Option 11C/ 11C Mini Installer's Checklist

P0917423 –v5

NOTE: This document is pertinent for Option 11C and Option 11C Mini systems on Release 25.30.

The **Generic X11 Release 25.30** software for Option 11C and Option 11C Mini systems includes fourteen (14) manufacture installed Performance Enhancement Products (PEPs) applicable to all regions, with one (1) additional PEP applicable to CALA and Asia Pacific regions only.

PEP #	PRS ID	Description
MPLR13794	MP11680	ELAN disconnection print msg causes warm start
MPLR13774	MP11705	When Main INIs basic calls not properly torn down
MPLR13736	MP09996	LD11 cpy TYPE=3900: value > 8 => SCH3202 error
MPLR13735	MP11563	Provide overflow to orig if mail TN in Maint Busy
MPLR13734	MP11651	Exp cab connected over L3 IP doesn't switch back
MPLR13816	MP11626	Improve router ARP refresh, prevent LD117 sys hang
MPLR14421	MP12182	11C M3900 Download Failure
MPLR14758	MP12345	11C Survivable IP Expansion file
MPLR14638	MP12272	**i2004** - EDD and ELAN failures with i2004
MPLR14599	MP12131	**i2004** - ISM decrement problem
MPLR14639	MP12118	**i2004** - Observe ACD agent problem
MPLR14539	MP11595	**i2004** - Call interruptions
MPLR14331	MP11975	**i2004** - M1 warmstart due to packet loss
MPLR15217	MP12561	ISA routes will be blocked

(CALA, A/P & Japan only)

Patch #	PRS ID	Description
MPLR13435	MP11358	PLDN GIVE ACCESS TO EXTERNAL TRUNKS

The Option 11C software daughterboard versions for Release 25.30 are as follows:

North America (U.S.A. / Canada)	CALA	Asia/Pacific
NTSK11AQ R19	**NTSK02AQ R17**	**NTSK03AQ R17**

The new Option 11C Mini system controller versions are as follows:

North America	CALA	Asia/Pacific
NTSK11ZQ R19	**NTSK02ZQ R17**	**NTSK03ZQ R17**

The software version can be identified by the Product Issue of the pre-programmed daughterboard, (or system controller on Option 11C Mini) or PCMCIA card. Product Issue may be determined by locating the label with the product code (i.e. NTSKxxAQ, NTSKxxZQ, or NTSKxxBQ) on either the software box, the software daughterboard, or the PCMCIA card. The Product Issue is the two digit number immediately following the product code. Note that the "xx" in the NTSKxxAQ, NTSKxxZQ, and NTSKxxBQ indicates the region to which the software is released.

PEPS Description

MPLR13794 MP11680 - A large number of M1 error messages are sent to the TTY if the ITG ELAN / TLAN cable is disconnected from the ITG cards or if the ITG cards are pulled out. This can result in a system warm-start. This PEP is to prevent the error messages from printing, thus also preventing the warm-start.

MPLR13774 MP11705 – This PEP resolves the INI problem on the MAIN cabinet. When Main INI's basic calls are not properly torn down since the dynamic switching bitmap was not properly initialized to reflect the preserved calls. This PEP must be loaded in both the MAIN cabinet and all EXPANSION cabinets.

MPLR13736 MP09996 - This PEP is required for Option 11C IP expansion systems. The craftsperson is blocked to copy more than eight (8) M3900 set types at one time. That is, when cpy is used in LD 11 the user can only enter a maximum value of 8 when the TYPE is 3900 set. A SCH3202 error is reported if a value of greater than 8 is specified and TYPE is 3900. **LD11 cpy TYPE=3900: value > 8 => SCH3202 error**

MPLR13735 MP11563 - This fix is useful if the mail intercept treatment is configured. It provides overflow (fast busy) tone to originating party if the mail TN is in Maintenance Busy state.

MPLR13734 MP11651 - This fix resolves the issue where the IP expansion cabinet when connected over layer 3 IP does not switch back from survival mode after the link comes back up.

MPLR13816 MP11626 - These two PEP's should be installed on both the Main and Expansion cabinets in all configurations (PTP,L2 and L3). They are provided to improve the router ARP refresh mechanism and prevents system hang while using OVL 117.

MPLR14421 MP12182 – This PEP resolves the issue where the M3900 TN's cannot successfully complete the firmware download on Option 11C systems. If this failure occurs while doing a single-set download, the error codes bug4036 and npr334 will appear.

MPLR14758 MP12345 – This PEP provides a file required for Survivable IP Expansion.

MPLR14638 MP12272–The manual and automatic EDD can fail if more than 4 ITG line cards are in use at one time.

MPLR14599 MP12131 – When creating an IP set in LD 11, the ISM values for both Internet telephones and digital telephones are decremented. This patch prevents the digital ISM value from being affected.

MPLR14639 MP12118 – If the ACD supervisor activates OBV (Observe Agent key) while agent is on, a trunk call to an i2004 ACD set, releasing the OBV key can drop the original call. This PEP corrects this issue.

MPLR14539 MP11595 – This patch prevents BUG330, AUD017 and AUD018 messages that occur when a call is placed to a different DN on the same i2004 phone or when a call originates or terminates on an i2004 to/from various different types of trunks (PRI, PRI2, DTI, DTI2, QSIG, others). This PEP is a replacement for MPLR13817/MP11659 which was provided on the previous version.

MPLR14331 MP11975 – Occasionally, packet loss on the E-LAN may result in the RUDP message getting stuck in queue. This can eventually result in the need to INI the switch. This PEP addresses that problem.

MPLR15217 MP12561 – This PEP addresses the problem of several calls failing due to blockage. ISA route calls would be blocked because of maximum and minimum restrictions even when there are several trunks still available.

+

(CALA and Asia Pacific software only)

MPLR13435 MP11358 – This PEP addresses an issue of potential toll fraud when Group Hunt (PLDN) allows access to an external trunk or number. If a PLDN is directed to Speed Call, and the Speed Call List entry is empty, it may be possible to access an external trunk. The PEP now invalidates the call if the digit following the PLDN is blank.
NOTE: The Group call feature is currently only available in the EMEA, CALA and Asia-Pacific Regions.

Option 11C/ 11C Mini Installer's Checklist

P0917423

NOTE: This document is pertinent for Option 11C and Option 11C Mini on R25.30

CAUTION

Ensure that the NTDK20 SSC card is on a **FLAT** surface before installing the Software Daughterboard and Security Device. Ensure that the NTDK97 MSC is on a **FLAT** surface before installing the Security Device.

DAMAGE MAY RESULT if this is done with the card still in the box!

CAUTION Please read this important message on software upgrades

Note: Nortel Networks recommends that you upgrade the boot code to the latest release when you upgrade the software. The boot code is on the programmed PCMCIA card.

Please refer to Nortel Networks NTP's for installation instructions.

UPGRADE method: Log in to the system and select DL 143. Type UPGRADE to access the Installation Program.

You cannot use the UPGRADE command to upgrade correctly from Release 22 to 23; 22 to 24; or 23 to 24. The Sysload Method must be used.
SYSLOAD method: Toggle the power supply to OFF and then to ON. During the reboot, press Ctrl I to access the Installation Program.

NEW - Software daughterboard – NTTK25AA

The NTTK25AA blank software daughterboard is being introduced due to the component obsolescence of the Intel Flash Memory chip used on NTTK13AA daughterboards. This new daughterboard however; has the same memory capacity as the NTTK13AA containing 48 Meg of flash memory storage split into 32 Meg of program store and 16 Meg of C:Drive. The NTTK25AA card is compatible with X11 Release 25.30 software or higher. This card is not compatible with issues of software earlier than 25.30. The installation of the card is the same as with the NTTK13AA or NTDK81AA. . **If you are upgrading from a previous version of software daughtercard, please ensure that you have the latest bootcode fromyour release 25.30 PCMCIA card. (see Upgrade NTP).**

As noted below, NTTK13AA will continue to be supported with X11 Release 24.24 to Release 25.30 and higher.

Software Daughterboard Compatibility

The following identifies the existing software daughterboards and the software releases they are compatible with:

Software Daughterboard	Capacity	Introduced on	Compatible with
NTDK21AA	32 Meg	Release 22.08D	Release 22.08D – 23.55
NTDK81AA	40 Meg	Release 23.18	Release 23.18 – 24.24
NTTK13AA	48 Meg	Release 24.24	Release 24.24 – 25.30and higher
NTTK25AA	48 Meg	Release 25.30	Release 25.30 and higher

NTDK97 – 11C Mini System Controller

This controller is designed specifically for the Option 11C Mini which has forced air cooling. DO NOT install this controller in an Option 11C Cabinet (NTAK11) as it will generate excess heat and system damage will result. In addition this controller, when installed in an Option 11C cabinet DOES NOT meet regulatory standards.

IP Expansion Connectivity

Upgrading your Option 11, 11E or 11C system to support IP Connectivity

A minimum software release of X11 Release 25.30 is required to use the new IP daughterboards.

In order to support the software, the software daughterboard, NTTK13AA or NTTK25AA is required on each IP cabinet.

The IP Expansion product requires a minimum vintage of the NTDK20EA SSC card in the main cabinet for Option 11C. Option 11C IP Expansion cabinets require minimum NTDK20CA or later.

Option 11C Mini requires a minimum vintage of the NTDK20EA SSC card in both the main and IP Expansion chassis.

The Option 11C Cabinet refresh is required for cabinets configured with IP daughteboards. Existing cabinets can be easily field upgraded by ordering the **NTDK18AA** cabinet upgrade kit.

IP daughterboards can co-exist with existing Fibre daughterboards thereby providing customers with an easy upgrade solution

NTDK97 – Faceplate LED status

The Link light will be "on" during sysload, then turn "off" after the ethernet interface is enabled (whether ethernet is configured or not) and remain "off" during normal use.

Before starting make sure you have the following:

11C System

• NTDK20 SSC Card • Software Daughterboard • Security Device • Keycode Datasheet (see next page for keycode instructions)

11C Mini System

• NTDK97 MSC Card • Security Device • Keycode Datasheet (see next page for keycode instructions)

For IP Expansion Systems

• IP Daughterboard(s) with appropriate cables • IP Expansion Security Device(s) • Grounding Clips

Note: Your IP Expansion Security Device I.D. begins with the number 4xxxxxxx. It is programmed to work with your main cabinet security device.

The following guides from the NTP suite will be helpful to complete installation:

• Option 11C Planning and Installation Guide • Option 11C Mini Planning and Installation Guide

• Option 11C and 11C Mini Upgrade Procedures Guide

• For IP Expansion installation procedures, refer to the Planning and Installation Guide

• For Survivability configurations, please refer to the Option 11C Survivability Operation and Configuration Guide.

• Set the baud rate for Port 0 of the SSC/MSC card, using the dip switch on the SSC/MSC card faceplate.

Port 0 is the only SDI port that can be used for software installations and upgrades.

• After successful install of the system, make sure that Port 0 of SSC/MSC card is configured as a Maintenance Terminal/TTY. This is required for future software upgrades.

• If upgrading from an Option 11E multi-cabinet system that has fibre connection to the expansion cabinets, it is recommended that the keycodes be validated on the main cabinet first before swapping out the expansion cabinets.

INSTALL MENU

If installing Option 11C using a Software Daughterboard for a brand new system or for an upgrade from an Option 11/11E to 11C, select Option 1 (New Install or Option 11/11E Upgrade – From Software Daughterboard). If installing to your 11C Mini system using a Mini System Controller for a brand new system, select Option 1.

If installing using a PCMCIA card, select Option 4 (New system installation – from Software Delivery Card) or Option 2 (System Upgrade) to upgrade an Option 11/11E to Option 11C, or to upgrade software to a new release or issue.

"**Basic Configuration**" database option includes the following items: Directory, Configuration Record, XPECs blocks, Superloops blocks, Patch, Physical Dump Record, IMS TN Table, IMS Links No, Table, Asynch Blocks, CSL Blocks, VAS Blocks, Background TTY Blocks, Background Port ID Blocks, Aries Data Block, SYS PARAMS Block, LAPW Blocks. For a more extensive default data block, please choose "Pre-Configured Data".

IMPORTANT KEYCODE INFORMATION:

The data you need to enter in the INSTALL MENU is provided on the Keycode Datasheet.

If the keycodes are unsuccessful, check the following:

-software issue, feature set name, any additional packages, TNs, ISM parameters, security ID, auxiliary ID (the old site ID, if this is an upgrade), and ensure the correct keycodes were entered. All items must match the keycode sheet exactly.

For an Option 11C Mini system, check that the number of TNs has been entered correctly from the keycode sheet.

When performing a new system installation, please ensure that the default AUX ID matches the AUX ID from the keycode data sheet.

If they still are not successful, then call your Service Representative.

SYSTEM UPGRADE FROM Option 11/11E to Option 11C, retaining copper interface

If you are installing the NTDK26 Backwards Compatible Daughterboard on the SSC card, jumper J7 must be removed prior to installing the card.

SYSTEM UPGRADE FROM Option 11 or 11E to Option 11C

The following two methods can be used to extract customer data from Option 11/11E software cartridge:

• PC with the Option 11/11E data stored in a CCBR file, or • NTDK30 Database Upgrade Tool

SOFTWARE UPGRADE on Option 11C or Option 11C Mini

The following is required: Software on PCMCIA Card and new keycodes; or blank PCMCIA Card and access to Nortel Network's Electronic Software Distribution website to download the applicable software.

SOFTWARE DOWNLOAD Website

The Electronic Software Distribution website (ESD) is available for Option 11C/11C Mini software downloads. The site is located at: http://www.nortelnetworks.com Choose Customer Support – Software Distribution. Choose Option 11C/11C Mini from the pulldown product listing menu.

Registration is required in order to access this site.

Meridian 1
R25 Asia Pacific Market Introduction Catalogue
(also known as R25 Asia Pacific General Release Bulletin)

(For Asia Pacific's Authorised Distributors internal use only)

Publication Number:	**Issue 1.0**
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Meridian 1 Product Management
Asia Pacific

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4 December 2000

S2. Introduction

Generic X11 Release 25.30 is supported on:

- Option 11C and Option 11C Mini plus Performance Enhancement Products (PEPs), as required. Refer to Section 4 for details of any manufactured PEPs for Small Systems.
- Options 51C, 61C, 81 and 81C equipped with the 68060 (NT5D10), or 68060E (NT5D03) commercial processors, plus mandatory PEPs as required. Refer to Section 5 for details of any mandatory PEPs required for Large Systems.
- Options 81C equipped with Call Processor PII commercial processors, plus mandatory PEPs. Refer to Section 5 for details of any mandatory PEPs required.

This document provides an overview of the Global features developed for the Meridian 1 Generic X11 Release 25.30 software product. It describes the new features and enhancements offered in this release. This document contains feature information that is applicable to Asia Pacific market region for all supported Meridian 1 system types as defined above.

X11 Global release 25.30 is a multi-purpose release designed to deliver a single global software stream to all markets. The default processor for new Release 25 Option 51C and Option 61C in Asia Pacific will be the 68060E processor.

Release 25.30 Option 81C new systems will ship with Fiber Network Fabric (FNF) and the 68060E Processor as the default configuration.

68030 and 68040 Call Processors are not supported on Release 25 in Asia Pacific. For other system details please refer to the Nortel Networks Publications (NTPs).

There is an updated Documentation CD-ROM for Release 25.30 and a new order code for the CP PII w/FNF Reference Library. Please refer to Section 8 for details of the Documentation Restructure and for the complete listing of Release 25.30 codes.

Release 25 includes the following key features:

The software release in brackets after the feature name indicates the minimum issue of release 25 software required for the feature.

SYSTEM FEATURES

- Option 11C / Mini IP Expansion (R25.30)[1]
- Call Processor PII (CP PII) (R25.15)
- Fiber Network Fabric (FNF) (R25.15)
- Inventory Reporting Phase II (R25.10)

DESKTOP

- M3900 Digital Telephone Enhancements (including M3900 Flash Download Flexibility Enhancement) (25.10 + PEPs or 25.15)
- ITG Line side and i2004 Internet Telephones (R25.30)
- Corporate Directory Dial Enhancement (R25.30)
- Scheduled Electronic Lock (R25.30)

NETWORKING

- Meridian ITG Trunks 2.0 with ISDN (R25.10)
- D-Channel Expansion (R25.10)
- MDECT 2000 - Multi Site Mobility Networking (R25.10)
- Night Service Enhancement for BRI Trunks (R25.30)

COUNTRY SPECIFIC

- Analog Calling Line Identification (ACLID) for Hong Kong (R25.10)

CALL CENTER

- Agent Greeting (R25.15)

CONCURRENT SYSTEM MANAGEMENT FOR RELEASE 25.30

- Meridian Administration Tools 6.6 (MAT 6.67)
- Optivity Telephony Manager 1.0 (OTM 1.01)

Note 1 – Please contact your Regional Nortel Networks Representative for country roll-out dates

Note. Not all R25 features described in this document are offered in all countries in Asia Pacific, and as noted within this document, not all features are supported on all machine types. Please contact your local Nortel Networks sales representative for more information.

For information on Memory calculations, please refer to P0910790, the Technical Reference Guide for Small Systems or NTLH03AA (A0804746), the Meridian 1 Release 25 Planning and Engineering Guide for Large Systems. This information is also available on the documentation CD-ROM .

Important

Please read all included advisements, requirements, and enhancements both common, and pertinent to your machine type prior to loading this software.

Release 25 Feature Availability and MAT/OTM Matrix

	11C	51C	61C	81	81C	25.10	25.15 (Re-spin)	25.30	MAT/OTM Mandatory Requirement
Fiber Network Fabric				X	X		X	X	No
Call Processor PII (CP PII)					X		X	X	No
CP PII & FNF					X		X	X	No
Option11C & 11C Mini IP Expansion	X							X	6.67.07/1.0[4] or later
ITG Trunks 2.0	X	X	X	X	X	X	X	X	6.67.04/1.0 or later
ITG Line- Side & i2004 Internet Telephone	X	X	X	X	X			X[1]	6.67.07/1.0[3] or later`
D-Channel Expansion				X	X	X	X	X	No
CLID On Analog Trunks	X	X	X	X	X	X	X	X	No
M3900 Digital Telephone Enhancement	X	X	X	X	X	X[2]	X	X	No
M3900 Corporate Directory	X	X	X	X	X		X	X	6.67.07/1.0 or later
M3900 Virtual Office	X	X	X	X	X		X	X	No
Scheduled Electronic Lock	X	X	X	X	X			X	Note 5
Night Service Enhancement For Bri Trunks	X	X	X	X	X			X	No
Inventory Reporting Ph 2	X	X	X	X	X	X	X	X	No
MDECT 2000 MSMN	X	X	X	X	X	X	X	X	No
Agent Greeting	X	X	X	X	X		X	X	No

Notes:

1 - Please contact your Regional Nortel Networks Representative for country roll-out dates.

2 - M3900 Enhancement requires R25.10 plus MDCS or Manufacture Patches **OR** R25.15 or later.

3 - The OTM 1.0 Upissue (OTM 1.01) and MAT 6.67 Update Disk (ITGL content) is required to supporrt ITGL in expansion cabinet in survival mode

4 - When OTM 1.1 is introduced it will deliver additional functionality to manage the Survivable IP Expansion cabinets in the areas of Common Services and Maintenance in both the Windows and Web environment.

5 – This feature is not supported in MAT 6.67 or OTM 1.01. Support for this feature is planned for OTM 1.1.

S3. General System Advisements

X11 Release 25.15 is a global software release. This document provides the advisements applicable to Asia Pacific, for the system types indicated in the “Systems Supported” section.

In this document, Small Systems refer to the Option 11C and Option 11C Mini. Large Systems refer to the Option 51C, 61C, 81 and 81C machine types. System Advisements are applicable to all System Types. Section 4 and 5 document advisements that are Small and Large System specific respectively.

Systems Supported

The default processor for New Release 25.30 Large systems is the 68060E. Generic X11 Release 25.30 supports the following machine types

- **Meridian 1 Option 11C** equipped with an NTDK20CA or higher Small System Controller (SSC) and NTTK13AA software daughterboard (providing 32Mb Program Store and 16Mb C-Drive space) which is necessary to provide sufficient program store for Release 25.
- **Meridian 1 Option 11C Mini** equipped with a NTDK97AB Mini System Controller which provides 48Mb of total memory.
- **Meridian 1 Options 51C, 61C, 81, and 81C** equipped with the Motorola 68060 (NT5D10), or 68060E (NT5D03) commercial processors. Release 25 upgrade for Options 51C, 61C, 81 and 81C is only supported via CD-ROM and require an IODU/C drive. The 68030 and 68040 are not supported with Generic X11 Release 25 in this market region.
- **Meridian 1 Option 81C equipped with the Call Processor PII commercial processor**, requires an Multi-Media Disk Unit (NT4N43). The Multi-Media Disk Unit is automatically included with an upgrade to Call Processor PII.

Feature Interactions

Microcellular features (packages 345, 346, 314, 302, 303) are not supported on any Release 25 based and later systems.

SLIC and UILC cards are not supported in Option 11C / 11C Mini IP Expansion (IPEX) cabinet for Rls 25.30.

Memory

Release 25.30 has the same memory requirements as 25.15. Release 25 has new memory requirements over Release 24, which may result in necessary upgrades. For small system memory requirements, refer to Small System Memory Requirements for Release 25 in Section 4. For large system memory requirements, refer to Call Processor Recommended Memory Requirements in Section 5.

Hardware

For Release 25 Base Software

X11 Global Release 25 base software may require memory upgrades as described above. Please refer to Section 4 and 5, for small and large systems.

System Upgrade - PE and EPE Support

PE and EPE hardware will be supported on X11 Release 25 subject to the following guidelines and limitations.

- CP3 (68060) and CP4 (68060E) Systems – PE and EPE supported subject to guidelines listed below.
- CP PII (Pentium®) System does not support PE or EPE cards.

Customers currently on Motorola 68060 and 68060E processors, wishing to take full advantage of the feature richness of X11 Release 25 are encouraged to migrate any existing Peripheral Equipment (PE) and Enhanced Peripheral Equipment (EPE) to Intelligent Peripheral Equipment (IPE). This is to ensure full optimization of the processing power afforded by the Motorola Processing platforms while maintaining Nortel Networks' standards of performance and quality.

Please contact your Nortel Networks Sales Representatives to help you in converting any of your customer's PE and EPE equipment to IPE platform.

System Upgrade - CP3, CP4 - Guidelines

Due to differences in processing speeds of the CP3 and CP4 processors and PE and EPE hardware, there are certain Customer Data Configurations that may be susceptible to performance degradation of Telephone sets connected to PE and EPE. These are:

- Having the same Multiple Appearance Directory Number (MADN) on Telephones connected to the same Digital Line Card.
- Group Call configurations where the target sets are on the same Digital Line Card.
- Calling Party Name Display- longer names increase the potential for problems.
- Numbering schemes where Directory Number Expansion is used.

However, since Release 25.15, a Message Buffering solution was incoporated in the software that would reduce system degradation caused by the above configurations.

System Upgrade - CP PII

For upgrades to the CP PII processor platform, PE and EPE cards will not be supported and will need to be migrated to IPE hardware. This refers to cards that plug into PE and EPE shelves (cards that have 1 1/2" spacing). Some telephone sets, such as SL1 sets (QSUXXX), may have to be replaced in this migration. Cards in the network shelves will continue to be supported. Connections from Networking Equipment to Meridian Mail and Digital Trunk/Primary Rate Interface are therefore not impacted by this requirement and remain supported in this configuration.

For New Release 25 Features

New hardware is required to activate several of the new Release 25 features:

The following features introduce new hardware. Please see the descriptions of the features in Section 6 for details.

- Call Processor PII (Option 81C only)
- Fiber Network Fabric (Option 81and Option 81C only)
- M3900 Digital Telephone Enhancements - Introduces new vintage sets with new firmware to support Phase 2 features. The M3900 Digital Telephones have a Flash Memory download capability that allows downloading of a new firmware version from the Meridian 1 to the M3900 telephone. Migration from current Release 1 M3900 sets that X11 Release 24 supports, to Release 2 M3900 sets that X11 Release 25 supports is done using the M3900 Flash Download capability.
- ITG Trunks 2.0 with ISDN (new vintage ITG card)
- CLID on Analog trunks for Hong Kong (new DXUTA Pack)
- ITG Line-side and i2004 Internet Telephones
- Option 11C / 11C Mini IP Expansion

M3900 Digital Telephone Enhancement Advisements

The following advisements apply to then M3900 Digital Telephones Enhancements:

Flash Download Advisements

M3900 Enhanced Flash Download Commands Now Available

The M3900 Enhanced Flash Download Commands (LD 32 including FDLS, FDLC and FSUM ALL and all Flash Download Related Prompts LD 97) are now available for general use. These commands are now also available on Release 25.10 with PEPs (MDCS release for Large Systems, Manufactured PEPs for Small systems). The solutions to these PEPs are included in Release 25.15.

Release 1 vs. Release 2 Telephone Feature Operation

Release 1 M3900 Features include the base M3900 feature set introduced on Release 24.24/24.25.

Release 2 M3900 set features include:

- Flash Download (25.10 + PEPS or 25,15)
- Context Sensitive Keys (25.10 or later)
- Set to Set Messaging (25.10 or later)
- Virtual Office (25.15)
- Corporate Directory (25.15)
- Display Based Expansion Module (25.10 or later)

The following table summarizes which M3900 Feature sets will be active when Release 1 and Release 2 M3900 sets are installed with the various releases of X11 Software which support M3900 sets:

	X11 Release 24 (24.24/24.25)	**X11 Release 25 (25.10/25.15)**
M39000 Sets with Rls 1 F/W	Rls 1 capability	Rls 1 capability
M39000 Sets with Rls 2 F/W	None Rls 2 Sets are not supported on Release 24.	Rls 2 capability

M3900 Flash Download provides the capability to download a new firmware version from the Meridian 1 to the M3900 telephone. On Release 25, Release 2 Firmware will be downloaded to the set by default, however, during the system software install process, the system administrator can select Release 1 firmware to be downloaded , if desired, when the flash download process is invoked.

Customers who desire M3900 Release 2 functionality must purchase X11 Release 25.10 or higher software.

M3900 Release 1 and Release 2 telephones can initially be identified through the part numbers below; however, telephones listed with these part numbers could contain either Release 1 or Release 2 firmware if a flash memory download has been performed on them. A flash memory download is not possible on X11 Release 24 so part numbers are likely to be accurate for M3900 telephones on this X11 release. M3900 telephones can be queried through Overlay 32 or from the set directly to determine their firmware version.

Release 1 Sets:

NTMN33BA-66 A0767102 Meridian M3903 Enhanced, Rel.1, Platinum

NTMN33BA-70 A0767103 Meridian M3903 Enhanced, Rel.1, Charcoal

NTMN34BA-66 A0767107 Meridian M3904 Professional, Rel.1, Platinum

NTMN34BA- 70 A0767108 Meridian M3904 Professional, Rel.1, Charcoal

Release 2 Sets:

NTMN33FA-66 A0806577 Meridian M3903 Enhanced, Rel. 2, Platinum

NTMN33FA-70 A0806578 Meridian M3903 Enhanced, Rel. 2, Charcoal

NTMN34FA-66 A0806581 Meridian M3904 Professional, Rel.2, Platinum

NTMN 34FA-70 A0806582 Meridian M3904 Professional, Rel. 2,Charcoal

Important Notes Regarding Scheduling of Flash Downloads

Since the Flash Downloading feature of the M3900 takes some bandwidth from the system signaling path while it is operating, it is recommended that downloading is scheduled in off peak hours for best results.

When a system is first brought into service with M3900 sets, there is a significant amount of messaging that occurs to activate the sets via the Lamp Audit background routine. The time required to bring all the sets into service on a system is dependent on the system configuration, and could take several hours. Performing a Flash Download directly after the system is brought into service will add to the message load on the system. As such it is recommended that M3900 set download activities not occur in conjunction with systems being brought into service, but that downloads occur 24 hours later.

These recommendations will reduce the likelihood of any other system signaling or messaging related issues from occurring on the Meridian 1 switch

The following table provides an estimate of the Flash Download times for the different system types.

System	Average Lines	M3900 Lines	Download Time
Option 11C	100	80	3 hours
Option 51C/61C	400	200	15 hrs. (2 XPECs) 7.5 hrs. (4 XPECs)
Option 81/81C	1350	650	16.5 hrs. (6 XPECs)

Assumptions

- 20% trunking on all systems
- 100% M3900 sets on 11C system
- 60% M3900 sets on large systems

Option 11C

- Download timing is approximately 9 minutes per set (idle system)
- Can download 4 sets in parallel

Option 51C-81C and MSL-100

- Download timing is approximately 9 minutes per set (idle system)
- Can download 1 set per XPEC in parallel (assuming sets evenly distributed across XPEC's)

Variables on Timing

- Recommend Downloading on idle system (during heavy traffic download could terminate)
- If the Superloops are configured with 2 XPEC cards per XNET then the downloads will be twice as long for each Superloop.

X11 Software and PSDL Version Identification

The PSWV version that is installed on the system will print when the ISS command is initiated in LD 22. A sample printout for small system with the PSWV identification and patch installed is as follows:

This is new information provided in R25.30 and R25.15 (Sept 25 re-spin issue)

REQ ISS

MAIN CAB

VERSION 2111

RELEASE 25

ISSUE 30 +

PSWV VERSION: PSWV XX

XX will be the new version of PSWV version number in the installed software

IN-SERVICE PATCHES : 3

PAT#	PRS	PATCH REF #	NAME	DATE	FILENAME
00	MP11029	MPLR13321	rem_tty	02/08/96	p13321.p
01	MP11030	MPLR13323	xdlc_enable	02/08/96	p13323.p
02	MP10806	MPLR13324	dyn_switch	02/08/96	p13324.p

The following print command is also available in order to get a complete list of all S/W versions of the PSDL which is part of the X11 Software:

REQ prt

TYPE pswv

PSWV VERSION: PSWV 52

MISP: S/W VERSION NUMBERS: 70

BRIL: S/W VERSION NUMBERS: 81

BRIT: S/W VERSION NUMBERS: 80

MSDL: S/W VERSION NUMBERS: 70

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3902: S/W VERSION NUMBERS: 40

3903: S/W VERSION NUMBERS: 52

3904: S/W VERSION NUMBERS: 46

3905: S/W VERSION NUMBERS: 32

System Security

Nortel Networks strongly recommends changing the default system passwords for both Meridian 1 and Meridian Mail systems during initial installation. These passwords should be changed again when the system is placed in active service. These actions will help deter unauthorized system access which can result in toll fraud or system abuse.

For more information, please refer to the System Security Management NTP (NTLH10AA - A0804757) included with new system or system upgrade shipments.

Audit routine

As in the case of previous software releases, it is recommended that the Audit routine (Overlay 44) be specified as the background diagnostic to optimize the system capability to deal with call processing anomalies, especially in large line size and high traffic configurations.

Real Time Impact of Release 25

The real time impact of Release 25 is shown in the following table. These values are based on the average basic calls measurements in combination with the real time impact on some basic market models which make extensive use of key features, such as: CPND, CDR, digital trunking, digital sets. Sites more heavily configured with these features will experience degradations at the high end of the ranges given, while those with only basic calls will experience degradations at the low end of the ranges.

Release to release change in real time capacity

Machine type	Release 24B to Release 25
11C	6%
CP2: (51C/61C/81/81C); for reference only	16%
CP3: (51C/61C/81/81C)	6%
CP4: (51C/61C/81/81C	6%

CP4 to CP PII improvement in real time capacity

Machine type	Release 25
CP4 to CP PII: **(Options 51C/61C/81/81C)**	206% (= 3.06X)

Real Time Upgrade Factors[1]

This section provides the guidelines to ensure "safe" upgrades to Release 25.

Note 1 - Figures for M68040 are given for comparison purposes only.

Upgrades to Later Releases - Real Time Consideration:

The table below shows the real time degradation expected when upgrading to Release 25.

This value does not include the impact of new applications or features. The table applies to Thor Systems Call Processors going back as far as Release 18. CP2 (CP68040) going back as far as Release 21B. 11C systems going back as far as Release 22. CP3 (CP68060) systems going back as far as Release 23 and CP4 (CP68060E) systems going back as far as Release 24. Ranges - the width of the ranges compounds as the number of releases traversed increases.

Release-by-release Real Time Cost of Software Upgrade

The table applies to Thor Systems, CP going back as far as Release 18, CP2 going back as far as Release 21B, 11C systems going back as far as Release 22, CP3 systems going back as far as Release 23 and CP4 systems going back as far as Release 23C. In order to accommodate the fact that performance varies with machine type and with feature mix, ranges of performance ratio rather than isolated ratios are given. For Release 25, CP3 and CP4 machines are at the lower end of the ranges shown, 11C and CP2 at the higher end.

From / to	19	20B	21B	22	23	23C	24	25
18	4-6%	23-31%	33-47%	49-75%	55-91%	58-99%	72-169%	82-212%
19		18-24%	27-39%	42-65%	48-80%	51-87%	65-154%	75-195%
20B			8-12%	21-33%	26-45%	29-51%	41-104%	49-137%
21B				12-19%	16-30%	18-35%	30-84%	38-113%
22					4-9%	6-13%	16-54%	23-79%
23						2-4%	11-42%	18-65%
23C							9-36%	16-58%
24(A)							2-20%	8-39%
24B								6-16%

To use the table, multiply “percent CPU utilisation" on the present system, (obtained from the TFS004 traffic report) and column "to" destination by 1 + a percent within the range shown in the table cell that is located at row "from" present release.

From the table the real time cost for a Release 22 to 24 Software upgrade is 14-28%.

Example: If TFS004 indicates 60% CPU utilization. Impact of cost of upgrade ranges from: 60*1.14% = 68.4% to 60*1.28% = 76.8%.

A range rather than a single number is specified because the real time effect varies significantly according to the site configuration. The range expresses the range of effects seen when looking at various market models and also at the effect on different call types - the basic calls, and the more widely used featured calls.

As a user of the table, you have the option of picking any single number within the range or of replacing all the ranges with single numbers and doing the multiplication accordingly (if you are traversing multiple releases.)

Machine to Machine Real Time Conversion Table

Machine types - the information from the real time cost of software upgrade table and the machine-to-machine conversion table can be combined.

The table below shows the machine to machine real time conversion factors. This can be used in conjunction with the table above in the case where one wants to upgrade to a different machine / processor when converting to Release 25.

from/to	11C	CP1	CP2	CP3	CP4	CP PII
11C	1.00	1.29	0.77	0.58	0.42	0.14
81/51C/61C/81C CP1	0.77	1.00	0.59	0.45	0.32	0.11
81/51C/61C/81C CP2	1.30	1.68	1.00	0.75	0.54	0.18
81/51C/61C/81C CP3	1.73	2.23	1.33	1.00	0.72	0.23
51C/61C/81/81C CP4	2.40	3.10	1.85	1.39	1.00	0.33
51C/61C/81/81C CP PII	7.35	9.49	5.65	4.26	3.06	1.00

Note: Due to rounding, compounded conversions FROM / TO may not always equal the equivalent single conversion. E.g. 51C -> 61C CP1 (CP68030) -> CP2 (CP68040) -> 81C CP3 (CP68060) is 0.64 * 0.73 = 0.46, but 51C -> 81C CP3 (CP68060) is 0.43. The table is intended for single conversions.

To project the impact of a CPU upgrade: multiply the real time utilization by the old CPU to new CPU factor found in the table above.

NOTE: The machine-machine conversion table shows only the ratios for the current release (Release 24). If the system is going up a release(s), get the cost range for upgrading to Release 24 first, then do the conversion on this range.

Example:

If in Release 20 on a CP1 (CP68030) real time use is 60%, and the cost range for moving up to Release 24 is 38-70%. That would mean that when you upgrade software on this CP1 (CP68030) you could expect to use from 1.38 * 60% to 1.70 * 60% of real time (83-102%).

If there has been a hardware upgrade to CP68060, and the machine-machine ratio is 0.47 from CP1 (CP68030) to CP3 (CP68060) then the real time use in release 24 on the CP3 (CP68060) is .47 * (83-102%) or 39-48% CPU use.

Memory Upgrade Factors

Upgrades to Option 11C from 11E:

A customer upgrading to Release 25 on an 11C (from 11E) may do so without considering the memory requirements for his particular configuration. That is, if it fits on 11E, then it fits on 11C.

Upgrades to Thor machines (Options 51C / 61C / 81 / 81C CP3-4, Options 81C CP PII) and to 11C from 11C:

A customer upgrading from an Omega (Options 21E/51/61/71) or Thor system to Release 25 on a Thor system (CP3-4, CP PII), or from an 11C to Release 25 on an 11C, must consider the size of his SL-1 database in terms of Release 25. With this knowledge he can then determine which size system and how much DRAM he will need.

To make this determination, take the following steps:

- Use MEMAVAIL display in SL-1 database user interface to determine the size of the SL-1 customer database on the system being upgraded from. The "USED" field in the MEMAVAIL display, returned by the SL-1 user interface after loading any service change overlay that can add or delete data (e.g., overlay 11), gives the present size (in memory) of the SL-1 customer data base in SL-1 words. (In this discussion, this quantity will be referred to as **"SL1DB-words"**.)

- Compare your **SL1DB-words** with the limits shown in Table 2 below to see if your memory requirement is small enough to be able to upgrade to Release 25 on the desired machine type. If your customer database size is too large to upgrade to the desired machine type and/or DRAM size, it may be possible to make it fit by configuring fewer call registers. (This is done in Overlay 17 – the configuration record user interface - with the NCR prompt after you have answered "Yes" to the PARM (change system parameters) prompt. Note that you must re-initialize the system in order to make your call register count change take effect.) In Table 3 below are shown the recommended call register counts for each machine type, and they're corresponding claims on SL-1 customer database memory. Use this as a guide to try for an optimal call register count. (As shown in the table, in Release 25 call registers use memory at a rate of 220 words per call register.)

- If you are upgrading to full Release 25 on an 11C or a CP3 or 4 you need at least 32MB of DRAM. Most likely, if you are on a THOR machine your database won't be sufficiently small enough to allow you to fit on 32MB, and so you will need at least 64MB. New THOR machines (CP4) will be sold with a minimum of 64MB DRAM. New 11C machines will be sold with 32MB DRAM.

Table 1: MEMAVAIL USED upper bounds for UPGRADE to Full Rls25

Machine being upgraded TO: (columns) **Release being upgraded FROM: (rows)**	**CP3-4 machines with 32MB DRAM**	**CP3-4 machines with 48MB DRAM**	**CP3-4 machines with 64MB or more* DRAM**	**CP PII machines with 128MB DRAM 81C**
upgrading from OMEGA (Options 21E/51/61/71) machines				
Phase 8B	384,000	1,751,000	2,456,000	4,037,000
Release 18	470,000	2,143,000	3,006,000	4,940,000
Release 19	521,000	2,373,000	3,329,000	5,471,000
Release 20	814,000	3,710,000	5,204,000	8,552,000
Release 21	896,000	4,081,000	5,724,000	9,408,000
upgrading from THOR (Options 51/61/81/81C) machines				
Phase 8B	288,000	1,313,000	1,842,000	3,028,000
Release 18	352,000	1,607,000	2,254,000	3,705,000
Release 19	390,000	1,780,000	2,497,000	4,103,000
Release 20	610,000	2,783,000	3,903,000	6,414,000
Release 21	672,000	3,061,000	4,293,000	7,056,000
Release 22	732,000	3,336,000	4,679,000	7,689,000
Release 23C	800,000	3,648,000	5,116,000	8,408,000
Release 24B	935,000	4,260,000	5,974,000	9,818,000

(Units=SL1words)

*For larger than 64MB DRAM add 4,000,000 to the “upgrading from THOR” entry that applies. (Databases upgrading from Omega will not be larger than the 64MB DRAM requirement.)

Table 2: MEMAVAIL USED upper bounds for UPGRADE (units=SL1words) on 11C.

Machine being upgraded TO: (columns) Release being upgraded FROM: (rows)	**11C with 32MB DRAM**
Upgrading from 11C	
Release 22	2,451,000
Release 23C	2,680,000
Release 24B	3,130,000

Table 3: Recommended Call Register Counts

	11C	**51C CP3&4**	**61C CP3&4**	**81/81C CP3&4**	**81C CP PII w/o NCE**	**81C CP PII w/NCE**
Recommended Call Register Count	1750	2000	4000	10000	20000	25000
Memory Required (SL-1words)	385,000	440,000	880,000	2,200,000	4,400,000	5,500,000

System Management and Release X11 Release 25

Support for Features in Release 25.15

Release 25.30 requires Meridian Administration Tools Release 6.6 (MAT 6.67.07) or later or Optivity Telephony Manager 1.0 (OTM 1.01) or later (see exception below).

Customers that utilize 3rd party management systems such as Switchview must ensure that the Management System is compatible with Release 25 software.

MAT 6.6x

- MAT Release 6.67.04 supports Generic X11 Release 25.10 and associated features;
- MAT Release 6.67.07 supports Generic X11 Release 25.15 and associated features.
- MAT Release 6.67.07 Plus update disk supports Generic X11 Release 25.30 and associated features
- To confirm your MAT Release version, open MAT on your PC, in the MAT
- Navigator Window under Help, select About MAT Application.
- For further information on MAT 6.6x please refer to the MAT specific
- General Release Bulletin, which will be shipped with each MAT order.

OTM 1.0

OTM 1.01 (Optivity Telephony Manager for Meridian) is a system management software product that provides a single point of connectivity to multiple Meridian 1 voice switches, Meridian Mail systems, and other applications within the portfolio. OTM supports connectivity over serial, dialup/PPP, or Ethernet. OTM includes:

- Windows based client applications with all of the functionality offered in MAT. This includes Station Admin. Traffic, Maintenance Windows, System terminal, etc.
- Improved Alarm management including ability to receives alarms other than core Meridian 1 alarms, and ability to translate serial alarms to SNMP.
- An Alarm Notification Script Wizard to assist in generating and maintaining the scripts that define conditions for alarm notification. OTM also offers Web Enabled Alarm viewing. The Web-based Maintenance Pages and Virtual Terminal Server provide users simple Browser access to devices in a site or workgroup both internally over the LAN or WAN or externally through dialup PPP connections.
- A transition toward IP-based management solutions needed to support Optivity and Unified Networks solutions of tomorrow. OTM 1.01 integrates with Nortel's Optivity NMS (Network Management System) as part of a Unified Management solution.

OTM 1.0 integrates with Nortel's Optivity NMS (Network Management System) as part of a Unified Management solution.

For more information about OTM 1.01, Release 25 Features that Require System Management please refer to the OTM 1.01General Release Bulletin when available.

Release 25 Features that Require System Management

The following X11 Release 25 Features require MAT 6.6 or OTM 1.0x:

- **ITG Trunks 2.0 with ISDN** - the configuration and maintenance of the IP Telephony Gateway (ITG) card is through the “ITG ISDN Trunks” application in MAT 6.67.04 or later or OTM 1.0.
- **Corporate Directory** functionality (one of the M3900 Digital Telephone Enhancements) - the configuration and maintenance of Corporate directory requires MAT 6.67.07 or OTM 1.0. For existing MAT 6.67.04 sites, and up-issue to MAT 6.67.07 is required for Corporate Directory.
- **ITG Line Side & i2004 Internet Telephones** - the configuration and maintenance of the IP Telephony Gateway (ITG) IPE card is through the “ITG IP Phones” application in MAT 6.67.07 or OTM 1.0.
- **Option 11C / 11C Mini IP Expansion** - MAT 6.67.07 Plus update disk or MAT 1.01 is required to support ITG card in the Expansion cabinet in survival mode.

Note: When OTM 1.1 introduced it will deliver additional functionality to manage the Survivable IP Expansion cabinets in the areas of Common Services and Maintenance in both the Windows and Web environment.

SELK - Scheduled Electronic Lock not supported in MAT 6.67 or OTM 1.01
This is an enhancement to the existing Electronic Lock Feature to provide a schedule facility. This allows a set or group of sets to be locked automatically after a predefined time when the user forgets to lock the set by dialing the FFC ELKA or FFC ELKD. The feature is activated in LD 10/11 by setting the new Class of Service (SLKA/SLKD) to SLKA. Packages 81(CCOS), 139 (FFC) and 162 (SAR) are required for the feature.
This feature is not supported in MAT 6.67 or OTM 1.01. Support for this feature is planned for OTM 1.1.

Meridian 1 Electronic Software Distribution (M1 ESD)

Nortel Networks is pleased to announce the launch of the Meridian 1 Electronic Software Distribution (M1ESD) web site. This site delivers software, documentation, and PEPs for a wide range of Meridian 1 products.

This site provides:

- Option 11C software and related documentation such as Beta documents.
- Option 51C, 61C, and 81C software including system software, install disks, related MDCSs, and related documentation for all CPU types.
- Unified Network Management (MAT/OTM) software including system software, updates, PEPs, and related documentation.
- IP Telephone software and documentation for products such as ITG Trunk and Line side applications and Inca Telecommuter.
- Interactive Voice Response (IVR) PEPs and related documentation.
- Meridian Integrated Products, including MIRAN, MICA, MICB, and MIPCD.

Who has access to the web site?

The site has both a secured and a non-secured section. The Meridian Integrated Products section is non-secured, and therefore no login ID or password is required to access that software.

The rest of the site is secured and password protected. M1ESD is designed for Nortel Networks Distributors and associated technical support staff. Except for exceptional circumstances, end customers will not be granted access to this site. Also note that access to the site does not grant automatic access to Alpha and Beta software, nor does access grant privileges to all regional software associated with Option 11C software.

How to get to the site:

You must register to get access to the site (see next page). Once registered, you can get directly to the site by simply clicking on this URL:

http://www.nortelnetworks.com/servsup/esd/meridian1/

Or you can go to http://www.nortelnetworks.com/, click on "Customer Support", then "Software Distribution". Finally, click on "Meridian 1ESD" found either in the Quick Links or in the alphabetical listings.

Note: no login ID or password is required to access Meridian Integrated Products.

To Register for an Account:

Nortel Networks has adopted the Common Registration System (CRS). This means you only need one user ID and password to access all Nortel Networks web pages to which you have rights. This includes the Meridian 1 Electronic Software Distribution (M1 ESD) site.

If you do not already have a Nortel Networks CRS account:

Go to this URL: http://www.nortelnetworks.com/cgi-bin/WebObjects/CRS

Step One

Create Your Account

Enter your email address.

Step Two

Complete your basic profile

Continue On To The Next Page to indicate an interest in Meridian 1 Electronic Software Distribution

Step Three

Select your interests:

- Make sure to check off "**Software Distribution**" and the "**Service & Support Data**" box and any other services in which you may be interested.

Select **at least one** of the following Product Families:

- Business Applications & Services
- Data and Internet Products
- Internet Telephony
- Network Management Products

Step Four

Complete your registration

If you are interested in Meridian Products, please select **at least one** of the products that you are interested in:

- Option 11C (Including Compact and Mini)
- Option 51C, 61C, 81/81C
- Unified Network Management (MAT/OTM)
- Interactive Voice Response IP Telephony

Submit your Application!

If you qualify for access to the M1ESD web site, you will gain access in approximately two working days after your application is received.

If you already have a Nortel Networks CRS account:

Go to this URL: http://www.nortelnetworks.com/cgi-bin/WebObjects/CRS

Select "Modify Profile"

Verify your information "Step 2, Complete your basic profile" and then click on "Continue on to next page" at the bottom of the web page.

In Step 3, "Select your interest", make sure to check off "Software Distribution" and the "Service & Support Data" box and any other services in which you may be interested.

Also in Step 3, select at least one of the following Product Families:

- Business Applications & Services
- Data and Internet Products
- Internet Telephony
- Network Management Products

In Step 4, you will be asked if you are interested in Meridian Products. Please select **at least one** of the products that you are interested in:

- Option 11C (Including Compact and Mini)
- Option 51C, 61C, 81/ 81C
- Unified Network Management (MAT/OTM)
- Interactive Voice Response IP Telephony

Submit your Application!

If you qualify for access to the M1ESD web site, you will gain access in approximately two working days after your application is received.

S4. Small System Advisements

The following advisements are for small systems (Option 11C and 11C Mini) only.

Small System Memory Requirements for Release 25

Option 11C Mini

The Option 11C Mini comes with 48Mb Total Memory (32 Mb Program Store and 16 Mb C-Drive space) on the Mini System Controller in order to run Release 25 software. The supported Release 25 System Controller card for Option 11C Mini:

- NTDK97AB (48 Meg - no memory upgrade needed) Mini System Controller (MSC)
- NTDK20EA or higher Small System Controller (SSC) for Option 11C Mini main and IP Expansion chassis when using IP Expansion.(25.30)

Please ensure that you have upgraded the bootcode on the MSC to NTDK34FA Rel 06. Refer to NTP Upgrades Guide - Chapter 15 Use the flash boot ROM utility.

Option 11C

Software Daughter Board Requirements

The Option 11C requires a 48Mb Total Memory (32 Mb Program Store and 16 Mb C-Drive space) in order to run Release 25 software. This requirement is met with the NTTK13AA Software Daughterboard.

A system upgrading to Release 25 must replace its NTDK21(32 Mb) or NTDK81(40 Mb) based software daughterboard, with an NTTK13AA (48 Mb) daughterboard. Please ensure that you have upgraded the bootcode on the SSC prior to upgrading the software daughterboard. To verify the size of the software daughterboard and for installation instructions, refer to NTP upgrade manual Chapter 9.

System Controller Card Requirements

The supported Release 25 System Controller card for Option 11C:

- NTDK20CA or higher Small System Controller (SSC)
- NTDK20EA or higher Small System Controller (SSC) for Option 11C main cabinet when using IP Expansion and NTDK20CA or higher for each Expansion cabinet(25.30).

An existing Option 11C system equipped with a controller card NTDK20AB can be upgraded to an NTDK20CA with a field upgrade kit NTDK19AA. As of July 1999, all controller cards shipped to the field have been NTDK20DA, which is compatible with Release 25.

Software Delivery Methods

Option 11C Mini

- Pre-Programmed Mini System Controller (MSC) for new systems
- PCMCIA Card for upgrades
- Meridian 1 Electronic Software Distribution (M1 ESD)

Option 11C

- Software Daughter board for new systems
- PCMCIA Card for upgrades
- Meridian 1 Electronic Software Distribution (M1 ESD)

Electronic Software Delivery for Small Systems

A programmed PCMCIA card can be used to upgrade an Option 11C or an Option 11C Mini system. The downloading of the software is only necessary when re-programming a PCMCIA card to update an existing Option 11C or 11C Mini system. When ordering a PCMCIA card for the first time, it can be sent pre-programmed with the current market release of software. Alternatively, a blank PCMCIA card can be ordered. This card can be used for future upgrades of software by downloading software from the Meridian 1 ESD site. The M1ESD site is at the following address:

http://www.nortelnetworks.com/servsup/esd/meridian1/

The software download process is required to take compressed software from the internet and download it to your PC for duplication.

To download the software from the M1ESD site onto your PCMCIA card using the PCMCIA Card Programmer, you must use the new version (05 or higher) which is found in the "Site Tools" menu. Any previous versions of the Card Programmer must be deleted from your PC before downloading the new version of this tool.

Software Conversion

For Option 11C, automatic conversion is supported directly to X11 Release 25 from the following releases (Note - not all releases were made available in all markets):

X11 Release 16, 18, 20, 21, 22, 23, 24

For Option 11C Mini, automatic conversion is supported directly to X11 Release 25 from X11 Release 24.

Upgrades to Release 25 from Option 11/11E

The Option 11/11E systems running on pre-release 22 software require a hardware upgrade in order to upgrade to Release 25. The Option 11C system offers a menu driven installation and upgrade method. Please refer to Option 11C Installation and or Upgrade Procedures Guide for additional information.

Please read the Option 11C NTPs thoroughly before performing any hardware/software changes. All upgrade procedures should be strictly followed step by step.

Upgrades to Release 25 from Option 11C

The Boot Code on the SSC may require updating before upgrading software to release 25.15. Refer to the “Small Systems Memory Requirements for Release 25” earlier in this section for the requirements. Updating of the SSC Boot Code is a manual process that uses the Flash Boot ROM Utility. Refer to NTP 553-3021-250 Upgrade procedures, chapter 13, or 553-3021-310 Software Installation Program Guide, chapter 11 for detailed procedures.

Upgrades to Release 25 from Option 11C Mini

Option 11C Mini was introduced with Release 24 on the NTDK97AA in Asia Pacific. This vintage of the Mini System Controller does not have sufficient memory for Release 25. To upgrade to Release 25 the minimum vintage of MSC is NTDK97AB or higher.

The Boot Code on the MSC may require updating before upgrading software to Release 25. Refer to the "Small System Memory Requirements for Release 25" earlier in this section for the requirements.

Updating the MSC Boot code is a manual process that requires a PCMCIA card programmed with Relelase 25. The upgrade is done using the Flash Boot ROM Utility in LD 143. Refer to NTP 553-3021-250 Upgrade Procedures Chapter 13.

Basic Configuration Data

On Release 22.08, the "Basic Configuration" default data option provided only a configuration record and no other customer data.

With X11 Release 22.16 and later, the "Basic Configuration" data option is expanded to include default data such as XPECs, Superloops, and other default data blocks. It doesn't include Model sets, routes, TN's etc. For complete default data including model sets etc., choose the Pre-Configured data option.

Use of BKO command in LD 43

The BKO command is used to backup the customer data to an external data card (blank PCMCIA card) located in slot "B" on the CPU faceplate.

Warning: If the pre-programmed software PCMCIA card is used during BKO operation, the card cannot be used to install software without first removing the backup data, reformatting the disk, and reprogramming with the appropriate software.

Backwards Compatible Daughterboard - NTDK26

The backward compatible daughterboard allows Option 11/11E/11C two cabinet (copper) systems to be upgraded to Release 25 maintaining copper connectivity.

The NTDK26 has a hardware key that prevents installation when the ethernet jumper (J7) is installed.

The ethernet jumper plug (J7) on the NTDK20 (Small System Controller) pack MUST be removed before the NTDK26 daughterboard is installed.

Note: Ethernet is not supported in this configuration.

IP Expansion Advisements for 25.30

- When connecting cabinets over a data network, One Way Speech Path is occasionally experienced for established calls for approximately 15 seconds during a system warm start as a result of data switch transmission interruption
- When using PRI2 with DDCH, it is recommended to set guard timers to a minimum value in LD 73 on the far end.
- When using the copy command for 3900 sets, the maximum number of sets that can be copied per command is 8 sets on an IP Expansion system.
- SILC and UILC cards are not supported in IP Expansion cabinets for Release 25.30.
- If the following files do not exist on the main cabinet (inet1.db, inet2.db, inet3.db and inet4.db), which are used for the configuration of a 10BaseT port on an IP Expansion cabinet, the message "Database Backup Failed" will be printed if the user backs up files from the C:drive to the PCMCIA card in overlay 43, even though the back-up was SUCCESSFUL. Please see patch: MPLR13879 in the patch library, which fixes the problem.
- If an i2004 set (installed in one of the Expansion cabinets) is called when the IP link is down, the caller will get ringback tone instead of overflow tone if Meridian Mail is not configured on the system.

TMDI in IP Expansion Cabinet

If the Main cabinet warm starts, TMDI trunk calls are dropped on the IP Expansion cabinet. If the IP link goes down, TMDI calls are dropped on the IP expansion cabinet.

When TMDI cards are plugged in to an IP expansion cabinet, or if they are enabled with the Force Download (FDL) option, the loop may not enable correctly (PRI006 may occur). In this case disable the loop and TMDI again and enable the TMDI without the FDL option. The loop should now enable properly in overlay 60. A TMDI207 is also possible when the FDL option is used, and the solution is also to disable the card and re-enable it without the FDL option.

NOTE: On switchback from Survival mode to Normal mode, the first TMDI card on the IP expansion cabinet takes up to 3 minutes to enable. For each additional TMDI card on the expansion cabinet, there will be an incremental delay of approximately 20-30 seconds.

NOTE: The FDL option is not normally needed when enabling a TMDI card, as the applications will download to the card if required, even without the option.

Software PEPs

Manufactured Software PEPs

Refer to Option 11C/Mini Installer's Checklist **P0917423**.

New Method for Programming PCMCIA Cards for Option 11C for Software Release 24 or Later

The Old Procedure

The old procedure of copying the self-extracting archive to the PCMCIA card, exploding the archive, deleting the archive, and then using the card for upgrading will no longer work for Release 24 or later.

There is a new Windows 95/98/NT tool available for preparing Option 11C and Option 11C Mini PCMCIA cards. This tool is very easy to use, and avoids errors that can occur when these cards are prepared manually. The PCMCIA Card Programmer and instructions can be downloaded from the Meridian 1 Electronic Software Distribution (M1ESD) web site.

The Windows 95/98/NT PCMCIA Card Programmer

The PCMCIA Card Programmer is compatible with Window 95, 98, and Windows NT 4.0 and above. The Programmer will prepare and if necessary erase the PCMCIA card, and load Option 11C software onto that card.

PCMCIA Card Software Structure

When properly programmed, the Option 11C and 11C Mini software on the PCMCIA card will have the following directory and file structure:

bootrom/

dflt_db/

p/

u/

dramos

dramos.sym

dramoscc.sym

readme.txt

S5. Large System Advisements

The following advisements are for large systems only: 51C, 61C, 81, and 81C.

Options 51C/61C/81/81C

Option 51C/61C/81/81C systems operating with a Motorola-based Call Processor (Call Processor 68060, or 68060E) are supported via CD-ROM and require IODU/C (NT5D61).

For an Option 81C system equipped with Call Processor PII, Release 25 requires a Multi-Media Disk Unit (NT4N43). The Multi-Media Disk Unit is automatically included with an upgrade to Call Processor PII.

Memory and Mass Storage Requirements

All IODU/C cards and MMDUs have the necessary disk partition space for Release 25 for all systems (minimum Hard Drive Capacity 121 Mbytes).

Refer to Call Processor Recommended Memory Requirements in this section for minimum memory requirements on Release 25.

Installation/Upgrading Advisements

Call Processor PII

Call Processor PII is available in Asia Pacific from August 2000.

Fiber Network Fabric

FNF is the standard network fabric for all new Option 81C system sales from April 2000.

Call Processor Memory Requirements

How to Meet Release 25 Memory Requirements

With regard to call processor memory requirements, the following tables define the actions necessary to be supported in Release 25 for existing system type / call processor combinations. The required actions are based on the minimum memory requirements for Release 25 as presented in the following section.

Option 51C/61C Systems:

Existing System Type	Existing Processor	Existing Memory Configuration	Action to be supported on Release 25
Option 51C/61C	68060, 68060E	48 MB (32/16)	Upgrade to 144 MB (64/80) by adding one 32 MB Flash memory (per card) and two 32 MB DRAM SIMM (per card)
Option 51C/61C	68060, 68060E	64 MB (32/32)	Upgrade to 128 MB (64/64) by adding one 32 MB Flash memory (per card) and one 32 MB DRAM SIMM (per card)
Option 51C/61C	68060, 68060E	80 MB (32/48)	Upgrade to 144 MB (64/80) by adding one 32 MB Flash memory (per card) and one 32 MB DRAM SIMM (per card)
Option 51C/61C	68060, 68060E	112 MB (64/48)	Upgrade to 144 MB (64/80) by adding one 32 MB DRAM SIMM (per card)
Option 51C/61C	68060, 68060E	128 MB (64/64)	**None** – Configuration is supported.

Note: (xx/yy) denotes Flash memory (xx) and DRAM memory (yy) configuration.

Option 81/81C 68060/68060E based systems with five or less network groups:

Existing System Type	Existing Processor	Existing Memory Configuration	Action to be supported on Release 25
Option 81/81C	68060, 68060E	64 MB (32/32)	Upgrade to 128 MB (64/64) by adding one 32 MB Flash memory (per card) and one 32 MB DRAM SIMM (per card)
Option 81/81C	68060, 68060E	80 MB (32/48)	Upgrade to 144 MB (64/80) by adding one 32 MB Flash memory (per card) and one 32 MB DRAM SIMM (per card)
Option 81/81C	68060, 68060E	112 MB (64/48)	Upgrade to 144 MB (64/80) by adding one 32 MB DRAM SIMM (per card)
Option 81/81C	68060E	128 MB (64/64)	**None** – Configuration is supported.

Note: (xx/yy) denotes Flash memory (xx) and DRAM memory (yy) configuration.

Option 81/81C 68060/68060E based systems with six or more network groups:

Existing System Type	Existing Processor	Existing Memory Configuration	Action to be supported on Release 25
Option 81/81C	68060, 68060E	64 MB (32/32)	Upgrade to 160 MB (64/96) by adding one 32 MB Flash memory (per card) and two 32 MB DRAM SIMMs (per card)
Option 81/81C	68060, 68060E	80 MB (32/48)	Upgrade to 144 MB (64/80) by adding one 32 MB Flash memory (per card) and one 32 MB DRAM SIMM (per card)
Option 81/81C	68060, 68060E	112 MB (64/48)	Upgrade to 144 MB (64/80) by adding one 32 MB DRAM SIMM (per card)
Option 81/81C	68060E	128 MB (64/64) NT5D03FA	Upgrade to 144 MB (64/80) by removing one 16 MB DRAM SIMM and adding one 32 MB DRAM SIMM (per card)
Option 81/81C	68060E	128 MB (64/64) NT5D03FB	Upgrade to 160 MB (64/96) by adding one 32 MB DRAM SIMM (per card)

Note: (xx/yy) denotes Flash memory (xx) and DRAM memory (yy) configuration.

The NTZC75AA DRAM Memory Upgrade Kit supports 32 MB DRAM memory upgrade of Call Processors 68060 and 68060E. The NTZC75AA contains one 32 MB DRAM SIMM and supports the memory upgrade of one Call Processor card. The number of SIMMs required to upgrade a Call Processor to the minimum memory requirement is defined above for currently existing memory configurations. NTZR21AD, the 16 MB DRAM Memory Upgrade Kit, has been market retired. The NTZC75AA DRAM Memory Upgrade Kit also supports software release prior to X11 Release 25. However, Call Processor cards operating on software prior to X11 Release 25 support a maximum of 64 MB of DRAM memory.

NTZC76AA supports optional Flash Memory upgrades. This kit may be used by distributors / customers who wish to standardize on higher memory configurations.

NTZC77AA contains the anti-static mat and ESD wrist-strap required to perform a memory upgrade; NTZC77AA is not required if the distributor/customer already possesses the anti-static mat and wrist-strap.

Release 25 Minimum Memory Requirements for 68060 or 68060E Processors for Asia Pacific Market Region

System Type	Flash Memory Requirement	DRAM Memory Requirement
Option 51C/61C	64 MB	64 MB
Option 81/81C • Option 81/81C systems operating on Call Processor 68060 or 68060E with 5 or fewer network groups (including systems with Fiber Network Fabric - FNF)	64 MB	64 MB
Option 81/81C • Option 81C systems operating on Call Processor 68060 or 68060E with 6 or more network groups (FNF systems)	64 MB	80 MB

Call Processor PII is available only in the 128 MB memory configuration.

All New Release 25 Option 51C and 61C systems will be equipped with 68060E Call Processors with 160 MB. Option 81C systems will be equipped with 68060E and 160 MB; Option 81C systems equipped with Call Processor and 128 MB memory configuration will be made available in July 2000.

Software Delivery Methods

The only supported media for large systems (Options 51C, 61C, 81 and 81C) is CD-ROM. This means that Release 25 requires an IODU/C (NT5D61) on a system operating with Call Processor 68060 (NT5D10) or 68060E (NT5D03). For an Option 81C system equipped with Call Processor PII, Release 25 requires an Multi-Media Disk Unit - MMDU (NT4N43). The MMDU is automatically included with an upgrade to Call Processor PII.

Option 51C, 61C, and 81C software including system software, install disks, related MDCSs, and related documentation for all CPU types can now be downloaded from the Meridian 1 Electronic Software Distribution (M1ESD) web site. The M1ESD site can be accessed through the following URL:

http://www.nortelnetworks.com/servsup/esd/meridian1/

Call Processor PII (CP PII) Advisements

1 Core Shelf Cards

Ensure that all core shelf cards (Processor, System Utility and all CNIs) are inserted on both sides before first power up. Also, ensure that both sides of the system (Core 0 and Core 1) have the same card configuration.

2 Point to Point Ethernet Connection

For redundancy, the point-to-point Ethernet connection should use cable NTRC17AA. The other Ethernet port on each card should be connected to the ELAN.

3 Do not Disable TTY Ports

Avoid disabling TTY ports because it might prevent the user from accessing PDT.

4 PDT

Do not use PDT from a serial port accessed through an MSDL STA feature.

5 DATA RDUN & RDUN

While running DATA RDUN or TEST RDUN in overlay 137 no other activities should be performed. The machine can be up and running, but after initiating the test, it is recommended that just sit and wait for it to complete. Do not run CTRL- PDT while this test is running.

6 Removing the MMDU

The MMDU cables need to be disconnected from the back of the unit before removal. DO NOT attempt to pull out the MMDU before disconnecting the cable, as damage will result to the MMDU and/or the cables and/or the backplane. The cable connectors can generally be accessed from the rear via access holes in the UEM and the cardcage. In some cases, these access holes may not be present, and it will then be necessary to remove the shelf from the UEM to provide access.

Conversion

Release 25 introduces direct conversion to Release 25 from (Note - not all software releases were made available in all markets):

- X81 Phase 7A/7B/7C
- X81 Phase 8B.0/8B.1/8B.2
- X11 Release 20, 21, 22, 23, 24

for Large System types NT, XT, Option 51, 61, 71, 81, 51C, 61C, 81C and 81C with CP PII*. Direct software conversion from Release 19 or 20 is not supported on Option 21E or STE system types. The Option 21E and STE continue to use previously defined upgrade processes. For all other supported system types in North America, direct software conversion to Release 25 is supported from Release 20 and subsequent. For Pre-Release 20 systems, the system must first be upgraded to Release 20. Once on Release 20, direct software conversion is supported to Release 25. Refer to the Software Conversion NTP (553-2001-320) and Upgrade System Installation NTPs (553-3001-258) for more information.

* Direct upgrades to CP PII are only possible from systems with 68K series Processors (CP1, CP2, CP3, CP4). Systems with earlier processors will require an interim upgrade step through a 68K processor.

CAUTION

Please read the Software Conversion NTP thoroughly before performing any software conversions. All conversion procedures should be strictly followed step-by-step. To avoid static discharge, wear a properly connected anti-static wrist strap when working on the Meridian 1 equipment.

PEPs for Release 25.30

Please check with your regional technical support primes for information on PEPs required for large systems.

S6. Release 25 Features Overview

The following features are supported in Release 25.30. All features are available on Release 25.30, but some features may not be available in all countries in Asia Pacific. Regional Sales representatives will be able to identify any features that are not available in a specific region.

For more detailed feature information refer to the following NTPs:

- 553-3001-011 - Feature Listing
- 553-3001-306 - X11 Features & Services

Feature Overview

Feature	New/ Changed ISMs	New Software package	New hardware
Option11C/Mini IP Expansion (25.30) (Small systems only Option11C/Mini)	Survivability	295	Yes
Call Processor PII (CP PII) for Option 81C only (R25.15)	No	368	Yes
Fibre Network Fabric (FNF) for Option 81/81C only (R25.15)	No	365	Yes
CLID on Analog Trunks for Hong Kong (R25.10)	No	No	Yes
D-Channel Expansion (for Option 81/81C only) (R25.10)	No	No	No
Inventory Reporting Ph. 2 (R25.10)	No	No	No
ISM Enhancements (R25.10)	Yes	No	No
M3900 Digital Telephone Enhancements (R25.10)	No	380, 381, 382	Yes
MDECT 2000 - Multi Site Mobility Networking [1] (R25.10)	No	370	No
Meridian ITG Trunks 2.0 with ISDN and 24-port ITG Card 1 [1] (R25.10)	ITG ISDN	Yes	Yes
Scheduled Electronic Lock	No	No	No
Night Service Enhancement for BRI Trunks	No	No	No
Meridian ITG Line side with i2004 Internet Telephones [1] (R25.30)	Internet Telephone	No	Yes
Agent Greeting [1] (R25.15)	No	152	Yes

Note 1 - Please check with your Nortel Networks Sales Representative on the roll-out schedule for your market region.

System Features

System Features are those features that do not require user station operation.

Option 11C/Mini IP Expansion (R25.30)

Description

The Option 11C/Mini IP Expansion provides IP interconnection between Option 11C main and expansion cabinets. This IP interconnection enables:

- Increased Networking Capacity
- Survivable Expansion Cabinets
- Voice Distribution over Campus Data Network

The solution is applicable to Option 11C and Option 11C Mini systems.

Increased Networking/SDI Capacity

This development provides increased networking capacity for the Option 11C and Option 11C Mini systems. Digital trunks can now be supported in any IP Expansion Cabinet or Mini main chassis, when connected via 100BaseT or 100BaseF. A total of 45 digital trunks could be supported on Option 11C, and 15 digital trunks supported on Mini.

TTY are not support in the IP Expansion Cabinets.

The following CE cards can now be supported in IP expansion cabinets/mini main chassis.

- 1.5MBDTI/PRI (NTAK09)
- 1.5MBTMDI (NTRB21)
- 2.0MB DTI (NTAK10)
- 2.0MB PRI (NTAK79)
- 2.0MB PRI (NTBK50)
- MISP (NTBK22)
- SDI DCH (NTAK02) (Only DCH is supported for ISL, ESDI, AML)

This development also provides increased SDI/D-channel capacity. 3 SDI ports are provided with each IP Expansion Cabinet and D-Channel capacity has been increased, such that a total of 16 D-channels are now supported per cabinet.

IP Expansion Cabinets

The Option 11C SSC card can accommodate up to two single or dual port IP daughterboards. The IP daughterboards can co-exist with either the single port or dual port fibre daughterboards.

These boards are available in single and dual port versions. The dual port IP daughterboard connects to the SSC of a Main cabinet and supports connections to two expansion cabinets, each equipped with an SSC, via IP. The single port IP daughterboard is used at the IP Expansion to provide connectivity back to the Main.

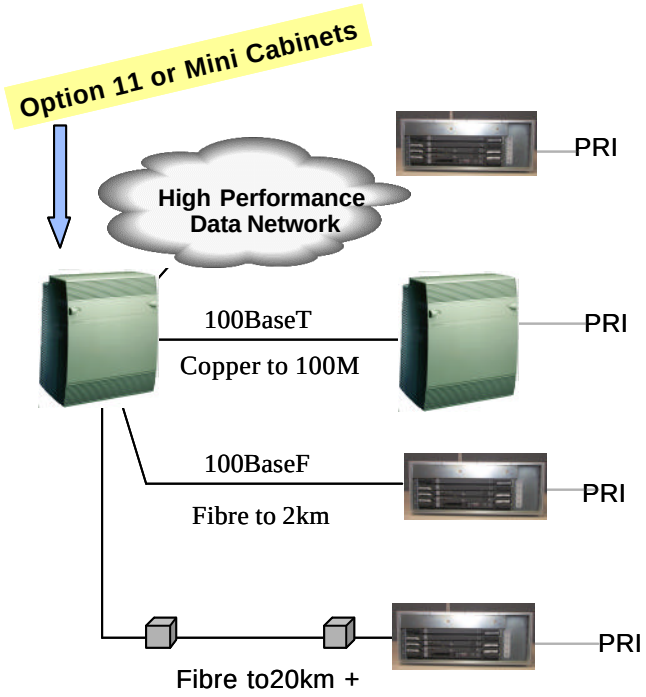
Survivability

IP Expansion Cabinets can be configured to be survivable in the event of a link failure, or a catastrophic failure of the main cabinet.

Based on the system configuration, if IP connectivity to the main is lost or a manual command is issued, an IP expansion cabinet can enter survival mode in which it acts as a fully functional "Stand-alone" Option 11C.

The number of survivable expansion cabinets allowed on a specific system is controlled via a new ISM parameter, "Survivability" , which has a range of 0-4. The default value for this ISM parameter is zero.

The code for ordering each Survivability option is NTSF8720/A0784530



Connection Through Data Network

- Either 100BaseT or 100BaseF can be used to connect into data equipment for voice distribution over data network

100BaseT

- Uses Standard copper Ethernet cable
- Expansion Cabinets can be located up to 100m from Main Cabinet when connected “point-to-point”

100BaseF

- Uses glass multimode fibre cable
- Expansion Cabinets can be located up to 2km from Main Cabinet

Third Party Converters

- Can be used to convert 100BaseT or 100BaseF to fibre for distances of 20km - plus

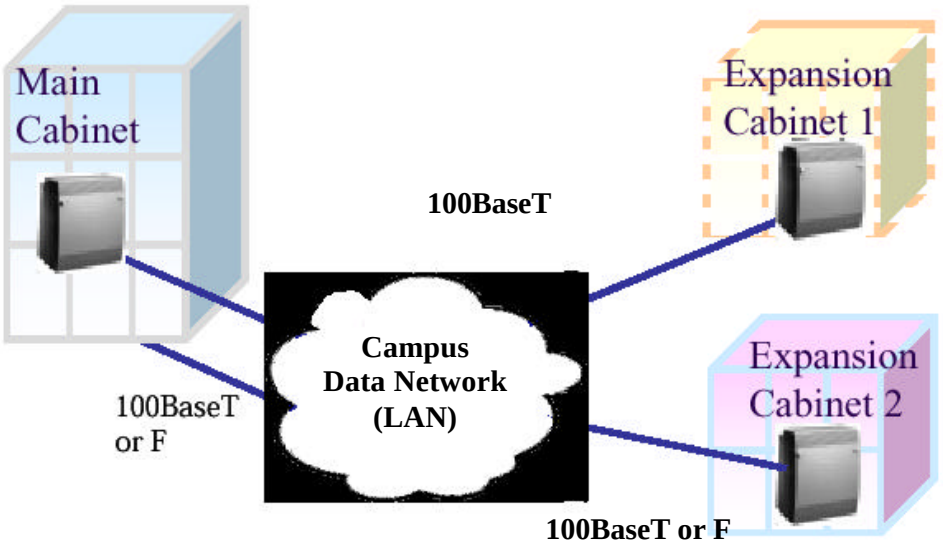
The IP Expansion introduces Four types of IP daughterboards:

- Single 100BaseT IP daughterboard
- Dua100BaseT IP daughterboard
- Single 100BaseF IP daughterboard
- Dual 100BaseF IP daughterboard

Voice Distribution over Campus Data Network

The IP Connectivity of expansion cabinets enables a high capacity, cost effective solution to distribute Option 11C and Mini cabinets over a high performance data network.

Full feature functionality, and non blocking architecture is maintained when Option 11C systems are distributed over high performance data networks. This patented solution delivers the exceptional functionality and reliability of Meridian 1 Option 11C, while delivering the benefits of voice/data convergence.



Hardware

The Option 11C/Mini IP Expansion introduces the following new hardware

- Dual Port 100baseT Daughterboard - NTDK83AA
- Single Port 100baseT Daughterboard- NTDK99AA
- Dual Port 100baseF Daughterboard- NTTK02AA
- Single Port 100baseF Daughterboard- NTTK01AA
- IP Expansion cabinet/chassis security device- NTDK57DA
- Various cables for intercabinet connectivity and EMI compliance

Security

A new security scheme is introduced in order to maintain the requirement of a single keycode per system while addressing the scenario where both the IP expansion cabinets and the Main must be independently installed with system software. A new expansion cabinet/chassis security device is introduced. This security device is installed in each IP Expansion cabinet and is coded to correspond only to a specific Main.

Package Requirements

IP Connectivity is packaged under package number 295 “IPEX” . If the IP Expansion package is restricted, IP connectivity between the Main and IP Expansions will be dis-allowed, regardless of whether or not IP daughterboards are connected to the Main. CE-Mux Expansion is not separately packaged, but is dependent on package number 295 “IPEX”.

Applicable Systems

Survivable IP Expansion is offered on Option 11C Mini and 11C systems only.

Call Processor PII (R25.15)

Description

Call Processor PII represents the next generation processor complex for Option 81C systems and results in significantly higher real-time performance capability for high-end, complex real-time intensive customer applications. The new Call Processor Complex incorporates industry standard embedded computing components consisting of the Intel® Pentium II microprocessor, a compact Peripheral Controller Interconnect (CPOS) bus architecture (back plane), and a new version of VxWorks® real-time operating system software. The new core complex continues the tradition of high reliability rating afforded Meridian 1 systems while increasing the busy hour call completion performance three-fold. Redundant call processor components are employed to ensure fail-safe operation.

The new call processor components reside in a core/network shelf similar to the shelf design used in Option 81C systems today. The new processor card is an off-the-shelf single board computer design from Motorola that utilizes the Intel Pentium II microprocessor. Other new processor interfaces are introduced such as a new system utility interface and new IDE compatible software media drives (hard drive, floppy drive and CD-ROM). The core network interface (CNI) previously used in Option 81C systems is retained, but redesigned to conform to the new cPCI back plane. Four CNI card slots per shelf are provided and allow up to eight network groups to be configured using the new Fiber Network Fabric interface cards. A new vintage of the existing shelf power supply is introduced to provide the additional electrical voltage required by the new call processor card. The network card slots within the new core/network shelf continue to support the same network cards supported on Option 81C today.

Because of the core/network shelf design approach, most system upgrades will only require card cage exchanges. For systems that preserve their network group equipment in the older style SL-1 cabinets, the use of Universal Equipment Modules (UEM) can be used to upgrade to Call Processor PII.

For additional product and feature information, please refer to the product bulletin that announces the introduction of Call Processor PII.

Hardware

System upgrades to Call Processor PII are possible under three scenarios:

- Module Level Upgrade
- Card Cage Level Upgrade
- Combination of Module and Card Cage

EPE will not be supported on systems wishing to upgrade to X11 Release 25 whose platforms reside on CP PII Call Processors. For more information, please refer to “Hardware” section in the General System Advisements of this document.

Package Requirements

This feature introduces one new package: CPP-CNI (package 368).

Prerequisite for package 368: package 299.

Applicable Systems

Call Processor PII is offered on Option 81C system only.

Fiber Network Fabric (R25.15)

Description

Fiber Network Fabric (FNF) allows the expansion of Meridian 1 Option 81 and 81C systems from five Network groups to eight Network groups, a 60% increase in port and trunk capacity. A Dual Ring fiber optic network replaces the Inter-group cards and module in current Meridian 1 systems. This Fiber Network provides complete non-blocking communication between the network groups, eliminating the incidence of busy signals for calls switched between groups. A Fiber Network of eight Network groups provides 7680 timeslots for 3840 simultaneous conversations.

For further information about FNF please refer to Fiber Network Fabric Product Bulletin, AP PM 2000-17.

Package Requirements

FNF requires a minimum of X11 Release 25.15 software, with software package 365, FIBN (Fiber Network), installed.

For release 25.15, the compatible FIJI card loadware is issue **12.** Issue 12 of the firmware is included on the NTRB33AB vintage of the circuit card. The firmware release can be verified by issuing the STAT FIJI x y FULL command in LD 39.

When a FIJI card with issue 11 firmware is installed with Release 25.15, download of issue 12 firmware to the installed FIJI cards will begin automatically.

Applicable Systems

This feature is applicable to Option 81 and 81C machines.

Inventory Reporting- Phase II (R25.10)

Description

The Inventory Reporting Phase II feature enhances the Rls 24 Inventory Reporting feature by adding several new cards to list of cards that can be "inventoried".

The Inventory Reporting feature (Rls 24), takes advantage of the intelligence built into the Meridian 1 PBX, to provide an automated tool for customers and support personnel to produce a hardware inventory report. This report will list the cards and telsets installed in the switch for business and support purposes. The Inventory Reporting feature will run on the Meridian 1 PBX using the evolved Graphical User Interface (GUI) for System Management or using a TTY device providing a Command Line Interface (CLI) to the switch.

The Inventory Reporting feature will allow a MAT6.5 GUI user to download inventory information from a file resident on the PBX hard-drive to the PC for manipulation in a PC resident database. Many End-Users have inventory tools and applications for asset management but currently, they must manually enter inventory data into their inventory tool.

Uses for this feature include but are not limited to:

- Upgrade Engineering
- Inventory Control
- Fault Isolation

The following cards are now included in the inventory report with Release 25:

Card Description	Eng. Code	Vintage
System Utility Card	NT4N67	AA
System Utility Transition	NT4N68	AA
LED/LCD Display Panel	NT4N71	AA
cCNI Card	NT4N65	AB
Call Processor PII Card	(A0810496)	N/A
Digital Trunk, DTI/PRI,	NT5D12	AF
Digital Trunk, DTI/PRI,	NT5D97	AB
Digital Trunk, PRI2,	NTCK43	AC
2.0 MB DTI	NTAK10	DC
1.5 MB DTI/PRI	NTAK09	DA
24 Port DLC	NTRD24	AA
24 Ports ISDN	NTZC44 AA,	BA
Fiber in Junctor Interface Motherboard	NTRB3301	N/A
Fiber in Junctor Interface Daughterboard	NTRB3303	N/A
3 Ports CNI	NTRB34	AA
2.0 MB PRI	NTAK79	BC
2.0 MB PRI	NTBK50	AA
TMDI (1.5 MB PRI/DTI)	NTRB21	AA

The additional cards supported by the Inventory Reporting feature as described above are supported on Release 25 and later and on MAT 6.6 and later.

Package Requirements

None - this feature is included in the X11 base software.

Applicable Systems

All system types supported by Release 25.

ISM Enhancements (R25.10)

Description

Release 25 introduces 7 new ISM parameters and changes the counting for two existing ISM parameters. The new ISM parameters are not used in all regions with Release 25. Refer to Chapter 9 of this document for ISM parameter settings for Release 25.10.

The seven new ISM counters for R25 are as follows:

- Attendant Consoles
- CLASS Telephones
- Phantom Ports
- Data Ports
- Traditional Trunks
- Internet Telephones **
- ITG ISDN Trunks

** INTERNET TELEPHONE ISM is for the ITG Line-side and i2004 Internet Telephone product which will be available at a later date.

Counting of the existing two ISMs, Analogue Telephones and Digital Telephones, are changed:

- CLASS sets are excluded from counting as Analogue Telephones.
- Data ports configured in Overlay 10, Analogue (500/2500) Telephone Administration, are excluded from counting as Analogue Telephones.
- Data ports configured in Overlay 11, Meridian Digital Telephone Administration, are excluded from counting as Digital Telephones.

Operation of the remaining ISM counters is not changed and these ISMs operate the same as they are today. The existing System TNs ISM continues to count every TN configured in the system.

ISM parameters that are not being used in Release 25 are set to the maximum values (32767 for Large systems, 2500 for small systems) which means:

- Large Systems - the new “maximum set” ISM parameters will not appear on the keycode sheet or in the LD 22 print outs.

- Small Systems - the new “maximum set” ISM parameters will appear on the keycode sheet, during the software installation and in the LD 22 & LD 143 print outs. On the Option11C and Option 11C Mini, please ensure that the values listed on the keycode sheets are followed during upgrades.

The following table is a summary of how various TNs are counted against the new/changed ISMs for markets using the counters in Release 25.

A TN configured in Meridian 1	**Existing ISM (*)**	**ISM in R25 (*)**
An Attendant console	None	Attendant Consoles
A PC console	None	Attendant Consoles
A Phantom Analogue set	None	Phantom Ports
A Phantom Digital set	Wireless Telephones	Wireless Telephones
A CLASS set	Analogue Telephones	CLASS Telephone
An Analogue Data Set (FAXA)	Analogue Telephones	Data Ports
A Digital Cordless Set (DCS)	None	Wireless Telephones
A Digital Data set	Digital Telephones	Data Ports
An ATA set	Digital Telephones	Data Ports
An MCA set	Digital Telephones	Data Ports
An MCU	Digital Telephones	Data Ports
An R232 DAC	Digital Telephones	Data Ports
An R422 DAC	Digital Telephones	Data Ports
An analogue trunk	None	Traditional Trunks
Line-Side T1/E1	Analogue Telephones	Analogue Telephones
An ITG 1.0 trunk	None	Traditional Trunks
An ITG 2.0 trunk	None	ITG ISDN Trunks
A 1.5 Mb DTI trunk	None	Traditional Trunks
A 2.0 Mb DTI trunk	None	Traditional Trunks
An ISL trunk	None	Traditional Trunks
A VNS trunk	None	Traditional Trunks
A 1.5 Mb PRI trunk	None	Traditional Trunks

A TN configured in Meridian 1	Existing ISM (*)	ISM in R25 (*)
A 2.0Mb PRI trunk	None	Traditional Trunks
An IDA trunk	None	Traditional Trunks
An ISA trunk	None	Traditional Trunks
A BRI trunk	None	Traditional Trunks
An i2004 Telephone	None	Internet Telephones

Note (*) - The System TNs ISM is not included in the table for comparison. The system TN ISM continues to count every TN configured in the system.

Package Requirements:

No new Packages are introduced with this feature.

CLID on Analog Trunks for Hong Kong (DXUT-A) (R25.10)

Description

CLID (Calling Line Identification), both caller's number and / or name along with date and time information is a service provided by the local exchange to the end user/subscriber in which the identity of the calling party is transmitted to the called party prior to the answering of the call. In case of the calling number/name being absent, the CO may send a reason for absence of the same. The DXUT-A card pack collects this information and gives it to the Software. If the data received is not erroneous then call will be terminated with CLI information on the display. If the received data is erroneous then call is terminated without displaying anything.

Package Requirements

This feature uses the existing ACLI package (349)

Applicable Systems

All system types supported by Release 25.

Networking Features

Networking Features are those features that operate in a networking environment.

D-Channel Expansion (R25.10)

Description

The D-Channel Expansion feature increases the total number of possible D-channels in a multi-group Meridian 1 system. The D-Channel Expansion feature increases the number of physical I/O addresses permitted for D-channel application to 16 per network group. For each physical I/O address, up to four ports are available for D-channel use. With the D-Channel Expansion feature, the X11 software supports up to 255 D-channels.

Feature Interactions

Incremental Software Management

The maximum number of D-Channels in a Meridian 1 system is one of the ISM limits in the system. The keycode file defines the ISM limits in an IODU/C based Meridian 1 system. The DCH limit is set in the keycode generation process. If the DCH limit is 64, the Keycode Generation group can change the DCH limit to a maximum of 255 (0-254).

Fiber Network Fabric

The D-Channel expansion feature increases the number of physical I/O addresses for DCH to 16 per network group.

The limit of physical I/O addresses in a Meridian 1 multiple group system depends on the number of groups in the system. The Fiber Network Fabric feature increases the maximum number of network groups allowed in a Meridian 1 system to eight.

Note: With Fiber Network there would appear to be a potential maximum of 512 devices (16 physical I/O addresses x 8 groups x 4 ports) however, the actual D-Channel limit of 255 (0-254) is due to Meridian 1 software considerations.

Engineering Guidelines

The D-Channel Expansion feature retains the existing physical I/O address range of 0-15. In Overlay 17 the DNUM (Device Number) prompt represents the physical I/O address of a given card. The D-Channel Expansion feature allows these DNUM addresses to be duplicated providing the cards reside in separate network groups. As a general rule the duplicate device numbers must be DDCH or MSDL cards (with DCH applications only). The actual limitation is that when duplicate device numbers are configured, no more than one of the duplicate devices can be a non-MSDL device (or MSDL with any non-DCH applications). Regardless of the device type, no duplicate device numbers may be provisioned within the same network group.

Device/ Application	MSDL (DCH only) DNUM x GROUP z	MSDL (non-DCH) DNUM x GROUP z	Non-MSDL DNUM x GROUP z
MSDL (DCH only) DNUM xGROUP y	valid	valid	valid Note: see Adjacent devices
MSDL (non-DCH) DNU M xGROUP y	valid	not valid	not valid
Non-MSDLDNU M xGROUP y	valid Note: see Adjacent devices	not valid	not valid

Where:

x = I/O device number

y = group number

z = alternate group number

Adjacent Devices: Non-MSDL cards usually appropriate one or more pairs of physical device numbers based on hardware switch settings. The second address of the pair is known as the adjacent device. When one address of the pair is configured in software, the other is then reserved for the same type of device. This is consistent with current operation but may cause exceptions to the table above.

Example: MSDL 4 in group 0 is DCH only, MSDL 5 in group 0 has an SDI (non-DCH) on port 0. Configuring TTY 4, using an SDI2 card, in group 1 is not allowed even though MSDL 4 is DCH only. This is due to the fact that TTY 4 has an adjacent device of TTY 5, and TTY 5 would conflict with MSDL 5 (non-DCH) in group 0.

Feature Configuration

D-Channels are configured the same as with current operation. The difference being that Overlay 17 will now allow duplicate device numbers in separate network groups provided the engineering guidelines are followed.

Applicable Systems

D-Channel Expansion is supported on Options 81 and 81C machines; these systems can support multiple groups. D-Channel expansion is not supported on Option 11C, Option 11C Mini, Option 51C or Option 61C at this time.

Package Requirements

The D-Channel Expansion feature requires the following packages:

- Multi -purpose Serial Data Link (MSDL) package 222
- Integrated Services Digital Network (ISDN) package 145
- One or more of:
  - ISDN Primary Rate Access (CO) (PRA) package 146
  - ISDN Signaling Link (ISL) package 147
  - 2.0 Mb/s Primary Rate Interface (PRI2) package 154

MDECT 2000 - Multi Site Mobility Networking (R25.10)

Description

The initial Meridian DECT program was introduced in June of 1998. This project provides an enhancement to this existing product.

This feature introduces Multi-Site Mobility Networking (MSMN) for an MDECT cordless system. MSMN provides the user with the ability to roam between Meridian sites, connected via an MCDN network, and use their DECT handset to make and receive calls as if the user is located in the home node within that network. Recognition of their handset at the visited location and the subsequent routing of calls is automatic and does not require user interaction.

A distinct component of this feature is the introduction of concentration for MDECT handsets. MSMN is supported only on concentrated handsets within a DECT system.

With the introduction of the 32 port MDECT laundered in R24, the number of DECT portables which could be configured on a single MDECT system was limited to 1024 (32 units x 32 landlords) on Option 51C - 81C or 640 (32 units x 20 landlords) on Opt.11C. These figures correspond to a limit of 2 fully populated IPE shelves on a large system or 2 fully populated cabinets on a small system.

To allow the ability to configure more portables than is limited by the MDECT system hardware constraints, concentration is introduced.

A concentrated MDECT system is a blocking system where the number of portables which can be configured is greater than the maximum number of simultaneous calls which can be supported by the available hardware. In order to configure a greater number of portables than physical resources exist, virtual Tons configured on phantom loops are used to represent the portables.

Package Requirements:

A new package has been created for the Mobility Networking feature. The package acronym is MSMN and the package number is 370.

The following table describes the total required X11 packaging for this feature to be operable.

Package Mnemonic	Package Number	Package Description	Package Type
MSDN	370	Mobility Networking	NEW – dependency on 350
MC32	350	Introduce octal density laundered for wireless sets	Dependant on 240
MCMO	240	Wireless specific (MCMO and MDECT) overlay and call processing functionality	EXISTING
FFC	139	Flexible Feature Codes	EXISG

Market Availability

Please contact your Nortel Networks Sales Representatives for availability dates.

Meridian ITG Trunks 2.0 with ISDN and 24 port ITG card (R25.10)

Description

The ITG compresses voice and demodulates Group 3 Fax. The ITG then routes the packetized data over a private IP network. Connections are thus made between Meridian 1 nodes, bypassing circuit-switched trunking facilities.

The ITG is an intelligent Peripheral Equipment (IPE) trunk card referred to as the IP Telephony Gateway (ITG) card. An ISDN Signaling Link D-channel (ISL DCH) provides DCH connectivity to the Meridian 1 and provides signaling control for the 24 ports on the ITG card. The DCH connection expands the signaling path between the Meridian 1 system and the gateway. ITG allows Meridian 1 systems to be networked together using ISDN networking features, while transmitting signaling and voice media over a standard IP signaling stack.

The ITG delivers an ISDN signaling interface between the Meridian 1 and the Voice and Fax over IP (XoIP) interface. The high signaling bandwidth of this ISDN interface expands the feature functionality for XoIP trunks. It provides, for example, Calling Line Identification (CLID) and Calling Party Name Display (CPND).

To implement an ITG, the customer must have a corporate IP network, and routers must be available for WAN connectivity between networked Meridian 1 systems.

Configuration of the ITG requires the presence of 10BaseT Ethernet interfaces and support of the IP version 4 layer and addressing in a WAN. There is no restriction on the physical medium of the WAN. 100BaseT Ethernet network connectivity is required for codecs with less compression. Voice traffic from the ITG cards is routed over a 10/100BaseT auto-sensing Ethernet interface. Inter-card signaling and communication with the Meridian Administration Tools (MAT) PC is over a 10BaseT Ethernet connection.

List of ITG ISDN Components

Component	Product codes
System Packages	
ITG ISDN Signaling Trunk Large Systems Package including D-Channel (NT0961AA) 24-Port ITG ISL Trunk with RTU and pre-installed software, I/O cables, DCH PC card, 50-pin I/O Panel Filter connector with ITG specific filtering for 100BaseTX, and NTP)	NTZC44AA A0786079
ITG ISDN Signaling Trunk Small Systems (Option 11C) Package including D-Channel (ITG Trunk 2.0 card with RTU license and pre-installed software that supports 24 ports, required cables, DCH PC card, and NTP)	NTZC44BA A0786080
ITG ISDN Signaling Trunk Small and Large Systems Package without DCH PC Card or NTP	NTZC45AA A0786081
Upgrade Packages	
Upgrade Kit for Large Systems from ITG Trunk 1.0 to 2.0 (includes required cables, DCH PC card, and NTP)	NTZC47AA A0786085
Upgrade Kit for Small Systems from ITG Trunk 1.0 to 2.0 (includes required cables, DCH PC card, and NTP)	NTZC47BA A0786086
Spare cards	
Meridian ITG Trunk 2.0 card (24 ports) (NT0961AA 24-Port ITG ISL Trunk with RTU and pre-installed software)	NT0961AA A0786146
Cables	
E-LAN, T-LAN, RS232 and DCH Ports cable for the NT0961AA 24-Port ITG ISL Trunk DCHIP card.	NTCW84KA A0784208
E-LAN, T-LAN, and RS232 Ports cable for the NT0961AA 24-Port ITG ISL Trunk card	NTMF94EA A0783470
E-LAN, T-LAN, RS232 and DCH Ports cable for the NTCW80CA 8-Port ITG ISL Trunk DCHIP card	NTCW84LA A0784437
E-LAN, T-LAN, RS232 and DCH Ports cable for the NTCW80AA 8-Port ITG ISL Trunk DCHIP card	NTCW84MA A0789752
DCH PC Card Pigtail cable	NTCW84EA A0744403
MSDL DCH cable (included in Large System package): 6 ft. 18 ft. 35 ft. 50 ft.	 NTND26AA NTND26AB NTND26AC NTND26AD

Component	Product codes
50 ft. MSDL DCH Extender cable	NTMF04AB A0774842
10 ft. Inter cabinet cable NTCW84KA to SDI/DCH cable	NTWE04AC A0794156
1 ft. Intra cabinet cable NTCW84KA to SDI/DCH cable	NTWE04AD A0794157
Shielded four-port SDI/DCH cable for the NTAK02BB SDI/DCH card (included in Small System package)	NTAK19FB A0403450
PC Maintenance cable (for faceplate RS232 maintenance port to local terminal access)	NTAG81CA A0655007
Maintenance Extender cable	NTAG81BA
Large Systems filter connector	
50 pin I/O Panel Filter Connector Block with ITG specific filtering for 100BaseTX (included in Large Systems package)	NTCW84JA A0783483
Backplane to I/O Panel ribbon cable assembly compatible with NTCW84JA I/O Panel Filter Connector Block with ITG-specific filtering for 100BaseTX T-LAN connection (replaces NT8D81BA Backplane to I/O Panel ribbon cable assembly equipped with non-removable Molded Filter Connectors)	NT8D81AA
A0359946	
Documentation	
Meridian Internet Telephony Gateway (ITG) Trunk 2.0/ISDN Signaling Link NTP	P0912540
PC Cards	
C7LIU DCH PC Card with Layer 2 DCH Software	NTWE07AA A0794155
ITG Trunk 2.0 24-Port Software Upgrade on 8Mb ATA Flash Rom PC Card	NT0963AA A0786148
ITG Trunk 2.0 8-Port Software Upgrade on 8Mb ATA Flash ROM PC Card	NT0962AA A0786147

Market Availability

Please contact your Nortel Networks Sales Representatives for availability dates.

Night Service Enhancement for BRI Trunks (R25.30)

Reference List

The following are the references in this section:

- Night Service and Night Service Enhancements feature modules in X11 Features and Services (553-3001-306)

Feature Description

Night Service Enhancement for BRI Trunks enhances the functionality of the Night Service feature. Night Service allows calls that are normally directed to the attendant to be routed to another defined destination. With the Night Service Enhancement for BRI Trunks feature, a Night Service DN (NITE) or Night Service Group number (NGRP) can be defined for BRI trunks.

The Night Service Enhancement for BRI Trunks feature introduces the NITE and NGRP prompts for Overlay 27.

The NITE prompt appears in Overlay 27 when the following conditions apply:

- Enhanced Night Service is disabled (ENS = NO) in Overlay 15.
- Auto Terminate is disabled (AUTO = NO) in Overlay 16.
- The BRI trunk is defined as a Direct Inward Dialing (DID) or Central Office (COT) trunk in Overlay 27.

The NGRP prompt appears in Overlay 27 when the following conditions apply:

- Enhanced Night Service is enabled (ENS = YES) in Overlay 15.
- Auto Terminate is disabled (AUTO = NO) in Overlay 16.
- The BRI trunk is defined as a DID or CO trunk in Overlay 27.

The Auto Terminate DN (ATDN) prompt appears in Overlay 14 when the following conditions apply:

- Auto Terminate is enabled (AUTO = YES) in Overlay 16.
- The BRI trunk is defined as a DID, CO, or TIE trunk in Overlay 27.

Note: In this case, neither the NITE prompt nor the NGRP prompt appears in Overlay 27.

Operating Parameters

With the Night Service Enhancement feature, you can enter a Group Hunt Pilot DN as the Night Service DN.

You cannot assign a BRIL DN to the night station.

The Night Service DN defined in Overlay 27 takes precedence over the Customer Night DN defined in Overlay 15.

The NITE or NGRP prompt appears for each B-channel. You can enter different Night DNs for each B-channel.

If you enter B2 = NO for the configuration of the second B-channel, the Night DN or Night Service Group number that you entered for the first B-channel (BI) is used.

If the definition for the ENS prompt is changed from NO to YES while Night Service is in effect, the system verifies that the Night number defined is a group number or a DN. If a Night DN or 0000 is defined, the existing Night DN, defined in Overlay 15, is used.

Feature Interactions

Refer to the Night Service and Night Service Enhancements feature modules in X11 Features and Services (553-3001-306) for feature interactions.

Packaging Requirements

The Night Service Enhancement for BRI Trunks feature requires the following packages:

- Enhanced Night Service (ENS) package 133, in order for the NGRP prompt to appear
- Integrated Services Digital Network (ISDN) package 145
- Primary Rate Access (PRA) package 146
- 2.0 Mb/s Primary Rate Interface (PRI2) package 154
- International Primary Rate Access (IPRA) package 202
- Basic Rate Interface (BRI) package 216
- Integrated Services Digital Network Basic Rate Interface Trunk Access (BRIT) package 233
- Basic Rate Interface Line Application (BRIL) package 235

Feature Implementation

Task summary list

The following is a summary of the tasks in this section:

1. LD 27- define a Night Service DN when ENS is disabled in Overlay 15.
2. LD 27- define a Night Service Group number when ENS is enabled in Overlay 15.

LD 27 – Define a Night Service DN when ENS is disabled in Overlay 15.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	DSL	Digital Subscriber Loop Data Block.
DSL	l s c dsl	Digital Subscriber Loop address.
	c dsl	For Option 11C.
APPL		Application type for this DSL.
	BRIE	Basic Rate Interface protocol engine. BRIE supports the QSIG and EuroISDN interfaces, and requires BRIT package 233. Any changes in the DSL route must match the BRIE loadware application.
	BRIT	Basic Rate Interface Trunk BRIT supports SL-1, Numeris, and ITR6 interfaces. BRIT package 233 is required.
...		

TKTP		Trunk Type.
	DID	Direct Inward Dialing trunk type.
	COT	Central Office trunk type.
PRID	x	Protocol ID, where x = 1-4
PDCA	xx	Pad Category table, as defined in Overlay73, where: xx = 1-16
ROUT	xxx	Route number for the Trunk DSL, where: xxx = 0-511
...		
B1	YES	Change B-Channel 1 configuration.
NITE		Night Service Directory Number.
	x...x	This DN can have up to four digits, or up to seven digits withDirectory Number Expansion (DNXP) package 150. You can enter a Group Hunt Pilot DN at this prompt. The DN that you enter here takes precedence over the NITE and NIT1-NIT4 prompts in LD15. If you enter a DN at this prompt, calls will go to this DN. If you do not enter a DN at this prompt, calls will go to the DNs defined at NITE prompts in LD15.
TGAR	0-(1)-31	Trunk Group Access Restriction number.
...		
B2	YES	Change B-Channel 2 configuration.
NITE		Night Service Directory Number.
	x...x	This DN can have up to four digits, or up to seven digits with Directory Number Expansion (DNXP) package 150. You can enter a Group Hunt Pilot DN at this prompt. The DN that you enter here takes precedence over the NITE and NIT1-NIT4 prompts in LD15. If you enter a DN at this prompt, calls will go to this DN. If you do not enter a DN at this prompt, calls will go to the DNs defined at NITE prompts in LD15.

LD 27 – Define a Night Service Group number when ENS is enabled in Overlay 15.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	DSL	Digital Subscriber Loop Data Block.
DSL	l s c dsl	Digital Subscriber Loop address.
	c dsl	For Option 11C.
APPL		Application.
	BRIE	Basic Rate Interface protocol engine. BRIE supports the QSIG and EuroISDN interfaces, and requires BRIT package 233. ANy changes in the DSL route must match the BRIE loadware application.
	BRIT	Basic Rate Interface Trunk BRIT supports SL-1, Numeris, and ITR6 interfaces. BRIT package 233 is required.
...		
TKTP	DID	Trunk Type.
	COT	Direct Inward Dialing trunk type. Central Office trunk type.
...		
B1	YES	Change B-Channel 1 configuration.
NGRP		Night Service Group number, where:
	x	x = 0-9 The NGRP prompt replaces the NITE prompt when ENS = YES in LD15.
TGAR	0-(1)-31	Trunk Group Access Restriction number.
...		
B2	YES	Change B-Channel 2 configuration.
NGRP		Night Service Group number, where:
	x	x = 0-9 The NGRP prompt replaces the NITE prompt when ENS = YES in LD15.

Feature operation

Refer to the Night Service and Night Service Enhancements feature modules in X11 features and services (553-3001-306) for Night Service and Night Service Enhancements feature operation.

Applicable Systems

All Systems support by Release 25.30

Station Features

Station Features are those features that require the user to perform certain steps from their station in order for the feature to function.

Scheduled Electronic Lock (R25.30)

Description

The Scheduled Electronic Lock (SELK) enhances of the Electronic Lock Feature .

The Scheduled Electronic Lock feature automatically locks telephone sets at predetermined times. These times are defined in the Scheduled Access Restrictions (SAR) database (Overlay 88). SAR group numbers are also defined in LD 88. A maximum of eight scheduled lock times can be assigned to each group.

Each telephone set that requires Scheduled Electronic Lock functionality must be assigned to a SAR group in LDs 10 or 11, and must have the Scheduled Electronic Lock Allowed (SLKA) Class of Service assigned.

In order to override the Scheduled Electronic Lock feature, the user must use the existing Electronic Lock feature. The user enters the Electronic Lock Deactivated (ELKD) Flexible Feature Code (FFC). The telephone set remains unlocked until the user dials the Electronic Lock Activated (ELKA) FFC. If the user does not dial the ELKA FFC, the system automatically locks the telephone set at the next scheduled lock time. For the set to be unlocked again, the user must dial the ELKD FFC to unlock the telephone set. The telephone set does not automatically unlock.

A special dial tone, defined in Overlay 56, notifies the user that the telephone set is in a locked state.

SELK Example

The SELK is scheduled for 18:00, 24:00, and 02:00. At 22:00, an employee who is working overtime needs to use their telephone. That person enters the ELKD FFC on the telephone set to unlock it. At 24:00, the telephone set automatically locks, if the user has not already locked it. To use the telephone set again, the employee must unlock it. At 02:00, the next scheduled lock time; the telephone set locks once more. The Schedule Electronic Lock feature remains in affect until the employee unlock the set by dialing the ELKD FCC.

Operating Parameter

This feature applies to X11 Release 25.30 and later.

The SELK feature supports analog and Meridian 1 proprietary telephone sets. The SELK feature does not support ACD sets, trunks or attendant consoles.

If a telephone set does not support the SAR and Electronic Lock features (for example, ACD sets), then it will not support the SELK feature.

If the Class of Service (CLS) is set to Scheduled Electronic Lock Deactivated (SKLD) in Overlays 10 and 11, the existing Electronic Lock and SAR feature functionalities apply.

When the SELK feature is active, it does not take the Controlled Class of Service (CCOS) restriction from Overlay 15. Configuration is done in Overlay 88.

When a telephone set is unlocked, CCOS restrictions override normal telephone set restrictions. When the SELK feature is active, the Scheduled Access Restrictions override the CCOS restrictions.

If the system is busy the Scheduled Electronic Lock feature could be slightly delayed. It is possible that a user could still dial an external number after the beginning of a scheduled lock time.

Feature Interactions

- **Automatic Call Distribution**

The SELK feature does not support Automatic Call Distribution (ACD) sets, as CCOS does not support ACD sets.

- **Direct Inward System Access**

Direct Inward System Access (DISA) numbers are not assigned to Scheduled Access Restrictions groups, so the SELK feature does not affect them.

- **Electronic Lock Network Wide / Electronic Lock on Private Lines**

The SELK feature supports Electronic Lock Network Wide / Electronic Lock on Private Lines. However, a scheduled lock is not supported over a network. Scheduled Electronic Lock must be configured and administered locally. Like SELK, these features obtain their restrictions from Scheduled Access Restrictions.

- **Message Intercept**

When SELK locks a telephone set, Message Intercept (MINT) provides a different dial tone or announcement while the telephone set is locked.

- **Multi Tenant Service**

If Scheduled Access Restrictions are applied to a tenant, the telephones in that tenant group follow the Scheduled Access Restrictions (unless the telephone belongs to a different SAR group).

- **Scheduled Access Restrictions**

The Scheduled Access Restrictions (SAR) Permanent Disable, Active Lock, and Lock Disable FFCs operations have precedence over SELK.

Packaging Requirements

Scheduled Electronic Lock requires the following packages:

- Controlled Class of Service (CCOS) package 81
- Flexible Feature Code (FFC) package 139
- Scheduled Access Restrictions (SAR) package 162
- Message Intercept (MINT) package 163, if the Message Intercept function is required

Feature Implementation

Task summary list

The following is a summary of the tasks in this section:

1. **LD 88** – Configure Scheduled Access Restrictions data block.
2. **LD 10** – Assign the Scheduled Electronic Lock feature to an analog (500/2500 type) telephone set.
3. **LD 11** – Assign the Scheduled Electronic Lock feature to a Meridian 1 proprietary telephone set.
4. **LD 57** – Define Flexible Feature Code for Scheduled Electronic Lock.

LD 88 – **Configure Scheduled Access Restrictions data block.**

Prompt	Response	Description
REQ	NEW CHG	Create data block. Change existing data block.
TYPE	SAR	Scheduled Access Restrictions.
CUST	0-99	Customer number.
	0-31	For Option 11C.
SPWD	xxxx	Secure data password (same password as defined for DISA on a per customer basis in LD 15). *Note*: This Prompt will not appear to a user with an LAO password.
SGRP	0-999	SAR group number.
OFFP	1-8 <CR>	Off-hour period number. Off-hour periods may overlap; the period that starts first has priority until that off-hour period is finished. All the promps shown up to the ICR prompt repeat until you enter <cr>. Go to ICR prompt.
- STAR hh mm	hh mm	Start time. The current start time (hours and minutes) is printed individually after the prompt. Respond with the new start time.
	X	Remove value and return to OFFP prompt.
- STOP hh mm	hh mm	Stop time. The current stop time (hours and minutes) is printed individually after the prompt. Respond with the new stop time.
	X	Remove value and return to OFFP prompt.
- DAYS	d ... d	Respond with a new set of days to be used. Maximum of seven entries in the range of 1-7. Day 1 = Sunday, Day 2 = Monday, etc.

- COS		Off-hour period Class of Service.
	(UNR)	Unrestricted
	CTD	Conditionally Toll-Denied
	CUN	Conditionally Unrestricted
	FR1	Fully Restricted Class1
	FR2	Fully Restricted Class 2
	FRE	Fully Restricted
	SRE	Semi-restricted
	TLD	Toll Denied
- TGAR	(0)-15	Trunk Group Access Restriction.
- NCOS	0-99	Network Class of Service.
- ICR	(NO) YES	Incoming Calls are Restricted.
LOCK	(1)-8	Indicates off-hour period to be used as the LOCK period. Default is Period 1.

LD 10 - Assign the Scheduled Electronic Lock feature to Meridian 1 proprietary Telephone set

Prompt	Response	Description
REQ	NEW	Add new data.
TYPE	aaaa	Meridian 1 proprietary telephone. See X11 Administration (553-3001-311).
TN	l s c u c u	Terminal Number. Terminal Number for the Option 11C.
SGRP	(0)-999	Scheduled Access Restriction group number. Must have group defined in LD 88.
SCPW	xxxx	Station Control Password.
CLS	CCSA	Controlled Class of Service Allowed. CCSD is default.
	SLKA	Scheduled Electronic Lock Allowed. SLKD is default.

LD 57 - Define Flexible Feature Code for Scheduled Electronic Lock

Prompt	Response	Description
REQ	NEW CHG	Add new data. Change existing data.
TYPE	FFC	Flexible Feature Code
CUST	0-99 0-31	Customer number. For Option 11C.
FFCT	YES (NO)	Provide FFC confirmation tone
CODE	ELKA	New/change Electronic Lock Activate FFC.
ELKA	xxxx	Enter the new or changed Electronic Lock Activate FFC
CODE	ELKD	New/change Electronic Lock Deactivate FFC.
ELKD	xxxx	Enter the new or changed Electronic Lock Deactivate FFC

Feature Operation

During the period that a set is locked, the user must enter the ELKD FFC to unlock the set. The set remains unlocked until either the next scheduled lock occurs or the user dial the ELKA FFC to manually lock/unlock the set.

Applicable Systems

All Systems support by Release 25.30

M3900 Digital Telephone Enhancements (R25.10)

Description

These enhancements to the M3900 Digital Telephones in Meridian X11 Release 25 bring additional functionality to the M3902, M3903, M3904 phones.

The M3900 Digital Telephone Enhancements will be supported on the M3905 Meridian Digital set in a future X11 Release

The new features include:

Context Sensitive Soft Keys (R25.10)

The Context Sensitive Soft Keys support the most frequently used call processing features. Soft keys for these features appear during Call Processing in appropriate call states.

Set-to-Set Messaging (R25.10)

This feature allows an M3900 user to define a one-line text message to be displayed on a caller's phone at the time the call is established. User turns the feature ON/OFF and edits the Set-to-Set Message text using the dialpad keys.

Corporate Directory (R25.15)

This capability provides the user access to a directory of names (data derived from MAT). Users can then search by last name, navigate through the directory, copy entries to their Personal Directory, and dial entries.

Virtual Office (Hot Desking) (R25.15)

This feature provides the capability for a user to login to a designated phone and have the user's own custom profile determine the configurable features of the phone in use. The Virtual Office capability is useful for telecommuters, for visitors, and for workers who are infrequently in the office.

Flash Download (R25.10 + PEPs or R25.15)

M3900 Flash Download provides the capability to download a new firmware version from the Meridian 1 to the M3900 telephone. Flash download provides a way for installed M3900 telephones to be updated to the appropriate firmware release level for supporting features on the Meridian 1.

Flash Download can be invoked for one M3900 telephone, for a group of M3900 telephones, or all telephones on the Meridian 1. It can be invoked locally or remotely for maintenance purposes.

The download capability includes flexible reporting capabilities for the flash download process. A report can be generated for a group of phones based on parameters specified in a table. These parameter include the following:

- Set type can be specified (M3902, M3903, M3904, M3905, All)
- TN Range can be specified (start TN, end TN)
- DN Range can be specified (start DN, end DN)
- Firmware version can be specified (all, specific)

The download capability also includes flexible and automated firmware downloading capabilities:

- Set type can be specified (M3902, M3903, M3904, M3905, All)
- Day(s) of week can be specified

Up to four intervals per day can be specified (start time, length)

- TN Range can be specified (start TN, end TN)
- DN Range can be specified (start DN, end DN)
- Force Download can be specified (yes,no)

Display Based Expansion Module (R25.10)

The Display-Based Expansion Module is a hardware module containing eight soft-labeled keys for DNs or features. The Expansion Modules "Page" key provides access to two additional pages allowing up to 24 DNs or features to be programmed.

A summary of the changes is included in the table below:

Requirement	M3901	M3902	M3903	M3904	S/W Rel
Flash Download Flexibility Enh.	No	Yes	Yes	Yes	R25.10 + PEPs or R25.15
# of Context Sensitive Soft Keys	0	0	4	4	R25.10 or later
Virtual Office (Hot Desking)	No	No	Yes	Yes	R25.15
Corporate Directory	No	No	Yes	Yes	R25.15
Set-to-Set Messaging	No	No	Yes	Yes	R25.10 or later
Display Based Expansion Module support	No	No	No	Yes	R25.10 or later

Package Requirements

The ARIES set package (170) and the DSET package (88) are required for the M3900 sets to work on the Meridian 1 switch.

The following new packages are required with this development:

Package 380 - Set to Set Messaging (R25.10 or later)

Package 381 - Corporate Directory (R25.15)

Package 382 - Virtual Office (R25.15)

Applicable Systems

All system types supported by Release 25.

Meridian ITG Line-side & i2004 Internet Telephones

Description

The Meridian ITG Line-side offering and i2004 Internet Telephone unifies a number of enterprise-critical communication functions and provides the customer with the benefits of IP Telephony such as simplified managementwithout sacrificing features, reliability or Quality of Service (QoS).

Meridian Administration Tools (MAT 6.67.07) or Optivity Telephony Manager (OTM 1.0) is used to provide a Graphical User Interface for installation and administration of the Meridian ITG and allow configuration of features such as bandwidth management for the telephony traffic on the

data network, set ToS/ DiffServ bits, select various voice CODECs (using silence suppression and voice activity detection as required) and much more.

Notable features of the i2004 Internet Telephone are:

- Large multi-field LCD display
- Integrated headset jack with ON/OFF button
- Fixed Icon labeled Hold key
- Fixed Icon labeled Release key
- Handsfree button with LED and enhanced audio speaker
- Volume Up/Down control and Mute button with LED
- Mute key
- Fixed Icon labeled Quit key (Used to exit displayed options or services)
- Fixed Icon labeled Headset key (with LED)
- Fixed Icon labeled Inbox key (Used as voice message key in 1st phase)
- Fixed Icon labeled Services key (Used to access set options)
- 12 Key keypad
- Handset
- 4 Navigation keys (left, right, up, down)
- 10 Soft labeled programmable DN or feature keys
- Message Waiting Indicator lamp

Soft label keys will operate similar to the analogous keys on the M3904 Phase 1 telephone.

Package Requirements

There are no new packages introduced for this feature.

There is a new ISM parameter (called "Internet Telephones") introduced with this feature, which controls the number of Internet Telephones that are enabled on the system.

The configuration and maintenance of the IP Telephony Gateway (ITG) IPE card is through the "ITG IP Phones" application in MAT or OTM.

ISM Parameter	PEC Code	CPC Code
Internet Telephones (Small Systems)	NTZC84AA	A0808998
Internet Telephones (Large Systems)	NTZC82AA	A0804340

The following table describes the existing X11 package dependencies for this feature to be operable:

Package Mnemonic	Package Number	Package Description
DSET	88	Digital Set Package
ARIES	170	Aries Terminal

Applicable Systems

All system types supported by Release 25

Market Availability

Please contact your regional Nortel Representative for availability dates for your country.

Call Center Feature

Agent Greeting (R25.15)

Agent Greeting is a feature to free the agent in a call center environment from the action of repeating a standard greeting for each individual call received. This feature is implemented via the VPS platform (VPS DSE - Agent Greeting Base H/W) in the form of an IPE pack on the M1 PABX. Agent Greeting is supported in both ACD or Symposium Call Center Server environments.

Package Requirements

The minimum release is X11 25.15 with package 152 (Flexible Services Port Package) turned on.

Applicable Systems

Supported M1 platforms are Option 11C, 51C, 61C and 81C.

S7. Software Packaging

New Package Numbers Introduced by R25

The following new packages are being supported with Release 25 software in Asia Pacific.

FEATURE	Mnemonic	Option Pkg	Supported on Option 11C/Mini
MDECT 2000 - Multi-Site Mobility Networking [1]	MSMN	370	Yes
Core Processor PII (81C)	CPP_CNI	368	No
M3900 series Meridian Digital Telephones: Set-to-Set Messaging	STS_MSG	380	Yes
M3900 series Meridian Digital Telephones: Corporate Directory	CDIR	381	Yes
M3900 series Meridian Digital Telephones: Virtual Office	VIRTUAL_OFFICE	382	Yes
Fiber Network Fabric (81 / 81C)	FIBN	365	No
IP Expansion (11C / 11C Mini only) [1]	IPEX	295	Yes

Note 1 - Please contact your Nortel Sales Representative on availability of this feature

R25 New Feature Packaging

Following is a list of the new features, the package in which they are to be found and the pre-requisites needed to obtain full feature operation.

Feature	MNEM	NUM	New Feature Pre-requisites
MDECT 2000 - Multi-Site Mobility Networking [1]	MSMN	370	139,240, 254, 350
Meridian Internet Telephone [1] (i2004)			88, 170
Calling Line Identification on Analog Trunks for Hong Kong (DXUT-A)			349
M3900 series Meridian Digital Telephones: Set-to-Set Messaging	STS_MSG	380	88, 170
M3900 series Meridian Digital Telephones: Corporate Directory	CDIR	381	88, 170
M3900 series Meridian Digital Telephones: Virtual Office	VIRT_OFFICE	382	88, 170

Feature	MNEM	NUM	New Feature Pre-requisites
Core Processor PII (81C)	CPP_CNI	368	299 mutually exclusive with 298 Package 368 mutually exclusive with 365 (FNF)
Fiber Network Fabric (81 & 81C)	FIBN	365	298 (81) or 299 (81C). Packages are mutually exclusive
D-Channel Expansion			145, 222 ; 146(PRA) or 147 (ISL) or 154 (PRI2)
ITG Trunkside 2.0			59,145,147,148,160; 57 (BARS) or 58 (NARS); 222,263,305 (only for large systems)
Inventory Reporting Phase 2			
OTM [1]			- Alarm Management 164, 242, 243, 296 - Maintenance Windows 164, 242, 243, 296 - Ethernet Connection for (Station Administration, Traffic Analysis and ESN ART) 164, 242 & 296 - SMNP Alarms (Open Alarms) 315 - Data Buffering and Access (DBA) 351 - Station Fast Sych 351
Agent Greeting [1]	FXS		152
IP Expansion [1]	IPEX	295	

Note 1 - Please contact your Nortel Sales Representative on availability of these features

R25 Software ISM Parameters

Introduction

R25 is introducing seven new ISM counters : ITG ISDN Trunks, Traditional Trunks, Data Ports, Phantom Ports, CLASS Telephones, Attendant Consoles, Internet telephones and is changing the counting criteria for two existing ISM counters, Digital telephones & Analogue telephones and remove the MOPT ISM.

The ITG ISDN Trunks ISM is non-modifiable.

R25.30 introduces an additional ISM – Survivability, used in conjunction with the Survivable IP Expansion product.

Operation of the remaining ISM counters is not changed.

The following table is a summary of how various TNs are counted against the new/changed ISMs for markets using the counters in Release 25.

A TN configured in Meridian 1	**Existing ISM (*)**	**ISM in R25 (*)**
An Attendant console	None	Attendant Consoles
A PC console	None	Attendant Consoles
A Phantom Analogue set	None	Phantom Ports
A Phantom Digital set	Wireless Telephones	Wireless Telephones
A CLASS set	Analogue Telephones	CLASS Telephone
An Analogue Data Set (FAXA)	Analogue Telephones	Data Ports
A Digital Cordless Set (DCS)	None	Wireless Telephones
A Digital Data set	Digital Telephones	Data Ports
An ATA set	Digital Telephones	Data Ports
An MCA set	Digital Telephones	Data Ports
An MCU	Digital Telephones	Data Ports
An R232 DAC	Digital Telephones	Data Ports
An R422 DAC	Digital Telephones	Data Ports
An analogue trunk	None	Traditional Trunks
Line-Side T1/E1	Analogue Telephones	Analogue Telephones
An ITG 1.0 trunk	None	Traditional Trunks
An ITG 2.0 trunk	None	ITG ISDN Trunks
A 1.5 Mb DTI trunk	None	Traditional Trunks
A 2.0 Mb DTI trunk	None	Traditional Trunks
An ISL trunk	None	Traditional Trunks
A VNS trunk	None	Traditional Trunks
A 1.5 Mb PRI trunk	None	Traditional Trunks
A 2.0Mb PRI trunk	None	Traditional Trunks
An IDA trunk	None	Traditional Trunks
An ISA trunk	None	Traditional Trunks
A BRI trunk	None	Traditional Trunks
An i2004 Telephone	None	Internet Telephones

Note (*) - The System TNs ISM is not included in the table for comparison. The system TN ISM continues to count every TN configured in the system.

ISM Parameter Defaults for Meridian 1 Option 11C - 81C for Asia Pacific

INCREMENTAL SOFTWARE	OPT 11C/11CM DEFAULT	OPT 51C-81C DEFAULT	NOTES
ACD_AGENTS	0	0	1ST increment of 10, thereafter increments of 1
ACDN	300	300	
AML	-	16	
ANALOGUE_TELEPHONES	0	0	Incremental units of 16
ASTs	5000	5000	
ATTENDANT_CONSOLES	2500	32767	
BRAND	0	0	Resets to 2
BRI_DSL	64	64	
CLASS_TELEPHONES	2500	32767	Reset with CNUMB-332 / CNAME-333
DATA_PORTS	2500	32767	
DCH	255	255	
DIGITAL TELEPHONES	0	0	Incremental units of 8
INTERNET_TELEPHONES	0	0	Incremental units of 8
ITG_ISDN_TRUNKS	0	0	Incremental units of 8
LTID	64	64	
MPH_DSL	-	100	
MUSCON	0	0	Increments of 32
PHANTOM_PORTS	2500	32767	
RANCON	0	0	Increments of 10
RANRTE	128	128	
TMDI_D-CHANNELS	64	-	Applies to Option 11C/11C Mini only.
TNs	32000	32000	
TRADITIONAL TRUNKS	2500	32767	
WIRELESS_TELEPHONES	0	0	Incremental units of 16
SURVIVABILITY	0	-	Increment of 1 up to a maximum value of 4 (i.e. 4 Survivable IP Expansion cabinet)

Note that while some ISMs have been set to the maximum, Nortel Networks reserve the rights to change these parameters in the future as necessary.

ISM definitions

Incremental Software Management (ISM) is a feature that provides flexibility and control over system configuration and implementation.

LOOP LIMIT : Define the number of loops for large systems

TNS : System TNs ISM will count ***all*** TNs allowed within the system (eg :Wireless Telephones, Analogue Telephones, and Digital Telephones, Phantom TN, BRI Line, Meridian Mail /Call Pilot ports).

ACD AGENTS : This ISM will count all ACD sets/ports as follows :

- ACD Analogue set
- ACD Digital set
- Meridian Integrated Application Portfolio (e.g MICB, MIPCD, etc.)

ACDN : This parameter will count all ACD DNs (queue)

AST : This ISM will count all AST sets/trunks as follows :

- Phantom Digital set
- Analogue AST set
- Digital AST set
- Associated trunk for CTI trunk monitoring and control

BRI DSL : This ISM will count the BRI unit

LTID : This ISM will count BRI Unit only if MISP or BRSC support D channel packet data.

DCH : This ISM will count the D-Channels Handlers on large systems

AML : This ISM will count the number of Application Module Links (eg : Meridian Mail / Call Pilot, Meridian Link, CCR)

MPH DSL : This parameter will count the Meridian Packet Handlers

RAN CON : This ISM will count the number of broadcast RAN connections.

RAN RTE : This parameter will count the number of broadcasting RAN routes.

MUS CON : This parameter will count the number of Music Broadcast connections.

BRAND : This parameter will control the brand display on the digital sets

DIGITAL TELEPHONES : This ISM will count digital telephones as follows :

- Digital voice set
- Digital data set
- ATA
- MCA
- MCU
- R232 DAC
- R422 DAC
- ACD digital set
- Meridian Integrated Application Portfolio (e.g MICB, MIPCD, etc.)
- Digital AST set

ANALOGUE TELEPHONES : This ISM will count analogue telephones as follows :

- Analogue set
- Line side T1/E1
- ACD Analogue set
- Analogue AST set

TMDI D-CHANNELS : This ISM will control the number of 1.5M D-Channels

WIRELESS TELEPHONES : This ISM will count wireless telephones as follows :

- CT2 set
- MDECT set

ITG ISDN TRUNKS : This ISM will control the maximum number of ITG ISDN trunks allowed on the system (ITG 2.0 & later version).

INTERNET TELEPHONES : This ISM will count internet telephones as follows :

Ratio 1/1 = 1 i2004order ISM counter will increase by 1

ATTENDANT CONSOLES : This ISM will control the number of attendant consoles configured in OVL 12 (each TN occupied by an Attendant Console will be used for SYS TNs ISM counting criteria). It is important that the attendant console is not implemented on Digital extension

CLASS TELEPHONES : This counter will count every configured CLASS Telephone

DATA PORTS : This counter will count every configured Data Port as follows :

- Analogue data set (FAXA)
- Any set configured in OVL 11 as Data TNs

PHANTOM PORTS : This counter will count every Phantom Port configured in OVL 10.

TRADITIONAL TRUNKS : This counter will count each Traditional Trunk as follows :

- Analog Trunk
- Digital Trunk
- ISDN Trunk
- ITG 1.0 Trunk

SURVIVABILITY : This counter will control the number of IP Expansion Cabinets allowed in a Option 11C / 11C Mini system.

R25 Software Package Dependency Reference

The following table lists all packages available on X11 Release 25.

NEW PACKAGES ARE HIGHLIGHTED IN BOLD

PKG	MNEM	Description	Technical prerequisites	Market Availability
0	BASIC	Basic System Features	1	9.30A
1	OPTF	Optional Features	0	9.30A
2	CUST	Multi Customer		9.30A
4	CDR	Call Detail Recording	5	9.30A
5	CTY	Call Detail Recording, Teletype Terminal	4	9.30A
7	RAN	Recorded Announcement		9.30A
8	TAD	Time and Date		9.30A
9	DNDI	Do Not Disturb Individual	16	9.30A
10	EES	End To End Signalling		9.30A
11	INTR	Intercept Treatment		9.30A
12	ANI	Automatic Number Identification	13	9.30A
13	ANIR	Automatic Number Identification, Route Selection	12	9.30A
14	BRTE	Basic Routing	32	9.30A
15	RPE1.5	1.5 MB RPE (not Opt 11)	Not with 165 (RPE2)	9.30A
16	DNDG	Do Not Disturb Group	9	9.30A
17	MSB	Make Set Busy		9.30A
18	SS25	Special Service for 2500 sets	73	9.30A
19	DDSP	Digit Display		9.30A
20	ODAS	Office Data Administration System		9.30A
21	DI	Dial Intercom		9.30A
22	DISA	Direct Inward System Access		9.30A
23	CHG	Charge Account	52,24	9.30A
24	CAB	Charge Account/Authorisation Code Base	23,52	9.30A
25	BAUT	Basic Authorisation Code	23,24,52	9.30A
26	CASM	Centralised Attendant Service,	Mutually exclusive with pkg 159	9.30A
27	CASR	Centralised Attendant Service	Mutually exclusive with pkg 159	9.30A
28	BQUE	Basic Queuing		9.30A
29	NTRF	Network Traffic		9.30A
32	NCOS	Network Class Of Service		9.30A
33	CPRK	Call Park		9.30A
34	SSC	System Speed Call	32	9.30A
35	IMS	Integrated Message Services	40, 45, 46, 109	9.30A
36	ROA	Recorded Overflow Announcement	7	9.30A
37	NSIG	Network Signalling	32	9.30A

48	GRP	Group Call		9.30A
49	NFCR	New Flexible Code Restriction	32	9.30A
50	ACDD	Automatic Call Distribution, Package D	40, 41, 42, 45, 51	9.30A
51	LNK	ACDD Auxiliary Processor Link	~~40, 45, 50~~	9.30A
52	FCA	Forced Charge Account	23, 24	9.30A
53	SR	Set Relocation		9.30A
54	AA	Attendant Administration		9.30A
55	HIST	History file		9.30A
56	AOP	Attendant Overflow Position	Mutually exclusive with pkg 159	9.30A
57	BARS	Basic Alternate Route Selection	14, 32	9.30A
58	NARS	Network Alternate Route Selection	14, 32	9.30A
59	CDP	Co-ordinated Dialling Plan	14, 28, 32, 57 / 58	9.30A
60	PQUE	Network Priority Queuing	14, 28, 32, 58, 61	9.30A
61	FCBQ	Flexible Call Back Queuing	14, 28, 32,	9.30A
62	OHQ	Off Hook Queuing	14, 28, ~~29~~, 32, 61 optional: 29 (on main and/or remote)	9.30A
63	NAUT	Network Authorisation Code	14, 23, 24, 25, 28, 32, 52, 57 / 58 / 59, 61	9.30A
64	SNR	Stored Number Redial		9.30A
65	TDET	Tone Detector (not Opt 11)		9.30A
67	NXFR	Network Transfer	32, 37	9.30A
70	HOT	Enhanced Hotline		9.30A
71	DHLD	Deluxe hold		9.30A
72	LSEL	Automatic Line Selection		9.30A
73	SS5	500 Set Dial Access to Features	18	9.30A
74	DRNG	Distinctive Ringing		9.30A
75	PBXI	1.5 MB DTI		9.30A
76	DLDN	Department Listed Directory Number		9.30A
77	CSL	Command Status Link		9.30A
79	OOD	Optional Outpulsing Delay		9.30A
80	SCI	Station Category Indication		9.30A
81	CCOS	Controlled Class Of Service		9.30A
82	RSDB	Resident Debug (only for non C_machine)		9.30A
83	CDRQ	Call Detail Recording, Queue Record	4	9.30A
84	ATM	Automatic Trunk Maintenance (not Opt 11)	65	9.30A
86	TENS	Multi-Tenant Service		9.30A
87	FTDS	Fast Tone & Digit Switch		9.30A
88	DSET	M2000 Digital Sets		9.30A
89	TSET	M3000 Digital Sets	88	9.30A
90	LNR	Last Number Redial		9.30A
91	DLT2	M2317 Digital Sets	88	9.30A
92	PXLT	Pre translation		9.30A
93	SUPV	Supervisory Console		9.30A
95	CPND	Calling Party Name display	88 / 89 / 91 / 140 / 170	10.10B
97	JPN	Japan Central Office Trunk		9.30A
98	DNIS	Dialled Number Identification Service	40, 45	10.10B
99	BGD	Background Terminal		10.10B
100	RMS	Room Status	81, 99	10.10B
101	MR	PPM / Message Registration	131	10.10B
102	AWU	Automatic Wake-Up	7, 81, 99	10.10B
103	PMSI	Property Management System Interface	81, 99, 100 / 101 / 102	10.10B
104	OPAO	Outpulsing of "*" and "#"		10.10B
105	LLC	Line Load Control		
107	MCT	Malicious Call Trace	4	10.10B
108	ICDR	Internal CDR	4	10.10B
109	APL	Auxiliary Processor Link	40, 45	10.10B

110	TVS	Trunk Verification From Station		10.10B
111	TOF	Automatic Call Distribution, Time Overflow Queuing	40, 41, 45	10.10B
113	IDC	Incoming Digit Conversion	32, 49	14.41D
114	AUXS	Automatic Call Distribution, Package D, Auxiliary Security	40, 41, 42, 45, 50, 51	14.41D
115	DCP	Direct Call Pick Up		14.41D
116	PAGT	Automatic Call Distribution, Priority Agent	40, 45	14.41D
117	CBC	Call by Call Service	145, 154 / 147	14.41D
118	CCDR	Calling Line ID in CDR	4, 145, 154 / 147	14.41D
119	EMUS	Enhanced Music	7, 44	14.41D
120	PLDN	Group Hunt / DN Access to SCL	32, 34, 81, 131,139	15.58F
121	SCMP	Station Camp-On	131	14.41D
122	IDA	Integrated Digital Access	129	16.87G
123	DPNSS	Digital Private Network Signalling System 1	122, 148,~~129~~, 14, 28, 32, 57/ 58/ 59, 61, 145, 154 / 147	16.87G
124	DASS2	Digital Access Signalling System 2	122, 123,148,~~129~~, 14, 28, 32, 57/ 58/ 59, 61, 145, 154 / 147	16.87G
125	FTC	Flexible Tones and Cadences	74	9.30A
126	OPCB	Operator Call-back (China #1)	131, 107 / 127 / 128 (if 107 then 4 is required)	14.41D
127	BKI	Attendant Break-In / Trunk Offer		9.30A
128	MFC	Multi-Frequency Compelled Signalling		9.30A
129	DTI2	2MB Digital Trunk Interface		10.10B
131	SUPP	International Supplementary Features		9.30A
132	TBAR	Trunk Barring		10.10B
133	ENS	Enhanced Night Service		14.41D
134	AFNA	Attendant Forward No Answer	Not with Pkg 174	14.41D
135	MFE	Multi-Frequency Signalling for Socotel		10.10C
136	JDMI	Japan Digital Multiplex Interface (not Opt 11)		14.41D
137	LSCM	Local Steering Code Modifications	58 / 59, 61	10.10C
138	DTD	Dial Tone Detector		10.10C
139	FFC	Flexible Feature Codes	81 required for Electronic Lock feature	14.41D
140	DCON	M2250 Attendant Console	88	15.56F
141	MPO	Multi-Party Operations		14.41D
143	ICP	Intercept Computer Interface	7, 17, 35, 40, 45, 46, 81, 109, 131, 139	10.10C
144	ABCD	16 Button Digitone/Multi frequency Telephone		14.41D
145	ISDN	Integrated Services Digital Network		14.41D
146	PRA	1.5 MB Primary Rate Access	75, 145	14.41D
147	ISL	ISDN Signalling Link	145	14.41D
148	NTWK	Advanced ISDN Network Services	14, 28, 32, 58, 61, 145, 129&147/154/183/233	14.41D
149	IEC	Inter Exchange Carrier	75, 145, 146	14.41D
150	DNXP	DN Expansion (7 Digit)	151 required if CDR equipped	14.41D
151	CDRE	CDR Expansion (7 Digit)	4, 150	14.41D
152	**FXS**	**Flexible Services Package**	**45**	**Rls 25**
153	IAP3P	ISDN-AP for 3rd Party Vendors	77	14.46E
154	PRI2	2MB Primary Rate Access	145	14.46E
155	ACNT	Automatic Call Distribution, Activity Code	40, 41, 42, 45, 50, 51, 114	14.46E
157	THF	Trunk Hook Flash (Centrex)		14.46E
158	FGD	Feature Group D	57, 58, 59, 151	18.20H

159	NAS	Network Attendant Service	14, 32, 58, 145, 161, 129&147 /154 /233 57 required for NAS Equi-repartition 59 required for NAS routing Not with Pkg.'s 26, 27, 56	14.46E
160	FNP	Flexible Numbering Plan	14, 28, 32, 58, ~~59~~	14.46E
161	ISDN INTL SUP	ISDN Supplementary Features	14, 28, 32, 58, 145, 129&147/ 154& opt 202/ 233 (202 for call cx limitation, DID to network, L1/isdn gateway)	14.46E
162	SAR	Scheduled Access Restrictions	25	15.56F
163	MINT	Message Intercept	125, 74	15.56F
164	LAPW	Limited Access to Overlays		15.56F
165	RPE2	2MB Remote Peripheral Equipment (not Opt 11)	Not with 15	15.56F
167	GPRI	International 1.5 / 2.0 MB Gateway (DTI released PRI deferred)	146, 154, 145 opt 75	18.20H
168	TMON	Traffic Monitoring (not Opt 11)		
169	COOP	Console Operations		14.46E
170	ARIE	Aries Digital Sets	88	14.41D
171	JTDS	Japan Tone & Digit Switch	74	14.41D
172	CPGS	Console Presentation Groups	86, 162	15.56F
173	ECCS	Enhanced Controlled Class of Service	81	15.56F
174	AAA	Attendant Alternative Answer	Not with Pkg 134	15.56F
175	NMS	Network Message Services	14, 28, 32, 46, 58, 148, 202&154 / 129&147 /233 (10 required for Mmai)l	15.56F
176	DTOT	DID to Tie	Japan only	16.87G
178	EOVF	Automatic Call Distribution, Enhanced Overflow	40, 41, 45, 111	15.56F
179	HVS	Meridian Hospitality Voice Services	7, 10, 17, 35, 40, 45, 46, 77, 109, 180	15.56F
180	DKS	Digit Key Signalling	7, 10, 17, 35, 40, 45, 46, 77, 109	15.56F
181	SACP	Semi-Automatic Camp-On		15.56F
182	TFM	Trunk Failure Monitor		15.56F
183	VNS	Virtual Network Services	58, 32, 14, 145, 147, 148, 161 154 required for PRI2	16.67G
184	OVLP	Overlap Signalling	14, 32, 58	15.56F
185	EDRG	Executive Distinct. Ringing	58 , 32, 145, 161	16.67G
186	POVR	Priority Override / Forced Campon	81, 139, 141	15.56F
187	RPA	Radio Paging	81, 139	15.58F
188	L1MF	X08 to X11 Gateway	14, 28, 32, 57/ 58/ 59, 61, 128, 145, 147 / 154, 159, 161	15.56F
190	UK	UK Program	203, 204, 205	16.87G
191	SECL	Series Call		15.56F
192	ORC_RVQ	Originator Routing Control (Dropback Busy)	145, 148, 61	18.20
193	RCK	Ringing Change Key		15.56F
196	OHOL	On Hold On Loudspeaker		20.06
197	FRTA	French Type Approval	131	15.59
198	FFCSF	Boss Secretary Filtering (FCC activation)	139	15.56F Note 1
200	AINS	Automatic Installation	Option 11 only	
202	IPRA	International Primary Rate Access(CO)	145, 154	15.56F
203	XPE	Meridian 1 XPE	131, 204, 205	15.56F
204	XCT0	M1 Enhanced Conference, TDS & MFS	205	15.56F
205	XCT1	M1 Superloop Administration (LD 97)	204	15.56F
206	MLWU	Multi-Language Wake-Up	7, 81, 99, 102	16.67G
207	NACD	Network Automatic Call Distribution	14, 28, 32, 37, 40, 41, 45, 58/ 59, 61, 111, 145, 148, 154 / 147, 178	15.56F
208	HSE	Hospitality Screen Enhancement	170	18.20H

209	MLM	Meridian Link Module	7, 8, 10, 17, 19, 35, 40, 45, 46, 77, 109, 153, 180	16.67G
210	MAID	Maid Identification	81, 99, 100, 103	18.20H
211	MLIO	Multi-Language In-Output	88,95	16.67G
212	VAWU	VIP Auto Wake Up	102	18.20H
214	EAR	Enhanced ACD Routing	41	18.20H
215	ECT	Customer Controlled Routing	77, 214 247 from Release 20 on	18.20H
216	BRI	Basic Rate Interface	203	18.20H
218	IVR	Hold in queue for IVR	215	18.20H
219	MWI	MWI Interworking with DMS		20.06
221	CIST	CIS Digital Trunk Interface	125, 131, 160, 203 DTI = 129, 204, 205 3WIRE = 87, 182	21.1x
222	MSDL	Multi-Purpose Serial Data Link	145, 154 (for ISDN functionality) 227 (for SDI) - Release 20 onwards	18.20H
223	FC68	FCC Compliance for DID Answer Supervision	not with 97	18.20H
224	M911	M911	19, 40, 41, 45, 214, 225	20.06
225	CWNT	Call Waiting Notification	19, 40, 41, 45, 214	20.06
227	MSDL SDI	MSDL Serial Data Interface (not Opt 11)	222	20.06
228	MSDL STA	Single Terminal Access (not Opt 11)	222, 227	20.06
229	SSAU	Station Specific Authorisation Codes	25	20.06
230	MDP	Manufacturing Delivered Patches (not Opt 11)		20.06
231	DNWK	DPNSS Network Services	14, 28, 32, 57/ 58/ 59, 61, 122, 123, 129, 13,148, 145, 154 / 147 optional MCDN Gateway 131, 145, 148, 159 optional 161	16.90G
232	PEMD	Pulsed EAM (Indonesia, French Colisee) (No MFE functionality)	129, 18, 73, 131, 127, 128, 101 126 required for Indonesia	18.20H
233	BRIT	ISDN BRI Trunk Access	216, 203, 145	18.20H
234	FCDR	New format CDR	4, 5	18.20H
235	BRIL	BRI line application	145, 203, 216	18.20H
236	ACRL	AC15 Recall	Reminded timer & Norstar transfer 131 M1 transfer 258	20.19
240	MCMO	Meridian 1 Companion	18, 139	20.19
242	MULTI_USER	Multi User Login (not supported on Option 11)		20.06
243	ALRM_FILTER	Meridian 1 Fault Management	55	20.06
245	SYS_MSG_LKUP	System Message Lookup	55	20.06
246	VMBA	M Mail Voice Box Administration		20.06
247	CALL	Call Identification		20.06
248	MPH	Meridian 1 Packet Handler (not Opt 11)	203, 216, 145, 154	20.06
249	M911_ENH	M911 Enhancement Display	19,40,41,45,214,224,225,234	Rls 25.0x
250	DPNA	Direct Private Network Access	7, 22, 25, 63	21.1x
251	SCDR	Station Activity Records	4,5	20.19
252	KD3	Spanish KD3 DID/DOD Interface	14, 18, 58, 59, 61, 113, 126, 129, 131, 160	20.06
253	ARFW	Attendant & Network Remote Call Forward	1, 139, 81 (18, 73 - for 500/2500) (145, 58, 59 - for NWK)	20.06
254	PHTN	Phantom TN Operation	139 - for RCFW	20.06
255	INBD	Japan D70 PRI nB+D	19, 75, 145, 146, 202, 222	20.06

256	ADMINSET	Administration Set	164, 242, 139 Option 11 : 200 Admin Set : 19, 88, 170 CPND : 95 Digit Display : 19	21.1x
258	ATX	AutoDial Tandem Transfer	10	20.06
259	CDRX	CDR Enhancement Phase 1	4, 5, 234	20.19
261	EURO	EuroISDN	19 (for CLID), 145, AOC: 4, 81, 101, 131, 161 PRI: 154, 202, 222 BRI: 203, 216, 233 OVLP : 19 (for CLID), 184, 160, 57/58	20.06
262	SAMM	Standalone Meridian Mail	122, 123, 175	20.19
263	QSIG	ECMA QSIG	19 (for CLID), 145, 202 PRI: 154, 202, 222 BRI: 203, 216, 233 OVLP : 19 (for CLID), 184, 160, 57/58 Name Display: 19, 95, 305	20.19
279	MLMS	Multi-Language Messages	211,245	20.06
283	UIGW	Universal ISDN Gateway	154 122, 123, 124 for DPNSS Interworking	20.06
284	DPNSS 189I	Enhanced DPNSS1 Gateway	122, 123, 154	20.06
285	CHINA	M1 IPE Loss Plan for China	126,131	20.06
286	REM_IPE	Remote IPE (not Opt 11)	203 (required), 1.5 MB RPE = 15 2.0 MB RPE - 165 (mutually exclusive)	Rls 22.08
288	DPNSS_ES	Enhanced DPNSS Services	Attendant Consoles = 127 DPNSS Network = 122, 123, 131, 145, 154 DPNSS Sup Services = 231 DPNSS - MCDN = 148, 159, 161	21.1x
289	ADSP	ACD Loop Start Trunk		20.19
290	CCB	Collect Call Blocking		21.1x
291	NI-2	North America National ISDN Class II Equipment	145, 146, 222	21.1x
292	CHTL	China Toll	128, 129, 131	21.1x
294	BTD	Busy Tone Detection	203	21.1x
295	**IPEX**	**Survivable IP Expansion**		**25.3x**
296	MAT	Network access to M1 management	164, 242 optional 243	Rls 22.08
297	MQA	Multiple Queue Assignment	40, 42, 45, 50, 51, 88, 170 For Agent Priority : 116 For Auto Forward of IDN calls :254	21.19
298	CPIO	Option 81 (not Opt 11)	Not with 299	21.19
299	CORENET	Option 81C (not Opt 11)	Not with 298	21.19
301	CPP	Calling Party Privacy	139	21.19
302	MOSR	Mobility Server	216, 254,303	Rls 22.08
303	MMO	Mobility Microcellular	302, 216, 254	Rls 22.08
304	ARDL	Automatic Redial (not Opt 11)	65	Rls 22.08
305	QSIGGF	QSig GF Transport	263	Rls 22.08
306	CPRKNET	Call Park Networkwide	33 For Network Call Park - 159	Rls 22.08
307	PAGENET	Call Page Networkwide		Rls 22.08
309	MASTER	EuroISDN Master Mode	EuroISDN: 261	Rls 22.08
310	CPCI	Called Party Control	107	Rls 22.08
311	NGCC	New Generation Call Center (ICCM) include Queue to NACD for ICCM	41,42,43,50,114,115,214,215,218,247,324	Rls 22.08

312	TATO	Trunk Antitromboning	145, 154, 147, 148 (recommended)	21.1x/Rls 22.08
313	ISPC	Australian SPCs	202, 145, 154, 203, 222, 129, 147	Rls 22.08
314	MMSN	Mobility Multisite Nwk	216, 254,302,303	Rls 22.08
315	OPEN ALARM	SNMP Alarm Integration		Rls 22.08
316	QSIG-SS	QSig Sup Services Call Completion	305, 1, 263, 59,160 optional 184	Rls 22.08
321	QTN	Queue to NACD (NCCR) for CCR.	207, 215	Rls 22.31
323	ETSI_SS	EuroISDN Supplementary Services	261, 1, 59, 160	Rls 22.08
324	NGEN	New Generation foundation	77,153,164,242,243,296	Rls 22.08
325	DMWI	DPNSS Message Waiting	122,123,231,10,46	Rls 23.12A
326	CISMFS	CIS MF Shuttle Signalling	125,129,131,160,221	Rls 23.12A
327	RANBRD	RAN Broadcast	7,11	Rls23.12A
328	MUSBRD	Music Broadcast	7,44	Rls 23.12A
329	ESA	Emergency Services Access	12, 20, 95, 145	Rls 23.12A
330	ESA_SUPP	Emergency Services Access Supplementary	329	Rls 23.12A
331	ESA_CLMP	Emergency Services Access Calling Number Mapping	329	Rls 23.12A
332	CNUMB	CLASS: Calling number delivery		Rls 23.12A
333	CNAME	CLASS: Name Delivery	95	Rls 23.12A
334	NI-2 CBC	NI-2 call by call service selection	291,145,146,222	Rls 23.12A
335	JTTC	Japan TTC Common Channel Signalling	145,146/154 ,202,216,233	Rls 23.12A
344	Reserved		164,353 Incompatible : (MMCS pack. 352)	Rls 24.25
347	TWR1	Taiwan R1 Modified Signaling	160	Rls 24.25
348	MEET	MCDN End To End Transparency	ISDN PRI : 145,146,148,222,263,305 ISDN PRI2 : 145,148,154,202,222,263,305 ISDN BRIT : 145,148,216,222,233,263,305 For NAS : 14,28,32,58,59,61,86,148,159,161,192 incompatible : 26,27,56 For NACD : 14,19,28,32,40,41,58,148,178,207, (57 or 59) For NMS-MC : 46, 148, 175 (with ACD 40,41,42,45) For NMS-MM : 10,35,40,45,46,77,148,175	Rls 24.25
349	ACLI	Information Notification Service for Japan	97, (package UK(190) incompatible)	Rls 24.25
350	MC32	Meridian Companion Enhanced Capacity	240 (Not option 11c)	Rls 24.25
351	DBA	Data Buffering and Access	296	Rls 24.25
353	Reserved		164,344 Incompatible : (MMCS pack. 352)	Rls 24.25
362	FDID	Flexible DID	49,81,99,100,113, with PMS : 103	Rls 24.25
364	NMCE	NGenR2/Call Pilot Connectivity	41,46,77,95,153,164,214,215,218,242,247,243,254,296,324 Optional: For Networked Messaging: 175	Rls 24.25
365	**FIBN**	**Fiber Network Fabric**	**298(option 81), 299 (option 81C) Only applicable to Option 81 & 81C**	**Rls 25**
366	PLUGIN	Plug-In Functionality		Rls 24.25
367	BNE	Business Networking Express	14, 19 , 57, 58, 59, 95, 101, 102, 139, 145, 146, 154, 161, 184, 202, 216, 222, 233, 261, 301, 323	Rls 25
368	**CPP_CNI**	**CP PII**	**299 Mutually exclusive with 298 Only applicable for Option 81C**	**Rls 25**
370	**MSMN**	**Multi-Site Mobility Networking**	**139,,240, 350**	**Rls 25**
380	**STS_MSG**	**Set-to-Set Messaging**	**88, 170**	**Rls 25**

381	**CDIR**	**Corporate Directory**	**88, 170**	**Rls25**
382	**VIRTUAL_OFFICE**	**Virtual Office**	**88, 170**	**Rls 25**

Note 1: This package was introduced on 15.59F and is not available on 16.67G, 16.87G, and 16.90G

Key : **,** indicates AND for option prerequisites

/ indicates OR for option prerequisites

Not Opt 11 indicates package not supported on option 11C

[] indicates optional feature packages for full feature functionality

Mut. Exc.. Mutually Exclusive

NEW PACKAGES ARE HIGHLIGHTED IN BOLD, Updates from previous release are in Italic.

S8. Release 25 Customer Documentation

The Release 25.15 documentation suite has been updated for Release 25.30.

The changes include:

- The What's is new Book P0919733 which contains an overview of Option 11C changes, M3900 changes and CPP software upgrade.
- Addendum.
- The NTP CD-ROM has been updated to include the What's New Book P0919733, Addendum, Navigator P0934461,Four Task guides, and the updated small systems NTP's . The code for the CD-ROM has changed to NTLH01AC.
- Software Input/Output Guides
- Various Small systems NTP's.
- The New Meridian Electronic Reference Library (MERL) CDs for Release 25.30 [NTLH19AB , A0835745] which includes two CDs: (1) The Core Meridian 1 Release 25.30 Reference Library CD ROM (2) The NTPs related to applications such as Call Pilot and Symposium
- The code for the Condensed library has been added to this document (NTLH17AB)
- The i2004 Internet Telephone Set NTP is on a separate CD-ROM, the code is NTDW18AA-A0806119.

Option 11C and 11C Mini Release 25 Documentation

Option 11C - English (Coil Package)

Description	Rls 25 PEC	Rls 25 CPC
Option 11C English - Coil Package	NTTK31AC	A0818524
Option 11C IP Expansion	N/A	P0919734
Option 11C Planning and Installation	N/A	P0915838
Option 11C and 11C Mini Fault Clearing Guide	N/A	P0915839
Option 11C and 11C Mini Central Answering Position Guide	N/A	P0910772
Option 11C and 11C Mini Customer Controlled Back-up and Restore Guide	N/A	P0910773
Option 11C and 11C Mini Upgrade Procedures Guide	N/A	P0915840
Meridian 1 X11 Release 25 Input/Output Administration Guide	N/A	P0915832
Meridian 1 X11 Release 25 Input/Output Maintenance Guide	N/A	P0915833
Meridian 1 X11 Release 25 Input/Output System Message Guide	N/A	P0915834

Option 11C Mini - English (Coil Package)

Description	Rls 25 PEC	Rls 25 CPC
Option 11C Mini English - Coil Package	NTKG80CG	A0818640
Option 11C Mini Planning and Installation	N/A	P0910788
Option 11C and 11C Mini Fault Clearing Guide	N/A	P0915839
Option 11C and 11C Mini Central Answering Position Guide	N/A	P0910772
Option 11C and 11C Mini Customer Controlled Back-up and Restore Guide	N/A	P0910773
Option 11C and 11C Mini Upgrade Procedures Guide	N/A	P0915840
Meridian 1 X11 Release 25 Input/Output Administration Guide	N/A	P0915832
Meridian 1 X11 Release 25 Input/Output Maintenance Guide	N/A	P0915833
Meridian 1 X11 Release 25 Input/Output System Message Guide	N/A	P0915834

Small System Optional Documents (Coil)

Description	Rls 25 PEC	Rls 25 CPC
Option 11C and 11C Mini Technical Reference Guide	N/A	P0915854
Option 11C 1.5 MB DTI/BRI	N/A	P0915856
Option 11C 2.0 MB DTI/PRI Guide	N/A	P0915855
Option 1C BRI Guide	N/A	P0915857
Option 11C IP Expansion	N/A	P0919734

Option 11C Mini Fiber Expansion Packages

Description	Rls 25 PEC	Rls 25 CPC
Option 11C Mini Fiber Expansion package	NTTK38AC	A0818527
Mini Planning and Installation Guide	N/A	P0910788
Mini Fiber Expansion Guide	N/A	P0915853
Option 11C Survivability IP Expansion	N/A	P0919734

Global Release 25.15 Meridian 1 CD-ROM

Description	Rls 25 PEC	Rls 25 CPC
Global Release 25 CD -ROM Meridian 1 Reference Library Options 11C- 81C	NTLH01AC	A0828806

Meridian Electronic Reference Library (MERL)

Description	Rls 25 PEC	Rls 25 CPC
Meridian Electronic Reference Library (MERL)	NTLH19AB	A0835745

Option 51C to 81C Release 25 Documentation

Meridian 1 Reference Library (Binders)

Description	Rls 25 PEC	Rls 25 CPC
Global Meridian 1 Reference Library	NTLH02AB	A0828803
Library Navigator	N/A	P0934461
Meridian 1 X11 Release 25 Planning and Engineering	NTLH03AA	A0804746
Meridian 1 X11 Release 25 System Installation and Maintenance	NTLH04AA	A0804747
Meridian 1 X11 Release 25 Upgrade and Conversion	NTLH05AA	A0804748
Meridian 1 X11 Release 25 Remote Services Products Guide	NTLH06AA	A0804749
Meridian 1 X11 Release 25 Software Feature Guide	NTLH08AA	A0804751
Meridian 1 X11 Release 25 Software Input/Output Guide	NTLH09AB	A0818140
Meridian 1 X11 Release 25 Software System Management	NTLH10AA	A0804757
Meridian 1 X11 Release 25 Networking	NTLH11AA	A0804767
Meridian 1 X11 Release 25 Meridian Data Services	NTLH12AA	A0804771
Meridian 1 X11 Release 25 Automatic Call Distribution	NTLH13AA	A0804775
Meridian 1 X11 Release 25 Hospitality	NTLH14AA	A0804777
What's New for R25.3x	N/A	P0919733

Large System Optional Documents (Binders)

Description	Rls 25 PEC	Rls 25 CPC
Meridian 1 X11 Release 25 DPNSS1	NTKF79AA	A0788073

Introductory Task Guides (Coil)

Introductory Task Guides - Coil	Rls 25 PEC	Rls 25 CPC
Meridian 1 X11 Task System Programming Guide	N/A	P0912433
Meridian 1 X11 Task Basic Telecom Management Guide	N/A	P0912434
Meridian 1 X11 Task Network Planning Guide	N/A	P0912435
Meridian 1 X11 Task Fault Clearing Guide	N/A	P0912436

Applicable to All Systems (Coil)

All Systems Coil	Rls 25 PEC	Rls 25 CPC
Meridian 1 X11 Input/Output Administration Guide	N/A	P0915832
Meridian 1 X11 Input/Output Maintenance Guide	N/A	P0915833
Meridian 1 X11 Input/Output Guide Messages Guide	N/A	P0915834
Meridian 1 X11 Release 25 System Security Management	N/A	P0913527

Stand Alone Guides (Coil)

Stand Alone Guides - Coil	Rls 25 PEC	Rls 25 CPC
CP PII w/ FNF Reference Library (Includes P0914249, P0914248)	NT5F36AA	A0786997
Meridian 1 X11 Release 25 Call Processor PII Description, Installation and Administration (CP PII & FNF)	N/A	P0914249
Meridian 1 X11 Release 25 Call Processor PII System and Software Upgrade (CP PII & FNF)	N/A	P0914248
Meridian 1 X11 Release 25 Fibre Network Fabric Reference Guide	NT5F37AA	A0786998
Meridian 1 X11 Release 25 NT5D61 IODU/C Reference Guide	N/A	P0912861
Meridian 1 X11 Release 25 Call Processor Card Field Memory Upgrade	N/A	P0912862
Meridian 1 X11 Release 25 Meridian Integrated Conference Bridge Description, Installation, Administration and Maintenance	N/A	P0912865
Meridian 1 X11 Release 25 Meridian Integrated RAN Description, Installation and Operation	N/A	P0912866
Meridian 1 X11 Release 25 Meridian Internet Telephony Gateway (ITG) Trunk 1.0 Basic Per-Trunk Signaling Description, Installation and Operation	N/A	P0912863
Meridian 1 X11 Release 25 Meridian Internet Telephony Gateway (ITG) Line Card 1.0 IP Telecommuter Description, Installation and Operation	N/A	P0912864
Meridian 1 X11 Release 25 Meridian Internet Telephony Gateway (ITG) Trunk 2.0/ISDN Signaling Link (ISL) Port Description, Installation and Maintenance	N/A	P0912540

Condensed Library

	Rls 25 PEC	Rls 25 CPC
Release 25 Condensed Library	NTLH17AB	A0828804
includes:		
Meridian 1 X11 Input/Output Administration Guide	N/A	P0915832
Meridian 1 X11 Input/Output Guide Messages Guide	N/A	P0915834
Meridian 1 X11 Input/Output Maintenance Guide	N/A	P0915833
553-2001-320 - Software Conversion Procedures 553-3001-300 - X11 System Management 553-3001-301 - X11 System Management Applications 553-3001-302 - X11 System Security Management 553-3001-313 - Emergency Services Access	N/A	P0916586

Release 25 Customer Documentation Addendum

A Release 25 Customer Documentation Addendum will be included with every Release 25 documentation library order. Please read the documentation addendum before you begin any installation. It will contain updated information on the following topics:

- Cable correction in the Meridian 1 Equipment Identification document (553-3001-156).
- Network group number correction in the Meridian 1 System Installation Procedures (553-3001-210).
- History file response in the Meridian 1 Software Input/Output Guide,
- Xll Administration (553-3001-311).
- Card replacement procedure in the Meridian 1 Hardware Replacement (553-3001-520).
- CLID on analog trunks for Hong Kong
- Computer Telephony Integration Adapter (CTIA) for the M3900 series telephones.
- Configuring SCPW for use with the M3903 and M3904 Virtual Terminal feature.

S9. Auxiliary Processor Compatibility

Below are the auxiliary application release levels that are compatible with X11 Release 25. Please note that not all applications or releases are available in all Asia Pacific markets.

Auxiliary Processor	Compatibility (Release)
Call Pilot	1.x
Companion	3.xx - 7.xx (7.xx required for Enhanced Capacity)
Companion DECT	45000302 or later (not downloaded from Meridian)
Meridian Mail	9.66, 10.11, 11.xx-13.xx
Meridian Mail Card Option	9.66, 10.11, 11.xx-13.xx
Meridian MAX	6.3, 7.5, 8.7, 9.2, 9.3 [1]
Meridian Customer Controlled Routing (discontinued)	3B, 3C [1]
Meridian Link (Replaced by Symposium Link)	5, 5C [1]
Network Administration Center	2.5 [1]
Meridian Administration Tools (MAT)	6.6x and later (Windows 95/98/NT V4 Workstation)
Optivity Telephony Manager (OTM)	1.0x and later
Symposium Messenger	3.x - 4.0
Symposium Multimedia Conference	4, 5
Symposium Communicator	1.x - 2.0
Symposium Fast Call / Fast View (Windows Only)	1.x
Symposium TAPI Service Provider	2.x
Symposium Desktop TAPI Service Provider for MCA (Meridian Communicator Adapter)	1.x - 2.x
Symposium Call Manager	4.x - 5.x
Symposium Agent	1.x - 2.x
Symposium Link	6.x
Symposium Express Call Center	2.0
Symposium Call Center Server	1.x, 3.x, 4.x
Symposium Integrated Interactive Voice Response	2.2 [1]
Symposium Open Interactive Voice Response	4.0 [1]

Note 1 - No X11 dependency.

S10. Training

Technical Training for Release 25 introduction was conducted recently in a number of locations in Asia Pacific.

In addition, all Release 25 contents will be covered either in existing training courses or new courses.

- Features and products like the new CP PII processor platform, Fibre Network Fabric (FNF), M3900 Enhancements and ACLID/DXUTA will be covered in the existing Course 700 Meridian 1 Technician Course;
- Inventory Reporting Phase 2 and MAT 6.6 covered in Course 402, MAT Training Course;
- D-Channel Expansion in both Course 700 and Course 262 ISDN PRI I & M Course;
- OTM 1.0 will be covered in a new course.
- Option 11C /11C Mini IP Expansion will be covered under the Option 11C technical courses.

These training courses will be available from the Nortel Networks Educational Services, Asia Pacific.

For course details, schedule and registration, please contact **Global Knowledge Network Australia Pty Ltd**, a Nortel Networks Authorised Education Partner.

They can be reached either via their website, http://www.globalknowledge.com.au or by telephone: 61-2-99230888.

S11. Release 25 Product Ordering

Release 25 Product Ordering is available to countries that have meet the various New Product Introduction Process's deliverables as set out by the Asia Pacific NPI functional group.

Effective 4 December 2000, the Release 25.30 is generally available to the following countries:

- Australia
- New Zealand
- Hong Kong
- Singapore
- Malaysia
- China
- Taiwan
- Philippines
- Thailand
- Indonesia
- India
- Korea
- Pakistan

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Ordering information for Release 25, both hardware and software, can be found in the Asia Pacific Price Manual and Addendums as issued by the Asia Pacific Sales Operations group.

S12. Glossary / Abbreviations

ACD	Automatic Call Distribution
AC	Activity Code
AMBase	Application Module Base
AML	Applications Module Link
ANI	Automatic Number Information
AOC	Advice Of Charge
API	Application Programming Interface
APL	Applications Processor Link
A/P	Asia/Pacific
ATD	Attendant Through Dialing Networkwide
BARS	Basic Alternate Route Selection
BCAP	Bearer Capability
BCS	SL1 and Digital sets
BRI	Basic Rate Interface (2B+D)
BTNR	British Telecommunications Network Requirement
BVW	Belleville (Nortel) Development location
CBT	Core Business Team
CBWF	DPNSS Call Back When Free
CBWNU	Call Back When Next Used
CC	Control Center
CCBS	Call Completion to Busy Subscriber
CCNR	Call Completion on No Reply
CCR	Customer Controlled Routine
CDP	Coordinated Dialing Plan
CDR	Call Detail Recording
CFNA	Call Forward No Answer
CFWAC	Call Forward All Calls
CLID	Calling Number Identification
CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
CLS	CLasS
CIS	Commonwealth Independent State
CMF	CT2 Mobility Features
CNND	Calling Number and Name Delivery
CNI	Calling Number Identification (R2MFC)

CNIP	Calling Name Identification Presentation
CNIR	Calling/Connected Name Identification Restriction
CO	Central Office
COLP	COnnected Line identification Presentation
COLR	COnnected Line identification Restriction
CORWAN	Corporate Wide Area Network
CPE	Customer Premises Equipment
CPU	Central Processing Unit
CRTOD	Call Redirection Time Of Day
CTI	Computer Telephony Interface
DASS	Digital Access Signaling System
D/B	Daughter Board
DID	Direct Inward Dialing
DISA	Direct Inward System Access
DN	Directory Number
DNIS	Dialed Number Identification Services
DPNA	Direct Private Network Access
DPNSS1	Digital Private Network Signaling System 1
DTI	Digital Trunk Interface
DTMF	Dual Tone MultiFrequency
ECF	Engineering Change Facility
EPROM	Erasable Programmable Read Only Memory
ESA	Emergency Service Access
ESDI	Enhanced Serial Data Interface
ETSI	European Telecommunications Standards Institute
ETSI GF	ETSI Generic Functional Protocol
FFC	Flexible Feature Codes
FIAT	Feature Integration Acceptance Testing
FIC	Feature Interactions Chart
FNP	Flexible Numbering Plan
FTC	Flexible Tone and Cadence
GCM	General Call Monitoring
GLW	Galway (NORTEL) Development location
ICCM	Integrated Call Center Manager
IDC	Incoming Digit Conversion
IE	Information Element
INT	INTernal
IPE	Intelligent Peripheral Equipment

IRR	Interim Release Review
ISDN	Integrated Services Digital Network
ISL	Integrated Signaling Link
ISM	Incremental Software Management
IVR	Integrated Voice Response
kHz	Kilo Hertz
MCDN	Meridian Customer Defined Network (Meridian 1 implementation of Q931)
MCMO	Mobility Control card for M1
MFC	Multi Frequency Compelled Signaling
MFE	Multi Frequency signaling for Socotel
MLV	Marne la Vallée (NORTEL) Development location
MMT	Meridian Modular Telephone sets
MPK	Mission Park (NORTEL) Development location
MSDL	Multipurpose Serial Data Link
MSN	Mobility Multisite Networking
MWFB	Message Waiting Forward Busy
NACD	Network Automatic Call Distribution
NARS	Network Alternate Route Selection
NAS	Network Attendant Service
NPI	Numbering Plan Identification
NRAG	Network Ring Again on MCDN
NRANA	Network Ring Again on No Answer on MCDN
OA&M	Operation, Administration and Maintenance
PDATA	Protected Data Store (Page 1 RAM)
PI	Product Improvement
PPM	Periodic Pulse Metering
PRD	Product Requirements Document
PSDL	Peripheral Software DownLoad
PSTN	Public Service Telephone Network
QSIG	Q Reference Signaling Point
RCI	Remote Carrier Interface
RCLS	Route Class (Ovl 16)
RM	Release Management
RO	Route Optimization
ROM	Read Only Memory
RPC	Request for Project Change
RPOP	Remote Point Of Presence
SAMM	Stand-alone Meridian Mail

SIC	Service Indicator Code
SIPE	Survivable IP Expansion
SPC	Semi Permanent Connection
SSD	Scanning and Signal Distribution
TAT	Trunk Anti Tromboning
TBD	To Be Defined
TDS	Tone and Digit Switch
TFM	Trunk Fail Monitor
TSA	Three Party Services Allowed
TTY	Teletype
UDATA	Unprotected Data Store (Page 0 RAM)
VDN	Virtual Directory Number
VNS	Virtual Network Services