDA909
  Minislot Size in Bytes = 16
  Map Advance (Dynamic) : 3057 usecs
  Map Count Internal = 1134268243
  No MAP buffer= 0x0   No Remote MAP buffer= 0x0
  Map Counts: Controller 1/1/0 = 1134266034
  UCD Counts:
    Controller 1/1/0:0 = 1150386

  UCD procedures on lch 0
  UCD ucd-succeeds(2) ucd-shut(0) init-state-err(0)
  UCD init-tss-err(0) init-timeout(0) init-start-err(0)
  UCD ucd-ccc-time(0) ucd-timeout(0) ucd-tss-err(0)
  UCD ucd-state-err(0) ucd-process(0) ucd-retries(0)
  UCD stale-tss(0)
  PHY: us errors 0  us recoveries 0 (enp 0)
  MAC PHY TSS: tss error start 0  tss error end 0
  MAC PHY Status: bcm3140 status 0  lookout status 0
  PHY: TSS late 0  discontinuous 0
  PHY: TSS mis-match 0  not-aligned 0
  PHY: TSS missed snapshots from phy 0
  MAP/UCD Replication Instructions:
    Controller 1/1/0 index = 362, bitmap = 0x0001
....
```

The table below describes the fields shown in the **show controllers cable upstream** command display.

Table 8: show controllers cable upstream Field Descriptions

Field	Description
Cable	Slot and port number indicating the location of the Cisco cable interface line card.
Upstream is up/administratively down	Administrative state of the upstream (whether it is shutdown or not).
Channel Width	Width of the RF upstream channel.
QPSK Symbol Rate	Modulation technique for upstream transmission.

Field	Description
Spectrum Group 4	Spectrum group associated with this slot and port.
Frequency	Transmission frequency of the RF upstream channel. **Note** Cisco cable interface line cards always program the upstream center frequency in 16 KHz increments. This is the frequency displayed in the router configuration and the **show controllers cable upstream** command. For example, if you use the **cable upstream frequency** command to specify a center frequency of 27 MHz, the actual center frequency will be 27.008 MHz, which is the next highest 16 KHz boundary.
Modulations	Spectrum group associated with this slot and port.
SNR measurement	Estimate for the overall signal-to-noise ratio (SNR) for cable interfaces that do not include onboard hardware-based spectrum management. For most cable interface line cards, this value reflects the modulation error rate (MER) value for the upstream (as calculated according to the IEEE 802.14 PHY layer specifications). The MER is sometimes incorrectly referred to as the carrier-to-noise ratio (CNR), and the SNR value is generally lower than the CNR value. **Note** In Cisco IOS Release 12.1(10)EC1 and Cisco IOS Release 12.2(4)BC1b, the algorithm for calculating the SNR estimate was refined for a more accurate value. Depending on the plant characteristics, the new SNR estimate could be up to 6 dB lower than the values shown in earlier software releases. This value is only an estimate—for the most accurate value, use a spectrum analyzer.
<card-name> CNR measurement	Estimate for the overall carrier-to-noise ratio (CNR) for the upstream on cable interfaces that include onboard hardware-based spectrum management. When the CNR measurement exceeds 40 dB, this line states “better than 40 dB.” As a general rule, the CNR is greater than the SNR value. **Note** This value is only an estimate—for the most accurate value, use a spectrum analyzer or use the **show controllers cable upstream spectrum** command. For individual cable modems, you can also use the **show cable modem cnr** command.
Nominal Input Power level	Desired power level coming into the receiver.

Field	Description
Tx Timing Offset	Largest ranging offset reported by CMs on the upstream.
Ranging Backoff Start/End	Ranging slots (expressed as an exponent of 2) to back off before resending the ranging bursts after an upstream collision. These values are configured using the **cable upstream range-backoff** *start end* command.
Ranging Backoff Automatic	Start and end ranging backoff exponents, which are set automatically, using the **cable upstream range-backoff automatic** command. **Note** These counters are not accurately updated on the Cisco uBR10-MC5X20S cable interface line card, which should manually configure the ranging backoff instead.
US timing offset	Upstream timing offset adjustment type and value.
Ranging Insertion Interval	Ranging insertion interval.
US throttling	Status of the upstream throttling.
Tx Backoff Start	Starting exponential backoff value for data collisions.
Tx Backoff End	Ending exponential backoff value for data collisions.
Modulation Profile Group	Set of burst profiles defining an upstream range.
part_id=	Part number of the PHY chip. FFFF means the PHY chip is turned off.
rev_id=	PHY chip revision number.
rev2_id=	PHY chip subrevision number.
nb_agc_thr=	Threshold used to control gain.
nb_agc_nom=	Accelerate convergence of input power level.
Range Load Reg Size=	Size in symbols for range request bursts.
Request Load Reg Size=	Size in symbols for request bursts.
Minislot Size in number of Timebase Ticks is	Size in tick units of upstream minislot. A tick is 6.25 microseconds.
Minislot Size in Symbols	Size in symbols of the upstream minislot.

Field	Description
Bandwidth Requests	Number of successful bandwidth requests received in the contention minislots.
Piggyback Requests	Number of successful bandwidth requests piggybacked with regular data transmissions.
Invalid BW Requests	Number of invalid bandwidth (BW) requests. An example of an invalid bandwidth request is a modem using a nonexistent service identifier (SID) to request bandwidth.
Minislots Requested	Total number of minislots requested.
Minislots Granted	Total number of minislots granted.
Minislot Size in Bytes	Size of the minislot in bytes.
Map Advance (Dynamic)	Dynamic map advance time.
Map Count	Total number of map counts.
Remote Map Counts	Total number of remote map counts.
UCD Count	Number of Upstream Channel Descriptors (UCDs) sent for this upstream.
Remote UCD Counts	Number of remote UCDs sent for this upstream.
PHY	Physical layer information for the following: • us errors—Number of upstream errors. • us recoveries—Number of upstream recoveries.
MAC PHY TSS	Statistics on the integrity of sync status of timestamp snapshot values between MAC and PHY.
MAC PHY Status	MAC physical status for the following: • bcm3140 status • lookout status
MAP/UCD Replication Instructions	MAP/UCD replication instructions.
DES Ctrl Reg # =	Interval data encryption standard (DES) controller register dump.

Field	Description
Null Modem RateLimit Dropped Pkts	(Cisco uBR-MC16U/X, Cisco uBR-MC28U/X only) Number of packets that were dropped because they had a Service Flow ID (SFID) of 0, which occurs when the packets are dropped due to rate-limiting on their original service flow.
Additional Information for Broadband Processing Engine (BPE) Cable Interface Line Cards	
JIB Version	Revision of the JIB circuitry, which is the custom processor onboard the BPE cards that handles the MAC-layer processing.
Upconverter is Enabled Output is Enabled	Status of the upconverter and the signal output. If this field shows that the output is disabled, use the **no cable downstream rf-shutdown** command to re-enable it.
Downstream Frequency	Configured frequency, in MHz, for the integrated upconverter (if present).
RF Power	Current RF power, in dBmV, as measured on the cable interface line card upconverter. The upconverter circuitry is accurate to a few tenths of a dBmV, but might vary +/- 1 dBmV depending on the transient noise that occurs when the power is measured.

Tip In Cisco IOS Release 12.1(12)EC, Release 12.2(8)BC1, and later releases, you can add a timestamp to **show** commands using the **exec prompt timestamp** command in the line configuration mode.

Examples

This example shows the output of the **show controllers cable upstream** command:

```
Router#show controllers cable 1/0/0 upstream
Controller 1/0/0 upstream 0  AdminState:UP OpState: UP
  Frequency 13.200 MHz, Channel Width 6.400 MHz, Symbol Rate 5.120 Msps
  atdma mode enabled
  Modulation Profile Group 221
  Modulations (64-QAM) - A-short 64-QAM, A-long 64-QAM, A-ugs 64-QAM
  Mapped to connector 0 and receiver 8
  Bind to Cable3/0/0 US0
  US phy MER(SNR)_estimate for good packets - 36.1280 dB
  Spectrum Group is overridden
  Nominal Input Power Level -1 dBmV

  PHY Dev status: UP
  PHY: us errors 0  us recoveries 0 (enp 0)
  PHY: TSS late 0  discontinuous 0
  PHY: TSS mis-match 0  not-aligned 0
  PHY: TSS missed snapshots from phy 0
```

```
  UCD LCH state: RUN_STEADY
  UCD change count = 4
  UCD Tx Counts = 86418

  Bandwidth Requests = 7612
  Piggyback Requests = 17
  Invalid BW Requests= 0
  Bytes Requested = 1393405
  Bytes Granted = 1393405
  Ranging Insertion Interval automatic (120 ms)
  Map Advance (Dynamic) : 2356 usecs
  Map Count S/W = 14254599
  Map Count Error = 0
  No MAP buffer= 0
  Map Count Internal = 14254898
  Map Count External = 14237090

  Attribute Mask = 0x0

Controller 1/0/0 upstream 1  AdminState:UP OpState: UP
  Frequency 19.600 MHz, Channel Width 6.400 MHz, Symbol Rate 5.120 Msps
  atdma mode enabled
  Modulation Profile Group 221
  Modulations (64-QAM) - A-short 64-QAM, A-long 64-QAM, A-ugs 64-QAM
  Mapped to connector 0 and receiver 9
  Bind to Cable3/0/0 US1
  US phy MER(SNR)_estimate for good packets - 36.1280 dB
  Spectrum Group is overridden
  Nominal Input Power Level -1 dBmV

  PHY Dev status: UP
  PHY: us errors 0  us recoveries 0 (enp 0)
  PHY: TSS late 0  discontinuous 0
  PHY: TSS mis-match 0  not-aligned 0
  PHY: TSS missed snapshots from phy 0

  UCD LCH state: RUN_STEADY
  UCD change count = 4
  UCD Tx Counts = 86418

  Bandwidth Requests = 7479
  Piggyback Requests = 28
  Invalid BW Requests= 0
  Bytes Requested = 1480962
  Bytes Granted = 1481073
  Ranging Insertion Interval automatic (120 ms)
  Map Advance (Dynamic) : 2356 usecs
  Map Count S/W = 14254591
  Map Count Error = 0
  No MAP buffer= 0
  Map Count Internal = 14254894


Router#show controllers cable 1/0/0 upstream 0
Controller 1/0/0 upstream 0  AdminState:UP OpState: UP
  Frequency 13.200 MHz, Channel Width 6.400 MHz, Symbol Rate 5.120 Msps
  atdma mode enabled
  Modulation Profile Group 221
  Modulations (64-QAM) - A-short 64-QAM, A-long 64-QAM, A-ugs 64-QAM
  Mapped to connector 0 and receiver 8
  Bind to Cable3/0/0 US0
  US phy MER(SNR)_estimate for good packets - 36.1280 dB
  Spectrum Group is overridden
  Nominal Input Power Level -1 dBmV

  PHY Dev status: UP
  PHY: us errors 0  us recoveries 0 (enp 0)
  PHY: TSS late 0  discontinuous 0
  PHY: TSS mis-match 0  not-aligned 0
  PHY: TSS missed snapshots from phy 0

  UCD LCH state: RUN_STEADY
  UCD change count = 4
```

```
  UCD Tx Counts = 86418

  Bandwidth Requests = 7612
  Piggyback Requests = 17
  Invalid BW Requests= 0
  Bytes Requested = 1393405
  Bytes Granted = 1393405
  Ranging Insertion Interval automatic (120 ms)
  Map Advance (Dynamic) : 2356 usecs
  Map Count S/W = 14254599
  Map Count Error = 0
  No MAP buffer= 0
  Map Count Internal = 14254898
  Map Count External = 14237090

  Attribute Mask = 0x0

Router#
```

This example shows the output of the **show controllers cable downstream** command:

```
Router#show controllers cable 1/0/0 downstream
  Dynamic Services Stats (All Downstreams):
  DSA: 0  REQs  0 RSPs  0 ACKs
  0 Successful DSAs  0 DSA Failures
  DSC: 0  REQs  0 RSPs  0 ACKs
  0 Successful DSCs  0 DSC Failures
  DSD:  0 REQs  0 RSPs
  0 Successful DSDs  0 DSD Failures
  DBC:  0 REQs  0 RSPs(Rcvd)  0 ACKs
  0 Successful DBCs  0 DBC Failures  0 DBC Partial
  0 DBC Protocol Violations
  0 Total DBC Pending Q-Size
  DCC: 4  REQs  0 RSPs  0 ACKs
  4 Successful DCCs  0 DCC Failures
  0 DCC Departs 0 DCC Arrives
  DCC end of transaction counts:
  DCC unknown cause(0) offline(0) if down(0) no cm(0)
  DCC no resource(0) no retries(0) reject(0) unknown state (0)
  DCC rebuild err (0) T15 timeout(0) wrong channel(0) dcc-req not send(0)
  DCC reinit MAC (4) dcc succeeds(0)
  DCC wcm(0)
  CM STATUS Stats:
  0 invalid_event  0 tlv_error
  0 disabled_event  0 invalid_state
  0 invalid_chid  0 prim_chid
  DOCSIS SF Stats:
  821 num_ds_sf_alloc,    124 num_ds_sf_free
  659 num_us_sf_alloc,      0 num_us_sf_free
  659 num_null_sf_alloc,    0 num_null_sf_free
    0 num_ds_sf_lock,       0 num_ds_sf_unlock
    0 num_us_sf_lock,       0 num_us_sf_unlock
    0 inv_cm_state,         0 inv_sfid_free,     0 invalid_sids
    0 null_idbs,            0 null_mds,          0 null_cms
    0 null_flows,           0 null_templates,    0 null_app_data
  486 num_tmr_sf_insert,  486 num_tmr_sf_remove
    0 num_tmr_sf_tmout,     0 stale_tmr_flows

 Local total modems 0, modems active 0, total DS flows 0
  NB DS In3/0/0:8, STATE: UP
   Frequency 141.0000 MHz 256-QAM,  ANNEX B, R/S Interleave I=32, J=4
   Network Delay 300 (usec)
   Bandwidth (Kbps): 6000,  Load Percent: 0
   Channel ID: 9, US MAP: 0x0003
   Total modems: 0, modems active : 0, modems wb : 0 total DS flows: 1
  NB DS In3/0/0:16, STATE: UP
   Frequency 189.0000 MHz 256-QAM,  ANNEX B, R/S Interleave I=32, J=4
   Network Delay 300 (usec)
   Bandwidth (Kbps): 6000,  Load Percent: 0
   Channel ID: 17, US MAP: 0x0003
   Total modems: 0, modems active : 0, modems wb : 0 total DS flows: 1
  NB DS In3/0/0:24, STATE: UP
```

```
 Frequency 237.0000 MHz 256-QAM,  ANNEX B, R/S Interleave I=32, J=4
 Network Delay 300 (usec)
 Bandwidth (Kbps): 6000,  Load Percent: 0
 Channel ID: 25, US MAP: 0x0003
 Total modems: 0, modems active : 0, modems wb : 0 total DS flows: 1
NB DS In3/0/0:32, STATE: UP
 Frequency 285.0000 MHz 256-QAM,  ANNEX B, R/S Interleave I=32, J=4
 Network Delay 300 (usec)
 Bandwidth (Kbps): 6000,  Load Percent: 0
 Channel ID: 33, US MAP: 0x0003
 Total modems: 3, modems active : 3, modems wb : 0 total DS flows: 7
NB DS In3/0/0:33, STATE: UP
 Frequency 291.0000 MHz 256-QAM,  ANNEX B, R/S Interleave I=32, J=4
 Network Delay 300 (usec)
 Bandwidth (Kbps): 6000,  Load Percent: 0
 Channel ID: 34, US MAP: 0x0003
 Total modems: 3, modems active : 3, modems wb : 0 total DS flows: 7
NB DS In3/0/0:40, STATE: UP
 Frequency 333.0000 MHz 256-QAM,  ANNEX B, R/S Interleave I=32, J=4
```

Related Commands

Command	Description
cable downstream frequency	Configures the downstream center frequency on the integrated upconverter.
cable downstream rf-power	Configures the desired RF output power on the integrated upconverter.
cable spectrum-group (global configuration)	Creates spectrum groups, which contain one or more upstream frequencies.
cable upstream frequency	Specifies that the upstream should be set to either a specific center frequency or be set dynamically.
show controllers cable upstream spectrum	(Cisco uBR-MC16 line card only) Displays the noise levels for a particular CM or displays the background noise for an entire upstream .
show interface cable sid	Displays interface controller information for a specific cable access router card slot.

show controllers cable jib

To display the ASIC processor (JIB) register information on a cable interface on the Cisco CMTS router, use the **show controllers cable jib**command in user EXEC or privileged EXEC mode.

show controllers cable {*slot/cable-interface-index*| *slot/subslot/cable-interface-index*} **jib us-partial-reset**

Syntax Description

slot	Slot where the line card resides. • Cisco uBR7225VXR router—The valid value is 1 or 2. • Cisco uBR7246VXR router—The valid range is from 3 to 6. • Cisco uBR10012 router—The valid range is from 5 to 8.
subslot	(Cisco uBR10012 only) Secondary slot number of the cable interface line card. The valid subslots are 0 or 1.
cable-interface-index	Downstream port of the Cisco uBR10-MC5X20 and Cisco uBR-MC28 line cards, or MAC domain index of the Cisco UBR-MC20X20V and Cisco uBR-MC3GX60V line cards. • Cisco uBR7225VXR and Cisco uBR7246VXR routers—The valid port value is 0 or 1. • Cisco uBR10012 router—The valid range for the Cisco UBR-MC20X20V and Cisco uBR-MC5X20 line cards is from 0 to 4. The valid range for the Cisco uBR-MC3GX60V line card is from 0 to 14.
jib	Displays JIB register information.
us-partial-reset	Displays JIB3 upstream partial reset data.

Command Modes

User EXEC (>) or

Privileged EXEC (#)

Command History

Release	Modification
12.2(33)SCF	This command was introduced.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Router.

Usage Guidelines

The **show controllers cable jib** command displays the packet capture buffers retrieved during the partial reset. It displays all of the capture buffers associated with the last partial reset event and also other information useful for determining the Partial Reset state.

Examples

The following is a sample output of the **show controllers cable jib** command:

```
Router# show controllers cable 5/0/0 jib us-partial-reset

Jib3 Upstream Partial Reset Information
Jib3 Upstream Debug Partial Reset Data
Partial Reset S/W Counts
------------------------
TOTAL Partial Resets  : 3
  PHY Side Partial Resets : 1
  CCF Partial Resets      : 1
  FrameP Partial Resets   : 0
  FragP Partial Resets    : 0
  PktP Partial Resets     : 0
  C2C Partial Resets      : 1
Partial Reset States
--------------------
PHY Side          : PR_NORMAL
Fauna             : PR_NORMAL
Partial Reset H/W Counts & Status
---------------------------------
  PHY Side Partial Resets  : 0x80300001
  PHY Side Partial Status0 : 0x00000000
  PHY Side Partial Status1 : 0x00000000
  CCF Partial Resets       : 0x8C000001
  CCF Partial Status1      : 0x00000000
  CCF Partial Status2      : 0x00000000
  FrameP Partial Resets    : 0x0C000000
  FrameP Partial Status    : 0x00000000
  FragP Partial Resets     : 0x0C000000
  FragP Partial Status     : 0x00000000
  PktP Partial Resets      : 0x0C000000
  PktP Partial Status1     : 0x00000000
  PktP Partial Status2     : 0x00000000
  PktP Partial Status3     : 0x00000000
  PktP Partial Status4     : 0x00000000
  C2C Partial Resets       : 0x8C000001
  C2C Partial Status       : 0x00000000
Partial Reset Packet Capture Buffers
------------------------------------
PHY Side Buf Ptr1 : 0x1F3DC35C
PHY Side Buf Ptr2 : 0x1F3E4390
PHY Side Buf Cnt  : 4079
FA1 Buf Ptr1      : 0x1F3EC3C4
FA1 Buf Ptr2      : 0x1F3F43F8
FA1 Buf Cnt       : 2663
FA2 Buf Ptr1      : 0x1F3FC42C
FA2 Buf Ptr2      : 0x1F404460
FA2 Buf Cnt       : 1109
FA3 Buf Ptr1      : 0x1F40C494
```

```
FA3 Buf Ptr2      : 0x1F4144C8
FA3 Buf Cnt       : 1109
FA4 Buf Ptr1      : 0x1F41C4FC
FA4 Buf Ptr2      : 0x1F424530
FA4 Buf Cnt       : 1109
PHY Side Capture FIFO Data (0xFEF entries, format: eop, data[31:0]):
----
0, 0xB            0, 0x0            0, 0x20163        0, 0x5440900
1, 0x6000000      0, 0x805000C      0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x8000006      0, 0x1632F40      1, 0x20000
0, 0x50050006     0, 0x0            0, 0xB            0, 0xFFF0001
0, 0x4060002      1, 0x400002       0, 0x400F0004     0, 0x0
0, 0xB            0, 0xFFF0001      1, 0x0            0, 0x230F0009
0, 0x0            0, 0xB            0, 0x0            0, 0x20163
0, 0x1C20900      1, 0x6000000      0, 0x805000C      0, 0x0
0, 0xB            0, 0xFFF0001      0, 0x8000006      0, 0x16345C2
1, 0x20000        0, 0x50050006     0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x4060002      1, 0x400002       0, 0x400F0004
0, 0x0            0, 0xB            0, 0xFFF0001      1, 0x0
0, 0x230F0009     0, 0x0            0, 0xB            0, 0x0
0, 0x20163        0, 0x8470900      1, 0x6000000      0, 0x805000C
0, 0x0            0, 0xB            0, 0xFFF0001      0, 0x8000006
0, 0x1637402      1, 0x20000        0, 0x50050006     0, 0x0
0, 0xB            0, 0xFFF0001      0, 0x4060002      1, 0x400002
0, 0x400F0004     0, 0x0            0, 0xB            0, 0xFFF0001
1, 0x0            0, 0x230F0009     0, 0x0            0, 0xB
0, 0x0            0, 0x20163        0, 0x6840900      1, 0x6000000
0, 0x805000C      0, 0x0            0, 0xB            0, 0xFFF0001
0, 0x8000006      0, 0x1639C03      1, 0x20000        0, 0x50050006
0, 0x0            0, 0xB            0, 0xFFF0001      0, 0x4060002
1, 0x400002       0, 0x400F0004     0, 0x0            0, 0xB
0, 0xFFF0001      1, 0x0            0, 0x230F0009     0, 0x0
0, 0xB            0, 0x0            0, 0x20163        0, 0xE850900
1, 0x6000000      0, 0x1C06002E     0, 0x0            0, 0x5
0, 0x10004        0, 0x1C           0, 0xA1D0005      0, 0xE4E8F7
0, 0x1E6BFB       0, 0x794000A      0, 0x830301       0, 0x4008001
0, 0x800F5C6      0, 0x3D30B06      0, 0x44080        0, 0xF8FFFFF
1, 0xFF2FFFF      0, 0x400F0004     0, 0x0            0, 0x5
0, 0x10004        1, 0x10000        0, 0x1C06002E     0, 0x0
0, 0x1            0, 0x10004        0, 0x1C           0, 0xA1D0005
0, 0xE4E8F6       0, 0x23BE85       0, 0x906000A      0, 0xA60301
0, 0x4000001      0, 0x100BDD7      0, 0xE90B06       0, 0x24300
0, 0x220000       1, 0x15A0000      0, 0x400F0004     0, 0x0
0, 0x1            0, 0x10004        1, 0x10000        0, 0x805000C
0, 0x0            0, 0xB            0, 0xFFF0001      0, 0x800001E
0, 0x1651CB2      1, 0x10000        0, 0x50050006     0, 0x0
0, 0xB            0, 0xFFF0001      0, 0x41E0001      1, 0xC310001
0, 0x400F0004     0, 0x0            0, 0xB            0, 0xFFF0001
1, 0x0            0, 0x230F0009     0, 0x0            0, 0xB
0, 0x0            0, 0x10165        0, 0xE560A00      1, 0xE000000
0, 0x805000C      0, 0x0            0, 0xB            0, 0xFFF0001
0, 0x800001E      0, 0x165229C      1, 0x10000        0, 0x50050006
0, 0x0            0, 0xB            0, 0xFFF0001      0, 0x41E0001
1, 0xC310001      0, 0x400F0004     0, 0x0            0, 0xB
0, 0xFFF0001      1, 0x0            0, 0x230F0009     0, 0x0
0, 0xB            0, 0x0            0, 0x10165        0, 0x4940A00
1, 0xE000000      0, 0x805000C      0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x800001E      0, 0x1652647      1, 0x10000
0, 0x50050006     0, 0x0            0, 0xB            0, 0xFFF0001
0, 0x41E0001      1, 0xC310001      0, 0x400F0004     0, 0x0
0, 0xB            0, 0xFFF0001      1, 0x0            0, 0x230F0009
0, 0x0            0, 0xB            0, 0x0            0, 0x10165
0, 0x2560A00      1, 0xE000000      0, 0x805000C      0, 0x0
0, 0xB            0, 0xFFF0001      0, 0x800001E      0, 0x1653424
1, 0x10000        0, 0x50050006     0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x41E0001      1, 0xC310001      0, 0x400F0004
0, 0x0            0, 0xB            0, 0xFFF0001      1, 0x0
0, 0x230F0009     0, 0x0            0, 0xB            0, 0x0
0, 0x10165        0, 0x1D70A00      1, 0xE000000      0, 0x805000C
0, 0x0            0, 0xB            0, 0xFFF0001      0, 0x800001E
0, 0x1656396      1, 0x10000        0, 0x50050006     0, 0x0
0, 0xB            0, 0xFFF0001      0, 0x41E0001      1, 0xC310001
0, 0x400F0004     0, 0x0            0, 0xB            0, 0xFFF0001
```

```
1, 0x0          0, 0x230F0009   0, 0x0          0, 0xB
0, 0x0          0, 0x10165      0, 0x1A0A00     1, 0xE000000
0, 0x805000C    0, 0x0          0, 0xB          0, 0xFFF0001
0, 0x800001E    0, 0x16591E8    1, 0x10000      0, 0x50050006
0, 0x0          0, 0xB          0, 0xFFF0001    0, 0x41E0001
1, 0xC310001    0, 0x400F0004   0, 0x0          0, 0xB
0, 0xFFF0001    1, 0x0          0, 0x230F0009   0, 0x0
0, 0xB          0, 0x0          0, 0x10165      0, 0xDC0A00
1, 0xE000000    0, 0x805000C    0, 0x0          0, 0xB
0, 0xFFF0001    0, 0x800001E    0, 0x165C292    1, 0x10000
0, 0x50050006   0, 0x0          0, 0xB          0, 0xFFF0001
0, 0x41E0001    1, 0xC310001    0, 0x400F0004   0, 0x0
0, 0xB          0, 0xFFF0001    1, 0x0          0, 0x230F0009
0, 0x0          0, 0xB          0, 0x0          0, 0x10165
0, 0xDDE0A00    1, 0xE000000    0, 0x805000C    0, 0x0
0, 0xB          0, 0xFFF0001    0, 0x800001E    0, 0x165EFA0
1, 0x10000      0, 0x50050006   0, 0x0          0, 0xB
0, 0xFFF0001    0, 0x41E0001    1, 0xC310001    0, 0x400F0004
0, 0x0          0, 0xB          0, 0xFFF0001    1, 0x0
0, 0x230F0009   0, 0x0          0, 0xB          0, 0x0
0, 0x10166      0, 0xD5F0A00    1, 0xE000000    0, 0x805000C
0, 0x0          0, 0xB          0, 0xFFF0001    0, 0x800001E
0, 0x1661F6C    1, 0x10000      0, 0x50050006   0, 0x0
0, 0xB          0, 0xFFF0001    0, 0x41E0001    1, 0xC310001
0, 0x400F0004   0, 0x0          0, 0xB          0, 0xFFF0001
1, 0x0          0, 0x230F0009   0, 0x0          0, 0xB
0, 0x0          0, 0x10166      0, 0xE2F0A00    1, 0xE000000
0, 0x805000C    0, 0x0          0, 0xB          0, 0xFFF0001
0, 0x800001E    0, 0x1665018    1, 0x10000      0, 0x50050006
0, 0x0          0, 0xB          0, 0xFFF0001    0, 0x41E0001
1, 0xC310001    0, 0x400F0004   0, 0x0          0, 0xB
0, 0xFFF0001    1, 0x0          0, 0x230F0009   0, 0x0
0, 0xB          0, 0x0          0, 0x10166      0, 0x9E40A00
1, 0xE000000    0, 0x805000C    0, 0x0          0, 0xB
0, 0xFFF0001    0, 0x800001E    0, 0x1667BAC    1, 0x10000
0, 0x50050006   0, 0x0          0, 0xB          0, 0xFFF0001
0, 0x41E0001    1, 0xC310001    0, 0x400F0004   0, 0x0
0, 0xB          0, 0xFFF0001    1, 0x0          0, 0x1C06002E
0, 0x0          0, 0x6          0, 0x30004      0, 0x1C
0, 0xA1D0005    0, 0xE4E8F7     0, 0x1E6BFC     0, 0x222000A
0, 0x870301     0, 0x4008003    0, 0x800CE55    0, 0x19A0B06
0, 0x244C0      0, 0xF1F0000    1, 0x570000     0, 0x400F0004
0, 0x0          0, 0x6          0, 0x30004      1, 0x10000
0, 0x230F0009   0, 0x0          0, 0xB          0, 0x0
0, 0x10166      0, 0x9650A00    1, 0xE000000    0, 0x805000C
0, 0x0          0, 0xB          0, 0xFFF0001    0, 0x800001E
0, 0x166AB3F    1, 0x10000      0, 0x50050006   0, 0x0
0, 0xB          0, 0xFFF0001    0, 0x41E0001    1, 0xC310001
0, 0x400F0004   0, 0x0          0, 0xB          0, 0xFFF0001
1, 0x0          0, 0x230F0009   0, 0x0          0, 0xB
0, 0x0          0, 0x10166      0, 0x8E60A00    1, 0xE000000
0, 0x805000C    0, 0x0          0, 0xB          0, 0xFFF0001
0, 0x800001E    0, 0x166DAB7    1, 0x10000      0, 0x50050006
0, 0x0          0, 0xB          0, 0xFFF0001    0, 0x41E0001
1, 0xC310001    0, 0x400F0004   0, 0x0          0, 0xB
0, 0xFFF0001    1, 0x0          0, 0x230F0009   0, 0x0
0, 0xB          0, 0x0          0, 0x10167      0, 0x9B00A00
1, 0xE000000    0, 0x805000C    0, 0x0          0, 0xB
0, 0xFFF0001    0, 0x800001E    0, 0x1670B84    1, 0x10000
0, 0x50050006   0, 0x0          0, 0xB          0, 0xFFF0001
0, 0x41E0001    1, 0xC310001    0, 0x400F0004   0, 0x0
0, 0xB          0, 0xFFF0001    1, 0x0          0, 0x230F0009
0, 0x0          0, 0xB          0, 0x0          0, 0x10167
0, 0x5680A00    1, 0xE000000    0, 0x805000C    0, 0x0
0, 0xB          0, 0xFFF0001    0, 0x800001E    0, 0x167375D
1, 0x10000      0, 0x50050006   0, 0x0          0, 0xB
0, 0xFFF0001    0, 0x41E0001    1, 0xC310001    0, 0x400F0004
0, 0x0          0, 0xB          0, 0xFFF0001    1, 0x0
0, 0x230F0009   0, 0x0          0, 0xB          0, 0x0
0, 0x10167      0, 0x4EC0A00    1, 0xE000000    0, 0x805000C
0, 0x0          0, 0xB          0, 0xFFF0001    0, 0x800001E
0, 0x16766D2    1, 0x10000      0, 0x50050006   0, 0x0
0, 0xB          0, 0xFFF0001    0, 0x41E0001    1, 0xC310001
```

```
0, 0x400F0004     0, 0x0            0, 0xB            0, 0xFFF0001
1, 0x0            0, 0x805000C      0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x8000006      0, 0x16781A8      1, 0x20000
0, 0x50050006     0, 0x0            0, 0xB            0, 0xFFF0001
0, 0x4060002      1, 0x400002       0, 0x400F0004     0, 0x0
0, 0xB            0, 0xFFF0001      1, 0x0            0, 0x230F0009
0, 0x0            0, 0xB            0, 0x0            0, 0x20167
0, 0x42D0900      1, 0x6000000      0, 0x805000C      0, 0x0
0, 0xB            0, 0xFFF0001      0, 0x8000006      0, 0x1678A69
1, 0x20000        0, 0x50050006     0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x4060002      1, 0x400002       0, 0x400F0004
0, 0x0            0, 0xB            0, 0xFFF0001      1, 0x0
0, 0x230F0009     0, 0x0            0, 0xB            0, 0x0
0, 0x20167        0, 0xCEE0900      1, 0x6000000      0, 0x230F0009
0, 0x0            0, 0xB            0, 0x0            0, 0x10167
0, 0x32D0A00      1, 0xE000000      0, 0x805000C      0, 0x0
0, 0xB            0, 0xFFF0001      0, 0x800001E      0, 0x16794F2
1, 0x10000        0, 0x50050006     0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x41E0001      1, 0xC310001      0, 0x400F0004
0, 0x0            0, 0xB            0, 0xFFF0001      1, 0x0
0, 0x805000C      0, 0x0            0, 0xB            0, 0xFFF0001
0, 0x8000006      0, 0x1679969      1, 0x20000        0, 0x50050006
0, 0x0            0, 0xB            0, 0xFFF0001      0, 0x4060002
1, 0x400002       0, 0x400F0004     0, 0x0            0, 0xB
0, 0xFFF0001      1, 0x0            0, 0x230F0009     0, 0x0
0, 0xB            0, 0x0            0, 0x20167        0, 0xBEE0900
1, 0x6000000      0, 0x805000C      0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x8000006      0, 0x167BDAA      1, 0x20000
0, 0x50050006     0, 0x0            0, 0xB            0, 0xFFF0001
0, 0x4060002      1, 0x400002       0, 0x400F0004     0, 0x0
0, 0xB            0, 0xFFF0001      1, 0x0            0, 0x230F0009
0, 0x0            0, 0xB            0, 0x0            0, 0x20167
0, 0x2F0900       1, 0x6000000      0, 0x230F0009     0, 0x0
0, 0xB            0, 0x0            0, 0x10167        0, 0x52F0A00
1, 0xE000000      0, 0x805000C      0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x8000006      0, 0x167C7AB      1, 0x20000
0, 0x50050006     0, 0x0            0, 0xB            0, 0xFFF0001
0, 0x4060002      1, 0x400002       0, 0x400F0004     0, 0x0
0, 0xB            0, 0xFFF0001      1, 0x0            0, 0x230F0009
007095: SLOT 5/0: Apr 27 04:43:17.502 Eastern: %UBR10000-5-UNREGSIDTIMEOUT: CM
 deleted unregistered Cable Modem 001e.6bfc.da8e0, 0x0            0, 0xB
    0, 0x0            0, 0x20167
0, 0xA300900      1, 0x6000000      0, 0x805000C      0, 0x0
0, 0xB            0, 0xFFF0001      0, 0x8000006      0, 0x167E6EC
1, 0x20000        0, 0x50050006     0, 0x0            0, 0xB
0, 0xFFF0001      0, 0x4060002      1, 0x400002       0, 0x400F0004
0, 0x0            0, 0xB            0, 0xFFF0001      1, 0x0
0, 0x10040048     0, 0x8003         0, 0xB            0, 0x20009
0, 0x1020042      0, 0x1006F2A      0, 0xFFFFFFFF     0, 0xFFF001E
.
.
.
```

The table below describes the fields shown in the **show controllers cable jib** command display.

Table 9: show controllers cable jib Field Descriptions

Field	Description
TOTAL Partial Resets	Total number of partial resets.
PHY Side Partial Resets	Number of partial resets that occurred on the PHY side of the network.
CCF Partial Resets	Number of partial resets that occurred on the Continuous Concatenation and Fragmentation (CCF) processor.

Field	Description
FrameP Partial Resets	Number of partial resets that occurred on the Frame Processor (FrameP).
FragP Partial Resets	Number of partial resets that occurred on the Fragmentation Processor (FragP).
PktP Partial Resets	Number of partial resets that occurred on the Packet Processor (PktP).
C2C Partial Resets	Number of partial resets that occurred on the Chip to Chip (also called FL2FA—Flora to Fauna) (C2C) processor.
PHY Side	Partial reset status on the PHY side.
Fauna	Partial reset status on the Fauna.
PHY Side Partial Resets	Number of partial resets that occurred on the PHY side processor.
PHY Side Partial Status	Partial reset status on the PHY side.
CCF Partial Resets	Number of partial resets that occurred on the CCF processor.
CCF Partial Status	Partial reset status on the CCF processor.
FrameP Partial Resets	Number of partial resets that occurred on the Frame processor.
FrameP Partial Status	Partial reset status on the Frame processor.
FragP Partial Resets	Number of partial resets that occurred on the Fragmentation processor.
FragP Partial Status	Partial reset status on the Fragmentation processor.
PktP Partial Resets	Number of partial resets that occurred on the Packet processor.
PktP Partial Status	Partial reset status on the Packet processor.
C2C Partial Resets	Number of partial resets that occurred on the C2C processor.
C2C Partial Status	Partial reset status on the C2C processor.
PHY Side Buf Ptr	PHY partial reset packet capture buffer pointer.

Field	Description
PHY Side Buf Cnt	PHY partial reset packet capture buffer count.
FA1 Buf Ptr	Partial reset packet capture buffer 1 pointer on the Fauna processor.
FA1 Buf Cnt	Number of packet capture buffer 1 counts associated with the partial reset on the Fauna processor.
FA2 Buf Ptr	Partial reset packet capture buffer 2 pointer on the Fauna processor.
FA2 Buf Cnt	Number of packet capture buffer 2 counts associated with the partial reset on the Fauna processor.
FA3 Buf Ptr	Partial reset packet capture buffer 3 pointer on the Fauna processor.
FA3 Buf Cnt	Number of packet capture buffer 3 counts associated with the partial reset on the Fauna processor.
FA4 Buf Ptr	Partial reset packet capture buffer 4 pointer on the Fauna processor.
FA4 Buf Cnt	Number of packet capture buffer 4 counts associated with the partial reset on the Fauna processor.

Related Commands

Command	Description
show controllers cable	Displays information about the interface controllers on a cable interface on the Cisco CMTS router.

show controllers cable upstream spectrum

To display the noise levels for a particular CM or to display the background noise for an entire upstream on the Cisco uBR-MC16 line card, use the **show controllers cable upstream spectrum** command in user EXEC or privileged EXEC mode.

show controllers cable {*slot/port*| *slot/subslot/port*} **upstream** *n* **spectrum** [*ip-address*| *mac-address*] *start-freq end-freq res-freq*

Syntax Description

slot/port	Identifies the cable interface and downstream port on the Cisco uBR7100 series and Cisco uBR7200 series routers. On the Cisco uBR7100 series router, the only valid value is **1/0**. On the Cisco uBR7200 series router, *slot* can range from 3 to 6, and *port* can be 0 or 1, depending on the cable interface.
slot/subslot/port	Identifies the cable interface on the Cisco uBR10012 router. The following are the valid values: • *slot* = 5 to 8 • *subslot* = 0 or 1 • *port* = 0 to 4 (depending on the cable interface)
n	Port number for the desired upstream (0 to 5).
ip-address	(Optional) IP address, in dotted decimal notation, for a CM on the specified upstream.
mac-address	(Optional) MAC address, in dotted hexadecimal notation, for a CM on the specified upstream.
start-freq	Starting frequency for the frequency range that is being reported (5 to 42 MHz; can also be specified as 5000 to 42000 KHz or 5000000 to 42000000 Hz).
end-freq	Ending frequency for the frequency range that is being reported (5 to 42 MHz). **Note** The ending frequency must be greater than the starting frequency and must be specified using the same units as the starting frequency (MHz, KHz, Hz).

res-freq	Resolution frequency to determine the number of data points for the report (12 to 37000 KHz). **Note** The resolution frequency must be specified in the same units as the starting and ending frequency (MHz, KHz, Hz). To use a resolution value less than 1 MHz, you must specify the other parameters in either Hz or KHz.

Command Modes

User EXEC, Privileged EXEC

Command History

Release	Modification
12.1(7)CX1	This command was introduced for Cisco CMTS routers using the Cisco uBR-MC16S cable interface line card.
12.2(8)BC2	Support was added for the Cisco uBR10012 router and the Cisco uBR-LCP2-MC16S cable interface line card.
12.3(21)BC	This command is obsolete.
IOS-XE 3.15.0S	This command was replaced by the **show cable spectrum-analysis** command.

Usage Guidelines

Cisco IOS Release 12.3(9a)BC adds the **tech-support** keyword to the **show controllers cable** command. This change allows users with large numbers of online cable modems to collect the necessary line card information without consuming the console session for a long period of time.

Additional and related improvements are also available for the **show cable tech-support** command.

For all supported releases, the **show controllers cable upstream spectrum** command displays the power in dBmV for a given frequency range for the specified upstream. The frequency range can cover any portion of the DOCSIS upstream frequency range (5 to 42 MHz), and the frequency range can be divided into a resolution as small as 12 KHz.

If a CM is specified by its IP address or MAC address, the power information for that particular CM is given. If no IP or MAC address is given, the command displays the background noise for the entire upstream. All displays use historical averaging of data collected at the time the command is used; historical information is not saved.

Note Cisco cable interface line cards always program the upstream's center frequency in 16-KHz increments, and this is the frequency displayed by the **show controller cable upstream** command. For example, if you use the **cable upstream frequency** command to specify a center frequency of 27 MHz (**cable upstream** *x* **frequency 27000000**), the actual center frequency will be 27.008 MHz, which is the next-highest 16-KHz boundary.

Tip By default, the **show controller cable upstream** command displays its output to the router's console port. To display the command's output when logged in during a Telnet session over an Ethernet port, use the **terminal monitor** command before giving the **show controller cable upstream** command.

Examples

The following example shows the **show controllers cable upstream** command displaying the power information for a particular CM on upstream 5 of cable interface slot 3/0. The power information is displayed over the entire upstream (5–42 MHz), with a resolution of 5 MHz:

```
Router# show cable modem

MAC Address    IP Address      I/F     MAC         Prim  RxPwr Timing Num  BPI
                                       State       Sid   (db)  Offset CPEs Enbld
...
00d0.ba77.7595 10.20.114.34    C3/0/U5 online      1     0.25  2740   1    yes
00d0.ba77.7621 10.20.114.17    C3/0/U5 online      2     0.25  2740   2    yes
00d0.ba77.7533 10.20.114.55    C3/0/U5 online      3     0.25  2740   1    yes
...
Router# show controllers cable 3/0 upstream 5 spectrum 10.20.114.34 5 42 5

02:16:49: Spectrum DATA(@0x4B060004) for u5: 4995-41991KHz(resolution 4992KHz, sid 1):
02:16:49: Freq(KHz) dBmV Chart
02:16:49: 4995 :    -5   *************************
02:16:49: 9987 :    -7   ************************
02:16:49: 14979:    -24  ****************
02:16:49: 19971:    -35  **********
02:16:49: 24963:    -39  ********
02:16:49: 29955:    -35  **********
02:16:49: 34947:    -37  *********
02:16:49:
Router#
```

Note The output for each frequency range includes a time-stamp, the ending frequency for each range (in KHz), the historical average power level for that range (in dBmV), and a series of asterisks that provides a graphical representation of the noise floor level for the signal (a stronger signal is indicated by more asterisks).

The following example shows a partial display of the background noise data for upstream 4 of cable interface slot 6/0. The command covers the entire upstream spectrum (5–42 MHz) at the minimum resolution of 12 KHz.

```
Router# show controller cable 6/0 upstream 4 spectrum 5000 42000 12


02:15:54: Spectrum DATA(@0x4B060004) for u5: 4995-41991KHz(resolution 12KHz, sid 1):
02:15:54: Freq(KHz) dBmV Chart
02:15:54: 4995 :    -100
02:15:54: 5007 :    -67
02:15:54: 5019 :    -67
02:15:54: 5031 :    -67
02:15:54: 5043 :    -64
02:15:54: 5055 :    -64
02:15:54: 5067 :    -61
...
02:15:54: 8199 :    -67
02:15:54: 8211 :    -61
02:15:54: 8223 :    -64
02:15:54: 8235 :    -57
02:15:54: 8247 :    -49  ***
02:15:54: 8259 :    -52  **
```

```
02:15:54: 8271 :    -46  *****
02:15:54: 8283 :    -45  *****
02:15:54: 8295 :    -52  **
02:15:54: 8307 :    -48  ****
02:15:54: 8319 :    -45  *****
02:15:54: 8331 :    -41  *******
02:15:54: 8343 :    -39  ********
02:15:54: 8355 :    -39  ********
02:15:54: 8367 :    -40  ********
02:15:54: 8379 :    -43  ******
02:15:54: 8391 :    -44  ******
02:15:54: 8403 :    -33  ***********
02:15:54: 8415 :    -32  ************
02:15:54: 8427 :    -30  **************
02:15:54: 8439 :    -27  ***************
02:15:54: 8451 :    -28  ***************
02:15:54: 8463 :    -36  **********
02:15:54: 8475 :    -40  ********
02:15:54: 8487 :    -37  *********
02:15:54: 8499 :    -40  ********
02:15:54: 8511 :    -39  ********
02:15:54: 8523 :    -28  ***************
02:15:54: 8535 :    -29  *************
02:15:54: 8547 :    -27  ***************
02:15:54: 8559 :    -29  *************
02:15:54: 8571 :    -40  ********
02:15:54: 8583 :    -36  **********
02:15:54: 8595 :    -28  ***************
02:15:54: 8607 :    -30  *************
...
02:15:54: 11247:    -40  ********
02:15:54: 11259:    -44  ******
02:15:54: 11271:    -44  ******
02:15:54: 11283:    -46  *****
02:15:54: 11295:    -46  *****
02:15:54: 11307:    -42  *******
02:15:54: 11319:    -46  *****
02:15:54: 11331:    -48  ****
02:15:54: 11343:    -53  *
02:15:54: 11355:    -55
02:15:54: 11367:    -54  *
02:15:54: 11379:    -57
02:15:54: 11391:    -61
02:15:54: 11403:    -60
02:15:54: 11415:    -60
02:15:54: 11427:    -60
02:15:54: 11439:    -61
02:15:54: 11451:    -57
02:15:54: 11463:    -58
02:15:54: 11475:    -67
02:15:54: 11487:    -58
...
```

Tip In Cisco IOS Release 12.1(12)EC, Release 12.2(8)BC1, and later releases, you can add a timestamp to **show** commands using the **exec prompt timestamp** command in line configuration mode.

Related Commands

Command	Description
cable modulation-profile	Creates a cable modulation profile.
cable upstream hop-priority	Determines the order of the corrective actions to be taken when ingress noise exceeds the allowable value for an upstream.

Command	Description
cable upstream modulation-profile	Configures an upstream for one modulation profile (static profile) or two modulation profiles (Dynamic Upstream Modulation).
show cable hop	Displays the current hop period and threshold for an upstream, along with other statistics.
show cable modem cnr	Displays information about the upstream carrier-to-noise ratio (CNR) for a particular cable modem.
show cable modulation-profile	Displays the cable modulation profiles that have been created.
show controllers cable	Displays detailed statistics for the cable interface.

show controllers clock-reference

To display hardware information, register values, and current counters for the TCC+ card or the Cisco cable clock card, use the **show controllers clock-reference** command in privileged EXEC mode.

show controllers clock-reference

Syntax Description

This command has no keywords or arguments.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.1(1a)T1	This command was introduced.
12.1(2)EC1	This command was supported on the EC train.
12.2(2)XF	This command was supported for the TCC+ card on Cisco uBR10012 routers.
12.2(4)BC1	Support was added to the Release 12.2 BC train.

Usage Guidelines

To reset the counters that are displayed with the **show controllers clock-reference** command, use the **cable clock clear-counters** command.

Note This command is not applicable on the SC train.

This command supports the Cisco CMTS clock feature set, which provides a synchronized clock for improved Voice-over-IP (VoIP) operations. The clock feature set requires one of the following configurations:

- A Cisco uBR10012 router with one or two TCC+ cards that are connected to an external national clock source.
- A Cisco uBR7246 VXR router using a Cisco uBR-MC16S, Cisco uBR-MC16E, Cisco uBR-MC28C, or Cisco uBR-MC28C-BNC cable interface line card. The router must also be equipped with a Cisco cable clock card and be running Cisco IOS 12.1(1a)T1, 12.1(2)EC1, or a later release. The Cisco cable clock card should be connected to an external national clock source.

Only these cable interface cards support the external clock card reference from a clock card to distribute that signal to CMs or set-top boxes (STBs) attached to the specific network segments. You can use other cable interface cards, such as the Cisco uBR-MC16C, with the clock card, but these other cable interfaces will not synchronize their downstream SYNC messages with the external clock source.

Each CM or STB must also support VoIP applications and the clock feature set. For example, the Cisco uBR924, running Cisco IOS Release 12.0(7)T or later, supports clock card feature automatically.

Examples

The following is sample output from the **show controllers clock-reference** command for a Cisco uBR7246 VXR router with a national clock card:

```
Router# show controllers clock-reference

National clock card with T1 controller
Control register     :0x4
Status register      :0x54
LIU Config Register 0:0x0
LIU Config Register 1:0x0
1 events reported in 266636 seconds
Primary active :1, LOS :0
Secondary active :0, LOS :1
Holdovers :0, HW faults :0
Router#
```

The following is sample output from the **show controllers clock-reference** command for a Cisco uBR10012 router with two TCC+ cards.

Note Each TCC+ card—Active and Backup—has its own separate set of registers.

```
Router# show controllers clock-reference

Controllers for Card in Slot: 1
Interrupt Status Reg                : 0x0
Interrupt Mask Reg                  : 0x0
UCPC Bus Control Status Reg         : 0x4035
Push Button Status Reg              : 0x0
Line Card Presence Status Reg       : 0x21
TSRG Control Reg                    : 0xB800
LC Power off Control Reg            : 0x0
PEMA Voltage Monitor High Time Reg  : 0x0
PEMA Voltage Monitor Total Time Reg : 0x0
PEMA Current Monitor High Time Reg  : 0x0
PEMA Current Monitor Total Time Reg : 0x0
PEMB Voltage Monitor High Time Reg  : 0x66
PEMB Voltage Monitor Total Time Reg : 0xCD
PEMB Current Monitor High Time Reg  : 0x1C
PEMB Current Monitor Total Time Reg : 0x34
LIU0 Read Write Reg                 : 0x11
LIU1 Read Write Reg                 : 0x11
LCD Control Reg RS0                 : 0x39
LCD Control Reg RS1                 : 0x39
General Purpose Control Reg 0       : 0x2
General Purpose Control Reg 1       : 0x2
General Purpose Control Reg 2       : 0x40
LC Power off Status Reg             : 0x0
Sec Clock Control Reg               : 0x81
Sec Clock Status Reg                : 0x1
Push Button Input Reg               : 0x0
LC Presence Input Reg               : 0x21
Compare Errors rcvd from 1/1: 0
Parity Errors rcvd from 1/1 : 0
Controllers for Card in Slot: 2
Interrupt Status Reg                : 0x0
Interrupt Mask Reg                  : 0x0
UCPC Bus Control Status Reg         : 0x4053
Push Button Status Reg              : 0x0
Line Card Presence Status Reg       : 0x21
TSRG Control Reg                    : 0xB800
LC Power off Control Reg            : 0x0
PEMA Voltage Monitor High Time Reg  : 0x0
PEMA Voltage Monitor Total Time Reg : 0x0
PEMA Current Monitor High Time Reg  : 0x0
PEMA Current Monitor Total Time Reg : 0x0
```

```
PEMB Voltage Monitor High Time Reg   : 0x66
PEMB Voltage Monitor Total Time Reg  : 0xCD
PEMB Current Monitor High Time Reg   : 0x1C
PEMB Current Monitor Total Time Reg  : 0x34
LIU0 Read Write Reg                  : 0x30
LIU1 Read Write Reg                  : 0x11
LCD Control Reg RS0                  : 0x66
LCD Control Reg RS1                  : 0x20
General Purpose Control Reg 0        : 0x0
General Purpose Control Reg 1        : 0x1
General Purpose Control Reg 2        : 0x43
LC Power off Status Reg              : 0x0
Sec Clock Control Reg                : 0x80
Sec Clock Status Reg                 : 0x1
Push Button Input Reg                : 0x0
LC Presence Input Reg                : 0x21
Compare Errors rcvd from 2/1: 0
Parity Errors rcvd from 2/1 : 0
PEM A Power = 0w, PEM B Power = 343w
Router#
```

Note The **show controllers clock-reference** command might display compare errors on the Cisco uBR10012 router because there could be a slight delay at system startup before the TCC+ cards synchronize with each other. These initial compare errors can be ignored and cleared with the **cable clock clear-counters** command.

Most of the information shown by the **show controllers clock-reference** command is in the form of a hexadecimal bitfield that is not meaningful for normal operations, but the following fields can be useful in troubleshooting problems with the TCC+ and cable interface line cards:

- UCPC Bus Control Status Reg—Displays the status of both TCC+ cards and whether the LCD Display Panel is present.
- Line Card Presence Status Reg—Provides a software view of whether a cable interface line card is physically present in the Cisco uBR10012 chassis.
- LC Presence Input Reg—Provides a hardware view of whether a cable interface line card is physically present in the Cisco uBR10012 chassis.
- LC Power off Status Reg—Indicates whether a cable interface line card slot has been powered off using the **cable power** command.

The table below shows how to interpret these fields:

Table 10: show controllers clock-reference Field Descriptions

Field	Description
UCPC Bus Control Status Reg	Displays the status of both TCC+ cards and of the LCD Display Panel. Each TCC+ card displays this field from its own point of view, where “this card” refers to itself and “the other card” refers to the other TCC+ card slot. • Bits 2–0 display the status of the other TCC+ card: ◦ 0x00=No card. ◦ 0x03=The other card is the backup card. ◦ 0x05=The other card is the active card. • Bit 3 is set to 1 upon a state change for the other TCC+ card. • Bits 6–4 display the status of this TCC+ card: ◦ 0x00=No card. ◦ 0x03=This card is the backup card. ◦ 0x05=This card is the active card. ◦ 0x06=This card has assumed the active card role, because the other card had been active but is now unresponsive. • Bit 7 is set to 1 upon a state change for this TCC+ card. • Bits 13–8 are unused. • Bit 14 is set to 1 if the LCD Display Panel is present. • Bit 15 is set to 1 if the presence of the LCD Display Panel has changed since the counters were last cleared.

Field	Description
The most common bit patterns for the UCPC Bus Control Status Reg field are: • 0x4003—This TCC+ card is not present, the other card is the active card, and an LCD Display is present. • 0x4030—This TCC+ card is the active card, the other card is not present, and an LCD Display is present. • 0x4035—This TCC+ card is the backup card, the other card is the active card, and an LCD Display is present. • 0x4053—This TCC+ card is the active card, the other card is the backup card, and an LCD Display is present. • 0x4065—This TCC+ card has assumed the active card role, because the other card had been active but is now unresponsive. The LCD Display is present.	
Line Card Presence Status Reg	The first eight bits indicate whether the line card is physically present, and the high eight bits indicate whether the card's physical state has changed since the counters were last cleared using the **cable clock clear-counters** command. 0x0001=slot 5/0 contains a cable interface card 0x0002=slot 5/1 contains a cable interface card 0x0004=slot 6/0 contains a cable interface card 0x0008=slot 6/1 contains a cable interface card 0x0010=slot 7/0 contains a cable interface card 0x0020=slot 7/1 contains a cable interface card 0x0040=slot 8/0 contains a cable interface card 0x0080=slot 8/1 contains a cable interface card 0x0100=slot 5/0 has changed physical state 0x0200=slot 5/1 has changed physical state 0x0400=slot 6/0 has changed physical state 0x0800=slot 6/1 has changed physical state 0x1000=slot 7/0 has changed physical state 0x2000=slot 7/1 has changed physical state 0x4000=slot 8/0 has changed physical state 0x8000=slot 8/1 has changed physical state

Field	Description
LC Presence Input Reg	The lower eight bits of this register indicate whether a cable interface line card is physically present in the chassis slot. The bit meanings are the same as the lower eight bits the Line Card Presence Status Reg. The upper eight bits of this register are unused.
Note The Line Card Presence Status Reg displays the line card state as determined by the Cisco IOS software, while the LC Presence Input Reg displays the state as determined by the chassis hardware.	
LC Power off Status Reg	0x01=slot 5/0 is powered off 0x02=slot 5/1 is powered off 0x04=slot 6/0 is powered off 0x08=slot 6/1 is powered off 0x10=slot 7/0 is powered off 0x20=slot 7/1 is powered off 0x40=slot 8/0 is powered off 0x80=slot 8/1 is powered off

Tip In Cisco IOS Release 12.1(12)EC, Release 12.2(8)BC1, and later releases, you can add a timestamp to **show** commands using the **exec prompt timestamp** command in line configuration mode.

Related Commands

Command	Description
cable clock clear-counters	Clears the counters displayed with the **show controllers clock-reference** command.
cable power	On the Cisco uBR10012 routers, turns a cable interface line card on or off, which updates the LC Power off Status registers displayed with the **show controllers clock-reference** command.
show cable clock	Displays the status of the Cisco cable clock card and the TCC+ card.

show controllers jacket

To display Wideband SIP register values, use the **show controllers jacket** command in privileged EXEC mode.

show controllers jacket *slot/subslot* [**all**| **cpld**| **processor**| **vanadium**| **spi_fpga**]

Syntax Description

slot	The slot where the Wideband SIP resides. On the Cisco uBR10012 router, slots 1 and 3 can be used for the Wideband SIP.
subslot	The subslot where the Wideband SIP resides. On the Cisco uBR10012 router, subslot 0 is always specified.
all	(Optional) Displays values for all registers.
cpld	(Optional) Displays values for the CPLD registers.
processor	(Optional) Displays values for the processor registers.
vanadium	(Optional) Displays values for the Vanadium registers.
spi_fpga	(Optional) Displays values for the SPI FPGA registers.

Command Default

If you do not specify **all** or the keyword for a specific register, **show controllers jacket** displays values for all registers.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.3(21)BC	This command was introduced for the Cisco uBR10012 router.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Router.

Usage Guidelines

Use the **show controllers jacket** command to display Wideband SIP register values. Values for the following Wideband SIP components can be displayed:

- CPLD—A Complex Programmable Logic Device (CPLD) that contains logic to control resets, the I/O bus, and SPA OIR.
- Processor—The Wideband SIP on-board processor that is responsible for configuring the chips on the SIP, communication to the PRE module, and communication with the SPA.
- Vanadium—A Cisco-designed ASIC that provides a link between the Wideband SIP and the PRE module.
- SPI FPGA—A bus converter that supports up to eight channels on a POS-PHY Level 3 (PL3) interface and up to eight channels shared between the two System Packet Interface Level 4 Phase 2 (SPI 4.2) interfaces. The SPI FPGA also interfaces the on-board processor complex to the Wideband SIP bus.

Examples

The following examples display **show controllers jacket** command output for the **cpld** and **processor** keywords:

```
Router# show controllers jacket 1/0 cpld
CPLD registers

[A4000000] Version:4
[A4000004] Clock frequency:32
[A4000008] Reset status and control:1
[A400000C] Software reset reason:0
[A4000010] Datapath reset: 19
[A4000014] SPA 0 OIR register: FF
[A4000018] SPA 1 OIR register: FF
[A400001C] SPA OIR interrupt status: (would clear on read)
[A4000020] SPA OIR interrupt mask: FF

Router# show controllers jacket 1/0 processor
Processor Registers
 Port A:
  Pin Assignment      C00000
  Data Direction      FF437C3A
  Open-Drain          1800F
  Data                A88005
  Special Options     0000
 Port B:
  Pin Assignment      0008
  Data Direction      FFFFBEF
  Open-Drain          0000
  Data                BF0FEFC
  Special Options     0008
 Port C:
  Pin Assignment      3580C
  Data Direction      FF7CA7F3
  Open-Drain          0000
  Data                84D004
  Special Options     0000
 Port D:
  Pin Assignment      30005
  Data Direction      FFCFFFE
  Open-Drain          30000
  Data                30000
  Special Options     30000
```

Related Commands

Command	Description
show controllers modular-cable	Displays Wideband SPA information.

show controllers modular-cable

To display information about the Cisco uBR-MC3GX60V cable line card and Wideband SPA, use the **show controllers modular-cable** command in privileged EXEC mode.

show controllers modular-cable slot/*subslot*/*bay* {**brief**| **fpga_registers**| {**all**| **sfp** [**port** *port_num*]| **ge_phy** [**port** *port_num*]}}

Cisco IOS Releases 12.3(23)BC5, 12.2(33)SCB and later releases

show controllers modular-cable *slot*/*bay* /*portslot*/*subslot*/*controller* {**all**| **association**| **bpi-entry** *bpi-index*| **brief**| **config**| **crashinfo**| **dsid-log search** *min max*| **dsid-ref-log dsid** *n*| **errors**| **fpga_version**| **fpga_registers**| **ge_phy** [**port** *port_num*]| **iofpga**| **mapping** [*rf-channel*| *wb-channel*]| **registers**| **rf-channel** *channel_number*| **sfp** [**port** *port_num*]| **spa-log-all**| **stat-index-log search** *min max*| **status**| **wideband-channel** *channel_number*}

Note The options mentioned in the syntax above are indicative and may vary with the cable interface line card used in the Cisco uBR10012 universal broadband router.

Syntax Description

slot/subslot/bay or slot/bay/port	Wideband SPA slot, subslot, bay, and port. • *slot*—Slot where the Wideband SIP resides. The valid values are 1 and 3. • *subslot*—Subslot where the Wideband SIP resides. The valid value is 0. • *bay*—Wideband SIP bay where the SPA resides. The valid range is from 0 to 3.
slot/subslot/controller	Modular-cable line card slot, subslot, and controller. • *slot*—Modular-cable line card slot. The valid value range is from 5 to 8. • *subslot*—Modular-cable line card subslot. The valid value is 0 or 1. • *controller*—Modular-cable line card controller. The valid range is from 0 to 2.
port	Specifies the interface number on the SPA.
all	(Optional) Displays all information about the modular-cable controller.
association	Displays associations between the MAC domains and wideband interfaces.

bpi-entry *bpi-index*	Displays information about Baseline Privacy Interface (BPI). • *bpi-index*—BPI index. The valid range is from 0 to 24575.
brief	(Optional) Displays a brief summary of the controller information.
config	Displays information about the configuration of the downstream field-programmable gate array (FPGA).
counters	Displays information about channel counters.
crashinfo	Displays crash information for the Wideband SPA.
dsid-log search *min max*	Searches for downstream IDs (DSID) in the Wideband SPA logs. • *min*—Minimum search value. The valid range is from 1 to 65535. • *max*—Maximum search value. The valid range is from 1 to 65535. **Note** This keyword is used to collect data only when requested by Cisco TAC.
dsid-ref-log dsid *n*	Retrieves last statistical index and ref count for DSID. • *n*—DSID search value. The valid range is from 1 to 65535. **Note** This keyword is used to collect data only when requested by Cisco TAC.
errors	Displays errors.
fpga_registers	(Optional) Displays information on the Wideband SPA Field-Programmable Gate Array (FPGA) (Blaze) registers.
fpga_version	Displays the FPGA version of the cable interface line cards.
ge_phy	(Optional) Displays physical layer (PHY) information on the Gigabit Ethernet ports.
iofpga	Displays information about I/O FPGA.

mapping	Displays information about the mapping of the configured RF channel and wideband channels. • *rf-channel*—RF channel counters. The valid range is from 0 to 31. If not specified all channels are displayed. • *wb-channel*—Wideband channel counters.The valid range is from 0 to 31. If not specified all channels are displayed.
registers	Displays registers for the downstream FPGAs.
rf-channel *channel-number*	Displays information for the RF channel indicated by *channel-number*. • *channel-number*—RF channel number. The valid values are from 0 to 23.
sfp	(Optional) Displays information about the small form-factor pluggable (SFP) modules.
stat-index-log search *min max*	Searches for downstream statistical indexes in SPA logs. • *min*—Minimum search value. The valid range is from 1 to 65535. • *max*—Maximum search value. The valid range is from 1 to 65535. **Note** This keyword is used to collect data only when requested by Cisco TAC.
spa-log-all	Displays SPA debug logs. **Note** This keyword is used to collect data only when requested by Cisco TAC.
port *port_num*	(Optional) When used with **sfp** or **ge_phy** keywords, the information displayed is for the specified Gigabit Ethernet port. If the **port** *port_num* argument is not used, the information displayed is for both Gigabit Ethernet ports.
status	Displays status of the downstream FPGAs.
wideband-channel *channel-number*	Displays information about the wideband channel indicated by *channel-number*. • *channel-number*—Wideband channel number. The valid values are from 0 to 31.

Command Default If you specify no keyword or argument, all categories of information for both Gigabit Ethernet ports are displayed.

Command Modes Privileged EXEC (#)

Command History

Release	Modification
12.3(21)BC	This command was introduced for the Cisco uBR10012 router.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA.
12.3(23)BC5	The command output was modified.
12.2(33)SCB	This command was integrated into Cisco IOS Release 12.2(33)SCB. This command was modified to change the addressing format for a modular cable interface from *slot/subslot/bay* to *slot/bay/port.*
12.3(23)BC6	The command output was modified to capture the SPA environment monitoring information.
12.2(33)SCC	The command output was modified to capture the toggle information.
12.2(33)SCE	This command was modified to include multiple keywords for the Cisco uBR-MC3GX60V cable line card.
12.2(33)SCG	This command was modified to include **dsid-log**, **dsid-ref-log**, **stat-index-log**, and **spa-log-all** keywords.
12.2(33)SCH	Support was added for the Bonding Across 3G60 Controllers Support feature added. The valid ranges for *rf-channel* and *wb-channel* counters for the **mapping** option are specified.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Router.

Usage Guidelines If you specify **all** instead of **sfp** or **ge_phy**, information for the SFP module and PHY is displayed.

Note This command will not provide crash dump information for the Cisco 10000 series SIP-600. Use the show diag 1/0 crashdump command to obtain this information for the Cisco 10000 Series SIP-600.

Examples The following is a sample output of the show controller integrated-cable command with the bpi-entry keyword:

```
Router# show controllers modular-Cable card 8/1 bpi-entry 1
```

```
BPI Index: 1 Segment: 0
 Even Key: Invalid, Odd Key: Invalid
 Key Sequence Number: 0 Security Association: 0x0
 Key Type: DES
 Even Key: 0000-0000-0000-00  IV: 0000-0000-0000-0000
  Odd Key: 0000-0000-0000-00  IV: 0000-0000-0000-0000
```

Table 11: show controller modular-cable Field Descriptions

Field	Description
BPI Index	BPI index number.
Segment	Hardware segment used by the DOCSIS MAC address.
Even Key	Current value of the Even Key in the BPI entry.
Odd Key	Current value of the Odd Key in the BPI entry.
Key Sequence Number	Key sequence number.
Security Association	Security association identifier.
Key Type	Type of key stored based on the encryption algorithm (Data Encryption Standard [DES] or Advanced Encryption Standard [AES]).

The following is a sample output of the **show controllers modular-cable** command with **fpga_registers**, **sfp**, and **ge_phy** keywords. In some cases, only part of the output is shown.

```
Router# show controllers modular-cable 1/0/0 fpga_registers
REG blz_sw_rev_id offset 0x00000000 = 0x00000000
REG blz_hw_rev_id offset 0x00000004 = 0x04030422
REG rst_ctrl_reg_0 offset 0x00000008 = 0x00000000
REG led_ctrl_reg_0 offset 0x00000010 = 0x00000001
REG gp_config_reg_0 offset 0x00000030 = 0x80000000
REG test_reg offset 0x000000B0 = 0xDEADBEAF
REG adr_trap_reg offset 0x000000B4 = 0x00000040
REG spa_timeout_reg offset 0x000000B8 = 0x000003E8
REG spa_error_reg offset 0x000000BC = 0x0000000A
REG bm_int_stat_reg offset 0x00000100 = 0x00000000
REG sfp_all_int_stat_reg offset 0x00000104 = 0x00000000
REG spa_brd_int_stat_reg offset 0x00000108 = 0x00000203
REG spa_brd_int_en_reg offset 0x00000120 = 0x000000CC
REG spa_brd_int_ovrd_reg offset 0x00000130 = 0x00000000
REG sfp_int_stat_reg_0 offset 0x00000200 = 0x00000000
REG sfp_cfg_stat_reg_0 offset 0x00000204 = 0x00010007
REG sfp_int_stat_reg_1 offset 0x00000208 = 0x00000000
REG sfp_cfg_stat_reg_1 offset 0x0000020C = 0x00010007
REG blz_ctrl_stat_reg offset 0x00000300 = 0x0007FF01
REG dcm_status_reg offset 0x00000304 = 0x00000009
REG blz_sp_int_stat_reg_0 offset 0x00000310 = 0x00000008
...
Router# show controllers modular-cable 1/0/0 sfp port 1
SFP in port 1
SFP is present
SFP LOS is not detected
SFP TX FAULT is not detected
SFP TX is enabled
```

```
ID: SFP
        Extended ID: 4
        Connector: LC
        SONET compliance:  not specified
        Gigabit Ethernet compliance: 1000BASE-SX
        Fibre Channel link length:  not specified
        Fibre Channel transmitter technology:  not specified
        Fibre Channel transmission media:  not specified
        Fibre Channel speed:  not specified
        Encoding: 8B10B
        Bit Rate: 1300 Mbps
        50 micron-multimode fiber supported length: 550 m
        62.5 micron-multimode fiber supported length: 270 m
        Upper bit rate limit: not specified
        Lower bit rate limit: not specified
        Date code (yy/mm/dd): 05/02/23
        Vendor name: CISCO-AGILENT
        Vendor OUI: 12499
        Vendor Part Number (PN): QFBR-5766LP            Vendor Rev:
        Vendor SN (SN): AGS090855CE
        Options implemented:
                LOS Signal
                TX Fault Signal
                TX Disable Signal
        Enhanced options implemented: none
        Diagnostic monitoring implemented: none
        Idprom contents (hex):
        0x00:   03 04 07 00 00 00 01 00 00 00 00 01 0D 00 00 00
        0x10:   37 1B 00 00 43 49 53 43 4F 2D 41 47 49 4C 45 4E
        0x20:   54 20 20 20 00 00 30 D3 51 46 42 52 2D 35 37 36
        0x30:   36 4C 50 20 20 20 20 20 20 20 20 20 03 52 00 B5
        0x40:   00 1A 00 00 41 47 53 30 39 30 38 35 35 43 45 20
        0x50:   20 20 20 20 30 35 30 32 32 33 20 20 00 00 00 C4
        0x60:   00 00 06 C9 F0 FA 7C 01 B3 C8 41 6B 39 04 FC 85
        0x70:   BB 20 9E 00 00 00 00 00 00 00 00 00 B4 94 52 CC
        0x80:   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
        0x90:   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
        State: Initalized
Phased Initialization
        Phase Reached: 4
        Phase Exit Code: 0
        Phase Read Offset: 0
Socket Verification
Router# show controllers modular-cable 1/0/0 ge_phy port 0
Gigabit PHY information for port 0:
  PHY Status:
  status (reg 1) = 0x16D
    link is up, auto-negotiation is complete
    remote fault not detected, jabber not detected
  Extended status register (reg 15) = 0xC000
    1000BaseX full duplex capable    1000BaseX half duplex capable
  phy specific status (reg 17) = 0xAC14
    link is up (real-time), speed/duplex resolved
    speed: 1000 Mbps, duplex: full
    page not received, cable length is < 50m
    MDI cross-over status: MDI, downshift status: no
    energy detect status: sleep
    transmit pause: disabled, receive pause: enabled
    polarity: normal, jabber: no
  phy specific extended status (reg 27) = 0xB487
    Fiber/ copper auto selection disabled, fiber link
    Serial interface auto-negotiation bypass enabled
    Serial interface auto-negotiation bypass status:
      Link came up because regular fiber autoneg completed
    Interrupt polarity is active low
  receive error count: 0x0
  Auto-negotiation configuration and status:
    Auto-negotiation is enabled and is completed
    Speed/duplex is resolved to 1000 Mbps, full duplex
    Advertised capabilities: 1000BaseX/HD 1000BaseX/FD Pause capable (Asymmetric)
    Partner capabilities: 1000BaseX/FD
...
```

Note The above command output was modified to capture the SPA sensor temperature readings and error packet information.

The error information contains details about the:

- Timestamp of the capture.
- Interrupt state when packet is captured, which indicates the error type.
- Packet length.
- Blaze header part of the packet.

The following is a sample output of the show controllers modular-cable command with NO error packets.

```
Router# show controllers modular-Cable 1/0/1 | b reading
WBCMTS DOCSIS SPA temperature sensor 0, reading: 25C/77F
WBCMTS DOCSIS SPA temperature sensor 1, reading: 25C/77F
Error Packets Captured on Blaze SPI Interface:
Timestamp IntStat Len BlazeHeader
Detail Packet Content: (first 80 bytes, hex format)
```

The following is a sample output of the show controllers modular-cable command with captured error packets.

```
Router# show controllers modular-Cable 1/0/0
SPA 0 is present
status LED: [green]
Host 12V is enabled and is okay.
Power has been enabled to the SPA.
SPA reports power enabled and okay.
SPA reports it is okay and is NOT held in reset.
.................. <<< text omitted
WBCMTS DOCSIS SPA temperature sensor 0, reading: 26C/78F
WBCMTS DOCSIS SPA temperature sensor 1, reading: 25C/77F
Error Packets Captured on Blaze SPI Interface:
Timestamp IntStat Len BlazeHeader
000:00:12:49.190 C0000808 1510 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
000:00:13:04.948 C0000808 796 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
000:00:13:09.468 C0000808 60 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
000:00:13:14.320 C0000808 26 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
000:00:13:18.088 C0000808 496 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
Detail Packet Content: (first 80 bytes, hex format)
[Entry 00]
0x00: 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
0x10: 00 1C 9C 24 01 E0 2F 00 00 01 00 00 00 00 00 00
0x20: 00 0A 00 00 03 04 FD 00 00 48 03 FC 00 00 00 00
0x30: 00 00 00 00 00 00 00 05 00 00 00 00 80 06 12 78
0x40: 00 00 00 00 00 00 00 00 00 00 00 05 00 00 00 00
[Entry 01]
0x00: 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
0x10: 00 1C 9C 24 01 E0 2F 00 00 01 00 00 00 00 00 00
0x20: 00 0A 00 00 03 04 FD 00 00 48 03 FC 00 00 00 00
0x30: 00 00 00 00 00 00 00 05 00 00 00 00 80 06 12 78
0x40: 00 00 00 00 00 00 00 00 00 00 00 05 00 00 00 00
[Entry 02]
0x00: 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
0x10: 00 1C 9C 24 01 E0 2F 00 00 01 00 00 00 00 00 00
0x20: 00 0A 00 00 03 04 FD 00 00 48 03 FC 00 00 00 00
0x30: 00 00 00 00 00 00 00 05 00 00 00 00
[Entry 03]
0x00: 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
0x10: 00 1C 9C 24 01 E0 2F 00 00 01
[Entry 04]
0x00: 00 00 00 00 01 00 00 00 00 00 00 00 00 0F C2 00
0x10: 00 1C 9C 24 01 E0 2F 00 00 01 00 00 00 00 00 00
0x20: 00 0A 00 00 03 04 FD 00 00 48 03 FC 00 00 00 00
```

```
0x30: 00 00 00 00 00 00 00 05 00 00 00 00 80 06 12 78
0x40: 00 00 00 00 00 00 00 00 00 00 00 05 00 00 00 00
```

Note The temperature sensor readings in the command output shown above is specific to the Cisco IOS Release 12.3(23)BC and will not appear in the Cisco IOS Release 12.2(33)SCB and later releases.

Beginning in Cisco IOS Release 12.3(23)BC6, the command output was modified to capture the SPA environment monitoring information. The environment monitoring information includes:

Temperature sensor information:

- Sensor number
- Current sensor reading
- Low threshold
- Warning threshold
- Critical threshold
- Shutdown threshold

Voltage sensor information:

- Nominal value of the rail
- Current voltage reading
- Low shutdown threshold
- Low warning threshold
- High warning threshold
- High shutdown threshold

The following is a sample output of the show controllers modular-cable command that displays the SPA environment monitoring information.

```
Router# show controllers modular-cable 1/0/0 | b SPA Env
SPA Environment Monitoring Information:
Temperature sensors for SPA-24XDS-SFP[1/0]:
Sensor   Reading  Low      Warning  Critical Shutdown
0        26C      0C       58C      68C      85C
1        27C      0C       58C      68C      85C
Voltage sensors for SPA-24XDS-SFP[1/0]:
Nominal  Reading  LowShut  LowWarn  HighWarn HighShut
3.300V   3.276V   3.069V   3.135V   3.465V   3.531V
2.500V   2.485V   2.325V   2.375V   2.625V   2.675V
1.200V   1.186V   1.116V   1.140V   1.260V   1.284V
1.800V   1.801V   1.674V   1.710V   1.890V   1.926V
```

Note The SPAs are shut down automatically when the sensor readings go beyond the threshold shutdown value.

In Cisco IOS Release 12.2(33)SCC, when the primary link on the SPA toggles more than five times within 30 seconds, and the backup link is UP, the backup link is selected for traffic. The link switches back to the primary link during the next primary link transition after 30 seconds or when the backup link fails. The show controllers modular-cable command output was modified to capture the toggle information.

The following is a sample output of the show controllers modular-cable command that displays the toggle information.

```
Router# show controllers modular-cable 1/1/0
SPA 1 is present
status LED: [green]
Host 12V is enabled and is okay.
Power has been enabled to the SPA.
SPA reports power enabled and okay.
SPA reports it is okay and is NOT held in reset.
Gigabit Ethernet Port Selected : Port 0
Receive Interface              : Out of Reset
Receive Interface              : Enabled
Transmit Interface             : Out of Reset
Transmit Interface             : Enabled
Primary Receive Clock          : Enabled
Backup Receive Clock           : Enabled
SFP [Port 0] : 1000BASE-SX Present
 Tx Enabled , LOS Not Detected , TxFault Not Detected
 Link Status [Port 0] : UP
Primary port Link Up   Events : 2
Primary port Link Down Events : 0
Backup  port Link Up   Events : 2
Backup  port Link Down Events : 0
Current Link Toggle Count     : 0
Link Toggle Suppressed        : TRUE
Link Toggle Suppress Events   : 0
SFP [Port 1] : 1000BASE-SX Present
 Tx Enabled , LOS Not Detected , TxFault Not Detected
 Link Status [Port 1] : UP
Wideband Channel information
Channel    RF bitmap   Police Info: Bytes      Interval
0          0x7                      0           0 ms
1          0xC                      0           0 ms
2          0x0                      0           0 ms
3          0x0                      0           0 ms
4          0x0                      0           0 ms
5          0x0                      0           0 ms
6          0x0                      0           0 ms
7          0x0                      0           0 ms
8          0x0                      0           0 ms
9          0x0                      0           0 ms
10         0x0                      0           0 ms
11         0x0                      0           0 ms
```

The following is a sample output for the **rf-channel** keyword:

```
Router# show controllers Modular-Cable 8/1/0 rf-channel
Ctrl Chan Frequency  Mod Annex IP Address      MAC Address    DEPI Remote ID
0    0    453000000  256 B     10.31.136.100   0022.9084.4e3f 101231
0    1    459000000  256 B     10.31.136.100   0022.9084.4e3f 101232
0    2    465000000  256 B     10.31.136.100   0022.9084.4e3f 101233
0    3    471000000  256 B     10.31.136.100   0022.9084.4e3f 101234
0    4    477000000  256 B     10.31.136.100   0022.9084.4e3f 101241
0    5    483000000  256 B     10.31.136.100   0022.9084.4e3f 101242
0    6    489000000  256 B     10.31.136.100   0022.9084.4e3f 101243
0    7    495000000  256 B     10.31.136.100   0022.9084.4e3f 101244
0    8    0          64  B     0.0.0.0         0000.0000.0000 0
0    9    0          64  B     0.0.0.0         0000.0000.0000 0
0    10   0          64  B     0.0.0.0         0000.0000.0000 0
0    11   0          64  B     0.0.0.0         0000.0000.0000 0
0    12   0          64  B     0.0.0.0         0000.0000.0000 0
0    13   0          64  B     0.0.0.0         0000.0000.0000 0
0    14   0          64  B     0.0.0.0         0000.0000.0000 0
0    15   0          64  B     0.0.0.0         0000.0000.0000 0
0    16   0          64  B     0.0.0.0         0000.0000.0000 0
0    17   0          64  B     0.0.0.0         0000.0000.0000 0
0    18   0          64  B     0.0.0.0         0000.0000.0000 0
0    19   0          64  B     0.0.0.0         0000.0000.0000 0
0    20   0          64  B     0.0.0.0         0000.0000.0000 0
0    21   0          64  B     0.0.0.0         0000.0000.0000 0
```

```
0    22   0          64  B     0.0.0.0         0000.0000.0000 0
0    23   0          64  B     0.0.0.0         0000.0000.0000 0
Router# show controllers Modular-Cable 8/1/0 rf-channel 7
Ctrl Chan Frequency  Mod Annex IP Address      MAC Address    DEPI Remote ID
0    7    495000000  256 B     10.31.136.100   0022.9084.4e3f 101244
```

The following is a sample output for the **wideband-channel** keyword:

```
Router# show controllers Modular-Cable 8/1/0 wideband-channel

WB                      BG    Primary
channel                 ID    BG
Wideband-Cable8/1/0:0   1377  Yes
Wideband-Cable8/1/0:1   1378  Yes
Wideband-Cable8/1/0:2   1379  Yes
Wideband-Cable8/1/0:3   1380  Yes
Wideband-Cable8/1/0:4   1381  Yes
Wideband-Cable8/1/0:5   1382  Yes
Wideband-Cable8/1/0:6   1383  Yes
Wideband-Cable8/1/0:7   1384  Yes
Wideband-Cable8/1/0:8   1385  Yes
Wideband-Cable8/1/0:9   1386  Yes
Wideband-Cable8/1/0:10  1387  Yes
Wideband-Cable8/1/0:11  1388  Yes
Wideband-Cable8/1/0:12  1389  Yes
Wideband-Cable8/1/0:13  1390  Yes
Wideband-Cable8/1/0:14  1391  Yes
Wideband-Cable8/1/0:15  1392  Yes
Wideband-Cable8/1/0:16  1393  Yes
Wideband-Cable8/1/0:17  1394  Yes
Wideband-Cable8/1/0:18  1395  Yes
Wideband-Cable8/1/0:19  1396  Yes
Wideband-Cable8/1/0:20  1397  Yes
Wideband-Cable8/1/0:21  1398  Yes
Wideband-Cable8/1/0:22  1399  Yes
Wideband-Cable8/1/0:23  1400  Yes
Wideband-Cable8/1/0:24  1401  Yes
Wideband-Cable8/1/0:25  1402  Yes
Wideband-Cable8/1/0:26  1403  Yes
Wideband-Cable8/1/0:27  1404  Yes
Wideband-Cable8/1/0:28  1405  Yes
Wideband-Cable8/1/0:29  1406  Yes
Wideband-Cable8/1/0:30  1407  Yes
Wideband-Cable8/1/0:31  1408  Yes
Router# show controllers Modular-Cable 8/1/0 wideband-channel 0
WB                      BG    Primary
channel                 ID    BG
Wideband-Cable8/1/0:0   1377  Yes
```

The following is a sample output of the show controllers modular-cable mapping command:

```
router# show controllers modular-cable mapping
Ctrlr    RF       MC         MC Rem.    WB         WB         WB Rem.
         channel  BW %       Ratio      channel    BW %       Ratio
5/1/0    2        0          0
```

Effective with Cisco IOS Release 12.2(33)SCH, the Bonding Across 3G60 Controllers Support feature is introduced. The following example shows the output of the **show controllers modular-cable mapping** command to display bonding of RF channels across 3G60 controllers:

Router#show controllers modular-cable 7/0/0 mapping rf-channel 21

Ctrlr RF MC MC Rem. WB WB WB Rem.

channel BW % Ratio channel BW % Ratio

7/0/0 21 0 0 7/0/0:0 10 1

7/0/1:30 10 1

Router#show controllers modular-cable 7/0/1 mapping wb-channel 30

Ctrlr WB RF BW % Remaining

channel channel Ratio

7/0/1 30 7/0/0:20 10 1

The output of the *rf-channel* keyword above shows that the RF channel number 21 belongs to wideband interface bonding group 0 on controller 0 and bonding group 30 on controller 1, with 10 percent bandwidth allocated to it on each controller.

The following is a sample output of the **show controllers modular-cable registers** command:

```
router# show controllers modular-Cable 5/1/0 registers
JIB3_DS BPI registers (base address 0xF8880000)
bpi_int_isr_0                       [0x00000000] = 0x00000000
bpi_int_ier_0                       [0x00000004] = 0x0000000F
glb_int_isr_0                       [0x00000010] = 0x00000000
glb_int_ier_0                       [0x00000014] = 0x00001EFF
glb_int_isr_1                       [0x00000020] = 0x00000000
glb_int_ier_1                       [0x00000024] = 0x00001EFF
col_chip_mode_reg                   [0x00000030] = 0x00000001
bpi_int_fesr_0                      [0x00000040] = 0x00000000
bpi_tst_tp_sel_reg                  [0x00000050] = 0x00000000
bpi_tst_tp_reg                      [0x00000054] = 0x00000000
bpi_cnt_good_packet_in_cnt          [0x00000064] = 0x00013418
bpi_cnt_bad_packet_in_cnt           [0x00000068] = 0x00000000
bpi_cnt_good_packet_out_cnt         [0x0000006C] = 0x00013418
bpi_cnt_bad_packet_out_cnt          [0x00000070] = 0x00000000
bpi_ecc_sbit_err_cnt                [0x00000074] = 0x00000000
glb_sw_rev_id                       [0x00000078] = 0x00020002
glb_hw_rev_id                       [0x0000007C] = 0x0001000D
frz_reg                             [0x00000080] = 0x00000000
frz_en                              [0x00000084] = 0x00000001
glb_dcm_status                      [0x00000088] = 0x00000007
glb_sw_rst                          [0x0000008C] = 0x00000000
```

The following is a sample output for the **dsid-log** keyword:

```
Router# show controllers modular-Cable 1/0/0 dsid-log search 1 1000
SPA 0 DSID Info Log Count 17
Entry 5
00y:000d:00h:03m:11.908 ds_stat_index=00022 dsid=0x001A8 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00009 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 6
00y:000d:00h:03m:11.972 ds_stat_index=00021 dsid=0x001A0 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00010 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 7
00y:000d:00h:03m:12.208 ds_stat_index=00024 dsid=0x001B8 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00011 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 8
00y:000d:00h:03m:12.632 ds_stat_index=00023 dsid=0x001B0 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00012 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 9
00y:000d:00h:27m:13.024 ds_stat_index=00021 dsid=0x00000 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00010 WbIdx=000000 old_dsid=0x001A0 MD=01 (5/0/1) IPC_Port=0x000C0000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_CLEAR_CLEANUP
Entry 10
```

```
00y:000d:00h:27m:13.090 ds_stat_index=00022 dsid=0x00000 seq_num_b4=0x00001
1st_seq_num=0x00001
slotIdx=10 5/0 sid=00009 WbIdx=000000 old_dsid=0x001A8 MD=01 (5/0/1) IPC_Port=0x000C0000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_CLEAR_CLEANUP
Entry 11
00y:000d:00h:27m:13.156 ds_stat_index=00023 dsid=0x00000 seq_num_b4=0x00001
1st_seq_num=0x00001
slotIdx=10 5/0 sid=00012 WbIdx=000000 old_dsid=0x001B0 MD=01 (5/0/1) IPC_Port=0x000C0000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_CLEAR_CLEANUP
Entry 12
00y:000d:00h:27m:13.220 ds_stat_index=00024 dsid=0x00000 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00011 WbIdx=000000 old_dsid=0x001B8 MD=01 (5/0/1) IPC_Port=0x000C0000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_CLEAR_CLEANUP
Entry 13
00y:000d:00h:29m:30.388 ds_stat_index=00025 dsid=0x001C0 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00013 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 14
00y:000d:00h:29m:32.544 ds_stat_index=00026 dsid=0x001C8 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00014 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 15
00y:000d:00h:29m:36.446 ds_stat_index=00028 dsid=0x001D8 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00016 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 16
00y:000d:00h:29m:36.970 ds_stat_index=00027 dsid=0x001D0 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00015 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
SPA 0 DSID Suspect Count 0
No entries in the DSID Suspect List Log for SPA 0
```

The following is a sample output with the **stat-index-log** keyword:

```
Router# show controllers modular-Cable 1/0/0 stat-index-log search 1 1000
SPA 0 DSID Info Log Count 17
Entry 5
00y:000d:00h:03m:11.908 ds_stat_index=00022 dsid=0x001A8 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00009 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 6
00y:000d:00h:03m:11.972 ds_stat_index=00021 dsid=0x001A0 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00010 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 7
00y:000d:00h:03m:12.208 ds_stat_index=00024 dsid=0x001B8 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00011 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 8
00y:000d:00h:03m:12.632 ds_stat_index=00023 dsid=0x001B0 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00012 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 9
```

```
00y:000d:00h:27m:13.024 ds_stat_index=00021 dsid=0x00000 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00010 WbIdx=000000 old_dsid=0x001A0 MD=01 (5/0/1) IPC_Port=0x000C0000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_CLEAR_CLEANUP
Entry 10
00y:000d:00h:27m:13.090 ds_stat_index=00022 dsid=0x00000 seq_num_b4=0x00001
1st_seq_num=0x00001
slotIdx=10 5/0 sid=00009 WbIdx=000000 old_dsid=0x001A8 MD=01 (5/0/1) IPC_Port=0x000C0000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_CLEAR_CLEANUP
Entry 11
00y:000d:00h:27m:13.156 ds_stat_index=00023 dsid=0x00000 seq_num_b4=0x00001
1st_seq_num=0x00001
slotIdx=10 5/0 sid=00012 WbIdx=000000 old_dsid=0x001B0 MD=01 (5/0/1) IPC_Port=0x000C0000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_CLEAR_CLEANUP
Entry 12
00y:000d:00h:27m:13.220 ds_stat_index=00024 dsid=0x00000 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00011 WbIdx=000000 old_dsid=0x001B8 MD=01 (5/0/1) IPC_Port=0x000C0000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_CLEAR_CLEANUP
Entry 13
00y:000d:00h:29m:30.388 ds_stat_index=00025 dsid=0x001C0 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00013 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 14
00y:000d:00h:29m:32.544 ds_stat_index=00026 dsid=0x001C8 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00014 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 15
00y:000d:00h:29m:36.446 ds_stat_index=00028 dsid=0x001D8 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00016 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
Entry 16
00y:000d:00h:29m:36.970 ds_stat_index=00027 dsid=0x001D0 seq_num_b4=0x00000
1st_seq_num=0x00000
slotIdx=10 5/0 sid=00015 WbIdx=000000 old_dsid=0x00000 MD=01 (5/0/1) IPC_Port=0x00010000
this_bay=0
GblIdx=000000 slot=0 bay=0 src_thread=DSID_UPDATE
SPA 0 DSID Suspect Count 0
No entries in the DSID Suspect List Log for SPA 0
```

The following is a sample output with the **dsid-ref-log** keyword:

```
Router# show controllers modular-Cable 1/0/0 dsid-ref-log dsid 0xf000
dsid = 61440(0xF000) last_stat_index = 64936 ref_count = 1
```

Related Commands

Command	Description
show controllers jacket	Displays Wideband SIP register values.

show controller tengigabitethernet

To display information about the Gigabit Ethernet interface used by the Downstream External PHY Interface (DEPI), use the **show controllers tengigabitethernet** command in privileged EXEC mode.

show controller tengigabitethernet
tengigabitethernet-interface-number/port-adapter-number/tengigabitethernet-interface-number

Syntax Description

tengigabitethernet-interface-number/port-adapter-number/tengigabitethernet-interface-number	For the Cisco cBR router— • *tengigabitethernet-interface-number*—Refers to the Supervisor PIC slot number. The valid values for the *tengigabitethernet-interface-number* are 4 or 5. • *port-adapter-number*—The valid value is 0. • *tengigabitethernet-interface-number*—Refers to the Ten Gigabit Ethernet interface on the Supervisor PIC. The valid range is 0 to 7.

Command Default

None

Command Modes

Privilege EXEC (#)

Command History

Release	Modification
IOS-XE 3.15.0S	This command was introduced on the Cisco cBR Series Converged Broadband Router. This command replaces the **show controllers gigabitethernet** command.

Examples

This example shows the output of the **show controllers tengigabitethernet** command on the Cisco cBR router:

```
Router#show controller tenGigabitEthernet 4/1/0
Show Controller Information for TenGigabitEthernet4/1/0

SFP Information:
================
SFP not present or SFP IDPROM read error
Global Debug Statistics:
==================

ESI Probus Master IF
    gpio_uncorr_ecc_cnt     : 0
```

```
    pb_uncorr_ecc_cnt       : 0
    gpio_corr_ecc_cnt       : 0
    pb_corr_ecc_cnt         : 0

ESI SEM
    sem_corr_irq0_cnt       : 0
    sem_corr_irq1_cnt       : 0
    sem_corr_irq2_cnt       : 0
    sem_corr_irq3_cnt       : 0
MAC Probus Slave IF
    gpio_uncorr_ecc_cnt     : 0
    pb_uncorr_ecc_cnt       : 0
    gpio_corr_ecc_cnt       : 0
    pb_corr_ecc_cnt         : 0

MAC SEM
    sem_corr_irq0_cnt       : 0
    sem_corr_irq1_cnt       : 0
    sem_corr_irq2_cnt       : 0
    sem_corr_irq3_cnt       : 0


Interface Debug Statistics:
===========================

Ingress Modules:
----------------
MAC 10G
    mac_rx_dropped_pkt_cnt  : 0
    mac_rx_ts_crc_bad_cnt   : 0

MAC Ingress QoS
    dropped_pkt_cnt_hi_priority  : 0
    dropped_pkt_cnt_lo_priority  : 0

MAC FIFO Control
    hi_pkt_cnt         : 0
    lo_pkt_cnt         : 0
    hi_drop_pkt_cnt    : 0
    lo_drop_pkt_cnt    : 0
    hi_buf_fullness    : 0
    lo_buf_fullness    : 0

MAC Serdes Pktbus IF
    tx_pkt_cnt               : 0

ESI Serdes Pktbus IF
    rx_pkt_cnt                : 0
    pkt_crc_err_cnt           : 0
    ser_soft_err_cnt          : 0

ESI Ingress Scheduler
    hiq_pkt_count       : 0
    loq_pkt_count       : 0
    hiq_drop_pkt_cnt    : 0
    loq_drop_pkt_cnt    : 0
    buf_hiq_fullness    : 0
     buf_loq_fullness    : 0

MAC Priority FC
     rx_hi_pause_cnt   : 0
     rx_low_pause_cnt  : 0
     tx_hi_pause_cnt   : 0
     tx_low_pause_cnt  : 0

Egress Modules:
------------
ESI Egress Header (DP0)
    esi_pkt_count                : 0
    dropped_pkt_channel_not_found : 0
    dropped_pkt_invalid_slot_id   : 0
```

```
ESI Egress Scheduler
    hiq_pkt_count       : 0
    loq_pkt_count       : 0
    hiq_drop_pkt_cnt    : 0
    loq_drop_pkt_cnt    : 0
    buf_hiq_fullness    : 0
    buf_loq_fullness    : 0

ESI Flow Control
    enable              : 0x00000000
    status              : 0x00000000
    total_tx_pause_cnt  : 0
    tx_pause_cnt_hi     : 0
    tx_pause_cnt_low    : 0

ESI Serdes Pktbus IF
    tx_pkt_cnt        : 0

MAC Serdes Pktbus IF
    rx_pkt_cnt               : 0
    pkt_crc_err_cnt          : 0
    ser_soft_err_cnt         : 0

MAC Scheduler
    hiq_pkt_count       : 0
    loq_pkt_count       : 0
    hiq_drop_pkt_cnt    : 0
    loq_drop_pkt_cnt    : 0
    buf_hiq_fullness    : 0
    buf_loq_fullness    : 0

MAC 10G
    mac_tx_dropped_pkt_cnt  : 0


Low Priority IRQ Counts
==================

PCIE Local
--------------------------------------------------------------------------------
    tx_terr_drp:                        0, tx_src_dis:                          0
    tx_err_fwd:                         0, rcv_regaccess_err_fwd:               0
    rcv_regaccess_ecrc_err:             0, cfg_err_ur_regaccess                 0
    cfg_err_ur_pktdma:                  0, cfg_pktdma_err_poison:               0
    msi_req_fail:                       0, msi_numvec_mismatch:                 0
    cfg_err_cpl_unexp:                  0, cfg_err_cpl_timeout_pktdma:          0
    cfg_err_cpl_abort_regaccess:        0, from_cpu_timeout_regaccess:          0
    phy_8b10b_err:                      0
    from_cpu_rd_cpl_trgt_err_regaccess:                                         0
    from_cpu_wr_invalid_trgt_err_regaccess:                                     0
    from_cpu_wr_trgt_err_regaccess:                                             0
    i2c_wrong_sl_id:                    0, i2c_excess_data:                     0
    i2c_insuf_wdata:                    0, i2c_insuf_addr_bytes:                0
     dma_missing_eop:                    0

PCIE Peer
--------------------------------------------------------------------------------
    tx_terr_drp:                        0, tx_src_dis:                          0
    tx_err_fwd:                         0, rcv_regaccess_err_fwd:               0
    rcv_regaccess_ecrc_err:             0, cfg_err_ur_regaccess                 0
    cfg_err_ur_pktdma:                  0, cfg_pktdma_err_poison:               0
    msi_req_fail:                       0, msi_numvec_mismatch:                 0
    cfg_err_cpl_unexp:                  0, cfg_err_cpl_timeout_pktdma:          0
    cfg_err_cpl_abort_regaccess:        0, from_cpu_timeout_regaccess:          0
    phy_8b10b_err:                      0
    from_cpu_rd_cpl_trgt_err_regaccess:                                         0
    from_cpu_wr_invalid_trgt_err_regaccess:                                     0
    from_cpu_wr_trgt_err_regaccess:                                             0
    i2c_wrong_sl_id:                    0, i2c_excess_data:                     0
    i2c_insuf_wdata:                    0, i2c_insuf_addr_bytes:                0
    dma_missing_eop:                    0

ESI ProcBus
```

```
-------------------------------------------------------------------------------
    uncorr_proc_bus_ecc_err:           0, uncorr_gpio_ecc_err:                0
    corr_proc_bus_ecc_err:             0, corr_gpio_ecc_err:                  0

ESI PktBus
-------------------------------------------------------------------------------
    frame_sync_err_lane0:              0, frame_sync_err_lane1:               0
    descrambler_err:                   0, decode_block_err:                   0
    rx_ifg_err:                        0, serdes_pkt_crc_error:               0
    input_pkt_error:                   0, input_fifo_sync_err:                0
    uncorr_fifo_err:                   0, corr_fifo_err:                      0
    rx_fifo_wr_err:                    0, rx_fifo_rd_err:                     0

ESI Ingress Scheduler
-------------------------------------------------------------------------------
    fifo_sgl_ecc_err:                  0, fifo_dbl_ecc_err:                   0
    fifo_flushed:                      0, pkt_len_mismatch_err:               0
    fifo_eop_err:                      0, fifo_sop_err:                       0
    packet_dropped_err:                0, lo_desc_fifo_full_pkt_dropped:      0
    hi_desc_fifo_full_pkt_dropped:     0, lo_buf_fifo_full_pkt_dropped:       0
    hi_buf_fifo_full_pkt_dropped:      0, pkt_dropped_pb_if_err:              0
    pkt_dropped_pb_err:                0, pkt_dropped_too_big:                0
    pkt_dropped_too_small:             0, pkt_len_mismatch_lo_err:            0
    pkt_len_mismatch_hi_err:           0

ESI Egress Header
-------------------------------------------------------------------------------
    slot_id_mismatch_err:              0, channel_not_found_err:              0
    pkt_too_small_err:                 0, fifo_parity_err:                    0
    fifo_rd_err:                       0, fifo_wr_err:                        0

ESI Egress Scheduler
-------------------------------------------------------------------------------
    buf_fifo_rd_err:                   0, buf_fifo_wr_err:                    0
    desc_fifo_rd_err:                  0, desc_fifo_wr_err:                   0
    desc_fifo_dbl_ecc_err:             0, fifo_sop_err:                       0
    fifo_eop_err:                      0, fifo_len_err:                       0
    fifo_flushed:                      0, buf_fifo_dbl_ecc_err:               0
    buf_fifo_sgl_ecc_err:              0, buf_fifo_pkt_dropped_full:          0
    desc_fifo_pkt_dropped_full:        0, desc_fifo_sgl_ecc_err:              0
    pkt_len_mismatch_hi_err:           0, pkt_len_mismatch_low_err:           0
    pkt_too_small:                     0, pkt_too_big:                        0
    pb_err:                            0, pb_if_err:                          0

ESI Flow Control
-------------------------------------------------------------------------------
    channel_not_found_err:             0, qstat_rx_error:                     0

MAC ProcBus
-------------------------------------------------------------------------------
    uncorr_proc_bus_ecc_err:           0, uncorr_gpio_ecc_err:                0
    corr_proc_bus_ecc_err:             0, corr_gpio_ecc_err:                  0

MAC PktBus
-------------------------------------------------------------------------------
    frame_sync_err_lane0:              0, frame_sync_err_lane1:               0
    descrambler_err:                   0, decode_block_err:                   0
    rx_ifg_err:                        0, serdes_pkt_crc_error:               0
    input_pkt_error:                   0, input_fifo_sync_err:                0
    uncorr_fifo_err:                   0, corr_fifo_err:                      0
    rx_fifo_wr_err:                    0, rx_fifo_rd_err:                     0

MAC 10g MAC
-------------------------------------------------------------------------------
    rx_fifos_flushed_error:            0, rx_buffer_read_error:               0
    rx_buffer_write_error:             0, rx_pkt_sync_error:                  0
    tx_fifos_flushed_error:            0, tx_buffer_read_error:               0
    tx_buffer_write_error:             0, tx_pkt_sync_error:                  0
    rx_buffer_pkt_drp:                 0, rx_frame_too_long:                  0
    rx_frame_too_short:                0, tx_buffer_pkt_drp:                  0
    tx_frame_too_long:                 0, tx_frame_too_short:                 0
    tx_header_len_chk_err:             0, tx_pb_if_err:                       0
    rx_ts_crc_bad:                     0
```

```
MAC Ingress QoS
-------------------------------------------------------------------------------
    data_fifo_rd_err:                   0, data_fifo_wr_err:                    0
    desc_fifo_rd_err:                   0, desc_fifo_wr_err:                    0
    desc_fifo_dbl_ecc_err:              0, fifo_sop_err:                        0
    fifo_eop_err:                       0, fifo_len_err:                        0
    fifo_flushed:                       0, data_fifo_dbl_ecc_err:               0
    data_fifo_sgl_ecc_err:              0, desc_fifo_sgl_ecc_err:               0
    ipv4_hdr_checksum_err:              0, pkt_len_mismatch_hi_err:             0
    pkt_len_mismatch_low_err:           0, pkt_too_small:                       0
    pkt_too_big:                        0, pb_err:                              0
    pb_if_err:                          0

MAC FIFO Ctl LOW
-------------------------------------------------------------------------------
    pkt_drop_rld_buffer_full:           0, pkt_drop_bypass_mode:                0
    pkt_drop_incoming_pkt_err:          0, pkt_drop_rld_output_pkt_err:         0
    uncorr_ecc_data_fifo_out:           0, corr_ecc:                            0

MAC RLDRAM
-------------------------------------------------------------------------------
    corr_rld_ecc_err:                   0, corr_bram_ecc_err:                   0
    ecc_cntr_over:                      0, ima_when_bist:                       0

MAC FIFO CTRL MUX
-------------------------------------------------------------------------------
   hi_priority_fifo_ovf_err:            0, hi_priority_fifo_ufl_err:            0
   lo_priority_fifo_ovf_err:            0, lo_priority_fifo_ufl_err:            0
   data_fifo_dbl_ecc_err:               0, data_fifo_sgl_ecc_err:               0

   MAC MAC Shceduler
-------------------------------------------------------------------------------
    buf_fifo_rd_err:                    0, buf_fifo_wr_err:                     0
    desc_fifo_rd_err:                   0, desc_fifo_wr_err:                    0
    desc_fifo_dbl_ecc_err:              0, fifo_sop_err:                        0
    fifo_eop_err:                       0, fifo_len_err:                        0
    fifo_flushed:                       0, buf_fifo_dbl_ecc_err:                0
    buf_fifo_sgl_ecc_err:               0, buf_fifo_pkt_dropped_full:           0
    desc_fifo_pkt_dropped_full:         0, desc_fifo_sgl_ecc_err:               0
    pkt_len_mismatch_hi_err:            0, pkt_len_mismatch_low_err:            0
    pkt_too_small:                      0, pkt_too_big:                         0
    pb_err:                             0, pb_if_err:                           0



Router#
```

Related Commands

Command	Description
show controller ethernet	Displays the hardware status of the backplane ethernet (BPE) device.

show cpd

To display the CPD functionality state, use the **show cpd** command in privileged EXEC mode.

show cpd

Command Default Information for the CPD state is displayed.

Command Modes Privileged EXEC

Command History

Release	Modification
12.3(21a)BC3	This command was introduced.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Router.

Examples This example shows the output of the **show cpd** command:

```
Router# show cpd
CPD enabled
CR ID :12345
```

Related Commands

Command	Description
cpd	Enables CPD.

show cr10k-rp cable

Note This command is meant for engineering debugging, and not for general customer use.

To display packet processing information for a particular service ID (SID) on a cable interface, use the **show cr10k-rp cable** command in user EXEC or privileged EXEC mode.

show cr10k-rp cable *slot/subslot/port sid* {**classifier**| **mac-rw-index**| **queue**| **service-flow** {**ds**| **us**}}

Syntax Description

cable *slot/subslot/port*	Identifies the cable interface on the Cisco uBR10012 router for which information should be displayed, where: • *slot*—0 to 8 • *subslot*—0 or 1 • *port*—0 to 4 (depending on the cable interface)
sid	(Optional) Identifies the service ID (SID) for which information should be displayed.
classifier	Displays classifier information for the SID.
mac-rw-index	Displays the MAC rewrite index for the SID.
queue	Displays information about the output packet queues for the modem identified by the SID.
service-flow ds	Displays the information of the downstream service-flows for the modem identified by the SID.
service-flow us	Displays the information of the upstream service-flows for the modem identified by the SID.

Command Default

None

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
12.2(15)BC1	This command was introduced for the Cisco uBR10012 router.
12.3BC	This command was integrated into Cisco IOS release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS release 12.2(33)SCA.
IOS-XE 3.15.OS	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

Usage Guidelines

The **show cr10k-rp cable** command displays information that the PRE routing processor (RP) module has about a particular SID. This information includes configuration information about the SID, as well as internal status information that is useful only to Cisco engineers in troubleshooting problems.

Examples

The following example shows typical output for the **show cr10k-rp cable** command for a SID that identifies a cable modem:

```
Router# show cr10k-rp c6/1/0 2 classifier

Mac Rw Index: 5 CCB Index: 7
CM Classifiers:
id=4, sfid=14 CFR Index 16396 RP sfindex 16396,
  prio=10, sip=0.0.0.0, sip mask=0.0.0.0
  dip=0.0.0.0, dip mask=0.0.0.0, prot=17, tos=A0,E0
  sport = 0,750, dport = 1024,10000 matches = 0

id=2, sfid=13 CFR Index 16395 RP sfindex 16395,
  prio=9, sip=0.0.0.0, sip mask=0.0.0.0
  dip=0.0.0.0, dip mask=0.0.0.0, prot=17, tos=A0,E0
  sport = 0,65535, dport = 0,65535 matches = 0

id=3, sfid=12 CFR Index 16394 RP sfindex 16394,
  prio=8, sip=9.0.0.0, sip mask=255.255.0.0
  dip=1.11.22.0, dip mask=255.255.255.0, prot=256, tos=0,FF
  sport = 0,65535, dport = 0,65535 matches = 0

id=1, sfid=11 CFR Index 16393 RP sfindex 16393,
  prio=7, sip=0.0.0.0, sip mask=0.0.0.0
  dip=1.11.22.0, dip mask=255.255.255.0, prot=256, tos=0,FF
  sport = 0,65535, dport = 0,65535 matches = 0
```

The following example shows typical output for the **show cr10k-rp classifier** command for a SID that identifies a customer premises equipment (CPE) device:

```
Router# show cr10k-rp c6/0/0 70 classifier

CPE Classifiers:
Mac Rw Index: 390       CCB Index: 97
id=7, sfid=205 CFR Index 16484 RP sfindex 16484,
  prio=255, sip=0.0.0.0, sip mask=0.0.0.0
  dip=15.0.0.1, dip mask=255.255.255.255, prot=257, tos=0,FF
  sport = 0,65535, dport = 1001,1001 matches = 0
id=1, sfid=199 CFR Index 16478 RP sfindex 16478,
  prio=25, sip=0.0.0.0, sip mask=0.0.0.0
  dip=0.0.0.0, dip mask=0.0.0.0, prot=257, tos=0,FF
  sport = 0,65535, dport = 1000,1000 matches = 0
```

```
id=5, sfid=203 CFR Index 16482 RP sfindex 16482,
  prio=0, sip=0.0.0.0, sip mask=0.0.0.0
  dip=15.0.0.1, dip mask=255.255.255.255, prot=256, tos=0,FF
  sport = 0,65535, dport = 0,65535 matches = 0
id=0, sfid=0 CFR Index 0 RP sfindex 0,
  prio=0, sip=0.0.0.0, sip mask=0.0.0.0
  dip=0.0.0.0, dip mask=0.0.0.0, prot=0, tos=2,1
  sport = 1000,500, dport = 1000,500 matches = 0
-----------------------------------------------------------
CPE Classifiers:
Mac Rw Index: 387       CCB Index: 93
id=4, sfid=202 CFR Index 16481 RP sfindex 16481,
  prio=255, sip=0.0.0.0, sip mask=0.0.0.0
  dip=14.0.0.1, dip mask=255.255.255.255, prot=17, tos=0,FF
  sport = 0,65535, dport = 0,65535 matches = 0
id=1, sfid=199 CFR Index 16478 RP sfindex 16478,
  prio=25, sip=0.0.0.0, sip mask=0.0.0.0
  dip=0.0.0.0, dip mask=0.0.0.0, prot=257, tos=0,FF
  sport = 0,65535, dport = 1000,1000 matches = 0
id=0, sfid=0 CFR Index 0 RP sfindex 0,
  prio=0, sip=0.0.0.0, sip mask=0.0.0.0
  dip=0.0.0.0, dip mask=0.0.0.0, prot=0, tos=2,1
  sport = 1000,500, dport = 1000,500 matches = 0
id=0, sfid=0 CFR Index 0 RP sfindex 0,
  prio=0, sip=0.0.0.0, sip mask=0.0.0.0
  dip=0.0.0.0, dip mask=0.0.0.0, prot=0, tos=2,1
  sport = 1000,500, dport = 1000,500 matches = 0
-----------------------------------------------------------
```

The following example shows typical output for the **mac-rw-index** option:

```
Router# show cr10k-rp c8/0/0 1 mac-rw-index

CPE Information for Interface Cable8/0/0 SID 1:
        Link Table Slot: 17  Mac-rw-index: 17
Router# show cr10k-rp c8/0/0 2 mac-rw-index

CPE Information for Interface Cable8/0/0 SID 2:
        Link Table Slot: 18  Mac-rw-index: 18
Router#
```

Tip To display more information about the max-rw-index, use the **show pxf cpu cef** command to display information for a specific IP address. The output of this command shows the max-rw-index value in the "rw_index" field.

The following example shows typical output for the **show cr10k-rp queue** command:

```
Router# show cr10k-rp c6/1/0 1 queue

RP SFID 16384 LC SFID 4
Queue Index: 293        QID 293 VCCI 6162       ClassID 5       Refcount 1
        Priority: Lo    Rates:(Act/Conf) CIR 0/0 MIR 6067/6067 EIR 1260/1260
        Statsitics: Length 0 Pkts 1 Octets 52 TailDrops 0 BufferDrops 0
RP SFID 16385 LC SFID 7
Queue Index: 294        QID 294 VCCI 6162       ClassID 6       Refcount 1
        Priority: Lo    Rates:(Act/Conf) CIR 0/0 MIR 0/1820 EIR 0/1260
        Statsitics: Length 0 Pkts 0 Octets 0 TailDrops 0 BufferDrops 0
RP SFID 16386 LC SFID 8
Queue Index: 295        QID 295 VCCI 6162       ClassID 7       Refcount 1
        Priority: Lo    Rates:(Act/Conf) CIR 0/0 MIR 0/2427 EIR 0/1260
        Statsitics: Length 0 Pkts 0 Octets 0 TailDrops 0 BufferDrops 0
ubr-45#show cr10k-rp mod 1/2/0:0 queue
BE Queues:
Queue Index: 131241, GlobalQID 71, CBLT ID 131241
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32881, lc_sfid 29, min_rate(bps) 0, max_rate(bps) 0
CIR Queues:
Queue Index: 2049, GlobalQID 70, CBLT ID 2049
        MinRate(Kbps) 100, ExcessRatio 32, ShapeRate(bps) 0, QLimit 255
```

```
Service Flow(s): rp_sf_index 32880, lc_sfid 8, min_rate(bps) 100000, max_rate(bps) 0
LL Queues:
```

The following example shows typical output for the **show cr10k-rp service-flow** command for both the downstream and upstream directions:

```
Router# show cr10k-rp c8/0/0 1 service-flow ds

RP DS SFID     LC SFID        Bytes          Packets        QID
16385          4              0              0              261
Router# show cr10k-rp c8/0/0 1 service-flow us

SFID           SID
3              1
```

Related Commands

Command	Description
show cr10k-rp queue	Displays information about the packet queues for a cable interface.

show cr10k-rp controller

Note This command is meant only for engineering debugging, and not for general customer use.

To display packet processing information for a particular service ID (SID) on a cable interface, use the **show cr10k-rp controller** command in user EXEC or privileged EXEC mode.

Cisco IOS Releases 12.3(21)BC, 12.3(23)BC, and 12.2(33)SCA

show cr10k-rp controller modular-cable *slot/subslot/port* {**lblt**| **pblt**}

Cisco IOS Release 12.2(33)SCB

show cr10k-rp controller modular-cable *slot/bay/port* {**lblt**| **pblt**}

Cisco IOS Release 12.2(33)SCF

show cr10k-rp controller modular-cable *slot/subslot/unit* {**acfe** [**cluster** *cluster-index*]| **lblt**| **pblt**}

Syntax Description

modular-cable *slot/bay/port*	Identifies the cable interface on the Cisco uBR10012 router for which information should be displayed, where: • *slot*—0 to 8 • *bay*—0 or 1 • *subslot*—0 to 3 • *port*—0 • *unit*—0
acfe	Identifies the Logical Bandwidth Limiting Traffic (LBLT) associated with the RF Physical Logical Bandwidth Limiting Traffic (PBLT). • *cluster-index*—Cluster index. The valid values range from 0 to 31.
lblt	Identifies the LBLT associated with the RF PBLT.
pblt	Identifies the PBLTs associated with the RF Channels.

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
12.2(15)BC1	This command was introduced for the Cisco uBR10012 router.
12.3BC	This command was integrated into Cisco IOS release 12.3BC. The modular-cable keyword was introduced.
12.2(33)SCA	This command was integrated into Cisco IOS release 12.2(33)SCA.
12.2(33)SCB	This command was modified. The addressing format for the modular-cable interface and wideband-cable interface changed from *slot/subslot/bay* to *slot/bay/port.*
12.2(33)SCF	This command was modified. The acfe keyword was added.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Router.

Usage Guidelines

The **show cr10k-rp controller** command displays information that the PRE route processor (RP) module has for a particular SID. This information includes configuration information about the SID, as well as internal status information that is useful only to Cisco engineers during troubleshooting.

Examples

The following examples show sample outputs for the **show cr10k-rp controller** command for a SID that identifies a cable modem:

```
Router# show cr10k-rp controller modular-cable 1/1/0 lblt

LBLTs on each RF Channel's PBLT
RFChnl WBChnl/LBLTGrp LBLTId Weight/Quantum
0          -/36        37          1/5520
          12/16        179         1/4478
1          -/37        39          1/0
          12/16        180         1/10000
2          -/38        41          1/0
          12/16        181         1/4473
          31/35        182         1/5526
3          -/39        43          1/0
          31/35        183         1/10000
4          -/40        45          1/0
5          -/41        47          1/0
6          -/42        49          1/0
7          -/43        51          1/0
8          -/44        53          1/0
9          -/45        55          1/0
10         -/46        57          1/0
11         -/47        59          1/0
12         -/48        61          1/0
13         -/49        63          1/0
14         -/50        65          1/0
15         -/51        67          1/0

Router# show cr10k-rp controller modular-cable 1/1/0 pblt

RF Channel PBLTs on Modular-Cable 1/0/0
Channel PBLTIndex BW(Kbps) Flowbit(prd/ofst) Rsrc/FlowRsrc
```

```
0       3         36000         512/0             3/3
1       4         37500         512/4             3/3
2       5         35625         512/8             3/3
3       6         37500         512/12            3/3
4       7         26000         512/16            3/3
5       8         26000         512/20            3/3
6       9         26000         512/24            3/3
7       10        26000         512/28            3/3
8       11        26000         512/32            3/3
9       12        26000         512/36            3/3
10      13        26000         512/40            3/3
11      14        26000         512/44            3/3
12      15        26000         512/48            3/3
13      16        26000         512/52            3/3
14      17        26000         512/56            3/3
15      18        26000         512/60            3/3
```

The following example shows a sample output for the **show cr10k-rp controller** command with the acfe keyword:

```
Router# show cr10k-rp controller modular-cable 1/1/0 acfe
Modular-Cable 1/0/0 status:
Topology changed: No
========Cluster 0========
Number of RF:   2
RF      FlexBW  WB      GuarBW  Quanta
0       28687   0       6028    2101
                -       22659   7898
1       28687   0       15030   5239
                -       13657   4760
Number of BG:   3
!
!
!
```

The following example shows a sample output for the **show cr10k-rp controller** command with the acfe keyword for a particular cluster:

```
Router# show cr10k-rp controller modular-cable 1/1/0 acfe cluster 1
Modular-Cable 1/0/0 status:
Topology changed: No
========Cluster 1========
Number of RF:   2
RF      FlexBW  WB      GuarBW  Quanta
2       28687   1       11695   4076
                -       16992   5923
3       28687   1       11696   4077
                -       16991   5922
Number of BG:   3
!
!
!
```

Related Commands

Command	Description
show cr10k-rp queue	Displays information about the packet queues for a cable interface.

show cr10k-rp queue

Note This command is meant for engineering debugging, and not for general customer use.

To display information about the packet queues for a cable interface, use the **show cr10k-rp queue** command in user EXEC or privileged EXEC mode.

Cisco IOS Releases 12.3(21)BC, 12.3(23)BC, and 12.2(33)SCA

show cr10k-rp {**cable** *slot/subslot/port*| **modular-cable** *slot/subslot/port:channel*| **wideband-cable** *slot/subslot/port:channel*} **queue** {**be**| **cir**| **llq**}

Cisco IOS Release 12.2(33)SCB

show cr10k-rp {**cable** *slot/subslot/port*| **modular-cable** *slot/bay/port:channel*| **wideband-cable** *slot/bay/port:channel*} **queue**

Syntax Description

cable *slot/subslot/port*	Identifies the cable interface on the Cisco uBR10012 router for which information should be displayed, where: • *slot*—0 to 8 • *subslot*—0 or 1 • *port*—0 to 4
modular-cable *slot/bay/port:channel*	Identifies the cable interface on the Cisco uBR10012 router for which information should be displayed, where: • *slot*—0 to 8 • *bay*—0 or 1 • *port*—0 • *channel*—0 **Note** Support for **modular-cable** keyword was introduced in Cisco IOS Release 12.3(23)BC.

wideband-cable *slot/bay/port:channel*	Identifies the wideband-cable interface on the Cisco uBR10012 router for which information should be displayed, where: • *slot*—0 to 8 • *bay*—0 or 1 • *port*—0 • *channel*—0 **Note** Support for **wideband-cable** keyword was introduced in Cisco IOS Release 12.3(21)BC.
queue	Displays information about the packet queues for the SID. **Note** Options for the keyword **queue** were removed from Cisco IOS Release 12.3(21)BC.

Command Default

None

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
12.2(15)BC1	This command was introduced for the Cisco uBR10012 router.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA.
12.2(33)SCB	The addressing format for the modular-cable interface and wideband-cable interface changed from *slot/subslot/bay* to *slot/bay/port from* Cisco IOS Release 12.2(33)SCB.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Router.

Usage Guidelines

The **show cr10k-rp queue** command displays information about the queues on the Cisco uBR10012 router.

Examples

The following examples show typical displays for each form of the **show cr10k-rp queue** command:

```
Router# show cr10k-rp cable 7/0/0 queue
Docsis queues on the interface: 1
Total DOCSIS Queues Allocated: 19
Available/Maximal reservable rate(kbps): 26000/26000
HQF BLT Info (LBLT Group 125):
LBLT 173: wt/qntm 1/10000; PBLT 1325: BW 26000Kbps, flowbit prd/ofst 32/3, rsrc
BE Queues:
Queue Index: 131345, GlobalQID 125, CBLT ID 131345
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 10000000, QLimit 255
Service Flow(s): rp_sf_index 32925, lc_sfid 7, min_rate(bps) 0, max_rate(bps) 10
CIR Queues:
LL Queues:

Router# show cr10k-rp modular-cable1/0/0:0 queue
Docsis queues on the interface: 9
Total DOCSIS Queues Allocated: 19
Available/Maximal reservable rate(kbps): 18750/18750
HQF BLT Info (LBLT Group 36):
LBLT 37: wt/qntm 1/5520; PBLT 3: BW 36000Kbps, flowbit prd/ofst 512/0, rsrc/flr
BE Queues:
Queue Index: 131346, GlobalQID 126, CBLT ID 131346
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 10000000, QLimit 255
Service Flow(s): rp_sf_index 32927, lc_sfid 8, min_rate(bps) 0, max_rate(bps) 10
Queue Index: 131349, GlobalQID 127, CBLT ID 131349
        MinRate(Kbps) 0, ExcessRatio 32, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32930, lc_sfid 10, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131350, GlobalQID 128, CBLT ID 131350
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32931, lc_sfid 13, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131351, GlobalQID 129, CBLT ID 131351
        MinRate(Kbps) 0, ExcessRatio 32, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32932, lc_sfid 12, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131352, GlobalQID 130, CBLT ID 131352
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32933, lc_sfid 14, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131359, GlobalQID 137, CBLT ID 131359
        MinRate(Kbps) 0, ExcessRatio 32, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32940, lc_sfid 16, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131360, GlobalQID 138, CBLT ID 131360
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32941, lc_sfid 28, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131361, GlobalQID 139, CBLT ID 131361
        MinRate(Kbps) 0, ExcessRatio 32, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32942, lc_sfid 22, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131362, GlobalQID 140, CBLT ID 131362
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32943, lc_sfid 29, min_rate(bps) 0, max_rate(bps) 0

CIR Queues:
LL Queues:

Router# show cr10k-rp wideband-cable1/0/0:12 queue
Docsis queues on the interface: 7
Total DOCSIS Queues Allocated: 19
Available/Maximal reservable rate(kbps): 67503/67503
HQF BLT Info (LBLT Group 16):
LBLT 179: wt/qntm 1/4478; PBLT 3: BW 36000Kbps, flowbit prd/ofst 512/0, rsrc/fl
LBLT 180: wt/qntm 1/10000; PBLT 4: BW 37500Kbps, flowbit prd/ofst 512/4, rsrc/f
LBLT 181: wt/qntm 1/4473; PBLT 5: BW 35625Kbps, flowbit prd/ofst 512/8, rsrc/fl
BE Queues:
Queue Index: 131347, GlobalQID 123, CBLT ID 131347
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 10000000, QLimit 255
Service Flow(s): rp_sf_index 32928, lc_sfid 8, min_rate(bps) 0, max_rate(bps) 10
Queue Index: 131353, GlobalQID 131, CBLT ID 131353
        MinRate(Kbps) 0, ExcessRatio 32, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32934, lc_sfid 18, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131354, GlobalQID 132, CBLT ID 131354
```

```
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32935, lc_sfid 23, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131355, GlobalQID 133, CBLT ID 131355
        MinRate(Kbps) 0, ExcessRatio 32, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32936, lc_sfid 20, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131356, GlobalQID 134, CBLT ID 131356
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32937, lc_sfid 24, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131357, GlobalQID 135, CBLT ID 131357
        MinRate(Kbps) 0, ExcessRatio 32, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32938, lc_sfid 26, min_rate(bps) 0, max_rate(bps) 0
Queue Index: 131358, GlobalQID 136, CBLT ID 131358
        MinRate(Kbps) 0, ExcessRatio 4, ShapeRate(bps) 0, QLimit 255
Service Flow(s): rp_sf_index 32939, lc_sfid 27, min_rate(bps) 0, max_rate(bps) 0
CIR Queues:
LL Queues:
```

Related Commands

Command	Description
show cr10k-rp	Displays packet processing information for a particular service ID (SID) on a cable interface.

show cr10k-rp slots

Note This command is meant for engineering debugging, and not for general customer use.

To display slot information for a particular service ID (SID) on a cable interface, use the **show cr10k-rp slots** command in user EXEC or privileged EXEC mode.

show cr10k-rp slots

Syntax Description

This command has no keywords or arguments.

Command Default

None

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
12.2(15)BC1	This command was introduced for the Cisco uBR10012 router.
12.3BC	This command was integrated into Cisco IOS release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS release 12.2(33)SCA.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Router.

Usage Guidelines

The **show cr10k-rp slots** command displays information that the PRE remote processor (RP) module has about a particular SID. This information includes configuration information about the SID, as well as internal status information that is useful only to Cisco engineers in troubleshooting problems.

Examples

The following example shows typical output for the **show cr10k-rp slots** command for a SID that identifies a cable modem:

```
Router# show cr10k-rp slots

------------------------------------------------------------
Slot/Sub        Flags           (Address)
------------------------------------------------------------
1/0             0x0804          (0x6494E168)
```

```
1/1             0x0804          (0x6494E250)
2/0             0x0002          (0x6494E338)
2/1             0x0002          (0x6494E420)
3/0             0x0002          (0x6494E508)
3/1             0x0002          (0x6494E5F0)
4/0             0x0804          (0x6494E6D8)
4/1             0x0804          (0x6494E7C0)
5/0             0x0804          (0x6494E8A8)
5/1             0x0002          (0x6494E990)
6/0             0x0002          (0x6494EA78)
6/1             0x0002          (0x6494EB60)
7/0             0x0804          (0x6494EC48)
7/1             0x0002          (0x6494ED30)
8/0             0x0002          (0x6494EE18)
8/1             0x0002          (0x6494EF00)
OIR TABLE:
  slot: 0 type: 00000001 bays: 0 analyzed: 1
  slot: 1 type: 00000001 bays: 0 analyzed: 1
  slot: 2 type: 00000415 bays: 4 analyzed: 1
        bay: 0 type: 000004AE
        bay: 1 type: 000004AE
        bay: 2 type: 00000000
        bay: 3 type: 00000000
  slot: 3 type: 000005B0 bays: 0 analyzed: 1
  slot: 4 type: 00000000 bays: 0 analyzed: 0
  slot: 5 type: 000002AF bays: 0 analyzed: 1
  slot: 6 type: 00000000 bays: 0 analyzed: 0
  slot: 7 type: 00000000 bays: 0 analyzed: 0
  slot: 8 type: 00000390 bays: 0 analyzed: 1
  slot: 9 type: 00000390 bays: 0 analyzed: 1
  slot: 10 type: 00000487 bays: 0 analyzed: 1
  slot: 11 type: 00000000 bays: 0 analyzed: 0
  slot: 12 type: 00000000 bays: 0 analyzed: 0
  slot: 13 type: 00000000 bays: 0 analyzed: 0
  slot: 14 type: 000003D5 bays: 0 analyzed: 1
  slot: 15 type: 00000000 bays: 0 analyzed: 0
  slot: 16 type: 00000000 bays: 0 analyzed: 0
  slot: 17 type: 00000000 bays: 0 analyzed: 0
SLOT INFO:
  slot: 0 subslot: 0 index: 0 num_bays: 0
  double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 7178D9A0  ironbus i0
  slot: 0 subslot: 1 index: 1 num_bays: 0
  double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F000  ironbus i0
  slot: 1 subslot: 0 index: 2 num_bays: 4
  double wide: 1 type: 00000415 util type: FFFFFFFF plugin: 72CB529C  ironbus i1
        slot: 1 subslot: 0 index: 2 type: 000004AE
        slot: 1 subslot: 256 index: 2 type: 000004AE
        slot: 1 subslot: 512 index: 2 type: 00000000
        slot: 1 subslot: 768 index: 2 type: 00000000
  slot: 1 subslot: 1 index: 3 num_bays: 0
  double wide: 0 type: 000005B0 util type: FFFFFFFF plugin: 22900974  ironbus i1
  slot: 2 subslot: 0 index: 4 num_bays: 0
  double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F120  ironbus i0
  slot: 2 subslot: 1 index: 5 num_bays: 0
  double wide: 0 type: 000002AF util type: FFFFFFFF plugin: 26362104  ironbus i0
  slot: 3 subslot: 0 index: 6 num_bays: 0
  double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F1E0  ironbus i0
  slot: 3 subslot: 1 index: 7 num_bays: 0
  double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F240  ironbus i0
  slot: 4 subslot: 0 index: 8 num_bays: 0
  double wide: 0 type: 00000390 util type: FFFFFFFF plugin: 263621A4  ironbus i0
  slot: 4 subslot: 1 index: 9 num_bays: 0
  double wide: 0 type: 00000390 util type: FFFFFFFF plugin: 761EF050  ironbus i1
  slot: 5 subslot: 0 index: 10 num_bays: 0
  double wide: 0 type: 00000487 util type: FFFFFFFF plugin: 76200EFC  ironbus i0
  slot: 5 subslot: 1 index: 11 num_bays: 0
  double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F3C0  ironbus i0
  slot: 6 subslot: 0 index: 12 num_bays: 0
  double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F420  ironbus i0
  slot: 6 subslot: 1 index: 13 num_bays: 0
  double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F480  ironbus i0
  slot: 7 subslot: 0 index: 14 num_bays: 0
  double wide: 0 type: 000003D5 util type: FFFFFFFF plugin: 22900FA0  ironbus i0
```

```
slot: 7 subslot: 1 index: 15 num_bays: 0
double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F540  ironbus i0
slot: 8 subslot: 0 index: 16 num_bays: 0
double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F5A0  ironbus i0
slot: 8 subslot: 1 index: 17 num_bays: 0
double wide: 0 type: FFFFFFFF util type: FFFFFFFF plugin: 6494F600  ironbus i0
```

Related Commands

Command	Description
show cr10k-rp queue	Displays information about the packet queues for a cable interface.