NORTEL

Communication Server 2100

Peripheral Module Release Document RELDOC

555-4001-599

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Contents

New in this release

The following sections detail what's new in *Communication Server 2100 Peripheral Module Release Document RELDOC* (555-4001-599) for release SE09.

- "Features" (page 5)
- "Other changes" (page 5)

Features

There are no feature changes that affect this document for release SE09.

Other changes

See the following section for information about changes that are not feature-related.

PM loads changed

"Summary of PM load changes" (page 5)shows the existing peripheral module (PM) loads that are updated for SE09 (see "Load-to-release cross-reference" (page 76), "PM-to-load cross-reference" (page 80), and "Load History" (page 88)). A new high-speed Input/Output Module (IOM) load, IOMHAX01, is also added.

Summary of PM load changes

SE08 release	SE09 release
QLI20CE_050307	QLI22AO
ETC21BK	ETC22BN
ENC21BK	ENC22BN
F8C20CU	F8C22BS
LPC21BK	LPC22BN
NRS21BK	NRS22BN
ARS21BM	ARS22BS
ATS21BM	ATS22BS
LRS21BM	LRS22BS

SE08 release	SE09 release
LTS21BM	LTS22BS
MPF20CQ	MPF22BN
MUC21BK	MUC22BN
ODT20CE_040825	ODT22AO
XM220CE	XM222AO
ESS20CE	ESS22AO
SXFWAK02	SXFWAL01
XREC01EG_04493_PKG	XREC01FC_05185_PKG
XHIO03BB_04493_LDLL	XHIO03CC_05185_LDLL
XRC21BM	XRC22BS
EDH20CE	EDH22AO

About this document

Purpose and audience

This document is designed as a supplement to the *DMS Peripheral Module Software Release Document* (297-2663-599). You can view *DMS Peripheral Release Documents*, (PMReldocs) at www.nortel.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 Digital Line Module (DLM) and Intelligent Peripheral Equipment (IPE). For information about all other PMs, refer to the *DMS Peripheral Module Software Release Document* (297-2663-599). These documents provides load names, update procedures and other release-specific information. Use these documents when you update an office to one of the following Product Computing-Module Loads (PCL): SE06, SE07, SE08 or SE09.

This document contains the following sections:

- SE06 Load Line-up - use this chapter for offices upgrading to SE06.

- SE07 Load Line-up - use this chapter for offices upgrading to SE07.

- SE08 Load Line-up - use this chapter for offices upgrading to SE08.

- SE09 Load Line-up - use this chapter for offices upgrading to SE09.

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

ATTENTION

To determine whether you have the latest version of this document, check the release information in the *Communication Server 2100 Commercial Systems Master Index of Publications* (555-4031-001).

How to use this document

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

- Review the section Overview of release on page 13, which provides release notes, load names, and other information critical to updating PMs and other hardware types.

- Review the overview of the update process in the *DMS Peripheral Module Software Release Document* (297-2663-599), which summarizes the update process and describes when to use each procedure in this document or the *DMS Peripheral Module Software Release Document*(297-2663-599).

- Review the overview of the automated update process in the *DMS Peripheral Module Software Release Document* (297-2663-599), which summarizes the new command interpreter (CI) level utility, PMUPGRADE.

- Perform the procedure in the *DMS Peripheral Module Software Release Document*(297-2663-599) to prepare for either a manual PM update or an automated PM update using PMUPGRADE.

- 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 in the *DMS Peripheral Module Software Release Document* (297-2663-599). Perform the procedure to start a PM update shift in the *DMS Peripheral Module Software Release Document* (297-2663-599) when you begin a PM update shift, and perform the procedure to finish a PM update shift in the *DMS Peripheral Module Software Release Document* (297-2663-599) when you complete a PM update shift.

Compliance with local policies

This document is written for all Meridian SL-100 customers updating to an SE09 PCL. 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.

References in document

The following documents provide additional information:

- *DMS-100 Family Post-Release Software Manager (PRSM) Reference Guide* (297-8991-540)

- *DMS-100 Family XA-Core Maintenance Manual* (297-8991-510)

- *DMS Peripheral Module Software Release Document* (297-2663-599)

- *LGC/LTC, RCC2 Remote Firmware Upgrade* (IM 65-6364)

- *Upgrading the SPM* (NN10053461)

How procedures are organized

Each procedure in this document, and in the *DMS Peripheral Module Software Release Document* (297-2663-599), contains 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 steps to perform the procedure.

Overview of release

Purpose

This document provides release notes, load names, and other information critical to updating peripheral modules (PM) and other hardware types. Use this information when you perform the procedures for a manual PM update or a PM update using PMUPGRADE as documented in the *DMS Peripheral Module Software Release Document* (297-2663-599), and when you schedule the update of each PM and hardware type.

> *Note:* Refer to Peripheral Module Documentation at www.nortel.com (go to Technical Documentation > Helmsman Express > Peripheral Module Documentation) for the latest version of this document. New users must register.

Changes in update process

This section reflects changes in the PM update process.

XA-Core component firmware updates

> **ATTENTION**
> For optimal robustness, offices must update the computing module interface card (CMIC), the Ethernet input/output processor (EIOP) and the ATM multimode data interface (AMDI) firmware loads after the one-night process (ONP) for this release with the new release firmware load.

The extended architecture core (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 list for update procedures and firmware load names:

- *DMS-100 Family XA-Core Maintenance Manual* (297-8991-510) for firmware upgrade on an XA-Core component at the PE, IOP or CMIC maintenance and administration position (MAP) level.

- "PM to load cross-reference" (page 79) lists the applicable firmware load names for this release and previous releases.

- *DMS Peripheral Module Software Release Document* (297-2663-599) for XA-Core component 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 backup load. Refer to the *DMS Peripheral Module Software Release Document* (297-2663-599) for the procedure to update the MS with all other PMs, and for PM update sequence requirements.

XA-Core tape cartridge contains PM load and PRSU files

With the BASE13 software level, 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 prepatched extended peripheral module load (PPXL) files. When the XA-Core tape cartridge indicates *Patches: No*, the office receives applicable PRSUs through prior software delivery methods.

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

ENET update requirements with Spectrum Peripheral Module

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

When an SPM is on the Meridian SL-100 switch, perform a manual update for the enhanced network (ENET) 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 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 on the Meridian SL-100 switch.

Spectrum Peripheral Module update requirements

To update your SPM, refer to *Upgrading the SPM* (NN10053461) in the Spectrum Peripheral Module collection in Helmsman Express (go to Technical Documentation > Helmsman Express > Peripheral Module Documentation).

PPXL audit before manual update of table PMLOADS

For offices at MSL10 or higher and when the PMLOADS table is updated manually, you must perform an additional step for each prepatched extended peripheral module load (PPXL) file in the office. Use the Post-Release Software Manager (PRSM) LFAUDIT command to audit each PPXL before the PMLOADS table is updated. The LFAUDIT command identifies the post-release software updates (PRSU) in the PPXL to the PRSM database.

Use the procedure for preparing for a manual PM update in the *DMS Peripheral Module SofAlso, tware Release Document* (297-2663-599) to perform the LFAUDIT command. If the manual PM update procedure and the LFAUDIT command are used, PPXLs are successfully added to PMLOADS table. If the manual PM update procedure and the LFAUDIT command are not used, the maintenance and administration position (MAP) terminal displays an error message similar to the following example:

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

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

SLM tape cartridge contains PM load and PRSU files

The satellite distribution center (SDC) uses a backup volume format to manufacture the new system load module (SLM) tape cartridge. The procedure for preparing for a manual PM update in the *DMS Peripheral Module Software Release Document* (297-2663-599) describes the required multifile 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.

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 occurs:

- 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 is introducing these utilities over several releases; the upgrade path of your office determines the level of available functions.

PMUPGRADE automates the administration and planning phases of the PM update. SWUPGRADE PM automates the update phase of the PM update. Refer to the *DMS Peripheral Module Software Release Documented* (297-2663-599) for more information about automated PM updates.

SE06 release

Peripheral module loads

This release includes the following types of load files:

- peripheral module (PM)

- post-release software update (PRSU)

- prepatched extended multiprocessor system (XMS)-based peripheral module (XPM) load

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: Refer to Peripheral Module Documentation at www.nortel.com (go to Technical Documentation > Helmsman Express > Peripheral Module Documentation) for the latest version of this document. New users must register.

The load_type field identifies the type of load. This field consists of the first three to four characters of the load name, and can include any combination of letters or digits. "Naming conventions for PM load_type" (page 15) lists possible naming conventions for the load_type field.

Note: Refer to "Load History" (page 27) for a complete list of PM load types supported in this release.

Naming conventions for PM load_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. "Naming conventions for PM edition_code" (page 16) lists possible naming conventions for the edition_code field.

Note: Refer to "Load History" (page 27) for a complete list of each version of each type of load.

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 post-release software update (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 that is 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 the *DMS-100 Family Post-Release Software Manager (PRSM) Reference Guide* (297-8991-540).

Prepatched XPM loads

Prepatched XPM loads (PPXLs) are loads with 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 and reduce load time.

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

> ⚠️ **CAUTION**
>
> Do not use the LOADPM CC command with the file name parameter when you update a PM with a PPXL. If you use the LOADPM CC command when you perform this type of update, the Post-Release Software Manager (PRSM) applies all patches built into the PPXL. Obsolete patches are not removed, and patches not built into the PPXL are not applied.

> ⚠️ **CAUTION**
>
> 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 command interpreter (CI) level to display the list of patches built into the PPXL. Example as follows:

```
>XPMLFP

>PATCHLIST FILE <PPXL file_name>
```

> *Note:* You must list the volume before you use this command.

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

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 *DMS Peripheral Module Software Release Document* (297-2663-599) 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 the PMLOADS table. If the PRSUs for the PPXL are not on the Meridian SL-100 switch, problems can develop later in the PM-loading process. For security, duplicate this volume on another disk.

Note: If the system load module (SLM) tape cartridge/media label text indicates Patches: Yes, the tape includes the required PRSUs for XPM and integrated service node (ISN) load files.

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

Peripheral module to baseline cross-reference

Refer to for information about the XPM processor firmware baseline.

XPM processor (AX74, MX77 or SX05) firmware baseline

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

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
	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
SMS	Subscriber carrier module-100S (SMS)	MX77	UPFWNU01
SMSR	Subscriber carrier module-100S remote (SMSR)	MX77	UPFWNU01

XPM	Description	XPM processor	Current firmware release
SMU	Subscriber carrier module-100 urban (SMU)	MX77	UPFWNU01

Note: The host and remote XPM must use a version of firmware that supports the Q.921 protocol, such as UPFWNUyxx or UPFWQyxx for MX77 and AX74, and SXFWyyxx for SX05.
Note: The RFWLOAD tool automates the firmware upgrade process. Refer to LGC/LTC, RCC2 Remote Firmware Upgrade (IM 65-6364) for information regarding the use of the RFWLOAD tool.

Load to release cross-reference

lists the PM and non-computing (CM) loads supported by this release and updated during the PM update process. Use this table to confirm the office receives all the loads necessary for the PM update.

Load-to-release cross-reference

Load Type	Load Description	Current SE06 Load
ADCM	Digital Carrier Module (DCM)	ADCMQA01
ARS	8 MB 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
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

Load Type	Load Description	Current SE06 Load
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 MB Frame Relay Interface Unit (FRIU)	F8C19BT
ILDR	ISDN Line Drawer (ILDR)	ILDRAF04
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
IOMH	High-speed Input/Output Module (IOM)	IOMHAX01
IOMR	Standard (IOM)	IOMRBC01
IPE	IPE Standard	IPE09AB
LCM	Basic ELCM/LCM (64 KB)	LCM01D
	RLCM (64 KB)	LCM01D
	RLCM (256 KB)	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)	LCME18AW
LIM	Link Interface Module (LIM)	LPC19BO
LRS	2 card - 8 MB (LIU7)	LRS19BT
LTS	32 MB (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 Multiport Cards	MPF19BO
MS	Message Switch	MUC19BO

Load Type	Load Description	Current SE06 Load
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
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
XAPE	Processor element (PE) - NTLX02DA	XAPE02AB_396
XHIOP	XA-Core HIOP NTLX04AA (ROM)	XHIO02AA_224_UPGR
XHIOP	XA-Core HIOP NTLX04AA (DLL)	XHIO02AK_508_LDLL
XHIOP	XA-Core HIOP NTLX04BA (ROM)	XHIO02AA_224_UPGR
XHIOP	XA-Core HIOP NTLX04BA (DLL)	XHIO02AK_508_LDLL

Load Type	Load Description	Current SE06 Load
XHIOP	XA-Core HIOP NTLX04CA (ROM)	XHIO02AH_484_ UPGR
XHIOP	XA-Core HIOP NTLX04CA (DLL)	XHIO02AK_508_ LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	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 with ISDN (RCC2)	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB
Note: Date extensions are not included for prepatched loads.		

PM to load cross-reference

"PM-to-load cross-reference" (page 24) 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 "Load History" (page 27). Use this table to identify the PMs to be updated in the office.

The first three columns identify the type of PM. The PM type column lists the kind of PM or other hardware type as posted at the maintenance and administration position (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 can help you identify 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 "List of terms" (page 113) in this document.

The fourth column lists loads for each PM for the current release. Only PMs with loads that changed since the office current release require updating

Note: Date extensions for prepatched loads are not included.

PM-to-load cross-reference

PM type	Description	Hardware	SE06
ATM	Autovon Trunk Maintenance Module (ATM)		ATMKA02
CMR	Class Module Resource Card (CMR)	6X78AA and up	CMR17B
CTM	Conference Trunk Module	1X81AA	MTMKA02
DCM	Digital Carrier Module (DCM)		ADCMQ01
	Remote Digital Carrier Module (RDCM)		RDCMPA02
DLM	Digital Line Module (DLM)		DLMXPM04
DTC	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	MX77AA	ECL14BC
DTC7	Digital Trunk Controller with SS7 (MX77)	MX77AA	ED714BC
DTC7	Digital Trunk Controller PLUS with SS7 (SX05) (DTC)	SX05AA	QD717AY1
DTCI	DTCI with ILD (with ISDN Peripheral	SX05AA	QLI19BE
DTU	Digital Test Unit for BERT tests (DTU)	4X23AA	DTUBAD01
	DTU for off-hook balance tests (DTU)	4X23AA	DTUHAA02
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	1X80AA	EDRMAE11
	Enhanced Digital Recording, Access Module (DTM-16 min.)	1X80BA	ED16AA07
EDTU	Digital Test Unit with 4X45 (DTUD)	4X45AA	DTUDAB02
EIU	Ethernet Interface Unit (ETC)		ETC19BO
ENET	Enhanced Network (ENC)	9X13KA	ENC19BO
ESA/MSA	Remote Line Module Load with ESA	ESA with NTMX45AA	MSA14BC
FRIU	8 MB Frame Relay Interface Unit (F8C)	EX31BA and up	F8C19BT
ILD	ISDN Line Drawer (ILDR)	6X54DA	ILDRAG01

PM type	Description	Hardware	SE06
IOM	IOM7	FX32CA - Sony SDT-7200 DAT	IOM7BC01
	IOM9	FX32CA - Sony SDT-9000 DAT	IOM9BC01
	IOME	4-GB DDU	IOMEBC01
	High-speed Input/Output Module (IOMH)		IOMHAX01
	Standard IOM (IOMR)		IOMRBC01
IPE	IPE Standard	7D07AC	IPE09AB
	Enhanced Intelligent Peripheral Equipment Load	7D07BA	EIPE17AH
LCM	Basic ELCM/LCM (64 KB)	6X51AA	LCM01D
	RLCM (64 KB)	6X51AB/AC	LCM01D
	RLCM (256 KB)	6X51AB/AC	XLCM18AW
	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	6X51AB/AC	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)		LCME18AW
LGC	LGC with ILD (with ISDN Peripheral)	SX05AA	QLI19BE
	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/ DTC)	MX77AA	ECL14BC
LGCI	Standard Enhanced (ISDN Peripherals)	SX05AA	QLI19BE
LIM	Link Interface Module (LIM)	9X13OD or 9X13OB with 9X14OB	LPC19BO
NIU	Network Interface Unit (NIU)		NRS19BO
LIU7	8 MB LIU for 36-link SPP	EX26AA, EX22BA and up	ARS19BT
	32 MB Channel Access LIU		ATS19BT
	2 card - 8 MB		LRS19BT
	32 MB		LTS19BT

PM type	Description	Hardware	SE06
LM	Basic Line Module (LM)		BLMTB01
	Basic Remote Line Module (BRLM)		BRLMVA03
LTC	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/ DTC)	MX77AA	ECL14BC
	LTC with SX05	SX05AA	QLI19BE
MPC4	1984 CCITT Compliant X.25 MPC (MPC4)	1X89BA and up	MPC403AC
MPCA	AsyncMulti-Protocol Controller (MPCA)	1X89BA and up	MPCA03AC
MPC0	1980 CCIT Compliant X.25 (MPC0)	1X89BA and up	MPC003AC
MPCX	BX.25 (MPCX)	1X89BA and up	MPCX33AB
MS/FW	9X17 Firmware Multi-port Cards (MPF)	9X17BB or 9X17CA or 9X17DA	MPF17BL
MS	Message Switch		MUC17BL
MTM	Maintenance Trunk Module		MTMKA02
	Remote Maintenance Trunk Module (MTM)		RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	2X11BA and up	MTULJ04
OAU	OAU		MTMKA02
PDTC/ DTCO	With CCS7 (MX77) (ODT)	MX77AA	ODT19BE
	With CCS7 (SX05)(ODT)	SX05 AA	QDT19BE2
	PDTC/DTCO with ISDN (MX77)	MX77AA	ODI19BE
	PDTC/DTCO with ISDN (SX05)	SX05AA	QDI19BE
RCC	XPM Plus RSC Load (XPM14) (RCC)	MX77AA	ESR14BC
RCC2	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	AX74AA	XRI17AY
RMM	Remote Maintenance Module (RMM)		RMM10A
SMA2/ ESMA	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	AX74AA	XM219BE
SMA	SMA	AX74AA	XSC13BB

PM type	Description	Hardware	SE06
SMS	SMS with MX77	MX77AA	ESS13BC
STM	STM		MTMKA02
SXFW	SX05 Firmware	SX05AA	SXFWAJ02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)		TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	MX77AA AX74AA	UPFWNU01
UPFWQ	MX77 Universal Firmware Loads with extended distance capability (EDC)	MX77AA	UPFWQM01
XA-Core	Input/Output Processor (IOP)	LX03AA or LS03AB or LX03BA or LX03BB	XAIO01AK
	Processor element (PE)	LX02CA	XAPE01AG
	Processor element (PE)	LX02DA	XAPE02AB_396
	CMIC	LX05AB	PK12CE12
	HIOP	LX04AA (ROM)	XHIO02AA_224_UPGR
	HIOP	LX04AA (DLL)	XHI02AK_508-LDLL
	HIOP	LX04BA (ROM)	XHIO02AA_224_UPGR
	HIOP	LX04BA (DLL)	XHI02AK_508-LDLL
	HIOP	LX04CA (ROM)	XHIO02AH_484_UPGR
	HIOP	LX04CA (DLL)	XHI02AK_508-LDLL
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)		XRC19BT

PM Load History

"Load History" (page 27) lists each load type supported by the MSL-100 product line and versions of these load types. This table is provided to help you plan PM updates. Use "PM-to-load cross-reference" (page 24) to identify the specific PMs and loads to be updated in the office.

Load History

Load Type	Load Description	SE06
ADCM	Digital Carrier Module (DCM)	ADCMQA01
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02
ATS	32 MB Channel Access LIU (LIU7)	ATS19BT

Load Type	Load Description	SE06
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	MTMKA02
DLM	Digital Line Module (DLM)	DLMXPM04
DTC7	Digital Trunk Controller with SS7 (MX77)	ED714BC
	Digital Trunk Controller PLUS with SS7 (SX05) (DTC)	QD717AY1
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 (LGC/LTC/DTC)	ECL14BC
ED16	Enhanced Digital Recording, Access Module (DTM-16 min.)	ED16AA07
EDCH	Standard Enhanced D-Channel Handler (CDH)	EDH19BE
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE11
EIPE	Enhanced Intelligent Peripheral Equipment Load	EIPE17AH
ENC	Enhanced Network (ENET)	ENC19B0
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02
ESA/MSA	ESA with MX45	MSA14BC
ESS	SMS with MX77	ESS13BC
ETC	Ethernet Interface Unit (EIU)	ETC19BO
F8C	8 MB Frame Relay Interface Unit (FRIU)	F8C19BT
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01
IOM7	FX32CA - Sony SDT-7200 DAT	IOM7BC01
IOM9	FX32CA - Sony SDT-9000 DAT	IOM9BC01
IOME	4 GB DDU	IOMEBC01
IOMH	High-speed Input/Output Module (IOM)	IOMHAX01
IOMR	Standard (IOM)	IOMRBC01
IPE	IPE Standard	IPE09AB
LCM	Basic ELCM/LCM (64 KB)	LCM01D
	RLCM (64 KB)	LCM01D
	RLCM (256 KB)	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)	LCME18AW

Load Type	Load Description	SE06
LGC	LGC with ILD	QLI19BE
LIU7	8 MB LIU for 36-link SPP	ARS19BT
	32 MB Channel Access LIU	ATS19BT
	2 card -8 MB	LRS19BT
	32 MB	LTS19BT
LIM	Link Interface Module (LIM)	LPC19BO
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
QDI	PDTC/DTCO with ISDN (SX05)	QDI19BE
QDT	PDTC with SS7 (SX05)	QDT19BE2
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI19BE
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02
RMM	Remote Maintenance Module (RMM)	RMM10A
SMS	SMS with MX77	ESS13BC
STM	STM	MTMKA02
SXFW	SX05 Firmware	SXFWAJ02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	UPFWNU01
UPFWQ	MX77 and AX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQM01

Load Type	Load Description	SE06
XA-Core	Processor element (PE) - NTLX02CA	XAPE01AG
XA-Core	Processor element (PE) - NTLX02DA	XAPE02AB _396
XIOP (XA-Core)	Input/Output Processor	XAIO01AK
XHIOP	LX04AA (ROM)	XHIO02AA_ 224_UPGR
XHIOP	LX04AA (DLL)	XHIO02AK_ 508_LDLL
XHIOP	LX04BA (ROM)	XHIO02AA_ 224_UPGR
XHIOP	LX04BA(DLL)	XHIO02AK_ 508_LDLL
XHIOP	LX04CA (ROM)	XHIO02AH_ 484_UPGR
XHIOP	LX04CA (DLL)	XHIO02AK_ 508_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	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 with ISDN (RCC2)	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB

SE07 release

Peripheral module loads

This release includes the following types of load files:

- peripheral module (PM)

- post-release software update (PRSU)

- prepatched extended multiprocessor system (XMS)-based peripheral module (XPM) load

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: Refer to "Peripheral Module Documentation" in Helmsman Express at www.nortel.com (go to Technical Documentation > Helmsman Express > Peripheral Module Documentation) for the latest version of this document. New users must register.

The load_type field identifies the type of load. This field consists of the first three to four characters of the load name, and can include any combination of letters or digits. "Naming conventions for PM load_type" (page 31) lists possible naming conventions for load_type field.

Note: Refer to "Load History" (page 45) for a complete list of PM load types supported in this release.

Naming conventions for PM load_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. "Naming conventions for PM edition_code" (page 32) lists possible naming conventions for the edition_code field.

Note: Refer to "Load History" (page 45) for a complete list of each version of each type of load.

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 post-release software update (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 that is 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 *DMS-100 Family Post-Release Software Manager (PRSM) Reference Guide* (297-8991-540).

Prepatched XPM loads

Prepatched 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 and reduce load time.

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

> **CAUTION**
> PPXLs are identified by a date extension to the base load name. For example, ODI20CE_040825 is the prepatched load for base load ODI20CE.

> **CAUTION**
> 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 command interpreter (CI) level to display the list of patches built into the PPXL. Example as follows:

```
>XPMLFP

>PATCHLIST FILE <PPXL file_name>
```

> *Note:* You must list the volume before you use this command.

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

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 *DMS Peripheral Module Software Release Document*(297-2663-599) 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 the PMLOADS table. If the PRSUs for the PPXL are not on the Meridian SL-100 switch, problems can develop later in the PM loading process. For security, this volume should be duplicated on another disk.

Note: If the system load module (SLM) tape cartridge/media label text indicates *Patches: Yes*, the tape includes the required PRSUs for XPM and integrated service node (ISN) load files.

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

Peripheral module to baseline cross-reference

Refer to for information about the XPM processor firmware baseline.

XPM processor (AX74, MX77 or SX05) firmware baseline

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

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
	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
SMS	Subscriber carrier module-100S (SMS)	MX77	UPFWNV03
SMSR	Subscriber carrier module-100S remote (SMSR)	MX77	UPFWNV03

XPM	Description	XPM processor	Current firmware release
SMU	Subscriber carrier module-100 urban (SMU)	MX77	UPFWNV03

Note: The host and remote XPM must use a version of firmware that supports the Q.921 protocol, such as UPFWNUyxx or UPFWQyxx for MX77 and AX74, and SXFWyyxx for SX05.
Note: The RFWLOAD tool automates the firmware upgrade process. Refer to LGC/LTC, RCC2 Remote Firmware Upgrade (IM 65-6364) for information regarding the use of the RFWLOAD tool.

Load to release cross-reference

"Load-to-release cross reference" (page 36) lists the PM and non-computing module (CM) loads supported by this release and updated during the PM update process. Use this table to confirm the office receives all the loads necessary for the PM update.

Note: Date extensions are not included for prepatched loads.

Load-to-release cross reference

Load Type	Load Description	Current SE07 Load
ADCM	Digital Carrier Module (DCM)	ADCMQA01
ARS	8 MB LIU for 36-link SPP (LIU7)	ARS20CU
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02
ATS	32 MB 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
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

Load Type	Load Description	Current SE07 Load
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 MB Frame Relay Interface Unit (FRIU)	F8C20CU
HCMIC	Computing Module Interface Card-NTLX17AA	XRC01DE_203_PKG
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01
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
IOMH	High-speed Input/Output Module (IOM)	IOMHAX01
IOMR	Standard (IOM)	IOMRBC01
IPE	IPE Standard	IPE09AB
LCM	Basic ELCM/LCM (64 KB)	LCM01D
	RLCM (64 KB)	LCM01D
	RLCM (256 KB)	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)	LCME18AW
LIM	Link Interface Module (LIM)	LPC20CQ
LRS	2 card - 8 MB (LIU7)	LRS20CU
LTS	32 MB (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 Multiport Cards	MPF20CQ
MS	Message Switch	MUC20CQ
MTM	Maintenance Trunk Module (MTM)	MTMKA02

Load Type	Load Description	Current SE07 Load
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_050222
QDT	PDTC with SS7 (SX05)	QDT20CE_050222
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI20CE_050307
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
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
XAPE	Processor element (PE) - NTLX02DA	XAPE02AB_396
XHIOP	XA-Core HIOP NTLX04AA (ROM)	XHIO02AA_224_UPGR
XHIOP	XA-Core HIOP NTLX04AA (DLL)	XHIO03AC_143_LDLL
XHIOP	XA-Core HIOP NTLX04BA (ROM)	XHIO02AA_224_UPGR
XHIOP	XA-Core HIOP NTLX04BA (DLL)	XHIO03AC_143_LDLL
XHIOP	XA-Core HIOP NTLX04CA (ROM)	XHIO02AH_484_UPGR
XHIOP	XA-Core HIOP NTLX04CA (DLL)	XHIO03AC_143_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC20CU

Load Type	Load Description	Current SE07 Load
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 with ISDN (RCC2)	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB

PM to load cross-reference

"PM-to-load cross-reference" (page 39) lists each PM type, hardware, and associated load supported by 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 PM type column lists the kind of PM or other hardware type as posted at the maintenance and administration position (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 can help you identify 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 List of terms in this document.

The remaining columns list loads for each PM for the current and previous release. Only PMs with loads that changed since the office current release require updating.

Note: Date extensions for prepatched loads are not included.

PM-to-load cross-reference

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

PM type	Description	Hardware	SE06	SE07
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
DTC7	Digital Trunk Controller PLUS with SS7 (SX05) (DTC)	SX05AA	QD717AY1	QD717AY1
DTCI	DTCI	SX05AA	QLI19BE	QLI20CE_050307
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

PM type	Description	Hardware	SE06	SE07
ENET	Enhanced Network (ENC)	9X13KA	ENC19BO	ENC20CQ
ESA/MSA	Remote Line Module Load with ESA	ESA with NTMX45AA	MSA14BC	MSA14BC
FRIU	8 MB Frame Relay Interface Unit (F8C)	EX31BA and up	F8C19BT	F8C20CU
ILD	ISDN Line Drawer (ILDR)	6X54DA	ILDRAG01	ILDRAG01
IOM	IOM7	FX32CA - Sony SDT-7200 DAT	IOM7BC01	IOM7BC01
	IOM9	FX32CA - Sony SDT-9000 DAT	IOM9BC01	IOM9BC01
	IOME	4 GB DDU	IOMEBC01	IOMEBC01
	High-speed Input/Output Module (IOMH)		IOMHAX01	IOMHAX01
	Standard IOM (IOMR)		IOMRBC01	IOMRBC01
IPE	IPE Standard	7D07AC	IPE09AB	IPE09AB
	Enhanced Intelligent Peripheral Equipment Load	7D07BA	EIPE17AH	EIPE17AH
LCM	Basic ELCM/LCM (64 KB)	6X51AA	LCM01D	LCM01D
	RLCM (64 KB)	6X51AB/AC	LCM01D	LCM01D
	RLCM (256 KB)	6X51AB/AC	XLCM18AW	XLCM18AW
	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM / RLCM / LCM (266 KB)	6X51AB/AC	XLCM18AW	XLCM18AW

PM type	Description	Hardware	SE06	SE07
LCME	Enhanced Line Concentrating Module with ISDN (LCME)		LCME18AW	LCME18AW
LGC	LGC with ILD (with ISDN Peripheral)	SX05AA	QLI19BE	QLI20CE_050307
	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/ DTC)	MX77AA	ECL14BC	ECL14BC
LGCI	Standard Enhanced (ISDN Peripherals)	SX05AA	QLI19BE	QLI20CE_050307
LIM	Link Interface Module (LIM)	9X13OD or 9X13OB with 9X14OB	LPC19BO	LPC20CQ
NIU	Network Interface Unit (NIU)		NRS19BO	NRS20CQ
LIU7	8 MB LIU for 36-link SPP	EX26AA, EX22BA and up	ARS19BT	ARS20CU
	32 MB Channel Access LIU		ATS19BT	ATS20CU
	2 card -8 MB		LRS19BT	LRS20CU
	32 MB		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_050307
MPC4	1984 CCITT Compliant X.25 MPC (MPC4)	1X89BA and up	MPC403AC	MPC403AC

PM type	Description	Hardware	SE06	SE07
MPCA	AsyncMult 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	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_050222
	PDTC/DTCO with ISDN (MX77)	MX77AA	ODI19BE	ODI20CE_040825
	PDTC/DTCO with ISDN (SX05)	SX05AA	QDI19BE	QDI20CE_050222
RCC	XPM Plus RSC Load (XPM14) (RCC)	MX77AA	ESR14BC	ESR14BC
RCC2	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	AX74AA	XRI17AY	XRI17AY

PM type	Description	Hardware	SE06	SE07
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
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
	Processor element (PE)	LX02DA	XAPE02AB_ 396	XAPE02AB_ 396
	CMIC	LX05AB	PK12CE12	PK12CE12
	HCMIC	LX17AA		XRC01DE_ 203_PKG
	HIOP	LX04AA (ROM)	XHIO02AA_ 224_UPGR	XHIO02AA_ 224_UPGR
	HIOP	LX04AA (DLL)	XHI002AK_ 508_LDLL	XHIO03AC_ 143_LDLL

PM type	Description	Hardware	SE06	SE07
	HIOP	LX04BA (ROM)	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR
	HIOP	LXO4BA (DLL)	XHI002AK_508_LDLL	XHIO03AC_143_LDLL
	HIOP	LX04CA (ROM)	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR
	HIOP	LX04CA (DLL)	XHI002AK_508_LDLL	XHIO03AC_143_LDLL
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)		XRC19BT	XRC20CU

PM Load History

"Load History" (page 45) 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 provided to help you plan PM updates. Use "PM-to-load cross-reference" (page 39) to identify the specific PMs and loads to be updated in the office.

Load History

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 with SS7 (SX05) (DTC)	QD717AY1	QD717AY1
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01	DTUBAD01
DTUD	Digital Test Unit with 4X45 (EDTU)	DTUDAB02	DTUDAB02

Load Type	Load Description	SE06	SE07
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
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 MB Frame Relay Interface Unit (FRIU)	F8C19BT	F8C20CU
HCMIC	Computing Module Interface Card - NTLX17AA		XRC01DE_ 203_PKG
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01	ILDRAG01
IOM7	FX32CA - Sony SDT-7200 DAT	IOM7BC01	IOM7BC01
IOM9	FX32CA - Sony SDT-9000 DAT	IOM9BC01	IOM9BC01
IOME	4 GB DDU	IOMEBC01	IOMEBC01
IOMH	High-speed Input/Output Module (IOM)	IOMHAX01	IOMHAX01
IOMR	Standard (IOM)	IOMRBC01	IOMRBC01
IPE	IPE Standard	IPE09AB	IPE09AB
LCM	Basic ELCM/LCM (64 KB)	LCM01D	LCM01D
	RLCM (64 KB)	LCM01D	LCM01D
	RLCM (256 KB)	XLCM18AW	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)	LCME18AW	LCME18AW
LGC	LGC with ILD	QLI19BE	QLI20CE_050307

Load Type	Load Description	SE06	SE07
LIU7	8 MB LIU for 36-link SPP	ARS19BT	ARS20CU
	32 MB Channel Access LIU	ATS19BT	ATS20CU
	2 card -8 MB	LRS19BT	LRS20CU
	32 MB	LTS19BT	LTS20CU
LIM	Link Interface Module (LIM)	LPC19BO	LPC20CQ
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_ 050222
QDT	PDTC with SS7 (SX05)	QDT19BE2	QDT20CE_ 050222
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI19BE	QLI20CE_ 050307
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02	RDCMPA02

Load Type	Load Description	SE06	SE07
RMM	Remote Maintenance Module (RMM)	RMM10A	RMM10A
SMS	SMS with MX77	ESS13BC	ESS20CE
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
XIOP (XA-Core)	Input/Output Processor	XAIO01AK	XAIO01AK
XAPE-(XA-Core)	Processor element (PE) - NTLX02CA	XAPE01AG	XAPE01AG
XAPE-(XA-Core)	Processor element (PE) - NTLX02DA		XAPE02AB_396
XHIOP	XA-Core HIOP NTLX04AA (ROM)	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR
XHIOP	XA-Core HIOP NTLX04AA (DLL)	XHI02AK_508_LDLL	XHI003AC_143_LDLL
XHIOP	XA-Core HIOP NTLX04BA (ROM)	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR
XHIOP	XA-Core HIOP NTLX04BA (DLL)	XHI02AK_508_LDLL	XHI003AC_143_LDLL
XHIOP	XA-Core HIOP NTLX04CA (ROM)	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR
XHIOP	XA-Core HIOP NTLX04CA (DLL)	XHI02AK_508_LDLL	XHIO03AC_143_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	XLCM18AW	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC19BT	XRC20CU
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM219BE	XM220CE

Load Type	Load Description	SE06	SE07
XRI	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	XRI17AY	XRI17AY
XRC01	XA-Core-HIOP LX17AA		XRC01DE_ 203_PKG
XRC20	XLIU	XRC19BT	XRC20CU
XSC	XPM Plus for SMA (SMA)	XSC13BB	XSC13BB

SE08 release

Peripheral module loads

This release includes the following types of files:

- peripheral module (PM)

- post-release software update (PRSU)

- prepatched extended multiprocessor system (XMS)-based peripheral module (XPM) load

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 at www.nortel.com (go to Technical Documentation > Helmsman Express > Peripheral Module Documentation) for the latest version of this document. New users must register.

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. "Naming conventions for PM load_type" (page 51) lists possible naming conventions for the load_type field.

Note: Refer to "Load History" (page 66) for a complete list of PM load types supported in this release.

Naming conventions for PM load_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. "Naming conventions for PM edition_code" (page 52) lists possible naming conventions for the edition_code field.

Note: Refer to "Load History" (page 66) for a complete list of each version of each type of load.

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 post-release software update (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 that is 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 *DMS-100 Family Post-Release Software Manager (PRSM) Reference Guide* (297-8991-540).

Prepatched XPM loads

Prepatched 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 and reduce load time.

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

> ⚠️ **CAUTION**
> Do not use the LOADPM CC command with the file name
> parameter when you update a PM with a PPXL. If you use the
> LOADPM CC command when you perform this type of update, the
> Post-Release Software Manager (PRSM) applies all patches built
> into the PPXL. Obsolete patches are not removed, and patches
> not built into the PPXL are not applied.

> ⚠️ **CAUTION**
> 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 command interpreter (CI) level to
display the list of patches built into the PPXL. Example as follows:

```
>XPMLFP

>PATCHLIST FILE <PPXL file_name>
```

Note: You must list the volume before you use this command.

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

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 DMS Peripheral Module Software Release Document
(297-2663-599) 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
the PMLOADS table. If the PRSUs for the PPXL are not on the Meridian
SL-100 switch, problems can develop later in the PM-loading process. For
security, duplicate this volume on another disk.

Note: If the system load module (SLM) tape cartridge/media label text indicates *Patches: Yes*, the tape includes the required PRSUs for XPM and integrated service node (ISN) load files.

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

Peripheral module to baseline cross-reference

Refer to for information on the XPM processor firmware baseline.

XPM processor (AX74, MX77 or SX05) firmware baseline

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

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
	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
SMS	Subscriber carrier module-100S (SMS)	MX77	UPFWNV03
SMSR	Subscriber carrier module-100S remote. (SMSR)	MX77	UPFWNV03

XPM	Description	XPM processor	Current firmware release
SMU	Subscriber carrier module-100 urban (SMU)	MX77	UPFWNV03

Note: The host and remote XPM must use a version of firmware that supports the Q.921 protocol, such as UPFWNUyxx or UPFWQyxx for MX77 and AX74, and SXFWyyxx for SX05.
Note: The RFWLOAD tool automates the firmware upgrade process. Refer to LGC/LTC, RCC2 Remote Firmware Upgrade (IM 65-6364) for information regarding the use of the RFWLOAD tool.

Load to release cross-reference

lists the PM and non-computing module (CM) loads supported by this release and updated during the PM update process. Use this table to confirm the office receives all the loads necessary for the PM update.

Note: Date extensions are not included for prepatched loads.

Load-to-release cross-reference

Load Type	Load Description	Current SE08 Load
ADCM	Digital Carrier Module (DCM)	ADCMQA01
ARS	8 MB LIU for 36-link SPP (LIU7)	ARS21BM
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02
ATS	32 MB Channel Access LIU (LIU7)	ATS21BM
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
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

Load Type	Load Description	Current SE08 Load
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE11
ENC	Enhanced Network (ENET)	ENC21BK
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)	ETC21BK
F8C	8 MB Frame Relay Interface Unit (FRIU)	F8C21BM
HCMIC	Computing Module Interface Card - NTLX17AA	XREC01EG_ 04493_PKG
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01
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
IOMH	High-speed Input/Output Module (IOM)	IOMHAX01
IOMR	Standard Input/Output Module (IOM)	IOMRBC01
IPE	IPE Standard	IPE09AB
LCM	Basic ELCM/LCM (64 KB)	LCM01D
	RLCM (64 KB)	LCM01D
	RLCM (256 KB)	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)	LCME18AW
LIM	Link Interface Module (LIM)	LPC21BK
LRS	2 card - 8 MB (LIU7)	LRS21BM
LTS	32 MB (LIU7)	LTS21BM
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 Multiport Cards	MPF21BK
MS	Message Switch	MUC21BK
MTM	Maintenance Trunk Module (MTM)	MTMKA02

Load Type	Load Description	Current SE08 Load
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04
NRS	Network Interface Unit (NIU)	NRS21BK
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_ 050222
QDT	PDTC with SS7 (SX05)	QDT20CE_ 050222
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI20CE_ 050307
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
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
XAPE	Processor element (PE) - NTLX02DA	XAPE02AB_ 396
XHIOP	XA-Core HIOP NTLX04AA (ROM)	XHIO02AA_ 224_UPGR
XHIOP	XA-Core HIOP NTLX04AA (DLL)	XHIO03BB_ 04493_LDLL
XHIOP	XA-Core HIOP NTLX04BA (ROM)	XHIO02AA_ 224_UPGR

Load Type	Load Description	Current SE08 Load
XHIOP	XA-Core HIOP NTLX04BA (DLL)	XHIO03BB_ 04493_LDLL
XHIOP	XA-Core HIOP NTLX04CA (ROM)	XHIO02AH_ 484_UPGR
XHIOP	XA-Core HIOP NTLX04CA (DLL)	XHIO03BB_ 04493_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC21BM
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM220CE
XRC21	XLIU	XRC21BM
XRI	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB

PM to load cross reference

"PM-to-load cross-reference" (page 60) lists each PM type, hardware, and associated load supported by release. The PMs, hardware, and loads for up to three applicable prior releases are also displayed. Use this table to identify the PMs to be updated in the office.

The first three columns identify the type of PM. The PM type column lists the kind of PM or other hardware type as posted at the maintenance and administration position (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 can help you identify 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 "List of terms" (page 113) in this document.

The remaining columns list loads for each PM for the current and two previous releases. Only PMs with loads that changed since the office current release require updating.

Note: Date extensions for prepatched loads are not included.

PM-to-load cross-reference

PM type	Description	Hardware	SE06	SE07	SE08
ATM	Autovon Trunk Maintenance Module (ATM)		ATMKA02	ATMKA02	ATMKA02
CMR	Class Module Resource Card (CMR)	6X78AA and up	CMR17B	CMR17B	CMR17B
CTM	Conference Trunk Module	1X81AA	MTMKA02	MTMKA02	MTMKA02
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 Cont roller PLUS (LGC/LTC/ DTC)	MX77AA	ECL14BC	ECL14BC	ECL14BC
DTC7	Digital Trunk Controller with SS7 (MX77)	MX77AA	ED714BC	ED714BC	ED714BC
DTC7	Digital Trunk Controller PLUS with SS7 (SX05) (DTC)	SX05AA	QD717AY1	QD717AY1	QD717AY1
DTCI	DTCI	SX05AA	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307
DTU	Digital Test Unit for BERT tests (DTU)	4X23AA	DTUBAD01	DTUBAD01	DTUBAD01
	DTU for off-hook balance tests (DTU)	4X23AA	DTUHAA02	DTUHAA02	DTUHAA02

PM type	Description	Hardware	SE06	SE07	SE08
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	1X80AA	EDRMAE11	EDRMAE11	EDRMAE11
	Enhanced Digital Recording, Access Module (DTM-16 min.)	1X80BA	ED16AA07	ED16AA07	ED16AA07
EDTU	Digital Test Unit with 4X45 (DTUD)	4X45AA	DTUDAB02	DTUDAB02	DTUDAB02
EIU	Ethernet Interface Unit (ETC)		ETC19BO	ETC20CQ	ETC21BK
ENET	Enhanced Network (ENC)	9X13KA	ENC19BO	ENC20CQ	ENC21BK
ESA/MSA	Remote Line Module Load with ESA	ESA with NTMX45AA	MSA14BC	MSA14BC	MSA14BC
FRIU	8 MB Frame Relay Interface Unit (F8C)	EX31BA and up	F8C19BT	F8C20CU	F8C20CU
ILD	ISDN Line Drawer (ILDR)	6X54DA	ILDRAG01	ILDRAG01	ILDRAG01
IOM	IOM7	FX32CA - Sony SDT-7200 DAT	IOM7BC01	IOM7BC01	IOM7BC01
	IOM9	FX32CA - Sony SDT-9000 DAT	IOM9BC01	IOM9BC01	IOM9BC01
	IOME	4-GB DDU	IOMEBC01	IOMEBC01	IOMEBC01
	High-speed Input/Output Module (IOMH)		IOMHAX01	IOMHAX01	IOMHAX01
	Standard IOM (IOMR)		IOMRBC01	IOMRBC01	IOMRBC01

PM type	Description	Hardware	SE06	SE07	SE08
IPE	IPE Standard	7D07AC	IPE09AB	IPE09AB	IPE09AB
	Enhanced Intelligent Peripheral Equipment Load	7D07BA	EIPE17AH	EIPE17AH	EIPE17AH
LCM	Basic ELCM/LCM (64 KB)	6X51AA	LCM01D	LCM01D	LCM01D
	RLCM (64 KB)	6X51AB/AC	LCM01D	LCM01D	LCM01D
	RLCM (256 KB)	6X51AB/AC	XLCM18AW	XLCM18AW	XLCM18AW
	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	6X51AB/AC	XLCM18AW	XLCM18AW	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)		LCME18AW	LCME18AW	LCME18AW
LGC	LGC with ILD (with ISDN Peripheral)	SX05AA	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307
	Digital Trunk/ Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	MX77AA	ECL14BC	ECL14BC	ECL14BC
LGCI	Standard Enhanced (ISDN Peripherals)	SX05AA	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307
LIM	Link Interface Module (LIM)	9X13OD or 9X13OB with 9X14OB	LPC19BO	LPC20CQ	LPC21BK
NIU	Network Interface Unit (NIU)		NRS19BO	NRS20CQ	NRS21BK

PM type	Description	Hardware	SE06	SE07	SE08
LIU7	8 MB LIU for 36-link SPP	EX26AA, EX22BA and up	ARS19BT	ARS20CU	ARS21BM
	32 MB Channel Access LIU		ATS19BT	ATS20CU	ATS21BM
	2 card -8 MB		LRS19BT	LRS20CU	LRS21BM
	32 MB		LTS19BT	LTS20CU	LTS21BM
LM	Basic Line Module (LM)		BLMTB01	BLMTB01	BLMTB01
	Basic Remote Line Module (BRLM)		BRLMVA03	BRLMVA03	BRLMVA03
LTC	Digital Trunk/ Line and Trunk/Line Group Cont roller PLUS (LGC/LTC/ DTC)	MX77AA	ECL14BC	ECL14BC	ECL14BC
	LTC with SX05	SX05AA	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307
MPC4	1984 CCITT Compliant X.25 MPC (MPC4)	1X89BA and up	MPC403AC	MPC403AC	MPC403AC
MPCA	AsyncMultProt ocol Controller (MPCA)	1X89BA and up	MPCA03AC	MPCA03AC	MPCA03AC
MPC0	1980 CCIT Compliant X.25 (MPC0)	1X89BA and up	MPC003AC	MPC003AC	MPC003AC
MPCX	BX.25 (MPCX)	1X89BA and up	MPCX33AB	MPCX33AB	MPCX33AB
MS/FW	9X17 Firmware Multi-port Cards (MPF)	9X17BB or 9X17CA or 9X17DA	MPF19BO	MPF20CQ	MPF20CQ
MS	Message Switch		MUC19BO	MUC20CQ	MUC21BK

PM type	Description	Hardware	SE06	SE07	SE08
MTM	Maintenance Trunk Module		MTMKA02	MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)		RMTMKA01	RMTMKA01	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	2X11BA and up	MTULJ04	MTULJ04	MTULJ04
OAU	OAU		MTMKA02	MTMKA02	MTMKA02
PDTC/ DTCO	With CCS7 (MX77) (ODT)	MX77AA	ODT19BE	ODT20CE_ 040825	ODT20CE_ 040825
	With CCS7 (SX05)(ODT)	SX05AA	QDT19BE2	QDT20CE_ 050222	QDT20CE_ 050222
	PDTC/DTCO with ISDN (MX77)	MX77AA	ODI19BE	ODI20CE_ 040825	ODI20CE_ 040825
	PDTC/DTCO with ISDN (SX05)	SX05AA	QDI19BE	QDI20CE_ 050222	QDI20CE_ 050222
RCC	XPM Plus RSC Load (XPM14) (RCC)	MX77AA	ESR14BC	ESR14BC	ESR14BC
RCC2	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	AX74AA	XRI17AY	XRI17AY	XRI17AY
RMM	Remote Maintenance Module (RMM)		RMM10A	RMM10A	RMM10A
SMA2/ ESMA	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP; SMA2 or ESMA)	AX74AA	XM219BE	XM220CE	XM220CE
SMA	SMA	AX74AA	XSC13BB	XSC13BB	XSC13BB

PM type	Description	Hardware	SE06	SE07	SE08
SMS	SMS with MX77	MX77AA	ESS13BC	ESS20CE	ESS20CE
STM	STM		MTMKA02	MTMKA02	MTMKA02
SXFW	SX05 Firmware	SX05AA	SXFWAJ02	SXFWAK02	SXFWAK02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)		TKMTKA02	TKMTKA02	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	MX77AA AX74AA	UPFWNU01	UPFWNV03	UPFWNV03
UPFWQ	MX77 Universal Firmware Loads with extended distance capability (EDC)	MX77AA	UPFWQM01	UPFWQN03	UPFWQN03
XA-Core	Input/Output Processor (IOP)	LX03AA or LS03AB or LX03BA or LX03BB	XAIO01AK	XAIO01AK	XAIO01AK
	Processor element (PE)	LX02CA	XAPE01AG	XAPE01AG	XAPE01AG
	Processor element (PE)	LX02DA	XAPE02AB_ 396	XAPE02AB_ 396	XAPE02AB_ 396
	CMIC	LX05AB	PK12CE12	PK12CE12	PK12CE12
	HCMIC	LX17AA		XRC01DE_ 203_ PKG	XREC01EG _ 04493_ PKG
	HIOP	LXO4AA (ROM)	XHIO02AA_ 224_UPGR	XHIO02AA_ 224_ UPGR	XHIO02AA_ 224_UPGR
	HIOP	LX04AA (DLL)	XHI002AK_ 508_LDLL	XHIO03AC_ 143_LDLL	XHIO03BB_ 04493_LDLL
	HIOP	LXO4BA (ROM)	XHIO02AA_ 224_UPGR	XHIO02AA_ 224_UPGR	XHIO02AA_ 224_UPGR
	HIOP	LX04BA (DLL)	XHI002AK_ 508_LDLL	XHIO03AC_ 143_LDLL	XHIO03BB_ 04493_LDLL

PM type	Description	Hardware	SE06	SE07	SE08
	HIOP	LXO4CA (ROM)	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR
	HIOP	LX04CA (DLL)	XHI002AK_508_LDLL	XHIO03AC_143_ LDLL	XHIO03BB_04493_LDLL
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)			XRC20CU	XRC21BM

PM Load History

"Load History" (page 66) 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 provided to help you plan PM updates. Use "PM-to-load cross-reference" (page 60) to identify the specific PMs and loads to be updated in the office.

Load History

Load Type	Load Description	SE06	SE07	SE08
ADCM	Digital Carrier Module (DCM)	ADCMQA01	ADCMQA01	ADCMQA01
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02	ATMKA02	ATMKA02
BLM	Basic Line Module (LM)	BLMTB01	BLMTB01	BLMTB01
BTM	Basic TM8 (TM8)	BTMKA02	BTMKA02	BTMKA02
BRLM	Basic Remote Line Module (RLM)	BRLMVA03	BRLMVA03	BRLMVA03
CMR	Class Module Resource Card (CMR)	CMR17B	CMR17B	CMR17B
CTM	Conference Trunk Module	MTMKA02	MTMKA02	MTMKA02
DLM	Digital Line Module (DLM)	DLMXPM04	DLMXPM04	DLMXPM04
DTC7	Digital Trunk Controller with SS7 (MX77)	ED714BC	ED714BC	ED714BC
	Digital Trunk Controller PLUS with SS7 (SX05) (DTC)	QD717AY1	QD717AY1	QD717AY1
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01	DTUBAD01	DTUBAD01

Load Type	Load Description	SE06	SE07	SE08
DTUD	Digital Test Unit with 4X45 (EDTU)	DTUDAB02	DTUDAB02	DTUDAB02
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.)	ED16AA07	ED16AA07	ED16AA07
EDCH	Standard Enhanced D-Channel Handler (CDH)	EDH19BE	EDH20CE	EDH20CE
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE11	EDRMAE11	EDRMAE11
EIPE	Enhanced Intelligent Peripheral Equipment Load	EIPE17AH	EIPE17AH	EIPE17AH
ENC	Enhanced Network (ENET)	ENC19B0	ENC20CQ	ENC21BK
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02	ERLMVA02	ERLMVA02
ESA/ MSA	ESA with MX45	MSA14BC	MSA14BC	MSA14BC
ESS	SMS with MX77	ESS13BC	ESS20CE	ESS20CE
ETC	Ethernet Interface Unit (EIU)	ETC19BO	ETC20CQ	ETC21BK
F8C	8 MB Frame Relay Interface Unit (FRIU)	F8C19BT	F8C20CU	F8C21BM
HCMIC	Computing Module Interface Card - NTLX17AA		XRC01DE_ 203_PKG	XREC01EG_ 04493_PKG
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01	ILDRAG01	ILDRAG01
IOME	4 GB DDU	IOMEBC01	IOMEBC01	IOMEBC01
IOM7	FX32CA - Sony SDT-7200 DAT	IOM7BC01	IOM7BC01	IOM7BC01
IOM9	FX32CA - Sony SDT-9000 DAT	IOM9BC01	IOM9BC01	IOM9BC01

Load Type	Load Description	SE06	SE07	SE08
IOMH	High-speed Input/Output Module (IOM)	IOMHAX01	IOMHAX01	IOMHAX01
IOMR	Standard IOM	IOMRBC01	IOMRBC01	IOMRBC01
IPE	IPE Standard	IPE09AB	IPE09AB	IPE09AB
LCM	Basic ELCM/LCM (64 KB)	LCM01D	LCM01D	LCM01D
	RLCM (64 KB)	LCM01D	LCM01D	LCM01D
	RLCM (256 KB)	XLCM18AW	XLCM18AW	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)	LCME18AW	LCME18AW	LCME18AW
LGC	LGC with ILD	QLI19BE	QLI20CE_050307	QLI20CE_050307
LIU7	8 MB LIU for 36-link SPP	ARS19BT	ARS20CU	ARS21BM
	32 MB Channel Access LIU	ATS19BT	ATS20CU	ATS21BM
	2 card -8 MB	LRS19BT	LRS20CU	LRS21BM
	32 MB	LTS19BT	LTS20CU	LTS21BM
LIM	Link Interface Module (LIM)	LPC19BO	LPC20CQ	LPC21BK
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
MPC0	1980 CCIT Compliant X.25 (MPC)	MPC003AC	MPC003AC	MPC003AC
MPF	9X17 Firmware Multi-port Cards	MPF19BO	MPF20CQ	MPF21BK
MS	Message Switch	MUC19BO	MUC20CQ	MUC21BK
MTM	Maintenance Trunk Module (MTM)	MTMKA02	MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)	RMTMKA01	RMTMKA01	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04	MTULJ04	MTULJ04

Load Type	Load Description	SE06	SE07	SE08
NRS	Network Interface Unit (NIU)	NRS19BO	NRS20CQ	NRS21BK
OAU	OAU	MTMKA02	MTMKA02	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	ODI19BE	ODI20CE_ 040825	ODI20CE_ 040825
ODT	PDTC/DTCO with CCS7 (MX77)	ODT19BE	ODT20CE_ 040825	ODT20CE_ 040825
PK	XA-Core CMIC	PK12CE12	PK12CE12	PK12CE12
QDI	PDTC/DTCO with ISDN (SX05)	QDI19BE	QDI20CE_ 050222	QDI20CE_ 050222
QDT	PDTC with SS7 (SX05)	QDT19BE2	QDT20CE_ 050222	QDT20CE_ 050222
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC	ESR14BC	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02	RDCMPA02	RDCMPA02
RMM	Remote Maintenance Module (RMM)	RMM10A	RMM10A	RMM10A
SMS	SMS with MX77	ESS13BC	ESS20CE	ESS20CE
STM	STM	MTMKA02	MTMKA02	MTMKA02
SXFW	SX05 Firmware	SXFWAJ02	SXFWAK02	SXFWAK02
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)	TKMTKA02	TKMTKA02	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	UPFWNU01	UPFWNV03	UPFWNV03
UPFWQ	MX77 and AX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQM01	UPFWQN03	UPFWQN03
XIOP (XA-Core)	Input/Output Processor	XAIO01AK	XAIO01AK	XAIO01AK
XAPE (XA-Core)	Processor element (PE) - NTLX02CA	XAPE01AG	XAPE01AG	XAPE01AG

Load Type	Load Description	SE06	SE07	SE08
XAPE (XA-Core)	Processor element (PE) - NTLX02DA	XAPE02AB_396	XAPE02AB_396	XAPE02AB_396
XHIOP	XA-Core HIOP NTLX04AA (ROM)	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR
XHIOP	XA-Core HIOP NTLX04AA (DLL)	XHIO02AK_508_LDLL	XHIO03AC_143_LDLL	XHIO03BB_04493_LDLL
XHIOP	XA-Core HIOP NTLX04BA (ROM)	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR
XHIOP	XA-Core HIOP NTLX04BA (DLL)	XHIO02AK_508_LDLL	XHIO03AC_143_LDLL	XHIO03BB_04493_LDLL
XHIOP	XA-Core HIOP NTLX04CA (ROM)	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR
XHIOP	XA-Core HIOP NTLX04CA (DLL)	XHIO02AK_508_LDLL	XHIO03AC_143_LDLL	XHIO03BB_04493_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	XLCM18AW	XLCM18AW	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC19BT	XRC19BT	XRC21BM
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM219BE	XM220CE	XM220CE
XRI	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	XRI17AY	XRI17AY	XRI17AY
XRC01	XA-Core-HIOP LX17AA		XRC01DE_203_PKG	XRC01DE_203_PKG
XSC	XPM Plus for SMA (SMA)	XSC13BB	XSC13BB	XSC13BB

SE09 release

Peripheral module loads

This release includes the following types of files:

- peripheral module (PM)

- post-release software update (PRSU)

- prepatched extended multiprocessor system (XMS)-based peripheral module (XPM) load

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 at www.nortel.com (go to Technical Documentation > Helmsman Express > Peripheral Module Documentation) for the latest version of this document. New users must register.

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. "Naming conventions for PM load_type" (page 71) lists possible naming conventions for the load_type field.

Note: Refer to "Load History" (page 88) for a complete list of PM load types supported in this release.

Naming conventions for PM load_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. "Naming conventions for PM edition_code" (page 72) lists possible naming conventions for the edition_code field.

Note: Refer to "Load History" (page 88) for a complete list of each version of each type of load.

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 post-release software update (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 that is 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 *DMS-100 Family Post-Release Software Manager (PRSM) Reference Guide* (297-8991-540).

Prepatched XPM loads

Prepatched XPM loads (PPXL) 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 prepatched load for base load ODI20CE.

> **CAUTION**
> Do not use the LOADPM CC command with the file name parameter when you update a PM with a PPXL. If you use the LOADPM CC command when you perform this type of update, the Post-Release Software Manager (PRSM) applies all patches built into the PPXL. Obsolete patches are not removed, and patches not built into the PPXL are not applied.

> **CAUTION**
> 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 command interpreter (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. To determine the full PPXL file name to load, the PM loader software uses the base load name in the inventory table to the ACTFILE index field in PMLOADS table. The following is a sample tuple from the PMLOADS table:

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 *DMS Peripheral Module Software Release Document* (297-2663-599) 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 the PMLOADS table. If the PRSUs for the PPXL are not on the Meridian SL-100 switch, problems can develop later in the PM-loading process. For security, duplicate this volume on another disk.

Note: If the system load module (SLM) tape cartridge/media label text indicates *Patches: Yes*, the tape includes the required PRSUs for XPM and integrated service node (ISN) load files.

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

Peripheral module to baseline cross-reference

Refer to for information on the XPM processor firmware baseline.

XPM processor (AX74, MX77 or SX05) firmware baseline

XPM	Description	XPM processor	Current firmware release
DTC	Digital trunk controller	MX77	UPFWNV03
	DTC with CCS7 (DTC7)	MX77	UPFWNV03
	DTC with CCS7 (DTC7)	SX05AA	SXFWAL01
	DTCI with ISDN (DTCI)	SX05	SXFWAL01
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	SXFWAL01
	LGCI with subtending RCC2; MX76 and HDLC provisioned (see Note 2 when upgrading to SX05)	SX05	SXFWAL01
	LGC with subtending RCC2; No MX76 or HDLC provisioned	MX77	UPFWNV03
		SX05	SXFWAL01
	LGC with subtending RCC2; No MX76 or HDLC provisioned	SX05	SXFWAL01
	LGC with ISDN line drawer (ILD)	SX05	SXFWAL01
	Line group controller (LGC)	MX77	UPFWNV03
		SX05	SXFWAL01

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	SXFWAL01
	LTC with ISDN (LTCI); MX76, HDLC and IP Gateways provisioned in table IPINV	SX05	SXFWAL01
	LTC with subtending RCC2; No MX76 or HDLC provisioned	MX77	UPFWNX07
		SX05	SXFWAL01
	LTCI with subtending RCC2; No MX76 or HDLC provisioned	SX05	SXFWAL01
	LTC with ISDN (LTCI)	SX05	SXFWAL01
	Line trunk controller (LTC)	MX77	UPFWNV03
		SX05	SXFWAL01
PDTC/ DTCO	Peripheral digital trunk controller (PDTC)	MX77	UPFWNV03
PDTC/ DTCO	Digital trunk controller overseas (DTCO)	SX05	SXFWAL01
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
	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
SMS	Subscriber carrier module-100S (SMS)	MX77	UPFWNV03
SMSR	Subscriber carrier module-100S remote (SMSR)	MX77	UPFWNV03

XPM	Description	XPM processor	Current firmware release
SMU	Subscriber carrier module-100 urban (SMU)	MX77	UPFWNV03

Note: The host and remote XPM must use a version of firmware that supports the Q.921 protocol, such as UPFWNUyxx or UPFWQyxx for MX77 and AX74, and SXFWyyxx for SX05.
Note: The RFWLOAD tool automates the firmware upgrade process. Refer to LGC/LTC, RCC2 Remote Firmware Upgrade (IM 65-6364) for information regarding the use of the RFWLOAD tool.

Load to release cross-reference

lists the PM and non-computing module (CM) loads supported by this release and updated during the PM update process. Use this table to confirm the office receives all the loads necessary for the PM update.

Note: Date extensions are not included for prepatched loads.

Load-to-release cross-reference

Load Type	Load Description	Current SE09 Load
ADCM	Digital Carrier Module (DCM)	ADCMQA01
ARS	8 MB LIU for 36-link SPP (LIU7)	ARS22BS
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02
ATS	32 MB Channel Access LIU (LIU7)	ATS22BS
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
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)	EDH22AO

Load Type	Load Description	Current SE09 Load
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE11
ENC	Enhanced Network (ENET)	ENC22BN
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	ESS22AO
ETC	Ethernet Interface Unit (EIU)	ETC22BN
F8C	8 MB Frame Relay Interface Unit (FRIU)	F8C22BS
HCMIC	Computing Module Interface Card - NTLX17AA	XREC01FC_ 05185_PKG
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01
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
IOMH	High-speed Input/Output Module (IOM)	IOMHAX01
IOMR	Standard IOM	IOMRBC01
IPE	IPE Standard	IPE09AB
LCM	Basic ELCM/LCM (64 KB)	LCM01D
	RLCM (64 KB)	LCM01D
	RLCM (256 KB)	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)	LCME18AW
LIM	Link Interface Module (LIM)	LPC22BN
LRS	2 card - 8 MB (LIU7)	LRS22BS
LTS	32 MB (LIU7)	LTS22BS
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	MPF22BN
MS	Message Switch	MUC22BN
MTM	Maintenance Trunk Module (MTM)	MTMKA02

Load Type	Load Description	Current SE09 Load
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04
NRS	Network Interface Unit (NIU)	NRS22BN
OAU	OAU	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	ODI20CE_ 040825
ODT	PDTC/DTCO with CCS7 (MX77)	ODT22AO
PK	XA-Core-CMIC	PK12CE12
QD7	DTC with SS7 SX05AA	QD717AY1
QDI	PDTC/DTCO with ISDN (SX05)	QDI20CE_ 050222
QDT	PDTC with SS7 (SX05)	QDT20CE_ 050222
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI22AO
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
SXFW	SX05 Firmware	SXFWAL01
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
XAPE	Processor element (PE) - NTLX02DA	XAPE02AB_ 396
XHIOP	XA-Core HIOP NTLX04AA (ROM)	XHIO02AA_ 224_UPGR
XHIOP	XA-Core HIOP NTLX04AA (DLL)	XHIO03CC_ 05185_LDLL
XHIOP	XA-Core HIOP NTLX04BA (ROM)	XHIO02AK_ 508_LDLL
XHIOP	XA-Core HIOP NTLX04BA (DLL)	XHIO03CC_ 05185_LDLL

Load Type	Load Description	Current SE09 Load
XHIOP	XA-Core HIOP NTLX04CA (ROM)	XHIO02AH_ 484_UPGR
XHIOP	XA-Core HIOP NTLX04CA (DLL)	XHIO03CC_ 05185_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC22BS
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM222AO
XRC21	XLIU	XRC22BS
XRI	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB

PM to load cross-reference

"PM-to-load cross-reference" (page 80) 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. Use this table to identify the PMs to be updated in the office.

The first three columns identify the type of PM. The PM type column lists the kind of PM or other hardware type as posted at the maintenance and administration position (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 can help you identify 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 "List of terms" (page 113) in this document.

The remaining columns list loads for each PM for the current and three previous releases. Only PMs with loads that changed since the office current release require updating.

Note: Date extensions for prepatched loads are not included.

PM-to-load cross-reference

PM type	Description	Hardware	SE06	SE07	SE08	SE09
ATM	Autovon Trunk Mainten_ance Module (ATM)		ATMKA02	ATMKA02	ATMKA02	ATMKA02
CMR	Class Module Resource Card (CMR)	6X78AA and up	CMR17B	CMR17B	CMR17B	CMR17B
CTM	Conference Trunk Module	1X81AA	MTMKA02	MTMKA02	MTMKA02	MTMKA02
DCM	Digital Carrier Module (DCM)		ADCMQ01	ADCMQ01	ADCMQ01	ADCMQ01
	Remote Digital Carrier Module (RDCM)		RDCMPA02	RDCMPA02	RDCMPA02	RDCMPA02
DLM	Digital Line Module (DLM)		DLMXPM04	DLMXPM04	DLMXPM04	DLMXPM04
DTC	Digital Trunk/ Line and Trunk/Line Group Controller PLUS (LGC/ LTC/ DTC)	MX77AA	ECL14BC	ECL14BC	ECL14BC	ECL14BC
DTC7	Digital Trunk Controller with SS7 (MX77)	MX77AA	ED714BC	ED714BC	ED714BC	ED714BC

PM type	Description	Hardware	SE06	SE07	SE08	SE09
DTC7	Digital Trunk Controller PLUS with SS7 (SX05) (DTC)	SX05AA	QD717AY1	QD717AY1	QD717AY1	QD717AY1
DTCI	DTCI	SX05AA	QLI19BE	QLI20CE_050307	QLI20CE_050307	QLI22AO
DTU	Digital Test Unit for BERT tests (DTU)	4X23AA	DTUBAD01	DTUBAD01	DTUBAD01	DTUBAD01
	DTU for off-hook balance tests (DTU)	4X23AA	DTUHAA02	DTUHAA02	DTUHAA02	DTUHAA02
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	1X80AA	EDRMAE11	EDRMAE11	EDRMAE11	EDRMAE11
	Enhanced Digital Recording, Access Module (DTM-16 min.)	1X80BA	ED16AA07	ED16AA07	ED16AA07	ED16AA07
EDTU	Digital Test Unit with 4X45 (DTUD)	4X45AA	DTUDAB02	DTUDAB02	DTUDAB02	DTUDAB02
EIU	Ethernet Interface Unit (ETC)		ETC19BO	ETC20CQ	ETC21BK	ETC22BN
ENET	Enhanced Network (ENC)	9X13KA	ENC19BO	ENC20CQ	ENC21BK	ENC22BN
ESA/ MSA	Remote Line Module Load with ESA	ESA with NTMX45 AA	MSA14BC	MSA14BC	MSA14BC	MSA14BC

PM type	Description	Hardware	SE06	SE07	SE08	SE09
FRIU	8 MB Frame Relay Interface Unit (F8C)	EX31BA and up	F8C19BT	F8C20CU	F8C20CU	F8C22BS
ILD	ISDN Line Drawer (ILDR)	6X54DA	ILDRAG01	ILDRAG01	ILDRAG01	ILDRAG01
IOM	IOM7	FX32CA - Sony SDT-7200 DAT	IOM7BC01	IOM7BC01	IOM7BC01	IOM7BC01
	IOM9	FX32CA - Sony SDT-9000 DAT	IOM9BC01	IOM9BC01	IOM9BC01	IOM9BC01
	IOME	4-GB DDU	IOMEBC01	IOMEBC01	IOMEBC01	IOMEBC01
	High-speed Input/Output Module (IOMH)		IOMHAX01	IOMHAX01	IOMHAX01	IOMHAX01
	Standard IOM (IOMR)		IOMRBC01	IOMRBC01	IOMRBC01	IOMRBC01
IPE	IPE Standard	7D07AC	IPE09AB	IPE09AB	IPE09AB	IPE09AB
	Enhanced Intelligent Peripheral Equipment Load	7D07BA	EIPE17AH	EIPE17AH	EIPE17AH	EIPE17AH
LCM	Basic ELCM/LCM (64 KB)	6X51AA	LCM01D	LCM01D	LCM01D	LCM01D
	RLCM (64 KB)	6X51AB/AC	LCM01D	LCM01D	LCM01D	LCM01D
	RLCM (256 KB)	6X51AB/AC	XLCM18AW	XLCM18AW	XLCM18AW	XLCM18AW
	eXtended Memory Line Concentrating Module:	6X51AB/AC	XLCM18AW	XLCM18AW	XLCM18AW	XLCM18AW

PM type	Description	Hardware	SE06	SE07	SE08	SE09
	XLCM (6X 51) (ELCM/ RLCM/LCM (266 KB)					
LCME	Enhanced Line Con centrating Module with ISDN (LCME)		LCME18A W	LCME18A W	LCME18A W	LCME18A W
LGC	LGC with ILD (with ISDN Peri pheral)	SX05AA	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307	QLI22AO
	Digital Trunk/Line and Trunk/ Line Group Controller PLUS (LGC/ LTC/ DTC)	MX77AA	ECL14BC	ECL14BC	ECL14BC	ECL14BC
LGCI	Standard Enhanced (ISDN Peripherals)	SX05AA	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307	QLI22AO
LIM	Link Interface Module (LIM)	9X13OD or 9X13 OB with 9X14OB	LPC19BO	LPC20CQ	LPC21BK	LPC22BN
NIU	Network Interface Unit (NIU)		NRS19BO	NRS20CQ	NRS21BK	NRS22BN
LIU7	8 MB LIU for 36-link SPP	EX26AA, EX22BA and up	ARS19BT	ARS20CU	ARS21BM	ARS22BS
	32 MB Channel Access LIU		ATS19BT	ATS20CU	ATS21BM	ATS22BS
	2 card -8 MB		LRS19BT	LRS20CU	LRS21BM	LRS22BS
	32 MB		LTS19BT	LTS20CU	LTS21BM	LTS22BS

PM type	Description	Hardware	SE06	SE07	SE08	SE09
LM	Basic Line Module (LM)		BLMTB01	BLMTB01	BLMTB01	BLMTB01
	Basic Remote Line Module (BRLM)		BRLMVA03	BRLMVA03	BRLMVA03	BRLMVA03
LTC	Digital Trunk/Line and Trunk/ Line Group Controller PLUS (LGC/ LTC/ DTC)	MX77AA	ECL14BC	ECL14BC	ECL14BC	ECL14BC
	LTC with SX05	SX05AA	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307	QLI22AO
MPC4	1984 CCITT Compliant X.25 MPC (MPC4)	1X89BA and up	MPC403AC	MPC403AC	MPC403AC	MPC403AC
MPCA	AsyncMult Protocol Controller (MPCA)	1X89BA and up	MPCA03AC	MPCA03AC	MPCA03AC	MPCA03AC
MPC0	1980 CCIT Compliant X.25 (MPC0)	1X89BA and up	MPC003AC	MPC003AC	MPC003AC	MPC003AC
MPCX	BX.25 (MPCX)	1X89BA and up	MPCX33AB	MPCX33AB	MPCX33AB	MPCX33AB
MS/FW	9X17 Firmware Multi-port Cards (MPF)	9X17BB or 9X1 7CA or 9X17DA	MPF19BO	MPF20CQ	MPF20CQ	MPF22BN
MS	Message Switch		MUC19BO	MUC20CQ	MUC21BK	MUC22BN

PM type	Description	Hardware	SE06	SE07	SE08	SE09
MTM	Mainten_ance Trunk Module		MTMKA02	MTMKA02	MTMKA02	MTMKA02
	Remote Mainten_ance Trunk Module (MTM)		RMTMKA01	RMTMKA01	RMTMKA01	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11 BA) (MTU)	2X11BA and up	MTULJ04	MTULJ04	MTULJ04	MTULJ04
OAU	OAU		MTMKA02	MTMKA02	MTMKA02	MTMKA02
PDTC/DTCO	With CCS7 (MX77) (ODT)	MX77AA	ODT19BE	ODT20CE_040825	ODT20CE_040825	ODT22AO
	With CCS7 (SX05) (ODT)	SX05AA	QDT19BE2	QDT20CE_050222	QDT20CE_050222	QDT20CE_050222
	PDTC/DTCO with ISDN (MX77)	MX77AA	ODI19BE	ODI20CE_040825	ODI20CE_040825	ODI20CE_040825
	PDTC/DTCO with ISDN (SX05)	SX05AA	QDI19BE	QDI20CE_050222	QDI20CE_050222	QDI20CE_050222
RCC	XPM Plus RSC Load (XPM14) (RCC)	MX77AA	ESR14BC	ESR14BC	ESR14BC	ESR14BC
RCC2	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	AX74AA	XRI17AY	XRI17AY	XRI17AY	XRI17AY

PM type	Description	Hardware	SE06	SE07	SE08	SE09
RMM	Remote Mainten_ance Modul e (RMM)		RMM10A	RMM10A	RMM10A	RMM10A
SMA2/ ESMA	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74 :CAP) SMA2 or ESMA)	AX74AA	XM219BE	XM220CE	XM220CE	XM222AO
SMA	SMA	AX74AA	XSC13BB	XSC13BB	XSC13BB	XSC13BB
SMS	SMS with MX77	MX77AA	ESS13BC	ESS20CE	ESS20CE	ESS22AO
STM	STM		MTMKA02	MTMKA02	MTMKA02	MTMKA02
SXFW	SX05 Firmware	SX05AA	SXFWAJ02	SXFWAK02	SXFWAK02	SXFWAL01
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)		TKMTKA02	TKMTKA02	TKMTKA02	TKMTKA02
UPFWN	MX77 & AX74 Universal Firmware	MX77AA AX74AA	UPFWNU01	UPFWNV03	UPFWNV03	UPFWNV03
UPFWQ	MX77 Universal Firmware Loads with extended distance capability (EDC)	MX77AA	UPFWQM01	UPFWQN03	UPFWQN03	UPFWQN03

PM type	Description	Hardware	SE06	SE07	SE08	SE09
XA-Core	Input/Output Processor (IOP)	LX03AA or LS03AB or LX03BA or LX03BB	XAIO01AK	XAIO01AK	XAIO01AK	XAIO01AK
	Processor element (PE)	LX02CA	XAPE01AG	XAPE01AG	XAPE01AG	XAPE01AG
	Processor element (PE)	LX02DA	XAPE02AB_396	XAPE02AB_396	XAPE02AB_396	XAPE02AB_396
	CMIC	LX05AB	PK12CE12	PK12CE12	PK12CE12	PK12CE12
	HCMIC	LX17AA		XRC01DE_203_PKG	XREC01EG_04493_PKG	XREC01FC_05185_PKG
	HIOP	LXO4AA (ROM)	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR
	HIOP	LX04AA (DLL)	XHI002AK_508_LDLL	XHIO03AC_143_LDLL	XHIO03BB_04493_LDLL	XHIO03CC_05185_LDLL
	HIOP	LXO4BA (ROM)	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR	XHIO02AA_224_UPGR	XHIO02AK_508_LDLL
	HIOP	LX04BA (DLL)	XHI002AK_508_LDLL	XHIO03AC_143_LDLL	XHIO03BB_4493_LDLL	XHIO03CC_05185_LDLL
	HIOP	LXO4CA (ROM)	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR	XHIO02AH_484_UPGR
	HIOP	LX04CA (DLL)	XHI002AK_508_LDLL	XHIO03AC_143_LDLL	XHIO03BB_04493_LDLL	XHIO03CC_05185_LDLL
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)			XRC20CU	XRC21BM	XRC22BS

PM Load History

The table "Load History" (page 88) 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 provided to help you plan PM updates. Use "PM-to-load cross-reference" (page 80) to identify the specific PMs and loads to be updated in the office.

Load History

Load Type	Load Description	SE06	SE07	SE08	SE09
ADCM	Digital Carrier Module (DCM)	ADCMQA01	ADCMQA01	ADCMQA01	ADCMQA01
ATM	Autovon Trunk Maintenance Module (ATM)	ATMKA02	ATMKA02	ATMKA02	ATMKA02
BLM	Basic Line Module (LM)	BLMTB01	BLMTB01	BLMTB01	BLMTB01
BTM	Basic TM8 (TM8)	BTMKA02	BTMKA02	BTMKA02	BTMKA02
BRLM	Basic Remote Line Module (RLM)	BRLMVA03	BRLMVA03	BRLMVA03	BRLMVA03
CMR	Class Module Resource Card (CMR)	CMR17B	CMR17B	CMR17B	CMR17B
CTM	Conference Trunk Module	MTMKA02	MTMKA02	MTMKA02	MTMKA02
DLM	Digital Line Module (DLM)	DLMXPM04	DLMXPM04	DLMXPM04	DLMXPM04
DTC7	Digital Trunk Controller with SS7 (MX77)	ED714BC	ED714BC	ED714BC	ED714BC
	Digital Trunk Controller PLUS with SS7 (SX05) (DTC)	QD717AY1	QD717AY1	QD717AY1	QD717AY1
DTUB	Digital Test Unit for BERT tests (DTU)	DTUBAD01	DTUBAD01	DTUBAD01	DTUBAD01
DTUD	Digital Test Unit with 4X45 (EDTU)	DTUDAB02	DTUDAB02	DTUDAB02	DTUDAB02
DTUH	DTU for off-hook balance tests (DTU)	DTUHAA02	DTUHAA02	DTUHAA02	DTUHAA02

Load Type	Load Description	SE06	SE07	SE08	SE09
ECL	Digital Trunk/Line and Trunk/Line Group Controller PLUS (LGC/LTC/DTC)	ECL14BC	ECL14BC	ECL14BC	ECL14BC
ED16	Enhanced Digital Recording, Access Module (DTM-16 min.)	ED16AA07	ED16AA07	ED16AA07	ED16AA07
EDCH	Standard Enhanced D-Channel Handler (CDH)	EDH19BE	EDH20CE	EDH20CE	EDH22AO
EDRAM	Enhanced Digital Recording Access Module (DTM-4 min.)	EDRMAE11	EDRMAE11	EDRMAE11	EDRMAE11
EIPE	Enhanced Intelligent Peripheral Equipment Load	EIPE17AH	EIPE17AH	EIPE17AH	EIPE17AH
ENC	Enhanced Network (ENET)	ENC19B0	ENC20CQ	ENC21BK	ENC22BN
ERLM	Remote Line Module Load with ESA (RLU)	ERLMVA02	ERLMVA02	ERLMVA02	ERLMVA02
ESA/ MSA	ESA with MX45	MSA14BC	MSA14BC	MSA14BC	MSA14BC
ESS	SMS with MX77	ESS13BC	ESS20CE	ESS20CE	ESS22AO
ETC	Ethernet Interface Unit (EIU)	ETC19BO	ETC20CQ	ETC21BK	ETC22BN
F8C	8 MB Frame Relay Interface Unit (FRIU)	F8C19BT	F8C20CU	F8C21BM	F8C22BS
HCMIC	Computing Module Interface Card - NTLX17AA		XRC01DE_ 203_PKG	XREC01EG_ 04493_PKG	XREC01FC_ 05185_PKG
ILDR	ISDN Line Drawer (ILDR)	ILDRAG01	ILDRAG01	ILDRAG01	ILDRAG01
IOM7	FX32CA - Sony SDT-7200 DAT	IOM7BC01	IOM7BC01	IOM7BC01	IOM7BC01

Load Type	Load Description	SE06	SE07	SE08	SE09
IOM9	FX32CA - Sony SDT-9000 DAT	IOM9BC01	IOM9BC01	IOM9BC01	IOM9BC01
IOME	4-GB DDU	IOMEBC01	IOMEBC01	IOMEBC01	IOMEBC01
IOMH	High-speed Input/Output Module (IOM)	IOMHAX01	IOMHAX01	IOMHAX01	IOMHAX01
IOMR	Standard IOM	IOMRBC01	IOMRBC01	IOMRBC01	IOMRBC01
IPE	IPE Standard	IPE09AB	IPE09AB	IPE09AB	IPE09AB
LCM	Basic ELCM/LCM (64 KB)	LCM01D	LCM01D	LCM01D	LCM01D
	RLCM (64 KB)	LCM01D	LCM01D	LCM01D	LCM01D
	RLCM (256 KB)	XLCM18AW	XLCM18AW	XLCM18AW	XLCM18AW
LCME	Enhanced Line Concentrating Module with ISDN (LCME)	LCME18AW	LCME18AW	LCME18AW	LCME18AW
LGC	LGC with ILD	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307	QLI22AO
LIU7	8 MB LIU for 36-link SPP	ARS19BT	ARS20CU	ARS21BM	ARS22BS
	32 MB Channel Access LIU	ATS19BT	ATS20CU	ATS21BM	ATS22BS
	2 card -8 MB	LRS19BT	LRS20CU	LRS21BM	LRS22BS
	32 MB	LTS19BT	LTS20CU	LTS21BM	LTS22BS
LIM	Link Interface Module (LIM)	LPC19BO	LPC20CQ	LPC21BK	LPC22BN
MPC4	1984 CCITT Compliant X.25 MPC (MPC)	MPC403AC	MPC403AC	MPC403AC	MPC403AC
MPCA	Asynchronous Multi-Protocol Controller (MPC)	MPCA03AC	MPCA03AC	MPCA03AC	MPCA03AC
MPCX	BX.25 (MPC)	MPCX33AB	MPCX33AB	MPCX33AB	MPCX33AB
MPC0	1980 CCIT Compliant X.25 (MPC)	MPC003AC	MPC003AC	MPC003AC	MPC003AC
MPF	9X17 Firmware Multi-port Cards	MPF19BO	MPF20CQ	MPF21BK	MPF22BN
MS	Message Switch	MUC19BO	MUC20CQ	MUC21BK	MUC22BN

Load Type	Load Description	SE06	SE07	SE08	SE09
MTM	Maintenance Trunk Module (MTM)	MTMKA02	MTMKA02	MTMKA02	MTMKA02
	Remote Maintenance Trunk Module (MTM)	RMTMKA01	RMTMKA01	RMTMKA01	RMTMKA01
MTU	Metallic Test Unit Load (2X10BA and 2X11BA) (MTU)	MTULJ04	MTULJ04	MTULJ04	MTULJ04
NRS	Network Interface Unit (NIU)	NRS19BO	NRS20CQ	NRS21BK	NRS22BN
OAU	OAU	MTMKA02	MTMKA02	MTMKA02	MTMKA02
ODI	PDTC/DTCO with ISDN (MX77)	ODI19BE	ODI20CE_ 040825	ODI20CE_ 040825	ODI20CE_ 040825
ODT	PDTC/DTCO with CCS7 (MX77)	ODT19BE	ODT20CE_ 040825	ODT20CE_ 040825	ODT22AO
PK	XA-Core CMIC	PK12CE12	PK12CE12	PK12CE12	PK12CE12
QDI	PDTC/DTCO with ISDN (SX05)	QDI19BE	QDI20CE_ 050222	QDI20CE_ 050222	QDI20CE_ 050222
QDT	PDTC with SS7 (SX05)	QDT19BE2	QDT20CE_ 050222	QDT20CE_ 050222	QDT20CE_ 050222
QLI	ISDN Peripheral: LTCI/DTCI/LGC (SX05)	QLI19BE	QLI20CE_ 050307	QLI20CE_ 050307	QLI22AO
RCC	XPM Plus RSC Load (XPM14) (RCC)	ESR14BC	ESR14BC	ESR14BC	ESR14BC
RDCM	Remote Digital Carrier Module (RDCM)	RDCMPA02	RDCMPA02	RDCMPA02	RDCMPA02
RMM	Remote Maintenance Module (RMM)	RMM10A	RMM10A	RMM10A	RMM10A
SMS	SMS with MX77	ESS13BC	ESS20CE	ESS20CE	ESS22AO
STM	STM	MTMKA02	MTMKA02	MTMKA02	MTMKA02
SXFW	SX05 Firmware	SXFWAJ02	SXFWAK02	SXFWAK02	SXFWAL01
TKM	Trunk Module Load with Metallic Test Capabilities (8-view) (TKMT)	TKMTKA02	TKMTKA02	TKMTKA02	TKMTKA02

Load Type	Load Description	SE06	SE07	SE08	SE09
UPFWN	MX77 & AX74 Universal Firmware	UPFWNU01	UPFWNV03	UPFWNV03	UPFWNV03
UPFWQ	MX77 and AX74 Universal Firmware Loads with extended distance capability (EDC)	UPFWQM01	UPFWQN03	UPFWQN03	UPFWQN03
XIOP (XA-Core)	Input/Output Processor	XAIO01AK	XAIO01AK	XAIO01AK	XAIO01AK
XAPE (XA-Core)	Processor element (PE) - NTLX02CA	XAPE01AG	XAPE01AG	XAPE01AG	XAPE01AG
XAPE (XA-Core)	Processor element (PE) - NTLX02DA	XAPE02AB_ 396	XAPE02AB_ 396	XAPE02AB_ 396	XAPE02AB_ 396
XHIOP	XA-Core HIOP NTLX04AA (ROM)	XHIO02AA_ 224_ UPGR	XHIO02AA_ 224_UPGR	XHIO02AA_ 224_UPGR	XHIO02AA_ 224_UPGR
XHIOP	XA-Core HIOP NTLX04AA (DLL)	XHIO02AK_ 508_LDLL	XHIO03AC_ 143_LDLL	XHIO03BB_ 04493_LDLL	XHIO03CC_ 05185_LDLL
XHIOP	XA-Core HIOP NTLX04BA (ROM)	XHIO02AA_ 224_UPGR	XHIO02AA_ 224_UPGR	XHIO02AA_ 224_UPGR	XHIO02AK_ 508_LDLL
XHIOP	XA-Core HIOP NTLX04BA (DLL)	XHIO02AK_ 508_LDLL	XHIO03AC_ 143_LDLL	XHIO03BB_ 04493_LDLL	XHIO03CC_ 05185_LDLL
XHIOP	XA-Core HIOP NTLX04CA (ROM)	XHIO02AH_ 484_UPGR	XHIO02AH_ 484_UPGR	XHIO02AH_ 484_UPGR	XHIO02AH_ 484_UPGR
XHIOP	XA-Core HIOP NTLX04CA (DLL)	XHIO02AK_ 508_LDLL	XHIO03AC_ 143_LDLL	XHIO03BB_ 04493_LDLL	XHIO03CC_ 05185_LDLL
XLCM	eXtended Memory Line Concentrating Module: XLCM (6X51) (ELCM/RLCM/LCM (266 KB)	XLCM18AW	XLCM18AW	XLCM18AW	XLCM18AW
XLIU	X.24/X.75 LIU Load, Packet Handler (XLIU)	XRC19BT	XRC19BT	XRC21BM	XRC22BS
XM2	AX74 MVI-28 Subscriber Carrier Module Access Node (AX74:CAP) SMA2 or ESMA)	XM219BE	XM220CE	XM220CE	XM222AO

Load Type	Load Description	SE06	SE07	SE08	SE09
XRI	AX74 Domestic Cabinetized Remote Cluster Controller with ISDN (RCC2)	XRI17AY	XRI17AY	XRI17AY	XRI17AY
XSC	XPM Plus for SMA (SMA)	XSC13BB	XSC13BB	XSC13BB	XSC13BB

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 describes only the update procedures that are unique to Meridian SL-100 peripheral modules and hardware types (that is, the DLM and IPE). However, many other DMS peripheral modules are 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* (297-2663-599).

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

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 CD-ROM/DVD.

Required information

None.

Update sequence

illustrates interfaces to use when installing upgrade software from a CD-ROM.

Notes

None.

Summary of procedure

START

Insert the CDROM in the CMT CD tray.

Telnet to the SDM or CBM.

Telnet Core0.

Change directory.

FTP to CMT.

Change directory of CDROM.

Perform MGET.

End FTP.

This flowchart summarizes the procedure.

Follow the instructions listed after the flowchart to perform this procedure.

Exit.

Telnet Core Switch.

DISKUT import loads.

Quit logout.

Telnet CMT.

Eject and remove CDROM.

STOP

G100642

Restore call processing application files

Step	Action

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

1   Insert the CD containing the PMLOADS into the CD-ROM tray.

2   Log into the Core Manager or CBM

```
>telnet <CBM_IP_Adress>
```

username - root

Password - <root_password>

From the CBM

3   Using Telnet, log in to core0.

```
#> telnet core0
```

The operating system prompt is returned:

Example

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

4   Change the 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: To change the directory and transfer the files using FTP, log on to the CS 2000 Management Tools server as a user with the appropriate privileges.

```
> ftp <CMT_IP_Adress>
```

Enter hostname:

```
> maint
```

Enter password:

```
> maint
```

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 the 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 1: Do not transfer a file with a name longer than 32 characters.

Note 2: Use the get command to retrieve a single file.

Example
```
ftp> get EDH20CE.bin1024
```

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

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: Import the PM load files from the native file system into the call-processing application file system. If the disk has insufficient space, a prompt to increase the volume size is presented.

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   After the IMPORT is complete, type the following commands to return to the CBM prompt:

> **quit all**

> **logout**

At the CBM prompt

13   Log in to the CMT.

#> **telnet <CMT_IP_Address>**

(Where user name and password both are "maint.")

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.

—End—

Upgrading the DLM Module
Application

> ⚠️ **CAUTION**
> 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 to prepare for a PM update and start a PM
update shift in the *DMS Peripheral Module Software Release Document*
(297-2663-599) to meet the following prerequisites for this procedure:

- The new load name is datafilled in the PMLOADS table.

- An office image was 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.

Node configuration for DLM
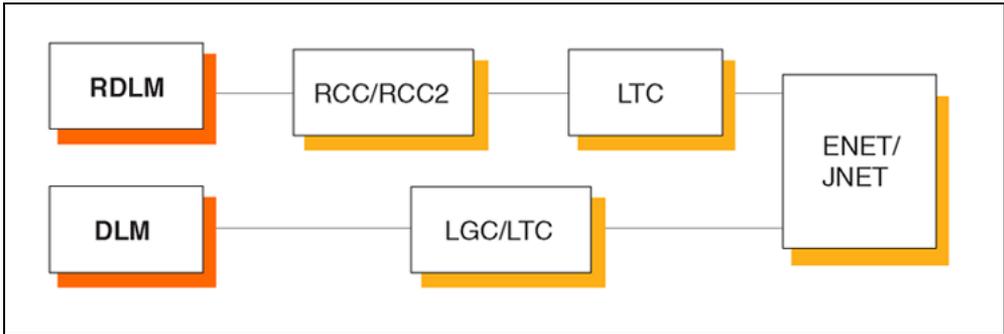
Notes

None.

Summary of procedure
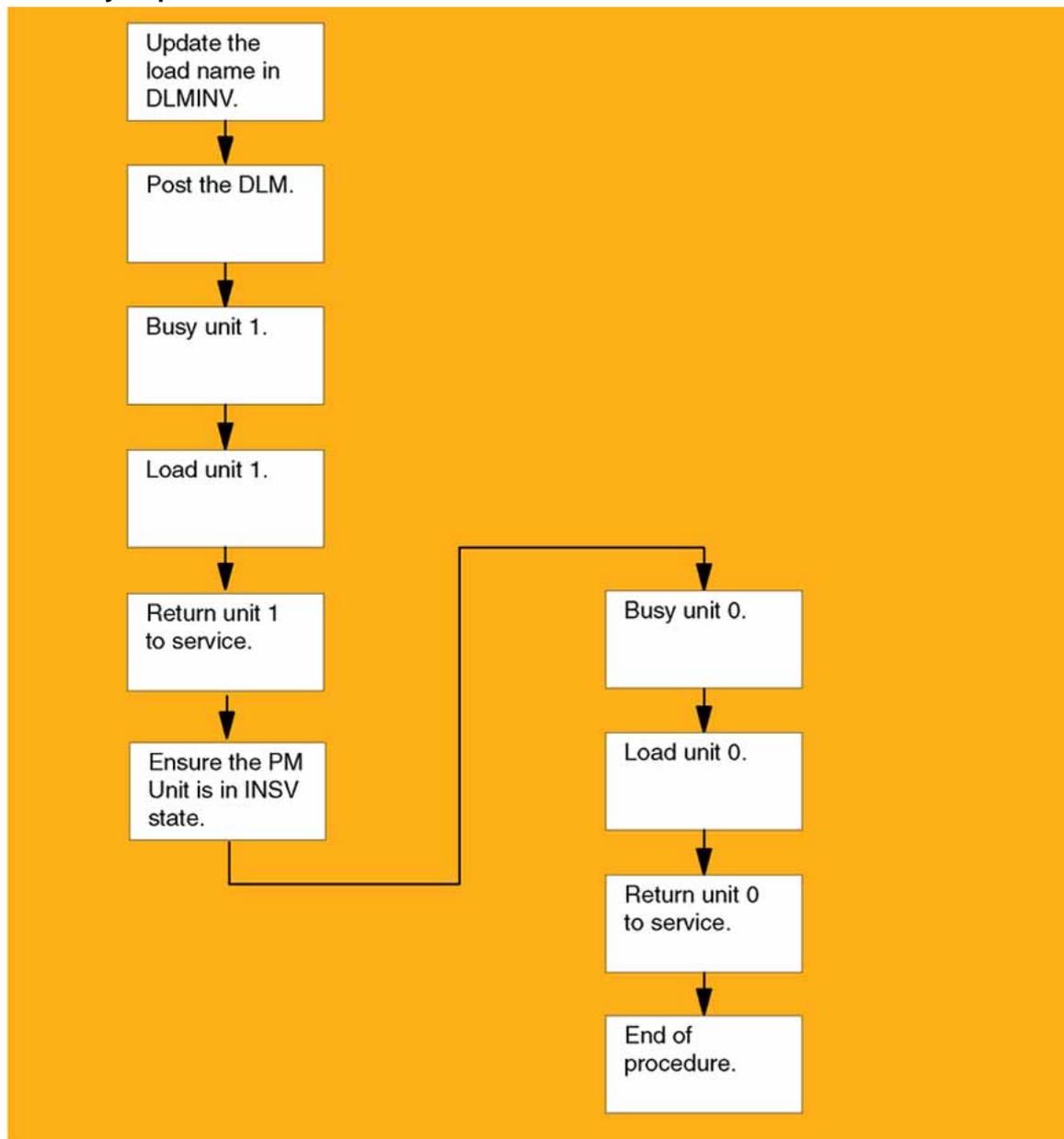
Upgrade the DLM Module

Step	Action

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 you begin 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 **Enter**.

b.   Locate the datafill tuple for the PM to be updated by typing

   `>POS site_name frame_no dlm_no`

   and pressing **Enter**.

   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 **Enter**.

   where

   `new_load`   is the name of the new load

d.   Confirm the change by typing

   `>Y`

   and pressing **Enter**.

e.   Exit the table by typing

   `>QUIT`

   and pressing **Enter**.

4   Access the PM level of the MAP display by typing

`>MAPCI; MTC; PM`

and pressing **Enter**.

5   Post the PM by typing

`>POST DLM site_name frame_no shelf_no`

and pressing **Enter**.

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 site_name field is optional with host-based DLMs.

6 Busy unit 1 by typing

>**BSY UNIT 1**

and pressing **Enter**.

7 Load unit 1 by typing

>**LOADPM UNIT 1 CC**

and pressing **Enter**.

8 Return unit 1 to service by typing

>**RTS UNIT 1**

and pressing **Enter**.

9 Ensure unit 1 is in service (INSV).

10 Busy unit 0 by typing

>**BSY UNIT 0**

and pressing **Enter**.

11 Load unit 0 by typing

>**LOADPM UNIT 0 CC**

and pressing **Enter**.

12 Return unit 0 to service by typing

>**RTS UNIT 0**

and pressing **Enter**.

13 You successfully updated the DLM. If other PMs or hardware types require updating during this shift, see the appropriate procedure in this document or the *DMS Peripheral Module Software Release Document* (297-2663-599). If this is the last PM or hardware type to be updated during this shift, see the procedure to finish a PM update shift in the *DMS Peripheral Module Software Release Document* (297-2663-599).

—End—

Updating the IPE
Application

> **CAUTION**
> 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 be updated to meet the following conditions before you update:

- The new load name is datafilled in the PMLOADS table.

- An office image was taken in the last 24 hours.

- All PM logs are enabled.

- The IPE is in service.

- Automatic REX testing is suspended in the office.

To meet these prerequisites, perform the procedures in the *DMS Peripheral Module Software Release Document* (297-2663-599) to prepare for a PM update and to start a PM update shift.

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

Update sequence
illustrates a possible node configuration for the IPE..

Node configuration for IPE
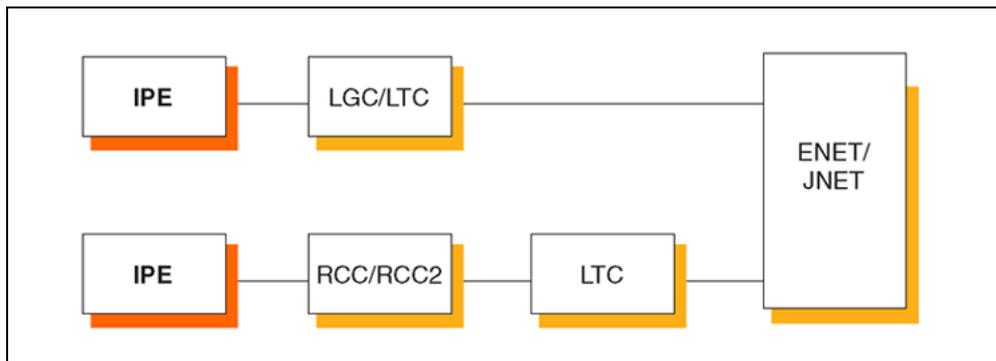
Subtending PMs None.

Serving PMs "Possible serving PMs to the IPE" (page 108) lists possible serving PMs to the IPE. Any subtending PMs in the node must be updated before the IPE.

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.

Summary of procedure to update an NT7D07BA controller card for MSL11 and up
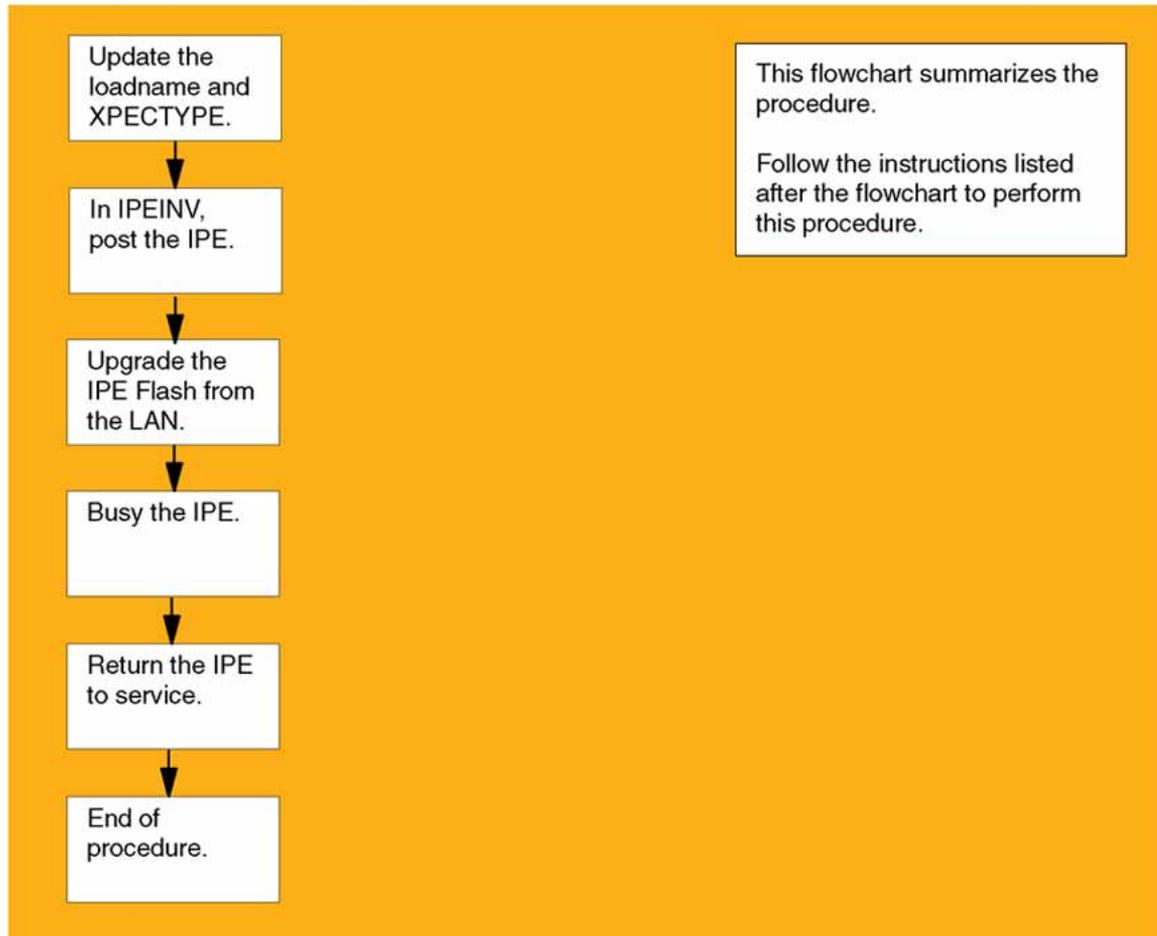
Update the IPE

Step	Action

At the CI level of the MAP display

> ### *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 office policy can require you to select another PM to update. Office policy can vary by PM type.*

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 **Enter**.

4   Locate the datafill tuple for the IPE to be updated by typing

>POS IPENM ipe_no

and pressing **Enter**.

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 **Enter**.

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 **Enter**.

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 a LAN connection is 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 **Enter**.

> *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 **Enter**.

8   Access the PM level of the MAP display by typing

>MAPCI; MTC; PM

and pressing **Enter**.

9   Post the IPE by typing

>POST IPE ipec_no shelf_no

and pressing **Enter**.

> 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 **Enter**.

11 Enter YES to confirm by typing

>**YES**

and pressing **Enter**.

12 NT7D07AC: Load the selected IPE by typing

>**LOADPM**

and pressing **Enter**.

NT7D07BA: Step 12 can be skipped as the NT7D07BA is provided with an initial load in Flash Memory.

13 Return the selected IPE to service by typing

>**RTS PM**

and pressing **Enter**.

14 **NT7D07AC:** You successfully updated the IPE. If other PMs or hardware types require updating during this shift, see the appropriate procedure in this document or the DMS Peripheral Module Software Release Document (297-2663-599). If this is the last PM or hardware type to be updated during this shift, see the procedure to finish a PM update shift in the DMS Peripheral Module Software Release Document (297-2663-599).

15 **NT7D07BA:** Upgrading the NT7D07BA flash through the LAN is accomplished using the Optivity Telephony Manager (OTM) or the M3900 EXPEC Firmware Manager (MEFM).

—End—

List of terms

CCITT

International Telephone and Telegraph Consultative Committee (Comite Consultatif International Telegraphique et Telephonique). Now known as the International Telecommunications Union (ITU).

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 the 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.

DMS
Digital Multiplex System.

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. An FRIU 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

- points in CCITT number 6 signaling (N6), common channel interoffice signaling number 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. The LTC 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. The LTCI 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.

MEFM

M3900 EXPEC Firmware Manager.

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 used for 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. A 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) 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.

OTM

Optivity Telephony Manager.

PANTHER

An automated PM upgrade tool that consists of the PMUPGRADE tool and the SWUPGRADE tool.

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 North American (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) that 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

A PANTHER CI-level super command that selects and copies new PM load and patch files from the distribution media to the Core, PMUGRADE also produces the PM upgrade plan that outlines the tasks required to upgrade PMs with new loads and patches.

PPXL

Prepatched XPM load. An XPM load with corrective PRSUs built into the files. Functionally, PPXLs are the same as base loads; they are incremental up-issues of their respective base loads.

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. The RCC2 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: a subscriber carrier module-100 rural (SMR); a subscriber carrier module-100S (SMS); a subscriber carrier module-100S remote (SMSR); and a 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 multiapplication high-speed Series III PM type and provides custom 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

A PANTHER CI-level super command that automates task execution in the PM upgrade plan to load and patch the necessary PMs.

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 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

- the equipment state that occurs when the central control removes 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 performs all 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 KB) 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. The XLIU 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.

Communication Server 2100

Peripheral Module Release Document RELDOC

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