



FRSM12 Command Reference

This chapter provides detailed information about the commands you can use to configure and manage a FRSM12 card in the MGX 8850 Release 3 operating environment.



Note

In command descriptions and examples in this document, references to “e3” and “E3” may appear. Wherever such references occur, they are illustrative in nature only and should not be interpreted to mean that E3 functionality is supported by the FRSM12 card for MGX 8850 Release 3.

addchanloop

Add Channel Loopback—add loopback to a channel in a network test configuration—FRSM12

The channel loopback tests the integrity of the connection (channel) at the local UNI. The system returns an error message if the connection is broken or incorrect data arrives at the end of the loopback. The maximum number of connection loopbacks is 8.

The **addchanloop** command applies to a network that is not carrying live traffic because the test is very intrusive. The test requires a testing device to generate a frame stream. The arguments for such a stream consist of the number of frames transmitted through the loop, the frame transfer rate, and so on.

A connection can have only one loopback at a time. Therefore, you cannot add a loopback for both directions at the same time. The loopback remains in effect until you delete it by entering the **delchanloop** command. To see the presence of connection loopbacks on a per-port basis, enter the **dspchanloop** command.

Syntax

```
addchanloop <ifNum> <dlci>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dlci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

delchanloop, **dspchanloop**

Attributes

log: yes State: active, standby Privilege: SERVICE_GP

Example

```
MGX8850.4.FRSM12.a > addchanloop 1 7
```

addcon

Add Connection—FRSM12

The **addcon** command adds a logical connection as an SPVC on a service module. The switch assigns a 20-octet NSAP address to the slave endpoint, which is sent back to the master and uniquely identifies the endpoint on the network.

Before Adding a Connection

Before you can add a connection, you must perform the following tasks:

1. The switch must have a network controller (see the description of the **addcontroller** command).
2. A physical line must be active. Enter the **upln** command or use the CiscoView application to activate the line.
3. At least one logical port must exist on the active physical line. Enter the **addport** command or use the CiscoView application to create the port. If necessary, modify the port using the **cnfport** command.
4. At least one resource partition must exist on the logical port. Enter the **addrscrptn** or the **addpart** command, or use the CiscoView application to create the resource partition. The resource partition should be associated with the controller added in task 1 above.

Adding a Connection

To provision a slave endpoint, you must first add a connection. Subsequently, you again enter the **addcon** command to provision a master endpoint. The master endpoint of the connection initiates the routing of the call and is considered the “calling” party. The slave endpoint is the called endpoint.

The master-slave arrangement works as follows:

- When you add a slave endpoint, the system returns a *slave endpoint identifier*. Subsequently, you must provide this slave endpoint identifier when specifying the master endpoint.
- When you add the master endpoint, you must provide the slave endpoint identifier. (In providing the slave endpoint identifier, it is best to use a Copy and Paste operation, rather than writing down the slave endpoint identifier and entering it manually.) After you add the master endpoint, the switch starts routing the connection.

To modify the bandwidth arguments or configure usage parameter control (UPC), enter the **cnfcon** command for all service types. In addition, ABR connections require more configurable arguments for implementing closed loop control. Enter the **cnfchanstdabr** command to configure the ABR arguments.

Syntax

```
addcon <ifNum> <dcli> <chanType> <serviceType> <mastership> <cir> [-slave <value>]
[-slavepersflag <slavepers>] [-eir <zeroCirEir>] [-bc <Burst Commit>] [-be <Burst Excess>]
[-detag <DE Tagging Enable>] [-igde <Ignore Incoming DE>] [-fecnmap <FECN map>]
[-demap <DE to CLP map>] [-clpmap <CLP to DE map>] [-eqsel <Egress Q Select>]
[-ingut <Ingress Perc Util>] [-egut <Egress Perc Util>] [-egrat <Egress Service Rate>]
[-rtngprio <Routing Priority>] [-upc <UPC Cnfg>] [-lpcr <local-remote PCR>]
[-rpcr <remote-local PCR>] [-lscr <local-remote SCR>] [-rscr <remote-local SCR>]
[-lmcr <local-remote MCR>] [-rmcr <remote-local MCR>]
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dli</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.
<i>chanType</i>	frNIW(1), frSIWtransparent(2), frSIWtranslate(3), frForward(5), frNIWReplace(6)
<i>serviceType</i>	highpriority(1), rtVBR(2), nrtVBR(3), uBR(5), stdABR(9)
<i>mastership</i>	master (1), slave (2)
<i>cir</i>	CIR Range: T3 range = 0–44736000; E3 range = 0–34368000
-slave	Slave id: nsap_address.vpi.vci
-slavepersflag	Persistency of the endpoint: persistent (0), non-persistent (1)
-eir	ZeroCirEir Range: T3 range = 0–44736000 (default); E3 range = 0–34368000
-bc	Burst Commit Range: 0–2097151; default value is 5100
-be	Burst Excess Range: 0–2097151; default value is 5100
-detag	DE Tagging: enable(1), disable(2); (disable is the default setting)
-igde	Ignore Incoming DE: enable(1), disable(2)
-fecnmap	FECN map: mapEFCI(1), setEFCIzero(2)
-demap	DE to CLP map: mapCLP(1), setCLPzero(2), setCLPone(3)
-clpmap	CLP to DE map: mapDE(1), setDEzero(2), setDEone(3), ignoreCLP(4); mapDE(1) is the default setting
-eqsel	Egress Q Select: highPriority(1), lowPriority(2), notSupported(3)
-ingut	Ingress Perc Util Range: 1–100; 100 percent is the default setting
-egut	Egress Perc Util Range: 1–100; 100 percent is the default setting
-egrat	Egress Service Rate Range: 2400–44736000
-rtngprio	Routing Priority Range: 1–15; 8 is the default value
-upc	UPC Cnfg: enable(1), disable(2); enable(1) is the default setting
-lpcr	Local PCR Range: 10–167760 cells per second
-rpcr	Remote PCR Range: 10–167760 cells per second
-lscr	Local SCR Range: 10–167760 cells per second
-rscr	Remote SCR Range: 10–167760 cells per second
-lmcr	Local MCR Range: 10–167760 cells per second
-rmcr	Remote MCR Range: 10–167760 cells per second

Related Commands

cnfcon, cnfchanstdabr, delcon, dspcon, dspcons, dspport, dncon, upon

Attributes

log: yes

State: active

Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > addcon 10 1000 1 1 2 5555
slave endpoint added successfully
slave endpoint id : 4700918100000000036B5E309C00000103180A00.0.1100

MGX8850.3.FRSM12.a > addcon 10 1001 1 1 1 5555 -slave
4700918100000000036B5E309C00000103180A00.0.1100
master endpoint added successfully
master endpoint id : 4700918100000000036B5E309C00000103180A00.0.1101
```

Usage Guidelines for Egress Queue Operations

To handle service module traffic in the egress direction, the FRSM12 card uses the same queuing principles as those implemented for the FRSM-VHS (MGX-FRSM-2CT3) card. Thus, for purposes of egress traffic, two queuing priorities apply: high and low.

Based on service type, egress traffic is mapped to one of the following queues, according to the default queue setting:

Traffic Service Type	Priority
CBR	High
VBR-rt	High
VBR-nrt	Low
ABR	Low
UBR	Low

For example, since egress queue selection is user-configurable, you can choose to direct ABR traffic to a high priority queue. Any combination of traffic service type and priority is permissible.

Note, however, that the quality of service (QoS) attributes for a given traffic service type cannot be guaranteed if several service types are sharing the same egress queue.

If you want to guarantee the QoS attributes for a given service type, you must establish a separate egress queue for that service type. Because a port only has two egress queues (high and low), the port can support two service types with a QoS guarantee. If several service types are sharing the same egress queue, then all the traffic service types sharing that queue must be treated equally. Accordingly, the VC threshold value (VC Max, VC Hi, and VC Lo) for the traffic service types sharing the same egress queue must be set to the same value.

addInloop

Add Line Loop—FRSM12

The **addInloop** command specifies a loopback state for a line on the current service module.



Note

Before you can change the loopback type for an existing loopback, you must first delete the loopback by entering the **dellnloop** command or by just entering the **addInloop** command with the No loopback mode.

Syntax

```
addInloop <-ds3 | -e3 bay.line> <-lpb loopback type>
```

Syntax Description

-ds3 -e3	Specifies a DS-3 (T3) line or an E3 line.
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
-lpb	Specifies the loopback type for the line type: 1 = No loopback (removes any existing loopback) 2 = Local loopback 3 = Remote loopback

Related Commands

dellnloop

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > addInloop -ds3 1.3 -lpb 2
Line loop-back status will be changed.
Do you want to proceed (Yes/No) ? y
```

addpart

Add Resource Partition—FRSM12

The **addpart** command adds a resource partition for the current card.



Note

The **addpart** and **addrscrptn** commands are identical. The command name “addrscrptn” is consistent with the corresponding command in Release 1 of the MGX 8850 node. Use the command name that you prefer. The same situation applies to commands that display and delete a resource partition. In this release of the FRSM12 card, only one resource partition per port is supported.

The provisioning process for a resource partition enables the user to divide port level resources (such as port bandwidth and number of connections) into multiple partitions (up to 20 partitions). Each of these partitions is assigned to a controller (up to 20 controllers) for connection addition. The controller uses the resources (bandwidth) for connection management.

The existing controller types include the following:

- PNNI
- MPLS
- PAR

However, in MGX 8850 Release 3.0, only the PNNI controller is supported.

The following general rules apply to provisioning a resource partition:

1. Only one controller ID can exist per partition ID for each port.
2. Multiple controller IDs of the same controller type per port are allowed, provided that only one controller ID exists per partition ID.
3. For each port, the same controller ID cannot be associated with more than one partition ID.
4. Within a port, each partition ID must have a unique range of DLCI values.

Before you add resource partitions, it is wise to plan for future developments, such as the addition of a new controller.

There are two types of multi-partitions:

- Hard Partitioning—When each partition has a fixed amount of bandwidth and a fixed number of connections.
- Soft Partitioning—When each partition has a minimum guaranteed bandwidth and number of connections, but the partition is allowed to use more than the minimum guaranteed bandwidth if the port has excess bandwidth and connection capacity.

Release 3 for the MGX 8850 supports both types of partitioning.

A resource partition provides the following services:

- Percentage of bandwidth
- DLCI range
- Number of connections

Before adding a resource partition, you must perform the following tasks:

1. Activate the physical lines on the card (by entering the **upln** or the optional **cnfln** command).
2. Add logical ports to the physical lines (by entering the **addport** or the optional **cnfport** command).

- Execute the **addcontroller** command on the PXM45 card to identify the controller type to the Cisco Virtual Switch Interface (VSI) and to give that controller an ID number. The **addpart** command takes this controller ID as an argument.

Syntax

addpart <ifNum> <CtrlNum> <cntlrlId> <lcns> <dlcilow> <dlcihigh> <ingpctb> <egrpctb>

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>CtrlNum</i>	Controller number: 1 = PAR (Portable AutoRoute)—Not supported in this release. 2 = PNNI—Only PNNI is supported in this release. 3 = TAG (MPLS)—Not supported in this release.
<i>cntlrlId</i>	Controller ID number. Range: 1–255.
<i>lcns</i>	Logical channel number. Range: 0–16000.
<i>dlcilow</i>	Lowest data-link connection identifier (DLCI). Range for 2-byte header: 0–1023; range for 4-byte header: 0–8388607. This is the value that specifies a DLCI in a Frame Relay network. The value must be $n * 32768$, where n is a number from 0 to 255.
<i>dlcihigh</i>	Highest data-link connection identifier (DLCI). Range for 2-byte header: 0–1023; range for 4-byte header: 0–8388607. This is the value that specifies a DLCI in a Frame Relay network. The value must be $((n * 32768) - 1)$, where n is a number from 1 to 256.
<i>ingpctb</i>	Percentage of ingress bandwidth available to the connection. Range: 0–100 percent.
<i>egrpctb</i>	Percentage of egress bandwidth available to the connection. Range: 0–100 percent.

Related Commands

cnfpart, delpart, dsparts, dsppart

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > addpart 10 2 2 1000 0 32767 100 100
```


addport

Add Port—FRSM12

The **addport** command creates and configures a logical port on an active physical line. You can only create one logical port on a physical line. The logical port consumes all the bandwidth on the line. The line must be configured before you can add a logical port.

Syntax

```
addport <ifNum> <bay.line> <portType> <sctId> [-dlciLen <dlciLen>]
[-flags <portFlagsBetweenFrames>] [-rat <PortEqueueServiceRatio>] [-csum <checksum>]
[-oversub <overSubscribeEnable>] [-lmiSig <lmiSigType>] [-asynUpdt <updateType>]
[-elmi <elmiState>] [-segLmi <segLmiStatus>] [-t391 <t391Value>] [-t392 <t392Value>]
[-n391 <n391Value>] [-n392 <n392Value>] [-n393 <n393Value>]
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
<i>portType</i>	Type of logical interface (port): 1 = Frame Relay Service 3 = Frame Forward
<i>sctId</i>	ID of the Service class template (SCT) for the port: Range:0–255 Default: 0
-dlciLen	DLCI header length: 1 = Two-byte DLCI header 2 = Four-byte DLC header
-flags	Flags between frames: 1 = 1 flag 2 = 2 flags 3 = 4 flags 4 = 8 flags 5 = 16 flags 6 = 32 flags 7 = 64 flags 8 = 128 flags

-rat	<p>This keyword and argument define the egress service ratio between the high priority and the low priority queues.</p> <p>Enter the keyword followed by a number in the range from 0 to 15.</p> <p>0 = No service ratio is configured. In this case, bandwidth is allocated to both the high priority and the low priority queues on demand, which means that traffic is dynamically allocated on a first-come, first-serve basis (in a manner similar to that for the AXSME card).</p> <p>1 = Default setting. In this case, the traffic of the CBR and rt-VBR service categories is allocated to the high priority queue, while the traffic of the nrt-VBR, ABR, and UBR service categories is allocated to the low priority queue.</p>
-csum	<p>Checksum type indicator:</p> <p>1 = crc16</p> <p>2 = crc32</p>
-oversub	<p>Oversubscription indicator:</p> <p>1 = Enable</p> <p>2 = Disable</p>
-lmiSig	<p>LMI signaling type indicator:</p> <p>2 = No Signaling</p> <p>3 = Startling</p> <p>4 = Annexing</p> <p>5 = Hindustani</p> <p>6 = Annexing</p> <p>7 = AnnexDNNI</p>
-asynUpdt	<p>Asynchronous update indicator:</p> <p>1 = Disable both Asynchronous Status Updates and Unsolicited Full Status</p> <p>2 = Enable Asynchronous Status Updates</p> <p>3 = Enable Unsolicited Full Status</p> <p>4 = Enable Asynchronous Status Updates and Unsolicited Full Status</p>
-elmi	<p>Enhanced LMI indicator:</p> <p>1 = Disable</p> <p>2 = Enable</p>
-segLmi	<p>Segmented LMI indicator:</p> <p>1 = Enable</p> <p>2 = Disable</p>
-t391	Interval in seconds for NNI to perform status polling. Range: 5–30.
-t392	Interval in seconds for UNI to expect status polling. Range: 5–30. The value of this parameter should be greater than that for the -t391 parameter above.
-n391	Number of UNI/NNI Polling cycles. Range: 1–255.
-n392	UNI/NNI Error threshold. Range: 1–10.
-n393	Monitored UNI/NNI Event count. The value of this parameter should be greater than that for the -n392 parameter above.

Related Commands

cnfport, delpport, dspport, dspports, dspportset

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > addport 10 2.4 1 0 -dlciLen 2
```

bootChange

Boot Change—FRSM12

The **bootChange** command sets the boot IP address and gateway address of the FRSM12 card. The boot IP address is used only when the FRSM12 card is booted up.

In the current release, the only arguments you should enter are “inet on ethernet (e)” and “gateway inet (g).” The **bootChange** command presents one argument at a time. Therefore, press the **Return** (or **Enter**) key at each prompt except for these two arguments. The example **bootChange** command below shows the two fields where you need to enter an IP address and the fields you skip.



Note

The boot IP address is not saved with issuance of the **saveallcnf** command.



Note

Enter the **ipifconfig** command to assign IP addresses for the FRSM12 card and the MGX 8850 shelf.

Syntax

```
bootChange
```

Related Commands

None.

Attributes

log: yes State: active Privilege: SERVICE_GP

Example

For all fields except the ethernet and gateway prompts, press the **Return** or **Enter** key.

```
MGX8850.11.FRSM12.a > bootchange

.' = clear field; '-' = go to previous field; ^D = quit

boot device           : lnPci0
processor number      : 0
host name             : tas3mssbuhw2
file name             : /usr/autoprog/AXSM_H/frsm12_pop2.ada
inet on ethernet (e) : 10.1.1.188
inet on backplane (b):
host inet (h)         : 10.1.1.1
gateway inet (g)      : 10.1.1.1
user (u)              : autoprog
ftp password (pw) (blank = use rsh):
flags (f)             : 0x0

target name (tn)      : axsmh
startup script (s)    : other (o)      :
```

bye

Bye—FRSM12

The **bye** command exits the current CLI session.

Syntax

bye

Related Commands

logout, exit

Attributes

log: yes State: active, standby, init Privilege: ANYUSER

Example

The following command exits the current CLI shell.

```
MGX8850.8.FRSM12.a > bye
```

```
(session ended)
```

CC

Change Card—FRSM12

The **cc** (Change Card) command changes the CLI of the current card to the CLI of another card. Enter the **cc** command, followed by the slot number of the desired card.

Syntax

```
cc <slot number>
```

Syntax Description

slot number The slot number of the destination card.

Related Commands

None.

Attributes

log: yes State: active, standby, init Privilege: ANYUSER

Example

The following example shows how to change from the command line of the FRSM12 in slot 12 to the command line of the PXM45 card in slot 8:

```
MGX8850.12.FRSM12.a > cc 8
```

```
(session redirected)
```

```
MGX8850.8.PXM.a >
```

If the slot is empty or the card is unreachable, the system displays an applicable message.

checkflash

Check Flash Memory—FRSM12

The **checkflash** command checks/validates flash memory on the FRSM12 card and displays certain flash memory attributes.

Syntax

```
checkflash
```

Syntax Description

No parameters.

Related Commands

None.

Attributes

Log: yes State: active, standby, initialize Privilege: ANYUSER

Example

```
MGX8850.11.FRSM12.a > checkflash
QUERY TABLE: flash_size=8388608  block_size=131072  write_buf_size=32
                buf_wr_time=2048  write_time=2048  erase_time=16384000
Verify checksum: addr=0xbfc00000  chksum=0xcd1a80b3  size=(0xae58,715864)...ok
```

clidbxlevel

Command Line Interface Debug Level—modify the contents of the CLI help output.—FRSM12

The **clidbxlevel** command enables you to display the attributes for a command. You must execute the **clidbxlevel** command on each card for which you want to change the level of displayed information. For example, if you enter the **clidbxlevel** command on a FRSM12 card in slot 2 and want to see the same level of information in slot 8, you must execute the **clidbxlevel** command on the CLI in slot 8 and make the appropriate change.

The displayed attributes for a command include the following:

- Required card state for execution
- Minimum user-privilege for the command
- Whether an incident of command execution appears in a log file

Syntax

```
clidbxlevel [level]
```

Syntax Description

<i>level</i>	Specified command level of the CLI. Range: 0–3. If you do not specify this argument, the system displays the current CLI level (see the command example below).
--------------	--

Related Commands

None.

Attributes

log: no State: active, standby, init Privilege: SERVICE_GP

Example

The example **clidbxlevel 1** command below specifies a change to CLI command level 1; the **? user** command obtains the attributes for all the commands at level 1 containing the *user* string.

```
MGX8850.11.FRSM12.a > clidbxlevel 1
Value of cliDbxLevel is now 1
MGX8850.11.FRSM12.a > ? user
```

Command	Access	Card	Log
-----	-----	-----	-----
adduser	GROUP1	A	+
cnfuser	GROUP1	A	-
deluser	GROUP1	A	+
dspusers	ANYUSER	A S	-
users	ANYUSER	A S	-

The following **clidbxlevel** command (without an argument) causes the current CLI command level to be displayed:

```
DominoNode6.4.FRSM12.a > clidbxlevel
```

```
Value of cliDbxLevel is currently 1
```

```
DominoNode6.4.FRSM12.a >
```

clralmct

Clear Alarm Counters—FRSM12

The **clralmct** command clears all the alarm counters and statistics on the specified line on the current card. All counters are reset to 0. All statistical alarms that are displayed by the **dspalms** and **dspalmct** command are cleared. The system does not display a response unless it detects a syntax error.

Syntax

```
clralmct <bay.line>
```

Syntax Description

<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
-----------------	---

Related Commands

dspalmct

Attributes

log: yes

State: active

Privilege: SUPER_GP

Example

```
MGX8850.3.FRSM12.a > clralmct 1.3
```

clrchanct

Clear Channel Counters—FRSM12

The **clrchanct** command clears all counters for frames on a connection (channel).

Syntax

```
clrchanct <ifNum> <dcli>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dcli</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

dspchanct, **clrchancts**

Attributes

log: yes State: active Privilege: SUPER_GP

Example

```
MGX8850.3.FRSM12.a > clrchanct 10 1000
```

clrchannts

Clear Channel Counters—FRSM12

The `clrchannts` command clears all counters for all connections (channels) on the card.

Syntax

```
clrchannts
```

Syntax Description

No parameters.

Related Commands

`dspchstats`, `clrchanent`

Attributes

Log: yes

State: active

Privilege: SUPER_GP

Example

```
MGX8850.3.FRSM12.a > clrchannts
```

clrportcnt

Clear Port Counter—FRSM12

The **clrportcnt** command clears counter values on a specific logical port.

Syntax

```
clrportcnt <ifNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
--------------	---

Related Commands

clrportcnts, **dspportcnt**

Attributes

log: yes

State: active

Privilege: SUPER_GP

Example

```
MGX8850.3.FRSM12.a > clrportcnt 10
```

clrportcnts

Clear Port Counters—FRSM12

The **clrportcnts** command clears all port counters on the current FRSM12 card. The system does not return a message unless a syntax error occurs (such as a spurious character following the CLI command proper).

Syntax

```
clrportcnts
```

Syntax Description

No parameters.

Related Commands

clrportent, **dspportent**

Attributes

log: yes

State: active

Privilege: SUPER_GP

Example

```
MGX8850.3.FRSM12.a > clrportcnts
```

clrscrn

Clear Screen—FRSM12

The **clrscrn** command clears the contents of the control terminal screen. After this command is executed, the current command line prompt appears at the top left of the terminal screen.

Syntax

clrscrn

Syntax Description

No parameters.

Related Commands

None.

Attributes

log: no State: active, standby, init Privilege: ANYUSER

Example

The example **clrscrn** command below erases all screen information, leaving only the current command line prompt:

```
DominoNode6.7.PXM.a > dspcds
DominoNode6                               System Rev: 03.00   May. 05, 2002 10:48:20 PST
Chassis Serial No:  SCA044304MV Chassis Rev: E0           GMT Offset: -8
Node Alarm: MAJOR

Card Front/Back      Card      Alarm      Redundant  Redundancy
Slot Card State      Type      Status     Slot       Type
---  -
01   Empty            ---      ---      ---      ---
02   Empty            ---      ---      ---      ---
03   Empty            ---      ---      ---      ---
04   Active/Active    FRSM12_12T3E3  NONE     NA         NO REDUNDANCY
05   Empty            ---      ---      ---      ---
06   Empty            ---      ---      ---      ---
07   Active/Active    PXM45         NONE     08        PRIMARY SLOT
08   Empty Resvd/Empty ---      NONE     07        SECONDARY SLOT
09   Empty            ---      ---      ---      ---
10   Empty            ---      ---      ---      ---
11   Active/Active    FRSM12_12T3E3  NONE     NA         NO REDUNDANCY
12   Empty            ---      ---      ---      ---
13   Empty            ---      ---      ---      ---
14   Empty            ---      ---      ---      ---
15   Empty            ---      ---      ---      ---

DominoNode6.7.PXM.a > clrscrn
DominoNode6.7.PXM.a >
```

cmdhistory

Display Command History—FRSM12

The **cmdhistory** command displays the last of a specified number of CLI commands executed on the current card.

This command generates the same output as the **history** command (see the “[history](#)” section on [page 4-108](#)).

Syntax

```
cmdhistory [ queue_depth ]
```

Syntax Description

<i>queue_depth</i>	This optional parameter establishes the depth of the command history queue (that is, the number of recent CLI commands to be cached). Range: 0–256; default queue depth: 10.
--------------------	--

Related Commands

history

Attributes

log: no State: active, standby, init Privilege: ANYUSER

Example

The following command lists the last 10 CLI commands issued on the current FRSM12 card:

```
DominoNode6.11.FRSM12.a > cmdhistory
Size of cmdHistory is currently 10 line(s)
 1 cc 4
 2 cc 11
 3 dspalmcnf -ds3 1.3
 4 dspalmcnt -ds3 1.3
 5 dspalms
 6 dspautoIndiag
 7 dspcd
 8 dspcdcnt
 9 dspcdsct abr
10 cmdhistory
```

To execute a previous command containing arguments (as in line 3 of the **cmdhistory** output above), enter an exclamation mark, followed immediately by the associated line number of the desired command in the history list, then press the **Enter** or **Return** key, as shown in the following example:

```
DominoNode6.11.FRSM12.a > !3
dspalmcnf -ds3 1.3
LineNum: 1.3
  Stat Alarm Severity: None
           15min Threshold   24hr Threshold
LCV  :      387              3865
```



```
LES :      86          864
PCV :     382        3820
PES :      86          864
PSES :     4           40
SEFS :     2           8
UAS :     10          10
```

```
DominoNode6.11.FRSM12.a >
```

cnfalm

Configure Alarm—FRSM12

The **cnfalm** command configures statistical alarm thresholds for a line. The configurable items for DS-3 and E3 are defined in RFC 2496.

The items constituting a configuration include the following:

- Line type: DS-3 or E3
- Severity of the alarm triggered when a threshold is exceeded: minor or major

Bolded keywords in the command syntax identify alarm criteria. Each keyword identifies the tested layer (line, and so on), the type of threshold (errored seconds, and so on), and a test period of 15 minutes or 24 hours. For example, the parameter **-les15** indicates the number of errored seconds that occurred on a line layer during any 15 minute period.

Bolded keywords also indicate the number of occurrences of the event the keyword identifies. The range for each *threshold* is 1 to 2^{32-1} . A keyword precedes each specified *threshold*. For example, the parameter **-sesf15 10** indicates that 10 instances of severely errored framing seconds occurred on a line during a 15-minute period.

Syntax

```
cnfalm -ds3 | -e3 <bay.line> -dsev <severity>, -lcv15 <LCV15min> -lcv24 <LCV24Hr>,
-les15 <LES15min> -les24 <LES24Hr>, -pcv15 <PCV15min> -pcv24 <PCV24Hr>,
-pes15 <PES15min> -pes24 <PES24Hr>, -pses15 <PSES15min> -pses24 <PSES24Hr>,
-sefs15 <SEFS15min> -sefs24 <SEFS24Hr>, -uas15 <UAS15min> -uas24 <UAS24Hr>
```

Syntax Description

-ds3 -e3	Specifies either a DS-3 (T3) line type or an E3 line type.
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
-dsev <i>severity</i>	Severity of the alarm: 1 = minor; 2 = major; 3 = none.
-lcv15 <i>LCV15min</i>	Code violations for a line during a 15-minute period.
-lcv24 <i>LCV24Hr</i>	Code violations for a line during a 24-hour period. The LCV24hrThreshold = 1–65535.
-les15 <i>LES15min</i>	Line errored seconds during a 15-minute period.
-les24 <i>LES24Hr</i>	Line errored seconds during a 24-hour period.
-pcv15 <i>PCV15min</i>	P-bit coding violations for a line during a 15-minute period.
-pcv24 <i>PCV24Hr</i>	P-bit coding violations for a line during a 24-hour period.
-pes15 <i>PES15min</i>	P-bit errored seconds during a 15-minute period.
-pes24 <i>PES24Hr</i>	P-bit errored seconds during a 24-hour period.
-pses15 <i>PSES15min</i>	P-bit severely errored seconds during a 15-minute period.
-pses24 <i>PSES24Hr</i>	P-bit severely errored seconds during a 24-hour period.
-sefs15 <i>SEFS15min</i>	Severely errored frame seconds during a 15-minute period.
-sefs24 <i>SEFS24Hr</i>	Severely errored frame seconds during a 24-hour period.
-uas15 <i>UAS15min</i>	Unavailable seconds during a 15-minute period.
-uas24 <i>UAS24Hr</i>	Unavailable seconds during a 24-hour period.

Related Commands

`dspalmcnf`

Attributes

log: yes

State: active

Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > cnfalm -ds3 1.1 -lcv15 5000 -pes15 6000
```

cnfautolndiag

Configure Auto Line Diagnostics—FRSM12

The **cnfautolndiag** command enables or disables auto line diagnostics on the card.

Syntax

cnfautolndiag <enable | disable>

Syntax Description

<i>enable</i> or <i>disable</i>	A numeric value that indicates the following: 1 = Enable 2 = Disable
---------------------------------	--

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850_03.10.FRSM12.a > cnfautolndiag 1
```

cnfcdsct

Configure Card-Level Service Class Template—FRSM12

The **cnfcdsct** command assigns a Service Class Template (SCT) to the FRSM12 card. The SCT contains bandwidth and policing arguments.

Syntax

```
cnfcdsct <SCT-id>
```

Syntax Description

<i>SCT-id</i>	Number of the SCT at the card level. Range is 0–255.
---------------	--

Related Commands

dspcdsct, **dspcd**, **dspct**

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > cnfcdsct 6
```

cnfcdstat

Configure Card Statistics—FRSM12

The **cnfcdstat** command configures the TFTP bucket statistics. This command allows the user to change the statistics configuration for the card. Part of the configuration controls the *bucket interval* and the *collection interval*. These arguments are used to control the generation of files (containing statistics) that are transferred to the Cisco WAN Manager (CWM) using the FTP protocol.

The card statistics level (*stats level*) cannot be set if there is any configuration on the lines, such as logical ports. You must set the *stats level* argument before you can add any logical ports. However, you can set the *bucket interval* and the *collection interval* after you have added logical ports.

Statistics on FRSM12 Card

Enabling statistics on the FRSM12 card affects performance. Statistical counters consume bandwidth, thus reducing the amount of bandwidth available for connections. The FRSM12 card provides statistical alarms to help control the amount of bandwidth used for statistics.

Statistical alarms are different from integrated alarms. An integrated alarm indicates a persistent traffic loss at either the local end of the connection (such as the LOS and LOF alarms) or at the remote end of the connection (such as the RDI alarm).

A statistical alarm indicates that a statistical counter has exceeded the threshold for an alarm indication. For example, the severely errored seconds (SES) counter might exceed the corresponding 15-minute threshold. For this condition, a statistical alarm is raised, which indicates a degraded performance that is not attributable to persistent traffic loss.

Statistical alarms are based on fixed statistics collection intervals. There are two types of fixed statistics collection intervals:

- 15 minute
- 24 hour

The start of an interval is aligned to the time of day, such as 11:15, 11:30, 11:45, and do on. At the end of the interval, the corresponding statistical alarms are cleared. An alarm is raised again if a counter exceeds the threshold during the new interval.

Syntax

```
cnfcdstat -i <bucket interval> -ci <collection interval> -sl <stats level> -ed <enable/disable>
```

Syntax Description

-i <i>bucket interval</i>	Statistics bucket interval indicator. Possible parameter values are: 5 = Five minutes 10 = Ten minutes 15 = Fifteen minutes 20 = Twenty minutes 30 = Thirty minutes 60 = Sixty minutes
-ci <i>collection interval</i>	Card statistics collection interval indicator (in minutes). Possible parameter values are: 0 = Default (the collection interval is the same as the bucket interval) 1 = One minute 5 = Five minutes
-sl <i>stats level</i>	Card statistics level indicator. Possible parameter values are: 1 = Level 1 2 = Level 2 3 = Level 3
-ed <i>enable/disable</i>	Bucket statistics indicator. Possible parameter values are: enable disable

Related Commands

dspcdstatcnf

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > cnfcdstat -i five -ci five -sl 2 -ed enable
MGX8850.3.FRSM12.a > cnfcdstat -ed disable
```

cnfchanstdabr

Configure Standard ABR Connection arguments—FRSM12

The **cnfchanstdabr** command configures the standard available bit rate (ABR) arguments, such as cell rates and times, for the specified logical interface (*ifNum*).

Syntax

```
cnfchanstdabr <ifNum> <dcli> [-mcr <Minimum Cell Rate>] [-pcr <Peak Cell Rate>]
[-icr <Initial Cell Rate>] [-rif <Rate Increase Factor>] [-rdf <Rate Decrease Factor>]
[-nrm <Cells per forward RM>] [-trm <Time betwn forward RM>]
[-tbe <Transient Buffer Exposure>] [-frtt <Fixed Roundtrip Time>]
[-adtf <ACR DecreaseTime Factor>] [-cdf <Cutoff Decrease Factor>]
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dcli</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.
-mcr	Minimum Cell Rate. Range: 10–167760 cells per second (cps)
-pcr	Peak Cell Rate. Range: 10–167760 cells per second
-icr	Initial Cell Rate. Range: 10–167760 cells per second
-rif	Rate Increase Factor. Range: 1–32768 (in steps of power of 2).
-rdf	Rate Decrease Factor. Range: 1–32768 (in steps of power of 2).
-nrm	Cells per forward RM. Range: 2–256 (in steps of power of 2).
-trm	Time between forward RM. Range: 3–100. Supported values are: 3, 6, 12, 25, 50, and 100. Any other supplied value is rounded off to the next higher supported value.
-tbe	Transient Buffer Exposure. Range: 0–16777215.
-frtt	Fixed Round Trip Delay. Range: 0–16700.
-adtf	ACR Decrease Factor. Range: 10–10230.
-cdf	Cutoff Decrease Factor. Range: 0–64 (in steps of power of 2).

Related Commands

dspchanstdabr

Attributes

Log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > cnfchanstdabr 10 1005 -mcr 200
```


cnfcon

Configure Connection—FRSM12

The **cnfcon** command modifies the configured arguments of a connection.

Syntax

```
cnfcon <ifNum> <dldci> [-cir <Committed Information Rate>] [-eir <zeroCirEir>]
[-bc <Burst Commit>] [-be <Burst Excess>] [-detag <DE Tagging Enable>]
[-igde <Ignore Incoming DE>] [-fecnmap <FECN map>] [-demap <DE to CLP map>]
[-clpmap <CLP to DE map>] [-eqsel <Egress Q Select>] [-ingut <Ingress Perc Util>]
[-egut <Egress Perc Util>] [-egrat <Egress Service Rate>] [-rtngprio <Routing Priority>]
[-mc <Max Cost>] [-lpcr <local-remote PCR>] [-rpcr <remote-local PCR>]
[-lscr <local-remote SCR>] [-rscr <remote-local SCR>] [-lmcr <local-remote MCR>]
[-rmcr <remote-local MCR>] [-rmbs <remote MBS>] [-cc <OAM CC Cnfg>] [-stat <Stats Cnfg>]
[-upc <UPC Cnfg>]
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12
<i>dldci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.
-cir	CIR (in bits per second). T3 Range: 0–44736000; E3 Range 0–34368000.
-eir	ZeroCirEir (in bits per second). T3 Range: 0–44736000; E3 Range: 0–34368000.
-bc	Burst commit (in number of bytes). Range: 0–2097151.
-be	Burst excess (in number of bytes). Range: 0–2097151.
-detag	DE Tagging: enable(1), disable(2)
-igde	Ignore Incoming DE: enable(1), disable(2)
-fecnmap	FECN map: mapEFCI(1), setEFCIzero(2)
-demap	DE to CLP map: mapCLP(1), setCLPzero(2), setCLPone(3)
-clpmap	CLP to DE map: mapDE(1), setDEzero(2), setDEone(3), ignoreCLP(4)
-eqsel	Egress Q Select: highPriority(1), lowPriority(2), notSupported(3)
-ingut	Ingress Percent Utilization. Range: 1–100.
-egut	Egress Percent Utilization. Range: 1–100.
-egrat	Egress Service Rate (in bits per second). Range: 2400–44736000.
-rtngprio	Routing Priority. Range: 1–15.
-mc	Max Cost. Range: 1–2147483647.
-lpcr	Local PCR. Range: 10–167760 cells per second.
-rpcr	Remote PCR. Range: 10–167760 cells per second.
-lscr	Local SCR. Range: 10–167760 cells per second.
-rscr	Remote SCR. Range: 10–167760 cells per second.
-lmcr	Local MCR. Range: 10–167760 cells per second.
-rmcr	Remote MCR. Range: 10–167760 cells per second.
-rmcr	Remote MCR. Range: 10–167760 cells per second.

-rmbs	Remote MBS. Range: 0–5000000 cps.
-cc	OAM CC: enable(1), disable(2)
-stat	Stats collection: enable(1), disable(2)
-upc	UPC Cnfg: enable(1), disable(2)

Related Commands

addcon, delcon, dspcon, dspcons, dspchanent, clrchancnt, clrchancnts

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > cnfcon 10 1000 -cir 10000
Configuration successful
```

Usage Guidelines for Egress Queue Operations

To handle service module traffic in the egress direction, the FRSM12 card uses the same queuing principles as those implemented for the FRSM-VHS (MGX-FRSM-2CT3) card. Thus, for purposes of egress traffic, two queueing priorities apply: high and low.

Based on service type, egress traffic is mapped to one of the following queues, according to the default queue setting:

Traffic Service Type	Priority
CBR	High
VBR-rt	High
VBR-nrt	Low
ABR	Low
UBR	Low

For example, since egress queue selection is user-configurable, you can choose to direct ABR traffic to a high priority queue. Any combination of traffic service type and priority is permissible.

Note, however, that the quality of service (QoS) attributes for a given traffic service type cannot be guaranteed if several service types are sharing the same egress queue.

If you want to guarantee the QoS attributes for a given service type, you must establish a separate egress queue for that service type. Because a port only has two egress queues (high and low), the port can support two service types with a QoS guarantee. If several service types are sharing the same egress queue, then all the traffic service types sharing that queue must be treated equally. Accordingly, the VC threshold value (VC Max, VC Hi, and VC Lo) for the traffic service types sharing the same egress queue must be set to the same value.

cnfln

Configure Line—FRSM12

The **cnfln** command configures a line on the current service module. Prior to entering this command to configure the line, you must first activate the line by means of the **upln** command.



Note

You cannot configure a line that has virtual interfaces currently configured on the line.

T3 Syntax

```
cnfln -ds3 <bay.line> -lt <LineType> -len <LineLength> -oof <LineOOFCriteria>
-cb <LineAIScBitsCheck> -rfeac <LineRcvFEACValidation> -clk <clkSource>
```

T3 Syntax Description

All **cnfln** command T3 arguments are keyword driven. Therefore, the order in which you enter the keywords is irrelevant.

-ds3	Specifies a DS-3 (T3) line.
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
-lt <LineType>	Specifies the type of T3 line. Possible values for this parameter are: 15 = ds3cbitfrmronly 16 = ds3m23frmronly
-len <LineLength>	The length of the line in meters. The range for this parameter is 0–64000.
-oof <LineOOFCriteria>	A number that specifies the threshold for triggering an out-of-frame condition. The possible values for this parameter are: 1 = 3 out of 8—An out-of-frame condition is declared if at least 3 out of 8 framing bits are in error. 2 = 3 out of 16 —An out-of-frame condition is declared if at least 3 out of 16 framing bits are in error.
-cb <LineAIScBitsCheck>	A number that determines whether the node checks the C-bit status in response to AIS status. The possible values for this parameter are: 1 = Check C-bit 2 = Ignore C-bit check

-rfeac <LineRcvFEACValidation>	Value that establishes the FEAC (far-end alarm and control) code validation criteria. The possible values for this parameter are: 1 = 4 out of 5—A valid FEAC code is declared if 4 out of 5 codes match. 2 = 8 out of 10—A valid FEAC code is declared if 8 out of 10 codes match.
-clk <clkSource>	Number that determines whether the transmit clock comes from the backplane (local timing) or the receive clock on the line (looped timing). The possible values for this parameter are: 1 = loopTiming source—The receive clock on the back card is redirected to become the transmit clock source. 2 = localTiming source (default)—The clock source from the backplane functions as the transmit clock source.

E3 Syntax

cnfln -e3 <bay.line> **-lt** <LineType> **-len** <LineLength> **-clk** <clkSource>

E3 Syntax Description

All **cnfln** command E3 arguments are keyword driven. Therefore, the order in which you enter the keywords is irrelevant.

-e3	Specifies an E3 line.
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
-lt <LineType>	Specifies the type of E3 line. The possible values for this parameter are: 17 = e3g832frmronly 18 = e3g751frmronly
-len <LineLength>	Length of the line in meters. The range for this parameter is 0–64000.
-clk <clkSource>	Number that determines whether the transmit clock comes from the backplane (local timing) or the receive clock on the line (looped timing). The possible values for this parameter are: 1 = loopTiming source—The receive clock on the back card is redirected to become the transmit clock source. 2 = localTiming source (default)—The clock source from the backplane functions as the transmit clock source.

Related Commands

dsplns, **dspln**, **dnln**, **upln**, **addlnloop**, **dellnloop**

Attributes

log: yes

State: active

Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > cnfln -ds3 1.3 -lt 16
```

```
MGX8850.3.FRSM12.a > cnfln -ds3 1.3 -lt 16 -len 100
```

cnfpart

Configure Resource Partition—FRSM12

The **cnfpart** command modifies a resource partition. See the **addpart** command for details.



Note

The **cnfpart** and **cnfrscrprt** commands are identical. The name “cnfrscrprt” is consistent with the corresponding command in Release 1 of the MGX 8850 switch. You can use either command.

Syntax

```
cnfpart -if <ifNum> -ctrlnum <controllerNum> [-lcn <available connections>]
[-dlcimin <minDlci>] [-dlcimax <maxDlci>] [-ibw <ingPctBw>] [-ebw <egrPctBw>]
```

Syntax Description

-if	Logical interface (port) number. Range: 1–12
-ctrlnum	Controller number: 1 = PAR (Portable AutoRoute)—Not supported in this release. 2 = PNNI—Only PNNI is supported in this release. 3 = TAG (MPLS)—Not supported in this release.
-lcn	Logical channel number. Range: 0–16000.
-dlcimin	Lowest data-link connection identifier (DLCI). A value that specifies the DLCI in a Frame Relay network: Two-byte header—Range: 1–1023 Four-byte header—Range: 0–8388607 The value specified must be $n * 32768$, where n is a number from 0 to 255.
-dlcimax	Highest data-link connection identifier (DLCI). A value that specifies a DLCI in a Frame Relay network: 2-byte header—Value range: 1–1023 4-byte header—Value range: 0–8388607 The value specified must be $(n * 32768) - 1$, where n is a number from 1 to 256.
-ibw	Percentage of ingress bandwidth available to the connection. Range: 0–100 percent.
-ebw	Percentage of egress bandwidth available to the connection. Range: 0–100 percent.

Related Commands

addpart, addrscrprt, cnfrscrprt, delpart, delrscrprt, dsppart, dspparts, dsprscrprt, dsprscrpts

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > cnfpart -if 10 -ctrlnum 2 -dlcimax 65535
```

cnfport

Configure Port—FRSM12

The **cnfport** command configures a logical port on the FRSM12 card. The system does not display a confirmation upon successful execution of the **cnfport** command, so enter the **dspport** command to check the changes.



Note

You can change the SCT ID if you first take down the port by entering the **dnport** command, then entering the **cnfport** command. After you change the SCT ID, enter the **upport** command to return the port to operational status.

Syntax

```
cnfport <ifNum> -sct <sctID> -dlciLen <dlciLen> -flags <portFlagsBetweenFrames>
-rat <PortQueueServiceRatio> -csum <checksum> -oversub <overSubscribeEnable>
-lmiSig <lmiSigType> -asynUpdt <updateType> -elmi <elmiState> -segLmi <segLmiStatus>
-t391 <t391Value> -t392 <t392Value> -n391 <n391Value> -n392 <n392Value> -n393 <n393Value>
```

Syntax Description

<i>ifNum</i>	Logical interface number (port) number. Range: 1–12.
-sct	Specifies the number of a service class template (SCT) for the port. Range: 1–6.
-dlciLen	DLCI header length: 1 = Two-byte DLCI header 2 = Four-byte DLC header
-flags	Flags between frames: 1 = 1 flag 2 = 2 flags 3 = 4 flags 4 = 8 flags 5 = 16 flags 6 = 32 flags 7 = 64 flags 8 = 128 flags
-rat	Service ratio. Range: 0–15.
-csum	Checksum type indicator: 1 = crc16 2 = crc32
-oversub	Oversubscription indicator: 1 = Enable 2 = Disable

-lmiSig	LMI signaling type indicator: 2 = No Signaling 3 = StrataLMI 4 = AnnexAUNI 5 = AnnexDUNI 6 = AnnexANNI 7 = AnnexDNNI
-asynUpdt	Asynchronous update indicator: 1 = Disable both Asynchronous Status Updates and Unsolicited Full Status 2 = Enable Asynchronous Status Updates 3 = Enable Unsolicited Full Status 4 = Enable Asynchronous Status Updates and Unsolicited Full Status
-elmi	Enhanced LMI indicator: 1 = Disable 2 = Enable
-segLmi	Segmented LMI indicator: 1 = Enable 2 = Disable
-t391	Interval in seconds for NNI to do status polling: Range: 5–30.
-t392	Interval in seconds for UNI to expect status polling: Range: 5–30. Should be greater than value of -t391 argument.
-n391	Number of UNI/NNI Polling cycles: Range: 1–255.
-n392	UNI/NNI Error threshold: Range: 1–10.
-n393	Monitored UNI/NNI Event count. Should be greater than value of -n392 argument.

Related Commands

addport, delpport, dspport, dspports

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > cnfport 10 -lmiSig 6
```


cnfrscrptn

Configure Resource Partition—FRSM12

The **cnfrscrptn** command modifies a resource partition.



Note

The **cnfpart** and **cnfrscrptn** commands are identical. The name “cnfrscrptn” is consistent with the corresponding command in Release 1 of the MGX 8850 switch. You can use either command.

Syntax

```
cnfrscrptn -if <ifNum> -ctrlnum <controllerNum> [-lcn <available connections>]
[-dlcimin <minDlci>] [-dlcimax <maxDlci>] [-ibw <ingPctBw>] [-ebw <egrPctBw>]
```

Syntax Description

-if	Logical interface (port) number. Range: 1–12
-ctrlnum	Controller number: 1 = PAR (Portable AutoRoute)—Not supported in this release. 2 = PNNI—Only PNNI is supported in this release. 3 = TAG (MPLS)—Not supported in this release.
-lcn	Logical channel number. Range: 0–16000.
-dlcimin	Lowest data-link connection identifier (DLCI). A value that specifies the DLCI in a Frame Relay network: Two-byte header—Range: 1–1023 Four-byte header—Range: 0–8388607 The value specified must be $n * 32768$, where n is a number from 0 to 255.
-dlcimax	Highest data-link connection identifier (DLCI). A value that specifies a DLCI in a Frame Relay network: 2-byte header—Value range: 1–1023 4-byte header—Value range: 0–8388607 The value specified must be $(n * 32768) - 1$, where n is a number from 1 to 256.
-ibw	Percentage of ingress bandwidth available to the connection. Range: 0–100 percent.
-ebw	Percentage of egress bandwidth available to the connection. Range: 0–100 percent.

Related Commands

addpart, addrscrptn, cnfpart, delpart, delrscrptn, dsppart, dspparts, dsprscrptn, dsprscrptns

Attributes

log: yes

State: active

Privilege: GROUP1

copycons

Copy Connections (Debugging Command)—FRSM12

The **copycons** command copies one or more endpoints from a specified endpoint. The number of entries to copy is specified using the *-num* option.

The following steps are recommended when using the **copycons** command:

- a. Add a slave endpoint then a master endpoint.
- b. Copy the slave endpoints by using the **copycons** command.
- c. Copy the master endpoints by using the **copycons** command.



Caution

Improper use of this command can result in incomplete, nonfunctioning connections in the network.

Syntax

```
copycons <source> <destn> [-rem <remote Conn Id>] [-num <num. conns to add>] [-verbose <1 | 0>]
```

Syntax Description

<i>source</i>	Source ID. This is the endpoint that is to be used as a template for copying purposes. This parameter is specified in the format <i>ifNum.dlci</i> : <i>ifNum</i> —Logical interface (port) number. Range: 1–12. <i>dlci</i> —Data-link connection identifier. Range for 2-byte header is 1–1023; range for 4-byte header is 1–8388607.
<i>destn</i>	Destination ID. This is the endpoint that is to be used as a template for copying purposes. This parameter is specified in the format <i>ifNum.dlci</i> : <i>ifNum</i> —Logical interface (port) number. Range: 1–12. <i>dlci</i> —Data-link connection identifier. Range for 2-byte header is 1–1023; range for 4-byte header is 1–8388607.
-rem	Remote connection ID. This parameter is specified in the format <i>ifNum.dlci</i> : <i>ifNum</i> —Logical interface (port) number. Range: 1–12. <i>dlci</i> —Data-link connection identifier. Range for 2-byte header is 1–1023; range for 4-byte header is 1–8388607.
-num	Number of consecutive endpoints to be added, starting from <i>destn</i> endpoint. Range: 1–20; Default: 1.
-verbose	Prints the status of cloning process, if enabled. 1 = Enable verbose 0 = Disable verbose (default)

Related Commands

addcon, delcon

Attributes

log: yes State: active Privilege: SERVICE_GP

Example

```
MGX8850.3.FRSM12.a > copycons 10.1000 10.500 -num 5 -verbose 1
slave endpoint added successfully
Identifier: 4700918100000000036B5E309C00000103180A00.0.600
slave endpoint added successfully
Identifier: 4700918100000000036B5E309C00000103180A00.0.601
slave endpoint added successfully
Identifier: 4700918100000000036B5E309C00000103180A00.0.602
slave endpoint added successfully
Identifier: 4700918100000000036B5E309C00000103180A00.0.603
slave endpoint added successfully
Identifier: 4700918100000000036B5E309C00000103180A00.0.604
```

core

Core Memory Dump Debugging Command—FRSM12

The **core** command applies to core memory dumps that can occur when a card is reset. Whether a specific reset type leads to a core dump is configurable. You can transfer the core dumps (in the form of zipped files) to a workstation.

The **core** command performs the following functions (described further in the “Syntax Description” section):

- The command displays the following:
 - Whether core files from the processor card exist, the reset reason that triggered the core dump, as well as a list of all possible reset reasons, a time stamp, and so on.
 - Status of core dumps in progress.
 - Current configuration of various arguments.
 - Subset of core-related information for the CLI of a service module.
- The command enables you to configure a wide variety of applicable functions.
- The command can take an immediate action, such as aborting an active core dump or acquiring a snapshot of a card’s core memory.

Certain **core** command functions are sufficiently complex to warrant a detailed description. Such functions are noted in the “Syntax Description” section below; further details are provided in the “Usage Guidelines for the Core Command” section below.

Slight differences exist in the way PXM cards process captured memory contents, as described below:

- Upon a card reset on the switch, the processor compares the reset reason to the core mask. For any match, the controller writes the RAM contents as a raw data image to an unmarked part of the hard disk. The drive holds only two *raw* data images, so you must copy that data to a zip file before it is overwritten if you wish to keep it. Using arguments described in the “Syntax Description” section, you can save an image to a zipped file with a name of your choosing, such as the following:

specified_name.zip

- For any model of the FRSM12 card, a core dump can occur during card boot-up after a reset. The processor compares the reset reason to the core mask for that slot. For any match, core memory is written to a file in the root directory of the C: drive. The zipped file has the following format:

core_slotslot_num.zip

where *slot_num* is the number of the slot in which the FRSM12 card resides

The node logs messages for a service module core dump. The log shows when the core dump started, when it finished, and when it is aborted, as well as any exceptions. To see these logs, enter the **dspllog -mod CRDMP** command on the PXM45 card.

You can send core dump files to the Cisco TAC where they can be unzipped and used for debugging purposes.

Syntax

core *<optional parameters>* (see the “Syntax Description” section below)

Syntax Description

The first entry in the following table is the **core** command itself. This command produces unique output when it is entered without arguments. Following the **core** command, the command's arguments are listed. Each of these optional arguments must follow the **core** command.

core	<p>A core command entered without arguments displays the following information:</p> <ul style="list-style-type: none"> • Priority of core dumping at the switch level • Whether images exist • Number of the image (0 or 1) • Reason for the reset causing the core dump • Time stamp
?	The core command followed by a question mark lists the optional arguments.
mask	<p>Enter the core mask command to display the following information:</p> <ul style="list-style-type: none"> • List of all possible reset reasons • Whether the reset is enabled to trigger a core dump • Associated hexadecimal value of each reset reason <p>The default mask is 0x262ee. To modify the mask, enter the command mask hex-mask. For details, see the “Usage Guidelines for the core Command” section below.</p>
mask default	Enter the mask default command to return the mask to the default value (0x262ee).
mask hex-mask reset number	<p>You can specify a mask that dictates whether or not core dumping is enabled on a card. Enter the core mask command, followed by either a hexadecimal form of the mask or a string of decimal integers preceded by a plus or minus sign. If you use the decimal number with a plus or minus sign, you can easily add or delete that reset reason from the mask. For example, a core + 11 command adds “reset from PXM” to the mask.</p> <p>For details, see the “Usage Guidelines for the core Command” section below.</p>
enable	Enter the core enable command to enable automatic core dumping for the current slot.
disable	Enter the core disable command to disable automatic core dumping for the current slot.

Usage Guidelines for the core Command

Usage considerations for the more complex **core** command arguments are presented below.

Disabling Core Dumps, Timeout, and Priority

You may want to disable core dumps for a slot due to the time it takes to write core memory to disk. For example:

- You may have isolated a problem and want to save the time required to write RAM contents to disk.
- The traffic on a card may be of such high priority that you do not want to dump core memory to disk.

As the processor becomes busier, core dumps require more time. In addition to disabling core dumps for a slot, you can set the priority of core dumps to 'low' at the switch level or specify a timeout period for core dumps.

Specifying the Core Mask

The core mask is the sum of hexadecimal numbers associated with the reset reasons that are enabled to trigger a core dump. Most reset reasons can be enabled to trigger a core dump. The reasons that cannot trigger a dump are also indicated. Each reason has an associated hexadecimal number and a decimal integer, regardless of whether it can trigger a core dump. If the reset reason is ON, the associated hexadecimal number is an element of the mask.

To create or modify a core mask, two approaches are available:

1. Add the hexadecimal values for the reset reasons that you want to be in the mask. For any modification, you must enter the entire mask, including the unchanged portions of the mask.
2. For adding or deleting a reset cause, enter a + or – before the decimal number for the reset reason. You can enter anywhere from 1 to 18 reasons. The system handles mask adjustment.

The following list shows the reset reasons and the default enable or disable states (ON or OFF). For a simplified example, enter the **core mask c** command to specify that only a resource overflow or watchdog timeout can cause a core dump for the slot on which you entered this command. The 5-digit (xxxxx) default mask, as displayed by the **core mask** command, is also shown in the following list.

- 1 OFF 00001 not used (cannot be turned ON)
- 2 ON 00002 DRAM Parity Error
- 3 ON 00004 WatchDog Timeout Reset
- 4 ON 00008 Resource Overflow
- 5 OFF 00010 Clear All Configuration (cannot be turned ON)
- 6 ON 00020 Missing Task
- 7 ON 00040 Reset because of PXM Low Voltage
- 8 ON 00080 Reset By Event Log Task
- 9 OFF 00100 Reset from Shell—Reset issued from a low-level debugging shell used by Cisco engineers
- 10 ON 00200 Unknown
- 11 OFF 00400 Reset from PXM—Some resets caused by a PXM can cause a core dump (for example, **resetcd**)
- 12 OFF 00800 Reset System (cannot be turned ON)—System reset triggered by **resetsys**
- 13 OFF 01000 Switch Core Card—Reset caused by the **switchcc** command (core card switch-over)
- 14 ON 02000 Secondary Cache Error

- 15 ON 04000 Software Error Reset
- 16 OFF 08000 S/W reset due to upgrade (cannot be turned ON)
- 17 OFF 10000 Restore All Configuration (cannot be turned ON)
- 18 ON 20000 Device Driver Error

If you add all the reset reasons that are ON in the default mask, the sum is the hexadecimal number 262ee. A reason that cannot trigger a core dump is indicated in the preceding list with the notation “cannot be turned ON.” A reset reason that cannot trigger a core dump removes pertinent information from memory.

Redundancy Policy

After a redundant pair of service modules switch over, the former active card reboots; thus, a core dump is possible. Because the activated card is carrying the traffic, the time to write RAM contents from the reset card to disk is normally not an issue. For non-redundant service modules, however, the time required to perform a core dump may be a concern. The arguments for the redundancy policy enable you to determine whether core dumps can occur in non-redundant service modules.

The redundancy policy is a node-level configuration matter. You can override the redundancy policy configuration on a per slot basis by enabling or disabling core dumps at the CLI for the card in question.

Aborting a Core Dump

In some circumstances, you may want to abort a service module core dump. The following are two such circumstances:

- Two or three core dumps are in process, but you do not want the switch to take the time and resources to complete these dumps. Furthermore, one core dump may be crucial; thus, to ensure that the crucial dump does not time out, you could abort one or both of the other core dumps.
- You could have removed redundancy from a pair of card slots, but you did not disable core dumps on a card for which you do not want core dumps. If a core dump begins at such a slot, you can abort the core dump for that slot using the PXM card. Then, you can change the configuration on the affected service module after it boots up.

To abort a core dump, enter the **core dump-status** command on the PXM45 card to display all service modules dumping core at the time. You can abort a dump on a particular slot by entering the **core abort-dump <slot#>** command on the PXM45 card.

Related Commands

ftp, ll, cd, dsplog (enter the **dsplog** command with the *-mod CRDMP* argument)

Attributes

Log: log State: active, standby, init Privilege: SERVICE_GP

dbxclierrcode

Debug Command Line Interface Error Code

The **dbxclierrcode** debug command enables you to specify a flag.

Syntax

```
dbxclierrcode [cliDbxFlag]
```

Syntax Description

<i>cliDbxFlag</i>	The optional flag argument can be either a 0 or a 1. If you do not enter a number, the command output shows the current flag.
-------------------	---

Related Commands

None.

Attributes

log: no State: active, standby, init Privilege: SERVICE_GP

delallcon

Delete All Connections—FRSM12

The **delallcon** command deletes multiple connections from a logical interface (*ifNum*).

Syntax

```
delallcon <ifNum> [-verbose 1 | 0 ]
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12
-verbose	(Optional). This keyword enables (1) or disables (0) verbose mode. In verbose mode, the system immediately displays the connection identifier of each connection after the connection is deleted.

Related Commands

delcon

Attributes

Log: yes

State: active

Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > delallcon 10 -verbose 1
Conn. 10.1000 deleted successfully
Conn. 10.1001 deleted successfully
Conn. 10.1005 deleted successfully
```

delchanloop

Delete Channel Loopback—FRSM12

The **delchanloop** command deletes a loopback from a connection (channel).

Syntax

```
delchanloop <ifNum> <dlci>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dlci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

addchanloop, **dspchanloop**

Attributes

log: yes State: active, standby Privilege: SERVICE_GP

Example

```
MGX8850.4.FRSM12.a > delchanloop 1 7
```

delcon

Delete Connection

The **delcon** command deletes a connection.

Syntax

```
delcon <ifNum> <dcli>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dcli</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

dspcon, addcon, cnfcon

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > delcon 10 1000  
Deletion successful
```

delcons

Delete Connections—FRSM12

The **delcons** command deletes a range of connections.



Caution

Before entering this command, you need to know exactly how many connections to delete. The **delcons** command starts deleting connection endpoints in lexicographic order (the **dspscons** command lists connection endpoints in like order). Improper use of the **delcons** command can result in deletion of more connections endpoints than necessary. Repairing such damage can be very costly.

Syntax

```
delcons <ifNum> <dldci> [-num <num.conns to del>] [-verbose < 1 | 0 >]
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dldci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.
-num	(Optional). This keyword specifies the number of connections to be deleted.
-verbose	(Optional). This keyword enables (1) or disables (0) verbose mode. In verbose mode, the system immediately displays the connection identifier of each connection after the connection is deleted.

Related Commands

dspscon, **addcon**, **cnfcon**, **delcon**

Attributes

log: yes State: active Privilege: SERVICE_GP

Example

```
MGX8850.3.FRSM12.a > delcons 10 500 -num 5 -verbose 1
Conn. 10.500 deleted successfully
Conn. 10.501 deleted successfully
Conn. 10.502 deleted successfully
Conn. 10.503 deleted successfully
Conn. 10.504 deleted successfully
```

dellnloop

Delete Line Loop—FRSM12

The **dellnloop** command removes the line loopback state from a line.

Syntax

```
dellnloop <-ds3 | -e3> <bay.line>
```

Syntax Description

-ds3 -e3	Specifies a DS-3 (T3) line or an E3 line.
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).

Related Commands

addlnloop

Attributes

log: yes State: active Privilege: GROUP1

Example

The following command deletes a DS-3 loopback line.

```
MGX8850.1.11.FRWM12.a > dellnloop -ds3 1.6
Line loop-back status will be changed.
Do you want to proceed (Yes/No) ?
```

delpart

Delete Resource Partition—FRSM12

The **delpart** command deletes a resource partition.

You must delete all connections in the resource partition before you can delete the partition. For information about resource partitions, refer to the [“addpart” section on page 4-7](#).



Note

The **delpart** and **delrscrptn** commands are identical. The name “delrscrptn” is consistent with the corresponding command in Release 1 of the MGX 8850 switch. You can use either command.

Syntax

```
delpart <ifNum> <CtrlNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>CtrlNum</i>	Controller number: 1 = PAR (Portable AutoRoute)—Not supported in this release. 2 = PNNI—Only PNNI is supported in this release. 3 = TAG (MPLS)—Not supported in this release.

Related Commands

addpart, addrscrptn, cnfpart, delrscrptn, dsppart, dsprscrptns

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > delpart 10 2
```

delport

Delete Port—FRSM12

The **delport** command removes a logical port from the FRSM12 card.

You must delete all connections and resource partitions for the port before you can delete the port.

Syntax

```
delport <ifNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
--------------	---

Related Commands

addport, **cnfport**, **dspport**, **dsports**

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > delport 10
```

delrsprtn

Delete Resource Partition—FRSM12

The **delrsprtn** command deletes a resource partition.

You must delete all connections in the resource partition before you delete the partition. For information about resource partitions, refer to the “[addpart](#)” section on page 4-7.



Note

The **delpart** and **delrsprtn** commands are identical. The name “delrsprtn” is consistent with the corresponding command in Release 1 of the MGX 8850 switch. You can use either command.

Syntax

```
delrsprtn <ifNum> <CtrlNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>CtrlNum</i>	Controller number: 1 = PAR (Portable AutoRoute)—Not supported in this release. 2 = PNNI—Only PNNI is supported in this release. 3 = TAG (MPLS)—Not supported in this release.

Related Commands

addpart, addrsptrtn, cnfpart, delpart, dsppart, dsprsptrtns

Attributes

log: yes State: active Privilege: GROUP1

dncon

Down Connection—FRSM12

The **dncon** command administratively deactivates (or “downs”) a connection. This command interrupts traffic, enabling you to modify the connection or to troubleshoot the network. To reactivate a connection, enter the **upcon** command.



Note

The **dncon** command can be executed only on the master endpoint.

Syntax

```
dncon <ifNum> <dcli>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dcli</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

upcon

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > dncon 10 1000
ERR: Operation not allowed on slave endpoint
```

```
MGX8850.3.FRSM12.a > dncon 10 1001
Admin state of connection is DOWN
```

dnln

Down Line—FRSM12

The **dnln** command deactivates a line on the current card, thus interrupting traffic on the card.

Before you can deactivate a line using the **dnln** command, you must perform the following steps:

-
- Step 1** Remove connections for the card. Enter the **delcon** or **delcons** command for this purpose.
 - Step 2** Remove resource partitions for the card. Enter the **dsprscrtn** command to determine the existing partitions; enter the **delrscrtn** command to remove the partitions.
 - Step 3** Remove all logical ports from the card. Enter the **dsports** command to determine the existing logical ports on the line; enter the **delpport** command to remove the logical ports.
-

Syntax

```
dnln <bay.line>
```

Syntax Description

<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
-----------------	---

Related Commands

dspln, **dsplns**, **cnfln**, **upln**

Attributes

log: yes State: active Privilege: GROUP1

Example

The following command deactivates bay 1, line 3.

```
MGX8850.3.FRSM12.a > dnln 1.3
```

dnport

Down Port—FRSM12

The **dnport** command disables (or “downs”) a logical port, thus interrupting all traffic on the logical port.

Normally, the **dnport** command is used for troubleshooting and changing the SCT. The configuration for the port remains intact. To enable a downed port, enter the **upport** command.

Syntax

```
dnport <ifNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
--------------	---

Related Commands

dspport, dsports, upport

Attributes

log: yes State: active Privilege: GROUP1

Example

The following command disables port 1 on the current card.

```
MGX8850.3.FRSM12.a > dnport 1
```

dspalm

Display Alarm—displays alarms for the configured alarm types for a line—FRSM12

The **dspalm** command enables you to view the alarms associated with a specified line.

See the **cnfalm** command for a description of the types of alarms that can be configured.

Syntax

```
dspalm <-ds3 | -e3> <bay.Line>
```

Syntax Description

-ds3 -e3	Specifies a DS-3 (T3) line or an E3 line.
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).

Related Commands

cnfalm, clralm, dspalms, dspalment

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspalm -ds3 1.3
Line Number      : 1.3
Alarm State      : XmtRAI,RcvLOF
Statistical Alarm State: SEFS15minAlarm,SEFS24hrAlarm,UAS15minAlarm,UAS24hrAlarm
```

dspalmcnf

Display Alarm Configuration—FRSM12

The **dspalmcnf** command displays alarm threshold information about alarm statistics being collected.

See the “[cnfalm](#)” section on page 4-26 for details regarding alarm threshold configuration.

Syntax

```
dspalmcnf <-ds3 | -e3> <bay.line>
```

Syntax Description

-ds3-	The keyword that specifies the type of alarms to display:
-e3	-ds3 —Displays the statistical alarms for the specified DS-3 line (<i>bay.line</i>). -e3 —Displays the statistical alarms for the specified E3 line (<i>bay.line</i>).
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).

Related Commands

cnfalm, dspalm, dspalms

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspalmcnf -ds3 1.3
LineNum: 1.3
Stat Alarm Severity: None
      15min Threshold   24hr Threshold
LCV  :      387         3865
LES  :      86         864
PCV  :     382        3820
PES  :      86         864
PSES :      4          40
SEFS :      2          8
UAS  :     10         10
```

dspalment

Display Alarm Counters—FRSM12

The **dspalment** command displays the performance monitoring alarm counters for either a DS-3 or an E3 line.

Syntax

```
dspalmentf -ds3 | -e3 <bay.line>
```

Syntax Description

-ds3	Specifies a DS-3 (T3) or an E3 line.
-e3	
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).

Related Commands

clralment

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
hsfrnd06.3.FRSM12.a > dspalmcnt -ds3 1.3
Line Number:      1.3
  Elapsed Time(in sec): 350
  Num of LOS :    0
  Num of OOF :    0
  Num of RAI :    0
  Near End
  CurrentCCVs   : 0
  CurrentCESS   : 0
  CurrentCSESS  : 0
  CurrentUASS   : 3510
  CurrentLCV    : 0
  CurrentLES    : 0
  CurrentPCV    : 0
  CurrentPES    : 0
  CurrentPSES   : 0
  CurrentSEFS   : 3510
  CurrentLSES   : 0
  Current24HrLCV : 0
  Current24HrLES : 4
  Current24HrPCV : 0
  Current24HrPES : 3
  Current24HrPSES: 3
  Current24HrSEFS: 3843
  Current24HrUAS : 4327
  Current24HrCCV : 0
  Current24HrCES : 3
  Current24HrCSES: 3
  Current24HrLSES: 4
  Far End
  CurrentCCVs   : 0
  CurrentCESS   : 0
  CurrentCSESS  : 0
  CurrentUASS   : 0
```

dspalms

Display Alarms—FRSM12

The **dspalms** command displays all line-related alarms on the current card.

RFC 2258 describes the alarm categories. The output generated by the **dspalms** command can scroll for many pages if more than one line is active. See the “[cnfalm](#)” section on page 4-26 for a description of the types of alarms possible.

Syntax

dspalms

Syntax Description

No parameters.

Related Commands

dspalm, **clralm**

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspalms

-----
Line Number           : 1.1
Alarm State           : Clear
Statistical Alarm State: UAS15minAlarm,UAS24hrAlarm

Line Number           : 1.2
Alarm State           : RcvRAI,XmtRAI,RcvLOF
Statistical Alarm State: SEFS15minAlarm,SEFS24hrAlarm,UAS15minAlarm,UAS24hrAlarm

Line Number           : 1.3
Alarm State           : XmtRAI,RcvLOF
Statistical Alarm State: SEFS15minAlarm,SEFS24hrAlarm,UAS15minAlarm,UAS24hrAlarm

Line Number           : 1.4
Alarm State           : Clear
Statistical Alarm State: UAS15minAlarm,UAS24hrAlarm

Line Number           : 1.5
Alarm State           : Clear

Type <CR> to continue, Q<CR> to stop:
Statistical Alarm State: No Statistical Alarms

Line Number           : 1.6
Alarm State           : Clear
Statistical Alarm State: No Statistical Alarms
```



```
Line Number          : 2.1
Alarm State          : Clear
Statistical Alarm State: No Statistical Alarms
```

```
Line Number          : 2.2
Alarm State          : Clear
Statistical Alarm State: No Statistical Alarms
```

```
Line Number          : 2.3
Alarm State          : Clear
Statistical Alarm State: No Statistical Alarms
```

Type <CR> to continue, Q<CR> to stop:

```
Line Number          : 2.4
Alarm State          : Clear
Statistical Alarm State: No Statistical Alarms
```

```
Line Number          : 2.5
Alarm State          : Clear
Statistical Alarm State: No Statistical Alarms
```

```
Line Number          : 2.6
Alarm State          : Clear
Statistical Alarm State: No Statistical Alarms
```

dspautoIndiag

Display Auto Line Diagnostics—FRSM12

The **dspautoIndiag** command displays the status of the auto line diagnostic feature on card.

Syntax

```
dspautoIndiag
```

Syntax Description

No parameters.

Related Commands

```
cnfautolndiag
```

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850_03.5.FRSM12.a > dspautoIndiag  
Auto Line Diagnostics : Disabled
```

dspcd

Display Card—FRSM12

The **dspcd** command displays information such as card type, state, serial number, versions, and so on, for the currently selected card.

Syntax

```
dspcd
```

Syntax Description

No parameters.

Related Commands

None.

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850_v3.3.FRSM12.a, dspcd
                          Front Card      Upper Card      Lower Card
                          -----
Card Type:                FRSM12_12T3E3    SMB-6-T3        SMB-6-T3
State:                    Active           Present         Present
Serial Number:            12345678901          10101010101     12
Boot FW Rev:              3.0.(0.100)        ---             ---
SW Rev:                   3.0.(0.111)        ---             ---
HW Rev:                   0.0              0.0             0.0
Orderable Part#:          800-12345-3        800-100-23      800-12345-1
PCA Part#:                73-5530-2         73-1111-22      73-1234-1
Reset Reason:Device Driver Error
Card Alarm:
Card Summary:
Card SCT Id: 0 !DefaultSCT used!
#Lines #Ports #Partitions
-----
      3      3      3
#SPVC  #MaxConns
-----
      3      16000
```

dspcdnt

Display Card Counters—FRSM12

The **dspcdnt** command displays the number of cells transferred between the service module and the switching planes. Synonyms for the switching plane include the following: crossbar, xbar, and switch fabric. One switch fabric is implemented in hardware by one ASIC.

The **dspcdnt** command is used primarily for debugging purposes.



Note

All cell counters are cleared as they are read.

Syntax

```
dspcdnt
```

Related Commands

```
dspportcnt
```

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850_03.3.FRSM12.a > dspcdnt
```

```
All cell counters are cleared upon read!
```

```

                Ingress cells to xbar                Egress cells from xbar
                -----                -----
plane 1 : 00000000000000000000000000000000    00000000000000000000000000000000
plane 2 : 00000000000000000000000000000000    00000000000000000000000000000000
plane 3 : 00000000000000000000000000000000    00000000000000000000000000000000
plane 4 : 00000000000000000000000000000000    00000000000000000000000000000000
plane 5 : 00000000000000000000000000000000    00000000000000000000000000000000
plane 6 : 00000000000000000000000000000000    00000000000000000000000000000000
plane 7 : 00000000000000000000000000000000    00000000000000000000000000000000
plane 8 : 00000000000000000000000000000000    00000000000000000000000000000000

                Ingress cells to destination slot
                -----
slot 01 : 00000000000000000000000000000000    slot 02: 00000000000000000000000000000000
slot 03 : 00000000000000000000000000000000    slot 04: 00000000000000000000000000000000
slot 05 : 00000000000000000000000000000000    slot 06: 00000000000000000000000000000000
slot 07 : 00000000000000000000000000000000    slot 08: 00000000000000000000000000000000
slot 09 : 00000000000000000000000000000000    slot 10: 00000000000000000000000000000000
slot 11 : 00000000000000000000000000000000    slot 12: 00000000000000000000000000000000
slot 13 : 00000000000000000000000000000000    slot 14: 00000000000000000000000000000000

```

dspcdsct

Display Card SCT—FRSM12

The **dspcdsct** command displays the contents of a card-level service class template (SCT) file. For more information about SCTs, refer to the *Cisco MGX 8850 Switch Software Configuration Guide*, Release 3.0.

Syntax

```
dspcdsct <abr | bw | gen | cosb | vcThr | cosThr | vcFR>
```

Syntax Description

abr	Available bit rate
bw	Bandwidth
gen	General VC
cosb	Class of service buffer
vcThr	VC thresholds
cosThr	COSB thresholds
vcFR	VC Frame Relay arguments

Related Commands

cnfcdsct, **dspstct**, **dspportstct**

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspcdsct vcThr
```

```
Service Class Template [ 0 ] : VC Threshold Parameters
Major Version [ 1 ]            : Minor Version [ 0 ]
```

SERV TYPE(DEC)	MAX_CELL THR(cells)	EFCI (cells)	CLPlo/EPD (cells)	CLPhi (cells)
VSI_DEFAULT(1)	20200	12120	6060	15150
VSI_SIGNAL(2)	300	250	250	300
ATMF_CBR1(256)	5050	5050	4040	5050
ATMF_VBRrt1(257)	10100	10100	8080	10100
ATMF_VBRrt2(258)	10100	10100	8080	10100
ATMF_VBRrt3(259)	10100	10100	8080	10100
ATMF_VBRnrt1(260)	50500	50500	40400	50500
ATMF_VBRnrt2(261)	50500	50500	40400	50500
ATMF_VBRnrt3(262)	50500	50500	40400	50500
ATMF_UBR1(263)	61440	61440	49152	61440
ATMF_UBR2(264)	61440	61440	49152	61440

```
|   ATMF_ABR(265) | 61440 | 49152 | 49152 | 61440 |
|   ATMF_CBR2(266) | 5050 | 5050 | 4040 | 5050 |
|   ATMF_CBR3(267) | 5050 | 5050 | 4040 | 5050 |
|   TAG_COS0(512) | 61440 | 36864 | 18432 | 43008 |
```

Type <CR> to continue, Q<CR> to stop:

dspcdstatcnf

Display Card Statistics Configuration

The **dspcdstatcnf** command displays the following card statistics settings configured by entering the **cnfcdstat** command:

- Bucket Interval
- Collection Interval
- Stats Level
- TFTP Statistics

Syntax

```
dspcdstatcnf
```

Syntax Description

No parameters.

Related Commands

```
cnfcdstat
```

Attributes

Log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspcdstatcnf  
Bucket Interval        : five  
Collection Interval    : five  
Stats Level            : 2  
TFTP Statistics        : disable
```

dspchancnt

Display Channel Counters—FRSM12

The **dspchancnt** command displays the statistical counters for a connection (channel).

Syntax

```
dspchancnt <ifNum> <dldci> -r <dsp interval> -max <max dsp time>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dldci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.
-r	Display interval reference point in which to display channel statistics. Range: 0–60 seconds
-max	Maximum display time. Range: 0–3600 seconds.

Related Commands

dspchstats, **clrchanent**

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspchanct 10 1000
```

```
-----
Port Number          :          10  DLCI          :          1000
Up Time (seconds)   :          499
-----
                Ingress chan stat                Egress chan stat
-----
Received Frames      :          0  Transmitted Frames      :          0
Received Bytes      :          0  Transmitted Bytes      :          0
Rcv Frames Discard  :          0  Xmt Frames Discard    :          0
Rcv Bytes Discard   :          0
Rcv Frames DE       :          0  Xmt Frames DE         :          0
Rcv Bytes DE        :          0  Xmt Bytes DE          :          0
Rcv Frames FECN     :          0  Xmt Frames FECN       :          0
Rcv Frames BECN     :          0  Xmt Frames BECN       :          0
Rcv Frames Tagged FECN :          0  Xmt Frames Tagged FECN :          0
Rcv Frames Tagged BECN :          0  Xmt Frames Tagged BECN :          0
Rcv Frames Tagged DE :          0  Xmt Frames Tagged DE  :          0
Rcv Bytes Tagged DE :          0  Xmt Bytes Tagged DE   :          0
Rcv Kbps AIR        :          0  Xmt Kbps AIR          :          0
Rcv Frames Unkn Protocols :          0  Xmt Frames Unkn Protocols :          0
Rcv Frames Exceed QDepth :          0
Rcv Bytes Exceed QDepth :          0
Rcv Frames Exceed DE Thres:          0
Rcv Frames UPC      :          0
                Xmt Frames CRC Error      :          0
                Xmt Frames Src Abort      :          0
                Xmt Frames Invalid CPIs   :          0
                Xmt Frames Length Violatns:          0
                Xmt Frames Oversized SDUs :          0
                Xmt Frames Phy Layer Fail :          0
                Xmt Frames on LMI Alarm    :          0
                Xmt Bytes on LMI Alarm     :          0
```

dspchanloop

Display Channel Loopbacks—FRSM12

The **dspchanloop** command displays the channel (connection) loopbacks on a logical port.

Syntax

```
dspchanloop <ifNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
--------------	---

Related Commands

addchanloop, **delchanloop**

Attributes

log: no	State: active, standby	Privilege: SERVICE_GP
---------	------------------------	-----------------------

Example

```
MGX8850.4.FRSM12.a > dspchanloop 1
Loop Back Connections on Interface 1
  Index      Conn LCN   ifNum   Dlci
   328             384     1       7
```

dspchanstdabr

Display Standard ABR Connection Parameters—FRSM12

The **dspchanstdabr** command displays the configured settings for the standard ABR arguments on the specified connection.

Syntax

```
dspchanstdabr <ifNum> <dlci>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dlci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

None.

Attributes

Log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > dspchanstdabr 10 1005
-----
Local   :                NSAP Address                vpi   vci
(S)     4700918100000000036B5E309C00000103180A00    0     1105
Remote  :                NSAP Address                vpi   vci
(M)     0000000000000000000000000000000000000000    0     0
-----
Port Number      : 10                DLCI           : 1005
-----
Transient Buffer Exposure (TBE)   : 16777215    cells
Fixed Round Trip Delay (FRTT)    : 0            milli seconds
Rate Decrease Factor (RDF)       : 16
Rate Increase Factor (RIF)       : 64
Cells per forward RM (NRM)      : 64
Time between forward RM (TRM)    : 256        milli seconds
Cutoff Decrease Factor (CDF)     : 16
ACR Decrease Factor (ADTF)       : 500        milli seconds
Initial Cell Rate (ICR)          : 208        cells/second
Minimum Cell Rate (MCR)         : 200        cells/second
Peak Cell Rate (PCR)            : 208        cells/second
-----
```

dspchantests

Display Channel Tests—display results of `tstdelay` or `tstconseq` commands—FRSM12

The `tstdelay` or `tstcon` command tests the integrity of the path of a connection in the ingress direction. After you successfully start a test through the `tstdelay` or `tstcon` command, the returned message directs you to enter the `dspchantests` command to display the results.

Syntax

```
dspchantests <ifNum> <dlci> [-num count]
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dlci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.
-num count	(Optional). This keyword and parameter indicate the number of connections to display.

Related Commands

`tstdelay`, `tstcon`

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspchantests 10 500 -num 5
Connection Id   Test Type      Result          Round Trip Delay
=====
10.0000500     No Test       Not In Progress
10.0000501     No Test       Not In Progress
10.0000502     No Test       Not In Progress
10.0000503     No Test       Not In Progress
10.0000504     No Test       Not In Progress
```

dspcon

Display Connection—FRSM12

The **dspcon** command displays information about an SPVC. Most of the information displayed by the **dspcon** command is derived from execution of the **addcon** command. See the “[addcon](#)” section on [page 4-3](#) for more information.

Syntax

```
dspcon <ifNum> <dlsi>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dlsi</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

addcon, **dspcons**, **cnfcon**, **delcon**

Attributes

log: no State: active Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspcon 10 1000
-----
Local   :          NSAP Address          vpi   vci
(S)    4700918100000000036B5E309C00000103180A00    0    1100
Remote :          NSAP Address          vpi   vci
(M)    4700918100000000036B5E309C00000103180A00    0    1101
-----
Port Number      : 10                DLCI          : 1000
Conn. Type       : frNIW             Chan Service Type: High Priority
Conn Service Type : cbr1             Egress Queue Type: highPriority
Admn Status      : UP                Oper Status    : ALARM
Slave Persist    : N/A              Max Cost       : N/A
CIR (bps)        : 10000             BC (bytes)     : 5100
BE (bytes)       : 5100              FECN Config    : setEFCIzero
ChanDEtoCLPmap  : mapCLP            ChanCLPtoDEmap : mapDE
IngrPercentUtil  : 100               EgrPercentUtil : 100
EgrSrvRate (bps) : 55555             ZeroCirEir (bps) : 44736000
DE Tagging       : DISABLED          IgnoreIncomingDE : DISABLED
Upload           : 00bb34ff          Routing Priority : 0
OAM CC Config    : DISABLED          Statistics      : DISABLED
Local Loopback   : DISABLED          UPC             : ENABLED
-----
Local PCR (cps)  : 208                Remote PCR (cps) : 208
Local SCR (cps)  : N/A                Remote SCR (cps) : N/A
Local MCR (cps)  : N/A                Remote MCR (cps) : N/A
:                Remote MBS (cps) : N/A
-----
```

```
Xmt Abit State      : A equal 0          Rcv Abit State     : OFF
Xmt ATM State       : Not Sending        Rcv ATM State      : AIS
```

```
-----
E-AIS/RDI   CONDITIONED  CCFAIL  IfFail  Mismatch  LMI-ABIT
YES          NO          NO        NO      NO        NO
-----
```

dspcons

Display Connections—FRSM12

The **dspcons** command displays all available information for current connections.

The default usage of the **dspcons** command is to enter the command without arguments. To narrow the scope of command output, use one or more of the optional keywords and arguments described below.

Syntax

```
dspcons [-conn <conn id>] [-filt <filter options>] [-if <intf no>] [-dlci <dlci filter>]
```

Syntax Description

-conn <i>conn id</i>	Connection ID number specified in the format <i>ifNum.dlci</i> : <i>ifNum</i> —Logical interface (port) number. Range: 1–12. <i>dlci</i> —Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.
-filt <i>filter options</i>	Filter type: <i>egrAisOrRdi</i> (2) <i>condn</i> (3) <i>iffail</i> (4) <i>ccfail</i> (5) <i>mis</i> (6) <i>abitLmi</i> (7) <i>any</i> (8) <i>none</i> (9)
-if <i>intf no</i>	Logical interface (port) number. Range: 1–12.
-dlci <i>dlci filter</i>	Data-link connection identifier. Range: 0–8388607.

Related Commands

dspcon, **addcon**, **cnfcon**, **delcon**, **dncon**, **upcon**, **dspncon**, **dspncons**

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > dspcons
record  Identifier      SrvcType  M/S    Upld    Admn    Alarm
-----  -
      1  01 0000001  High Priority  S    02692bb9  UP    None
      3  01 0000002  High Priority  S    02692bbc  UP    None
      5  01 0000003  High Priority  S    02692bbd  UP    None
      7  01 0000004  High Priority  S    02692bbf  UP    None
      9  01 0000005  High Priority  S    02692bc1  UP    None
      2  02 0000001  High Priority  M    02692bbb  UP    None
      4  02 0000002  High Priority  M    02692bbd  UP    None
```

dspcons

```

 6 02 0000003 High Priority M 02692bbf UP None
 8 02 0000004 High Priority M 02692bc1 UP None
10 02 0000005 High Priority M 02692bc2 UP None
11 03 0000001 High Priority S 02692bc3 UP None
13 03 0000002 High Priority S 02692bc5 UP None
15 03 0000003 High Priority S 02692bc7 UP None
17 03 0000004 High Priority S 02692bc9 UP None
19 03 0000005 High Priority S 02692bcb UP None
12 04 0000001 High Priority M 02692bc4 UP None
14 04 0000002 High Priority M 02692bc6 UP None
16 04 0000003 High Priority M 02692bc8 UP None
18 04 0000004 High Priority M 02692bca UP None
20 04 0000005 High Priority M 02692bcc UP None

.
.
.

45 09 0000003 High Priority S 02692be4 UP None
47 09 0000004 High Priority S 02692be6 UP None
49 09 0000005 High Priority S 02692be8 UP None
42 10 0000001 High Priority M 02692be2 UP None
44 10 0000002 High Priority M 02692be4 UP None
46 10 0000003 High Priority M 02692be6 UP None
48 10 0000004 High Priority M 02692be7 UP None
50 10 0000005 High Priority M 02692be9 UP None
51 11 0000001 High Priority S 02692bea UP None
53 11 0000002 High Priority S 02692bec UP None
55 11 0000003 High Priority S 02692bee UP None
57 11 0000004 High Priority S 02692bf0 UP None
59 11 0000005 High Priority S 02692bf2 UP None
52 12 0000001 High Priority M 02692beb UP None
54 12 0000002 High Priority M 02692bed UP None
56 12 0000003 High Priority M 02692bef UP None
58 12 0000004 High Priority M 02692bf1 UP None
60 12 0000005 High Priority M 02692bf3 UP None

```

DominoNode6.11.FRSM12.a >

dspdbinfo

Display Debug Information—FRSM12

The **dspdbinfo** command displays debugging information in a specified format for a specified slot number.

Syntax

```
dspdbinfo <lslot> <level>
```

Syntax Description

<i>lslot</i>	Logical slot for which debugging information is to be displayed. Range: 1–32.
<i>level</i>	Extent of debugging information to be displayed: 0–1 = Display summary information 2 = Display summary information, plus table summary information 3 = Display all debugging information, which includes the following: <ul style="list-style-type: none"> • Summary information • Table summary information • Detailed table summary information

Related Commands

None.

Attributes

Log: yes State: active Privilege: GROUP1

Example

The following example causes all the debug information for logical slot 11 to be displayed for the FRSM12 card.

```
DominoNode6.11.FRSM12.a > dspdbinfo 11 3

-----
ALL DATABASES for LSLOT=11

=====
Total number of DB:
      Created=2      Registered=2
Total number of Table Created=7:

=====

-----
CB Ptr = 0x87504898 Name Entry Ptr = 0x87b73cb8
Database: dbId = 0xb000001 Name = cProConnDb Version = 0x2000000
      Application: Id = 0x10007      Name = CCMA_Task
      Type of DB: STATIC AND NOT SHARED
      DB State: Active = REGISTERED
```

```

                Standby = UNKNOWN
    Number of Tables in DB: 2
    Next DBId: 0xffffffff
    First Table Id: 0xb000002
    =====
Database Tables Information:

    =====
LS CB Ptr = 0x87b73c58 Table Cb Ptr = 0x874fbbb8 Name Entry Ptr = 0x87b743d4
Table Index: 2           Table Name : cProConnDbTable1
TableId: 0xb000002,      DBId: 0xb000001
Record Size = 84        Max Record = 8192
Last Commit Id = 0
Table State: Active    = REGISTERED
                    Standby = UNKNOWN

    .
    .
    .

    =====
LS CB Ptr = 0x87b73c58 Table Cb Ptr = 0x87443838 Name Entry Ptr = 0x87b743f4
Table Index: 3           Table Name : CardTable
TableId: 0xb000003,      DBId: 0xb000002
Record Size = 24        Max Record = 1
Last Commit Id = 1
Table State: Active    = REGISTERED
                    Standby = UNKNOWN

-----
-----

DominoNode6.11.FRSM12.a >

```

dspfelpbks

Display FarEnd Line Loopbacks—FRSM12

The **dspfelpbks** command displays the remote endpoint loopback status of each line on the card.

Syntax

dspfelpbks

Syntax Description

No parameters.

Related Commands

delfelpbk, **addfelpbk**

Attributes

Log: no State: active, standby Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > dspfelpbk
Line Num      FarEnd Loopback Status
-----
 1.1          NOFELOOPBACK
 1.2          NOFELOOPBACK
 1.3          FELINELOOPBACK
 1.4          NOFELOOPBACK
 1.5          NOFELOOPBACK
 1.6          NOFELOOPBACK
 2.1          NOFELOOPBACK
 2.2          NOFELOOPBACK
 2.3          NOFELOOPBACK
 2.4          NOFELOOPBACK
 2.5          NOFELOOPBACK
 2.6          NOFELOOPBACK
```

dspln

Display Line—FRSM12

The **dspln** command displays the characteristics of a physical line.



Note

To display far end loopback status, issue the **dspfelpbks** command.

Syntax

```
dspln <-ds3 | -e3> <bay.line>
```

Syntax Description

-ds3	Command delineator that precedes the <i>bay.line</i> argument for a T3 line.
-e3	Command delineator that precedes the <i>bay.line</i> argument for an E3 line.
<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).

Related Commands

upln, cnfl, dspfelpbk, dnln

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspln -ds3 1.3
Line Number           : 1.3
Admin Status          : Up
Line Type              : ds3m23frmronly
Line Coding            : ds3B3ZS
Line Length(meters)  : 100
OOFCriteria           : 3Of16Bits
AIS c-Bits Check      : Ignore
Loopback              : NoLoop
Xmt. Clock source     : localTiming
Rcv FEAC Validation   : 8 out of 10 FEAC codes
Alarm Status          : Major
Number of ports       : 0
Number of partitions  : 0
Number of SPVC        : 0
```

dsplnpmbucketcnt

Display Line Performance Bucket Counters—FRSM12

The **dsplnpmbucketcnt** command displays the interval counters for line-specific performance monitoring.

Syntax

```
dsplnpmbucketcnt <bay.line> <intvl>
```

Syntax Description

<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
<i>intvl</i>	Time interval to display. Range: 0–96: 0 = Current 15-minute interval 1 = Most recent 15-minute interval 2 = Next most recent 15-minute interval, and so on 96 = Oldest 15-minute interval

Related Commands

dspalment, cnfalm, clralment

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.1.10.FRSM12.a > dsplnpmbucketcnt 1.3 2
Line Number :      1.3
Interval    :      2
Near End    Far End
CCVs       : 0           0
CESs       : 0           0
CSEs       : 0           0
UASs       : 0           0
PESs       : 0
PSEs       : 0
SEFs       : 0
LCVs       : 0
PCVs       : 0
LEs        : 0
```

dsplns

Display Lines—FRSM12

The **dsplns** command displays the configuration for all lines on a card.

For each line, the **dsplns** command displays the following information:

- Bay and line number
- Line state—up (active) or down (inactive)
- Line type
- Whether a loopback exists on the line
- Configured line length in meters
- Criteria for Out-of-Frame (OOF) error
- Whether C-bit (AIS) checking is enabled
- Alarm status—clear, critical, and so on

For information about an individual line, enter the **dspln** command. The **dspln** command also shows the transmit clock configuration, if such a configuration exists.

Syntax

dsplns

Related Commands

cnfln, **dnln**, **dspcd**, **dspln**, **upln**

Attributes

log: no

State: active, standby

Privilege: ANYUSER

Example

```
MGX8850.4.FRSM12.a > dsplns
Line Line      Line      Line  Length  OOF      AIS      Alarm
Num  State     Type      Lpbk  (meters) Criteria cBitsCheck State
-----
 1.1  Up    ds3m23frmronly  Local      0  30f16Bits  Ignore Clear
 1.2  Up    ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Clear
 1.3  Up    ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Critical
 1.4  Down  ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Clear
 1.5  Up    ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Critical
 1.6  Down  ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Clear
 2.1  Down  ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Clear
 2.2  Down  ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Clear
 2.3  Up    ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Clear
 2.4  Up    ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Critical
 2.5  Down  ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Clear
 2.6  Down  ds3cbitfrmronly NoLoop      0  30f16Bits  Ignore Clear
```

dsppart

Display Resource Partition—FRSM12

The **dsppart** command displays information about a specified resource partition.



Note

The **dsppart** and **dsprscrptn** commands are identical. The name “dsprscrptn” is consistent with the corresponding command in Release 1 of the MGX 8850 switch. You can use either command.

Syntax

```
dsppart <ifNum> <ctrlNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>ctrlNum</i>	Controller number: 1 = PAR (Portable AutoRoute)—Not supported in this release. 2 = PNNI—Only PNNI is supported in this release. 3 = TAG (MPLS)—Not supported in this release.

Related Commands

addpart, cnfpart, delpart, dspparts, dsprscrptn, addrscrptn, cnfrscrptn, delrscrptn, dsprscrptns

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dsppart 10 2
  Interface Number      : 10
  Partition Id          : pnni           Number of SPVC: 0
  Controller Id         : 2
  Available LCNs        : 1000
  Min dlci              : 0
  Max dlci              : 65535
  Ing Percentage bw     : 100
  Egr Percentage bw     : 100
```

dspparts

Display Resource Partitions—FRSM12

The **dspparts** command displays information for all the resource partitions for the current card.

For information about specific elements of a resource partition, see the “[addpart](#)” section on page 4-7.



Note

The **dspparts** and **dsprscrptns** commands are identical. The name “dsprscrptns” is consistent with the corresponding command in Release 1 of the MGX 8850 switch. You can use either command.

Syntax

```
dspparts
```

Related Commands

addpart, addrscrptn, cnfpart, cnfrscrptn, delpart, delrscrptn, dsppart, dsprscrptns

Attributes

log: no

State: active, standby

Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dspparts
if      Ctlr   Ctlr  available  min    max    ingr    egr
Num    Num    ID    LCNs      DLCI   DLCI   PctBw   PctBw
-----
 1     pnni    2     1000      0     32767  100     100
 2     pnni    2     1000      0     32767  100     100
 4     pnni    2     1000      0     32767  100     100
10     pnni    2     1000      0     65535  100     100
```


dspport

Display Port—FRSM12

The **dspport** command displays the configuration for a logical port.

For a description of each item in the **dspport** command, see the “[addport](#)” section on page 4-9.



Note

The SCT ID that the **dspport** command displays pertains to the port. For the card-level SCT ID, enter the **dspcd** command.

Syntax

```
dspport <ifNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
--------------	---

Related Commands

addport, **delpport**, **dnport**, **dspports**

Attributes

log: no

State: active, standby

Privilege: ANYUSER

Example

```

MGX8850.3.FRSM12.a > dspport 1
Interface Number          : 10
  Line Number             : 2.4
  Admin State             : Down           Number of partitions : 0
  Operational State      : Down           Number of SPVC       : 0
  Port State             : Inactive
  Port Signalling State  : No Signalling Failure
  IfType                 : FrameRelay
  SCT Id                 : 0 Default
  DLCI Length            : TwoBytes
  Flags Between Frames   : 1
  Equeue Service Ratio   : 1
  Port Speed             : 44736 kbps
  Checksum type          : crc16
  Over-subscription     : Disabled
  Over-subscribed       : False
  Ingress Percent Util   : 0
  Egress Percent Util    : 0
  SignallingProtocolType : AnnexANNI
  Enhanced LMI          : Disabled
  FRF 1.2 Support       : Disabled
  Asynchronous Updates  : Disabled
  T391 Link Integrity Timer : 10 secs
  T392 Polling Verification Timer : 15 secs
  N391 Full Status Polling Counter : 6
  N392 Error Threshold   : 3
  N393 Monitored Event Count : 4

```

dspportcnt

Display Port Counters—FRSM12

The **dspportcnt** command displays the frame counters for a logical port.

Syntax

```
dspportcnt <ifNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
--------------	---

Related Commands

dsports, **dspport**, **cnfport**, **clrportcnt**, **clrportcnts**

Attributes

log: no	State: active, standby	Privilege: ANYUSER
---------	------------------------	--------------------

Example

```
MGX8850.3.FRSM12.a > dspportcnt 10
Interface Num      : 10
Rcv Frames        :          8   Xmt Frames          :          6
Rcv Bytes         :        100   Xmt Bytes         :         90
Rcv Frames FECN   :          0   Xmt Frames FECN   :          0
Rcv Frames BECN   :          0   Xmt Frames BECN   :          0
Rcv Frame DE      :          0
Rcv Kbps AIR      :          0   Xmt Kbps AIR      :          0
Rcv Frame Disc CRC Err :      0   Xmt Frames LMI Alarm :      0
Rcv Frame Disc Align Err :      0   Xmt Bytes LMI Alarm  :      0
Rcv Frame Disc Illeg Len :      0   Xmt Bytes Underrun  :      0
Rcv Frame Disc Illeg Hdr :      0
Rcv Frame Abort   :          0
Rcv Frame Unknown DLCI :          2
Rcv Frame Last Unkn DLCI :    8273860
Rcv Frame Tagged FECN :          0
Rcv Frame Tagged BECN :          0
Rcv Frame Tagged DE :          0
Rcv Frame DiscXcd DE Thre:      0
Rcv Frame DiscNo Channel :      0
Rcv Frame Disc Overrun :      0
Rcv Frame Buffer Unavail :      0
Rcv LMI Status Inquiry :          3   Xmt Status Inquiry  :          3
Rcv LMI Status     :          3   Xmt LMI Status     :          3
Rcv LMI Asynch Update :          0   Xmt LMI Asynch Update :          0
Rcv LMI Invalid Request :          0
Rcv LMI UNI Seq Mismatch :          0
Rcv LMI NNI Seq Mismatch :          0
LMI UNI Signalling tmout :          0
LMI NNI Signalling tmout :          0
```

dsports

Display Ports—FRSM12

The **dsports** command displays general information about all logical ports on the card.

Syntax

dsports

Syntax Description

No parameters.

Related Commands

addport, cnfport, delport, dspport

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dsports
ifNum   Line   Admin   Operational   ifType   sctID
-----
      1    1.1   Down       Down         FrameRelay  0 Default
      2    1.2   Down   LowerLayerDown   FrameRelay  0 Default
      4    1.4   Down       Down         FrameRelay  0 Default
     10    2.4   Down       Down         FrameRelay  0 Default
```

dspportsct

Display Port SCT—FRSM12

The **dspportsct** command displays the contents of the service class template (SCT) for a port.

Syntax

```
dspportsct <abr | bw | gen | cosb | vcThr | cosThr | vcFR> <ifNum>
```

Syntax Description

abr	Available bit rate arguments
bw	Bandwidth argument
gen	General policing and connection admission control (CAC) arguments
cosb	Class of service buffer arguments
vcThr	VC threshold arguments
cosThr	Class of service buffer threshold arguments
vcFR	VC Frame Relay arguments
<i>ifNum</i>	Logical interface (port) number. Range: 1–12.

Related Commands

addport, cnfport, dspport, dspset, dspcdset

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```

MGX8850.3.FRSM12.a > dsportsct cosThr 12
-----+-----
| Service Class Template [ 5] : COSB Threshold Parameters |
-----+-----
| COSB | MAX_CELL | EFCI | CLP_LO | CLP_HI | EPD_HI | DISC_ALM |
|      | THRESH(uS) | (in uS) | (in uS) | (in uS) | (in uS) | THRESH(uS) |
-----+-----
| 1 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 2 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 3 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 4 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 5 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 6 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 7 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 8 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 9 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 10 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 11 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 12 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 13 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 14 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 15 | 0 | 0 | 0 | 0 | 0 | 1000000 |
| 16 | 0 | 0 | 0 | 0 | 0 | 1000000 |
-----+-----

```

dsprscrtn

Display Resource Partition—FRSM12

The **dsprscrtn** command displays information about a resource partition.



Note

The **dsppart** and **dsprscrtn** commands are identical. The name “dsprscrtn” is consistent with the corresponding command in Release 1 of the MGX 8850 switch. You can use either command.

Syntax

```
dsprscrtn <ifNum> <CtrlNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>CtrlNum</i>	Controller number: 1 = PAR (Portable AutoRoute)—Not supported in this release. 2 = PNNI—Only PNNI is supported in this release. 3 = TAG (MPLS)—Not supported in this release.

Related Commands

addrscrtn, cnfrscrtn, delrscrtn, dsprscrtns, dsppart

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > dsprscrtn 1 2
Interface Number           : 1
Partition Id               : pnni           Number of SPVC: 5
Controller Id              : 2
Available LCNs             : 1334
Min dlci                   : 0
Max dlci                   : 1023
Ing Percentage bw          : 100
Egr Percentage bw          : 100

DominoNode6.11.FRSM12.a >
```

dsprscrptns

Display Resource Partitions—FRSM12

The **dsprscrptns** command displays information for all the resource partitions for the current card.

For information about specific elements of a resource partition, see the “[addpart](#)” section on page 4-7.



Note

The **dspparts** and the **dsprscrptns** commands are identical. The name “dsprscrptns” is consistent with the corresponding command in Release 1 of the MGX 8850 switch. You can use either command.

Syntax

```
dsprscrptns
```

Syntax Description

No parameters.

Related Commands

addpart, addrscrptn, cnfpart, cnfrscrptn, delpart, delrscrptn, dspparts, dsprscrptn

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > dsprscrptns
if   Ctlr  Ctlr  available  min    max    ingr    egr
Num  Num   ID    LCNs      DLCI   DLCI   PctBw   PctBw
-----
 1   pnni   2     1334      0     1023   100     100
 2   pnni   2     1334      0     1023   100     100
 3   pnni   2     1334      0     1023   100     100
 4   pnni   2     1334      0     1023   100     100
 5   pnni   2     1333      0     1023   100     100
 6   pnni   2     1333      0     1023   100     100
 7   pnni   2     1333      0     1023   100     100
 8   pnni   2     1333      0     1023   100     100

DominoNode6.11.FRSM12.a >
```


dspst

Display SCT—FRSM12

The **dspst** command displays the contents of a port-level or card-level service class template (SCT).

For more information about SCTs, see the description of SCTs in the *Cisco MGX 8850 Switch Software Configuration Guide*, Release 3.0.

Using the **dspst** command, you can display the following information:

- Port or card-level SCTs
- Particular SCT template
- Particular section within the SCT (see “Syntax Description” below for an explanation)

Syntax

```
dspst <abr | bw | gen | cosb | vcThr | cosThr | vcFR> <sciID> <port | card> [t3 | e3]
```

Syntax Description

abr	Available bit rate arguments
bw	Bandwidth argument
gen	General policing and connection admission control (CAC) arguments
cosb	Class of service buffer arguments
vcThr	VC threshold arguments
cosThr	Class of service buffer threshold arguments
vcFR	VC Frame Relay arguments
<i>sciID</i>	SCT identifier. Range: 0–255.
port card	Specifies service class template (SCT) arguments: port = Port SCT (egress) card = Card SCT (ingress)
t3 e3	Specifies the line type: t3 = 104268 cells per second e3 = 80000 cells per second

Related Commands

cnfedset, dspedset, dspportset, dsped

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > dpsct vcFR 5 card t3
```

```
Service Class Template [5] : Bw and Policing Parameters
```

SERV-TYPE(DEC)	DE TAG ENABLE	FECN	DE TO CLP MAP	CLP TO DE MAP
VSI_SIGNAL(2)	DISABLED	MAP	MAP	MAP
ATMF_CBR1(256)	DISABLED	MAP	MAP	MAP
ATMF_VBRrt1(257)	DISABLED	MAP	MAP	MAP
ATMF_VBRrt2(258)	DISABLED	MAP	MAP	MAP
ATMF_VBRrt3(259)	DISABLED	MAP	MAP	MAP
ATMF_VBRnrt1(260)	DISABLED	MAP	MAP	MAP
ATMF_VBRnrt2(261)	DISABLED	MAP	MAP	MAP
ATMF_VBRnrt3(262)	DISABLED	MAP	MAP	MAP
ATMF_UBR1(263)	DISABLED	MAP	MAP	MAP
ATMF_UBR2(264)	DISABLED	MAP	MAP	MAP
ATMF_ABR(265)	DISABLED	MAP	MAP	MAP
ATMF_CBR2(266)	DISABLED	MAP	MAP	MAP
ATMF_CBR3(267)	DISABLED	MAP	MAP	MAP

SERV TYPE	ING. PERC. UTIL	EGR. PERC. UTIL	IGNORE INCOMING DE
VSI_SIGNAL(2)	100	100	DISABLED
ATMF_CBR1(256)	100	100	DISABLED
ATMF_VBRrt1(257)	100	100	DISABLED
ATMF_VBRrt2(258)	100	100	DISABLED
ATMF_VBRrt3(259)	100	100	DISABLED
ATMF_VBRnrt1(260)	100	100	DISABLED
ATMF_VBRnrt2(261)	100	100	DISABLED
ATMF_VBRnrt3(262)	100	100	DISABLED
ATMF_UBR1(263)	100	100	DISABLED
ATMF_UBR2(264)	100	100	DISABLED
ATMF_ABR(265)	100	100	DISABLED
ATMF_CBR2(266)	100	100	DISABLED
ATMF_CBR3(267)	100	100	DISABLED

dsptask

Display Task—FRSM12

The **dsptask** displays a specified task (Resource ID) at a specified level.

Syntax

```
dsptask <Task ID> <Level>
```

Syntax Description

<i>Task ID</i>	Resource ID number.
<i>Level</i>	Display Level. Range: 0–2.

Related Commands

dsptasks

Attributes

Log: yes State: active Privilege: GROUP1

Example

```
MGX8850.11.FRSM12.a > dsptask 0x1006e 1
```

```

NAME          ENTRY          TID    PRI    STATUS    PC          SP          ERRNO    DELAY
-----
tSmOutTsk04cliOutTask  81d0a000 221  READY    803dea78 81d09ba0      0      0

stack: base 0x81d0a000 end 0x81d08000 size 8176 high 2232 margin 5944

options: 0x4
VX_DEALLOC_STACK

$0 =          0 at =          0 v0 =          0
v1 =          0 a0 =          1006e a1 = ffffffff80274350
a2 = ffffffff8ad87938 a3 =          0 t0 =          0
t1 =          0 t2 =          0 t3 =          0
t4 =          0 t5 =          0 t6 =          0
t7 =          0 s0 =          0 s1 = ffffffff81d1e300
s2 =          200 s3 = ffffffff81d09c68 s4 =          a
s5 =          0 s6 =          0 s7 =          0
t8 =          0 t9 =          0 k0 =          0
k1 =          0 gp = ffffffff8066e780 sp = ffffffff81d09ba0
s8 =          0 ra =          0
sr = 3004f701 pc = 803dea78

SSI_TID          : 0x1006e
parent          : tSmInTsk04
binary sem ID   : 0x0
msg queue chain : NULL
initial task status : ERROR

```

```
suspend recv action : restart task
starvation recv action : no action

suspend recv tick : 0
suspend count : 0

starve rec tick : 0
starve count : 0

runaway count : 0
runaway hwm count : 0

starvation count : 0
starvation hwm count: 1

hang count : 0
hang hwm count : 0

flags : 0
```

dsptasks

Display Tasks—FRSM12

The **dsptasks** command displays all tasks currently running on a card.

Syntax

```
dsptasks
```

Syntax Description

No parameters.

Related Commands

```
dsptask
```

Attributes

Log: yes

State: active

Privilege: GROUP1

Example

```
DominoNode6.11.FRSM12.a > dsptasks
```

Name	SSI_TID	TASK_ID
tRootTask	0x1	0x81efbd70
tSarDisp	0x1000d	0x81e808e0
tLOGD	0x1000e	0x81e7b820
ctc	0x1000f	0x81e76060
tExcTask	0x10010	0x81ef1cb0
tLogTask	0x10011	0x81eef100
tWdbTask	0x10012	0x81e8cc90
tNetTask	0x10013	0x81eac9e0
tPortmapd	0x10014	0x81e91cd0
IPC Ctl	0x10015	0x81e70d60
tSyncRamDb	0x10016	0x81e6bac0
CliCcRoot	0x10017	0x81e66a00
tSntermdTas	0x10018	0x81e645e0
tCccInTsk	0x10019	0x81e602e0
tSyserrd	0x1001a	0x81e859a0
tCliIOtimer	0x1001b	0x81e83700
tCccCmdTsk	0x1001c	0x81e5b220
tCccOutTsk	0x1001d	0x81e55f60
SRCV	0x1001e	0x81e77300
dbClnt	0x1001f	0x81e53c90
FileAccSrv	0x10020	0x81e4f9f0
StatFileMgr	0x10021	0x81e4d4e0
emRoot	0x10022	0x81e49240
CCMA_Task	0x10023	0x81e40fa0
snmpAxsmRat	0x10024	0x81e3cd00
lmiRootTask	0x10025	0x81e3aa60
TrapRat	0x10026	0x81e387c0
CutRat	0x10027	0x81e30520
CliRat	0x10028	0x81e2e280

tEvtHndlrTa	0x10029	0x81e2bec0
tSmInTsk02	0x3002a	0x81d57520
hw_timer_Ta	0x1002b	0x81e235f0
cardTask0	0x1002c	0x81e1f2c0
tVsiSlave	0x1002d	0x81decac0
tVsiSync	0x1002e	0x81de0820
tCproAlm	0x1002f	0x81dd8580
tCpro	0x10030	0x81dd42e0
tOam	0x10031	0x81dd0040
lmiMainTask	0x10032	0x81dcae90
cutSTask	0x10033	0x81dc69e0
snmpSA	0x10034	0x81dc2620
trapClTask	0x10035	0x81dbe2c0
tSmCmdTsk02	0x30036	0x81d53280
tSmOutTsk02	0x30037	0x81e26550
camTask	0x10038	0x81db1830
tDbgInTask	0x10039	0x81dad4a0
cutW1Task	0x1003a	0x81da51d0
cutW2Task	0x1003b	0x81d9e250
cutW3Task	0x1003c	0x81d99fb0
tTelnetDTas	0x1003d	0x81d95ce0
tLTsk_0512	0x1003e	0x81db8e10
tLTsk_0513	0x1003f	0x81d919e0
tLTsk_0514	0x10040	0x81d8d740
tLTsk_0515	0x10041	0x81d894a0
tLTsk_0516	0x10042	0x81d85200
tLTsk_0517	0x10043	0x81d80f60
tLTsk_1518	0x10044	0x81d7ccc0
tLTsk_1519	0x10045	0x81d78a20
tLTsk_1520	0x10046	0x81d74780
tLTsk_1521	0x10047	0x81d704e0
tLTsk_1522	0x10048	0x81d6c240
tLTsk_1523	0x10049	0x81d67fa0
Stats Manag	0x1004a	0x81d63d00
tftp_update	0x1004b	0x81d5fa60
tftp_transm	0x1004c	0x81d5b7c0
tSmInTsk02	0x3004d	0x81d57520
tSmCmdTsk02	0x3004e	0x81d53280
tSmOutTsk02	0x3004f	0x81e26550
tSmInTsk03	0x200a4	0x81d4dfe0
tSmCmdTsk03	0x200a5	0x81d49d40
tSmOutTsk03	0x200a6	0x81db4b70

Free task entry : 129

DominoNode6.11.FRSM12.a >

dspversion

Display Version—display firmware versions on an individual card—FRSM12

The **dspversion** command displays details for the versions of boot and runtime firmware images residing on a card. Typically, you use the **dspversion** command in conjunction with the commands for changing a card's firmware version. (See "Related Commands" section below.) For example, you can enter the **dspversion** command to see if a particular firmware version is currently running.

Version Numbering Conventions

This section describes how to interpret the *version* number of a firmware image. Commands such as **loadrev** and **setrev** require a version number rather than a filename. Similarly, the **dspversion** command shows the firmware version number, rather than the firmware filename. Although the version number derives from the firmware filename, they are distinctly different.

Firmware Filenames

The FW directory on the hard drive contains firmware files for possibly many revisions. Each firmware file has the *fw* file extension. The format of a firmware filename follows:

cardtype_version-element[_platform].fw

Note that *platform* is an optional field because it applies only to the PXM45 card. For example, a firmware file may have the name "frsm12_003.000.001.001.fw." Within this filename, the version-portion of the filename is 003.000.001.001. (Note the absence of "mgx" in the filename.) The version-portion of the filename has the following format:

major-release.minor-release.maintenance.patch

Using the example "frsm12_003.000.001.001.fw," the version portion is 3.0(1.1). Similarly, if no patch is present in the firmware image, the version number would be 3.0(1).

The range for each *release*, *maintenance*, and *patch* is 0–255. Note, as you read left-to-right, that each element is a superset of the element on the right, and the number on the right resets to 0 or 1 when the element on its *left* is incremented. For example, if the *minor-release* number 010 rolls to 011, the *maintenance* on its right is reset to 1, so the new version in the example is "003.010.001.000." (Note the anomaly here is that the *maintenance* number resets to 1 rather than 0, due to the IOS convention of starting maintenance numbers at 1.)

Version Numbers

To derive the firmware version number, the firmware filename is altered by removing insignificant zeroes and reformatting the filename to include parentheses. The format of a *version* number follows:

major-release.minor-release(maintenance.patch)phase

For example, the significance of 3.0(60.8)P1 is shown below:

major-release	minor-release	(maintenance.patch)	phase
3.	0.	(60.8)	P1

Prerelease, developmental firmware versions have one or two alphanumeric characters at the end of the version number. These versions may appear in various contexts. For example, the Help display for a **setrev** command gives examples of *revision*, but only the first two items in the following bulleted list could be in the *released* product. These two items show major release 3, minor release 0, and the minimal maintenance number of 1 (per IOS precedent). The last three bulleted items show the developmental revision numbers:

- 3.0(1) (note the absence of a patch number)
- 3.0(1.248) (note that the patch number is 248)
- 3.0(0.1)A1 (note that the phase number is A1)
- 3.0(0.10)D2 (note that the phase number is D2)
- 3.0(0.248)P1; 3.0(0.1)P2; 3.0(0.113)P3; 3.0(0.10)P4

Syntax

dspversion

Syntax Description

No parameters.

Related Commands

abortrev, commitrev, loadrev, runrev, setrev, dspcd

Attributes

log: no State: active, standby, init Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > dspversion

  Image Type   Shelf Type   Card Type   Version   Built On
  -----
  Runtime      MGX          FRSM12     3.0(0.0)A May  6 2002, 18:40:45
  Boot         MGX          FRSM12     3.0(0.0)A -
```

DominoNode6.11.FRSM12.a >

Exit

Exit from User Session—FRSM12

The **exit** command ends the current user session and terminates the telnet connection to the switch.

To start another user session, you must log in again using the telnet procedure.

Syntax

exit

Syntax Description

No parameters.

Related Commands

bye, logout

Attributes

log: yes State: active, standby, init Privilege: ANYUSER

Example

The following shows an example usage of the **exit** command:

```
DominoNode6.11.FRSM12.a > exit
```

```
(session ended)
```

```
<Your 'TELNET' connection has terminated>
```

getpcrfromcir

Get Peak Cell Rate (PCR) Value from Committed Information Rate (CIR)—FRSM12

The **getpcrfromcir** command returns the peak cell rate value for the specified committed information rate (*cir*).

Syntax

```
getpcrfromcir <cir>
```

Syntax Description

<i>cir</i>	Specified committed information rate (CIR) value in bits per second.
------------	--

Related Commands

None.

Attributes

Log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.3.FRSM12.a > getpcrfromcir 10000  
PCR value is : 37
```

help

Help—FRSM12

The **help** command enables you to display all the commands associated with the current card.

The behavior of the **help** command, with or without a argument (*string*), is outlined below:

- In the absence of a *string* argument in the **help** command, the entire command repertoire applicable to the current card is displayed.
- By specifying part of a command name as the *string* argument in the **help** command, all the commands applicable to the current card that contain the specified string are displayed.
- By specifying the complete command name as the *string* argument in the **help** command, the output indicates only whether the specified command is available for use on the current card.

Syntax

```
help [string]
```

Syntax Description

<i>string</i>	Partial or complete command name.
---------------	-----------------------------------

Related Commands

None.

Attributes

log: no State: active, standby, init Privilege: ANYUSER

Example

The following command indicates that the **cnfalm** command is available for use on the current card.

```
DominoNode6.11.FRSM12.a > help cnfalm
```

```
Available commands
-----
cnfalm
```

```
DominoNode6.11.FRSM12.a >
```

history

Command History—FRSM12

The **history** command displays the last of a specified number of CLI commands executed on the current card.

This command generates the same output as the **cmdhistory** command (see the “[cmdhistory](#)” section on [page 4-24](#)).

Syntax

```
history [ queue_depth ]
```

Syntax Description

<i>queue_depth</i>	This optional parameter establishes the depth of the command history queue (that is, the number of recent CLI commands to be cached). Range: 0–256; default queue depth: 10.
--------------------	--

Related Commands

cmdhistory

Attributes

log: no State: active, standby, init Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > history
Size of cmdHistory is currently 10 line(s)
 1 cc 11
 2 timeout 0
 3 getpcrfromcir
 4 getpcrfromcir 1000
 5 Help
 6 q
 7 Help cnfalm
 8 history

DominoNode6.11.FRSM12.a >
```

logout

Log Out—FRSM12

The **logout** command terminates the current user session.

Syntax

```
logout
```

Syntax Description

No parameters.

Related Commands

bye, exit

Attributes

log: yes State: active, standby, init Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > logout  
  
(session ended)  
  
<Your 'TELNET' connection has terminated>
```

ping

Ping—FRSM12

The **ping** command is used to determine if a specified destination host is operational. The command causes the switch to send an ICMP packet to the destination IP address.

Syntax

```
ping <IP_Addr> [<Num_Packets>]
```

Syntax Description

<i>IP_Addr</i>	IP address of the destination host in dotted decimal format.
<i>Num_Packets</i>	Number of packets. Range: 0–65535. 0 = Indicates that infinite number of packets are to be sent to the destination host. 3 = (Default). Indicates that three packets are to be sent to the destination host.

Related Commands

None.

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
MGX8850.7.FRSM12.a > ping 172.29.23.148 3
PING 172.29.23.148: 56 data bytes
64 bytes from 172.29.23.148: icmp_seq=0. time=0. ms
64 bytes from 172.29.23.148: icmp_seq=1. time=0. ms
64 bytes from 172.29.23.148: icmp_seq=2. time=0. ms
----172.29.23.148 PING Statistics----
3 packets transmitted, 3 packets received, 0% packet loss
round-trip (ms)  min/avg/max = 0/0/0
```

rrtcon

Reroute Connection—force the system to reroute a connection—FRSM12

The **rrtcon** command enables you to initiate the immediate rerouting of a connection.

Syntax

```
rrtcon <ifNum > <dcli>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dcli</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

dspcons, dspcon

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > rrtcon 10 1001
```

sesntimeout

Session Timeout—FRSM12

The **sesntimeout** command displays the timeout period (in seconds) that was specified by means of the **timeout** command (see the “[timeout](#)” section on page 4-114). The timeout period is the length of time in seconds that will expire before the telnet session automatically terminates.



Note

Besides displaying the timeout period for the current telnet session, the **sesntimeout** command can also be issued with the optional *time_out* argument (see below) to deliberately change the timeout period currently in effect.

Syntax

```
sesntimeout [time_out]
```

Syntax Description

<i>time_out</i>	(Optional). When specified, this argument is a positive number indicating the period of time (in seconds) of idle time to be allowed in the current user session before the session times out. Specifying a value of 0 prevents the session from timing out.
-----------------	--

Related Commands

sesnwatchdog, **timeout**

Attributes

Log: yes State: active Privilege: GROUP1

Example

```
MGX8850.11.FRSM12.a > sesntimeout
The timeout period for this session is currently 36000 second(s)
```


sesnwatchdog

Session Watchdog—FRSM12

The **sesnwatchdog** command sets the state of the session watchdog timer function to either ON or OFF.

This command provides a timeout function to handle very long response times to CLI commands during debugging operations. Accordingly, if the session watchdog timer is set to OFF, CLI debugging commands may take longer to execute to completion.

Syntax

```
sesnwatchdog [ on | off ]
```

Syntax Description

on	Default value. Indicates that session watchdog timer function is active.
off	Indicates that session watchdog timer function is not active.

Related Commands

None.

Attributes

Log: yes State: active Privilege: GROUP1

Example

```
DominoNode6.11.FRSM12.a > sesnwatchdog
Value of sesnWatchdog is currently ON
```

```
DominoNode6.11.FRSM12.a > sesnwatchdog off
Value of sesnWatchdog is now turned OFF
```

```
DominoNode6.11.FRSM12.a > sesnwatchdog
Value of sesnWatchdog is now turned OFF
```

timeout

Timeout—specifies the number of seconds of idle time for the current user-session—FRSM12

The **timeout** command enables you to increase or decrease the amount of idle time in the current user session from the default value of 10 minutes (600 seconds).

If you do not specify the optional *time_out* parameter (see below), the system displays the timeout period currently in effect. At the end of the timeout period, the system logs you out.

To disable the session timeout function, specify 0 seconds as the timeout period.



Note

The **timeout** command is equivalent to the **sesntimeout** command (see the “[sesntimeout](#)” section on page 4-112).

Syntax

```
timeout [time_out]
```

Syntax Description

time_out (Optional). When specified, this argument is a positive number indicating the period of time (in seconds) of idle time to be allowed in the current user session before it times out.

The default value for this argument is 10 minutes (600 seconds). Specifying a value of 0 prevents the session from timing out.

Related Commands

sesntimeout

Attributes

log: no State: active, standby, init Privilege: ANYUSER

Example

The following are sample usages of the **timeout** command:

```
DominoNode6.11.FRSM12.a > timeout
The timeout period for this session is currently 0 second(s)

DominoNode6.11.FRSM12.a >

DominoNode6.11.FRSM12.a > timeout 60
The timeout period for this session is now set to 60 second(s)

DominoNode6.11.FRSM12.a >

DominoNode6.11.FRSM12.a > timeout 0
The timeout period for this session is now set to 0 second(s)

DominoNode6.11.FRSM12.a >
```

```
DominoNode6.11.FRSM12.a > timeout 3600  
The timeout period for this session is now set to 3600 second(s)  
  
DominoNode6.11.FRSM12.a >
```

tstcon

Test Connection Activity—FRSM12

The **tstcon** command sends an OAM loopback cell to test the viability of a connection.

Syntax

```
tstcon <ifNum > <dlci>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dlci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

tstdelay

Attributes

Log: yes State: active Privilege: GROUP1

Example

```
tballmgx6.10.FRSM12.a > tstcon 1 824
tstcon is in progress ..
Connection Id    Test Type                      Result                      Round Trip Delay
=====        =====                      =====                      =====
01.0000824        Test Con                      Passed
```

tballmgx6.10.FRSM12.a >

tstdelay

Test Delay—FRSM12

The **tstdelay** command tests the integrity of the connection in the ingress direction by sending supervisory cells to the remote end of the network and back. The **tstdelay** command applies only to SPVCs. If the test begins successfully, the **tstdelay** command output indicates that the test is in progress.

You can enter the **dspchantests** command to determine the round trip time of the test in microseconds.



Note

The primary purpose of the **tstdelay** command is to test the integrity of the connection. The round trip time is not accurate enough for any use requiring an accurate delay measurement.

Syntax

```
tstdelay <ifNum > <dlci>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dlci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

tstcon, **dspchantests**

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.10.FRSM12.a > tstdelay 1 824
tstdelay is in progress ..
Connection Id      Test Type          Result             Round Trip Delay
=====
01.0000824        Test Delay         Passed             0 microsec

MGX8850.10.FRSM12.a >
```

upcon

Up Connection—bring a connection back into service—FRSM12

The **upcon** command activates a connection that was previously brought down administratively by issuance of the **dncon** command.



Note

The **upcon** command can be executed only on the master endpoint of the connection.

Syntax

```
upcon <ifNum> <dlci>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
<i>dlci</i>	Data-link connection identifier. Range for 2-byte header: 1–1023; range for 4-byte header: 1–8388607.

Related Commands

dncon

Attributes

log: yes State: active Privilege: GROUP1

Example

```
MGX8850.3.FRSM12.a > upcon 10 1000
ERR: Operation not allowed on slave endpoint
```

```
MGX8850.3.FRSM12.a > upcon 10 1001
Admin state of connection is UP
```

upln

Up Line—FRSM12

The **upln** command activates a line on the current card.

After you activate a line, enter the **cnfln** command to configure the line characteristics and the line signaling protocol.



Note

Before entering the **upln** command, see the description of the **cnfcdsct** command for important planning considerations.

Syntax

```
upln <bay.line>
```

Syntax Description

<i>bay.line</i>	Identifies the bay number (1 or 2) and the line number (1–6).
-----------------	---

Related Commands

dspln, **dsplns**, **cnfln**, **dnln**

Attributes

log: yes State: active Privilege: GROUP1

Example

The following command activates bay 1, line 3:

```
MGX8850.3.FRSM12.a > upln 1.3
```

upport

Up Port—FRSM12

The **upport** command restores a logical port to an active state, enabling the port to again carry network traffic.

The **upport** command is typically entered following reconfiguration or troubleshooting procedures. Before you can enter the **upport** command, however, you must have first deactivated the port by entering the **dnport** command. Throughout a deactivation and activation sequence, the configuration of the logical port remains intact.

Syntax

```
upport <ifNum>
```

Syntax Description

<i>ifNum</i>	Logical interface (port) number. Range: 1–12.
--------------	---

Related Commands

dspport, **dspports**, **dnport**

Attributes

log: yes	State: active	Privilege: GROUP1
----------	---------------	-------------------

Example

The **upport** command below restores port 1 on the current FRSM12 card to operational status.

```
MGX8850.3.FRSM12.a > upport 1
MGX8850.3.FRSM12.a >
```


users

Users—FRSM12

The **users** command displays a list of active users of the card.

Syntax

```
users
```

Syntax Description

No parameters.

Related Commands

None.

Attributes

Log: no State: standby Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > users
```

Port	Slot	Idle	UserId	From
telnet.01	11	0:00:00	cisco	0.0.0.0
smterm.02	11	0:00:00	cisco	slot 7
smterm.03 *	11	0:00:00	cisco	slot 7

```
DominoNode6.11.FRSM12.a >
```

who

Who—FRSM12

The **who** command enables you to see details about the user currently logged onto a card.

The information consists of the:

- The type of port initiating the **who** command
- Slot number of the current card
- Idle time in hours, minutes, and seconds
- Current user name
- IP address of the device that accessed the card (not the card or the node IP address)

Syntax

who

Syntax Description

No parameters.

Related Commands

whoami

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > who
```

Port	Slot	Idle	UserId	From
telnet.01	11	0:00:00	cisco	0.0.0.0
smterm.02	11	0:00:00	cisco	slot 7
smterm.03 *	11	0:00:00	cisco	slot 7

```
DominoNode6.11.FRSM12.a >
```

whoami

Who Am I—PXM45, AXSM

The **whoami** command returns the following information about the currently logged in user:

- User ID
- Access level
- Terminal port

Syntax

```
whoami
```

Syntax Description

No parameters.

Related Commands

```
who
```

Attributes

log: no State: active, standby Privilege: ANYUSER

Example

```
DominoNode6.11.FRSM12.a > whoami
```

```
User ID:          cisco  
Access Level:    CISCO_GP  
Terminal Port:   smterm.02
```

```
DominoNode6.11.FRSM12.a >
```

