555-4001-599

Meridian SL-100

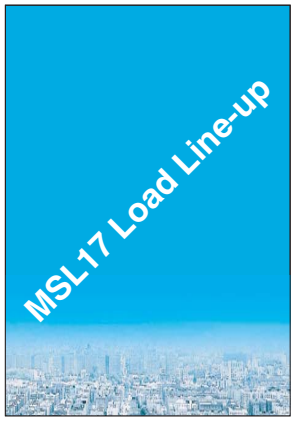
Peripheral Module Release Document

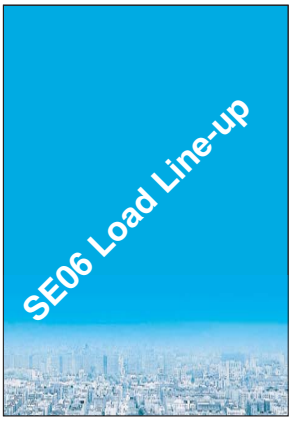
RELDOC

MSL17/SE06/SE07 Standard 12.04 October 2004

Note: Refer to “Peripheral Module Documentation” in Helmsman Express for the latest version of this document.

For the required load, go to the appropriate section:





NORTEL NETWORKS™

Meridian SL-100

Peripheral Module Release Document

RELDOC

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Standard 12.04, SE07. Document has merged load line-up information from MSL17 and SE06, so that one document will now apply to all upgrade sites moving forward (see ***Important notice*** below).

October 2004

Standard 12.03, SE07. Updated to include CD Delivery process.

September 2004

This document has been updated to Standard release, version 12.02, to reflect the completion of the review of Load information changes.

Important notice: Beginning in SE07 this document has been restructured to act as a companion to the *DMS Peripheral Module Software Release Document* (SN07 – 297-2663-599). All Peripheral Module Update procedures that are common to the two platforms have been removed from this guide. Therefore, if a procedure is not contained in this guide, you must refer to the appropriate procedure in the *DMS Peripheral Module Software Release Document,* 297-2663-599 (for example, SN07 for SE07, and SN06 for SE06.).

For SE06 and MSL17 information and updates see the current SE06 and MSL17 *Meridian SL-100 Peripheral Module Release Document,* 555-4001-599. Always check the most recent version for the correct Load line-ups.

August 2004

Draft 12.01, SE07. Updated to include corrections to load information for SE07.

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About this document

Purpose and audience

This document is designed as a supplement the *DMS Peripheral Module Software Release Document* (SN07 – 297-2663-599). *DMS Peripheral Release Documents,* (PMReldocs) can be viewed at WWW.Nortlel.com (go to Technical Documentation > Helmsman Express > Peripheral Module Documentation).

Use this document to update the software in Meridian SL-100 Peripheral Modules (PM) and hardware types that are unique to the Meridian SL-100 (that is, the DLM and IPE). For information about all other Peripheral Modules refer to the *DMS Peripheral Module Software Release Document.* These documents provides load names, update procedures and other release-specific information. Use these documents when updating an office to one of the Product Computing-Module Loads (PCL): MSL17, SE06 or SE07.

This document now contain the following sections:

- MSL17 Load Line-up – use this chapter for offices upgrading to MSL17.
- SE06 Load Line-up – use this chapter for offices upgrading to SE06.
- SE07 Load Line-up – use this chapter for offices upgrading to SE07.
- Update procedures – use this chapter for all office upgrades.

How to check the version and issue of this document

The version and issue of the document are indicated by numbers (for example, 01.01). For example, the first release of a document is 01.01. In the next software release cycle, the first release of the same document is 02.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release.The second two digits indicate the issue. The issue number increases each time the document is revised, but re-released in the

same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

FOR MORE INFORMATION

To determine whether you have the latest version of this document, check the release information in the *Meridian SL-100 Master Index of Publications*.

How to use this document

After receiving this document the PM load media, perform the following tasks.

- Review “Overview of release” in this document. This chapter provides release notes, load names and other information critical to updating PMs and other hardware types.
- Review “Overview of update process” in the *DMS Peripheral Module Software Release Document*. This chapter summarizes the update process and describes when to use each procedure in this document or the *DMS Peripheral Module Software Release Document*.
- Review “Overview of PMUPGRADE” in the *DMS Peripheral Module Software Release Document*. This chapter summarizes PMUPGRADE, the new utility that automates many of the administrative tasks of PM updates.
- Perform the procedure “Preparing for a PM update” or “Preparing for a PM update using PMUPGRADE” in the *DMS Peripheral Module Software Release Document*.
- Schedule the update of each PM and hardware type in the office.
- Update the PMs and hardware types, following the schedule and using the appropriate procedures in this document or the *DMS Peripheral Module Software Release Document*. Perform the procedure “Starting a PM update shift” in the *DMS Peripheral Module Software Release Document* when you begin a PM update shift, and perform the procedure “Finishing a PM update shift” in the *DMS Peripheral Module Software Release Document* when you complete a PM update shift.

Compliance with local policies

This document is written for all Meridian SL-100 customers updating to an SE07PCL. However, many customers have company-specific and office-specific policies regarding PM updates. Review these policies, and resolve any differences between the policies and this document, before beginning the PM update process.

Backwards compatibility

This document is backwards-compatible to MSL14 with the following Communications Services Platform (CSP loads).

- CSP 17 (XPM17 and CSP17-based PCLs)

References in document

The following documents provide additional information:

- *DMS Peripheral Module Software Release Document*
- *One Night Process Software Delivery Procedures*
- *DMS-100 Family XA-CORE Maintenance Manual*
- *Post-Release Software Manager (PRSM) Operating Procedures*
- *Enhanced Digital Recorded Announcement Machine Peripheral Module Software Release Document*
- *Setup and Use of Carrier Performance Monitoring Archive (PMA) for SPMs*
- *SPM Basics*
- *Upgrading the SPM*
- *SPM Fault Management*
- *SPM Configuration Management*
- *SPM Performance Management*
- *SPM Security and Administration*

How procedures are organized

Each procedure in this document, and the *DMS Peripheral Module Software Release Document,* contain a summary flowchart and a list of steps. The flowchart summarizes the procedure, and the list of steps provides detailed instructions for the procedure. Review the summary flowchart, and then follow the list of steps to perform the procedure.

MSL17 Load Line-up

Overview of MSL17 release

Purpose

This chapter provides release notes, load names, and other information critical to updating peripheral modules (PM) and other hardware types. Use this information when performing the procedures “Preparing for a manual PM update” or “Preparing for a PM update using PMUPGRADE” in this document and when scheduling the update of each PM and hardware type.

Note: Please refer to “Peripheral Module Documentation” in Helmsman Express (www.nortel.com) for the latest version of this document.

Changes in update process

This section reflects changes in the PM update process.

XA-Core component firmware updates

Attention

ATTENTION

For optimal robustness, offices must update the computing module interface card (CMIC), the ethernet input output processor (EIOP) and the ATM multi-mode data interface (AMDI) firmware loads after the ONP for this release with the new release firmware load.

The XA-Core component firmware loads for the input output processor (IOP) and processor element (PE) do not require an update for this

release. Refer to the following for update procedures and firmware load names:

- section “Upgrade firmware on an XA-Core component at the PE, IOP or CMIC MAP level” in the XA-Core Maintenance Manual, 297-8991-510, to update the XA-Core components.
- table “PM-to-load cross-reference for the applicable firmware load names for this release and previous releases.
- table “XA-Core component firmware cross-reference” for the baseline and new release firmware loads.

Message switch load on PM load tape is patch current

ATTENTION

The message switch (MS) can require additional memory to support this release. Contact the next level of support or the Nortel Networks software delivery prime for additional information.

The PM load tape for this release includes the patched current MS load file, which is not a back-up load. Use procedure “Update the MS” in this document and update the MS with all other PMs. Refer to figure PM configurations P-side to C-side in chapter “Overview of update process” for PM update sequence requirements.

XA-Core tape cartridge contains PM load and PRSU files

With the BASE13 software level, extended architecture core (XA-Core) digital audio tape (DAT) cartridges are delivered to offices with XA-Core. When the XA-Core tape cartridge label text indicates *Patches: Yes*, the tape contains PM load and post-release software update (PRSU) files, including pre-patched XPM load (PPXL) files. When the XA-Core tape cartridge indicates *Patches: No*, the office receives any applicable PRSUs through prior software delivery methods.

Note: PRSU and patch are used interchangeably in this document.

ENET update requirements with Spectrum Peripheral Module (SPM)

The spectrum peripheral module (SPM) is a new multi-application high speed Meridian SL-100 Series III PM. The SPM provides customized network access capabilities

When an SPM is present on the Meridian SL-100 switch, perform a manual update for the ENET (enhanced network) in order to maintain

communication with the SPM. Do not use SWUPGRADE PM to perform an automated update for the ENET when an SPM is present on the Meridian SL-100 switch. Only the administration, preparation, and planning activities of the automated process are supported for the ENET when an SPM is present on the Meridian SL-100 switch.

PPXL audit before manual update of table PMLOADS

For offices at MSL10 or higher and when table PMLOADS is updated manually, an additional step must be performed for each pre-patched XPM loadfile (PPXL) in the office. Use the Post-Release Software Manager (PRSM) LFAUDIT command to audit each PPXL before table PMLOADS is updated. The LFAUDIT command identifies the post-release software updates (PRSU) in the PPXL to the PRSM database.

Use the procedure “Preparing for a manual PM update” in this document to perform the LFAUDIT command. If the “Preparing for a manual PM update” procedure and the LFAUDIT command are used, PPXLs are successfully added to table PMLOADS. If the “Preparing for a manual PM update” procedure and the LFAUDIT command are not used, the MAP terminal displays an error message similar to the following:

```
PRSM data missing
To correct, enter the PRSM command level. Then type:
LFAUDIT PPXL ELIO9AX ELIO9AX_980107 S00DPMLOADS
```

If PMUPGRADE is used to update table PMLOADS, take no additional action. PMUPGRADE performs the audit automatically.

SLM tape cartridge contains PM load and PRSU files

The satellite distribution center (SDC) uses backup volume format to manufacture the new SLM tape cartridge. The procedure “Prepare for a manual PM update” in this document describes the required multi-file restore (MFR) command syntax to copy PM load and PRSU files from the SLM tape cartridge to the SLM disk volume. The backup volume format does not impact the automated PM update process.

Note: *PRSU* and *patch* are used interchangeably in this document.

Integrated services node auto imaging

Attention

ATTENTION

Follow office policy on imaging when upgrading the nodes in the office for this release. Office policy may vary from the steps described in this document.

With Integrated Auto Imaging (IAI), the Meridian SL-100 switch automatically takes an image of an integrated service node (ISN) when one of the following actions occur.

- Table datafill is changed
- PRSUs are applied

Automated PM updates

Two command interpreter (CI) level utilities, PMUPGRADE and SWUPGRADE PM, are available to automate PM updates. Nortel Networks is introducing these utilities over several releases, the upgrade path of your office determines the level of available functionality.

PMUPGRADE automates the administration and planning phases of the PM update. SWUPGRADE PM automates the update phase of the PM update. Refer to the chapter “Overview of automated update process” in this document for more information on automated PM updates.

Peripheral module to baseline cross reference

Refer to Table 1 for information on the XPM processor firmware baseline.

Table 1
XPM processor (NTAX74, NTMX77 or NTSX05) firmware baseline (Sheet 1 of 3)

XPM	Description	XPM processor	Current firmware release
DTC	DTC with ISDN (DTCI). Provisioned with NTMX76, high-level data link control (HDCL) and IP Gateways provisioned in table IPINV.	NTSX05	SXFWAJ02
	DTC with CCS7 (DTC7).	NTMX77	UPFWNU01
	DTC with CCS7 (DTC7).	NTMX77	UPFWNU01
	DTC with ISDN (DTCI).	NTSX05	SXFWAJ02
	DTC with CCS7.	NTSX05	SXFWAJ02
	Digital trunk controller (DTC).	NTMX77	UPFWNU01
ESA	ESA with NTMX45AA processor.	NTMX45	UPFWNU01

Table 1
XPM processor (NTAX74, NTMX77 or NTSX05) firmware baseline (Sheet 2 of 3)

XPM	Description	XPM processor	Current firmware release
LGC	LGC with subtending RCC2. NTMX76 and HDLC provisioned. See Note 2 when upgrading to NTSX05.	NTMX77 NTSX05	UPFWQM01 SXFWAJ02
	LGCI with subtending RCC2. NTMX76 and HDLC provisioned. See Note 2 when upgrading to NTSX05.	NTSX05	SXFWAJ02
	LGC with subtending RCC2. No NTMX76 or HDLC provisioned.	NTMX77 NTSX05	UPFWNU01 SXFWAJ02
	LGC with subtending RCC2. No NTMX76 or HDLC provisioned.	NTSX05	SXFWAJ02
	LGC with ISDN line drawer (ILD).	NTSX06	SXFWAJ02
	Line group controller (LGC).	NTMX77 NTSX05	UPFWNU01 SXFWAJ02
LTC	LTC with subtending RCC2. NTMX76 and HDLC provisioned. See Note 2 when upgrading to NTSX05.	NTMX77	UPFWQM01
	LTCI with subtending RCC2. NTMX76 and HDLC provisioned. See Note 2 when upgrading to NTSX05.	NTSX05	SXFWAJ02
	LTC with ISDN (LTCI). NTMX76, HDLC and IP Gateways provisioned in table IPINV.	NTSX05	SXFWAJ02
	LTC with subtending RCC2. No NTMX76 or HDLC provisioned.	NTMX77 NTSX05	UPFWNU01 SXFWAJ02
	LTCI with subtending RCC2. No NTMX76 or HDLC provisioned.	NTSX05	SXFWAJ02
	LTC with ISDN (LTCI).	NTSX05	SXFWAJ02
	Line trunk controller (LTC).	NTMX77 NTSX05	UPFWNU01 SXFWAJ02
PDTC/ DTCO	Peripheral digital trunk controller (PDTC).	NTMX77	UPFWNU01
PDTC/ DTCO	Digital trunk controller overseas (DTCO).	NTSX05	SXFWAJ02
RCC	Remote cluster controller (RCC).	NTMX77	UPFWNU01

Table 1
XPM processor (NTAX74, NTMX77 or NTSX05) firmware baseline (Sheet 3 of 3)

XPM	Description	XPM processor	Current firmware release
RCC2	Remote cluster controller 2 (RCC2). With host peripheral provisioned with NTSX05 processor. See Note 2 if host peripheral is upgraded to NTSX05 processor with MX76 cards.	NTAX74	UPFWNU01
	Remote cluster controller 2 (RCC2). See Note 2 if host peripheral is upgraded to NTSX05 processor with 6X69 cards.	NTAX74	UPFWNU01
SMA	Subscriber carrier module-100 access (SMA).	NTAX74	UPFWNU01
SMA2	Subscriber carrier module-100 access 2 (SMA2).	NTAX74	UPFWNU01
SMS	Subscriber carrier module-100S (SMS).	NTMX77	UPFWNU01
SMSR	Subscriber carrier module-100S remote. (SMSR).	NTMX77	UPFWNU01
SMU	Subscriber carrier module-100 urban (SMU).	NTMX77	UPFWNU01

Note 1: The host and remote XPM must be using a version of firmware which supports the Q.921 protocol. Firmware that supports the Q.921 protocol are UPFWNUyxx or UPFWQyxx for NTMX77 and NTAX74, and SXFWyyxx for NTSX05.

Note 2: The RFWLOAD tool automates the firmware upgrade process. Refer to the section titled “Remote firmware loader tool” in this chapter for information regarding the use of the RFWLOAD tool.

Peripheral module loads

This release includes the following types of files:

- PM loads
- PRSUs
- PPXLs

PM loads are the traditional PM load files. The load name for a base load consists of two fields: load_type and edition_code.

The load_type field identifies the type of load. This field consists of the first three to four characters of the load name, and it can include any combination of letters or digits. Table 2 lists possible naming conventions for field load_type.

Note: Refer to Table 6 on page 33, the “Load history” table, for a complete list of PM load types supported in this release.

Table 2
Naming conventions for PMload_type

Syntax	Example
zzz	LCM01D, MTMKA02, D1T005, ETCO4BF1, ECL06GBH
zzzz	LCME06BH, RMTMKA01, MPCX33AB
Note: The character z represents a letter or digit	

The edition_code field identifies the version of the type of load. The edition_code field consists of the remaining three to five characters of the load name. Table 3 lists possible naming conventions for the edition_code field.

Note: Refer to Table 6 on page 33, the “Load history” table, for a complete list of each version of each type of load.

Table 3
Naming conventions for PM edition _code

Syntax	Example
xxxxxnn	MTMKA02
nnnnxxnn	LCME06BH
nxnzzz	D1T005
xxxnnx	LCM01D
nnnxxnnz	ETC04BF1
nnnxxnnn	ECL06GBH
Note: The character x represents a letter, the character n represents a digit, and the character z represents a letter or a digit.	

Post release software update

A PRSU is software created as one of the following:

- a procedure replacement to correct software deficiencies delivered to all affected sites
- an enhancement to the original design delivered to all affected sites and activated on a per office basis
- a fix for a data corruption deliverable, delivered only to the affected office
- a delivery mechanism for early feature deployment that contains new features and is activated on a per site basis by a controlled password

Note: For naming conventions and additional patching information, refer to *Post-Release Software Manager (PRSM) Reference Guide,* 297-8991-540.

Pre-patched XPM loads

PPXLs are loads that have corrective PRSUs built into the files. PPXLs do not reduce the number of PRSUs against a given load. PPXLs reduce the number of PRSUs manually applied to the load along with reducing loading time.

PPXLs are identified by a date extension to the base load name. For example, ODI20CE_040825 is the pre-patched load for base load ODI20CE.

CAUTION
Possible service interruption
Do not use the LOADPM CC command with the file name parameter when updating a PM with a PPXL. If the LOADPM CC command is used when performing this type of update, PRSM applies all patches built into the PPXL. Obsolete patches are not removed and patches not built into the PPXL are not applied.

CAUTION
Possible service interruption
PPXLs automate the process of manually patching the load. Use the ASSIGN command to set the load to each PM unit. Failure to use the ASSIGN command results in patches not built into the PPXL not being applied.

Use the PATCHLIST command at the CI level to display the list of patches built into the PPXL. Example as follows:

>XPMLFP

>PATCHLIST FILE <PPXL file_name>

Note: The volume must be listed before using this command. Only the base load name needs to be datafilled in the associated PM inventory table. In order to determine the full PPXL file-name to load, the PM loader software uses the base load name in the inventory table to index field ACTFILE in table PMLOADS. Following is a sample tuple from table PMLOADS.

LOADNAME
ACTFILE ACTVOL
BKPFILE BKPVOL UPDACT

ODT20CE
ODT20CE_040825 S00DPMLOADS
ODT20CE_040825 S01DPMLOADS N

Download or copy the PRSUs for the PPXL to the Meridian SL-100 switch. Refer to the “PRSU file storage” section in this chapter for recommendations on the storage of PRSU files. A PPXL reduces the number of PRSUs manually applied to the load, but the PRSUs for the PPXL must reside on the Meridian SL-100 switch prior to datafilling in table PMLOADS. If the PRSUs for the PPXL are not on the Meridian SL-100 switch, problems will develop later in the PM loading process. For security, this volume should be duplicated on another disk.

Note: If the SLM tape cartridge label text indicates *Patches: Yes,* the tape includes the required PRSUs for XPM and ISN load files.

The XPM may have additional PRSUs applied or removed in the same manner used with XPM loads in the past. Any PRSUs built into the PPXL may be removed from the load as long as the PRSU file is present on the disk.

Load-to-release cross-reference

Table 4 lists the PM and non-CM loads supported by this release and updated during the PM update process. Use this table to confirm the office has received all the loads necessary for the PM update.

Note: Date extensions are not included for pre-patched loads.

Table 4
Load-to-release cross-reference (Sheet 1 of 4)

Load Type	Load Description	Current Load
ADCM	Digital Carrier Module (DCM)	ADCMQ01
ARS	8-Meg LIU for 36-link SPP (LIU7)	ARS17BL2
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02
BLM	Basic Line Module (LM)	BLMTB01
BTM	Basic TM8 (TM8)	BTMKA02
BRLM	Basic Remote Line Module (RLM)	BRLMVA03
CMR	Class Module Resource Card (CMR)	CMR17B
DLM	Digital Line Module (DLM)	DLMXPM04
DTC7	Digital Trunk Controller with SS7: (MX77)	ED714BC
DTC7	Digital Trunk Controller PLUS w/SS7: (SX05) (DTC)	QD717AY1
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01
DTUD	Digital Test Unit with NT4X45 (EDTU)	DTUDAB01
DTUH	DTU for off-hook balance tests (DTU)	DTUHAA02
ECL	Digital Trunk/Line and Trunk/Line Group Controller PLUS with NTMX77 (LGC/LTC/DTC)	ECL14BC
ED16	Enhanced Digital Recording, Access Module (DTM-16 min.)	ED16AA06
EDCH	Standard Enhanced D-Channel Handler (CDH)	EDH17AY
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE10
EIPE	Enhanced Intelligent Peripheral Equipment Load	EIPE17AH
ENC	Enhanced Network (ENET)	ENC17BL
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02

Table 4
Load-to-release cross-reference (Sheet 2 of 4)

Load Type	Load Description	Current Load
ESA/MSA	ESA with NTMX45	MSA14BC
ESS	SMS with MX77	ESS13BC
ETC	Ethernet Interface Unit (EIU)	ETC17BL
F8C	8-Meg Frame Relay Interface Unit (FRIU)	F8C17BL
ILDR	ISDN Line Drawer (ILDR)	ILDRAF04
IOMR	Standard Input/Output Module (IOM)	IOMRBC01
IOM7	Load for NTFX32CA with Sony SDT-7200 DAT drive	IOM7BC01
IOM9	Load for NTFX32CA with Sony SDT-9000 DAT drive	IOM9BC01
IOME	Load for 4-GB DDU enhancements	IOMEBC01
IPE	IPE Standard	IPE09AB
LCM	Basic ELCM/LCM (64 Kbyte)	LCM01D
	RLCM (64 Kbyte)	LCM01D
	RLCM (256 Kbyte)	XLCM17AT
LCME	Enhanced Line Concentrating Module w/ISDN (LCME)	LCME17AT
LIM	Link Interface Module (LIM)	LPC17BL
LRS	2 card - 8-Meg (LIU7)	LRS17BL2
LTS	32-Meg (LIU7)	LTS17BL
MPC4	1984 CCITT Compliant X.25 MPC (MPC)	MPC403AC
MPCA	Asynchronous Multi-Protocol Controller (MPC)	MPCA03AC
MPCX	BX.25 (MPC)	MPCX33AB
MPCO	1980 CCIT Compliant X.25 (MPC)	MPCO03AC
MPF	9X17 Firmware Multi-port Cards	MPF17BL
MS	Message Switch	MUC17BL
MTM	Maintenance Trunk Module (MTM)	MTMKA02
	Remote Maintenance Trunk Module (MTM)	MTMKA02

Table 4
Load-to-release cross-reference (Sheet 3 of 4)

Load Type	Load Description	Current Load
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04
NRS	Network Interface Unit (NIU)	NRS17BL
OAU	OAU	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	ODI17AY
ODT	PDTC/DTCO with CCS7 (MX77)	ODT17AY
PK	XA-Core-CMIC	PK12CE12
QDI	PDTC/DTCO with ISDN (SX05)	QDI17AY1
QDT	PDTC with SS7 (SX05)	QDT17AY1
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI17AY1
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02
RMM	Remote Maintenance Module (RMM)	RMM10A
RMTM	Remote Maintenance Trunk Module (MTM)	MTMKA02
SMS	SMS with NTMX77	ESS13BC
STM	STM	MTMKA02
SXFW	SX05 Firmware	SXFWAJ02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TM/MTM)	TKMTKA02
UPFWN	NTMX77 & NTAX74 Universal Firmware	UPFWNU01
UPFWQ	NTMX77 and NTAX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQM01
XAIO	XA-Core-IOP	XAIO01AK
XAPE	Processor element (PE) – NTLX02CA	XAPE01AG
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	XLCM17AT
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC17BL

Table 4
Load-to-release cross-reference (Sheet 4 of 4)

Load Type	Load Description	Current Load
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM217AY
XRI	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB

PM to load cross reference

Table 5 on page 28 lists each PM type, hardware and associated load supported by this release. The PMs, hardware and loads for three prior releases are also displayed in the next table. Use this table to identify the PMs to be updated in the office.

The first three columns identify the type of PM. The type column lists the kind of PM or other hardware type as posted at the MAP display. The description column describes the service provided by the PM. The hardware column lists product engineering codes (PEC) for some circuit cards in some PMs. The hardware column may be helpful in identifying the type of PM in the Meridian SL-100 switch or the type of load for that PM.

Note 1: Gating hardware is any hardware required for a particular release. Gating hardware PECs are identified in the table.

Note 2: For assistance with acronyms used in this table, refer to the chapter “List of terms” in this document.

The middle columns list loads for each PM for recent releases. Only PMs with loads that are changed since the office’s current release require updating.

Note: Date extensions for pre-patched loads are not included.

The column Size lists the size of the file in SLM blocks, which may be helpful in allocating volumes to hold the copied loads. Re-issued loads and pre-patched loads may cause variations between the actual size of the load and the size listed in the table.

Table 5
PM to load cross reference (Sheet 1 of 6)

PM type	Description	Hardware	MSL14	MSL15	MSL17
ATM	Autovon Trunk Maintenance Module (ATM)		ATMKA02	ATMKA02	ATMKA02
CMR	Class Module Resource Card (CMR)	NT6X78AA and up	CMR10A	CMR10A	CMR17B
DCM	Digital Carrier Module (DCM)		ADCMQ01	ADCMQ01	ADCMQ01
	Remote Digital Carrier Module (RDCM)		RDCMPA02	RDCMPA02	RDCMPA02
DLM	Digital Line Module (DLM)		DLMXPM04	DLMXPM04	DLMXPM04
DTC	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	NTMX77AA	ECL14BC	ECL14BC	ECL14BC
DTC7	Digital Trunk Controller with SS7: (MX77)	NTMX77AA	ED714BC	ED714BC	ED714BC
DTC7	Digital Trunk Controller PLUS w/SS7: (SX05) (DTC)	NTSX05AA		QD715AY	QD717AY1
DTCI	DTCI with ILD (with ISDN Peripheral	NTSX05AA	QLI14BC	QLI15AY	QLI17AY1
DTU	Digital Test Unit for BERT tests (DTU)	NT4X23AA	DTUBAD01	DTUBAD01	DTUBAD01
	DTU for off-hook balance tests (DTU)	NT4X23AA	DTUHAA02	DTUHAA02	DTUHAA02

Table 5
PM to load cross reference (Sheet 2 of 6)

PM type	Description	Hardware	MSL14	MSL15	MSL17
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	NT1X80AA	EDRMAE08	EDRMAE10	EDRMAE10
	Enhanced Digital Recording, Access Module (DTM-16 min.)	NT1X80BA	ED16AA03	ED16AA06	ED16AA06
EDTU	Digital Test Unit with NT4X45 (DTUD)	NT4X45AA	DTUDAA01	DTUDAB01	DTUDAB01
EIU	Ethernet Interface Unit (ETC)		ETC14BG	ETC15BC	ETC17BL
ENET	Enhanced Network (ENC)	NT9X13KA	ENC14BG	ENC15BG	ENC17BL
ESA/MSA	ESA	NTMX45AA	MSA14BC	MSA14BC	MSA14BC
FRIU	8-Meg Frame Relay Interface Unit (F8C)	NTEX31BA and up	F8C14BJ	F8C15BH	F8C17BL
ILD	ISDN Line Drawer (ILDR)	NT6X54DA	ILDRAF04	ILDRAF04	ILDRAF04
IOM	Standard Input/Output Module (IOMR)		IOMRAZ01	IOMRAZ01	IOMRBC01
		FX32CA – Sony SDT-7200 DAT			IOM7BC01
		FX32CA – Sony SDT-9000 DAT			IOM9BC01
		4-GB DDU			IOMEBC01
IPE	IPE Standard	NT7D07AC	IPE09AB	IPE09AB	IPE09AB
	Enhanced Intelligent Peripheral Equipment Load	NT7D07BA	EIPE17AB	EIPE17AB	EIPE17AH

Table 5
PM to load cross reference (Sheet 3 of 6)

PM type	Description	Hardware	MSL14	MSL15	MSL17
LCM	Basic ELCM/LCM (64 Kbyte)	NT6X51AA	LCM01D	LCM01D	LCM01D
	RLCM (64 Kbyte)	NT6X51AB/AC	LCM01D	LCM01D	LCM01D
	RLCM (256 Kbyte)	NT6X51AB/AC	XLCM14BA	XLCM15AB	XLCM17AT
	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	NT6X51AB/AC	XLCM14BA	XLCM15AB	XLCM17AT
LCME	Enhanced Line Concentrating Module w/ISDN		LCME14BA	LCME15AB	LCME17AT
LGC	LGC with ILD (with ISDN Peripheral)	NTSX05AA	QLI14BC	QLI15AY	QLI17AY1
	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/ DTC)	NTMX77AA	ECL14BC	ECL14BC	ECL14BC
LGCI	Standard Enhanced (ISDN Peripherals)	NTSX05AA	QLI14BC	QLI15AY	QLI17AY1
LIM	Link Interface Module (LIM)	NT9X13OD or NT9X13OB with NT9X14OB	LPC14BG	LPC15BC	LPC17BL
NIU	Network Interface Unit (NIU)		NRS14BG	NRS15BG	NRS17BL
LIU7	8-Meg LIU for 36-link SPP	NTEX26AA, NTEX22BA and up	ARS14BJ	ARS17BL2	ARS17BL2
	32-Meg Channel Access LIU		ATS14BJ	ATS15BH	ATS17BL
	2 card -8Meg		LRS14BJ	LRS17BL2	LRS17BL2
	32-Meg		LTS14BJ	LTS15BH	LTS17BL

Table 5
PM to load cross reference (Sheet 4 of 6)

PM type	Description	Hardware	MSL14	MSL15	MSL17
LM	Basic Line Module (LM)		BLMTB01	BLMTB01	BLMTB01
	Basic Remote Line Module (BRLM)		BRLMVA03	BRLMVA03	BRLMVA03
LTC	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/ DTC)	NTMX77AA	ECL14BC	ECL14BC	ECL14BC
	LTC with NTSX05	NTSX05AA	QLI14BC	QLI15AY	QLI17AY1
MPC4	1984 CCITT Compliant X.25 MPC (MPC4)	NT1X89BA and up	MPC403AC	MPC403AC	MPC403AC
MPCA	AsyncMulti-Protocol Controller (MPCA)	NT1X89BA and up	MPCA03AC	MPCA03AC	MPCA03AC
MPCO	1980 CCIT Compliant X.25 (MPCO)	NT1X89BA and up	MPCO03AC	MPCO03AC	MPCO03AC
MPCX	BX.25 (MPCX)	NT1X89BA and up	MPCX33AB	MPCX33AB	MPCX33AB
MS/FW	9X17 Firmware Multi-port Cards (MPF)	NT9X17BB or NT9X17CA or NT9X17DA	MPF14BG	MPF15BC	MPF17BL
MS	Message Switch		MUC14BG	MUC15BC	MUC17BL
MTM	Maintenance Trunk Module (MTM)	NT1X81AA	MTMKA02	MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)		RMTMKA01	RMTMKA01	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	NT2X11BA and up	MTULJ04	MTULJ04	MTULJ04
OAU	OAU		MTMKA02	MTMKA02	MTMKA02

Table 5
PM to load cross reference (Sheet 5 of 6)

PM type	Description	Hardware	MSL14	MSL15	MSL17
PDTC/ DTCO	With CCS7 (MX77) (ODT)	NTMX77AA	ODT14BC	ODT15AY	ODT17AY
	With CCS7 (SX05)(ODT)	NTSX05 AA	QDT14BC	QDT15AY	QDT17AY
	PDTC/DTCO with ISDN (MX77)	NTMX77AA	ODI14BC	ODI15AY	ODI17AY
	PDTC/DTCO with ISDN (SX05)	NTSX05AA	QCI14BC	QDI15AY	QDI17AY1
RCC	XPM Plus RSC Load (XPM14) (RCC)	NTMX77AA	ESR14BC	ESR14BC	ESR14BC
RCC2	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	NTAX74AA	XRI14BC	XRI15AY	XRI17AY
RMM	Remote Maintenance Module (RMM)		RMM10A	RMM10A	RMM10A
SMA2/ ESMA	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	NTAX74AA	XM214BC	XM215AY	XM217AY
SMA	SMA	NTAX74AA	XSC13BB	XSC13BB	XSC13BB
SMS	SMS with NTMX77	NTMX77AA	ESS13BB	ESS13BC	ESS13BC
STM	STM		MTMKA02	MTMKA02	MTMKA02
SXFW	SX05 Firmware	NTSX05AA	SXFWAG04	SXFWAH01	SXFWAJ02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)		TKMTKA02	TKMTKA02	TKMTKA02
UPFWN	NTMX77 & NTAX74 Universal Firmware	NTMX77AA NTAX74AA	UPFWNR04	UPFWNS01	UPFWNU01
UPFWQ	NTMX77 Universal Firmware Loads with extended distance capability (EDC)	NTMX77AA	UPFWQJ04	UPFWQK01	UPFWQM01

Table 5
PM to load cross reference (Sheet 6 of 6)

PM type	Description	Hardware	MSL14	MSL15	MSL17
XA-Core	Input/Output Processor (IOP)	NTLX03AA or NTLS03AB or NTLX03BA or NTLX03BB	XAIO01AG	XAIO01AK	XAIO01AK
	Processor element (PE)	NTLX02CA	XAPE01AG	XAPE01AG	XAPE01AG
	CMIC	NTLX05AB	PK10CU10	PK10CU10	PK12CE12
XLIU	X.24/X.75 XLIU Load, Packet Handler (XLIU)				XRC17BL

PM Load History

Table 6 lists each load type supported by the MSL-100 product line and versions of these load types for recent MSL-100 software releases. This table is included in this document to assist in planning PM updates. Use the PM-to-load cross-reference table, Table 5 on page 28 in this chapter, to identify the specific PMs and loads to be updated in the office.

Table 6
Load History (Sheet 1 of 6)

Load Type	Load Description	MSL14	MSL15	MSL17
ADCM	Digital Carrier Module (DCM)	ADCMQ01	ADCMQ01	ADCMQ01
ARS	8-Meg LIU for 36-link SPP (LIU7)	ARS14BJ	ARS17BL2	ARS17BL2
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02	ATMKA02	ATMKA02
ATS	32-Meg Channel Access LIU (LIU7)	ATS14BJ	ATS15BH	ATS17BL
BLM	Basic Line Module (LM)	BLMTB01	BLMTB01	BLMTB01
BTM	Basic TM8 (TM8)	BTMKA02	BTMKA02	BTMKA02
BRLM	Basic Remote Line Module (RLM)	BRLMVA03	BRLMVA03	BRLMVA03

Table 6
Load History (Sheet 2 of 6)

Load Type	Load Description	MSL14	MSL15	MSL17
CMR	Class Module Resource Card (CMR)	CMR10A	CMR10A	CMR17B
DLM	Digital Line Module (DLM)	DLMXPM04	DLMXPM04	DLMXPM04
DTC7	Digital Trunk Controller with SS7: (MX77)	ED714BC	ED714BC	ED714BC
DTC7	Digital Trunk Controller PLUS w/SS7: (SX05) (DTC)		QD715AY	QD717AY
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01	DTUBAD01	DTUBAD01
DTUD	Digital Test Unit with NT4X45 (EDTU)	DTUDAA01	DTUDAB01	DTUDAB01
DTUH	DTU for off-hook balance tests (DTU)	DTUHAA02	DTUHAA02	DTUHAA02
ECL	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	ECL14BC	ECL14BC	ECL14BC
ED16	Enhanced Digital Recording, Access Module (DTM-16 min.)	ED16AA03	ED16AA06	ED16AA06
EDCH	Standard Enhanced D-Channel Handler (CDH)	EDH14BC	EDH15AY	EDH17AY
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE08	EDRMAE10	EDRMAE10
EIPE	Enhanced Intelligent Peripheral Equipment Load	EIPE17AB	EIPE17AB	EIPE17AH
ENC	Enhanced Network (ENET)	ENC14BG	ENC15BG	ENC17BL
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02	ERLMVA02	ERLMVA02

Table 6
Load History (Sheet 3 of 6)

Load Type	Load Description	MSL14	MSL15	MSL17
ESA/MSA	ESA with NTMX45	MSA14BC	MSA14BC	MSA14BC
ESS	SMS with MX77	ESS13BC	ESS13BC	ESS13BC
ETC	Ethernet Interface Unit (EIU)	ETC14BG	ETC15BC	ETC17BL
F8C	8-Meg Frame Relay Interface Unit (FRIU)	F8C14BJ	F8C15BH	F8C17BL
ILDR	ISDN Line Drawer (ILDR)	ILDRAF04	ILDRAF04	ILDRAF04
IOMR	Standard Input/Output Module (IOM)	IOMRAZ01	IOMRAZ01	IOMRBC01
IOM7	FX32CA – Sony SDT-7200 DAT			IOM7BC01
IOM9	FX32CA – Sony SDT-9000 DAT			IOM9BC01
IOME	4-GB DDU			IOMEBC01
IOP (XA-Core)	Input/Output Processor	XAOI01AG	XAOI01AK	XAOI01AK
IPE	IPE Standard	IPE09AB	IPE09AB	IPE09AB
LCM	Basic ELCM/LCM (64 Kbyte)	LCM01D	LCM01D	LCM01D
	RLCM (64 Kbyte)	LCM01D	LCM01D	LCM01D
	RLCM (256 Kbyte)	XLCM14BA	XLCM15AB	XLCM17AT
LCME	Enhanced Line Concentrating Module w/ISDN (LCME)	LCME14BA	LCME15AB	LCME17AT
LGC	LGC with ILD	QLI14BC	QLI15AY	QLI17AY1
LIM	Link Interface Module (LIM)	LPC14BG	LPC15BC	LPC17BL

Table 6
Load History (Sheet 4 of 6)

Load Type	Load Description	MSL14	MSL15	MSL17
LIU7	8-Meg LIU for 36-link SPP			ARS17BL2
	32-Meg Channel Access LIU			ATS17BL
	2 card -8Meg			LRS17BL2
	32-Meg			LTS17BL
LRS	8-Meg LIU7	LRS14BJ	LRS17BL2	LRS17BL2
LTS	32 Meg LIU7	LTS14BJ	LTS15BH	LTS17BL
MPC4	1984 CCITT Compliant X.25 MPC (MPC)	MPC403AC	MPC403AC	MPC403AC
MPCA	Asynchronous Multi-Protocol Controller (MPC)	MPCA03AC	MPCA03AC	MPCA03AC
MPCX	BX.25 (MPC)	MPCX33AB	MPCX33AB	MPCX33AB
MPCO	1980 CCIT Compliant X.25 (MPC)	MPCO03AC	MPCO03AC	MPCO03AC
MPF	9X17 Firmware Multi-port Cards	MPF14BG	MPF15BC	MPF17BL
MS	Message Switch	MUC14BG	MUC15BC	MUC17BL
MTM	Maintenance Trunk Module (MTM)	MTMKA02	MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)	MTMKA01	MTMKA01	MTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04	MTULJ04	MTULJ04
NRS	Network Interface Unit (NIU)	NRS14BG	NRS15BG	NRS17BL
OAU	OAU	MTMKA02	MTMKA02	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	ODI14BC	ODI15AY	ODI17AY

Table 6
Load History (Sheet 5 of 6)

Load Type	Load Description	MSL14	MSL15	MSL17
ODT	PDTC/DTCO with CCS7 (MX77)	ODT14BC	ODT15AY	ODT17AY
PK	XA-Core CMIC	PK10CU10	PK10CU10	PK12CE12
QDI	PDTC/DTCO with ISDN (SX05)	QCI14BC	QDI15AY	QDI17AY1
QDT	PDTC with SS7 (SX05)	QDT14BC	QDT15AY	QDT17AY
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI14BC	QLI15AY	QLI17AY1
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC	ESR14BC	ESR14BC
RCC2		XRI14BC	XRI15AY	XRI17AY
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02	RDCMPA02	RDCMPA02
RLCM	Remote Line Concentrating Module 1/extended distance capability (6X51) (RLCM)	EDC10BH	EDC10BH	EDC10BH
RMM	Remote Maintenance Module (RMM)	RMM10A	RMM10A	RMM10A
SMS	SMS with NTMX77	ESS13BB	ESS13BC	ESS13BC
STM	STM	MTMKA02	MTMKA02	MTMKA02
SXFW	SX05 Firmware	SXFWAG04	SXFWAH01	SXFWAJ02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)	TKMTKA02	TKMTKA02	TKMTKA02
UPFWN	NTMX77 & NTAX74 Universal Firmware	UPFWNR04	UPFWNS01	UPFWNU01

Table 6
Load History (Sheet 6 of 6)

Load Type	Load Description	MSL14	MSL15	MSL17
UPFWQ	NTMX77 and NTAX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQJ04	UPFWQK01	UPFWQM01
XAPE-(XA-Core)	Processor element (PE) – NTLX02CA	XAPE01AG	XAPE01AG	XAPE01AG
XIOP (XA-Core)	Input/Output Processor	XAOI01AG	XAOI01AK	XAOI01AK
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	XLCM14BA	XLCM15AB	XLCM17AT
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC14BJ	XRC15BH	XRC17BL
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM214BC	XM215AY	XM217AY
XRI	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	XRI14BC	XRI15AY	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB	XSC13BB	XSC13BB

SE06 Load Line-up

Overview of SE06 release

Purpose

This chapter provides release notes, load names, and other information critical to updating peripheral modules (PM) and other hardware types. Use this information when performing the procedures “Preparing for a manual PM update” or “Preparing for a PM update using PMUPGRADE” in this document and when scheduling the update of each PM and hardware type.

Note: Please refer to “Peripheral Module Documentation” in Helmsman Express (www.nortel.com) for the latest version of this document.

Changes in update process

This section reflects changes in the PM update process.

XA-Core component firmware updates

Attention

ATTENTION

For optimal robustness, offices must update the computing module interface card (CMIC), the ethernet input output processor (EIOP) and the ATM multi–mode data interface (AMDI) firmware loads after the ONP for this release with the new release firmware load.

The XA-Core component firmware loads for the input output processor (IOP) and processor element (PE) do not require an update for this

release. Refer to the following for update procedures and firmware load names:

- section “Upgrade firmware on an XA-Core component at the PE, IOP or CMIC MAP level” in the XA-Core Maintenance Manual, 297-8991-510, to update the XA-Core components.
- table “PM-to-load cross-reference for the applicable firmware load names for this release and previous releases.
- table “XA-Core component firmware cross-reference” for the baseline and new release firmware loads.

Message switch load on PM load tape is patch current

ATTENTION

The message switch (MS) can require additional memory to support this release. Contact the next level of support or the Nortel Networks software delivery prime for additional information.

The PM load tape for this release includes the patched current MS load file, which is not a back-up load. Use procedure “Update the MS” in this document and update the MS with all other PMs. Refer to figure PM configurations P-side to C-side in chapter “Overview of update process” for PM update sequence requirements.

XA-Core tape cartridge contains PM load and PRSU files

With the BASE13 software level, extended architecture core (XA-Core) digital audio tape (DAT) cartridges are delivered to offices with XA-Core. When the XA-Core tape cartridge label text indicates *Patches: Yes*, the tape contains PM load and post-release software update (PRSU) files, including pre-patched XPM load (PPXL) files. When the XA-Core tape cartridge indicates *Patches: No*, the office receives any applicable PRSUs through prior software delivery methods.

Note: PRSU and patch are used interchangeably in this document.

ENET update requirements with Spectrum Peripheral Module (SPM)

The spectrum peripheral module (SPM) is a new multi-application high speed Meridian SL-100 Series III PM. The SPM provides customized network access capabilities

When an SPM is present on the Meridian SL-100 switch, perform a manual update for the ENET (enhanced network) in order to maintain communication with the SPM. Do not use SWUPGRADE PM to

perform an automated update for the ENET when an SPM is present on the Meridian SL-100 switch. Only the administration, preparation, and planning activities of the automated process are supported for the ENET when an SPM is present on the Meridian SL-100 switch.

Spectrum Peripheral Module (SPM) update requirements

To update your SPM, refer to SPM upgrade procedure NN10053461 (SPM Release 17.1) in the Spectrum Peripheral Module collection in Helmsman Express.

Note: Access Helmsman Express through www.nortel.com and then proceed through the Products and Services, Technical Documentation, Helmsman Express links (new users will are required to register).

PPXL audit before manual update of table PMLOADS

For offices at MSL10 or higher and when table PMLOADS is updated manually, an additional step must be performed for each pre-patched XPM loadfile (PPXL) in the office. Use the Post-Release Software Manager (PRSM) LFAUDIT command to audit each PPXL before table PMLOADS is updated. The LFAUDIT command identifies the post-release software updates (PRSU) in the PPXL to the PRSM database.

Use the procedure “Preparing for a manual PM update” in this document to perform the LFAUDIT command. If the “Preparing for a manual PM update” procedure and the LFAUDIT command are used, PPXLs are successfully added to table PMLOADS. If the “Preparing for a manual PM update” procedure and the LFAUDIT command are not used, the MAP terminal displays an error message similar to the following:

```
PRSM data missing
To correct, enter the PRSM command level. Then type:
LFAUDIT PPXL ELIO9AX ELIO9AX_980107 S00DPMLOADS
```

If PMUPGRADE is used to update table PMLOADS, take no additional action. PMUPGRADE performs the audit automatically.

SLM tape cartridge contains PM load and PRSU files

The satellite distribution center (SDC) uses backup volume format to manufacture the new SLM tape cartridge. The procedure “Prepare for a manual PM update” in this document describes the required multi-file restore (MFR) command syntax to copy PM load and PRSU files from the SLM tape cartridge to the SLM disk volume. The backup volume format does not impact the automated PM update process.

Note: *PRSU* and *patch* are used interchangeably in this document.

Integrated services node auto imaging

ATTENTION

Follow office policy on imaging when upgrading the nodes in the office for this release. Office policy may vary from the steps described in this document.

With Integrated Auto Imaging (IAI), the Meridian SL-100 switch automatically takes an image of an integrated service node (ISN) when one of the following actions occur.

- Table datafill is changed
- PRSUs are applied

Automated PM updates

Two command interpreter (CI) level utilities, PMUPGRADE and SWUPGRADE PM, are available to automate PM updates. Nortel Networks is introducing these utilities over several releases, the upgrade path of your office determines the level of available functionality.

PMUPGRADE automates the administration and planning phases of the PM update. SWUPGRADE PM automates the update phase of the PM update. Refer to the chapter “Overview of automated update process” in this document for more information on automated PM updates.

Peripheral module to baseline cross reference

Refer to Table 7 for information on the XPM processor firmware baseline.

Table 7
XPM processor (AX74, MX77 or SX05) firmware baseline (Sheet 1 of 3)

XPM	Description	XPM processor	Current firmware release
DTC	DTC with ISDN (DTCI). Provisioned with MX76, high-level data link control (HDCL) and IP Gateways provisioned in table IPINV	SX05	SXFWAJ02
	DTC with CCS7 (DTC7)	MX77	UPFWNU01
	DTC with CCS7 (DTC7)	MX77	UPFWNU01
	DTC with ISDN (DTCI)	SX05	SXFWAJ02
	DTCI with CCS7	SX05	UPFWNU01
	Digital trunk controller (DTCI)	SX05	SXFWAJ02
ESA	ESA with MX45AA processor.	MX45	UPFWNU01
LGC	LGC with subtending RCC2. MX76 and HDLC provisioned. See Note 2 when upgrading to SX05.	MX77 SX05	UPFWQM01 SXFWAJ02
	LGCI with subtending RCC2. MX76 and HDLC provisioned. See Note 2 when upgrading to SX05.	SX05	SXFWAJ02
	LGC with subtending RCC2. No MX76 or HDLC provisioned.	MX77 SX05	UPFWNU01 SXFWAJ02
	LGC with subtending RCC2. No MX76 or HDLC provisioned.	SX05	SXFWAJ02
	LGC with ISDN line drawer (ILD).	SX05	SXFWAJ02
	Line group controller (LGC).	MX77 SX05	UPFWNU01 SXFWAJ02

Table 7
XPM processor (AX74, MX77 or SX05) firmware baseline (Sheet 2 of 3)

XPM	Description	XPM processor	Current firmware release
LTC	LTC with subtending RCC2. MX76 and HDLC provisioned. See Note 2 when upgrading to SX05.	MX77	UPFWQM01
	LTCI with subtending RCC2. MX76 and HDLC provisioned. See Note 2 when upgrading to SX05.	SX05	SXFWAJ02
	LTC with ISDN (LTCI). MX76, HDLC and IP Gateways provisioned in table IPINV.	SX05	SXFWAJ02
	LTC with subtending RCC2. No MX76 or HDLC provisioned.	MX77 SX05	UPFWNU01 SXFWAJ02
	LTCI with subtending RCC2. No MX76 or HDLC provisioned.	SX05	SXFWAJ02
	LTC with ISDN (LTCI).	SX05	SXFWAJ02
	Line trunk controller (LTC).	MX77 SX05	UPFWNU01 SXFWAJ02
PDTC/ DTCO	Peripheral digital trunk controller (PDTC).	MX77	UPFWNU01
PDTC/ DTCO	Digital trunk controller overseas (DTCO).	SX05	SXFWAJ02
RCC	Remote cluster controller (RCC).	MX77	UPFWNU01
RCC2	Remote cluster controller 2 (RCC2). With host peripheral provisioned with SX05 processor. See Note 2 if host peripheral is upgraded to SX05 processor with MX76 cards.	AX74	UPFWNU01
	Remote cluster controller 2 (RCC2). See Note 2 if host peripheral is upgraded to SX05 processor with 6X69 cards.	AX74	UPFWNU01
SMA	Subscriber carrier module-100 access (SMA).	AX74	UPFWNU01
SMA2	Subscriber carrier module-100 access 2 (SMA2).	AX74	UPFWNU01

Table 7
XPM processor (AX74, MX77 or SX05) firmware baseline (Sheet 3 of 3)

XPM	Description	XPM processor	Current firmware release
SMS	Subscriber carrier module-100S (SMS).	MX77	UPFWNU01
SMSR	Subscriber carrier module-100S remote. (SMSR).	MX77	UPFWNU01
SMU	Subscriber carrier module-100 urban (SMU).	MX77	UPFWNU01

Note 1: The host and remote XPM must be using a version of firmware which supports the Q.921 protocol. Firmware that supports the Q.921 protocol are UPFWNUyxx or UPFWQyxx for MX77 and AX74, and SXFWyyxx for SX05.

Note 2: The RFWLOAD tool automates the firmware upgrade process. Refer to the section titled “Remote firmware loader tool” in this chapter for information regarding the use of the RFWLOAD tool.

Peripheral module loads

This release includes the following types of files:

- PM loads
- PRSUs
- PPXLs

PM loads are the traditional PM load files. The load name for a base load consists of two fields: load_type and edition_code.

The load_type field identifies the type of load. This field consists of the first three to four characters of the load name, and it can include any combination of letters or digits. Table 8 lists possible naming conventions for field load_type.

Note: Refer to the “Load history” table, Table 12 on page 59 in this chapter, for a complete list of PM load types supported in this release.

Table 8
Naming conventions for PMload_type

Syntax	Example
zzz	LCM01D, MTMKA02, D1T005, ETCO4BF1, ECL06GBH
zzzz	LCME06BH, RMTMKA01, MPCX33AB

Note: The character z represents a letter or digit

The edition_code field identifies the version of the type of load. The edition_code field consists of the remaining three to five characters of the load name. Table 9 lists possible naming conventions for the edition_code field.

Note: Refer to the "Load history" table, Table 12 on page 59 in this chapter, for a complete list of each version of each type of load.

Table 9
Naming conventions for PM edition _code

Syntax	Example
xxxxxnn	MTMKA02
nnnnxxnn	LCME06BH
nxnzzz	D1T005
xxxnnx	LCM01D
nnnxxnnz	ETC04BF1
nnnxxnnn	ECL06GBH
Note: The character x represents a letter, the character n represents a digit, and the character z represents a letter or a digit.	

Post release software update

A PRSU is software created as one of the following:

- a procedure replacement to correct software deficiencies delivered to all affected sites
- an enhancement to the original design delivered to all affected sites and activated on a per office basis
- a fix for a data corruption deliverable, delivered only to the affected office
- a delivery mechanism for early feature deployment that contains new features and is activated on a per site basis by a controlled password

Note: For naming conventions and additional patching information, refer to *Post-Release Software Manager (PRSM) Reference Guide,* 297-8991-540.

Pre-patched XPM loads

PPXLs are loads that have corrective PRSUs built into the files. PPXLs do not reduce the number of PRSUs against a given load. PPXLs

reduce the number of PRSUs manually applied to the load along with reducing loading time.

PPXLs are identified by a date extension to the base load name. For example, ODI20CE_040825 is the pre-patched load for base load ODI20CE.

CAUTION
Possible service interruption

Do not use the LOADPM CC command with the file name parameter when updating a PM with a PPXL. If the LOADPM CC command is used when performing this type of update, PRSM applies all patches built into the PPXL. Obsolete patches are not removed and patches not built into the PPXL are not applied.

CAUTION
Possible service interruption

PPXLs automate the process of manually patching the load. Use the ASSIGN command to set the load to each PM unit. Failure to use the ASSIGN command results in patches not built into the PPXL not being applied.

Use the PATCHLIST command at the CI level to display the list of patches built into the PPXL. Example as follows:

```
>XPMLFP

>PATCHLIST FILE <PPXL file_name>
```

Note: The volume must be listed before using this command. Only the base load name needs to be datafilled in the associated PM inventory table. In order to determine the full PPXL file-name to load, the PM loader software uses the base load name in the inventory table to index field ACTFILE in table PMLOADS. Following is a sample tuple from table PMLOADS.

LOADNAME
ACTFILE ACTVOL
BKPFILE BKPVOL UPDACT

ODT20CE
ODT20CE_040825 S00DPMLOADS

ODT20CE_040825 S01DPMLOADS N

Download or copy the PRSUs for the PPXL to the Meridian SL-100 switch. Refer to the “PRSU file storage” section in this chapter for recommendations on the storage of PRSU files. A PPXL reduces the number of PRSUs manually applied to the load, but the PRSUs for the PPXL must reside on the Meridian SL-100 switch prior to datafilling in table PMLOADS. If the PRSUs for the PPXL are not on the Meridian SL-100 switch, problems will develop later in the PM loading process. For security, this volume should be duplicated on another disk.

Note: If the SLM tape cartridge/media label text indicates *Patches: Yes,* the tape includes the required PRSUs for XPM and ISN load files.

The XPM may have additional PRSUs applied or removed in the same manner used with XPM loads in the past. Any PRSUs built into the PPXL may be removed from the load as long as the PRSU file is present on the disk.

Load to release cross reference

Table 10 lists the PM and non-CM loads supported by this release and updated during the PM update process. Use this table to confirm the office has received all the loads necessary for the PM update.

Note: Date extensions are not included for pre-patched loads.

Table 10
Load-to-release cross reference (Sheet 1 of 4)

Load Type	Load Description	Current SE06 Load
ADCM	Digital Carrier Module (DCM)	ADCMQA01
ARS	8-Meg LIU for 36-link SPP (LIU7)	ARS19BT
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02
BLM	Basic Line Module (LM)	BLMTB01
BTM	Basic TM8 (TM8)	BTMKA02
BRLM	Basic Remote Line Module (RLM)	BRLMVA03
CMR	Class Module Resource Card (CMR)	CMR17B
CTM	Conference Trunk Module (CTM)	MTMKA02
DLM	Digital Line Module (DLM)	DLMXPM04

Table 10
Load-to-release cross reference (Sheet 2 of 4)

Load Type	Load Description	Current SE06 Load
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01
DTUD	Digital Test Unit with 4X45 (EDTU)	DTUDAB02
DTUH	DTU for off-hook balance tests (DTU)	DTUHAA02
ECL	Digital Trunk/Line and Trunk/Line Group Controller PLUS with MX77 (LGC/LTC/DTC)	ECL14BC
ED16	Enhanced Digital Recording, Access Module (DTM-16 min.)	ED16AA07
ED7	DTC with SS7 MX77	ED714BC
EDCH	Standard Enhanced D-Channel Handler (DCH)	EDH19BE
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min).	EDRMAE11
ENC	Enhanced Network (ENET)	ENC19BO
EIPE	Enhance Intelligent Peripheral Equipment Load	EIPE17AH
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02
ESA/MSA	ESA with NTMX45AA	MSA14BC
ESS	SMS with MX77	ESS13BC
ETC	Ethernet Interface Unit (EIU)	ETC19BO
F8C	8-Meg Frame Relay Interface Unit (FRIU)	F8C19BT
ILDR	ISDN Line Drawer (ILDR)	ILDRAF04
IOMR	Standard Input/Output Module (IOM)	IOMRBC01
IOM7	Load for NTFX32CA with Sony SDT-7200 DAT drive	IOM7BC01
IOM9	Load for NTFX32CA with Sony SDT-9000 DAT drive	IOM9BC01
IOME	Load for 4-GB DDU enhancements	IOMEBC01
IPE	IPE Standard	IPE09AB

Table 10
Load-to-release cross reference (Sheet 3 of 4)

Load Type	Load Description	Current SE06 Load
LCM	Basic ELCM/LCM (64 Kbyte)	LCM01D
	RLCM (64 Kbyte)	LCM01D
	RLCM (256 Kbyte)	XLCM18AW
LCME	Enhanced Line Concentrating Module w/ISDN (LCME)	LCME18AW
LIM	Link Interface Module (LIM)	LPC19BO
LRS	2 card - 8-Meg (LIU7)	LRS19BT
LTS	32-Meg (LIU7)	LTS19BT
MPC4	1984 CCITT Compliant X.25 MPC (MPC)	MPC403AC
MPCA	Asynchronous Multi-Protocol Controller (MPC)	MPCA03AC
MPCX	BX.25 (MPC)	MPCX33AB
MPC0	1980 CCIT Compliant X.25 (MPC)	MPC003AC
MPF	9X17 Firmware Multi-port Cards	MPF19BO
MS	Message Switch	MUC19BO
MTM	Maintenance Trunk Module (MTM)	MTMKA02
	Remote Maintenance Trunk Module (MTM)	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04
NRS	Network Interface Unit (NIU)	NRS19BO
OAU	OAU	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	ODI19BE
ODT	PDTC/DTCO with CCS7 (MX77)	ODT19BE
PK	XA-Core-CMIC	PK12CE12
QD7	DTC with SS7 SX05AA	QD717AY1
QDI	PDTC/DTCO with ISDN (SX05)	QDI19BE
QDT	PDTC with SS7 (SX05)	QDT19BE2
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI19BE

Table 10
Load-to-release cross reference (Sheet 4 of 4)

Load Type	Load Description	Current SE06 Load
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02
RMM	Remote Maintenance Module (RMM)	RMM10A
STM	STM	MTMKA02
SXFW	SX05 Firmware	SXFWAJ02
TKMT	Trunk Module Load with Metallic Test Capabilities (8-view) (TM/MTM)	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	UPFWNU01
UPFWQ	MX77 and AX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQM01
XAIO	XA-Core-IOP	XAIO01AK
XAPE	Processor element (PE) – NTLX02CA	XAPE01AG
XHIO	XA-Core HIOP NTLX04CA	XHIO02AK
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC19BT
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM219BE
XRI	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB

PM to load cross reference

Table 11 on page 54, “PM-to-load cross-reference”, lists each PM type, hardware and associated load supported by this release. The PMs, hardware and loads for up to three applicable prior releases are also displayed in the next table. Use this table to identify the PMs to be updated in the office.

The first three columns identify the type of PM. The type column lists the kind of PM or other hardware type as posted at the MAP display. The description column describes the service provided by the PM. The hardware column lists product engineering codes (PEC) for some

circuit cards in some PMs. The hardware column may be helpful in identifying the type of PM in the Meridian SL-100 switch or the type of load for that PM.

Note 1: Gating hardware is any hardware required for a particular release. Gating hardware PECs are identified in the table.

Note 2: For assistance with acronyms used in this table, refer to the chapter "List of terms" in this document.

The middle column lists loads for each PM for the previous release. Only PMs with loads that are changed since the office's current release require updating.

Note: Date extensions for pre-patched loads are not included.

The column Size lists the size of the file in SLM blocks, which may be helpful in allocating volumes to hold the copied loads. Re-issued loads and pre-patched loads may cause variations between the actual size of the load and the size listed in the table.

Table 11
PM-to-load cross-reference (Sheet 1 of 6)

PM type	Description	Hardware	MSL17	SE06
ATM	Autovon Trunk Maintenance Module (ATM)		ATMKA02	ATMKA02
CMR	Class Module Resource Card (CMR)	6X78AA and up	CMR17B	CMR17B
CTM	Conference Trunk Module	1X81AA	MTMKA02	MTMKA02
DCM	Digital Carrier Module (DCM)		ADCMQ01	ADCMQ01
	Remote Digital Carrier Module (RDCM)		RDCMPA02	RDCMPA02
DLM	Digital Line Module (DLM)		DLMXPM04	DLMXPM04
DTC	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	MX77AA	ECL14BC	ECL14BC
DTC7	Digital Trunk Controller with SS7: (MX77)	MX77AA	ED714BC	ED714BC

Table 11
PM-to-load cross-reference (Sheet 2 of 6)

PM type	Description	Hardware	MSL17	SE06
DTC7	Digital Trunk Controller PLUS w/SS7: (SX05) (DTC)	SX05AA	QD717AY1	QD717AY1
DTCI	DTCI with ILD (with ISDN Peripheral	SX05AA	QLI17AY1	QLI19BE
DTU	Digital Test Unit for BERT tests (DTU)	4X23AA	DTUBAD01	DTUBAD01
	DTU for off-hook balance tests (DTU)	4X23AA	DTUHAA02	DTUHAA02
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	1X80AA	EDRMAE10	EDRMAE11
	Enhanced Digital Recording, Access Module (DTM-16 min.)	1X80BA	ED16AA06	ED16AA07
EDTU	Digital Test Unit with 4X45 (DTUD)	4X45AA	DTUDAB01	DTUDAB02
EIU	Ethernet Interface Unit (ETC)		ETC17BL	ETC19BO
ENET	Enhanced Network (ENC)	9X13KA	ENC17BL	ENC19BO
ESA/MSA	Remote Line Module Load with ESA	ESA with NTMX45AA	MSA14BC	MSA14BC
FRIU	8-Meg Frame Relay Interface Unit (F8C)	EX31BA and up	F8C17BL	F8C19BT
ILD	ISDN Line Drawer (ILDR)	6X54DA	ILDRAF04	ILDRAG01

Table 11
PM-to-load cross-reference (Sheet 3 of 6)

PM type	Description	Hardware	MSL17	SE06
IOM	Standard Input/Output Module (IOMR)		IOMRBC01	IOMRBC01
		FX32CA – Sony SDT-7200 DAT		IOM7BC01
		FX32CA – Sony SDT-9000 DAT		IOM9BC01
		4-GB DDU		IOMEBC01
IPE	IPE Standard	7D07AC	IPE09AB	IPE09AB
	Enhanced Intelligent Peripheral Equipment Load	7D07BA	EIPE17AH	EIPE17AH
LCM	Basic ELCM/LCM (64 Kbyte)	6X51AA	LCM01D	LCM01D
	RLCM (64 Kbyte)	6X51AB/AC	LCM01D	LCM01D
	RLCM (256 Kbyte)	6X51AB/AC	XLCM17AT	XLCM18AW
	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	6X51AB/AC	XLCM17AT	XLCM18AW
LCME	Enhanced Line Concentrating Module w/ISDN (LCME)		LCME17AT	LCME18AW
LGC	LGC with ILD (with ISDN Peripheral)	SX05AA	QLI17AY1	QLI19BE
	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/ DTC)	MX77AA	ECL14BC	ECL14BC
LGCI	Standard Enhanced (ISDN Peripherals)	SX05AA	QLI17AY1	QLI19BE

Table 11
PM-to-load cross-reference (Sheet 4 of 6)

PM type	Description	Hardware	MSL17	SE06
LIM	Link Interface Module (LIM)	9X13OD or 9X13OB with 9X14OB	LPC17BL	LPC19BO
NIU	Network Interface Unit (NIU)		NRS17BL	NRS19BO
LIU7	8-Meg LIU for 36-link SPP	EX26AA, EX22BA and up	ARS17BL2	ARS19BT
	32-Meg Channel Access LIU		ATS17BL	ATS19BT
	2 card -8Meg		LRS17BL2	LRS19BT
	32-Meg		LTS17BL	LTS19BT
LM	Basic Line Module (LM)		BLMTB01	BLMTB01
	Basic Remote Line Module (BRLM)		BRLMVA03	BRLMVA03
LTC	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/ DTC)	MX77AA	ECL14BC	ECL14BC
	LTC with SX05	SX05AA	QLI17AY1	QLI19BE
MPC4	1984 CCITT Compliant X.25 MPC (MPC4)	1X89BA and up	MPC403AC	MPC403AC
MPCA	AsyncMulti-Protocol Controller (MPCA)	1X89BA and up	MPCA03AC	MPCA03AC
MPC0	1980 CCIT Compliant X.25 (MPC0)	1X89BA and up	MPC003AC	MPC003AC
MPCX	BX.25 (MPCX)	1X89BA and up	MPCX33AB	MPCX33AB
MS/FW	9X17 Firmware Multi-port Cards (MPF)	9X17BB or 9X17CA or 9X17DA	MPF17BL	MPF17BL
MS	Message Switch		MUC17BL	MUC17BL

Table 11
PM-to-load cross-reference (Sheet 5 of 6)

PM type	Description	Hardware	MSL17	SE06
MTM	Maintenance Trunk Module		MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)		RMTMKA01	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	2X11BA and up	MTULJ04	MTULJ04
OAU	OAU		MTMKA02	MTMKA02
PDTC/ DTCO	With CCS7 (MX77) (ODT)	MX77AA	ODT17AY	ODT19BE
	With CCS7 (SX05)(ODT)	SX05 AA	QDT17AY	QDT19BE2
	PDTC/DTCO with ISDN (MX77)	MX77AA	ODI17AY	ODI19BE
	PDTC/DTCO with ISDN (SX05)	SX05AA	QDI17AY1	QDI19BE
RCC	XPM Plus RSC Load (XPM14) (RCC)	MX77AA	ESR14BC	ESR14BC
RCC2	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	AX74AA	XRI17AY	XRI17AY
RMM	Remote Maintenance Module (RMM)		RMM10A	RMM10A
SMA2/ ESMA	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	AX74AA	XM217AY	XM219BE
SMA	SMA	AX74AA	XSC13BB	XSC13BB
SMS	SMS with MX77	MX77AA	ESS13BC	ESS13BC
STM	STM		MTMKA02	MTMKA02
SXFW	SX05 Firmware	SX05AA	SXFWAJ02	SXFWAJ02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)		TKMTKA02	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	MX77AA AX74AA	UPFWNU01	UPFWNU01

Table 11
PM-to-load cross-reference (Sheet 6 of 6)

PM type	Description	Hardware	MSL17	SE06
UPFWQ	MX77 Universal Firmware Loads with extended distance capability (EDC)	MX77AA	UPFWQM01	UPFWQM01
XA-Core	Input/Output Processor (IOP)	LX03AA or LS03AB or LX03BA or LX03BB	XAIO01AK	XAIO01AK
	Processor element (PE)	LX02CA	XAPE01AG	XAPE01AG
	CMIC	LX05AB	PK12CE1	PK12CE12
	HIOP	LX04CA		XHIO03AC_508_LDLL
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)		XRC17BL	XRC19BT

PM Load History

Table 12, (Load history), lists each load type supported by the MSL-100 product line and versions of these load types for recent MSL-100 software releases. This table is included in this document to assist in planning PM updates. Use the PM-to-load cross-reference table, Table 11 on page 54 in this chapter, to identify the specific PMs and loads to be updated in the office.

Table 12
Load History (Sheet 1 of 5)

Load Type	Load Description	MSL17	SE06
ADCM	Digital Carrier Module (DCM)	ADCMQ01	ADCMQA01
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02	ATMKA02
ATS	32-Meg Channel Access LIU (LIU7)	ATS17BL	ATS19BT
BLM	Basic Line Module (LM)	BLMTB01	BLMTB01
BTM	Basic TM8 (TM8)	BTMKA02	BTMKA02
BRLM	Basic Remote Line Module (RLM)	BRLMVA03	BRLMVA03
CMR	Class Module Resource Card (CMR)	CMR17B	CMR17B

Table 12
Load History (Sheet 2 of 5)

Load Type	Load Description	MSL17	SE06
CTM	Conference Trunk Module	MTMKA02	MTMKA02
DLM	Digital Line Module (DLM)	DLMXPM04	DLMXPM04
DTC7	Digital Trunk Controller with SS7: (MX77)	ED714BC	ED714BC
	Digital Trunk Controller PLUS w/SS7: (SX05) (DTC)	QD717AY1	QD717AY1
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01	DTUBAD01
DTUD	Digital Test Unit with 4X45 (EDTU)	DTUDAB01	DTUDAB02
DTUH	DTU for off-hook balance tests (DTU)	DTUHAA02	DTUHAA02
ECL	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	ECL14BC	ECL14BC
ED16	Enhanced Digital Recording, Access Module (DTM-16 min.)	ED16AA06	ED16AA07
EDCH	Standard Enhanced D-Channel Handler (CDH)	EDH17AY	EDH19BE
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE10	EDRMAE11
EIPE	Enhanced Intelligent Peripheral Equipment Load	EIPE17AH	EIPE17AH
ENC	Enhanced Network (ENET)	ENC17BL	ENC19B0
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02	ERLMVA02
ESA/MSA	ESA with MX45	MSA14BC	MSA14BC
ESS	SMS with MX77	ESS13BC	ESS13BC
ETC	Ethernet Interface Unit (EIU)	ETC17BL	ETC19BO
F8C	8-Meg Frame Relay Interface Unit (FRIU)	F8C17BL	F8C19BT
ILDR	ISDN Line Drawer (ILDR)	ILDRAF04	ILDRAG01
IOMR	Standard Input/Output Module (IOM)	IOMRBC01	IOMRBC01

Table 12
Load History (Sheet 3 of 5)

Load Type	Load Description	MSL17	SE06
IOM7	FX32CA – Sony SDT-7200 DAT	IOM7BC01	IOM7BC01
IOM9	FX32CA – Sony SDT-9000 DAT	IOM9BC01	IOM9BC01
IOME	4-GB DDU	IOMEBC01	IOMEBC01
IPE	IPE Standard	IPE09AB	IPE09AB
LCM	Basic ELCM/LCM (64 Kbyte)	LCM01D	LCM01D
	RLCM (64 Kbyte)	LCM01D	LCM01D
	RLCM (256 Kbyte)	XLCM17AT	XLCM18AW
LCME	Enhanced Line Concentrating Module w/ISDN (LCME)	LCME17AT	LCME18AW
LGC	LGC with ILD	QLI17AY1	QLI19BE
LIU7	8-Meg LIU for 36-link SPP	ARS17BL2	ARS19BT
	32-Meg Channel Access LIU	ATS17BL	ATS19BT
	2 card -8Meg	LRS17BL2	LRS19BT
	32-Meg	LTS17BL	LTS19BT
LIM	Link Interface Module (LIM)	LPC17BL	LPC19BO
MPC4	1984 CCITT Compliant X.25 MPC (MPC)	MPC403AC	MPC403AC
MPCA	Asynchronous Multi-Protocol Controller (MPC)	MPCA03AC	MPCA03AC
MPCX	BX.25 (MPC)	MPCX33AB	MPCX33AB
MPC0	1980 CCIT Compliant X.25 (MPC)	MPC003AC	MPC003AC
MPF	9X17 Firmware Multi-port Cards	MPF17BL	MPF19BO
MS	Message Switch	MUC17BL	MUC19BO
MTM	Maintenance Trunk Module (MTM)	MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)	RMTMKA01	RMTMKA01

Table 12
Load History (Sheet 4 of 5)

Load Type	Load Description	MSL17	SE06
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MPC003AC	MTULJ04
NRS	Network Interface Unit (NIU)	MPF17BL	NRS19BO
OAU	OAU	MUC17BL	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	MTMKA02	ODI19BE
ODT	PDTC/DTCO with CCS7 (MX77)	ODT17AY	ODT19BE
PK	XA-Core CMIC	PK12CE12	PK12CE12
QDI	PDTC/DTCO with ISDN (SX05)	QDI17AY1	QDI19BE
QDT	PDTC with SS7 (SX05)	QDT17AY	QDT19BE2
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI17AY1	QLI19BE
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02	RDCMPA02
RMM	Remote Maintenance Module (RMM)	RMM10A	RMM10A
SMS	SMS with MX77	ESS13BC	ESS13BC
STM	STM	MTMKA02	MTMKA02
SXFW	SX05 Firmware	SXFWAJ02	SXFWAJ02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)	TKMTKA02	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	UPFWNU01	UPFWNU01
UPFWQ	MX77 and AX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQM01	UPFWQM01
XA-Core	Processor element (PE) – NTLX02CA	XAPE01AG	XAPE01AG
XIOP (XA-Core)	Input/Output Processor	XAIO01AK	XAIO01AK
XHIOP (LX04CA)			XHIO02AK_508_LDLL

Table 12
Load History (Sheet 5 of 5)

Load Type	Load Description	MSL17	SE06
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	XLCM17AT	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC17BL	XRC19BT
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM217AY	XM219BE
XRI	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	XRI17AY	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB	XSC13BB

SE07 Load Line-up

Overview of SE07 release

Peripheral module loads

This release includes the following types of files:

- PM loads
- PRSUs
- PPXLs

PM loads are the traditional PM load files. The load name for a base load consists of two fields: load_type and edition_code.

Note: Please refer to “Peripheral Module Documentation” in Helmsman Express (www.nortel.com) for the latest version of this document.

The load_type field identifies the type of load. This field consists of the first three to four characters of the load name, and it can include any combination of letters or digits. Table 13 lists possible naming conventions for field load_type.

Note: Refer to the “Load history” table, Table 18 on page 83 in this chapter, for a complete list of PM load types supported in this release.

Table 13
Naming conventions for PMload_type

Syntax	Example
zzz	LCM01D, MTMKA02, D1T005, ETCO4BF1, ECL06GBH
zzzz	LCME06BH, RMTMKA01, MPCX33AB
Note: The character z represents a letter or digit	

The edition_code field identifies the version of the type of load. The edition_code field consists of the remaining three to five characters of the load name. Table 14 lists possible naming conventions for the edition_code field.

Note: Refer to the "Load history" table, Table 18 on page 83 in this chapter, for a complete list of each version of each type of load.

Table 14
Naming conventions for PM edition _code

Syntax	Example
xxxxxnn	MTMKA02
nnnnxxnn	LCME06BH
nxnzzz	D1T005
xxxnnx	LCM01D
nnnxxnnz	ETC04BF1
nnnxxnnn	ECL06GBH
Note: The character x represents a letter, the character n represents a digit, and the character z represents a letter or a digit.	

Post release software update

A PRSU is software created as one of the following:

- a procedure replacement to correct software deficiencies delivered to all affected sites
- an enhancement to the original design delivered to all affected sites and activated on a per office basis
- a fix for a data corruption deliverable, delivered only to the affected office
- a delivery mechanism for early feature deployment that contains new features and is activated on a per site basis by a controlled password

Note: For naming conventions and additional patching information, refer to *Post-Release Software Manager (PRSM) Reference Guide,* 297-8991-540.

Pre-patched XPM loads

PPXLs are loads that have corrective PRSUs built into the files. PPXLs do not reduce the number of PRSUs against a given load. PPXLs reduce the number of PRSUs manually applied to the load along with reducing loading time.

PPXLs are identified by a date extension to the base load name. For example, ODI20CE_040825 is the pre-patched load for base load ODI20CE.

CAUTION
Possible service interruption
Do not use the LOADPM CC command with the file name parameter when updating a PM with a PPXL. If the LOADPM CC command is used when performing this type of update, PRSM applies all patches built into the PPXL. Obsolete patches are not removed and patches not built into the PPXL are not applied.

CAUTION
Possible service interruption
PPXLs automate the process of manually patching the load. Use the ASSIGN command to set the load to each PM unit. Failure to use the ASSIGN command results in patches not built into the PPXL not being applied.

Use the PATCHLIST command at the CI level to display the list of patches built into the PPXL. Example as follows:

```
>XPMLFP

>PATCHLIST FILE <PPXL file_name>
```

Note: The volume must be listed before using this command.

Only the base load name needs to be datafilled in the associated PM inventory table. In order to determine the full PPXL file-name to load, the PM loader software uses the base load name in the inventory table to index field ACTFILE in table PMLOADS. Following is a sample tuple from table PMLOADS.

LOADNAME
ACTFILE ACTVOL
BKPFILE BKPVOL UPDACT
_____

ODT20CE
ODT20CE_040825 S00DPMLOADS
ODT20CE_040825 S01DPMLOADS N

Download or copy the PRSUs for the PPXL to the Meridian SL-100 switch. Refer to the “PRSU file storage” section in this chapter for recommendations on the storage of PRSU files. A PPXL reduces the number of PRSUs manually applied to the load, but the PRSUs for the PPXL must reside on the Meridian SL-100 switch prior to datafilling in table PMLOADS. If the PRSUs for the PPXL are not on the Meridian SL-100 switch, problems will develop later in the PM loading process. For security, this volume should be duplicated on another disk.

Note: If the SLM media label text indicates *Patches: Yes,* the media includes the required PRSUs for XPM and ISN load files.

The XPM may have additional PRSUs applied or removed in the same manner used with XPM loads in the past. Any PRSUs built into the PPXL may be removed from the load as long as the PRSU file is present on the disk.

Peripheral module to baseline cross reference

Refer to Table 15 for information on the XPM processor firmware baseline.

Table 15
XPM processor (AX74, MX77 or SX05) firmware baseline (Sheet 1 of 3)

XPM	Description	XPM processor	Current firmware release
DTC	Digital trunk controller	MX77	UPFWNV03
	DTC with CCS7 (DTC7)	MX77	UPFWNV03
	DTC with CCS7 (DTC7)	SX05AA	SXFWAK02
	DTCI with ISDN (DTCI)	SX05	SXFWAK02
ESA	ESA with MX45AA processor.	MX45	UPFWNV03
LGC	LGC with subtending RCC2. MX76 and HDLC provisioned. See Note 2 when upgrading to SX05.	MX77	UPFWQN03
		SX05	SXFWAK02
	LGCI with subtending RCC2. MX76 and HDLC provisioned. See Note 2 when upgrading to SX05.	SX05	SXFWAK02
	LGC with subtending RCC2. No MX76 or HDLC provisioned.	MX77	UPFWNV03
		SX05	SXFWAK02
	LGC with subtending RCC2. No MX76 or HDLC provisioned.	SX05	SXFWAK02
	LGC with ISDN line drawer (ILD).	SX05	SXFWAK02
	Line group controller (LGC).	MX77	UPFWNV03
		SX05	SXFWAK02

Table 15
XPM processor (AX74, MX77 or SX05) firmware baseline (Sheet 2 of 3)

XPM	Description	XPM processor	Current firmware release
LTC	LTC with subtending RCC2. MX76 and HDLC provisioned. See Note 2 when upgrading to SX05.	MX77	UPFWQN03
	LTCI with subtending RCC2. MX76 and HDLC provisioned. See Note 2 when upgrading to SX05.	SX05	SXFWAK02
	LTC with ISDN (LTCI). MX76, HDLC and IP Gateways provisioned in table IPINV.	SX05	SXFWAK02
	LTC with subtending RCC2. No MX76 or HDLC provisioned.	MX77	UPFWNX07
		SX05	SXFWAK02
	LTCI with subtending RCC2. No MX76 or HDLC provisioned.	SX05	SXFWAK02
	LTC with ISDN (LTCI).	SX05	SXFWAK02
	Line trunk controller (LTC).	MX77	UPFWNV03
		SX05	SXFWAK02
PDTC/ DTCO	Peripheral digital trunk controller (PDTC).	MX77	UPFWNV03
PDTC/ DTCO	Digital trunk controller overseas (DTCO).	SX05	SXFWAK02
RCC	Remote cluster controller (RCC).	MX77	UPFWNV03
RCC2	Remote cluster controller 2 (RCC2). With host peripheral provisioned with SX05 processor. See Note 2 if host peripheral is upgraded to SX05 processor with MX76 cards.	AX74	UPFWNV03
	For HDLC		UPFWQN03
	Remote cluster controller 2 (RCC2). See Note 2 if host peripheral is upgraded to SX05 processor with 6X69 cards.	AX74	UPFWNV03
SMA	Subscriber carrier module-100 access (SMA).	AX74	UPFWNV03
SMA2	Subscriber carrier module-100 access 2 (SMA2).	AX74	UPFWQN03

Table 15
XPM processor (AX74, MX77 or SX05) firmware baseline (Sheet 3 of 3)

XPM	Description	XPM processor	Current firmware release
SMS	Subscriber carrier module-100S (SMS).	MX77	UPFWNV03
SMSR	Subscriber carrier module-100S remote. (SMSR).	MX77	UPFWNV03
SMU	Subscriber carrier module-100 urban (SMU).	MX77	UPFWNV03
Note 1: The host and remote XPM must be using a version of firmware which supports the Q.921 protocol. Firmware that supports the Q.921 protocol are UPFWNyxx or UPFWQyxx for MX77 and AX74, and SXFWyyxx for SX05. ***Note 2:*** The RFWLOAD tool automates the firmware upgrade process. Refer to the section titled “Remote firmware loader tool” in this chapter for information regarding the use of the RFWLOAD tool.			

Load to release cross reference

Table 16 lists the PM and non-CM loads supported by this release and updated during the PM update process. Use this table to confirm the office has received all the loads necessary for the PM update.

Note: Date extensions are not included for pre-patched loads.

Table 16
Load-to-release cross reference (Sheet 1 of 4)

Load Type	Load Description	Current SE07 Load
ADCM	Digital Carrier Module (DCM)	ADCMQA01
ARS	8-Meg LIU for 36-link SPP (LIU7)	ARS20CU
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02
ATS	32-Meg Channel Access LIU (LIU7)	ATS20CU
BLM	Basic Line Module (LM)	BLMTB01
BTM	Basic TM8 (TM8)	BTMKA02
BRLM	Basic Remote Line Module (RLM)	BRLMVA03
CMR	Class Module Resource Card (CMR)	CMR17B
CTM	Conference Trunk Module (CTM)	MTMKA02
DLM	Digital Line Module (DLM)	DLMXPM04
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01

Table 16
Load-to-release cross reference (Sheet 2 of 4)

Load Type	Load Description	Current SE07 Load
DTUD	Digital Test Unit with 4X45 (EDTU)	DTUDAB02
DTUH	DTU for off-hook balance tests (DTU)	DTUHAA02
ECL	Digital Trunk/Line and Trunk/Line Group Controller PLUS with MX77 (LGC/LTC/DTC)	ECL14BC
ED16	Enhanced Digital Recording, Access Module (DTM-16 min.)	ED16AA07
ED7	DTC with SS7 MX77	ED714BC
EDCH	Standard Enhanced D-Channel Handler (DCH)	EDH20CE
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min).	EDRMAE11
ENC	Enhanced Network (ENET)	ENC20CQ
EIPE	Enhance Intelligent Peripheral Equipment Load	EIPE17AH
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02
ESA/MSA	ESA with NTMX45AA	MSA14BC
ESS	SMS with MX77	ESS20CE
ETC	Ethernet Interface Unit (EIU)	ETC20CQ
F8C	8-Meg Frame Relay Interface Unit (FRIU)	F8C20CU
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01
IOMR	Standard Input/Output Module (IOM)	IOMRBC01
IOM7	Load for NTFX32CA with Sony SDT-7200 DAT drive	IOM7BC01
IOM9	Load for NTFX32CA with Sony SDT-9000 DAT drive	IOM9BC01
IOME	Load for 4-GB DDU enhancements	IOMEBC01
IPE	IPE Standard	IPE09AB
LCM	Basic ELCM/LCM (64 Kbyte)	LCM01D
	RLCM (64 Kbyte)	LCM01D
	RLCM (256 Kbyte)	XLCM18AW
LCME	Enhanced Line Concentrating Module w/ISDN (LCME)	LCME18AW

Table 16
Load-to-release cross reference (Sheet 3 of 4)

Load Type	Load Description	Current SE07 Load
LIM	Link Interface Module (LIM)	LPC20CQ
LRS	2 card - 8-Meg (LIU7)	LRS20CU
LTS	32-Meg (LIU7)	LTS20CU
MPC4	1984 CCITT Compliant X.25 MPC (MPC)	MPC403AC
MPCA	Asynchronous Multi-Protocol Controller (MPC)	MPCA03AC
MPCX	BX.25 (MPC)	MPCX33AB
MPC0	1980 CCIT Compliant X.25 (MPC)	MPC003AC
MPF	9X17 Firmware Multi-port Cards	MPF20CQ
MS	Message Switch	MUC20CQ
MTM	Maintenance Trunk Module (MTM)	MTMKA02
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04
NRS	Network Interface Unit (NIU)	NRS20CQ
OAU	OAU	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	ODI20CE_040825
ODT	PDTC/DTCO with CCS7 (MX77)	ODT20CE_040825
PK	XA-Core-CMIC	PK12CE12
QD7	DTC with SS7 SX05AA	QD717AY1
QDI	PDTC/DTCO with ISDN (SX05)	QDI20CE
QDT	PDTC with SS7 (SX05)	QDT20CE
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI20CE
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02
RMM	Remote Maintenance Module (RMM)	RMM10A
RMTM	Remote Maintenance Trunk Module (MTM)	RMTMKA01
STM	STM	MTMKA02

Table 16
Load-to-release cross reference (Sheet 4 of 4)

Load Type	Load Description	Current SE07 Load
SXFW	SX05 Firmware	SXFWAK02
TKMT	Trunk Module Load with Metallic Test Capabilities (8-view) (TM/MTM)	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	UPFWNV03
UPFWQ	MX77 and AX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQN03
XAIO	XA-Core-IOP	XAIO01AK
XAPE	Processor element (PE) – NTLX02CA	XAPE01AG
XHIO	XA-Core HIOP NTLX04CA	XHIO03AC_143_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC20CU
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM220CE
XRC01	XA-Core-HIOP LX17AA	XRC01DE_203_PKG
XRC20	XLIU	XRC20CU
XRI	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB

PM to load cross reference

Table 17 on page 77, “PM-to-load cross-reference”, lists each PM type, hardware and associated load supported by this release. The PMs, hardware and loads for up to three applicable prior releases are also displayed in the next table. Use this table to identify the PMs to be updated in the office.

The first three columns identify the type of PM. The type column lists the kind of PM or other hardware type as posted at the MAP display. The description column describes the service provided by the PM. The hardware column lists product engineering codes (PEC) for some circuit cards in some PMs. The hardware column may be helpful in identifying the type of PM in the Meridian SL-100 switch or the type of load for that PM.

Note 1: Gating hardware is any hardware required for a particular release. Gating hardware PECs are identified in the table.

Note 2: For assistance with acronyms used in this table, refer to the chapter “List of terms” in this document.

The middle column lists loads for each PM for the previous release. Only PMs with loads that are changed since the office’s current release require updating.

Note: Date extensions for pre-patched loads are not included.

The column Size lists the size of the file in SLM blocks, which may be helpful in allocating volumes to hold the copied loads. Re-issued loads and pre-patched loads may cause variations between the actual size of the load and the size listed in the table.

Table 17
PM-to-load cross-reference (Sheet 1 of 6)

PM type	Description	Hardware	SE06	SE07
ATM	Autovon Trunk Maintenance Module (ATM)		ATMKA02	ATMKA02
CMR	Class Module Resource Card (CMR)	6X78AA and up	CMR17B	CMR17B
CTM	Conference Trunk Module	1X81AA	MTMKA02	MTMKA02
DCM	Digital Carrier Module (DCM)		ADCMQ01	ADCMQ01
	Remote Digital Carrier Module (RDCM)		RDCMPA02	RDCMPA02
DLM	Digital Line Module (DLM)		DLMXPM04	DLMXPM04
DTC	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	MX77AA	ECL14BC	ECL14BC
DTC7	Digital Trunk Controller with SS7: (MX77)	MX77AA	ED714BC	ED714BC

Table 17
PM-to-load cross-reference (Sheet 2 of 6)

PM type	Description	Hardware	SE06	SE07
DTC7	Digital Trunk Controller PLUS w/SS7: (SX05) (DTC)	SX05AA	QD717AY1	QD717AY1
DTCI	DTCI	SX05AA	QLI19BE	QLI20CE
DTU	Digital Test Unit for BERT tests (DTU)	4X23AA	DTUBAD01	DTUBAD01
	DTU for off-hook balance tests (DTU)	4X23AA	DTUHAA02	DTUHAA02
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	1X80AA	EDRMAE11	EDRMAE11
	Enhanced Digital Recording, Access Module (DTM-16 min.)	1X80BA	ED16AA07	ED16AA07
EDTU	Digital Test Unit with 4X45 (DTUD)	4X45AA	DTUDAB02	DTUDAB02
EIU	Ethernet Interface Unit (ETC)		ETC19BO	ETC20CQ
ENET	Enhanced Network (ENC)	9X13KA	ENC19BO	ENC20CQ
ESA/ MSA	Remote Line Module Load with ESA	ESA with NTMX45AA	MSA14BC	MSA14BC
FRIU	8-Meg Frame Relay Interface Unit (F8C)	EX31BA and up	F8C19BT	F8C20CU
ILD	ISDN Line Drawer (ILDR)	6X54DA	ILDRAG01	ILDRAG01

Table 17
PM-to-load cross-reference (Sheet 3 of 6)

PM type	Description	Hardware	SE06	SE07
IOM	Standard Input/Output Module (IOMR)		IOMRBC01	IOMRBC01
		FX32CA – Sony SDT-7200 DAT	IOM7BC01	IOM7BC01
		FX32CA – Sony SDT-9000 DAT	IOM9BC01	IOM9BC01
		4-GB DDU	IOMEBC01	IOMEBC01
IPE	IPE Standard	7D07AC	IPE09AB	IPE09AB
	Enhanced Intelligent Peripheral Equipment Load	7D07BA	EIPE17AH	EIPE17AH
LCM	Basic ELCM/LCM (64 Kbyte)	6X51AA	LCM01D	LCM01D
	RLCM (64 Kbyte)	6X51AB/AC	LCM01D	LCM01D
	RLCM (256 Kbyte)	6X51AB/AC	XLCM18AW	XLCM18AW
	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	6X51AB/AC	XLCM18AW	XLCM18AW
LCME	Enhanced Line Concentrating Module w/ISDN (LCME)		LCME18AW	LCME18AW
LGC	LGC with ILD (with ISDN Peripheral)	SX05AA	QLI19BE	QLI20CE
	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	MX77AA	ECL14BC	ECL14BC

Table 17
PM-to-load cross-reference (Sheet 4 of 6)

PM type	Description	Hardware	SE06	SE07
LGCI	Standard Enhanced (ISDN Peripherals)	SX05AA	QLI19BE	QLI20CE
LIM	Link Interface Module (LIM)	9X13OD or 9X13OB with 9X14OB	LPC19BO	LPC20CQ
NIU	Network Interface Unit (NIU)		NRS19BO	NRS20CQ
LIU7	8-Meg LIU for 36-link SPP	EX26AA, EX22BA and up	ARS19BT	ARS20CU
	32-Meg Channel Access LIU		ATS19BT	ATS20CU
	2 card -8Meg		LRS19BT	LRS20CU
	32-Meg		LTS19BT	LTS20CU
LM	Basic Line Module (LM)		BLMTB01	BLMTB01
	Basic Remote Line Module (BRLM)		BRLMVA03	BRLMVA03
LTC	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/ DTC)	MX77AA	ECL14BC	ECL14BC
	LTC with SX05	SX05AA	QLI19BE	QLI20CE
MPC4	1984 CCITT Compliant X.25 MPC (MPC4)	1X89BA and up	MPC403AC	MPC403AC
MPCA	AsyncMultProtocol Controller (MPCA)	1X89BA and up	MPCA03AC	MPCA03AC
MPC0	1980 CCIT Compliant X.25 (MPC0)	1X89BA and up	MPC003AC	MPC003AC
MPCX	BX.25 (MPCX)	1X89BA and up	MPCX33AB	MPCX33AB

Table 17
PM-to-load cross-reference (Sheet 5 of 6)

PM type	Description	Hardware	SE06	SE07
MS/FW	9X17 Firmware Multi-port Cards (MPF)	9X17BB or 9X17CA or 9X17DA	MPF19BO	MPF20CQ
MS	Message Switch		MUC19BO	MUC20CQ
MTM	Maintenance Trunk Module		MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)		RMTMKA01	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	2X11BA and up	MTULJ04	MTULJ04
OAU	OAU		MTMKA02	MTMKA02
PDTC/ DTCO	With CCS7 (MX77) (ODT)	MX77AA	ODT19BE	ODT20CE_040825
	With CCS7 (SX05)(ODT)	SX05AA	QDT19BE2	QDT20CE
	PDTC/DTCO with ISDN (MX77)	MX77AA	ODI19BE	ODI20CE_040825
	PDTC/DTCO with ISDN (SX05)	SX05AA	QDI19BE	QDI20CE
RCC	XPM Plus RSC Load (XPM14) (RCC)	MX77AA	ESR14BC	ESR14BC
RCC2	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	AX74AA	XRI17AY	XRI17AY
RMM	Remote Maintenance Module (RMM)		RMM10A	RMM10A
SMA2/ ESMA	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	AX74AA	XM219BE	XM220CE

Table 17
PM-to-load cross-reference (Sheet 6 of 6)

PM type	Description	Hardware	SE06	SE07
SMA	SMA	AX74AA	XSC13BB	XSC13BB
SMS	SMS with MX77	MX77AA	ESS13BC	ESS20CE
STM	STM		MTMKA02	MTMKA02
SXFW	SX05 Firmware	SX05AA	SXFWAJ02	SXFWAK02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)		TKMTKA02	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	MX77AA AX74AA	UPFWNU01	UPFWNV03
UPFWQ	MX77 Universal Firmware Loads with extended distance capability (EDC)	MX77AA	UPFWQM01	UPFWQN03
XA-Core	Input/Output Processor (IOP)	LX03AA or LS03AB or LX03BA or LX03BB	XAIO01AK	XAIO01AK
	Processor element (PE)	LX02CA	XAPE01AG	XAPE01AG
	CMIC	LX05AB	PK12CE12	PK12CE12
	HIOP	LX04CA	XHIO03AC_508_LDLL	XHIO03AC_143_LDLL
	HIOP	LX17	XRC01DE_203	XRC01DE_203_PKG
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)			XRC20CU

PM Load History

Table 18, (Load history), lists each load type supported by the MSL-100 product line and versions of these load types for recent MSL-100 software releases. This table is included in this document to assist in planning PM updates. Use the PM-to-load cross-reference table, Table

17 on page 77, to identify the specific PMs and loads to be updated in the office.

Table 18
Load History (Sheet 1 of 4)

Load Type	Load Description	SE06	SE07
ADCM	Digital Carrier Module (DCM)	ADCMQA01	ADCMQA01
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02	ATMKA02
BLM	Basic Line Module (LM)	BLMTB01	BLMTB01
BTM	Basic TM8 (TM8)	BTMKA02	BTMKA02
BRLM	Basic Remote Line Module (RLM)	BRLMVA03	BRLMVA03
CMR	Class Module Resource Card (CMR)	CMR17B	CMR17B
CTM	Conference Trunk Module	MTMKA02	MTMKA02
DLM	Digital Line Module (DLM)	DLMXPM04	DLMXPM04
DTC7	Digital Trunk Controller with SS7: (MX77)	ED714BC	ED714BC
	Digital Trunk Controller PLUS w/SS7: (SX05) (DTC)	QD717AY1	QD717AY1
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01	DTUBAD01
DTUD	Digital Test Unit with 4X45 (EDTU)	DTUDAB02	DTUDAB02
DTUH	DTU for off-hook balance tests (DTU)	DTUHAA02	DTUHAA02
ECL	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	ECL14BC	ECL14BC
ED16	Enhanced Digital Recording, Access Module (DTM-16 min.)	ED16AA07	ED16AA07
EDCH	Standard Enhanced D-Channel Handler (CDH)	EDH19BE	EDH20CE
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE11	EDRMAE11
EIPE	Enhanced Intelligent Peripheral Equipment Load	EIPE17AH	EIPE17AH

Table 18
Load History (Sheet 2 of 4)

Load Type	Load Description	SE06	SE07
ENC	Enhanced Network (ENET)	ENC19B0	ENC20CQ
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02	ERLMVA02
ESA/MSA	ESA with MX45	MSA14BC	MSA14BC
ESS	SMS with MX77	ESS13BC	ESS20CE
ETC	Ethernet Interface Unit (EIU)	ETC19BO	ETC20CQ
F8C	8-Meg Frame Relay Interface Unit (FRIU)	F8C19BT	F8C20CU
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01	ILDRAG01
IOMR	Standard Input/Output Module (IOM)	IOMRBC01	IOMRBC01
IOM7	FX32CA – Sony SDT-7200 DAT	IOM7BC01	IOM7BC01
IOM9	FX32CA – Sony SDT-9000 DAT	IOM9BC01	IOM9BC01
IOME	4-GB DDU	IOMEBC01	IOMEBC01
IPE	IPE Standard	IPE09AB	IPE09AB
LCM	Basic ELCM/LCM (64 Kbyte)	LCM01D	LCM01D
	RLCM (64 Kbyte)	LCM01D	LCM01D
	RLCM (256 Kbyte)	XLCM18AW	XLCM18AW
LCME	Enhanced Line Concentrating Module w/ISDN (LCME)	LCME18AW	LCME18AW
LGC	LGC with ILD	QLI19BE	QLI20CE
LIU7	8-Meg LIU for 36-link SPP	ARS19BT	ARS20CU
	32-Meg Channel Access LIU	ATS19BT	ATS20CU
	2 card -8Meg	LRS19BT	LRS20CU
	32-Meg	LTS19BT	LTS20CU
LIM	Link Interface Module (LIM)	LPC19BO	LPC20CQ

Table 18
Load History (Sheet 3 of 4)

Load Type	Load Description	SE06	SE07
MPC4	1984 CCITT Compliant X.25 MPC (MPC)	MPC403AC	MPC403AC
MPCA	Asynchronous Multi-Protocol Controller (MPC)	MPCA03AC	MPCA03AC
MPCX	BX.25 (MPC)	MPCX33AB	MPCX33AB
MPC0	1980 CCIT Compliant X.25 (MPC)	MPC003AC	MPC003AC
MPF	9X17 Firmware Multi-port Cards	MPF19BO	MPF20CQ
MS	Message Switch	MUC19BO	MUC20CQ
MTM	Maintenance Trunk Module (MTM)	MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)	RMTMKA01	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04	MTULJ04
NRS	Network Interface Unit (NIU)	NRS19BO	NRS20CQ
OAU	OAU	MTMKA02	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	ODI19BE	ODI20CE_040825
ODT	PDTC/DTCO with CCS7 (MX77)	ODT19BE	ODT20CE_040825
PK	XA-Core CMIC	PK12CE12	PK12CE12
QDI	PDTC/DTCO with ISDN (SX05)	QDI19BE	QDI20CE
QDT	PDTC with SS7 (SX05)	QDT19BE2	QDT20CE
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI19BE	QLI20CE
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02	RDCMPA02
RMM	Remote Maintenance Module (RMM)	RMM10A	RMM10A
SMS	SMS with MX77	ESS13BC	ESS20CE

Table 18
Load History (Sheet 4 of 4)

Load Type	Load Description	SE06	SE07
STM	STM	MTMKA02	MTMKA02
SXFW	SX05 Firmware	SXFWAJ02	SXFWAK02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)	TKMTKA02	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	UPFWNU01	UPFWNV03
UPFWQ	MX77 and AX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQM01	UPFWQN03
XAPE-(XA-Core)	Processor element (PE) – NTLX02CA	XAPE01AG	XAPE01AG
XIOP (XA-Core)	Input/Output Processor	XAIO01AK	XAIO01AK
XHIOP (LX04CA)		XHIO02AK_508_LDLL	XHIO03AC_143_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 Kbyte)	XLCM18AW	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC19BT	XRC19BT
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM219BE	XM220CE
XRI	AX74 Domestic Cabinetized Remote Cluster Controller w/ISDN (RCC2)	XRI17AY	XRI17AY
XRC01	XA-Core-HIOP LX17AA		XRC01DE_203_PKG
XRC20	XLIU	XRC19BT	XRC20CU
XSC	XPM Plus for SMA (SMA)	XSC13BB	XSC13BB

Update Procedures

Update procedures

Purpose

The procedures in this chapter describe how to update Peripheral Modules (PM) and other hardware types during the PM update process.

Note: This document only describes the update procedures that are unique to Meridian SL-100 Peripheral Modules (PM) and hardware types (that is, the DLM and IPE). However, many other DMS Peripheral Modules are also supported off the Meridian SL-100. For information about updating Meridian SL-100 Peripheral Modules not described in this document, refer to the *DMS Peripheral Module Software Release Document.*

The summary of procedures in this chapter are flowcharts which represent a high-level-summary of the steps required to update PMs. Please use the steps of procedures in this chapter for detailed information regarding PM updating.

Attention

ATTENTION
The examples in this document are shown for reference purposes only.

Note: If the CD label text indicates *Patches: Yes*, the CD includes the required Post-Release Software Updates (PRSU) for XMS-based Peripheral Module (XPM) and Integrated Service Node (ISN) load files.

Restoring call processing application files

Application

Complete this procedure when the final shipment of software arrives.

ATTENTION
Do not perform this procedure for a platform-only upgrade.

Prerequisites

You must have the latest software on CDROM/DVD.

Required information

None.

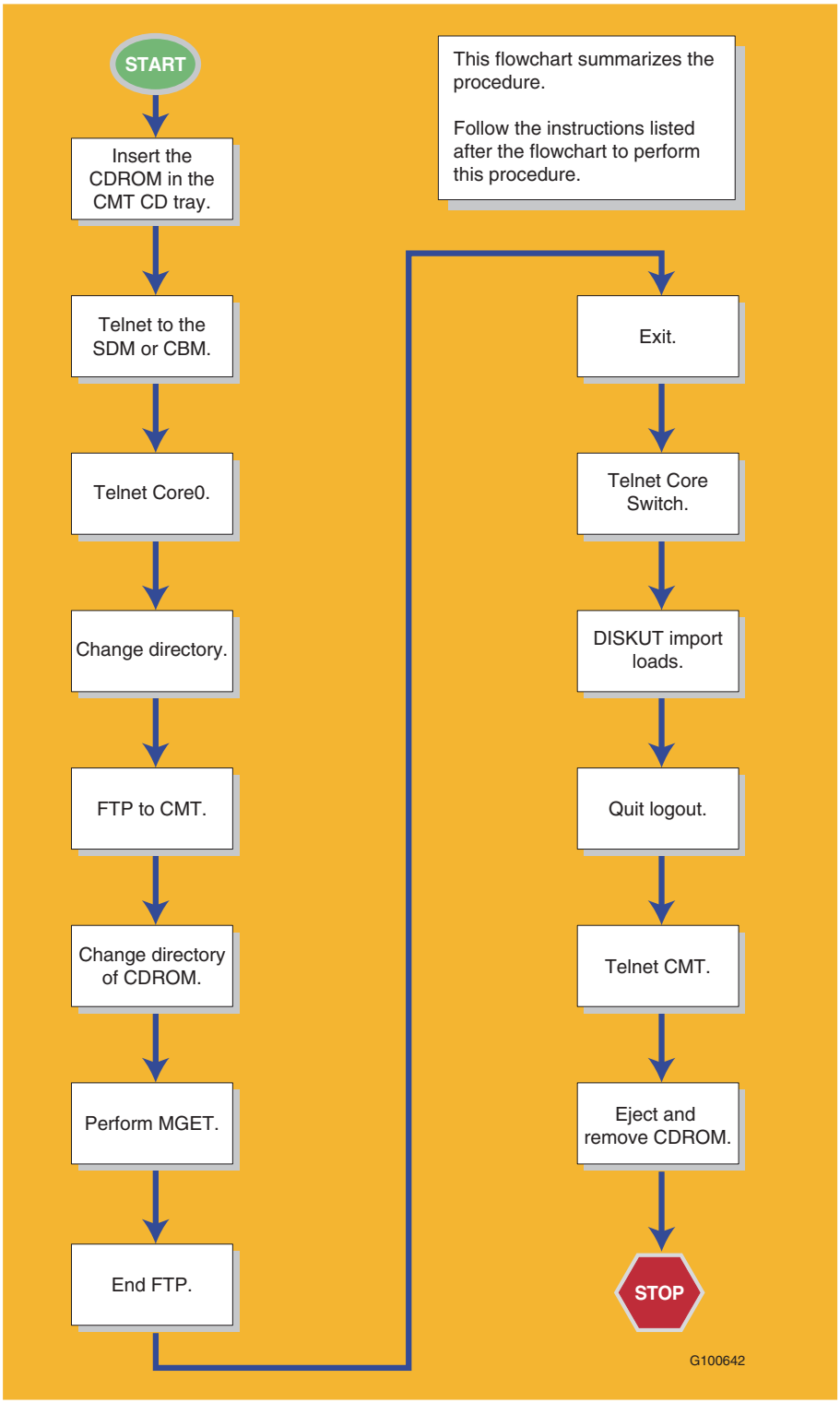
Update sequence

The following figure illustrates interfaces to use when installing upgrade software from a CDROM.

Notes

None.

Figure 1
Summary of procedure



Procedure 1
Restore call processing application files

SITE — At the CS 2000 Management Tools server (CMT)

1 Insert the CD containing the PMLOADS into the CDROM tray.

2 Log into the Core Manager or CBM

```
>telnet <CBM_IP_Adress>
```

username – root

Password – <root_password>

From the CBM

3 Telnet to core0.

```
#> telnet core0
```

The operating system prompt is returned:

Figure 2
Example

```
[mtc@hostname mtc]$
```

4 Change directory to the volume where the PMLOADS will reside:

```
> cd /3PC/<sd01>/<PMLOADS_volume>
```

Example
> cd /3PC/sd01/pmloads

5 Open an FTP session to the CS 2000 Management Tools server and log in:

Note: Log in to the CS 2000 Management Tools server as a user with privilege to change directory and transfer files with FTP.

```
> ftp <CMT_IP_Adress>
```

Enter hostname:

```
> maint
```

Enter password:

```
> maint
```

Figure 3
Example

```
[mtc@10.40.44.67 image0]$ ftp <cs_2000_mgmt_tools_ip>
Connected to <cs_2000_mgmt_tools_ip>.
Name (hostname:mtc): maint
331 Password required for maint.
Password:
230 User maint logged in.
ftp>
220 ProFTPD 1.2.8 Server (Authorized Use Only) [hostname]
```

6 Change directory (cd), list the file size (ls), change the mode to binary (bin), turn the prompt off (prompt), and get the file (mget):

```
ftp> cd /cdrom/cdrom0
ftp> ls
ftp> bin
ftp> prompt
ftp> mget *
```

Note: Do not transfer a file with a name longer than 32 characters.

Note: The get command can be used to retrieve a single file.

Example
ftp> get EDH20CE.bin1024

Figure 4
Example

```
ftp> cd /cdrom/cdrom0
250 CWD command successful.
ftp> ls
ERS20CE.img1020
ENX20CE.img1020
...
LRS20CE.img1020
MPF20CE.bin138
QLI20BT.bin1024
ftp> bin
200 Type set to I.
ftp> prompt
Interactive mode off.
ftp> mget *
local:
200 PORT command successful
150 Opening data connection for
ERS20CE.img1020 (binary mode) (5107140
byt
226 Transfer complete.
150 Opening data connection for
ENX20CE.img1020 (binary mode) (3913740
byt
226 Transfer complete.
......
.......
```

7 End the FTP session by typing:

ftp> bye

At the core0 prompt

8 Type **exit** to return to the CBM session

> exit

Figure 5
Example

```
[mtc@hostname mtc]$ exit
```

At the CBM prompt

9 Telnet to the CM session

#> telnet cm

Use “admin” for both username and password.

10 Enter diskut

>diskut

At diskut

11 Import the PMLOADS

```
> IMPORT SD01<PMLOADS_VOLUME>
```

Note: The PM load files are imported from the native file system into the call processing application file system. If the disk does not have enough space, a prompt to increase the volume size is presented.

Figure 6
Example

```
DISKUT:

> IMPORT SD01PMLOADS
Attempting to import 24 files selected on SD01PMLOADS.
Imported ERS20CE.img1020 as ERS20CE IMAGE 1020
Imported ENX20CE.img1020 as ENX20CE IMAGE 1020
...
Imported MPF20CE.bin138 as MPF20CE BIN 128
Imported QLI20BT.img1024 as QLI20BT IMAGE 1024
Imported 24 files successfully of 24 attempts on SD01PMLOADS
```

12 Once the IMPORT has completed, type the following to return you to the CBM prompt:

```
> quit all
> logout
```

At the CBM prompt

13 Log in to the CMT

```
#> telnet <CMT_IP_Address>
```

(Where username and password both are “maint”.)

Figure 7
Example

```
Trying <hostname>...
Connected to <hostname>.
Escape character is "^]".
Authorized use only, activities logged.
login: username
Password: <password>
Last login: Fri Jan 30 12:48:10 from <otherhost>
prompt:>
```

14 Eject the CD

```
# eject
```

15 Remove the disk from the tray

This procedure is now complete

Upgrading the DLM Module

Application

CAUTION
Possible service interruption
Perform this procedure during a maintenance window or a period of low traffic.

Use this procedure to update the digital line module (DLM).

Prerequisites

Perform the procedures “Preparing for a PM update” and “Starting a PM update shift” in this document to meet the following prerequisites for this procedure:

- The new load name is datafilled in table PMLOADS.
- An office image has been taken in the last 24 hours.
- All PM logs are enabled.
- The DLM is in-service.
- The DLM successfully passed its last REX test within the last two weeks.
- Automatic REX testing is suspended in the office.

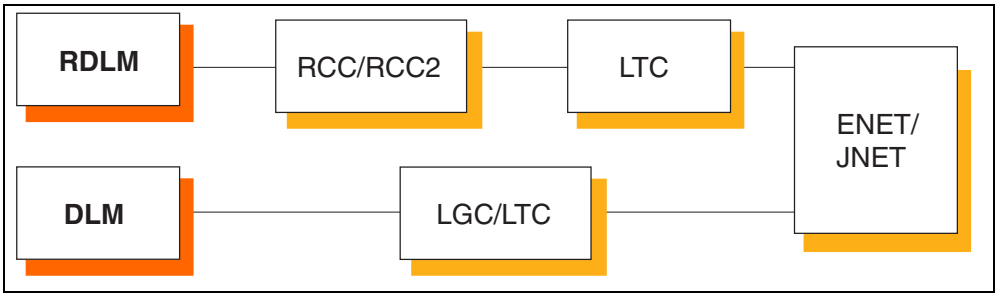
Required information

None.

Update sequence

The following figure illustrates a possible node configuration for the DLM. Serving PMs must be updated after the DCM or DES.

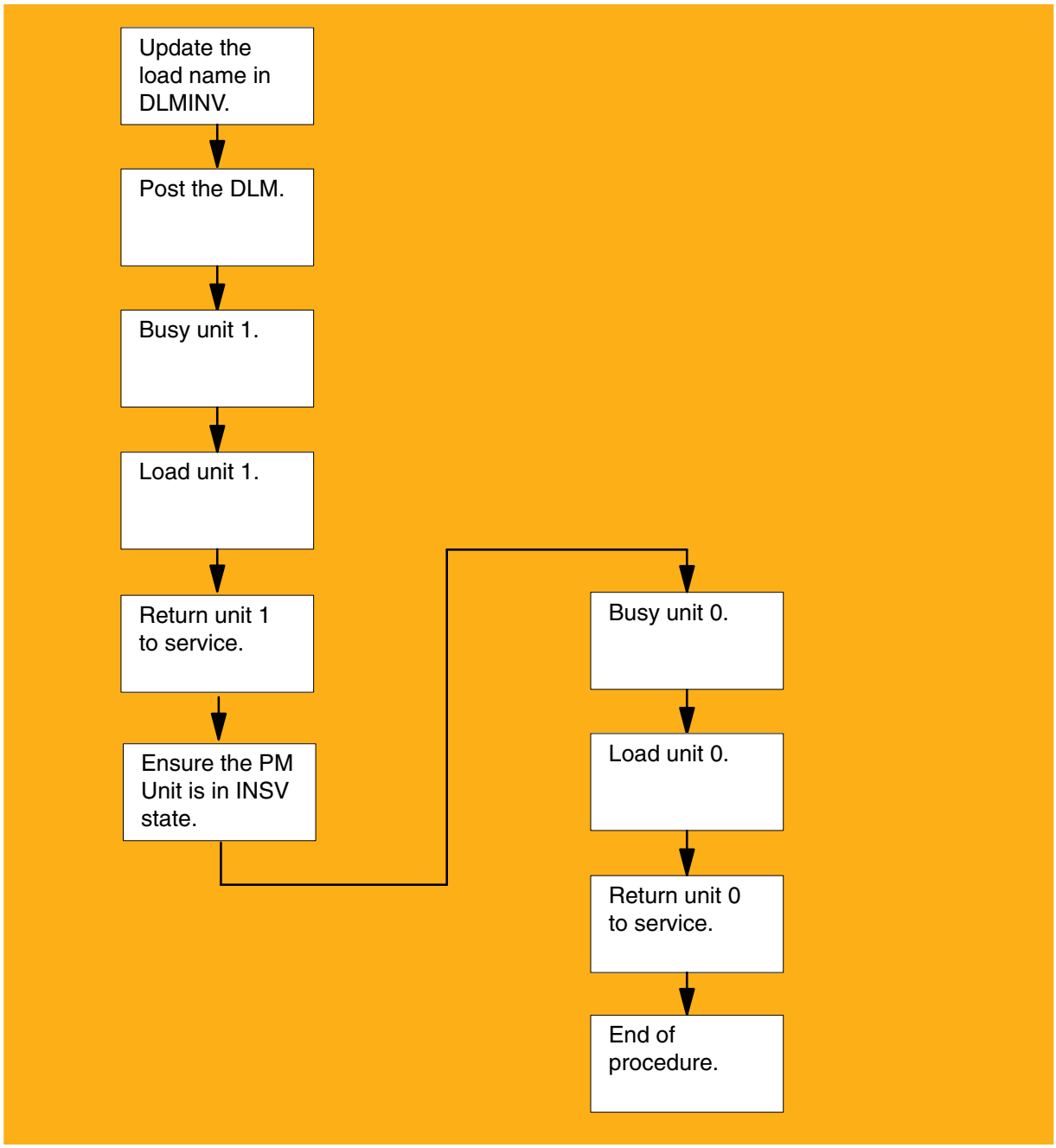
Figure 8
Node configuration for DLM



Notes

None.

Figure 9
Summary of procedure



Procedure 2
Upgrade the DLM Module

At the CI level of the MAP display

1 Select a DLM to update.

2 Review the introduction to this procedure. All prerequisites must be met before beginning this procedure.

3 Update the DLM inventory table by performing the following steps.

a Access the DLM inventory table by typing

```
>TABLE DLMINV
```

and pressing the **Enter** key.

b Position on the datafill tuple for the PM to be updated by typing

```
>POS site_name frame_no dlm_no
```

and pressing the **Enter** key.

where

site_name	is the name of the site
frame_no	is the number of the frame
dlm_no	is the number of the PM

c Change the load name to the new load name by typing

```
>CHA LOAD new_load
```

and pressing the **Enter** key.

where

new_load	is the name of the new load

d Confirm the change by typing

```
>Y
```

and pressing the **Enter** key.

e Exit the table by typing

```
>QUIT
```

and pressing the **Enter** key.

4 Access the PM level of the MAP display by typing

```
>MAPCI; MTC; PM
```

and pressing the **Enter** key.

5 Post the PM by typing

```
>POST DLM site_name frame_no shelf_no
```

and pressing the **Enter** key.

where

site_name	is the site of the DLM
frame_no	is the number of the frame (0-511)
shelf_no	is the number of the shelf (0 or 1)

Note: The field site_name is optional with host-based DLMs.

6 Busy unit 1 by typing

```
>BSY UNIT 1
```

and pressing the **Enter** key.

7 Load unit 1 by typing

```
>LOADPM UNIT 1 CC
```

and pressing the **Enter** key.

8 Return unit 1 to service by typing

```
>RTS UNIT 1
```

and pressing the **Enter** key.

9 Ensure unit 1 is in service (INSV).

10 Busy unit 0 by typing

```
>BSY UNIT 0
```

and pressing the **Enter** key.

11 Load unit 0 by typing

```
>LOADPM UNIT 0 CC
```

and pressing the **Enter** key.

12 Return unit 0 to service by typing

```
>RTS UNIT 0
```

and pressing the **Enter** key.

13 You have successfully updated the DLM. If there are other PMs or hardware types to update during this shift, go to the appropriate procedure in this document. If this is the last PM or hardware type to be updated during this shift, go to “Finishing a PM update shift” in this document.

This procedure is now complete

Updating the IPE

Application

CAUTION
Possible service interruption
Perform this procedure during a maintenance window or a period of low traffic. Because the IPE is not redundant, all traffic will be lost during this procedure.

Use this procedure to update the Intelligent Peripheral Equipment (IPE) module.

Prerequisites

This procedure requires that the office and the IPE to be updated meet the following conditions prior to updating:

- The new load name is datafilled in table PMLOADS.
- An office image has been taken in the last 24 hours.
- All PM logs are enabled.
- The IPE is in-service.
- Automatic REX testing is suspended in the office.

Performing the procedures “Preparing for a PM update” and “Starting a PM update shift” in this document will ensure these prerequisites are met.

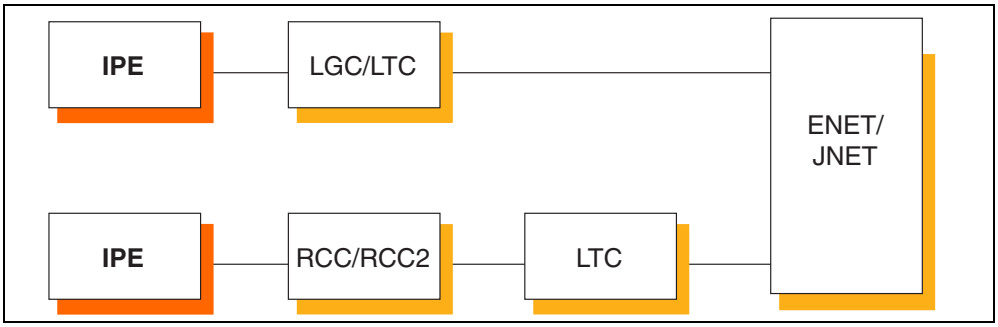
Required information

Be sure that you know whether you are upgrading from an NT7DO7AC controller card to an NT7DO7BA controller card, or whether you are just upgrading the IPE software. When upgrading to an NT7DO7BA, follow the IM section of 65-5466.

Update sequence

The following figure illustrates a possible node configuration for the IPE.

Figure 10
Node configuration for IPE



Subtending PMs

None.

Serving PMs

The following table lists possible serving PMs to the IPE. Any subtending PMs in the node must be updated before the IPE.

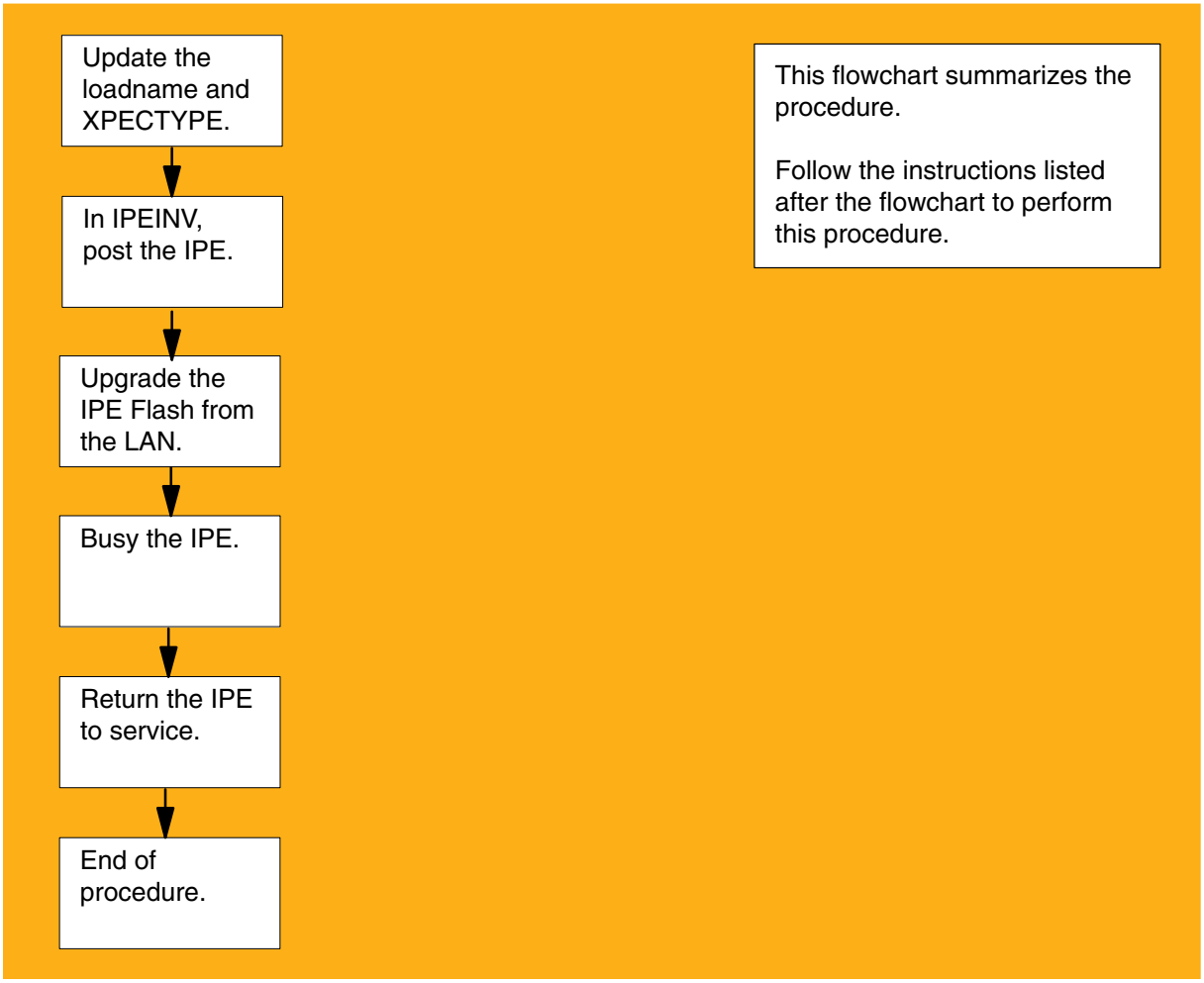
Table 19
Possible serving PMs to the IPE

PM	Description
LGC	Line group controller
LTC	Line trunk controller
RCC	Remote cluster controller
RCC2	Remote cluster controller 2

Notes

None.

Figure 11
Summary of procedure to update an NT7D07BA controller card for MSL11 and up



Procedure 3
Update the IPE

Attention

ATTENTION

Follow office policy if a command fails during this procedure. If an RTS command fails for example, office policy can require you to contact the next level of support, terminate all update activities for the shift, troubleshoot the problem and return the PM to service, or select another PM to update. Office policy can vary by PM type.

At the CI level of the MAP display

1 Select an IPE to update.

2 Review the introduction to this procedure. All prerequisites must be met before beginning this procedure.

3 Access the IPE inventory table by typing

```
>TABLE IPEINV
```

and pressing the **Enter** key.

4 Position on the datafill tuple for the IPE to be updated by typing

```
>POS IPENM ipe_no
```

and pressing the **Enter** key.

where

ipe_no is the number of the IPE (0 to 511)

5 **NT7D07AC:** Change the load name to the new load name by typing

```
>CHA LOAD new_load
```

and pressing the **Enter** key.

where

new_load is the name of the new load

NT7D07BA: Change the following fields:

LOAD: Datafill the required IPE load by typing, for example:

```
>CHA LOAD eipe11at
```

and pressing the **Enter** key.

TUPLE TO BE CHANGED:

```
HOST    01   0    7     IPEC   0  1   A  0     8D37DC EIPE11AT
    LTC   0    HIPE N    (7) (5) (6) (4)$     8 STANDARD
```

Change the following fields:

XPECTYPE: Enter ENHANCED for the NT7D07BA

XPECTYPE: STANDARD

```
>CHA CNTRLCD enhanced
```

STATE: Enter ENABLED if there is a LAN connection required. Enter DISABLE if no LAN connection is required.

STATE:

>ENABLED

If STATE IS ENABLED, enter IPADDR (which is the IP address for the card), SUBNET and DFLT_GWY (Default Gateway) from you facility group.

IPADDR:

>47 198 136 125 (example)

SUBNET:

>255 255 255 0 (example)

DFLT_GWY

>47 198 128 1 (example)

The following message appears:

```
************PLEASE BE AWARE***********
Changes from STANDARD to ENHANCED or changes to the IP
Port information requires the IPE to be BSYed and RTSd.
```

6 Confirm the change by typing

>Y

and pressing the **Enter** key.

Note: The PM will change state to ISTb. This is due to the load mismatch between the inventory table and the PM. Continue with this procedure.

7 Exit the table by typing

>QUIT

and pressing the **Enter** key.

8 Access the PM level of the MAP display by typing

>MAPCI; MTC; PM

and pressing the **Enter** key.

9 Post the IPE by typing

>POST IPE ipec_no shelf_no

and pressing the **Enter** key.

where

ipec_no	is the number of the IPE column (0 to 127
shelf_no	is the number of the IPE shelf (0-3)

CAUTION
The BSY command takes subscribers out of service.
Busying the posted IPE takes all subscribers on that IPE out of service.

10 Busy the selected IPE by typing

>BSY PM

and pressing the **Enter** key.

11 Enter YES to confirm by typing

```
>YES
```

and pressing the **Enter** key.

12 NT7D07AC: Load the selected IPE by typing

```
>LOADPM
```

and pressing the **Enter** key.

NT7D07BA: This step can be skipped. The NT7D07BA already comes with an initial load in Flash Memory.

13 Return the selected IPE to service by typing

```
>RTS PM
```

and pressing the **Enter** key.

14 **NT7D07AC:** You have successfully updated the IPE. If there are other PMs or hardware types to update during this shift, go to the appropriate procedure in this document. If this is the last PM or hardware type to be updated during this shift, go to “Finishing a PM update shift” in this document.

15 **NT7D07BA:** Instructions to upgrade the NT7D07BA flash through the LAN must be obtained from Nortel Networks TAS until the Optivity Telephony Manager (OTM) is available. Once OTM is available, all flash upgrades will be performed by OTM.

This procedure is now complete

List of terms

CCS7
Common Channel Signaling 7. A digital message-based network signaling standard, defined by the CCITT, that separates call signaling information from voice channels so that interoffice signaling is exchanged over a separate signaling link.

channelized access
A method of providing direct access between a Common Channel Signaling 7 (CCS7) network and the application-specific units (ASU) in a link peripheral processor (LPP) without the need for channel banks. A network interface unit (NIU), with either a junctored network (JNET) module or an enhanced network (ENET) module, provides channelized access between the CCS7 network and ASUs.

CI level
Command interpreter level. Initial MAP level from where commands are entered.

CI
A support operating system component that functions as the main interface between machine and user.

CM
Computing module. The processor and memory of the dual-plane combined core (DPCC) used by Meridian SL-100 switch. Each CM consists of a pair of central processing units (CPUs) with associated memory that operate in a synchronous matched mode on two separate planes. Only one plane is active; it maintains overall control of the system while the other plane is on standby.

CMR
CLASS modem resource. The CMR card is used by Custom Local Area Signaling Services (CLASS) features to transmit calling number and name information to customer premises equipment (CPE).

C-side
Central side. The side of a node that faces away from the peripheral modules (PM) and toward the central control (CC). Also known as control side. *See also* peripheral side (P-side).

CTM
Conference trunk module. The NT1X81 card in the maintenance trunk module (MTM) or service trunk module (STM).

datafill
A term that denotes:

- the entry of data into tables
- the data entered into tables

DCH	D-channel handler. A card in an ISDN line group controller (LGCI) or in an ISDN line trunk controller (LTCI) that provides the primary interface to all D-channels. The DCH also performs a Q.921 link access procedure on the D-channel (LAPD) layer 2 processing. The DCH is connected permanently to an ISDN loop and receives or sends messages on the signaling/packet data channel.
DCM	Digital carrier module. A peripheral module (PM), located in a digital carrier equipment (DCE) frame, that provides speech and signaling interfaces between a DS30 network port and digital trunks. A DCM is provisioned with up to five line cards.
DES	Digital echo suppressor. A voice-activated device that monitors the level of digital speech signals on the transmit and receive paths between interconnected trunk circuits. The DES automatically applies attenuation, when necessary, to reduce echo effects on long-haul trunk circuits.
DEST	A PRSM destination. A DEST is a single patchable entity in a Meridian SL-100 system.
DESTD	The name of a DEST.
DTC	Digital trunk controller. A peripheral module (PM) that connects DS30 links from the network with digital trunk circuits.
DTCI	Digital trunk controller with ISDN. A peripheral module (PM) that connects DS30 links from the network with ISDN digital trunk circuits.
DTM	Digital trunk module. The NT1X80 card in the maintenance trunk module (MTM) or service trunk module (STM).
DTU	Digital test unit. A card in the maintenance trunk module (MTM) used to perform bit error rate tests (BERT) on trunk circuits.
EDCH	Enhanced D-channel handler. A card in an ISDN line group controller (LGCI) or in an ISDN line trunk controller (LTCI) that provides the primary interface to all D-channels. The EDCH also performs Q.921 LAPD layer 2 processing. It is connected permanently to an ISDN loop, and receives or sends messages on the signaling and packet data channel. Similar to the DCH, the EDCH has a memory upgrade from 1 Mbyte to 4 Mbyte, a clock speed upgrade from 16 MHz to 20 MHz, and a data bus upgrade from a 16-bit width to 32 bits. *See also* DCH
EIU	Ethernet interface unit. The unit that connects the Meridian SL-100 system to the local area network.
ENET	Enhanced network. A channel-matrixed time switch that provides pulse code modulated voice and data connections between peripheral modules (PM). ENET also provides message paths to the DMS-bus components.
ESA	Emergency stand-alone. An emergency service that permits local calling within a remote switching center (RSC) or remote line concentrating module (RLCM) in the event of loss of communication with the host office.

exec	A subprogram resident in software and made up of primitive instructions.
FRIU	A frame relay interface unit (FRIU) is the application-specific unit (ASU) for Dataspan frame relay service. It provides the physical connection for T1 carriers at the link peripheral processor (LPP).
ILD	ISDN line drawer. A drawer type that can be installed in Meridian SL-100 remotes in the North America market. The ILD houses up to 28 BRI ISDN lines.
InSv	In service. Refers to the state of switching equipment when it is performing normal call processing functions (that is, providing subscriber service).
ISDN	Integrated services digital network. A set of standards proposed by the CCITT to establish compatibility between the telephone network and various data terminals and devices. ISDN is a communications network that provides access to voice, data, and imaging services from a single type of connector.
ISTb	In service trouble. This state is imposed on a unit that indicates trouble but that can still process calls.
LCM	Line concentrating module. A peripheral module (PM) that connects the line trunk controller (LTC) or line group controller (LGC) and up to 640 subscriber lines, using 2 to 6 DS30A links.
LCME	Enhanced line concentrating module with ISDN. A dual-unit peripheral module (PM) that terminates ISDN 2B1Q (two binary one quaternary) U-type (single slot) lines, ISDN S/T-type lines, plain old telephone service (POTS) lines, electronic business set (EBS) lines, and Datapath lines. The LCME also provides access to the ISDN B-, D-, and M-channels. The LCME supports 480 POTS or EBS lines, or 240 Datapath lines.
LGC	Line group controller. A peripheral module (PM) that connects DS30 links from the network to line concentrating modules (LCM).
LGCI	Line group controller with ISDN. A peripheral module (PM) that connects DS30 links from the network.
LIM	Link interface module. A peripheral module (PM) that controls messaging between link interface units (LIU) in a link peripheral processor (LPP). The LIM also controls messages between the LPP and the DMS-bus component. A LIM consists of two LIM units and two frame transport buses (F-bus). The two LIM units operate in a load-sharing mode with each other.
linkset	A term that denotes: • a group of links related to one application instance • a collection of links connecting two adjacent signaling points in CCITT no. 6 signaling (N6), common channel interoffice signaling no. 6 (CCIS6), and Common Channel Signaling 7 (CCS7).

LIU7	CCS7 link interface unit. A peripheral module (PM) that processes messages entering and leaving a link peripheral processor (LPP) through an individual signaling data link. Each LIU7 consists of a set of cards and a paddle board provisioned in one of the link interface shelves of the LPP.
LM	Line module. A peripheral module (PM) that provides speech and signaling interfaces for up to 640 subscriber lines. The LM consists of line drawers, a line module controller (LMC), and a frame supervisory panel (FSP).
LTC	Line trunk controller. A peripheral module (PM) that is a combination of the line group controller (LGC) and the digital trunk controller (DTC) and provides all the services offered by both. It supports line concentrating module (LCM) and AB trunks.
LTCI	Line trunk controller with ISDN. A peripheral module (PM) that combines the line group controller (LGC) and the digital trunk controller (DTC) and provides all the services offered by both. It also supports ISDN channeling.
MAP	Maintenance and administration position. A group of components that provides a user interface between switch personnel and the Meridian SL-100 switch. The interface consists of a video display unit (VDU) and keyboard, a voice communications module, test facilities, and special furniture.
MTU	Magnetic tape unit. A general term used to describe the magnetic tape recording function as a maintenance tool. The MTU can be any type of magnetic tape drive that functions in this way. The MTU is also known as tape unit.
MTM	Maintenance trunk module. In a trunk module equipment (TME) frame, a peripheral module (PM) that is equipped with test and service circuit cards and contains special buses to accommodate test cards for maintenance. The MTM provides an interface between the Meridian SL-100 switch digital network and the test and service circuits.
ManB	Manual busy. A busy state manually imposed on a trunk by operating a panel control or entering a command at the keyboard of a visual display unit.
MPC	Multiprotocol controller. A general-purpose card that allows data communications between an Meridian SL-100 switch and an external computer (for example, between a billing computer and an Meridian SL-100 switch). The MPC card resides on the I/O controller (IOC) shelf. MPC card protocol software is downloaded from the MSL-100 CPU and then used to support software routines for Data Packet Network (DPN) communications.
MS	Message switch. A high-capacity communications facility that functions as the messaging hub of the dual-plane combined core (DPCC) of an Meridian SL-100 SuperNode processor. The MS controls messaging between the DMS-bus components by concentrating and distributing messages and by allowing other DMS-STP components to communicate directly with each other.

MTA	Metallic test access. A hardware device providing metallic connections between test access points (for example, in subscriber line circuits in a digital switching center) and various types of test equipment.
MTC	Maintenance level. A MAP level used to access several areas of the Meridian SL-100 switch, such as central control (CC), peripheral modules (PM), the lines maintenance subsystem (LNS), and others.
NAV	An audio processor that uses Flexible Vocabulary Recognition to support telecommunications services, including operator services.
NIU	Network interface unit. An Meridian SL-100 system application-specific unit (ASU) that provides channelized access for F-bus resident link interface units (LIU) using a channel bus (C-bus). The NIU resides in a link peripheral processor (LPP) frame.
OAU	Office alarm unit. A peripheral module (PM) located in a trunk module equipment (TME) frame. The OAU is similar to the maintenance trunk module (MTM), but is equipped with circuit cards that provide an interface with various types of office alarm circuits instead of test circuits.
ONP	One-night process. An eight-week process that culminates in the overnight application of software to the switch.
patch	An incremental change to software applied after the load has been compiled.
PCL	Product computing load. A compiled software load that replaces the batch change supplement (BCS). A PCL consists of features selected from the NA development stream intended for a particular Meridian SL-100 system application in a particular market. Every PCL with the same name is the same in terms of software content.
PM	Peripheral module. Any hardware module in the Meridian SL-100 switch that provides an interface between external line, trunk, or service facilities. A PM contains peripheral processors (PP) which perform local routines, thus relieving the load on the CPU.
PM firmware	The peripheral module (PM) operating system. Software residing in the PM consists of the following classes: • software residing in read-only memory (ROM) that satisfies the customary definition of firmware • Software loaded into random access memory (RAM) when the peripheral is put into service • software that consists of execs, which are resident subprograms made up of primitive instructions
PMUPGRADE	PANTHER PM upgrade file copy and planning, CI super command.

PPXL	Pre-patched XPM load. An XPM load that has corrective PRSUs built into the files. Functionally, PPXLs are the same as base loads; they are incremental up-issues of their respective base loads.
PRL	Functionality that delivers update loads to peripheral modules.
PRSM	Post Release Software Manager. The tool that applies software updates after the milestone release of a load.
PRSU	Post release software unit. A software change distributed after the milestone release of a load.
PRSUID	The name of a PRSU.
P-side	P-side. The side of a node facing away from the central control (CC) and toward the peripheral modules (PM).
RCC	Remote cluster controller. A dual-shelf peripheral module (PM) that provides a master controller for all units at the remote switching center (RSC) and is, in turn, controlled by the host line trunk controller (LTC).
RCC2	Remote cluster controller 2. A remote cluster controller (RCC) for the remote switching center-SONET (RSC-S). The RCC2 is an enhanced RCC that provides the central control of the RSC-S. It is connected to the host by metallic or fiber connections. The RCC2 is a single-shelf peripheral module (PM) that provides the same functions for all units at the RSC.
RLCM	Remote line concentrating module. An equipment frame that provides an interface between two to six DS-1 links (from the line group controller (LGC) at the host office) and up to 640 subscriber lines (connected locally). An RLCM is equipped with one line concentrating module (LCM), a remote maintenance module (RMM), and a host interface equipment (HIE) shelf.
RLM	Remote line module. A pair of remotely located line modules that provide an interface (over two to eight DS-1 links) between a digital carrier module (DCM) at the host office and up to 1280 users.
RMM	Remote maintenance module. A peripheral module (PM) with a configuration similar to that of the maintenance trunk module (MTM). An RMM accommodates up to 12 service and test cards.
SCM-100	Subscriber carrier module-100. A family of four peripheral modules (PM) that connect three types of remote terminals with Meridian SL-100 switches. The SCM-100 family consists of: subscriber carrier module-100 rural (SMR), subscriber carrier module-100S (SMS), subscriber carrier module-100S remote (SMSR), and subscriber carrier module-100 urban (SMU).
SFDEV	Store file device in the Meridian SL-100 switch.
SLM	System load module. A mass storage system in a Meridian SL-100 system processor that stores office images. From the SLM, new loads or stored images can be booted into the computing module (CM).

SMA	Subscriber carrier module-100 access. The LTC-based Meridian SL-100 peripheral that provides common signaling channel/embedded operations channel (CSC/EOC) link management, DS-1 facility management, and the interface to the DMS-core component.
SMA2	Subscriber carrier module-100 access 2. A subscriber carrier module-100 access (SMA) that supports 28 DS-1 links.
SMS	Subscriber carrier module-100S A subscriber carrier module that provides an interface between the remote concentrator SLC-96 of an SLC-96 system and the Meridian SL-100 switch.
SMSR	Subscriber carrier module-100S remote. A subscriber carrier module that provides an interface between the remote concentrator SLC-96 (RCS) and a remote switching center (RSC).
SMU	Subscriber carrier module-100 urban. A subscriber carrier module that provides an interface between the remote carrier urban (RCU) of a switch and the Meridian SL-100 switch.
SPM	Spectrum Peripheral Module. The SPM is a multi-application high-speed Series III PM type and provides customized network access capabilities.
STM	Service trunk module. A peripheral module (PM) in the Meridian SL-100 switch that consists of two compact maintenance trunk modules (MTM).
SWACT	Switch activity. A switch in an Meridian SL-100 fault tolerant system that changes the states of two identical devices devoted to the same function. In other words, an SWACT makes an active device inactive and an inactive device active.
SWUPGRADE PM	PANTHER PM upgrade execution engine, CI super command.
SysB	System busy. A term that denotes: • a busy state that is automatically imposed by equipment in response to a fault condition • the status of trunk circuits that have failed the tests performed by the automatic trunk testing facilities. Failed trunks are taken out of service and added to a list of SysB trunks that can be accessed by operating company personnel. • he equipment state that occurs when the central control has removed equipment from normal service.
TM	Trunk module. A peripheral module (PM) in a trunk module equipment (TME) frame that provides speech and signaling interfaces between a DS30 network port and analog trunks.
TM8	A trunk module (TM) with 120 pairs (eight-wire circuits) of conductors wired to the distribution frame.

unit	One of two parts of an extended multiprocessor system (XMS)-based peripheral module (XPM) or a line concentrating module (LCM). Each unit has independent processing capabilities. The peripheral module (PM) has an active unit and an inactive unit. The active unit does all the processing while the inactive unit is on standby.
X.25	A CCITT-defined network layer protocol that is used in packet switching to establish, maintain, and clear virtual circuit connections between an ISDN terminal and a destination in the packet switching network.
X.75	A CCITT-defined network layer protocol that is used in packet switching to establish, maintain, and clear virtual circuit connections between packet switching networks.
XLCM	A line concentrating module (LCM) with a large memory (256 kbyte) load.
XLIU	X.25-X.75 line interface unit. An X.25-X.75 link interface unit is the application-specific unit (ASU) for Dataspan frame relay service. It provides the physical connection for T1 carriers at the link peripheral processor (LPP).
XMS	Extended multiprocessor system. A workstation-based microcomputer with networking capabilities based on a Motorola 68000 microprocessor with system software written in Bell-Northern Research (BNR) Pascal.
XPM	XMS-based peripheral module. The generic name for peripheral modules (PM) that use the Motorola 68000 microprocessor. An XPM has two processors in a hot-standby configuration: a master processor (MP) and a signaling processor (SP).
XPM-Plus	XMS-based peripheral module product life upgrade strategy. The integration of a new processor complex into the existing XPM architecture.

Meridian SL-100

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