RPD Commands: show a through show g

show bcm-driver

To display the OFDMA channel initialization status and channel UP or DOWN status details of the BCM driver, use the **show bcm-driver** command.

show bcm-driver

Syntax Description

This command has no arguments or keywords

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 RPD Software 1.1	This command was introduced.

Usage Guidelines None.

Displays the details of the BCM Driver

This example shows how to view the details of the BCM driver:

```
R-PHY#show bcm-driver
BCM316X driver info: BCM3161 B1

SCQAM_0: INIT_COMPLETE
SCQAM_1: INIT_COMPLETE
TOP: START
OFDMA_0: Init_Complete retry:0 UP (admin: DOWN)
OFDMA_1: Init_Complete retry:0 UP (admin: DOWN)
OFDMA_2: Init_Complete retry:0 UP (admin: DOWN)
OFDMA_3: Init_Complete retry:0 UP (admin: DOWN)
DPMI: START

OFDMA Firmware Versions:
TPMI App @ 0.0.61 b62285e5c0746b69a28a5498b338605b
TPMI PM @ -None- c4d68ff86addc669680d8784ee1e76f0
DPMI @ -None- aa19704e2df88cba929dafd245dd595d
OFDMA Admin @ 0.0.31 ef4b18b87f8d9e99fb25caf31567f856
OFDMA PW @ 1.0.21 3a2502850150788d4a4926c8862cb450
OFDMA CPU/DSP @ 1.11.40, revision 49168
OFDMA CPU0 5f18f4bdab24ff01e4c49d9be0587c42
OFDMA CPU1 359fb94c6c771a6d4dabac6918d74eff
OFDMA CPU2 bb7d821b030827b126638eb39ee3b9c4
OFDMA CPU3 28007b7a07f211ab26c4d2cf34d3570e
OFDMA DSP0 fd1e0dc0a44f035043b6966ae4e9610a
```

show bcm-register

To show the upstream triggered spectrum capture configuration, use the **show bcm-register** command.

show bcm-register wbfft config

Syntax Description

wbfft	Wide Band Fast Fourier Transform

Command Default   None.

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 6.4.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to view the Upstream Triggered Spectrum Capture configuration.

```
R-PHY#show bcm-register wbfft config
WBFFT Triger Mode   : Other
Enable UTSC         : True
Samples Num         : 4096
Session ID          : 5f20003c
PNM Dest IP         : 91.7.66.171
PNM Dest Mac        : 0050.5688.eb3d
```

show bcm-version

To view the BCM version information, use the **show bcm-version** command.

show bcm-version

Syntax Description

This command has no arguments or keywords.

Command Default   None

Command Modes   Privileged EXEC mode (#)

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to view the version of BCM:

```
R-PHY#show bcm-version
BCM316X version info: BCM3161 B1
TPMI Version: 0x3d
DPMI Version: 0x17
Upstream SC-QAM ENP Version: MIPS(0x510) Data(0x9) FFT(0x8) IMP(0x8) Request(0x5) REGPROC(0x6)
Upstream OOB Version: Firmware(0x0) DSP Interface(0x0)
```

show build-info

To view the RPD software image version information, use the **show build-info** command.

show build-info

Syntax Description

This command has no arguments or keywords.

Command Default   None

Command Modes   Privileged EXEC mode (#)

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to view the software image version on the RPD:

```
R-PHY#show build-info
RPD_IMAGE_VERSION=v6.5
RPD_TYPE=RPD_hardware_certificate
RPD_BRANCH=(detached from RPD_V6_5_20190429)
OPENRPD_BRANCH=(detached from RPD_V6_5_20190429)
SERESRPD_BRANCH=(detached from RPD_V6_5_20190429)
RPD_BUILDER=rpd-release
RPD_BUILD_TIME=1556508498
```

show certificate

To view the chain status of a certificate, use the **show   certificate   status** command.

show certificate status { **verbose** }

Syntax Description

verbose	(Optional) Shows the RPD certificate information on the time and reasons for the certificate failure

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to view the status of the certificates on RPD:

```
R-PHY#show certificate status
Result: Fail
Reason: Certificate chain is not complete
Detail: Root CA: Not ready, Device CA: Not ready, Device cert: Not ready
```

Examples   To show the RPD certificate information on the time and reasons for the certificate failure, use the **show certificate status verbose** command. This example shows a valid certificate.

```
R-PHY# show certificate status ver
Root CA
notBefore=Oct 28 00:00:00 2014 GMT
notAfter=Oct 27 23:59:59 2064 GMT
Device CA
notBefore=Oct 28 00:00:00 2014 GMT
notAfter=Oct 27 23:59:59 2049 GMT
Device cert
notBefore=Aug 23 06:08:37 2017 GMT
notAfter=Aug 24 06:08:36 2037 GMT
Result: Pass
```

This example shows a certificate which is invalid.

```
R-PHY# show certificate status verbose
Root CA
notBefore=Oct 28 00:00:00 2014 GMT
notAfter=Oct 27 23:59:59 2064 GMT
Device CA
notBefore=Oct 28 00:00:00 2014 GMT
```

```
notAfter=Oct 27 23:59:59 2049 GMT
Device cert
notBefore=Aug 23 06:08:37 2017 GMT
notAfter=Aug 24 06:08:36 2037 GMT
Device cert: C = US, O = CableLabs, OU = Root CA01, CN = CableLabs Root Certification
Authority
error 9 at 2 depth lookup:certificate is not yet valid
Result: Fail
Reason: Certificate is not well chained
```

show clock

To display the system clock, use the **show clock** command.

show clock

Syntax Description

This command has no arguments or keywords.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to display the system clock.

```
R-PHY#show clock
06:03:11.021 Thu May 09 2019
```

show config-startup-capture

To view the startup-capture configuration, use the **show config-startup-capture** command.

show config-startup-capture

Syntax Description

This command has no arguments or keywords.

Command Default   None.

| **Command Modes** | Privileged EXEC mode (#) |

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

| **Usage Guidelines** | None. |

Example

This example shows how to view the startup-capture configuration.

```
R-PHY#show config-startup-capture
startup tcpdump enabled
duration 6 minutes, max_files 10, tcpdump para: -p -i vbh0
```

show console

To check whether the console port is enabled, use the **show console** command.

show console

Syntax Description

This command has no arguments or keywords.

| **Command Default** | None. |

| **Command Modes** | Privileged EXEC mode (#) |

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

| **Usage Guidelines** | None. |

Example

This example shows how to check whether the console port is enabled or not.

```
R-PHY#show console
console is enabled
```

show core-files

To view the core files, use the **show core-files** command.

show core-files {**info** | **server** | **status**}

Syntax Description		
	info	Shows core files.
	server	Shows information of the server, which is used for uploading the RPD core files.
	status	Shows the status of the files being uploaded.

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines None.

Example

This example shows how to view the core files:

```
R-PHY#show core-files info
-rw-r--r--  1 root    root         0 Feb 25 06:12 20190225.1551075165.python.6.4915.core.gz
-rw-r--r--  1 root    root  95436800 Feb 25 06:12 20190225.1551075165.python.6.4915.core
-rw-r--r--  1 root    root   9504602 Aug 14  2018 20180814.1534213098.python.11.4482.core.gz
-rw-r--r--  1 root    root   9459035 Aug 12  2018 20180812.1534110510.python.4.4462.core.gz
```

Example

This example shows how to view the information of the server, which is used for uploading the RPD core files.

```
R-PHY#show core-files server
Crash Data Server   : 11.1.1.10
Dest Path           : jiexiao/corefile/
Protocol            : tftp
```

Example

This example shows how to view the status of the files being uploaded.

```
R-PHY#show core-files status
Idx  FileControl   FileStatus          FileName
0    other         availableForUpload  20190225.1551075165.python.6.4915.core.gz
2    other         availableForUpload  20180812.1534110510.python.4.4462.core.gz
1    other         availableForUpload  20180814.1534213098.python.11.4482.core.gz
```

show cpu

To view the MTU information of the interface and the status of the different types of traffic received at the CPU of the RPD, use the **show cpu** command.

show cpu { **history** | **mtu** | **rx** }

Syntax Description	history	Shows the history of memory usage percentage in a graphical format.
	mtu	Shows interface MTU information.
	rx	Shows the status of various types of incoming traffic to the RPD.

Command Default None.

Command Modes Privileged EXEC (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	The show cpu command was introduced.
Cisco 1x2 / Compact Shelf RPD Software 7.6	The history option was introduced.

Usage Guidelines None

Example

This example shows how to view the MTU information of the interface:

```
R-PHY#show cpu mtu
interface MTU
vbh0     2350
vbh1     2350
```

Example

This example shows how to view the status of the varios types of traffic received by the RPD CPU.

```
R-PHY#show cpu rx
Policer         Green        Yellow         Red
default         3058           0            0
ARP(ucast)      5798           0            0
ARP(bcast)         0           0            0
ICMP6            536           0            0
ICMP           21886           0            0
IGMP               0           0            0
GCP           760693           0            0
SSH                0           0            0
HTTP               0           0            0
HTTPS              0           0            0
PTP          5987875           0            0
DHCP             613           0            0
```

```
DHCP6                    0             0             0
TOD                      3             0             0
S-BFD6                   0             0             0
L2TP(conn)6              0             0             0
OOB                      0             0             0
S-BFD                    0             0             0
L2TP(conn)            3902             0             0
```

Example

This example shows how to view the CPU usage history:

```
R-PHY#show cpu history
     43343433343443433343334333433443
     09818299919028099909819919019018
     ................................
     45927463975508596875630745760 8
43.5
43.0
42.5       *
42.0       *         *
41.5       *    *    *            *    *
41.0    * *    *    *            *    *    *
40.5 *    * *    * ** *     *    *    *    **
40.0 *    * *    ** ** ** **    *    *    **
39.5 ** * ******** ****** * ******
39.0 **** *************** *********
38.5 ****************************
    0.....6.....1.....1.....2.....3
          0     2     8     4     0
                0     0     0     0
 CPU usage percentage (last 300 seconds / 5 minutes)


     44444444445
     44423343337
     ...........
     05031575222
60.0
58.0          *
56.0          *
54.0          *
52.0          *
50.0          *
48.0          *
46.0          *
44.0 *** *******
42.0 **********#
40.0 ##########
    0.....3.....6.....9.....1.....1.....1.....2.....2.....2.....3.....3.....3
          0     0     0     2     5     8     1     4     7     0     3     6
                            0     0     0     0     0     0     0     0     0
            CPU usage percentage (last 360 minutes / 6 hours)
      * = maximum % per 5 minutes    # = average % per 5 minutes




     5.0
     4.5
     4.0
     3.5
     3.0
```

```
 2.5
 2.0
 1.5
 1.0
 0.5
 0.0
    0...2...4...7...9...1...1...1...1...2...2...2...2...3...3
        4   8   2   6   2   4   6   9   1   4   6   8   1   3
                        0   4   8   2   6   0   4   8   2   6
          CPU usage percentage (last 336 hours / 14 days)
      * = maximum % per 6 hours    # = average % per 6 hours


-- Example of average/max calculation from seconds to minutes


R-PHY#show cpu history
      43333443433443334443334444444345
      09999209189218980208900111111910
      ..............................
      44139111496014163659320847950000
53.0
51.5
50.0                            *
48.5                            *
47.0                            *
45.5                            *
44.0                            *
42.5       *       *       *     *   *   *
41.0 *     *   *   **    ***     ****  **
39.5 ************* * **************
38.0 *****************************
    0.....6.....1.....1.....2.....3
          0     2     8     4     0
                0     0     0     0
 CPU usage percentage (last 300 seconds / 5 minutes)


      5
      7
      .
      2
61.0
59.0
57.0 *
55.0 *
53.0 *
51.0 *
49.0 *
47.0 *
45.0 *
43.0 *
41.0 #
    0.....3.....6.....9.....1.....1.....1.....2.....2.....2.....3.....3.....3
          0     0     0     2     5     8     1     4     7     0     3     6
                            0     0     0     0     0     0     0     0     0
              CPU usage percentage (last 360 minutes / 6 hours)
        * = maximum % per 5 minutes    # = average % per 5 minutes
```

-- Example of dynamic range / step size

```
      -- showing only seconds graph

          3
          1
          .
          1
  36.0
  35.5
  35.0
  34.5
  34.0
  33.5
  33.0
  32.5
  32.0
  31.5
  31.0 *
       0....5....1
                0
        seconds banner


          93
          .1
          5.
          01
  34.5
  32.0  *
  29.5  *
  27.0  *
  24.5  *
  22.0  *
  19.5  *
  17.0  *
  14.5  *
  12.0  *
   9.5 **
       0....5....1
                0
        seconds banner



  ====================================================================================================
  ====================================================================================================
  -- Example of all three graphs being used

          42192
          .8..4
          9.29.
          46415
  31.0
  28.0  *
  25.0  *   *
  22.0  *   *
  19.0  *   *
  16.0  *   *
  13.0  *   *
  10.0  * **
   7.0  * **
   4.0 ** **
   1.0 *****
       0....5
          seconds banner
```

```
        22222
        66666
        .....
        88888
30.5
29.0
27.5 ****#
26.0 ****#
24.5 **#*#
23.0 *##*#
21.5 *##*#
20.0 *##*#
18.5 *##*#
17.0 *####
15.5 #####
    0....5
        minute banner

        222
        666
        ...
        888
27.0 ***
26.0 ***
25.0 ***
24.0 ***
23.0 ***
22.0 #**
21.0 #**
20.0 ##*
19.0 ##*
18.0 ##*
17.0 ###
    0....5....1
            0
        hour banner
```

show default routers

To view the details of the default router of the RPD, use the **show default routers** command.

show default routers

Syntax Description

This command has no arguments or keywords.

Command Default	None.
Command Modes	Privileged EXEC mode (#)

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to view the details of the default router of the RPD:

```
R-PHY#show default routers
AddType    IpAddress    EnetPortIndex    Lifetime    Preference
IPv4       11.1.6.1     1                1800        medium
```

show dhcp

To display the Dynamic Host Configuration Protocol (DHCP) information of the RPD provision interface, use the **show dhcp** command in privileged EXEC mode.

show dhcp

Syntax Description

This command has no arguments or keywords.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to display the DHCP information of the RPD provision interface.

```
R-PHY#show dhcp
Interface   IP-Address   Subnet-Mask
vbh0        11.1.6.100   255.255.255.0

Details:
-------------------------------------------------------
Interface:               vbh0
AddrType:                IPv4
TimeServers:             10.1.1.1, 11.1.1.10
TimeOffset:              28800
LogServers:              11.1.1.10
CCAPCores:               11.1.6.3, 11.1.6.2
```

show dot1x

To view the details of the 8021x authentication, use the **show   dot1x** command.

show   dot1x   detail

show   dot1x   summary

Syntax Description		
detail	Shows detailed information about 8021x authentication.	
summary	Shows the basic information on 8021x authentication.	

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to display the detailed information on the 8021x authentication.

```
R-PHY#show dot1x detail
Interface        EAP_Received       Status
vbh0             False              UP

bssid=01:80:c2:00:00:03
freq=0
ssid=
id=0
mode=station
pairwise_cipher=NONE
group_cipher=NONE
key_mgmt=IEEE 802.1X (no WPA)
wpa_state=ASSOCIATED
ip_address=11.1.6.100
address=10:04:9f:c1:08:00
Supplicant PAE state=HELD
suppPortStatus=Unauthorized
EAP state=FAILURE
uuid=589a20d0-9806-56e5-998a-a97140e6a9c7
```

Example

This example shows how to display a summary of the 8021x authentication.

```
R-PHY#show dot1x summary
Interface         EAP_Received       Status
vbh0              False              UP
```

show downstream calibration

To display the downstream channel calibration information, use the **show downstream calibration** command.

show downstream calibration info

show downstream calibration table

Syntax Description

info	Shows the downstream channel calibration information.
table	Shows the downstream channel calibration table.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to view the downstream channel calibration information:

```
R-PHY#show downstream calibration info
Configuration details:
  QAM channel count               : 16
  OFDM channel count              : 1
  Number of OOB channels          : 0
  Number of SC-QAM based tones    : 0
  Number of leakage tones         : 0
  Number of allignment tones      : 0
  Number of 6MHz QAM channels     : 16
  Number of 6MHz QAM and OFDM     : 47
  Number of 6MHz QAM OOB Tones    : 16
  Number of 6MHz OFDM&tone channels  : 31
  UPDI_Spectrum_Portion           : 0.659574
  FQUP_Spectrum_Portion           : 0.340426
  OFDM bandwidth                  : 185.0 MHz
  DOCSIS 3.1 max level            : 41.0 dBmV
  Calibration level               : 37.8
  Spectrum adjust offset          : 0.1 dB
  QAM/OFDM set level              : 32.0 dBmV
  RF attenuation                  : 10.0 dB
  OOB Tone Adjust                 : -0.0
  Total Pilot Tone Set Level      : 0.0
  Total Alignment Tone Set Level  : 0.0
```

```
      Total Leakage Tone Set Level          : 0.0
      Total OOB Set Level                   : 0.0
      vva default                           : 36269
      vtt default                           : 9538
QAM calculated scalers:
      Baseline channel count                : 160
      Baseline level                        : 38.0 dBmV
      Scaled level                          : 48.0 dBmV
      Adjusted level                        : 43.4 dBmV
      Equalization factor                   : -1.3 dB
      6MHz Equalized level                  : 42.0 dBmV
      Mod output scale                      : 13257
      Coarse output scale                   : 3
      Fine output scale                     : 112698
      QAM scaler                            : 38237
OFDM calculated scalers:
      Baseline channel count                : 1
      Baseline level                        : 43.7 dBmV
      Scaled level                          : 43.8 dBmV
      Adjusted level                        : 42.0 dBmV
      Equalization factor                   : 0.0 dB
      6MHz Equalized level                  : 42.0 dBmV
      BPSK constellation scale              : 1158 (190 MHz)
      OFDM scaler                           : 106448 (190 MHz, 4K)
      OFDM scaler                           : 73644 (190 MHz, 8K)
QAM channels:
   [  0,  on]  213 MHz, 32.0 -> 32.0 dBmV {Scale=12718}
   [  1,  on]  219 MHz, 32.0 -> 32.0 dBmV {Scale=12704}
   [  2,  on]  225 MHz, 32.0 -> 32.0 dBmV {Scale=12645}
   [  3,  on]  231 MHz, 32.0 -> 32.0 dBmV {Scale=12602}
   [  4,  on]  237 MHz, 32.0 -> 32.0 dBmV {Scale=12631}
   [  5,  on]  243 MHz, 32.0 -> 32.0 dBmV {Scale=12733}

OFDM channels:
   [158,  on] 638600 KHz (3700 50 648800 833400), 32.0 -> 32.0 dBmV {UPDI=106448, BPSK=1174}
SC-QAM based Pilot Tones:
Allignment Tones:
Leakage detection Tones:
OOB channels:
```

Example

```
R-PHY#show downstream calibration table
Request Power Table
Channel -> Request Power:
      1 ->  62.00 dBmV
       2 ->  58.00 dBmV
       3 ->  56.00 dBmV
       4 ->  54.00 dBmV
       5 ->  53.00 dBmV
       6 ->  52.00 dBmV
       7 ->  51.00 dBmV
       8 ->  51.00 dBmV
     {9 ->  46.00 dBmV
       ...
      16 →  46.00 dBmV}
     {17 ->  40.00 dBmV
       ...
      47 ->  40.00 dBmV}
     {48 ->  39.00 dBmV
       ...
      57 ->  39.00 dBmV}
```

```
            {58 ->  38.00 dBmV
             ...
             69 ->  38.00 dBmV}
            {70 ->  37.00 dBmV
             ...
             83 ->  37.00 dBmV}
            {84 ->  36.00 dBmV
             ...
            101 ->  36.00 dBmV}
            {102 -> 35.00 dBmV
             ...
            124 ->  35.00 dBmV}
            {125 ->  34.00 dBmV
             ...
            150 ->  34.00 dBmV}
            {151 ->  33.00 dBmV
             ...
            160 ->  33.00 dBmV

     VVA Table
      VVA  -> VTT:
         0 ->  0.000 dBmV
       290 ->  0.003 dBmV
       435 ->  0.003 dBmV
       580 ->  0.005 dBmV
       725 ->  0.005 dBmV
       870 ->  0.008 dBmV
      1015 ->  0.009 dBmV
      1160 ->  0.010 dBmV
      1305 ->  0.011 dBmV
       ...
     58000 -> 17.538 dBmV

     Frequency Offset Table
       Reference power level = 37.83
       55 MHz -> -0.60 dBmV
        ...
     1217 MHz ->  0.00 dBmV

     show downstream channel configuration { ds_channel_number}
     usage: show downstream channel configuration
     example:
     R-PHY#show downstream channel configuration
     Chan  State     Frequency  Type     Annex     Modulation Srate   Interleave  Power     Muted

     0     UP        213000000  DOCSIS   ANNEX_B   256QAM     5361    I32-J4      32        NORMAL

     1     UP        219000000  DOCSIS   ANNEX_B   256QAM     5361    I32-J4      32        NORMAL

     2     UP        225000000  DOCSIS   ANNEX_B   256QAM     5361    I32-J4      32        NORMAL

     3     UP        231000000  DOCSIS   ANNEX_B   256QAM     5361    I32-J4      32        NORMAL


     Chan  State    Type     StartFreq   Width      PlcFreq     CPrefix   RollOff   Interleave  Spacing
        Power    Muted
     158   UP       OFDM     645000000   192000000  651000000   1024      128       16          50kHz
           32.0    NORMAL

     *NOTE: Start frequency and channel width do not cover guardband override scenario.
     R-PHY#show downstream channel configuration 1-2
     Chan  State     Frequency  Type     Annex     Modulation Srate   Interleave  Power     Muted
```

```
1      UP      219000000  DOCSIS   ANNEX_B  256QAM    5361    I32-J4     32       NORMAL

2      UP      225000000  DOCSIS   ANNEX_B  256QAM    5361    I32-J4     32       NORMAL


*NOTE: Start frequency and channel width do not cover guardband override scenario.

show downstream channel sync
usage: show downstream channel sync interval and source mac config for psp mode
example:
R-PHY#show downstream channel configuration sync
Chan Sync_Int Sync_Mac
0    10       badb.ad0a.0eba
1    10       badb.ad0a.0ebb
8    10       badb.ad0a.0eba
9    10       badb.ad0a.0ebb
```

show downstream channel configuration

To view the downstream channel configuration, use the **show downstream channel configuration** command.

show downstream channel configuration

show downstream channel configuration sync

Syntax Description

sync	Shows the downstream channel sync interval and source MAC configuration for PSP mode.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example: Downstream Channel Configuration

This example shows how to view the downstream channel configuration.

```
R-PHY#show downstream channel configuration
Chan  State    Frequency  Type     Annex    Modulation Srate   Interleave   Power   Muted

0     UP       213000000  DOCSIS   ANNEX_B  256QAM     5361    I32-J4       32      NORMAL

1     UP       219000000  DOCSIS   ANNEX_B  256QAM     5361    I32-J4       32      NORMAL

2     UP       225000000  DOCSIS   ANNEX_B  256QAM     5361    I32-J4       32      NORMAL

3     UP       231000000  DOCSIS   ANNEX_B  256QAM     5361    I32-J4       32      NORMAL

4     UP       237000000  DOCSIS   ANNEX_B  256QAM     5361    I32-J4       32      NORMAL
```

```
5     UP     243000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

6     UP     249000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

7     UP     255000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

8     UP     261000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

9     UP     267000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

10    UP     273000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

11    UP     279000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

12    UP     285000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

13    UP     291000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

14    UP     297000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

15    UP     303000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL


Chan  State  Type    StartFreq  Width      PlcFreq     CPrefix  RollOff  Interleave  Spacing
   Power   Muted
158   UP     OFDM     645000000  192000000  651000000   1024     128      16          50kHz
      32.0    NORMAL

*NOTE: Start frequency and channel width do not cover guardband override scenario.
R-PHY#show downstream channel configuration 1-2
Chan  State  Frequency  Type     Annex     Modulation Srate    Interleave  Power    Muted

1     UP     219000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL

2     UP     225000000  DOCSIS    ANNEX_B  256QAM    5361    I32-J4    32    NORMAL


*NOTE: Start frequency and channel width do not cover guardband override scenario.
```

Example: Downstream Channel Configuration Sync

```
R-PHY#show downstream channel configuration sync
Chan Sync_Int Sync_Mac
0    10       badb.ad0a.0eba
1    10       badb.ad0a.0ebb
8    10       badb.ad0a.0eba
9    10       badb.ad0a.0ebb
```

show downstream channel counter

To display the downstream channel counter information, use the **show downstream channel counter** command in privileged EXEC mode.

show downstream channel counter [dpmi | dps | tpmi]

Syntax Description	**dpmi**	Displays DS counters per channel from top module to downstream module.
	dps	Displays DS counters per channel at dps module (last module before leaving RPD).
	tpmi	Displays DS (MAC management/data) and US counters (maps) per channel incoming to RPD top module.

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines None.

Example

These examples shows how to display the downstream channel counter information:

```
R-PHY#show downstream channel counter
------------------ Packets counter in TPMI ------------------

Level     Rx-pkts     Rx-sum-pkts
Node Rcv  281517      4122087340
Depi Pkt  673         9830440

Port Chan SessionId(dec/hex)    Rx-pkts     Rx-sum-pkts
DS_0 0    4390912   /0x00430000 69792       1762857
DS_0 1    4390913   /0x00430001 17          447
DS_0 2    4390914   /0x00430002 17          447
DS_0 3    4390915   /0x00430003 17          447
DS_0 4    4390916   /0x00430004 69792       1762858
DS_0 5    4390917   /0x00430005 17          447
DS_0 6    4390918   /0x00430006 17          447
DS_0 7    4390919   /0x00430007 17          447
DS_0 8    4390920   /0x00430008 69794       1761888
DS_0 9    4390921   /0x00430009 17          447
DS_0 10   4390922   /0x0043000A 17          447
DS_0 11   4390923   /0x0043000B 17          447
DS_0 12   4390924   /0x0043000C 17          447
DS_0 13   4390925   /0x0043000D 17          446
DS_0 14   4390926   /0x0043000E 17          446
DS_0 15   4390927   /0x0043000F 17          446
DS_0 158  272695296 /0x10410000 903         13143222
US_0 0    13893632  /0x00D40000 17422       255036768
US_0 1    13893633  /0x00D40001 17422       255035870
US_0 2    13893634  /0x00D40002 17422       254777868
US_0 3    13893635  /0x00D40003 17422       254776651

Port      Rx-pkts     Rx-sum-pkts Drop-pkts  Drop-sum-pkts
DS_0      210709      3088227003  0          0
US_0      70048       1024833029  0          0
US_1      0           103847      0          0

Note: The above counters are only for live debug and might overflow
```

```
------------------ Packets counter in DPMI ------------------

Field       Pkts      Sum-pkts
Dpmi Ingress 210610   3082981415
Pkt Delete  0         0
Data Len Err 0        0

Chan Flow_id SessionId(dec/hex)     Octs      Sum-octs   SeqErr-pkts SeqErr-sum-pkts
0    0       4390912  / 0x00430000  2130      54106      0           1
0    1       4390912  / 0x00430000  12529     331502     0           1
0    2       4390912  / 0x00430000  4519036   114108617  0           1
0    3       4390912  / 0x00430000  0         0          0           0
1    0       4390913  / 0x00430001  0         0          0           0
1    1       4390913  / 0x00430001  578       15164      0           1
1    2       4390913  / 0x00430001  0         34         0           1
1    3       4390913  / 0x00430001  0         0          0           0
2    0       4390914  / 0x00430002  0         0          0           0
2    1       4390914  / 0x00430002  578       15164      0           1
2    2       4390914  / 0x00430002  0         34         0           1
2    3       4390914  / 0x00430002  0         0          0           0
3    0       4390915  / 0x00430003  0         0          0           0
3    1       4390915  / 0x00430003  578       15164      0           1
3    2       4390915  / 0x00430003  0         34         0           1
3    3       4390915  / 0x00430003  0         0          0           0
4    0       4390916  / 0x00430004  2130      54106      0           1
4    1       4390916  / 0x00430004  12529     331502     0           1
4    2       4390916  / 0x00430004  4519036   114109385  0           1
4    3       4390916  / 0x00430004  0         0          0           0
5    0       4390917  / 0x00430005  0         0          0           0
5    1       4390917  / 0x00430005  578       15164      0           1
5    2       4390917  / 0x00430005  0         34         0           1
5    3       4390917  / 0x00430005  0         0          0           0
6    0       4390918  / 0x00430006  0         0          0           0
6    1       4390918  / 0x00430006  578       15164      0           1
6    2       4390918  / 0x00430006  0         34         0           1
6    3       4390918  / 0x00430006  0         0          0           0
7    0       4390919  / 0x00430007  0         0          0           0
7    1       4390919  / 0x00430007  578       15164      0           1
7    2       4390919  / 0x00430007  0         34         0           1
7    3       4390919  / 0x00430007  0         0          0           0
8    0       4390920  / 0x00430008  2130      55502      0           1
8    1       4390920  / 0x00430008  12653     334035     0           1
8    2       4390920  / 0x00430008  4519036   114045319  0           1
8    3       4390920  / 0x00430008  0         0          0           0
9    0       4390921  / 0x00430009  0         0          0           0
9    1       4390921  / 0x00430009  578       15164      0           1
9    2       4390921  / 0x00430009  0         34         0           1
9    3       4390921  / 0x00430009  0         0          0           0
10   0       4390922  / 0x0043000A  0         0          0           0
10   1       4390922  / 0x0043000A  578       15164      0           1
10   2       4390922  / 0x0043000A  0         34         0           1
10   3       4390922  / 0x0043000A  0         0          0           0
11   0       4390923  / 0x0043000B  0         0          0           0
11   1       4390923  / 0x0043000B  578       15164      0           1
11   2       4390923  / 0x0043000B  0         34         0           1
11   3       4390923  / 0x0043000B  0         0          0           0
12   0       4390924  / 0x0043000C  0         0          0           0
12   1       4390924  / 0x0043000C  578       15164      0           1
12   2       4390924  / 0x0043000C  0         34         0           1
12   3       4390924  / 0x0043000C  0         0          0           0
13   0       4390925  / 0x0043000D  0         0          0           0
13   1       4390925  / 0x0043000D  578       15130      0           1
```

```
13   2       4390925    / 0x0043000D   0       34         0       1
13   3       4390925    / 0x0043000D   0       0          0       0
14   0       4390926    / 0x0043000E   0       0          0       0
14   1       4390926    / 0x0043000E   578     15130      0       1
14   2       4390926    / 0x0043000E   0       34         0       1
14   3       4390926    / 0x0043000E   0       0          0       0
15   0       4390927    / 0x0043000F   0       0          0       0
15   1       4390927    / 0x0043000F   578     15130      0       1
15   2       4390927    / 0x0043000F   0       34         0       1
15   3       4390927    / 0x0043000F   0       0          0       0
158  0       272695296  / 0x10410000   0       64859      0       1
158  1       272695296  / 0x10410000   20245   294291636  0       1
158  2       272695296  / 0x10410000   0       374        0       1
158  3       272695296  / 0x10410000   0       0          0       1
158  0   PLC 272695296  / 0x10410000   0       0          0       1
158  1   PLC 272695296  / 0x10410000   0       0          0       1
158  2   PLC 272695296  / 0x10410000   0       0          0       1
158  3   PLC 272695296  / 0x10410000   34869   507665651  0       1
```

Note: The above counters are only for live debug and might overflow

------------------ Packets counter in DPS -------------------

```
Chan Tx-packets Tx-octets  Drop-pkts   Tx-sum-pkts Tx-sum-octs Drop-sum-pkts Rate-in-Mbps
Buffers-Avail
0    70757      4593872    0           1020790312  1943815742  0             1.027
0xfe
1    18         612        0           257698      8761732     0             0.000
0xfe
2    18         612        0           257698      8761732     0             0.000
0xfe
3    18         612        0           257699      8761766     0             0.000
0xfe
4    70761      4594128    0           1020794233  1943921794  0             1.027
0xfe
5    18         612        0           257699      8761766     0             0.000
0xfe
6    18         612        0           257699      8761766     0             0.000
0xfe
7    18         612        0           257698      8761732     0             0.000
0xfe
8    70770      4594764    0           1020790323  1943678097  0             1.027
0xfe
9    18         612        0           257701      8761834     0             0.000
0xfe
10   18         612        0           257699      8761766     0             0.000
0xfe
11   18         612        0           257699      8761766     0             0.000
0xfe
12   18         612        0           257697      8761698     0             0.000
0xfe
13   18         612        0           257697      8761698     0             0.000
0xfe
14   18         612        0           257698      8761732     0             0.000
0xfe
15   18         612        0           257678      8761052     0             0.000
0xfe
158  100        5433       0           5412279     294357180   0             0.004
0x1fff
```

Note: The above counters are only for live debug and might overflow

```
R-PHY#show downstream channel counter dpmi
Field        Pkts        Sum-pkts
Dpmi Ingress 50675       3083032090
Pkt Delete   0           0
Data Len Err 0           0

Chan Flow_id SessionId(dec/hex)        Octs      Sum-octs   SeqErr-pkts SeqErr-sum-pkts
0    0       4390912   / 0x00430000   818       54924      0           1
0    1       4390912   / 0x00430000   3685      335187     0           1
0    2       4390912   / 0x00430000   1087088   115195705  0           1
0    3       4390912   / 0x00430000   0         0          0           0
1    0       4390913   / 0x00430001   0         0          0           0
1    1       4390913   / 0x00430001   170       15334      0           1
1    2       4390913   / 0x00430001   0         34         0           1
1    3       4390913   / 0x00430001   0         0          0           0
2    0       4390914   / 0x00430002   0         0          0           0
2    1       4390914   / 0x00430002   170       15334      0           1
2    2       4390914   / 0x00430002   0         34         0           1
2    3       4390914   / 0x00430002   0         0          0           0
3    0       4390915   / 0x00430003   0         0          0           0
3    1       4390915   / 0x00430003   170       15334      0           1
3    2       4390915   / 0x00430003   0         34         0           1
3    3       4390915   / 0x00430003   0         0          0           0
4    0       4390916   / 0x00430004   818       54924      0           1
4    1       4390916   / 0x00430004   3685      335187     0           1
4    2       4390916   / 0x00430004   1087088   115196473  0           1
4    3       4390916   / 0x00430004   0         0          0           0
5    0       4390917   / 0x00430005   0         0          0           0
5    1       4390917   / 0x00430005   170       15334      0           1
5    2       4390917   / 0x00430005   0         34         0           1
5    3       4390917   / 0x00430005   0         0          0           0
6    0       4390918   / 0x00430006   0         0          0           0
6    1       4390918   / 0x00430006   170       15334      0           1
6    2       4390918   / 0x00430006   0         34         0           1
6    3       4390918   / 0x00430006   0         0          0           0
7    0       4390919   / 0x00430007   0         0          0           0
7    1       4390919   / 0x00430007   170       15334      0           1
7    2       4390919   / 0x00430007   0         34         0           1
7    3       4390919   / 0x00430007   0         0          0           0
8    0       4390920   / 0x00430008   818       56320      0           1
8    1       4390920   / 0x00430008   3685      337720     0           1
8    2       4390920   / 0x00430008   1087088   115132407  0           1
8    3       4390920   / 0x00430008   0         0          0           0
9    0       4390921   / 0x00430009   0         0          0           0
9    1       4390921   / 0x00430009   170       15334      0           1
9    2       4390921   / 0x00430009   0         34         0           1
9    3       4390921   / 0x00430009   0         0          0           0
10   0       4390922   / 0x0043000A   0         0          0           0
10   1       4390922   / 0x0043000A   170       15334      0           1
10   2       4390922   / 0x0043000A   0         34         0           1
10   3       4390922   / 0x0043000A   0         0          0           0
11   0       4390923   / 0x0043000B   0         0          0           0
11   1       4390923   / 0x0043000B   170       15334      0           1
11   2       4390923   / 0x0043000B   0         34         0           1
11   3       4390923   / 0x0043000B   0         0          0           0
12   0       4390924   / 0x0043000C   0         0          0           0
12   1       4390924   / 0x0043000C   170       15334      0           1
12   2       4390924   / 0x0043000C   0         34         0           1
12   3       4390924   / 0x0043000C   0         0          0           0
13   0       4390925   / 0x0043000D   0         0          0           0
13   1       4390925   / 0x0043000D   170       15300      0           1
13   2       4390925   / 0x0043000D   0         34         0           1
13   3       4390925   / 0x0043000D   0         0          0           0
14   0       4390926   / 0x0043000E   0         0          0           0
```

```
14   1          4390926    / 0x0043000E   170         15300        0            1
14   2          4390926    / 0x0043000E   0           34           0            1
14   3          4390926    / 0x0043000E   0           0            0            0
15   0          4390927    / 0x0043000F   0           0            0            0
15   1          4390927    / 0x0043000F   170         15300        0            1
15   2          4390927    / 0x0043000F   0           34           0            1
15   3          4390927    / 0x0043000F   0           0            0            0
158  0          272695296  / 0x10410000   0           64859        0            1
158  1          272695296  / 0x10410000   4879        294296515    0            1
158  2          272695296  / 0x10410000   0           374          0            1
158  3          272695296  / 0x10410000   0           0            0            1
158  0    PLC   272695296  / 0x10410000   0           0            0            1
158  1    PLC   272695296  / 0x10410000   0           0            0            1
158  2    PLC   272695296  / 0x10410000   0           0            0            1
158  3    PLC   272695296  / 0x10410000   8274        507673925    0            1

Note: The above counters are only for live debug and might overflow



R-PHY#show downstream channel counter dps
Chan Tx-packets Tx-octets  Drop-pkts  Tx-sum-pkts Tx-sum-octs Drop-sum-pkts Rate-in-Mbps
Buffers-Avail
0    29278      1901233    0          1020819590  1945716975  0             1.027
0xfe
1    7          238        0          257705      8761970     0             0.000
0xfe
2    7          238        0          257705      8761970     0             0.000
0xfe
3    7          238        0          257706      8762004     0             0.000
0xfe
4    29278      1901233    0          1020823511  1945823027  0             1.027
0xfe
5    7          238        0          257706      8762004     0             0.000
0xfe
6    7          238        0          257706      8762004     0             0.000
0xfe
7    7          238        0          257705      8761970     0             0.000
0xfe
8    29271      1900721    0          1020819594  1945578818  0             1.027
0xfe
9    7          238        0          257708      8762072     0             0.000
0xfe
10   7          238        0          257706      8762004     0             0.000
0xfe
11   7          238        0          257706      8762004     0             0.000
0xfe
12   7          238        0          257704      8761936     0             0.000
0xfe
13   7          238        0          257704      8761936     0             0.000
0xfe
14   7          238        0          257705      8761970     0             0.000
0xfe
15   7          238        0          257685      8761290     0             0.000
0xfe
158  89         4845       0          5412431     294365451   0             0.004
0x1fff

Note: The above counters are only for live debug and might overflow



R-PHY#show downstream channel counter tpmi
Level      Rx-pkts     Rx-sum-pkts
```

```
Node Rcv  170713    4122258053
Depi Pkt  408       9830848

Port Chan SessionId(dec/hex)    Rx-pkts    Rx-sum-pkts
DS_0 0    4390912   /0x00430000 42315      1805172
DS_0 1    4390913   /0x00430001 11         458
DS_0 2    4390914   /0x00430002 11         458
DS_0 3    4390915   /0x00430003 11         458
DS_0 4    4390916   /0x00430004 42315      1805173
DS_0 5    4390917   /0x00430005 11         458
DS_0 6    4390918   /0x00430006 11         458
DS_0 7    4390919   /0x00430007 11         458
DS_0 8    4390920   /0x00430008 42316      1804204
DS_0 9    4390921   /0x00430009 11         458
DS_0 10   4390922   /0x0043000A 11         458
DS_0 11   4390923   /0x0043000B 11         458
DS_0 12   4390924   /0x0043000C 11         458
DS_0 13   4390925   /0x0043000D 11         457
DS_0 14   4390926   /0x0043000E 11         457
DS_0 15   4390927   /0x0043000F 11         457
DS_0 158  272695296 /0x10410000 547        13143769
US_0 0    13893632  /0x00D40000 10564      255047332
US_0 1    13893633  /0x00D40001 10564      255046434
US_0 2    13893634  /0x00D40002 10564      254788432
US_0 3    13893635  /0x00D40003 10564      254787215

Port     Rx-pkts    Rx-sum-pkts Drop-pkts  Drop-sum-pkts
DS_0     128158     3088355161  0          0
US_0     42488      1024875517  0          0
US_1     12         103859      0          0

Note: The above counters are only for live debug and might overflow
```

show downstream depi configuration

To display the downstream DEPi configuration, use the **show downstream depi configuration** command.

show downstream depi configuration

show downstream depi configuration *channel_id*

Syntax Description	*channel_id*	Displays downstream channel DEPi configuration.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example: Downstream Channel DEPi Configuration

This example shows how to display downstream channel DEPi configuration:

```
R-PHY#show downstream depi configuration
Channel PwSubtype    SessionId(dec/hex)      SrcIp
0       PSP          4390912   /0x00430000   11.1.6.100
1       PSP          4390913   /0x00430001   11.1.6.100
2       PSP          4390914   /0x00430002   11.1.6.100
3       PSP          4390915   /0x00430003   11.1.6.100
4       PSP          4390916   /0x00430004   11.1.6.100
5       PSP          4390917   /0x00430005   11.1.6.100
6       PSP          4390918   /0x00430006   11.1.6.100
7       PSP          4390919   /0x00430007   11.1.6.100
8       PSP          4390920   /0x00430008   11.1.6.100
9       PSP          4390921   /0x00430009   11.1.6.100
10      PSP          4390922   /0x0043000A   11.1.6.100
11      PSP          4390923   /0x0043000B   11.1.6.100
12      PSP          4390924   /0x0043000C   11.1.6.100
13      PSP          4390925   /0x0043000D   11.1.6.100
14      PSP          4390926   /0x0043000E   11.1.6.100
15      PSP          4390927   /0x0043000F   11.1.6.100
158     PSP          272695296 /0x10410000   11.1.6.100
```

Example: Downstream DEPi Configuration for a Channel

```
R-PHY#show downstream depi configuration 0
Channel PwSubtype    SessionId(dec/hex)      SrcIp
0       PSP          4390912   /0x00430000   11.1.6.100
```

show downstream dlm counter

To view the downstream channel configuration, use the **show downstream dlm counter** command.

show downstream dlm counter

Command Default	None.
Command Modes	Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines None.

Example: Downstream DLM Counter

```
R-PHY#show downstream dlm counter
      DLM RX Count:       872
      DLM TX Count:       872
      Bad Format Drop:    0
```

```
                  Bad Code Field Drop: 0
                  Bad Session Drop:    0
```

show downstream ofdm

To view the downstream OFDM channel profile information and PLC error interrupt details, use the **show downstream ofdm** command.

show downstream ofdm {**counter profile** | **db** | **interrupt**}

<table>
<tr><td rowspan="3">Syntax Description</td><td>counter profile</td><td>Shows the downstream OFDM channel profiles counter information.</td></tr>
<tr><td>db</td><td>Shows the downstream OFDM channel profiles counter information from the RPD database.</td></tr>
<tr><td>interrupt</td><td>Shows the downstream OFDM channel PLC error interrupt information.</td></tr>
</table>

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 RPD Software 1.1	This command was introduced.

Usage Guidelines   None.

Example

This example shows how to view the downstream OFDM channel profiles counter information:

```
R-PHY#show downstream ofdm counter profile
OFDM Channel: 158
Profile Pkts       Sum-Pkts   Bytes      Sum-Bytes  Codewords  Sum-Codewords
0       1020393    1020393    55101222   55101222   195        695847
1       0          0          0          0          0          0
2       0          0          0          0          0          0
3       0          0          0          0          0          0
4       0          0          0          0          0          0
5       0          0          0          0          0          0
6       0          0          0          0          0          0
7       0          0          0          0          0          0
8       0          0          0          0          0          0
9       0          0          0          0          0          0
10      0          0          0          0          0          0
11      0          0          0          0          0          0
12      0          0          0          0          0          0
13      0          0          0          0          0          0
14      0          0          0          0          0          0
15      0          0          0          0          0          0

OFDM Channel: 159
```

```
OFDM Channel: 160

OFDM Channel: 161

OFDM Channel: 162

Note: The above counters are only for live debug and might overflow
```

Example

This example shows how to view the downstream OFDM channel profiles counter information from the RPD database:

```
R-PHY#show downstream ofdm db
Channel ID  Index  Type  Port Index  OutDiscards  OutErrors  OutPackets  DiscontinuityTime

158         0      2     0           0            0          1042293     2019-09-04
16:12:41.818131
            Profile:  0 Profile_CW: 696981
            Profile:  1 Profile_CW: 0
            Profile:  2 Profile_CW: 0
            Profile:  3 Profile_CW: 0
            Profile:  4 Profile_CW: 0
            Profile:  5 Profile_CW: 0
            Profile:  6 Profile_CW: 0
            Profile:  7 Profile_CW: 0
            Profile:  8 Profile_CW: 0
            Profile:  9 Profile_CW: 0
            Profile: 10 Profile_CW: 0
            Profile: 11 Profile_CW: 0
            Profile: 12 Profile_CW: 0
            Profile: 13 Profile_CW: 0
            Profile: 14 Profile_CW: 0
            Profile: 15 Profile_CW: 0
            Plc OutDiscards  Plc OutErrors  Plc OutPackets  Plc DiscontinuityTime
            0                0              953156          2019-09-04 16:12:41.818177
            operStatusDsOfdm:  1
            PlcFrameTimeAlignment:  8219228673410636832
Channel ID  Index  Type  Port Index  OutDiscards  OutErrors  OutPackets  DiscontinuityTime

159         1      2     0           0            0          1038247     2019-09-04
16:12:41.833570
            Profile:  0 Profile_CW: 798899
            Profile:  1 Profile_CW: 0
            Profile:  2 Profile_CW: 0
            Profile:  3 Profile_CW: 0
            Profile:  4 Profile_CW: 0
            Profile:  5 Profile_CW: 0
            Profile:  6 Profile_CW: 0
            Profile:  7 Profile_CW: 0
            Profile:  8 Profile_CW: 0
            Profile:  9 Profile_CW: 0
            Profile: 10 Profile_CW: 0
            Profile: 11 Profile_CW: 0
            Profile: 12 Profile_CW: 0
            Profile: 13 Profile_CW: 0
            Profile: 14 Profile_CW: 0
            Profile: 15 Profile_CW: 0
            Plc OutDiscards  Plc OutErrors  Plc OutPackets  Plc DiscontinuityTime
            0                0              943863          2019-09-04 16:12:41.833699
            operStatusDsOfdm:  1
```

```
             PlcFrameTimeAlignment:  8219228673433137840
      Channel ID   Index   Type   Port Index   OutDiscards   OutErrors   OutPackets   DiscontinuityTime

      160          2       2      0            0             0           0            2019-09-04
      20:12:33.639701
             Profile:  0 Profile_CW: 0
             Profile:  1 Profile_CW: 0
             Profile:  2 Profile_CW: 0
             Profile:  3 Profile_CW: 0
             Profile:  4 Profile_CW: 0
             Profile:  5 Profile_CW: 0
             Profile:  6 Profile_CW: 0
             Profile:  7 Profile_CW: 0
             Profile:  8 Profile_CW: 0
             Profile:  9 Profile_CW: 0
             Profile: 10 Profile_CW: 0
             Profile: 11 Profile_CW: 0
             Profile: 12 Profile_CW: 0
             Profile: 13 Profile_CW: 0
             Profile: 14 Profile_CW: 0
             Profile: 15 Profile_CW: 0
             Plc OutDiscards  Plc OutErrors  Plc OutPackets  Plc DiscontinuityTime
             0                0              0               2019-09-04 20:12:33.639701
             operStatusDsOfdm:  2
             PlcFrameTimeAlignment:  0
      Channel ID   Index   Type   Port Index   OutDiscards   OutErrors   OutPackets   DiscontinuityTime

      161          3       2      0            0             0           0            2019-09-04
      20:12:33.639701
             Profile:  0 Profile_CW: 0
             Profile:  1 Profile_CW: 0
             Profile:  2 Profile_CW: 0
             Profile:  3 Profile_CW: 0
             Profile:  4 Profile_CW: 0
             Profile:  5 Profile_CW: 0
             Profile:  6 Profile_CW: 0
             Profile:  7 Profile_CW: 0
             Profile:  8 Profile_CW: 0
             Profile:  9 Profile_CW: 0
             Profile: 10 Profile_CW: 0
             Profile: 11 Profile_CW: 0
             Profile: 12 Profile_CW: 0
             Profile: 13 Profile_CW: 0
             Profile: 14 Profile_CW: 0
             Profile: 15 Profile_CW: 0
             Plc OutDiscards  Plc OutErrors  Plc OutPackets  Plc DiscontinuityTime
             0                0              0               2019-09-04 20:12:33.639701
             operStatusDsOfdm:  2
             PlcFrameTimeAlignment:  0
      Channel ID   Index   Type   Port Index   OutDiscards   OutErrors   OutPackets   DiscontinuityTime

      162          4       2      0            0             0           0            2019-09-04
      20:12:33.639701
             Profile:  0 Profile_CW: 0
             Profile:  1 Profile_CW: 0
             Profile:  2 Profile_CW: 0
             Profile:  3 Profile_CW: 0
             Profile:  4 Profile_CW: 0
             Profile:  5 Profile_CW: 0
             Profile:  6 Profile_CW: 0
             Profile:  7 Profile_CW: 0
             Profile:  8 Profile_CW: 0
             Profile:  9 Profile_CW: 0
             Profile: 10 Profile_CW: 0
```

```
                    Profile: 11 Profile_CW: 0
                    Profile: 12 Profile_CW: 0
                    Profile: 13 Profile_CW: 0
                    Profile: 14 Profile_CW: 0
                    Profile: 15 Profile_CW: 0
                    Plc OutDiscards  Plc OutErrors  Plc OutPackets  Plc DiscontinuityTime
                    0                0              0               2019-09-04 20:12:33.639701
                    operStatusDsOfdm:  2
                    PlcFrameTimeAlignment:  0
```

Example

This example shows how to view the downstream OFDM channel PLC error interrupt details:

```
R-PHY#show downstream ofdm interrupt
Interrupt              Status
PLC MC msg format err    0x0
PLC EM msg format err    0x0
PLC EM msg late err      0x0
PLC FU msg format err    0x0
PLC FU msg late err      0x0
PLC TR msg format err    0x0
PLC TR msg late err      0x0
```

show downstream ofdm configuration

To view the downstream OFDM Channel Descriptor (OCD) and Downstream Profile Descriptor (DPD) configurations, use the **show downstream ofdm configuration** command.

show downstream ofdm configuration {**ocd** | **dpd**}

Syntax Description	ocd	Shows the downstream OFDM configuration OCD configuration.
	dpd	Shows the downstream OFDM configuration DPD configuration.

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 RPD Software 1.1	This command was introduced.

Usage Guidelines None.

Example

This example shows how to display both the OCD and DPD configurations:

```
R-PHY#show downstream ofdm configuration
OFDM Channel: 158
```

```
OCD Message
  OCD fields
    DCID                        : 159
    CCC                         : 2
    TLV 0 Spacing               : 50 KHz
    TLV 1 Cyclic Prefix         : 1024 samples
    TLV 2 Rolloff               : 128 samples
    TLV 3 Spectrum Location     : 500600000 Hz
    TLV 4 Interleave Depth      : 16
    TLV 5 Subcarrier Assignment : Continuous Pilots (list)
      1638  1702  1766  1830  1894  1958  1997  2009  2020  2029
      2066  2075  2086  2098  2142  2206  2270  2334  2398  2462


    TLV 5 Subcarrier Assignment : Excluded Subcarriers (range)
                                : 0    - 1605
    TLV 5 Subcarrier Assignment : Excluded Subcarriers (range)
                                : 2490 - 4095
    TLV 5 Subcarrier Assignment : PLC Subcarriers (range)
                                : 2044 - 2051
    TLV 6 Primary Capable       : 0 (No)

OFDM Channel: 158
DPD Message
  DPD fields
    DCID                        : 159
    Profile ID                  : 0
    CCC                         : 4
    TLV 5 Subcarrier Range/List : Range (continuous)
      Modulation                : 1024 (default value)
                                : 0    - 4095
DPD Message
  DPD fields
    DCID                        : 159
    Profile ID                  : 1
    CCC                         : 4
    TLV 5 Subcarrier Range/List : Range (continuous)
      Modulation                : 4096 (default value)
                                : 0    - 4095
DPD Message
  DPD fields
    DCID                        : 159
    Profile ID                  : 2
    CCC                         : 4
    TLV 5 Subcarrier Range/List : Range (continuous)
      Modulation                : 2048 (default value)
                                : 0    - 4095
DPD Message
  DPD fields
    DCID                        : 159
    Profile ID                  : 255
    CCC                         : 4
    TLV 5 Subcarrier Range/List : Range (continuous)
      Modulation                : 16 (default value)
                                : 0    - 4095
```

Example

This example shows how to display the OCD configuration:

```
R-PHY#show downstream ofdm configuration ocd
OFDM Channel: 158
```

```
OCD Message
  OCD fields
    DCID                          : 159
    CCC                           : 2
    TLV 0 Spacing                 : 50 KHz
    TLV 1 Cyclic Prefix           : 1024 samples
    TLV 2 Rolloff                 : 128 samples
    TLV 3 Spectrum Location       : 500600000 Hz
    TLV 4 Interleave Depth        : 16
    TLV 5 Subcarrier Assignment   : Continuous Pilots (list)
      1638  1702  1766  1830  1894  1958  1997  2009  2020  2029
      2066  2075  2086  2098  2142  2206  2270  2334  2398  2462



    TLV 5 Subcarrier Assignment   : Excluded Subcarriers (range)
                                  : 0    - 1605
    TLV 5 Subcarrier Assignment   : Excluded Subcarriers (range)
                                  : 2490 - 4095
    TLV 5 Subcarrier Assignment   : PLC Subcarriers (range)
                                  : 2044 - 2051
    TLV 6 Primary Capable         : 0 (No)
```

This example shows how to display the DPD configuration:

```
R-PHY#show downstream ofdm configuration dpd
OFDM Channel: 158
DPD Message
  DPD fields
    DCID                          : 159
    Profile ID                    : 0
    CCC                           : 4
    TLV 5 Subcarrier Range/List   : Range (continuous)
      Modulation                  : 1024 (default value)
                                  : 0    - 4095
DPD Message
  DPD fields
    DCID                          : 159
    Profile ID                    : 1
    CCC                           : 4
    TLV 5 Subcarrier Range/List   : Range (continuous)
      Modulation                  : 4096 (default value)
                                  : 0    - 4095
DPD Message
  DPD fields
    DCID                          : 159
    Profile ID                    : 2
    CCC                           : 4
    TLV 5 Subcarrier Range/List   : Range (continuous)
      Modulation                  : 2048 (default value)
                                  : 0    - 4095
DPD Message
  DPD fields
    DCID                          : 159
    Profile ID                    : 255
    CCC                           : 4
    TLV 5 Subcarrier Range/List   : Range (continuous)
      Modulation                  : 16 (default value)
                                  : 0    - 4095
```

show downstream oob configuration

To display the downstream OOB configuration, use the **show downstream oob configuration** command.

show downstream oob configuration {**55d1** | **55d2** | **depi** | **ndf**}

Syntax Description

55d1	Displays the 55D1 in OOB channel configuration.
55d2	Displays the 55D2 in OOB channel configuration.
depi	Displays the OOB DEPI configuration.
ndf	Dsiplays the NDF in OOB channel configuration.

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Example

This example shows how to display the 55D1 in OOB channel configuration:

```
R-PHY#show downstream oob configuration 55d1

OOB 55D1 bcm configuration:
Chan          State    Power    Muted   Frequency  CalcuFreq  RegFreq
1:Primary     UP       -10      UnMuted 100000000  190000     190000
1:Secondary   UP        0       UnMuted 81000000   1a4000     1a4000
```

Example

This example shows how to display the 55D2 in OOB channel configuration:

```
R-PHY#show downstream oob configuration 55d2

OOB 55D2 bcm configuration:
Chan    State   Power    Muted    Frequency  CalcuFreq  RegFreq
0       UP      1        UnMuted  94000000   fff38000   f38000
```

Example

This example shows how to display the OOB DEPI configuration:

```
R-PHY#show downstream oob configuration depi
DS OOB depi 55d1 configuration:
```

```
Chan_id Session id Internal SessionId Source IP                                    Group
IP
163     0x800000cb 0xff0000a3         2002::a86f:6f01
ff3a::8086:1

DS OOB depi 55d2 not configured!
```

Example

This example shows how to display the NDF in OOB channel configuration:

```
R-PHY#show downstream oob configuration ndf

OOB NDF bcm configuration:
Chan    State   Power   Muted   Frequency  CalcuFreq  RegFreq
2       UP      0       UnMuted 70000000   ffd58000   d58000
```

show downstream oob counter

To display the incoming traffic to the DSP modulator for all the three downstream OOB channels, use the **show downstream oob counter** command. In addition, it displays the DSP reset count.

show downstream oob counter {**55d1** | **55d2** | **ndf**}

Syntax Description		
	55d1	Shows the incoming traffic to the DSP modulator for the downstream OOB-55d1 channel.
	55d2	Shows the incoming traffic to the DSP modulator for the downstream OOB-55d2 channel.
	ndf	Shows the incoming traffic to the DSP modulator for the downstream Narrowband Digital Forward (NDF) channel.

Command Default	None.

Command Modes	Privileged EXEC mode (#)

Command History	**Release**	**Modification**
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines	If an issue occurs, where the DSP modulator is not responding, the DSP auto resets to recover the system or manually via CLI command. Hence, this command shows how many times the DSP has been reset.

Example

This example shows how to display the downstream counter details, when the system is configured with OOB 55d2 and NDF:

```
R-PHY#show downstream oob counter

DSOOB 55D2 counters: [update every 2 minutes]
 Modulator : In Packets 136321012
 INTST_rst_cnt : 1

DSOOB NDF counters: [update every 2 minutes]
 Modulator              [Chan : 2] : In Packets 12348790
 DPS reset              count : 0 (since last reload)
```

Example

This example shows how to display the downstream counter details, when system is configured with OOB 55d1 and NDF:

```
R-PHY#show downstream oob counter

DSOOB 55D2 counters: [update every 2 minutes]
Modulator : In Packets 21080962
INTST_rst_cnt : 1

DSOOB NDF counters: [update every 2 minutes]
Modulator                          [Chan : 2] : In Packets 1239956
DPS reset                          count : 0 (since last reload)
```

Example

This example shows how to display the downstream OOB 55-1 counter details:

```
R-PHY#show downstream oob counter 55d1

DSOOB 55D1 counters: [update every 2 minutes]
 Primary Channel   : In Packets 456310017
 INTST_rst_cnt : 0
 Secondary Channel : In Packets 0
 INTST_rst_cnt : 0
```

Displays Downstream OOB 55-2 Counter Details

This example shows how to display the downstream OOB 55-2 counter details:

```
R-PHY#show downstream oob counter 55d2

DSOOB 55D2 counters: [update every 2 minutes]
 Modulator : In Packets 136281012
 INTST_rst_cnt : 1
```

Displays Downstream NDF Counter Details

This example shows how to display the downstream NDF counter details:

```
R-PHY#show downstream oob counter ndf

DSOOB NDF counters: [update every 2 minutes]
```

```
Modulator                                    [Chan : 2] : In Packets 1239956
DPS reset                                      count : 0 (since last reload)
```

show downstream port configuration

To view the downstream port configuration, use the **show downstream port configuration** command.

show downstream port configuration

Syntax Description

This command has no arguments or keywords.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example: Downstream Port Configuration

This example shows how to display the downstream port configuration:

```
R-PHY#show downstream port configuration
Admin: UP
Muted: NORMAL
BasePower: 32 dBmV
```

show downstream port status

To view the downstream port status, you can use the **show downstream port status** command.

show downstream port status

Syntax Description

This command has no arguments or keywords.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 9.x	This command was introduced.

Usage Guidelines None.

Downstream Port Configuration

This example shows how to display the downstream port status:

```
R-PHY# show downstream port status
Port ID Port Type Oper Status
0 DS UP
```

show downstream scqam

To display the downstream SCQAM channel counter DB, use the **show downstream scqam db** command.

show downstream scqam db

Syntax Description

This command has no arguments or keywords.

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines None.

Example: Downstream SC QAM

This example shows how to display the downstream SC QAM:

```
R-PHY#show downstream scqam db
Channel ID  Channel Type  Port Index  OutDiscards  OutErrors  OutPackets  DiscontinuityTime

0            1             0           0            0          183510024   2019-05-09
07:11:22.960000
1            1             0           0            0          183936629   2019-05-09
07:11:22.960000
2            1             0           0            0          106252      2019-05-09
07:11:22.960000
3            1             0           0            0          106285      2019-05-09
07:11:22.960000
4            1             0           0            0          102849      2019-05-09
```

```
07:11:22.960000
5            1              0          0            0          102902      2019-05-09
07:11:22.960000
6            1              0          0            0          102949      2019-05-09
07:11:22.960000
7            1              0          0            0          102850      2019-05-09
07:11:22.960000
8            1              0          0            0          183500907   2019-05-09
07:11:22.960000
9            1              0          0            0          183927878   2019-05-09
07:11:22.960000
10           1              0          0            0          92992       2019-05-09
07:11:22.960000
11           1              0          0            0          92992       2019-05-09
07:11:22.960000
12           1              0          0            0          92992       2019-05-09
07:11:22.960000
13           1              0          0            0          92992       2019-05-09
07:11:22.960000
14           1              0          0            0          92990       2019-05-09
07:11:22.960000
15           1              0          0            0          92992       2019-05-09
07:11:22.960000
```

show environment

To display the details of the sensor and their statuses, use the **show environment** command.

show environment all

show environment history *sensor_id*

show environment sensor *sensor_id*

show environment summary

show environment table *sensor_id*

Syntax Description		
	all	Shows a list of sensors and their statuses.
	history	Shows the sensor state change history.
	sunnary	Shows sensors summary, including the alarm information.
	table	Display a sensor state and threshold for alarms.
	sensor_id	ID of the sensor.

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None

Example: List of Sensors and their Statuses

This example shows how to list the sensors and their statuses.

```
R-PHY#show environment all
Sensor List:  Environmental Monitoring
ID    Sensor                State            Value
--    ------                -----            -----
1     temp: FPGA            NORMAL           34 Celsius
2     temp: BCM3161         NORMAL           43 Celsius
3     temp: RF_DS           NORMAL           48 Celsius
4     temp: Inlet_Air       NORMAL           24 Celsius
5     temp: CPU             NORMAL           32 Celsius
6     volt: VP5P0_SB        NORMAL           4.927030 Volt
7     volt: VP3P5           NORMAL           3.499980 Volt
8     volt: 3620_V          NORMAL           1.107324 Volt
9     volt: VP12P0_RF       NORMAL           11.935384 Volt
10    volt: VP3P3_VG        NORMAL           3.303598 Volt
11    volt: VP12V           NORMAL           11.902281 Volt
12    volt: VP1P4           NORMAL           1.377696 Volt
13    volt: VP5P5           NORMAL           5.536112 Volt
14    volt: VP2P0_FP        NORMAL           2.007010 Volt
15    volt: VP3P3           NORMAL           3.307962 Volt
16    volt: VP1P8           NORMAL           1.797583 Volt
17    volt: VP3P3_CLK       NORMAL           3.301416 Volt
18    volt: RF_PD_OU        NORMAL           0.899420 Volt
19    volt: VP3V3_APL       NORMAL           3.310708 Volt
20    volt: VP1P2_IO        NORMAL           1.198793 Volt
21    volt: DB_3V3          NORMAL           3.306407 Volt
22    volt: VP1P35          NORMAL           1.357581 Volt
23    volt: VP3P0_BCM       NORMAL           3.009023 Volt
24    volt: VP1P8_BCM       NORMAL           1.791038 Volt
25    volt: VP2P5_IO        NORMAL           2.484766 Volt
26    volt: VP1P2_FP        NORMAL           1.194792 Volt
27    volt: VP1P0A_BC       NORMAL           0.998244 Volt
28    volt: VP1P0A_FP       NORMAL           0.999744 Volt
29    volt: VP1P0_BCM       NORMAL           0.926726 Volt
30    volt: VP1P0           NORMAL           1.009246 Volt
31    volt: VP1P0_FP        NORMAL           1.001244 Volt
32    volt: LM5066_V        NORMAL           12.099411 Volt
33    current: LM5066_I     NORMAL           3.819864 Amp
34    current: VP1P0_FP     NORMAL           2.250000 Amp
35    current: VP1P0        NORMAL           4.062500 Amp
36    current: VP1P0_BCM    NORMAL           7.187500 Amp
```

Example: Sensor State Change History

This example shows how to display the history details of the sensor's state change:

```
R-PHY#show environment history 1
<156>2019-05-08T04:41:18.929639+00:00 RPD10049FC10800 WARNING type=Temp, name=FPGA , id=1
, data=34.000000, unit=Celsius, poll=2, time=2019-05-08 04:41:18
```

```
<156>2019-05-08T05:05:50.713127+00:00 RPD10049FC10800 WARNING type=Temp, name=FPGA , id=1
, data=35.000000, unit=Celsius, poll=2, time=2019-05-08 05:05:50
```

Example: A Sensor Summary

This example shows how to display the summary of a sensor:

```
R-PHY#show environment sensor 1
ID   Sensor              State           Value
--   ------              -----           -----
1    temp: FPGA          NORMAL          35 Celsius
```

Example: A Sensors Summary Including Alarm Information

```
R-PHY#show environment summary
Number of Critical alarms: 0
Number of Major alarms: 0
Number of Minor alarms: 0

ID   Sensor              State           Value
--   ------              -----           -----
1    temp: FPGA          NORMAL          35 Celsius
2    temp: BCM3161       NORMAL          44 Celsius
3    temp: RF_DS         NORMAL          49 Celsius
4    temp: Inlet_Air     NORMAL          25 Celsius
5    temp: CPU           NORMAL          33 Celsius
6    volt: VP5P0_SB      NORMAL          4.946668 Volt
7    volt: VP3P5         NORMAL          3.499980 Volt
8    volt: 3620_V        NORMAL          1.093875 Volt
9    volt: VP12P0_RF     NORMAL          11.935384 Volt
10   volt: VP3P3_VG      NORMAL          3.303598 Volt
11   volt: VP12V         NORMAL          11.811884 Volt
12   volt: VP1P4         NORMAL          1.376256 Volt
13   volt: VP5P5         NORMAL          5.533116 Volt
14   volt: VP2P0_FP      NORMAL          2.007010 Volt
15   volt: VP3P3         NORMAL          3.307962 Volt
16   volt: VP1P8         NORMAL          1.797583 Volt
17   volt: VP3P3_CLK     NORMAL          3.301416 Volt
18   volt: RF_PD_OU      NORMAL          0.907422 Volt
19   volt: VP3V3_APL     NORMAL          3.309058 Volt
20   volt: VP1P2_IO      NORMAL          1.198793 Volt
21   volt: DB_3V3        NORMAL          3.306407 Volt
22   volt: VP1P35        NORMAL          1.356971 Volt
23   volt: VP3P0_BCM     NORMAL          3.009023 Volt
24   volt: VP1P8_BCM     NORMAL          1.789947 Volt
25   volt: VP2P5_IO      NORMAL          2.484766 Volt
26   volt: VP1P2_FP      NORMAL          1.194292 Volt
27   volt: VP1P0A_BC     NORMAL          0.997744 Volt
28   volt: VP1P0A_FP     NORMAL          0.999744 Volt
29   volt: VP1P0_BCM     NORMAL          0.926226 Volt
30   volt: VP1P0         NORMAL          1.009246 Volt
31   volt: VP1P0_FP      NORMAL          1.000744 Volt
32   volt: LM5066_V      NORMAL          12.077611 Volt
33   current: LM5066_I   NORMAL          3.845438 Amp
34   current: VP1P0_FP   NORMAL          2.312500 Amp
35   current: VP1P0      NORMAL          4.125000 Amp
36   current: VP1P0_BCM  NORMAL          7.125000 Amp
```

Example: A Sensor State and Threshold for Alarms

```
R-PHY#show environment table 1
sensor_id: 1
name: FPGA
type: temp
unit: Celsius
state            low          high
----------------------------------
NORMAL           N/A          84
MINOR-HIGH       85           89
MAJOR-HIGH       90           94
CRITICAL-HIGH    95           99
POWER-CYCLE-HIGH 100          N/A
poll_interval: 2
sensor_state: NORMAL
sensor_value: 35
```

show fault-management

To display the RPD fault-management configuration details, use the **show fault-management** command.

show fault-management {**config** | **local-queue** | **pending-queue**}

Syntax Description		
	config	Shows the RPD fault-management configuration from the principal core.
	local-queue	Shows the RPD fault-management local queue events.
	pending-queue	Shows the RPD fault-management pending queue events.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example: RPD Fault-Management Configuration from Principal Core

This example shows how to view the RPD fault-management configuration from the principal core.

```
R-PHY#show fault-management config
NotifyEnable:        disable
EvThrottleAdminStatus: unconstrained
EvThrottleThreshold:   5
EvThrottleInterval:    1
EvPriority:
 emergency:       LocalQueue, PendingQueue
```

```
alert:          LocalQueue, PendingQueue
critical:       LocalQueue, PendingQueue
error:          LocalQueue, PendingQueue
warning:        LocalQueue
notice:         LocalQueue
information:    LocalQueue
debug:          NoStoreInQueue
```

Example: RPD Fault-Management Local Queue Events

This example shows how to view the RPD fault-management local queue events.

```
R-PHY#show fault-management local-queue
LastTime            FirstTime           Event      Level        Counts Text
2019-05-08 04:04:24  2019-05-08 04:04:24  66070102   notice       1     SSH Authentication
 Successful from: 11.1.6.1 admin
2019-05-08 04:04:48  2019-05-08 04:05:17  2148075527 warning      2      Rpd default
login credentials detected in use - please change password immediately
2019-05-08 04:38:07  2019-05-08 04:38:07  66070401   notice       1      SW Download
INIT - Via GCP: SW file:RPD_seres_rpd_20190507_130525_or_166.itb.sign.SSA - SW
server:11.1.1.10
```

Example: RPD Fault-Management Pending Queue Events

This example shows how to view the RPD fault-management pending queue events.

```
R-PHY#show fault-management pending-queue
LastTime            FirstTime           Event      Level        Counts Text
2019-05-08 04:04:24  2019-05-08 04:04:24  66070102   notice       1     SSH Authentication
 Successful from: 11.1.6.1 admin
2019-05-08 04:04:48  2019-05-08 04:05:17  2148075527 warning      2      Rpd default
login credentials detected in use - please change password immediately
2019-05-08 04:38:07  2019-05-08 04:38:07  66070401   notice       1      SW Download
INIT - Via GCP: SW file:RPD_seres_rpd_20190507_130525_or_166.itb.sign.SSA - SW
server:11.1.1.10
```

show fpga

To view the details of the field-programmable gate array (FPGA) configuration and status, use the **show fpga** command.

show fpga version

show fpga video {**configuration** | **statistics**} *start_channel end_channel*

show fpga video filter

show fpga video interrupt

Syntax Description		
version	Shows FPGA version.
configuration	Shows FPGA video configuration.
start_channel / *end_channel*	Specifies the start and end channel numbers.

filter	Shows the FPGA VPMi MAC/IP address filter configuration or hits counter.
interrupt	Shows the FPGA interrupt status.
statistics	Shows the FPGA video channel counter statistics.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines   None.

Example: FPGA Version

This example shows how to view the FPGA version.

```
R-PHY#show fpga version
FPGA Revision(0x00000000):    0x7e2a5202(2018-10-10 8.2)
```

Example: FPGA Video Configuration

This example shows how to view the FPGA video configuration.

```
R-PHY#show fpga video configuration
NUMBER              start channel ID: <0-163>
R-PHY#show fpga video configuration 0
NUMBER              end channel ID: <0-163>
R-PHY#show fpga video configuration 0 0
Mode: ASYNC

Chan   Ready  VPMI        MPTF        TYPE            M      N     BUF   MACDA  MACSA
IPDA   IPSA
              Session_ID  Session_ID                              TRHD  IDX    IDX
IDX    IDX
0      FALSE  0x00000000  0x00000000  ANNEX_B_QAM64   401    812   0     ---    ---
---    ---
```

Example: FPGA Video Filter

This example shows how to view the FPGA video filter.

```
R-PHY#show fpga video filter
VPMI FILTER Enabled

VPMI FILTER configuration:
NO VPMI MACDA FILTER ENTRY is enabled
MACDA_FILTER_ENABLE: 0x00000000
NO VPMI MACSA FILTER ENTRY is enabled
MACSA_FILTER_ENABLE: 0x00000000
NO VPMI IPDA FILTER ENTRY is enabled
```

```
IPDA_FILTER_ENABLE: 0x00000000
NO VPMI IPSA FILTER ENTRY is enabled
IPSA_FILTER_ENABLE: 0x00000000

INDEX  MAC_DEST_ADDR      MAC_SRC_ADDR       MAC_SRC_ADDR_MASK  MAC_DA_HIT_CNT  MAC_SA_HIT_CNT

0      00:00:00:00:00:00  00:00:00:00:00:00  00:00:00:00:00:00  0               0

1      00:00:00:00:00:00  00:00:00:00:00:00  00:00:00:00:00:00  0               0

2      00:00:00:00:00:00  00:00:00:00:00:00  00:00:00:00:00:00  0               0

INDEX  IP_DEST_ADDR   IP_SRC_ADDR  IP_DA_HIT_CNT   IP_SA_HIT_CNT
0      ---            ---          0               0
1      ---            ---          0
```

Example: FPGA Video Interrupt

This example shows how to view the FPGA video interrupt status.

```
R-PHY#show fpga video interrupt
MDJT intr:
HIPRI_INT_SRC(0x08000040):      0x00000001
HIPRI_INT_MSK(0x08000044):      0x000001ff
HIPRI_INT_CHN_SRC(0x08000048): 0x00000000
LOPRI_INT_SRC(0x08000060):      0x00000000
LOPRI_INT_MSK(0x08000064):      0x00000001
LOPRI_INT_CHN_SRC(0x08000068): 0x00000000
BUF_OVFL_CHN_SRC_0(0x0800006c): 0x00000000
BUF_OVFL_CHN_SRC_1(0x08000070): 0x00000000
BUF_OVFL_CHN_SRC_2(0x08000074): 0x00000000
BUF_OVFL_CHN_SRC_3(0x08000078): 0x00000000
BUF_OVFL_CHN_SRC_4(0x0800007c): 0x00000000
INBUF_DELQ_CHN_SRC_0(0x0800009c): 0x00000000
INBUF_DELQ_CHN_SRC_1(0x080000a0): 0x00000000
INBUF_DELQ_CHN_SRC_2(0x080000a4): 0x00000000
INBUF_DELQ_CHN_SRC_3(0x080000a8): 0x00000000
```

Example: FPGA Video Channel Statistics

This example shows how to view the FPGA video channel counter statistics .

```
R-PHY#show fpga video statistics 0 0
CHN  IN_PKT_CNT  DEL_PKT_CNT  INS_PKT_CNT  OUT_PKT_CNT
0    0           0            0            0
```

show gcp session

To display the GCP session overall status or GCP statistics per session, use the **show gcp session** command.

show gcp session

show gcp session statistics

Syntax Description	**statistics**	Shows the GCP session statistics per session.

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines None.

Example: GCP Session Overall Status

This example shows how to view the GCP session overall status:

```
R-PHY#show gcp session
GCP session information

Active sessions:
SLAVE: 11.1.6.100:None --> 11.1.6.3:8190
SLAVE: 11.1.6.100:None --> 11.1.6.2:8190

Principal session:
None

Principal candidate session
None

Non Principal sessions:
None

Failed sessions:
None
```

Example: GCP Statistics per Session

This example shows how to view the GCP statistics per session:

```
R-PHY#show gcp session statistics
GCP session statistics:

Session1: SLAVE: 11.1.6.100:None --> 11.1.6.3:8190
Rx:560514
RxRunt:0
RxFrag:0
RxInvalidLen:0
RxDecodeFail:0
RxDecodeFrag:0
RxSessionErr:0
RxSessionClose:0
RxNoData:274756
RxSockErr:0
RxQEmpty:0
Tx:280272
TxQEmpty:0
```

```
TxQFull:0
TxFrag:0
TxEncodeErr:0
TxEncodeFail:0
TxSessionErr:0
TxSockErr:0

Session2: SLAVE: 11.1.6.100:None --> 11.1.6.2:8190
Rx:171392
RxRunt:0
RxFrag:0
RxInvalidLen:0
RxDecodeFail:0
RxDecodeFrag:0
RxSessionErr:0
RxSessionClose:0
RxNoData:85695
RxSockErr:0
RxQEmpty:0
Tx:85701
TxQEmpty:0
TxQFull:0
TxFrag:0
TxEncodeErr:0
TxEncodeFail:0
TxSessionErr:0
TxSockErr:0
```

show group environment

To display the information on shelf group environment, use the **show   group   environment** command.

show   group   environment {**alarm** | **all** | **eeprom-fanio** | **eeprom-psio** | **eeprom-psu** | **fan** | **power** | **temperature** | **table**}

Syntax Description

alarm	Shows shelf sensor alarms.
all	Shows shelf all sensor information.
eeprom-fanio	Shows shelf group fanio eeprom info.
eeprom-psio	Shows shelf group psio eeprom info.
eeprom-psu	Shows shelf group psu eeprom info.
fan	**power**	**temperature**	Shows shelf group fan, power, and temperature sensor status.
table	Shows shelf group sensor information.

Command Default   None.

Command Modes   Privileged EXEC mode (#)

Command History	Release	Modification
	Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.
	Cisco 1x2 / Compact Shelf RPD Software 4.1	Options to show eeprom info for shelf group fanio, psio, and psu were added.
	Cisco 1x2 / Compact Shelf RPD Software 9.x	The output of **eeprom-psio** option was updated with Compact Shelf Chassis Serial Number details.

Usage Guidelines All commands in the **show group** command are supported only for the shelf primary node.

Example: Shelf Sensor Alarms

This example shows how to view the shelf sensor alarms.

```
R-PHY#show group environment alarm
EventId     Module  Level  StartTime  Duration         Text

2148075525  PSU1    error  04:47:30   1 day, 20:29:30  Rpd shelf power fail
PSU1;GROUP-ID=0004.9f30.a078
```

Example: Shelf All Sensor Information

This example shows how to view all information about the sensor.

```
R-PHY#show group environment all
---temperature---
ID  Desc                      Value(Celsius)  Test   Last Chg
60  Local Temperature Register  24            False  04:47:10
61  Remote DX1 temperature      24            False  04:47:10
62  Inlet Air U38 local         23            False  04:47:10


---power---
ID  Desc  State  Test   Last Chg
57  PSU0  ON     False  04:47:10
58  PSU1  FAIL   False  04:47:30


---fan---
ID  Desc  State  Level  Front(rpm)  Rear(rpm)  Test   Last Chg
51  FAN1  On     1      7324        7312       False  04:47:10
52  FAN2  On     1      7397        7212       False  04:47:10
53  FAN3  On     1      7250        7338       False  04:47:10
54  FAN4  On     1      7331        7278       False  04:47:10
55  FAN5  On     1      7591        7357       False  04:47:10
```

Example: Shelf Group FANIO EEPROM Info

This example shows how to view the shelf group FANIO EEPROM info.

```
R-PHY#show group environment eeprom-fanio
Eeprom format version: 04
Compatiblity Byte: FF
Controller Type - Type: 40
Controller Type - High Byte: 0D
Controller Type - Low Byte: 7F
Hardware Version - Type: 41
```

```
Hardware Version - High Byte: 02
Hardware Version - Low Byte: 00
PCA Part Number - Type: 82
PCA Part Number - Values: 73-18623-2
PCA Revision - Type: 42
PCA Revision - Values: 42 30
TAN Part Number - Type: C0
TAN Part Number - Length: 46
TAN Part Number: 800-104482-2
TAN Revision Number - Type: 8D
TAN Revision Number: 42 30 00 00
Product Number (PID) - Type: CB
Product Number (PID) - Length: 92
Product Number (PID): RPHY_SHELF_3X6
Version ID (VID) - Type: 89
Version ID (VID): V02
CLEI Code - Type: C6
CLEI Code - Length: 8A
CLEI Code: CAMME00BRB
Deviation Number - Type: 88
Deviation Number: 00 00 00 00
PCB Fab Version - Type: 02
PCB Fab Version: 02
PCA Serial Number - Type: C1
PCA Serial Number - Length: 8B
PCA Serial Number: CAT2222E1JJ
RMA Test History - Type: 03
RMA Test History: 00
RMA Number - Type: 81
RMA Number: 00 00 00 00
RMA History - Type: 04
RMA History: 00
Manufacturing Test Data - Type: C4
Manufacturing Test Data - Length: 08
Manufacturing Test Data: 00 00 00 00 00 00 00 00
Field Diagnostic Data - Type: C5
Field Diagnostic Data - Length: 08
Field Diagnostic Data: 00 00 00 00 00 00 00 00
Asset ID - Type: CC
Asset ID - Length: A0
Asset ID: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
 20 20 20 20 20
Licensing Transaction ID - Type: 8B
Licensing Transaction ID: 00 00 00 00
```

Example: Shelf Group PSIO EEPROM Info

This example shows how to view the shelf group PSIO EEPROM info.

```
R-PHY#show group environment eeprom-psio
Eeprom format version: 04
Compatiblity Byte: FF
Controller Type - Type: 40
Controller Type - High Byte: 0D
Controller Type - Low Byte: 7F
Hardware Version - Type: 41
Hardware Version - High Byte: 01
Hardware Version - Low Byte: 00
PCA Part Number - Type: 82
PCA Part Number - Values: 73-18592-1
PCA Revision - Type: 42
PCA Revision - Values: 46 30
TAN Part Number - Type: C0
```

```
TAN Part Number - Length: 46
TAN Part Number: 800-104482-2
TAN Revision Number - Type: 8D
TAN Revision Number: 42 30 00 00
Product Number (PID) - Type: CB
Product Number (PID) - Length: 92
Product Number (PID): RPHY_SHELF_3X6
Version ID (VID) - Type: 89
Version ID (VID): V02
CLEI Code - Type: C6
CLEI Code - Length: 8A
CLEI Code: CAMME00BRB
Deviation Number - Type: 88
Deviation Number: 00 00 00 00
PCB Fab Version - Type: 02
PCB Fab Version: 01
PCA Serial Number - Type: C1
PCA Serial Number - Length: 8B
PCA Serial Number: CAT2222E0UX
RMA Test History - Type: 03
RMA Test History: 00
RMA Number - Type: 81
RMA Number: 00 00 00 00
RMA History - Type: 04
RMA History: 00
Manufacturing Test Data - Type: C4
Manufacturing Test Data - Length: 08
Manufacturing Test Data: 00 00 00 00 00 00 00 00
Field Diagnostic Data - Type: C5
Field Diagnostic Data - Length: 08
Field Diagnostic Data: 00 00 00 00 00 00 00 00
Asset ID - Type: CC
Asset ID - Length: A0
Asset ID: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
 20 20 20 20 20
Licensing Transaction ID - Type: 8B
Licensing Transaction ID: 00 00 00 00
System MAC Address - Type: C3
System MAC Address - Length: 06
System MAC Address: 00:53:bf:f4:4b:6e
System MAC Address Block Size - Type: 43
System MAC Address Block Size: 00 01 C2 8B
Chassis Serial Number - Type Field: C2
Chassis Serial Number - Length Field: 8B
Chassis Serial Number: CAT2223E15D
```

Example: Shelf Group PSU EEPROM Info

This example shows how to view the shelf group PSU EEPROM info.

```
R-PHY#show group environment eeprom-psu
PSU0:   PRESENT
Block Signature: 0xABAB
Block Version: 3
Block Length: 160
Block Checksum: 6085
Seeprom Size: 65535
Block Count: 2
Fru Major Type: 0xAB01
Fru Minor Type: 0x0000
OEM String: Cisco Systems, Inc.
Product Number (PID): N55-PAC-750W
Serial Number: POG21027T2B
```

```
Part Number: 341-0503-01
Part Version: A0
MFG Deviation: 0
HW Rev Major: 0x0001
HW Rev Minor: 0x0000
Power Consumption: 0
RMA_Failure Code: 0,0,0,9
Block Signature: 0x000C
Block Version: 0
Block Length: 3
Block Checksum: 1
CLEI Code:
Version ID (VID):

PSU1:    PRESENT
Block Signature: 0xABAB
Block Version: 3
Block Length: 160
Block Checksum: 6093
Seeprom Size: 65535
Block Count: 2
Fru Major Type: 0xAB01
Fru Minor Type: 0x0000
OEM String: Cisco Systems, Inc.
Product Number (PID): N55-PAC-750W
Serial Number: POG21027T1K
Part Number: 341-0503-01
Part Version: A0
MFG Deviation: 0
HW Rev Major: 0x0001
HW Rev Minor: 0x0000
Power Consumption: 0
RMA_Failure Code: 0,0,0,9
Block Signature: 0x000C
Block Version: 0
Block Length: 3
Block Checksum: 1
CLEI Code:
Version ID (VID):
```

Example: Shelf Group Fan, Power, and Temperature Sensor Status

This example shows how to view the shelf group fan, power, and temperature sensor status.

```
R-PHY#show group environment fan
ID  Desc  State  Level  Front(rpm)  Rear(rpm)  Test   Last Chg
51  FAN1  On     1      7328        7310       False  04:47:10
52  FAN2  On     1      7359        7217       False  04:47:10
53  FAN3  On     1      7263        7305       False  04:47:10
54  FAN4  On     1      7380        7279       False  04:47:10
55  FAN5  On     1      7558        7363       False  04:47:10
R-PHY#show group environment power
ID  Desc  State  Test   Last Chg
57  PSU0  ON     False  04:47:10
58  PSU1  FAIL   False  04:47:30
R-PHY#show group environment temperature
ID  Desc                       Value(Celsius)  Test   Last Chg
60  Local Temperature Register  24             False  04:47:10
61  Remote DX1 temperature      23             False  04:47:10
62  Inlet Air U38 local         24             False  04:47:10
```

Example: Shelf Group Sensor Information

This example shows how to view the shelf group sensor information.

```
R-PHY#show group environment table
Fan Location:
      ------------------------FRONT----------------------
    /                                                    /|
   /                                                    / |
  /                                                    /  |
 /                                                    /   |
------------------------BACK----------------------       /
| : : : |        |        |        |        |        |   /
| : : : |  FAN5  |  FAN4  |  FAN3  |  FAN2  |  FAN1  |  /
| : : : |        |        |        |        |        | /
----------------------------------------------------
```

```
Fan Speed definition:
|------------------------------------------------------------------------------------------|
| Default | Default Inlet Air(RF |    Ramp Down    |        Avg          |        Avg
        |
|  Speed  |      U38 local)      | Temperature(.C) | Fan Speed RPM, FRONT | Fan Speed RPM,
 Rear |
|  Level  |    Temp Range(.C)    |                 |                     |
        |
|---------+----------------------+-----------------+---------------------+--------------------|
| Speed 1 |      up to 40        |       37        | 50% PWM, 7570+-10%  |     7330+-10%
        |
|---------+----------------------+-----------------+---------------------+--------------------|
| Speed 2 |      41 to 50        |       47        | 70% PWM, 10945+-10% |     10555+-10%
        |
|---------+----------------------+-----------------+---------------------+--------------------|
| Speed 3 |    51 and above      |       -         | 100% PWM, 16000+-10% |     15400+-10%
        |
|------------------------------------------------------------------------------------------|
```

```
Fan failure definition:
It will be assumed that a fan is failed if it is running less than 3000RPM
or less/more than 2500 RPM from set point. At this point the system will alarm
and send the remaining fans to maximum speed.
```

```
Hw Sensor definition:
|----------------------------------------------------------------------------|
|   Sensor  |  desc and     | Minor | Major | Critical |  Power  |  System    |
|   Name    | board Ref Des |       |       |          |  cycle  | Response   |
|-----------+---------------+-------+-------+----------+---------+------------|
| Inlet_Air |  U38 local    |  50   |  55   |    61    |   NA    | Just alarm |
|-----------+---------------+-------+-------+----------+---------+------------|
|   FPGA    |     Q4        |  85   |  90   |    95    |   100   | Power cycle|
|-----------+---------------+-------+-------+----------+---------+------------|
|   CPU     |     Q2        |  90   |  95   |    100   |   105   | Power cycle|
|-----------+---------------+-------+-------+----------+---------+------------|
|  BCM3161  |     Q3        |  95   |  100  |    105   |   110   | Power cycle|
|-----------+---------------+-------+-------+----------+---------+------------|
|   RF_DS   |     Q1        |  90   |  95   |    105   |   110   | Power cycle|
|----------------------------------------------------------------------------|
```

show group info

To display the shelf group information, use the **show group info** command.

show group info

Syntax Description

This command has no arguments or keywords.

Command Default None.

Command Modes Privileged EXEC mode (#)

Command History

Release	Modification
Cisco 1x2 / Compact Shelf RPD Software 2.1	This command was introduced.

Usage Guidelines None.

Example: Shelf Group Information

This example shows how to display the shelf group information.

```
R-PHY#show group info
Group Id: 0004.9f30.a078
CPU Id: 0
CPLD version: 9
Primary: True
Operational: True
```