



ILMI and LMI Commands

This chapter describes the ILMI and LMI commands. These commands let you add, delete, configure, display status, and create statistics for ILMI or LMI at the UNI or for PNNI. For the UNI, commands are executed on the CLI of an AXSM or AXSM-E. For PNNI, commands are executed on the CLI of a PXM45. The chapter begins with a description of issues related to command entry, port identification, and so on.

Position-Dependent and Keyword-Driven Parameters

A command can include parameters that are *keyword-driven* or *position-dependent*.

For position-dependent parameters, you must type parameters in the order they appear in the syntax description or on-line help. To create a logical port, for example, the position-dependent syntax is:

```
addport <ifNum> <bay.line> <guaranteedRate> <maxrate> <sctID> <ifType> [vpi]
```

For a keyword-driven parameter, a keyword must precede the value. The keyword is preceded by a dash and followed by the parameter (**-timeout** <secs>, for example). The order you enter keyword-driven parameters does not matter—although any preceding or succeeding, position-dependent parameters must appear as they do in the command syntax description.

In the following syntax example, the command is to delete more than one connection at a time. The mandatory, position-dependent connection identifier consists of a logical port (*ifNum*) and the VPI and VCI of the first connection to delete. After the connection identifier, the line shows two optional, keyword-driven parameters. These keyword-driven parameters let you enter the number of connections to delete and specify verbose mode:

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

Command Entry

When you enter a command with the current version of the product, you must type all intended arguments before you press the **Return** key or **Enter** key.

If you press the **Return** key or **Enter** key with incorrect parameters or no parameters (if the command requires parameters), a message displays the syntax and parameter ranges. The returned message may also suggest what the problem is. For example, the message may warn of too few parameters. No error messages or warnings appear until you complete the command.

Identifying Physical and Logical Elements

The Private Network-to-Network Interface (PNNI) control protocol and the AXSM use different formats to identify the same elements. This section describes the format of these elements in the PNNI and AXSM contexts and how they correspond to each other. When you configure an item on the switch, you may need to specify it in PNNI as well as the AXSM. For example, if you configure a PNNI port on the CLI of the PXM45, you also need to configure a logical port on the CLI of the AXSM. Furthermore, when you display a connection on the AXSM, you identify that same connection using a different format on the PXM45. For specific examples of these parallel actions, see the *Cisco MGX 8850 and MGX 8950 Switch Software Configuration Guide*, Release 2.1.



Note

Apart from the way PNNI and the lower levels of logic identify the same element, the issue of configuration sequence needs explanation. For example, when you configure logical ports, you must complete certain tasks on the AXSM CLI before and after related PNNI tasks. This manual describes prerequisites for certain commands, but refer to the *Cisco MGX 8850 and MGX 8950 Switch Software Configuration Guide*, Release 2.1 for more details on these sequences.

AXSM Format

The AXSM items that you identify for addressing purposes are:

- Slot
- Bay
- Line
- Logical port

A logical port on an AXSM or AXSM-E (and its CLI) always uses the label *ifNum*. For a UNI and NNI interface, a one-to-one correspondence exists between a logical port and a physical line. For virtual trunks, you can configure multiple ports for a line.

The maximum number of logical ports on an AXSM is 60 or 32 on an AXSM-E, regardless of the number of AXSM back cards or whether the interface type is UNI, NNI, or VNNI.

PNNI Format

The PNNI controller requires the following format to identify a physical port:

[shelf.]slot:subslot.port:subport

The PNNI physical *port identifier* (physical port ID) consists of a series of mandatory elements. Note the period or colon between the elements. The elements of the physical port ID are as follows:

- The *shelf* is always 1 for the current product and so is usually omitted.
- The *slot* number of the front card.
- *Subslot* is the number of the bay where the back card resides. This number is 1 or 2.
- *Port* is the physical line.
- *Subport* corresponds to the resource partition on the AXSM. For a UNI or NNI, this resource partition is the same number as the logical port number (*ifNum*) on the AXSM. For a virtual network-to-network interface (VNNI), these numbers do not directly correspond to each other.

For each physical port number, PNNI also generates a logical port number as an encrypted form of the physical port number. The logical port number appears as an unformatted numerical string. For example, a PNNI physical port ID may have the form 1:1.2:2, so the PNNI logical port number would be 16848898. Where needed, the descriptions in the PNNI command chapter define the need for this logical port number. (This section does not define a PNNI logical port number, nor does it describe the correspondence between an AXSM port and a PNNI logical port number.) For the correspondence between a PNNI physical port and the port identifier on an AXSM, see [Table 4-1](#).

Table 4-1 Mapping PNNI Port ID to AXSM Elements

PNNI port	AXSM
Shelf	N/A
Slot	Slot
Subslot	Bay (for upper or lower back card)
Port	Line
Subport	Logical interface (<i>or port</i>)

As the table shows, a port from the PNNI side is a line on the AXSM, and a subport from the PNNI side is a logical interface (or logical port) on an AXSM. An example of a PNNI physical port identifier is 1:2.1:1. This *portid* corresponds to an AXSM, with the following particulars:

Slot 1

Bay 2

Line 1

Logical interface 1 (or logical port 1)

addlmi

Add Local Management Interface—add LMI to support feeder or interoperability.

The **addlmi** command lets you add extended LMI (XLMI) so that an AXSM logical interface can support one of the following:

- A feeder line to a Release 1 MGX 8850 switch
- Interoperability with a Service Expansion Shelf (SES)



Note

By using the **addlmi** command to add LMI for a feeder shelf, the **addfdr** command is unnecessary.

Usage Guidelines

Note the following properties and behaviors before you use the **addlmi** command:

- The only connections that can exist between an MGX 8850 node and a feeder shelf or a Service Expansion Shelf are SPVCs and SPVPs.
- For the feeder application of the **addlmi** command, the effect is the same as using **addfdr**, so you do not need to use **addfdr** for a logical port in addition to **addlmi**.
- No other ILMI or LMI configuration can exist on the AXSM logical interface.
- No connections can exist on the AXSM logical interface.
- A combined maximum of 16 feeder lines or SES interoperability ports can exist on the switch.
- When a port is configured for an XMLI link with an SES, IP connectivity must be disabled.
- The XLMI timers are not configurable on the AXSM. Timer configuration is done on the SES. The values for the LMI timers on AXSM are:
 - SPVC Status Enquiry Timer: 10 seconds
 - SPVC Update Status Timer: 10 seconds
 - Retry Timers: 5 seconds

Cards on Which This Command Runs

AXSM

Syntax

```
addlmi <ifNum> <type>
```

Syntax Description

<i>ifNum</i>	The logical interface number has a range of 1–60.
<i>type</i>	The LMI type refers to either feeder support or interoperability with a BPX 8600-type switch. Enter either a 1 or 2, as follows: <ul style="list-style-type: none"> 1: feeder 2: XLMI to support interoperability with SES

Related Command

dellmi, uplmi, dnlmi, uplmi, clrlmistat, dsplmi, dsplmis, dsplmistat

Attributes

Log: log State: active Privilege: ANYUSER

Example

Add a LMI for a feeder to AXSM port 2. Check the resulting LMI.

```
M8850_NY.1.AXSM.a > addlmi 2 1
M8850_NY.1.AXSM.a > dsplmi 2
  LMI Interface Number      : 2
  LMI Remote Name           : M8850_NY
  LMI IP Address            : 10.10.10.56
  LMI Remote Shelf         : 1
  LMI Remote Slot          : 1
  LMI Remote Port          : 1
  LMI Type                  : AXSM
  LMI Model Number         : 8850
  LMI Configuration        : Up
  LMI Link Status          : Up
  LMI Alarms                : Clear
```

addprfx

Add Prefix—create an address prefix for a UNI or IISP.

The **addprfx** command lets you add an ATM prefix for ILMI to a UNI or IISP.

Cards on Which This Command Runs

Syntax

```
addprfx <portid> <atm-prefix>
```

Syntax Description

portid Identifies a PNNI physical port. The format is *slot:subslot.port:subport*. For a description of each field, see the section, “[PNNI Format](#),” at the beginning of the chapter.

atm-prefix A 13-byte ATM prefix (26 hexadecimal characters).

Related Commands

dspprfx, delprfx

Attributes

Log: log State: active Privilege: GROUP1

Examples

Add prefix 47.0091.8100.0000.0000.0ca7.9e01 to PNNI physical port 3:1.1:1. Display ARM address prefixes for this port. Only the one just added exists.

```
M8850_NY.7.PXM.a > addprfx 3:1.1:1 47.0091.8100.0000.0000.0ca7.9e01
```

```
M8850_NY.7.PXM.a > dspprfx 3:1.1:1
```

```
ILMI Configured Port Prefix(es):
47.0091.8100.0000.0000.0ca7.9e01
```

```
M8850_NY.7.PXM.a >
```

clrilmicnt

Clear ILMI Counters

Clears the ILMI statistics for a partition and logical interface (or port) on a service module.

Cards on Which This Command Runs

AXSM, AXSM-E

Syntax

```
clrilmicnt <ifNum> <partId>
```

Syntax Description

ifNum The ranges for logical interface (or AXSM port) number are as follows:

- AXSM: 1–60
- AXSM-E: 1–32

partId The ranges for partition identifier are as follows:

- AXSM: 1–5
- AXSM-E: 1–20

Related Commands

dspilmicnt, dspilmi, dspilmis

Attributes

Log: log State: active Privilege: SUPER_GP

Examples

Clear the ILMI statistics for logical interface 1, resource partition 1. Before doing so, confirm the existence of these entities by executing **dspparts**.

```
pop20two.1.AXSM.a > dspparts
if part Ctlr egr egr ingr ingr min max min max min max
Num ID ID GuarBw MaxBw GuarBw MaxBw vpi vpi vci vci conn conn
      (.0001%) (.0001%) (.0001%) (.0001%)
-----
  1  1  2  10000  10000  10000  10000  10  100  100  1000  0  10
```

```
pop20two.1.AXSM.a > clrilmicnt 1 1
ilmi stats for ifNum 1, partId 1 cleared
```

clrlmistat

Clear LMI Statistics—clears LMI statistics on an AXSM interface.

The **dsplmistat** command lets you display general statistics about an LMI (XLMIs) on an AXSM interface. See also description of the **addlmi** command.

Cards on Which This Command Runs

AXSM

Syntax

dsplmistat <*ifNum*>

Syntax Description

ifNum The logical interface number has a range of 1–60.

Related Command

dellmi, uplmi, dnlmi, uplmi, dsplmistat, addlmi, dsplmi, dsplmis

Attributes

Log: log State: active, standby Privilege: ANYUSER

Example

After checking the statistics on logical interface 2, clear the LMI statistics then recheck them.

```
M8850_NY.1.AXSM.a > dsplmistat 2

STATUS REPORT ENQUIRY transmitted : 1
STATUS REPORT ENQUIRY received   : 1
STATUS REPORT transmitted         : 1
STATUS REPORT received            : 1
UPDATE STATUS transmitted         : 0
UPDATE STATUS received            : 0
UPDATE STATUS ACK transmitted     : 0
UPDATE STATUS ACK received        : 0
Invalid PDU received              : 0
Invalid PDU length received       : 0
Invalid PDU IEs received          : 0
Invalid Transaction Num received   : 0
Unknown PDU type received         : 0

NODE STATUS enquiry transmitted   : 3605
NODE STATUS enquiry received      : 3605
NODE STATUS ack transmitted       : 3605
NODE STATUS ack received          : 3605
NODE STATUS degrade transmitted   : 0
NODE STATUS degrade received      : 0
NODE STATUS delete transmitted    : 0
```



```
NODE STATUS delete received      : 0
NODE STATUS unknown received     : 0
```

```
M8850_NY.1.AXSM.a > clrlmistat 2
```

```
M8850_NY.1.AXSM.a > dsplmistat 2
```

```
STATUS REPORT ENQUIRY transmitted : 0
STATUS REPORT ENQUIRY received    : 0
STATUS REPORT transmitted         : 0
STATUS REPORT received            : 0
UPDATE STATUS transmitted         : 0
UPDATE STATUS received            : 0
UPDATE STATUS ACK transmitted     : 0
UPDATE STATUS ACK received       : 0
Invalid PDU received              : 0
Invalid PDU length received       : 0
Invalid PDU IEs received          : 0
Invalid Transaction Num received  : 0
Unknown PDU type received         : 0
```

```
NODE STATUS enquiry transmitted  : 3
NODE STATUS enquiry received     : 3
NODE STATUS ack transmitted      : 3
NODE STATUS ack received         : 3
NODE STATUS degrade transmitted  : 0
NODE STATUS degrade received     : 0
NODE STATUS delete transmitted   : 0
NODE STATUS delete received     : 0
NODE STATUS unknown received     : 0
```

```
M8850_NY.1.AXSM.a >
```

cnfaddrreg

Configure Address Registration

This command lets you enable or disable ILMI address registration for a port. Before you can run **cnfaddrreg**, the following must have occurred:

1. The applicable port must have been created by executing **addpnport**.
2. The port must be downed by executing **dnpport**.

The **cnfaddrreg** command can also enable (or disable) the address registration for backward compatibility.

The peer must support address registration table and procedure, so you must confirm that address registration is enabled on all three places.

Cards on Which This Command Runs

PXM45

Syntax

```
cnfaddrreg <portid> [{yes | no}]
```

Syntax Description

In addition to typing a port ID, you must also type either “yes” or “no.”

- portid* Identifies a PNNI physical port. The format is *slot:subslot.port:subport*. For a description of each field, see the section, “[PNNI Format](#),” at the beginning of the chapter.
- yes** Enable ILMI address registration on the port. The default is “yes” (enabled).
- no** Disable ILMI address registration on the port.

Related Commands

None

Attributes

Log: log State: active Privilege: GROUP1

Examples

Disable ILMI address registration on port 4:1.1:11.

```
Geneva.7.PXM45.a > cnfaddrreg 4:1.1:1 no
```

cnfautocnf

Configure Auto Configuration

The **cnfautocnf** command enables or disables ILMI auto configuration for a port. To use this command, the port must be added but administratively down (via **dnppnport**).

With auto-configuration enabled, the ILMI slave side starts ILMI auto configuration to negotiate the ATM layer parameters with its peer while ports come up. With auto-configuration disabled, the ILMI slave does not start ATM layer parameter-negotiation while ports come up. Instead, the ILMI slave uses the local configuration parameters. The default state for auto-configuration is enabled.

Cards on Which This Command Runs

PXM45

Syntax

```
cnfautocnf <portid> [yes | no]
```

Syntax Description

- portid* Identifies a PNNI physical port. The format is *slot:subslot.port:subport*. For a description of each field, see the section, “[PNNI Format](#),” at the beginning of the chapter.
- yes** Enable ILMI automatic configuration on the port.
Default: yes
- no** Disable ILMI automatic configuration on the port.

Attributes

Log: log State: active Privilege: GROUP1

Examples

Enable ILMI auto-configuration on port 4:1.1:11.

```
Geneva.1.AXSM.a > cnfaddrreg 4:1.1:1 no
```

cnfilmi

Configure ILMI

Configures the card-level interim local management interface (ILMI) for the AXSM. Activating the card-level ILMI through **cnfilmi** requires a pre-existing logical port (see **addport**) and resource partition (see **addrscrptn** or **addpart**). No response appears unless an error occurs.



Note

For network-level ILMI in relation to PNNI, run the PNNI-specific ILMI commands on the PXM45.

Cards on Which This Command Runs

AXSM, AXSM-E

Syntax

```
cnfilmi <ifNum> -id <partitionID> -ilmi <ilmiEnable> -vpi <vpi> -vci <vci> -trap <ilmiTrapEnable>
-s <keepAliveInt> -t <pollingIntervalT491> -k <pollInctFact>
```

Syntax Description

<i>ifNum</i>	Logical port number. <ul style="list-style-type: none"> On an AXSM, the range is 1–60. On an AXSM-E, the range is 1–32.
-id	Partition ID in the range 1–20. (See description of addpart or addrscrptn for information regarding resource partition ID.)
-ilmi	Enable or disable ILMI. 1=enable. 2=disable.
-vpi	VPI for the ILMI signaling connection. The range is 0–255.
-vci	VPI for the ILMI signaling connection. The range is 0–65535.
-trap	Enable or disable ILMI trap. 1=enable. 2=disable.
-s	Keep alive interval. The range is 1–65535 seconds.
-t	Polling interval for T491 in the range 0–65535 seconds.
-k	Polling interval K in the range 0–65535 seconds.

Related Commands

dspilmi, **dspilmis**, **dspilmient**, **clrilmient**, **dnilmi**, **upilmi**

Attributes

Log: log

State: active

Privilege: GROUP1

Examples

```
Unknown.1.AXSM.a > cnfilmi 1 1 -ilmi 1 -vpi 40 -vci 99 -s 10 -t 10 -k 10
```

cnfilmienable

Enables ILMI on a PNNI port. Prior to **cnfilmienable**, the port must be administratively down. Use the **dnpnport** command to down the port and **uppnport** to up it.

Cards on Which This Command Runs

PXM45

Syntax

```
cnfilmienable <portid> [yes | no]
```

Syntax Description

<i>portid</i>	Identifies a PNNI physical port. The format is <i>slot:subslot.port:subport</i> . For a description of each field, see the section, “ PNNI Format ,” at the beginning of the chapter.
yes or no	Type “yes” to enable ILMI or “no” to disable ILMI on the specified PNNI port. Default: disabled

Related Commands

dnpnport, **uppnport**, **dsppnilmi**

Attributes

Log: log State: active Privilege: GROUP1

Examples

Enable ILMI on a PNNI port 4:1.1:11. First, disable the port by using **dnpnport**.

```
Geneva.1.PXM.a > dspilmi 4:1.1:11
INFO: No ilmi address registered

Geneva.1.AXSM.a > cc 7

(session redirected)

Geneva.7.PXM.a > dnpnport 4:1.1:11

Geneva.7.PXM.a > cnfilmienable 4:1.1:1

Geneva.7.PXM.a > uppnport 4:1.1:11

Geneva.7.PXM.a >
```

cnfilmiproto

Configure ILMI Protocol

The **cnfilmiproto** command lets you configure how PNNI reacts to ILMI events that occur on the VSI slave (a service module). Use the **dsppnilmi** command to confirm changes to the configuration.

Cards on Which This Command Runs

PXM45

Syntax

```
cnfilmiproto <portid> [-securelink {yes | no}] [-attachmentpoint {yes | no}]
[-modlocalattrstd {yes | no}]
```

Syntax Description

<i>portid</i>	Identifies a PNNI physical port. The format is <i>slot:subslot.port:subport</i> . For a description of each field, see the section, “ PNNI Format ,” at the beginning of the chapter.
-securelink	Sets the flag securelink to make PNNI release the call if it loses connection to the ILMI slave. no: do not enable the ILMI Secure link protocol. yes: disable the ILMI Secure link protocol. Default: yes
-attachmentpoint	Sets the flag attachmentpoint to make PNNI release the call if the slave ILMI session sees changes in peer information, such as the system name or system ID. no: do not enable the detection of loss of attachmentpoint protocol. yes: Enable the detection of loss of attachmentpoint. Default: yes
-modlocalattrstd	Sets the flag modlocalattrstd to make PNNI release the call if the slave ILMI sees ATM layer (partition resource) changes, such as the VPI or VCI. no: disable the ILMI standard procedure for modification of local ATM param. yes: enable the ILMI standard procedure for modification of local ATM param. Default: yes

Related Commands

dsppnilmi

Attributes

Log: log

State: active

Privilege: GROUP1

Example

```
SanJose.7.PXM.a > cnfilmiproto 11:2.1.1 -securelink no -attachmentpoint no  
-modlocalattrstd yes
```


dbgilmi

Debug ILMI

Use **dbgilmi** to debug ILMI functionality (such as address registration or auto configuration).



Note

VSI pass-through information is exchanged between only the controller (PPNI) and the switch.

Cards on Which This Command Runs

PXM45

Syntax

```
dbgilmi {enable | disable} [portid]  
[-log <vsi | func | minor | major | warning | error | dump | fatal | all>]  
[-dbg <vsi | func | minor | major | warning | error | dump | fatal | all>]
```

Syntax Description

enable disable	Activate or de-activate ILMI debugging.
<i>portid</i>	Identifies a PNNI physical port. The format is <i>slot:subslot.port:subport</i> . For a description of each field, see the section, “ PNNI Format ,” at the beginning of the chapter.
-log	If you type the optional keyword log , follow it with at least one of the following: vsi func minor major warning error dump fatal all: log all
-dbg	If you type the optional keyword dbg , follow it with at least one of the following: vsi func minor major warning error dump fatal all: dbg all

Attributes

Log: log

State: active, standby

Privilege: SERVICE_GP

dellmi

Delete Local Management Interface—delete LMI to delete a feeder connection or SES interoperability.

The **dellmi** command lets you delete LMI from an AXSM logical interface. By doing so, the feeder line or connection to the SES is removed.



Note

Remove all connections before you delete LMI on an interface.

Cards on Which This Command Runs

AXSM

Syntax

dellmi <*ifNum*>

Syntax Description

ifNum The logical interface number has a range of 1–60.

Related Command

addlmi, uplmi, dnlmi, uplmi, clrlmistat, dsplmi, dsplmis, dsplmistat

Attributes

Log: log State: active Privilege: ANYUSER

Example

Delete the LMI on port 2, then check to see if any LMIs remain.

```
M8850_NY.1.AXSM.a > dellmi 2
```

```
M8850_NY.1.AXSM.a > dsplmis
```

IF No.	Remote Name	Remote IP	Rmt Slot	Rmt Port	LMI Admin	LMI Oper	LMI Alarms
---	-----	-----	-----	-----	-----	-----	-----

```
M8850_NY.1.AXSM.a >
```

delprfx

Delete Prefix

The **delprfx** command lets you delete an ILMI address prefix associated with a UNI, IISP, or AINI.

Cards on Which This Command Runs

PXM45

Syntax

```
delprfx <portid> <atm-prefix>
```

Syntax Description

portid Identifies a PNNI physical port. The format is *slot:subslot.port:subport*. For a description of each field, see the section, “[PNNI Format](#),” at the beginning of the chapter.

atm-prefix A 13-byte ATM address prefix, specified as 26 hexadecimal characters.

Related Commands

addprfx, **dspprfx**

Attributes

Log: log State: active Privilege: GROUP1

Examples

Delete ATM prefix 47.0091.8100.0000.0000.0ca7.9e01 from PNNI physical port 3:1.1:1. Display prefixes for this port.

```
M8850_NY.7.PXM.a > delprfx 3:1.1:1 47.0091.8100.0000.0000.0ca7.9e01
```

```
M8850_NY.7.PXM.a > dspprfx 3:1.1:1
```

```
INFO: No Prefix registered
```

```
M8850_NY.7.PXM.a >
```

dnilmi

Down ILMI

The **dnilmi** command lets you de-activate (down) ILMI on a logical port so you can modify a configuration, troubleshoot, or run certain commands that require ILMI to be inoperative.

Cards on Which This Command Runs

AXSM, AXSM-E

Syntax

```
dnilmi <ifNum> <partId>
```

Syntax Description

ifNum The ranges for logical interface (or AXSM port) number are as follows:

- AXSM: 1–60
- AXSM-E: 1–32

partId The ranges for partition identifier are as follows:

- AXSM: 1–5
- AXSM-E: 1–20

Related Commands

dspilmi, **dspilmis**, **upilmi**

Attributes

Log: log State: active, standby Privilege: SERVICE_GP

dn1mi

Down Local Management Interface

De-activates the Local Management Interface (LMI) on the specified logical port (*ifNum*).

Cards on Which This Command Runs

AXSM

Syntax

```
dn1mi <ifNum>
```

Syntax Description

ifNum The interface number of the logical port on which to activate the LMI. The range is 1–60.

Related Commands

uplmi

Attributes

Log: log

State: active

Privilege: ANYUSER

Example

```
dn1mi 2
```

dspilmi

Display ILMI

Display the configuration for the interim local management interface (ILMI) on a specific port. The information in the **dspilmi** output was configured through the **cnfilmi** command.

Cards on Which This Command Runs

AXSM, AXSM-E

Syntax

```
dspilmi <ifNum> <partId>
```

Syntax Description

ifNum The ranges for logical interface (or AXSM port) number are as follows:

- AXSM: 1–60
- AXSM-E: 1–32

partId The range for partition identifier is as follows:

- AXSM: 1–5
- AXSM-E: 1–20

Related Commands

cnfilmi, **dspilmis**, **dspilmicnt**, **clrilmicnt**

Attributes

Log: nolog State: active, standby Privilege: ANYUSER

Examples

Display ILMI information for logical interface 1, resource partition 1.

```
pinnacle3.1.2.AXSM.a > dspilmi 1 1

  Sig. rsrc  Ilmi  Sig  Sig  Ilmi  S:Keepalive  T:conPoll  K:conPoll
  Port Part State  Vpi  Vci Trap  Interval    Interval  InactiveFactor
  ----  ---  -
  1    1    Off   0   16 On           1           5           4

pinnacle3.2.AXSM.a >
```

dspilmiaddr

Display ILMI Address—displays ILMI registered port addresses.

The **dspilmiaddr** command lets you display the ATM addresses registered by the peer via the ILMI address registration mechanism.

Cards on Which This Command Runs

PXM45

Syntax

```
dspilmiaddr <portid>
```

Syntax Description

portid Identifies a PNNI physical port. The format is *slot:subslot.port:subport*. For a description of each field, see the section, “[PNNI Format](#),” at the beginning of the chapter.

Related Commands

cnfilmienable, cnfilmiproto, dsppnilmi, pntraceilmi

Attributes

Log: nolog State: active, standby Privilege: ANYUSER

Examples

Display the ILMI address on port 3:2.2:4.

```
8850_NY.7.PXM.a > dspilmiaddr 3:2.2:4
```

```
INFO: No ilmi address registered
```


dspilmicnt

Display ILMI Counters

Displays the ILMI counters for a particular resource partition on a particular logical port.

Cards on Which This Command Runs

AXSM, AXSM-E

Syntax

```
dspilmicnt <ifNum> <partId>
```

Syntax Description

ifNum The ranges for logical interface (or AXSM port) number are as follows:

- AXSM: 1–60
- AXSM-E: 1–32

partId The range for partition identifier is as follows:

- AXSM: 1–5
- AXSM-E: 1–20

Related Commands

cnfilmi, **dspilmi**, **dspilmis**, **clrilmicnt**, **dnilmi**, **upilmi**

Attributes

Log: nolog State: active, standby Privilege: ANYUSER

Examples

Display the ILMI counters for logical port 1/partition ID 1 on the current AXSM card.

```
Unknown.1.AXSM.a > dspilmicnt 1 1
  If Number                : 1
  Partition Id              : 1
  SNMP Pdu Received        : 65
  GetRequest Received      : 34
  GetNext Request Received : 0
  SetRequest Received       : 0
  Cold Start Trap Received  : 0
  GetResponse Received     : 31
  GetResponse Transmitted  : 34
  GetRequest Transmitted   : 34
  Cold Start Trap Transmitted : 0
  VPC Trap Transmitted     : 0
  VCC Trap Transmitted     : 0
  Unknown Type Received    : 0
```

```
ASN1 Pdu Parse Error      : 0
No Such Name Error       : 0
Pdu Too Big Error        : 0
```

dspilmis

Display ILMI Configurations

The **dspilmis** command lets you display the configuration of all interim local management interfaces (ILMIs) on the service module.

Cards on Which This Command Runs

AXSM, AXSM-E

Syntax

dspilmis

Related Commands

cnfilmi, dspilmi, dspilmicnt

Attributes

Log: nolog State: active, standby Privilege: ANYUSER

Examples

Display all ILMIs on the current service module.

```
pop20two.1.AXSM.a > dspilmis
```

Sig Port	rsrc Part	Ilmi State	Sig Vpi	Sig Vci	Ilmi Trap	S:Keepalive Interval	T:conPoll Interval	K:conPoll InactiveFactor
1	2	On	0	16	On	1	5	4
2	2	Off	0	16	On	1	5	4
3	2	Off	0	16	On	1	5	4

```
pop20two.1.AXSM.a >
```

dsplmi

Display Local Management Interface—display details about LMI on a logical interface.

The **dsplmi** command lets you display details about an extended LMI on an AXSM logical interface. See also description of the **addlmi** command. Each LMI can support one of the following:

- A feeder line to a Release 1 MGX 8850 switch
- Interoperability with a Service Expansion Shelf (SES)

Cards on Which This Command Runs

AXSM

Syntax

dsplmi <*ifNum*>

Syntax Description

ifNum The logical interface number has a range of 1–60.

Related Command

dellmi, uplmi, dnlmi, uplmi, clrlmistat, addlmi, dsplmis, dsplmistat

Attributes

Log: log State: active Privilege: ANYUSER

Example

Display the LMI on AXSM port 2.

```
M8850_NY.1.AXSM.a > dsplmi 2
LMI Interface Number      : 2
LMI Remote Name          : M8850_NY
LMI IP Address            : 10.10.10.56
LMI Remote Shelf         : 1
LMI Remote Slot          : 1
LMI Remote Port          : 1
LMI Type                  : AXSM
LMI Model Number         : 8850
LMI Configuration        : Up
LMI Link Status          : Up
LMI Alarms                : Clear
```

dsplmis

Display Local Management Interfaces—display all LMIs on an AXSM.

The **dsplmis** command lets you display general information about all extended LMIs (XLMIs) on an AXSM card. See also description of the **addlmi** command. Each LMI can support one of the following:

- A feeder line to a Release 1 MGX 8850 switch
- Interoperability with a Service Expansion Shelf (SES)

Cards on Which This Command Runs

AXSM

Syntax

dsplmis

Syntax Description

No parameters

Related Command

dellmi, **uplmi**, **dnlmi**, **uplmi**, **clrlmistat**, **addlmi**, **dsplmi**, **dsplmistat**

Attributes

Log: log State: active Privilege: ANYUSER

Example

Display all LMIs on the current AXSM. The display shows that only one LMI exists.

```
M8850_NY.1.AXSM.a > dsplmis
IF      Remote  Remote      Rmt    Rmt    LMI    LMI    LMI
No.     Name     IP           Slot   Port   Admin  Oper   Alarms
----  -
  2 M8850_NY  10.10.10.56  1      1      Up     Up     Clear
```

dsplmistat

Display Local Management Interface Statistics—display statistics for an LMI on an AXSM port.

The **dsplmistat** command lets you display general statistics about an LMI (XLMIs) on an AXSM interface. See also description of the **addlmi** command.

Cards on Which This Command Runs

AXSM

Syntax

dsplmistat <*ifNum*>

Syntax Description

ifNum The logical interface number has a range of 1–60.

Related Command

dellmi, uplmi, dnlmi, uplmi, clrlmistat, addlmi, dsplmi, dsplmis

Attributes

Log: log State: active, standby Privilege: ANYUSER

Example

Display LMI statistics on AXSM port 2.

```
M8850_NY.1.AXSM.a > dsplmistat 2

STATUS REPORT ENQUIRY transmitted : 1
STATUS REPORT ENQUIRY received   : 1
STATUS REPORT transmitted        : 1
STATUS REPORT received           : 1
UPDATE STATUS transmitted        : 0
UPDATE STATUS received           : 0
UPDATE STATUS ACK transmitted    : 0
UPDATE STATUS ACK received       : 0
Invalid PDU received             : 0
Invalid PDU length received      : 0
Invalid PDU IEs received         : 0
Invalid Transaction Num received  : 0
Unknown PDU type received        : 0

NODE STATUS enquiry transmitted  : 2748
NODE STATUS enquiry received     : 2748
NODE STATUS ack transmitted      : 2748
NODE STATUS ack received         : 2748
```

```
NODE STATUS degrade transmitted : 0
NODE STATUS degrade received   : 0
NODE STATUS delete transmitted  : 0
NODE STATUS delete received     : 0
NODE STATUS unknown received    : 0
```

```
M8850_NY.1.AXSM.a >
```

dsppn1mi

Display PNNI ILMI

Displays the ILMI information for a PNNI logical port. The ILMI state can be one of the following.

Disable	Protocol is not enabled on this port.
NotApplicable	This port is not accessible due to hardware-related conditions.
LostConnectivity	Protocol on listening port is not enabled.
EnableNotUp	This port is not accessible due to hardware.
UpAndNormal	This port is physically up, and the protocol is enabled.



Note

The VC for ILMI is a control channel, but its bandwidth parameters are fixed, as follows: PCR=1000 cps; SCR=50cps; and MBS=1024 cells.

The bandwidth used by ILMI (when enabled) and other control-type VCs (see **cnfpnctive**) adds to the bandwidth load on the port. Use **dspload** to determine the load on port resources.

Cards on Which This Command Runs

PXM45

Syntax

```
dsppn1mi <portid>
```

Syntax Description

portid Identifies a PNNI physical port. The format is *slot:subslot.port:subport*. For a description of each field, see the section, “[PNNI Format](#),” at the beginning of the chapter.

Related Commands

dspilmi

Attributes

Log: nolog State: active, standby Privilege: ANYUSER

Examples

Display the ILMI for port 6:1.1:1. For comparison, run the **dsppilmi** command on the card in slot 6, Note that it contains information that corresponds to the **dsppnilmi** output.

```
M8850_NY.7.PXM.a > dsppnilmi 6:1.1:1
```

```
Port: 6:1.1:1          Port Type: ENNI          Side: network
Autoconfig: disable   UCSM: disable
Secure Link Protocol: enable
Change of Attachment Point Procedures: enable
Modification of Local Attributes Standard Procedure: enable
Addressreg: disable
VPI: 0                VCI: 0
Max Prefix: 0         Total Prefix: 0
Max Address: 0        Total Address: 0
Resync State: 0       Node Prefix: no
Peer Port Id: 0       System_Id : 0.0.0.0.0.0
Peer Addressreg: disable
Peer Ip Address : 0.0.0.0
Peer Interface Name :
ILMI Link State : Disable
ILMI Version : ilmi40
```

```
INFO: No Prefix registered
```

```
INFO: No ilmi address registered
```

```
M8850_NY.7.PXM.a > cc 6
```

```
(session redirected)
```

```
M8850_NY.6.AXSM.a > dsppilmi 1 1
```

Sig	rsrc	Ilmi	Sig	Sig	Ilmi	S:Keepalive	T:conPoll	K:conPoll
Port	Part	State	Vpi	Vci	Trap	Interval	Interval	InactiveFactor
1	1	Off	0	16	On	1	5	4

```
M8850_NY.6.AXSM.a >
```

dspprfx

Display Prefix

Display the ILMI address prefixes for a port.

Cards on Which This Command Runs

PXM45

Syntax

dspprfx <portid>

Syntax Description

portid Identifies a PNNI physical port. The format is *slot:subslot.port:subport*. For a description of each field, see the section, “[PNNI Format](#),” at the beginning of the chapter.

Related Commands

addprfx, **delprfx**

Attributes

Log: nolog State: active, standby Privilege: ANYUSER

Examples

Display all ILMI address prefixes for port 4:1.1:11.

```
SanJose.7.PXM.a > dspprfx 4:1.1:11
ILMI Configured Port Prefix(es):
47.0091.8100.0000.0000.0ca7.9e01
   88.8888.8888.0000.0000.0000.0000

SanJose.7.PXM.a >
```

upilmi

Up ILMI—activate ILMI on a resource partition.

Use **upilmi** to activate interim local management interface (ILMI) for a particular resource partition on a logical port. Before executing **upilmi** for the partition, you must:

1. Activate a line through the **upln** command and configure the line through **cnfln**
2. Create a logical port through the **addport** command
3. Add resource partitions through **addrseprtn**

After activating ILMI, you can configure ILMI through the **cnfilmi** command.

Cards on Which This Command Runs

AXSM, AXSM-E

Syntax

```
upilmi <ifNum> <partId>
```

Syntax Description

ifNum The ranges for logical interface (or AXSM port) number are as follows:

- AXSM: 1–60
- AXSM-E: 1–32

partId The ranges for partition identifier are as follows:

- AXSM: 1–5
- AXSM-E: 1–20

Related Commands

cnfilmi, **dspilmi**

Attributes

Log: log State: active, standby Privilege: GROUP1

uplmi

Up Local Management Interface

Activates the Local Management Interface (LMI) on the specified logical port (*ifNum*).

Cards on Which This Command Runs

AXSM

Syntax

```
uplmi <ifNum>
```

Syntax Description

ifNum The interface number of the logical port on which to activate the LMI. The range is 1–60.

Related Commands

dnlmi

Attributes

Log: log

State: active

Privilege: GROUP1

Example

```
uplmi 2
```

Example

Determine whether ILMI is up on logical port 1, resource partition 1. If ILMI is down (or off), activate it by using the **upilmi** command. Note the second time you run the **dspilmi** command, the ILMI state now appears as “on.”

```
M8850_NY.5.AXSME.a > dspilmi 1 1
```

Sig. Port	rsrc Part	Ilmi State	Sig Vpi	Sig Vci	Ilmi Trap	S:Keepalive Interval	T:conPoll Interval	K:conPoll InactiveFactor
1	1	Off	0	16	Off	1	5	4

```
M8850_NY.5.AXSME.a > upilmi 1 1
```

```
Warning: connections (if any) on port could get rerouted.  
Do you want to proceed (Yes/No) ? y
```

```
M8850_NY.5.AXSM.a > dspilmi 1 1
```

Sig. Port	rsrc Part	Ilmi State	Sig Vpi	Sig Vci	Ilmi Trap	S:Keepalive Interval	T:conPoll Interval	K:conPoll InactiveFactor
1	1	On	0	16	Off	1	5	4

