Meridian 1

Option 11C, 11C Mini, 51C, 61C, 81, and 81C

General Release Bulletin - Release 25.15

P0918917 Issue 1.00 General Release Bulletin - Release 25.15

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Introduction

Generic X11 Release 25.15 is supported on:

- Option 11C and Option 11C Mini plus Performance Enhancement Products (PEPs), as required. Refer to Chapter 2 for details of any manufactured PEPs for Small Systems.
- Options 51C, 61C, 81 and 81C equipped with the Motorola 68040 (NT9D19), 68060 (NT5D10), or 68060E (NT5D03) commercial processors, plus mandatory PEPs as required. Refer to Chapter 3 for details of any mandatory PEPs required for Large Systems.
- Options 81C equipped with Call Processor PII commercial processors, plus mandatory PEPs. Refer to Chapter 3 for details of any mandatory PEPs required.

X11 Global release 25.15 is a multi-purpose release designed to deliver a single global software stream to all markets. This document provides an overview of the Global features and enhancements developed for Meridian 1 Generic X11 Release 25.15 software. This document contains feature information that is applicable Globally but the advisements and many of the technical details apply specifically to North America and CALA, and may not apply to Europe and Asia Pacific.

The default processor for new Option 51C and 61C systems is the 68060E processor.

Release 25.15 Option 81C new systems will ship with Fiber Network Fabric (FNF) and Call Processor PII (CP PII) as the default configuration.

There is an updated Documentation CD -Rom for Release 25.15 and a new order code for the CP PII w/FNF Reference Library. The Meridian 1 Customer Documentation Library was simplified for X11- Global Release 25.10. Please refer to Chapter 4 for details of the Documentation Restructure and for the complete listing of Release 25.15 codes.

Release 25.15 Feature Overview:

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

SYSTEM FEATURES

- Call Processor PII (CP PII) (25.15)[1]
- Fiber Network Fabric (FNF) (25.15) [2]
- Inventory Reporting Phase II (25.10)
- CLID on Analog Trunks for Hong Kong (25.10)

DESKTOP

- M3900 Digital Telephone Enhancements (including M3900 Flash Download Flexibility Enh.) (25.10 + PEPs or 25.15)[3]
- ITG Line-side & i2004 Internet Telephones (25.15) [4]

NETWORKING

- Meridian ITG Trunks 2.0 with ISDN (25.10)
- Private to Public CLID Conversion(25.10)
- D-Channel Expansion (25.10)
- Business Networking Express (25.15)
- MDECT 2000 - Multi Site Mobility Networking (25.10)

REGULATORY

- 10/20 Digit ANI on 911 Calls (25.10)

CALL CENTER

- Agent Greeting (25.15)

CONCURRENT SYSTEM MANAGEMENT FOR RELEASE 25.15

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

Note 1- CP PII was introduced on controlled release in April 2000 on Release 25.10 and will be generally available on July 17, 2000 with Release 25.15. CP PII will remain on controlled release on 25.10 until 25.15 is available.

CP PII and FNF were introduced as mutually exclusive in April 2000 and will be configurable in combination on the same system on July 17, 2000 with Release 25.15.

Note 2 - Release 25.15 will be the new baseline for all systems configured with FNF. For all systems running Release 25.10 with FNF please refer to the “FNF Retrofit Bulletin”

Note 3 - M3900 Enhanced Flash Download is now available for general use, and requires Release 25.10 + PEPs or Release 25.15.

Note 4 - ITG Line side & i2004 Internet Telephone Set will be available after the general availability of release 25.15. Refer to the i2004 Internet Telephone Product Bulletin.

Where references in this document are made to “Release 25”, the statements are applicable to Release 25.10 and release 25.15.

Note: Not all Release 25.15 features are offered in all countries, and not all features are supported on all machine types. Please refer to Chapter 5 of this document for feature details and market availability information, or contact your local Nortel Networks sales representative for more information.

Note: For information on Real Time requirements, please contact your local Nortel Networks sales representative. 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.

IMPORTANT

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

Chapter 1 - System Advisements

X11 Release 25.15 is a global software release. This document provides the advisements specific to North America and CALA, that may not be applicable to Europe and Asia Pacific.

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. Chapters 2 and 3 detail advisements that are Small and Large system specific respectively.

Where references are made to Release 25, the statements are applicable to Release 25.10 and release 25.15.

Systems Supported

The default processor for New Option 51C and Option 61C Release 25.15 Systems in all regions is the 68060E. The default for Option 81C systems is the CP PII processor with FNF.

Generic X11 Release 25.15 supports the following machine types (Note - not all processors were made available in all markets):

- **Meridian 1 Option 11C** equipped with an NTDK20CA or higher Small System Controller (SSC) AND NTTK13AA software daughterboard providing 48Mb Total Memory (32 Mb Program Store and 16 Mb C-Drive space) which is necessary to provide sufficient program store for Release 25.10 or higher.
- **Meridian 1 Option 11C Mini** equipped with a NTDK97AB Mini System Controller which provides 48Mb Total Memory (32 Mb Program Store and 16 Mb C-Drive space).

- **Meridian 1 Options 51C, 61C, 81, and 81C** equipped with the Motorola 68040 (NT9D19), 68060 (NT5D10), or 68060E (NT5D03) commercial processors are only supported via CD ROM and require an IODU/C drive.
- **Meridian 1 Option 81C system equipped with Call Processor PII**, 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 Release 25 or later systems.

Memory

Release 25.15 has the same memory requirements as 25.10. 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 Chapter 2. For large system memory requirements, refer to “Call Processor Recommended Memory Requirements” in Chapter 3.

Hardware

For Release 25 Base Software

X11 Global Release 25 base software may require **memory** upgrades as described above. Please refer to Chapters 2 and 3, for small and large systems

PE and EPE Support

CP2 , CP3, and CP4

X11 Release 25.10 and 25.15 supports PE and EPE equipment currently supported on Release 24.25 systems. A very limited number of sites running release 25 have experienced sporadic digital set operation when combined with older PE and EPE hardware. This issue is related to the occasional loss of system messages between the CPU and the set. Release 25 contains a Message Buffering solution to address this issue.

Call Processor Pentium (CP PII)

For upgrades to the CP PII processor platform, 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 Chapter 5 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. Once Release 2 M3900 telephones start shipping, no flash download will be required for new Release 2 M3900 telephone orders. Additional information related to M3900 Digital Telephone Enhancements can be found in Chapter 5 and in the “M3900 Digital Telephone Release 2 Product Bulletin Issue 1”.
- 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

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.

Machine type	24 to25
11C	6%
CP2: (51C/61C/81/81C)	16%
CP3: (51C/61C/81/81C)	6%
CP4: (51C/61C/81/81C)	6%

CP4 to CP PII improvement in real time capacity	
CP4 to CP PII: (Options 51C/61C/81/81C)	206% (= 3.06X)

Recommended Call Register Counts

The following tables detail the recommended Call Register Counts for Release 25.10. Call Registers are set in LD. 17, at the “NCR” prompt, after answering “Yes” to the PARM prompt.

	11C	51C CP2	61C CP2	51C CP3&4	61C CP3&4
Recommended Call Register Count	1750	1500	3000	2000	4000

	81/81C CP2	81/81C CP3&4	81C CP PII with 5 or fewer groups	81C CP PII with 6 to 8 groups
Recommended Call Register Count	7500	10000	20000	25000

New LD 32 Commands to Reset XPECs and XNETs

Two new commands have been added in overlay 32 to allow manual enabling of XPEC and XNET cards. The new commands are XRST and FRST.

In the event of a Meridian 1 power reset (e.g. during system upgrade to Fiber Network Fabric), there is a chance that the Meridian 1 may fail to automatically enable all of the XPECs and/or FPECs in the system. In such as a case it is recommended to use the following manual procedure to enable XPECs and/or FPECs as required:

1 Identify the network loop number(s) and the loop type(s) (i.e. XNET or FNET) associated with the XPEC(s)/FPEC(s).

2 Load Overlay 32.

3 Disable one of the loops identified in Step 1 using the DISL command.

4 Issue a hardware reset to the loop using the XRST command for an XNET loop, or FRST command for an FNET loop.

5 Enable the loop using the ENLL command.

6 Repeat steps 3 to 5 for each loop identified in Step 1.

Note 1- the XRST command also works to reset the Local Carrier Interface (LCI) card of a Carrier Remote superloop.

New CLS = MCBN / MCBY

A new classes of service was introduced in Release 25.10 and is not included in the Release 25 Input Output Guide. It will be included in the next up-issue of the Input / Output Guide. The new class of service is introduced to resolve an interaction between a new feature on R25 called Diversion on EuroISDN (for Europe only) and MICB. The Call Diversion feature has to be bypassed when MICB is used. The new class of service tags 2616 units that are actually used for MICB (CLS = MCBY), rather than normal sets (CLS = MCBN).

M3900 Digital Telephone Enhancement Advisements

The following advisements apply to then M3900 Digital Telephones Improvements:

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 25.10 & 25.15 , 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 has (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.

Flash Download interaction with Midnight Routines

When scheduling the Flash Download of sets, note that one hour before the Midnight routines execute the flash download process will be gracefully stopped. The Flash downloading will resume once mid-night routines are executed.

Using the Flash Download Cancel Command

For M3900 sets actively being flash downloaded when the Flash Download Cancel FDLC command is issued, the flash download to these sets is completed before the flash download process cancels.

SDL2110 error message

When performing a flash download to an M3900 port that does not have a set installed or downloading to an M3900 port that has the wrong M3900 set type installed, an SDL2110 error message will be printed out at the system.

M3900 Missing Label Resolution

There have been instances that M3900 sets are missing labels after Sysload and Initialization. This problem has been identified as a problem in X11 Release 24 and a planned fix was put into X11 Release 25 Software. The fix has been implemented through the Lamp Audit process on the Meridian 1 switch. If a set has not yet received its Key Map Download after Initialization, the Lamp Audit process will make a pass through to all sets and ensure that they will have been downloaded during the 1st pass of the Lamp Audit process. The missing labels should only be missing for a short period while Lamp Audit completes its pass of checks.

In the unlikely event that a set does not show its feature key labels immediately after the Flash Download process, there is a mechanism that will recover the labels on a timed basis. The time for the labels to be recovered would nominally be around 6 minutes, although it could be slightly longer. Please allow the additional time for the recovery process to kick in. If sets are downloaded during off times as recommended, this is not likely to be noticed.

Clearing Download Schedules

It is important to note that when the scheduled downloading of sets has been completed, you should clear all schedules in LD 97. This can be done by using LD 97 and entering the following for each day previously scheduled :

FDAY x 0…..where x is the day 0 to 6.

Remote Call Forward

When using the Remote call forward feature with M3903, M3904, and M3905 telephones on X11 Release 24C (25.08)software, the system will not update the Call forward number when checked on the display of the telephone. The phones will still show the last locally programmed call forward number when checked.

M3905 Installation

Installing an M3905 set into a port NOT configured as an M3905 set can overload messaging on an XPEC and cause that port to be disabled. In some rare instances the XPEC could go out of service. Technicians should validate port configuration, physical connections and database prior to physical connection of a new terminal.

M3900 Documentation Advisements

Reason Codes for SDL2110 Messages during Flash Download

The documentation does not properly state the Reason codes if the Error message SDL2110 is received when performing flash downloads. The following table gives the correct reason codes for the error message (SDL2110 REASON xx; Where xx is the reason number defined below):

1 = Timeout error

2 = PSW checksum error

3 = Record checksum error

4 = Record format error

5 = Firmware state error

6 = Invalid page number received

7 = Unrequired page delivered during download

18 = Flash memory cannot be erased (M3900)

19 = Error detected while programming flash (M3900)

20 = An application is currently active, download cannot proceed (M3900)

21 = verification byte incorrect (M3900)

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.

Call Pilot Distributor Web Site for PEPs Identification

Please check on the CallPilot distributor web site on the NIC for current information on any required PEPs for any given X11 software release. The web site is at: http://www.nortelnetworks.com/nic Products>CallPilot

Please note that this site requires account and password. If you do not currently have an account and password, and are a CallPilot distributor, please contact your regional sales representative for access to this site.

System Management and X11 Release 25.15

Release 25.15 is supported by Meridian Administration Tools Release 6.6 (MAT 6.67.07) or later, or Optivity Telephony Manager 1. 0 (OTM 1.0) or later. For existing MAT 6.67.04 sites, and up-issue to MAT is required for Corporate Directory.

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

MAT 6.6

For further information and advisements regarding MAT 6.6, please refer to the MAT 6.6 General Release Bulletin that is shipped with each MAT 6.6 package and to the MAT 6.6 Product Bulletin. For existing MAT 6.667.04 sites, an up-issue to MAT 6.67.07 is required for the Corporate Directory feature.

OTM 1.0

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

For more information about OTM 1.0, please refer to the OTM 1.0 General Release Bulletin when available.

Release 25 Features that Require System Management

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

- **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 6.667.07 or OTM 1.0.

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.

At this time, this site is available to distributors in North America, CALA and Asia Pacific.European distributors do not currently have access to M1ESD. Interested distributors in Europe are asked to contact their NPI prime for more information.

This site provides:

- Option 11C software and related documentation such as General Release Bulletins and 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 Meridian IP Telecommuter.
- Interactive Voice Response (IVR) PEPs and related documentation.
- Meridian Integrated Products, including MIRAN, MICA, MICB, and MIPCD.
- New PCMCIA Card Programmer (version 05) found in the "Site Tools" menu. This updated version is required to download software from the new M1ESD site.

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.

Chapter 2 - 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)

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)

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 not available to European Distributors - interested European distributors should contact their NPI prime). 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.

The previous Small System site that was applicable in CALA, Asia Pacific and North America (https://www.nortel.com/entprods/cts/option11c/) went off-air on January 15, 2000. User accounts and passwords for this site will not be automatically migrated to the new M1 ESD site. Nortel Networks has implemented a Common Registration System, whereby you use only one user name and password to access all Nortel Networks web pages to which you have rights. The old Option 11C site and its login format do not comply with the Common Registration System.

Even if you have an account at the old small system site, you will need to re-register for access to the new site. Please refer to the information on the Meridian 1 Electronic Software Distribution (M1 ESD) section in Chapter 1 of this document for more information.

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.

Option 11C Mini Default TN Level for North America

The Option 11C Mini and the Option 11C are offered with the same software feature sets however the default number of TNs with Option 11C Mini is 100.

For Option 11C Mini, when the installer uses the Software Installation menu the default number of TNs shown in the menu is set to 200. The keycode sheet for the installation will show the correct value which needs to be entered for the customer.

Option 11C Mini (US and Canada)

NTSF8011 General Business 100 TNs

NTSF8012 Enhanced Business 100 TNs

NTSF8013 Enterprise Business 100 TNs

NTSF8014 NAS/VNS 100 TNs

To order additional TNs in increments of 100 the following order codes are used:

Option 11C Mini (US and Canada)

NTSF8101 General Business Additional 100 TNs

NTSF8012 Enhanced Business Additional 100 TNs

NTSF8013 Enterprise Business Additional 100 TNs

NTSF8014 NAS/VNS Additional 100 TNs

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 Chapter 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.

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 25.10. Refer to the "Small System Memory Requirements for Release 25" earlier in this chapter for the requirements.

Updating the MSC Boot code is a manual process that requires a PCMCIA card programmed with R25.10. 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.

Software PEPs

Manufactured Software PEPs

There are no manufacture installed PEPs on the Option 11C/11C Mini software for release 25.15.

Installing PEPs

All Option 11C PEP files exist in the Global Patch Database. Other PEPs which may need to be installed must be placed in the following directory: c:/u/patch

There are 5 ways to get a PEP file into this directory.

- **a** PEPs can be downloaded to the switch by FTP over an ethernet connection.
- **b** PEPs can be downloaded to the switch by FTP over a serial line using SLIP.
- **c** PEPs can be downloaded to the switch by FTP over a serial line using PPP.
- **d** Program the PEP file onto a PCMCIA card. Install the PCMCIA card in drive a. In pdt copy the PEP file from the PCMCIA card to the c drive. eg: cp a:newpep.p c:/u/patch/newpep.p
- **e** PEPs can be downloaded to the switch using XMODEM file transfer over a serial line.

The following is the description of the pdt commands to perform a file transfer using the **XMODEM** protocol.

rx - command for receiving a file

sx - command for sending a file

To use rx, PDT Level 1 or Level 2 password login is required.

To use sx, PDT Level 2 password login is required. This is done for security purposes so that you can't get any data out of the system unless you know the PDT Level 2 password.

To transfer a file from a PC/workstation to the switch

pdt> rx [path/]filename.ext

You then enter the appropriate commands to invoke xmodem file transfer on the PC/workstation

To transfer a file from the switch

pdt> sx [path/]filename.ext

You then enter the appropriate commands to invoke xmodem file transfer on the PC/workstation.

For binary files (eg, PEP files and database files), please ensure that the files are transferred in binary mode.

When the transfer is completed, a transmission summary is displayed and the pdt prompt is shown.

total packets	20
number of retries	0
receive timeouts	1
system errors	0
unknown characters	0
transfer canceled	0
packets received out of sequence	0
packets with corrupted sequence	0
packets failed checksum/crc check	0
incomplete packets	0
duplicate packets	0

pdt>

The following is an example in a unix environment:

Use tip to connect to the switch (if you telnet to the switch you can't use umodem)

To transfer a PEP to the switch in pdt

cd c:/u/patch

rx newpep.p

When the system prompts “Ready to receive...”, invoke local command mode by typing ~C (tilde C) and issue the umodem (s)end (b)inary command.

~C (tilde C to enter local command)

umodem -sb ~mydir/peps/newpep.p

To transfer a file to the workstation in pdt

cd to directory eg c:/p/sl1

sx direct.rec

When the system prompts “Ready to send...”, invoke local command mode by typing ~C (tilde C) and issue the umodem (r)eceive (b)inary command.

~C (tilde C to enter local command)

umodem -rb ~mydir/backup/direct.rec

The following is an example in a PC/Window 95 environment:

Use the HyperTerminal application to dial up to the switch

To transfer a PEP to the switch in pdt

cd c:/u/patch

rx newpep.p

When the system prompts "Ready to receive...", invoke file transfer on the PC side using the (T)ransfer pull-down menu and selecting the (S)end File option.

Select the file to be sent and select XMODEM as the Protocol. Then start the transfer on the PC side.

To transfer a file to the PC in pdt

cd to directory eg c:/p/sl1

sx direct.rec

When the system prompts "Ready to send...", invoke file transfer on the PC side using the (T)ransfer pull-down menu and selecting the (R)eceive File option.

Select or create a file to be received as and select XMODEM as the Protocol. Then start the transfer on the PC side.

PEP Installation Steps:

1) In pdt use the pload command to load the PEPs. To make sure that these PEPs remain in service you must enter the pload command without the PEP name. It will then prompt you for the PEP name and ask the following questions:

Days patch vulnerable to sysload [3]- set this to 0

In-service initialize threshold [5]- enter a carriage return

In-service days to monitor inits[7]- set this to 0

2) After using the pload command, use the pins command to put the PEPs in.

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

Electronic Software download is not available in Europe. Interested European distributors should contact their NPI Prime.

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

Chapter 3 - Large System Advisements

The following advisements are for large systems only: Options 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 68040, 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 an 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 large systems (minimum Hard Drive Capacity 121 Mbytes).

Refer to “Call Processor Recommended Memory Requirements” in this chapter for minimum memory requirements on Release 25

Call Processor Memory Requirements

Release 25 Minimum Memory Requirements for 68040, 68060 or 68060E Processors:

X11 Release 25 Supports Call Processor 68040 (NT9D19), Call Processor 68060 (NT5D10), and Call Processor 68060E (NT5D03).

Minimum call processor memory requirements for X11 Release 25 as follows:

System Type	Flash Memory Requirement	DRAM Memory Requirement	Total Memory	Applicable Regions
Option 51C/61C	32 MB	48 MB	80 MB	North America
Option 81/ 81C on 68060/68060E with 5 or fewer Network Groups, or Option 81C on 68040 (FNF or non-FNF)	32 MB	64 MB	96 MB	North America
Option 81/ 81C on 68060/68060E with 6 or more Network Groups (FNF systems)	32 MB	80MB	112 MB	North America
Option 51C/61C	64MB	80MB	144 MB	CALA
Option 81/ 81C on 68060/68060E any number of Network Groups, (FNF or non-FNF)	64MB	80MB	144 MB	CALA

Note: Call Processor PII is available only in the 128 Mb memory configuration.

Release 25 Recommended Memory Requirements for 68060E Processors:

System Type	Flash Memory Requirement	DRAM Memory Requirement	Total Memory	Applicable Regions
Option 51C/61C	64 MB	64MB	128 MB	North America CALA
Option 81/ 81C (with or without Fiber Network Fabric)	64 MB	96 MB	160 MB	North America CALA

New Release 25 systems will ship with Call Processor 68060E with the recommended memory configurations as shown in the table above.

Call Processors 68040 and 68060 have been market retired and are no longer orderable.

With X11 Release 25, there will be three call processor configurations available for new systems, system hardware upgrades and merchandise shipment:

- 68060E - 128 MB (NT5D03FB). This configuration meets the X11 Release 25 memory requirements for all Meridian 1 Option 51C, 61C, 81, 81C systems except Option 81C systems having 6 or more network groups. This configuration is suggested for Option 51C and 61C systems.
- ·68060E - 160 MB (NT5D03PB). This configuration is available commencing April, 2000. It meets the X11 Release 25 memory requirements for all Meridian 1 Option 51C, 61C, 81, 81C systems. This configuration is suggested for Option 81/81C systems where CP PII is not available or elected.
- CP PII - 128 MB - Option 81C Call Processor with Intel® Pentium® II. A separate product bulletin will address CP PII product availability and product description.

How to Meet Release 25 Memory Requirements

The following table defines the actions to be taken to ensure compatibility with Release 25 for various existing call processor combinations on Option 51C, 61C, 81/81C:

For Option 51C/61C Systems:

Existing System Type	Existing Processor	Existing Memory Config.	Action to be supported on Release 25	Applicable Regions
Option 51C/61C	68040, 68060, 68060E	48 MB (32/16)	Upgrade to 80 MB (32/48) by adding one 32 MB DRAM SIMM (per card)	North America
Option 51C/61C	68040, 68060, 68060E	64 MB (32/32)	Upgrade to 96 MB (32/64) by adding one 32 MB DRAM SIMM (per card)	North America
Option 51C/61C	68040, 68060, 68060E	80 MB (32/48)	**None -** Configuration is supported.	North America
Option 51C/61C	68040	96 MB (64/32)	Upgrade to 128 MB (64/64) by adding one 32 MB DRAM SIMM (per card)	North America
Option 51C/61C	68040, 68060, 68060E	112 MB (64/48)	**None -** Configuration is supported.	North America
Option 51C/61C	68060E	128 MB (64/64)	**None -** Configuration is supported.	North America
Option 51C/61C	68060, 68060E	112 MB (64/48)	Upgrade to 144 MB (64/80) by adding one 32 MB DRAM SIMM (per card)	CALA
Option 61C	68060E	128 MB (64/64)	Upgrade to 160 MB (64/96) by adding one 32 MB DRAM SIMM (per card)	CALA

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

Note: New Option 51C Systems not sold in CALA on Release 24 or later.

Note: For CALA order NT9C29AD for 51C, and NT9C38AA for 61C.

For Option 81/81C Systems on 68060/68060E with five or fewer network groups, or any Option 81/81C 68040 based systems:

Existing System Type	Existing Processor	Existing Memory Config.	Action to be supported on Release 25	Applicable Regions
Option 81/81C	68040, 68060, 68060E	64 MB (32/32)	Upgrade to 96 MB (32/64) by adding one 32 MB DRAM SIMM (per card)	North America
Option 81/81C	68040, 68060, 68060E	80 MB (32/48)	Upgrade to 112 MB (32/80) by adding one 32 MB DRAM SIMM (per card)	North America
Option 81/81C	68040	96 MB (64/32)	Upgrade to 128 MB (64/64) by adding one 32 MB DRAM SIMM (per card)	North America
Option 81/81C	68040, 68060, 68060E	112 MB (64/48)	Upgrade to 144 MB (64/80) by adding one 32 MB DRAM SIMM (per card)	North America
Option 81/81C	68060E	128 MB (64/64)	**None -** Configuration is supported.	North America
Option 81/81C	68060, 68060E	112 MB (64/48)	Upgrade to 144 MB (64/80) by adding one 32 MB DRAM SIMM (per card) (NT9C39AA)	CALA
Option 81/81C	68060E	128 MB (64/64)	Upgrade to 160MB (64/96) by adding one 32 MB DRAM SIMM (per card) (NT9C39AA)	CALA

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

For Option 81/81C Systems on 68060/60E with 6 or more network groups:

Existing System Type	Existing Processor	Existing Memory Config.	Action to be supported on Release 25	Applicable Regions
Option 81/81C	68060, 68060E	64 MB (32/32)	Upgrade to 128 MB (32/96) by adding two 32 MB DRAM SIMMs (per card)	North America
Option 81/81C	68060, 68060E	80 MB (32/48)	Upgrade to 112 MB (32/80) by adding one 32 MB DRAM SIMM (per card)	North America
Option 81/81C	68060, 68060E	112 MB (64/48)	Upgrade to 144 MB (64/80) by adding one 32 MB DRAM SIMM (per card)	North America
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)	North America & CALA
Option 81/81C	68060E	128 MB (64/64) NT5D03FB	Upgrade to 160 MB (64/96) by adding one 32 MB DRAM SIMM (per card)	North America & CALA

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

Note: For CALA order NT9C39AA DRAM Memory Upgrade Kit.

The NTZC75AA DRAM Memory Upgrade Kit for North America supports 32 MB DRAM memory upgrade of Call Processors 68040, 68060 and 68060E. This kit 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.

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

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 68040 (NT9D19), 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/

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 19, 20, 21, 22, 23, 24

for Large System types RT, 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 19 and subsequent. For Pre-Release 19 systems, the system must first be upgraded to Release 19 or Release 20 (depending upon the system and previously defined upgrade path). Once on Release 19 or 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.

Fiber Network Fabric (FNF) Advisements

FIJI Card Loadware Version

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 firmware earlier than Issue 12 is installed with Release 25.15, download of Issue 12 firmware to the installed FIJI cards will begin automatically. Issue 11 firmware will continue to run on the FIJI cards until the download of Issue 12 firmware is complete. While Issue 11 of the firmware is running on the system, there is a possibility that the download of the Issue 12 firmware may time-out, and not complete fully. If this occurs, errors messages will be observed (see Manual FIJI Loadware Download section below) and a manual download to the remaining FIJI cards will be required.

Automatic FIJI Loadware Download:

The automatic download will be triggered by INIT if there is a version change on any of the FIJIs. It will start about 2 minutes after INIT.

The automatic download will do up to 4 FIJI cards (on the same ring) in parallel. Therefore the automated download is almost 4 times faster than the manual method.

Manual FIJI Loadware Download:

If for any reason the automatic download does not complete successfully the FIJI firmware can be downloaded manually. If the automatic download is not successful, a FIJI006 (ring recovery failure) message and/or a FIJI057 s (can not download ring s) message, will be displayed, which indicates that the download has stopped and that the ring being downloaded was unable to complete. If this occurs, the STAT FIJI x y FULL command should be issued in LD 39 to verify that the firmware version matches on all FIJI cards. If the firmware version does not match you should proceed with the manual download process as described below:

There are two ways to manually download FIJI card loadware:

a download to an individual card

b download to an entire ring

It is important to note that a FIJI card cannot be upgraded while the ring carries traffic, that the FIJI card is in. Therefore all traffic must first be moved to the other ring, before any download can be done to an individual card or a whole ring.

Following either download method will cause the FIJI cards to be upgraded one at a time. *It takes approximately 15 minutes to upgrade one FIJI card.*

Downloading to an entire ring causes each FIJI card in the ring to be upgraded in sequence one at a time. Therefore for a 4 group ring, it would take approximately 1 hour and an 8 group ring would take approximately two hours.

The total amount of time to manually download all 16 FIJI cards on an 8 group system (both rings) would be approximately 4 hours.

To manually download the correct version of loadware to a single FIJI card:

Download of One FIJI card in OVERLAY 39:

1 ARCV OFF

2 SWRG s (s the other ring).

3 STAT SCG s

4 If clock active on side s go to next step, otherwise, SCLK

5 DIS FIJI x y (x-group#, y-ring#).

6 ENL FIJI x y [FDL] (FDL is needed only if there's no version change)

7 ARCV ON

To download the correct version of loadware to an entire ring:

Download an entire ring in OVERLAY 39:

1 ARCV OFF

2 SWRG x ("x" the other ring).

3 STAT SCG x

4 If clock active on side "x" go to next step, otherwise, SCLK

5 DIS RING y

6 ENL RING y (will not download if there's no version change). *This step could take approximately two hours to complete.*

7 To download other ring repeat steps 2-6 when s is current ring.

8 ARCV ON

To manually download the correct version of loadware to both rings:

Download to both rings in OVERLAY 39:

1 ARCV OFF

2 SWRG 1 (Ring status will now be NONE/FULL)

3 STAT SCG 1

4 If clock active on side 1 go to next step, otherwise, SCLK. The active clock must be on side 1, while side 0 is being upgraded.

5 DIS RING 0

6 ENL RING 0 (will not download if there's no version change). *This step could take approximately two hours to complete.*

7 SWRG 0 (Ring status will now be FULL/NONE)

8 SCLK

9 DIS RING 1

10 ENL RING 1(will not download if there's no version change). *This step could take approximately two hours to complete.*

11 ARCV ON (within 1 minute Ring status will go to HALF/HALF)

Supported DDP Card Vintages for FNF

Nortel Networks has identified a timing issue between the Fiber Network Fabric feature (FNF) and the Dual-port DTI/PRI (DDP) circuit pack (NT5D12) when installed in the same Meridian 1. The problem severely impacts FNF feature operation and occurs on vintages AA, AB, AE and AF of the NT5D12 card. The problem has been corrected on Vintage AG of the NT5D12. All new system shipments will be equipped with the NT5D12AG. The AC and AD vintages of the NT5D12 circuit pack function properly with the FNF feature.

New Information Messages for FIJI Automated Download

The following new messages have been introduced with Release 25 related to the automated download of firmware to the FIJI card for Fiber Network Fabric. These information messages may not be included in your user NTPs.

FIJI061 RING r : STARTING AUTOMATIC DOWNLOAD

FIJI062 FIJI g s : ENABLING FIJI CARD

FIJI063 FIJI g s : DOWNLOAD DONE. TESTING CARD

FIJI064 FIJI g s : SELFTEST DONE

where:

r - ring number (0 or 1)

g - group (0 - 7)

s - side (0 or 1)

It should be noted that these messages are information messages only, and are not alarms.

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.

PEPs for Release 25.15

There is one mandatory PEP required for all CP PII Systems with Release 25.15. This PER resolves certain rare occurrences of one-way-speech path on Release 25.15.

Chapter 4 - Documentation

The Release 25.10 documentation suite has been updated for Release 25.15. The changes include:

- The CP PII Description, Installation and Administration Guide and the CP PII System and Software upgrade Guide have been updated and assigned new order codes. These updated guides are included under a new Reference Library code (NT5F36AA) . This library replaces the NTLH15AA Library code introduced on Release 25.10 for CP PII with IGS.
- The NTP CD-ROM has been updated to include the NT5F36AA, the code for the CD-ROM has changed to NTLH01AB.
- The code for the Condensed library (not changed from Release 25.10) has been added to this document (NTLH17AA)
- The i2004 Internet Telephone Set NTP is on a separate CD-ROM, the code is NTDW18AA- A0806119.

Documentation Restructure

The Meridian 1 Customer Documentation Library has been restructured for X11 - Global Release 25 to accomplish the following objectives:

- Simplify the Meridian 1 library by reducing page count by 25% or greater.
- Improve access to content through reference and task summary lists.
- Improve accuracy of content through testing and correction updates.
- Improve durability of the documents through better binding.

For more information on the documentation changes with Release 25 please refer to the Release 25 Customer Documentation Product Bulletin.

All documents listed in this Chapter may not be available in all markets. Please contact your regional sales representative for further information.

Simplified Meridian 1 Library

The Meridian 1 Customer Documentation Library has been simplified for X11- Global Release 25 in the following ways:

- The North American and International libraries have been merged to comprise one global documentation library.
- Country specific information has been identified in the documents where applicable.
- Some documents have been retired as a result of merging information.
- Extraneous and irrelevant content has been removed from documents.
- Task based procedures and formats have been used where applicable.
- Overall page count for the Meridian 1 X11 - Global Release 25 Customer Documentation Library has been reduced by 35%.
- Obsolete components (i.e., QMT21 High Speed Data Module, Tape Drives, 5.25 Floppy Drives, CMDU, etc.) have been removed from the Meridian 1 - X11 Global Release 25 Customer Documentation Library.
- Obsolete components are documented in the Meridian 1 - X11 Release 24B Customer Documentation Library. This library package will continue to be available as a separately orderable item.
- The documentation for small and large systems (Options 11C-81C) has been placed on one CD-ROM (Global Meridian 1 Online Documentation - Release 25) to improve content access.

Improved Content Access

Access to Meridian 1 library content has been improved for X11 - Global Release 25 Customer Documentation in the following ways:

- Concise, descriptive topic headers, figure, and table titles have been applied.

- Content lists with cross-references (active links on the CD-ROM, page numbers for paper) have been added to the beginning of each chapter.
- Reference lists with cross-reference to related content within the library have been added to the beginning of each chapter where applicable.
- Sequential task summary lists for major procedures with cross-references have been added where applicable.
- The Meridian 1-X11 Global Release 25 Customer Documentation Library Navigator now contains several tables which define:
  - •new documents
  - •merged documents
  - •retired documents
- The Meridian 1 - X11 Global Release 25 Customer Documentation Library will be available on CD-ROM, paper, and through the Training and Documentation web site of Nortel Networks (http://www63.nortelnetworks.com/td/Documentation/online_doc.asp)

Note: Not all regions have access to the Training and Documentation Web site

Improved Accuracy

The accuracy of the Meridian 1 library content has been improved for X11-Global Release 25 Customer Documentation in the following ways:

- Redundant content has been removed to eliminate confusion and errors.
- All submitted corrections received by the customer documentation group prior to the documentation publish dates have been included in the X11-Global Release 25 Customer Documentation.

Improved Durability

The durability of the Meridian 1 library has been improved for X11-Global Release 25 Customer Documentation in the following ways:

- Four ring binders will replace perfect bound documents as the global standard.
- Coil binding will continue to be used for specific documents.

Documentation Ordering Structure

- The Meridian 1-X11 Global Release 25 Customer Documentation may be ordered as a base package or as optional documents. The following tables provide information on:
- New documents created for Meridian 1-X11 Global Release 25 Customer Documentation.
- Documents that were merged for Meridian 1-X11 Global Release 25 Customer Documentation.
- Documents that are retired and not included in Meridian 1-X11 Global Release 25 Customer Documentation.
- NTP numbers and order codes for Meridian 1-X11 Global Release 25 Customer Documentation.

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	**NTTK31AB**	**A0799147**
Option 11C Planning and Installation	N/A	P0910770
Option 11C and 11C Mini Fault Clearing Guide	N/A	P0910771
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	P0910774
Meridian 1 X11 Release 25 Input/Output Administration Guide	N/A	P0910777
Meridian 1 X11 Release 25 Input/Output Maintenance Guide	N/A	P0910775
Meridian 1 X11 Release 25 Input/Output System Messages Guide	N/A	P0910776

Option 11C - French - Coil Package

Description	Rls 25 PEC	Rls 25 CPC
Option 11C French - Coil Package	**NTTK31BB**	**A0799148**
Option 11C Planning and Installation	N/A	P0910778
Option 11C and 11C Mini Fault Clearing Guide	N/A	P0910779
Option 11C and 11C Mini Central Answering Position Guide	N/A	P0910780
Option 11C and 11C Mini Customer Controlled Back-up and Restore Guide	N/A	P0910781
Option 11C and 11C Mini Upgrade Procedures Guide	N/A	P0910782
Meridian 1 X11 Release 25 Input/Output Administration Guide	N/A	P0910787
Meridian 1 X11 Release 25 Input/Output Maintenance Guide	N/A	P0910783
Meridian 1 X11 Release 25 Input/Output System Messages Guide	N/A	P0910786

Option 11C Mini - English - Coil Package

Description	Rls 25 PEC	Rls 25 CPC
Option 11C Mini English - Coil Package	**NTKG80CF**	**A0799343**
Option 11C Mini Planning and Installation	N/A	P0910788
Option 11C and 11C Mini Fault Clearing Guide	N/A	P0910771
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	P0910774
Meridian 1 X11 Release 25 Input/Output Administration Guide	N/A	P0910777
Meridian 1 X11 Release 25 Input/Output Maintenance Guide	N/A	P0910775
Meridian 1 X11 Release 25 Input/Output System Messages Guide	N/A	P0910776

Option 11C Mini - French - Coil Package

Description	Rls 25 PEC	Rls 25 CPC
Option 11C Mini French - Coil Package	NTKG81CF	A0799344
Option 11C Mini Planning and Installation	N/A	P0910789
Option 11C and 11C Mini Fault Clearing Guide	N/A	P0910779
Option 11C and 11C Mini Central Answering Position Guide	N/A	P0910780
Option 11C and 11C Mini Customer Controlled Back-up and Restore Guide	N/A	P0910781
Option 11C and 11C Mini Upgrade Procedures Guide	N/A	P0910782
Meridian 1 X11 Release 25 Input/Output Administration Guide	N/A	P0910787
Meridian 1 X11 Release 25 Input/Output Maintenance Guide	N/A	P0910783
Meridian 1 X11 Release 25 Input/Output System Messages Guide	N/A	P0910786

Small System Optional Documents - Coil

Description	Rls 25 PEC	Rls 25 CPC
Option 11C and 11C Mini Technical Reference Guide-English	N/A	P0910790
Option 11C 1.5 MB DTI/BRI - English	N/A	P0910791
Option 11C 2.0 MB DTI/PRI Guide- English	N/A	P0910793
Option 1C BRI Guide- English	N/A	P0910795
Option 11C 1.5 MB DTI/BRI - French	N/A	P0910792
Option 11C 2.0 MB DTI/PRI Guide- French	N/A	P0910794
Option 11C BRI Guide- French	N/A	P0910796

Option 11C Mini Fiber Expansion Packages

Description	Rls 25 PEC	Rls 25 CPC
Option 11C Mini Fiber Expansion package (English)	NTTK38AB	A0799149
Mini Planning and Installation guide	N/A	P0910788
Mini Fiber Expansion Guide - English	N/A	P0910797
Option 11C Mini Fiber Expansion package (French)	NTTK38BB	A0799152
Mini Planning and Installation guide	N/A	P0910789
Mini Fiber Expansion Guide	N/A	P0910798

Global Release 25.10 Meridian 1 CD-ROM

Description	Rls 25 PEC	Rls 25 CPC
Global Release 25 CD -ROM Meridian 1 Reference Library Options 11C- 81C **	NTLH01AB	A0818138

** New for Release 25.15

Option 51C to 81C Release 25.10 Documentation

Meridian 1 Reference Library (Binders)

Large System (Binders)	Rls 25 PEC	Rls 25 CPC
Global Meridian 1 Reference Library	**NTLH02AA**	**A0804744**
Library Navigator	N/A	P0912432
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 Procedures	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	NTLH09AA	A0804753
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

Large System Optional Documents (Binders)

Description	Rls 25 PEC	Rls 25 CPC
Meridian 1 X11 Release 25 DPNSS1	NTKF79AA	A0788073
Meridian 1 X11 Release 25 DASS2	NTKF92AA	A0788088

Introductory Task Guides - COIL

Introductory Task Guides (Coil)	Rls 25 PEC	Rls 25 CPC
Meridian 1 X11 Task System Programming Guide	N/A	P0906780
Meridian 1 X11 Task Basic Telecom Management Guide	N/A	P0906781
Meridian 1 X11 Task Network Planning Guide	N/A	P0906782
Meridian 1 X11 Task Fault Clearing Guide	N/A	P0906779

Applicable to All Systems (Coil)

All Systems Coil	Rls 25 PEC	Rls 25 CPC
Meridian 1 X11 Input/Output Administration Guide	N/A	P0910777
Meridian 1 X11 Input/Output Maintenance Guide	N/A	P0910775
Meridian 1 X11 Input/Output Guide Messages Guide	N/A	P0910776
Meridian 1 X11 Guide for the UK Option 11C-81C	N/A	P0912437
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 Mini Carrier Remote Description, Installation and Administration	N/A	P0914209

**** New Documents for Release 25.10**

****New Documents for Release 25.15**

Stand Alone Guides - Coil	**Rls 25 PEC**	**Rls 25 CPC**
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 Integrated Personal Call Director **	**N/A**	**P0914163**
Meridian 1 X11 Release 25 Meridian Integrated Call Assistant **	**N/A**	**P0914162**
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**
Meridian 1 X11 Release 25 Meridian Branch Voice 1.0 Description, Installation and Operation **	**N/A**	**P0912867**

**** New Documents for Release 25.10**

Condensed Library

	Rls 25 PEC	Rls 25 CPC
Release 25 Condensed Library	**NTLH17AA**	**A0820834**
includes:		
Meridian 1 X11 Input/Output Administration Guide	**N/A**	**P0910777**
Meridian 1 X11 Input/Output Guide Messages Guide	**N/A**	**P0910776**
Meridian 1 X11 Input/Output Maintenance Guide	**N/A**	**P0910775**
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**

Data Sheets

Global Release 25 Data Sheets are available by ordering P0907149.

Note: Data sheets are not available in all regions.

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.

Chapter 5 - Features Overview

The following features are supported in Release 25.15. All features are available on Release 25.15, but some features may not be available in all markets. 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

NOTE - ITG Line-Side & i2004 Internet Telephone will be generally available after the general availability of Release 25.15. Refer to i2004 Internet Telephone Product Bulletin for more information.

Feature Overview

Feature	New/ Changed ISMS	New S/W Pkg.	New H/W
Call Processor PII (CP PII) - (25.15) (For Option 81C only)	No	Yes - 368	Yes
Fiber Network Fabric (FNF) - (25.15) (for Option 81/81C only)	No	Yes - 365	Yes
D-Channel Expansion - (25.10) (For Option 81 & 81C only)	No	No	No
ITG Trunks 2.0 with ISDN - (25.10)	Yes -ITG ISDN	Yes	Yes
M3900 Digital Telephone Enhancements - (25.10)	No	Yes - 380, 381,382	Yes
Inventory Reporting Ph. 2 - (25.10)	No	No - in base	No
Public to Private CLID Conversion - (25.10)	No	No	No
10/20 Digit ANI on 911 - (25.10)	No	Yes - 249	No
ISM Enhancements - (25.10)	Yes	No	No
MDECT 2000 - Multi Site Mobility Networking - (25.10) (EUROPE ONLY)	No	Yes - 370	No
Plug-ins 1-14 - (25.10) (EUROPE ONLY)	No	No	No
Business Networking Express - (25.15) (EUROPE ONLY)	No	Yes - 367	No
Agent Greeting (25.15) (EUROPE ONLY)	No	Yes - 152	Yes
Analog CLID on Analog Trunks for Hong Kong - (25.10)	No	No	Yes
ITG Line-side and i2004 Internet Telephones - (25.15)	Yes - INTERNET TELEPHONES	No	Yes

The Release in brackets after the feature name indicates the release that the feature is available on.

Market Availability of Features

Feature	North America	CALA
SYSTEM FEATURES		
Call Processor PII (CP PII) (For Option 81C only)	All Markets	All Markets
Fiber Network Fabric (FNF) (For Option 81/81C only)	All Markets	All Markets
ISM Enhancements	N/A	Use ITG ISDN Trunks
Inventory Reporting Ph. 2	All Markets	All Markets
CLID on Analog Trunks for Hong Kong (DXUTA)	N/A	N/A
Plug-ins (EUROPE ONLY)	N/A	N/A
STATION FEATURES		
M3900 Digital Telephone Enhancements	All Markets	All Markets
ITG Line-side and i2004 Internet Telpehones	All Markets	All Markets
NETWORKING		
Meridian ITG Trunks 2.0 with ISDN	All Markets	All Markets
D-Channel Expansion (For Option 81 & 81C only)	All Markets	All Markets
10/20 Digit ANI on 911	All Markets	N/A
Public to Private CLID Conversion	All Markets	N/A
MDECT 2000 - Multi Site Mobility Networking (EUROPE ONLY)	N/A	N/A
Business Networking Express (BNE) (EUROPE)	N/A	N/A
CALL CENTER - Agent Greeting (EUROPE ONLY)	N/A	N/A

Note - Market applicability of release 25 features in Europe and Asia Pacific is covered in the MIC for Europe and the GRB for Asia Pacific.

System Features

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

Call Processor PII - (25.15)

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 (cPCI®) 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 classic systems such as the earlier SL-1 systems, module level upgrades will be required.

For additional product and feature information, please refer to the Call Processor PII (CP PII) Introduction Product Bulletin.

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 Chapter 1 of this document.

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.

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.

Target Region

Global

Fiber Network Fabric - (25.15)

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 (FNF) Product Bulletin (2000-022).

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.

Target Region

Global

ISM Enhancements - (25.10)

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 6 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.

Refer to Chapter 6 of this document for these ISM parameter settings in Release 25 for each region.

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

A TN configured in Meridian 1	Existing ISM (*)	ISM in R25 (*)
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.

Package Requirements:

No new Packages are introduced with this feature.

Target Region:

Europe

CALA - will use ITG Trunks with initial Release 25 introduction

CALA & North America - will use INTERNET TELEPHONES when product is available.

Inventory Reporting- Phase II - (25.10)

Description

The Inventory Reporting Phase II feature enhances the Rills 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 or later 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	Applicable Market
CIS Trunk for Option 11C	NTCG02	BA, BB	CIS
CIS Trunk for Meridian 1	NTCG01	BA, BB	CIS
System Utility Card	NT4N67	AA	Global
System Utility Transition	NT4N68	AA	Global
LED/LCD Display Panel	NT4N71	BA	Global
cCNI Card	NT4N65	AB	Global
Call Processor PII card	(A0810496)	N/A	Global
Digital Trunk, DTI/PRI,	NT5D12	AF	North America
Digital Trunk, DTI/PRI,	NT5D97	AB	International
Digital Trunk, PRI2,	NTCK43	AC	International
2.0 MB DTI	NTAK10	DC	Global
1.5 MB DTI/PRI	NTAK09	DA	North America
24 Port DLC	NTRD24	AA	Global
24 Ports ISDN	NTZC44	AA, BA	Global
Fiber in Junctor Interface Motherboard	NTRB3301	N/A	Global
Fiber in Junctor Interface Daughterboard	NTRB3303	N/A	Global
3 Ports CNI	NTRB34	AA	Global
2.0 MB PRI	NTAK79	BC	International
2.0 MB PRI	NTBK50	AA	Global
TMDI (1.5 MB PRI/DTI)	NTRB21	AA	North America

The additional cards supported by the Inventory Reporting feature as described in the previous table 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.

Target Region

Global

CLID on Analog Trunks for Hong Kong (DXUT-A) - (25.10)

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 does not introduce any new packages.

This feature uses the existing ACLI package (349)

Applicable Systems

All system types supported by Release 25.

Target Region

Hong Kong

Plug-ins - (25.10)

Description

The purpose of this new process is to make it easier to deliver and faster to integrate patch Product Improvements (PIs) by delivering integrated solutions to customer requests. Plug-ins are integrated into the software, and are selected according to the Plug-in process limitations and specifications.

These Plug-ins will also create a library of new PI integrated into X11 software which could be use by distributors to answer customer requests in a more effective manner.

This process will be, within Release 25 timeframe, only available in Europe and could be potentially extend to others regions at a later date.

Package Requirements

The PLUGIN (366) package is needed for activating this Product Improvement.

Applicable Systems

All system types supported by Release 25.

Target Region

Europe

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.

M3900 Digital Telephone Enhancements - (25.10)

Description

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

The new features include:

Context Sensitive Soft Keys (25.10)

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 (25.10)

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 (25.15)

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

Virtual Office (Hot Desking) (25.15)

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 (25.10 + PEPs or 25.15)

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(25.10)

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 Rls
Flash Download Flexibility Enh.	No	Yes	Yes	Yes	25.10 +PEPs or 25.15
# of Context Sensitive Soft Keys	0	0	4	4	25.10 or later
Virtual Office (Hot Desking)	No	No	Yes	Yes	25.15
Corporate Directory	No	No	Yes	Yes	25.15
Set-to-Set Messaging	No	No	Yes	Yes	25.10 or later
Display Based Expansion Module support	No	No	No	Yes	25.10 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 (25.10 or later)

Package 381 - Corporate Directory (25.15)

Package 382 - Virtual Office (25.15)

Applicable Systems

All system types supported by Release 25.

Target Region

Global

ITG Line-Side & i2004 Internet Telephones - (25.15)

PLEASE NOTE

ITG Line-Side & i2004 Internet Telephone will be generally available after the general availability of Release 25.15. Refer to i2004 Internet Telephone Product Bulletin for more information.

Description

Nortel Networks introduces a new desktop terminal that delivers the feature rich suite of Meridian Digital Services over a single Ethernet connection. It requires the new IP Telephony Gateway (ITG) IPE Card. Each card has 24 ports supports up to 96 i2004 Internet Phones per card with new functionality introduced in Release 25.

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 management without sacrificing features, reliability or Quality of Service (QoS).

Meridian Administration Tools (MAT) or Optivity Telephony Manager (OTM) 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 6.6 or OTM 1.0.

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

Pkg Mnemonic	Pkg #	Pkg. Description	Applicable Mkt
DSET	88	Digital Set Pkg	Global
ARIES	170	Aries Terminal Pkg	Global

Networking Features

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

Meridian ITG Trunks 2.0 with ISDN - (25.10)

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

Component	Product codes
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
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

Component	Product codes
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

D-Channel Expansion - (25.10)

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)DNUM xGROUP y	valid	not valid	not valid
Non-MSDLDNUM 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

Target Region

Global

10 / 20 Digit ANI on 911 - (25.10)

Description

This feature is being developed to address Blocker Requirement GR 2953 and FCC ruling: Communications Commission Docket No. 94-102, RM-8143, which will require a PBX acting as a PSAP (Public Safety Answering Point) to accept a 10 or 20 digit ANI when terminating 9-1-1 calls. This FCC ruling addresses two separate industry issues hence the two separate features. The 10 digit ANI feature addresses the increasing number of Naps in North America. The 20 digit ANI feature addresses the ability to locate a 9-1-1 caller who is using wireless service.

These two issues are resolved with two new ANI formats. Both new formats use two II (Information Indicator) digits as opposed to the single NPD (Numbering Plan Digit) digit currently used. The new formats are II+10 digit ANI for whirling service and II+10+10 digit ANI for wireless service. These new formats will be referred as the 10 digit ANI format and the 20 digit ANI format respectively.

Due to the increasing demand for additional telephone numbers, the reserve of unassigned numbers within an NPA is quickly being exhausted. This results in many new Naps being introduced, sometimes by splitting or overlaying an already existing NPA. This in turn requires that a single PSAP must now be able to handle multiple Naps within its jurisdiction. The old signaling interface could only support a maximum of four Naps. The old format of NPD+7-digit ANI would use the single digit NPD values of 0-3 to translate into an NPA via a look-up table. The new 10 digit ANI format solves this issue by including the NPA in the 10 digit ANI field, so any number of valid Naps will now be accepted within a single PSAP.

The second issue of accurately determining the physical location of a wireless caller dialing 9-1-1, is addressed by the 20 digit ANI format. The first 10 ANI digits would provide the CSN (Calling Station Number). This number could be used to call back the originator in cases where the 9-1-1 call was disconnected. The second 10 ANI digits, or pseudo ANI, would provide the cell site/sector information to best define the wireless caller's location so assistance could be dispatched to the correct area. This function is not supported in any way by the old format.

Engineering Guidelines

The following packaging requirements exist for this feature:

Package Mnemonic	Package Number	Package Description	Package Type (New or Existing or Dependency)	Applicable Market
ENH_M911	249	Enhanced M911	New	Global
M911	224	Meridian 911	Existing	Global
DIGDSP	19	Digit Display	Existing	Global
ACD_BAS	40	Basic ACD-Package A	Existing	Global
ACDB	41	ACD Package B	Existing	Global
ACD	45	Extended ACD Package	Existing	Global
EAR	214	Enhanced ACD Routing	Existing	Global
CWNT	225	Call Waiting Notification	Existing	Global

M911 format is configured on a per route basis. Overlay 16 contains one new prompt, M911_NPID_FORM, for configuring what format is expected on the M911 trunk route. M911_NPID_FORM is only prompted if the Meridian 911 and Enhanced M911 packages are equipped and an M911 trunk route is being defined.

Package Requirements

A new package 249 has been added to enable this feature.

Applicable Systems

All system types supported by Release 25.

Target Region

North America

Private to Public CLID Conversion - (25.10)

Description

The Private to Public CLID Conversion feature addresses situations where an incorrect CLID displays when a call hops off the private network to the public network (the PSTN) at a tandem node.

This feature is applicable to Electronic Switched Network (ESN) networks using private network numbering plans that can be either one of the following:

- Uniform Dialing Plan (UDP)
- Coordinated Dialing Plan (CDP)

On systems without this feature, if a call is sent to a PSTN route at a tandem node, the private CLID of the originating telephone is sent to the Central Office (CO). There are Cost that modify the CLID (adding an NPA and NXX); therefore, the terminating telephone displays an incorrect CLID.

This feature will be applicable to interface types such as DMS 100, DMS 250, #4 & #5 ESS, S100 and NI-2 TR-1268 interfaces.

This feature introduces a prompt (CPUB) in the Route Data Block (LD 16). This prompt controls what option applies when the tandem node builds the public format CLID.

The choices for the prompt CPUB are: ON, OFF and LDN

ON

Means the feature is enabled. The software checks the CLID of the Calling Party in the setup message to extract the LOC or DSC of the originating caller.

The system then references the LOC or DSC at the tandem switch to get the NPA and NXX of the caller to build the CLID for the outgoing call to the public network.

OFF

Means the feature is disabled. The CLID is built as it was prior to the introduction of this feature.

LDN

The tandem node sends its LDN0 (from LD 15) to the CO as the CLID. The CLID is constructed by coupling the HNPA and HNXX in CLID entry 0 in the Customer Data Block (LD 15) with the LDN0 from LD 15 at the tandem node.

Feature Interactions

Automatic Call Distribution (ACD)

When a private call is presented to an ACD DN and the call flows to the PSTN due to the ACD Night Call Forward or the Underflow or the Overflow feature, then the Private to Public CLID Conversion feature can operate.

Alternate Routing

The Private to Public CLID Conversion feature applies for Network Alternate Routing (NARS), QSIG Alternate Routing, and MCDN Alternate Routing.

Billing Display Feature (BDSP)

At the tandem node, the BDSP and Private to Public CLID Conversion features are mutually exclusive. However, if they exist together at one node, BDSP takes precedence over the Private to Public CLID Conversion feature.

- Call Forward All Types (External Calls)/Hunting
- Call Forward All Types includes the following call forward scenarios:
- Call Forward All Calls
- Call Forward Busy
- Call Forward by Busy Type
- Call Forward External Deny

- Call Forward No Answer / Flexible Call Forward No Answer
- Call Forward No Answer, Second Level

Call Redirection by Time of Day

When a call forwards to an external telephone, if the call is sent out on a PSTN route, then the Private to Public Conversion feature configures the originating CLID in a public format, if the option is configured at the node that is redirecting the call. The same applies to Hunting if the Hunt DN is an external number.

Call Transfer

The Private to Public Conversion feature has no interaction with Call Transfer. The prior functionality continues.

Calling Party Privacy (CPP) and Calling Party Privacy Override (CPPO)

A call marked as a CPP or CPPO call, can hopeful the private network to the public network. Even though the Private to Public Conversion feature modifies the private CLID to a public format CLID, the presentation indicators indicating whether this is CPP/CPPO call are not modified. After hopeful occurs, the call continues to be identified as a CPP or CPPO call.

CDR

This feature has no interaction with CDR. Even after the CLID is converted, the CDR remains the same as without conversion.

Meridian Mail

In a case where a call terminates on Meridian Mail with a converted CLID, the private greeting is not given. Either an unknown origin or public greeting is given.

Call Sender feature

This feature has no interaction with the Call Sender feature of Meridian Mail.

Remote Virtual Queuing

Remote Virtual Queuing continues to work normally. During a call re-initiation (when a public network trunk becomes available), if a hop off to the public network takes place, this feature converts the originating CLID to a public format.

Networking feature interactions

CLID Enhancements

The CLID Enhancement feature provides flexibility in the way the CLID at the origination node is built. The Private to Public Conversion feature works at the tandem node, and therefore does not have any interaction with the CLID Enhancement feature. If the configuration at the tandem node is to send the LDN of the tandem node as the CLID, CLAD entry “0” is used to build the tandem node LDN CLID.

Network ACD

When Network ACD routes a call over a PSTN route, then the Private to Public CLID Conversion feature sets the originating CLID to a public format, if this option is configured at the node that diverted the call.

Network Ring Again

The Network Ring Again feature continues to work normally. During a call re-initiation, if a hop off to the public network takes place, this feature converts the origination CLID to a public format.

Internet Telephony Gateway (ITG)

ITG 2.0 implements ITG with ISDN as ITG ISL. When an ITG ISL trunk call hops off to the public network, and if this feature is configured, the originating CLID is modified to a public network format.

Engineering Guidelines

At the tandem switch the NPA and NXX must be configured for all of the LOC or DSC codes which might originate a call within the private network.

Package Requirements

The following software packages are required:

- Basic Automatic Route Selection (BARS) package 57 or Network Alternate Route Selection (NARS) package 58 and/or Coordinated Dialing Plan (CDP) package 59
- Integrated Services Digital Network (ISDN) package 145
- Primary Rate Access (PRA) package 146 or 2.0 Mbps Primary Rate Interface (PRI2) package 154

Applicable Systems

All system types supported by Release 25.

Target Region

North America

MDECT 2000 - Multi Site Mobility Networking - (25.10)

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	Applicable Market
MSMN	370	Mobility Networking	NEW - dependency on 350	Europe, Asia Pacific
MC32	350	Introduce octal density laundered for wireless sets	Dependant on 240	GLOBAL
MCMO	240	Wireless specific (MCMO and MDECT) overlay and call processing functionality	EXISTING	GLOBAL
FFC	139	Flexible Feature Code	EXISTING	GLOBAL

Business Networking Express (BNE) - (25.15)

It is a new NORTEL VPN solution for connecting several Meridian 1 through a Resodding interface. “Business Networking Express” solution consists of an X11 software package that mixes Resodding public services as well as some Meridian1 proprietary features. The objective is to deliver a homogenous set of services that should address 90% of the basic requests for customers who want to build a small private network at a very efficient cost. BNE includes a number of frequently used Resodding supplementary services to deliver the following functionality's between Meridian 1 sites:

- The Resodding Call Completion to Busy subscriber supplementary service, introduced in release 22.
- The Name and Private number (calling and connected numbers) display using User to User Service 1, introduced in release 25.
- The Resodding Explicit Call Transfer supplementary services introduced in release 25.
- The Resodding Call Diversion supplementary services.

Business Network Express - Name and Private CLID

Description

The Business Network Express Name and Private CLID feature is useful when a user dials a private number in order to reach another Meridian 1 site through the public network. The existing ESN feature translates the dialed number to a public number so that the called user can be reached through the PSTN. The BNE feature inserts the calling Name and the Private CLI in the User-to-User IE carrying by the SETUP message. On destination switch, the private CLI is displayed along the calling name on the alerted set. The alerted name is delivered to the calling user in a User-to-User IE carried in the ALERT message and displayed on the calling set. When the call is answered, the connected name and the private Connected Number is provided to the calling user in a User-to-User carried in a CONNECT message. Note that to be consistent with MCDN and QSIG, an H is displayed in front the private number.

Includes gateways for MCDN, QSIG and DPNSS. This will ensure the Name display inside a network with several protocols (EISDN, MCDN, QSIG, and DPNSS).

Business Network Express - EISDN Call Transfer

Description

The feature allows transfer notifications for supervised & unsupervised transfer, and depending on configuration, network optimization is preferred. The feature gives the possibility to the Private Network:

- To notify the Public network that a transfer has been performed within the Private Network.
- To optimize the call, by asking the public network to perform the transfer. This is also called transfer invocation with the public network.

The EISDN Call Transfer supports supplementary s according to the standard ETS 300-367/368/369. This includes the Hero-ISDN-MCDN, Resodding-QSIG, and Resodding-DPNSS gateways.

Package Requirements

One new package (367) is required.

Applicable Systems

All system types supported by Release 25.

Target Region

Europe - Only applicable in countries where the EISDN supplementary services described above are supported.

Market Availability

Business Network Express will be on Controlled Release with the initial introduction of Release 25. Contact your Nortel Sales Representative for the market availability status of these features.

Chapter 6 - Software ISMs & Packaging

ISM Parameters

New ISM Parameters

With the introduction of X11 Release 25.10, there are seven new ISM parameters. Many of the new ISM Parameters have been introduced for future use and are not used in Release 25. 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.

Changes to Existing ISM Parameters

D-CHANNELS

The D-Channel Expansion feature supports up to 255 (0-254) D-Channels per Option 81/81C system.

ANALOGUE TELEPHONES and DIGITAL TELEPHONES

Counting of the existing two ISM counters, ANALOGUE TELEPHONES and DIGITAL TELEPHONES are changed with Release 25. CLASS sets and Data Ports configured in Overlay 10 are excluded from counting as ANALOGUE TELEPHONES. Data Ports configured in Overlay 11 are excluded from counting as DIGITAL TELEPHONES.

Release 25.15 default ISM Parameters values for LARGE SYSTEMS

ISM Parameter	CALA	North America
ITG ISDN TRUNKS	0 (sold increments of 8)	32767 (NOT USED)
INTERNET TELEPHONES	0 (sold in increments of 8)	0 (sold in increments of 1)
ATTENDANT CONSOLES	32767 (NOT USED)	32767 (NOT USED)
CLASS TELEPHONES	32767 (NOT USED)	32767 (NOT USED)
PHANTOM PORTS	32767 (NOT USED	32767 (NOT USED)
DATA PORTS	32767 (NOT USED)	32767 (NOT USED)
TRADITIONAL TRUNKS	32767 (NOT USED)	32767 (NOT USED)
ANALOGUE TELEPHONES	32767 (NOT USED)	32767 (NOT USED)
DIGITAL TELEPHONES	32767 (NOT USED)	32767 (NOT USED)

Release 25.15 default ISM Parameter values for SMALL SYSTEMS

ISM Parameter	CALA	North America
ITG ISDN TRUNKS	0 (sold increments of 8)	2500 (NOT USED)
INTERNET TELEPHONES	0 (sold in increments of 8)	0 (sold in increments of 1)
ATTENDANT CONSOLES	2500 (NOT USED)	2500 (NOT USED)
CLASS TELEPHONES	2500 (NOT USED)	2500 (NOT USED)
PHANTOM PORTS	2500 (NOT USED	2500 (NOT USED)
DATA PORTS	2500 (NOT USED)	2500 (NOT USED)
TRADITIONAL TRUNKS	2500 (NOT USED)	2500 (NOT USED)
ANALOGUE TELEPHONES	2500 (NOT USED)	2500 (NOT USED)
DIGITAL TELEPHONES	2500 (NOT USED)	2500 (NOT USED)

New and Enhanced Software Packages in Release 25.15

There are no new packages introduced with Release 25.15. The following table provides a list of the new packages introduced in Release 25.10 and enhanced packages as a result of Release 25.10, their mnemonics, and their package numbers.

New Packages for Release 25

Package Name	Mnemonic	Package Number	Supported on 11C &11C Mini
Flexible Service Package (for Agent Greeting Feature)	FXS	152	Yes
10/20 Digit ANI on 911 Calls	M911_ENH	249	Yes
Fiber Network Fabric	FIBER_ NETWORK	365	No
Business Network Express	BNE	367	Yes
Call Processor PII	CPP_CNI	368	No
MDECT Multi Site Mobility Networking	MSMN	370	Yes
M3900 - Set to Set Messaging	STS_MGS	380	Yes
M3900 Corporate Directory	CDIR	381	Yes
M3900 Virtual Office	VIRTUAL_ OFFICE	382	Yes

Enhanced Packages for Release 25.15

Package Name	Mnemonic	Package Number	Supported on Option 11C/11C Mini
Inventory Reporting Phase 2	BASIC	0	Yes
D-Channel Expansion	MSDL	222	No
Meridian ITG Trunks 2.0	ISDN ISL	145, 147	Yes Yes
Private To Public CLID Conversion	ISDN PRA	145, 146	Yes Yes

Chapter 7 - Auxiliary Processor Compatibility

Below are the auxiliary application release levels that are compatible with X11 Release 25.10 and later.

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 a
Meridian Customer Controlled Routing	3B, 3C [a]
Meridian Link	5, 5C [a]
Network Administration Center	2.5 [a]
C-PLUS (base) - LAN Key - Performer	3.11 - 1.0 - 1.0 and later
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

Auxiliary Processor	Compatibility (Release)
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 Express Call Center	1.0
Symposium Call Center Server	1.x, 3.x
Symposium Integrated Interactive Voice Response	2.2 [a]
Symposium Open Interactive Voice Response	4.0 [a]

[a] No X11 dependency.

Note - not all applications or releases are available in all markets.

Meridian 1

Option 11C, 11C Mini, 51C, 61C, 81, and 81C

General Release Bulletin

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