Option 11C Installer's Checklist

P0917149

NOTE: This document is pertinent for Option 11C on Release 25.08 (Release 24.24 Software Up-issue)

Memory Requirements for Rls 24C (25.08)

The Option 11C requires a 40Mb Total Memory (32 Mb Program Store and 8Mb C-Drive space) in order to run Release 24C (25.08) software.

The supported Release 24C (25.08) System Controller card for Option 11C:
- NTDK20CA or higher Small System Controller (SSC)
- NTDK81AA or NTTK13AA Software Daughterboard.

NEW - Software daughterboard change - NTTK13AA

In preparation for release 25, the release 24.24 software load has been provided on an NTTK13AA blank daughterboard instead of an NTDK81 card. The NTTK13AA is a 48 Meg card that is split into 32 Meg of program store and 16 Meg of C:Drive. This card is only backward compatible to 24.24. The installation of the card is the same as with the NTDK81. If you are upgrading from an NTDK21 card, please ensure that you have the latest bootcode from your release 24.24 PCMCIA card. (see Upgrade NTP).

Release 24 Option 11C Systems that were previously on Release 22 or Release 23 may require SIMM Upgrades to 16 Meg DRAM, to support Release 24C (25.08).
16Mb of DRAM is required for Release 24C (25.08). Use the LD 135 method of determining memory configuration (stat mem), which will give the DRAM and SRAM that are on the CPU. 16 Meg DRAM indicates an NTDK20CA (field) or DA (factory).

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 24C (25.08).

Before starting make sure you have the following:

- Keycode Data sheet

The Option 11C Upgrade Procedures Guide may be needed to complete the upgrade.

NOTE: If the keycodes do not work, check the following:

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

If they still do not work, please call your Service Representative.

SOFTWARE DELIVERY METHODS

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

WEBSITE FOR SOFTWARE DOWNLOAD

The Option 11C Electronic Software Distribution website (M1ESD is located at: www.nortelnetworks.com/servsup/esd/meridian1/. You will need to register to access the software provided on this site.

INSTALLING THE FOURTH OR FIFTH CABINET (24.24 and later)

There are new hardware components required in order to expand the Line Size of the Option 11C to a 4th or 5th cabinet Please review the NTPs for new installation/upgrade steps.

INSTALLING FIBRE EXPANSION CABINET(S)

The following may be required:

- NTDK23 or NTDK25 Fibre Receiver Pack(s)
- NTDK22 or NTDK24 Fibre Daughterboard(s)
- NTDK84 or NTDK85 New Fibre Receiver Pack if equipping a 4th or 5th cabinet(s) (24.24 and later)
- Fibre Cable(s)
- Fibre Mounting Guides

Meridian 1

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

General Release Bulletin - Release 24C (25.08)

P0917230 Issue 1.02 January 2001

Meridian 1

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

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Introduction

Generic X11 Release 24 C is delivered by:

- X11 Release 25.08 for Option 11C, Options 51C, 61C, 81 and 81C.

This document provides:

- An overview of the features and functionality included in Meridian 1 Release 24C (25.08) software.
- Advisements for All systems, Small systems and Large systems
- Mandatory PEPs for Large and Small systems - Refer to Chapter 2 for details of any manufactured PEPs for Option 11C and Chapter 3 for details of any mandatory PEPs required for Large Systems
- ISM settings and new and changed Software packages

This document is applicable in North America only.

Nortel Networks is pleased to introduce Meridian 1 Generic X11 Release 24C (25.08) software, for Options 11C, 51C, 61C, 81 and 81C systems. Release 24C (25.08) targets primarily M3900 Digital Telephone Improvements for systems currently running on X11 Release 24.24 or X11 Release 24.25. The M3900 Digital Telephone improvements include:

- 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.
- The updated M3900 downloadable firmware version that resolves the field issues observed on Release 1 sets (refer to "M3900 Resolved Problems" list in this document).

Release 24C (25.08) also provides additional system level message buffering to improve operational performance of EPE equipment with 68060 and 68060E processors, as well, Release 24C resolves TMDI issues observed on Release 24.24.

For the Option 11C, details on the Meridian Mail Option, the Central Answering Position feature, the Autoconfiguration feature, Model Sets and Administration Sets, as well as installation and operation, can be found in the Nortel Networks Publications (NTPs) pertinent to these machine types.

For Options 51C, 61C, 81 and 81C details on feature installation and operation, and hardware upgrade procedures, refer to the X11 Release 25 Nortel Networks Publications (NTPs). Also, please refer to the Software Conversion Procedures (NTLH05AA-A0804748) that are included in your NTP shipment prior to loading this software.

Release 24C (25.08) is based on Release 25.10 software. As such, the following base Release 25.10 features are supported on Release 24C (25.08):

SYSTEM FEATURES

- Inventory Reporting Phase II

DESKTOP

- M3900 Digital Telephone Improvements (Flash Download)

NETWORKING

- Private to Public CLID Conversion
- D-Channel Expansion

SYSTEM MANAGEMENT SUPPORTED ON RELEASE 24C (25.08)

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

Note: No other Release 25.10 features are supported on Release 24C (25.08). For a listing of the Release 25.10 features not supported on Release 24C, refer to Chapter 1 “Feature Interactions”.

Release 24C (25.08) will use standard Release 25 documentation. Any unique Release 24C items are documented in this document.

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.

Please refer to Chapter 4 of this document for more detailed information on the documentation re-structure and the Release 25 documentation order codes.

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 24C (25.08) is a North American software release. This document provides information specific to North America.

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.

Systems Supported

Generic X11 Release 24C (25.08) supports the following machine types:

- **Meridian 1 Option 11C** equipped with an NTDK20CA or higher Small System Controller (SSC) AND NDK81AA or NTTK13AA software daughterboard providing a minimum of 40Mb Total Memory (32 Mb Program Store and 8Mb C-Drive space) which is necessary to provide sufficient program store for Release 24C (25.08). All sites currently running on Release 24.24 should already be equipped with these daughter boards.
- **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. The 68030 is not supported with Generic X11 Release 24C (25.08).

Feature Interactions

- Microcellular features (packages 345, 346, 314, 302, 303) are not supported on Release 24C or Release 25 or later systems.
- Release 24C (25.08) does not support the following Release 25.10 features:

  •Call Processor PII (CP PII)

  •Fiber Network Fabric (FNF)

  •M3900 Set to set Messaging

  •M3900 Virtual Office

  •M3900 Corporate Directory

  •M3900 DBA *

  •M3900 Context Sensitive Keys*

  •10/20 Digit ANI on 911 Calls

  •Meridian ITG Trunks 2.0 with ISDN

  •Meridian ITG Line-side & i2004 Internet Telephones

* Refer to section “Release 1 vs. Release 2 Telephone Feature Operation” in the Flash Download Advisement section later in this chapter for more information.

Memory

In general, release 24C (25.08) requires the same memory configuration as Release 24.24/24.25. Some Option 11 systems will require a memory upgrade, refer to “Small System Memory Requirements for Release 24C (25.08)” in Chapter 2. For large system memory requirements, refer to “Call Processor Recommended Memory Requirements” in Chapter 3.

Hardware

PE and EPE Support

X11 Release 24C (25.08) supports PE and EPE equipment currently supported on Release 24.25 systems. A very limited number of sites running release 24.25 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 24C contains a Message Buffering solution to address this issue.

M3900 Digital Telephone Improvements Advisements

The following advisements apply to then M3900 Digital Telephones Improvements:

Flash Download Advisements

Release 1 vs. Release 2 Telephone Feature Operation

For those customers that upgrade from Meridian X11 Release 24.24/24.25 to X11 Release 24C (25.08), there can be differences in the way M3900 digital telephones operate depending on whether they have Release 1 or Release 2 telephones.

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

Release 2 M3900 set features include:

- Context Sensitive Keys
- Set to Set Messaging
- Virtual Office
- Corporate Directory
- Display Based Expansion Module

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 24C (25.08)**	**X11 Release 25 (25.10/25.15)**
M39000 Sets with Rls 1 F/W	Rls 1 capability	Rls 1 capability	Rls 1 capability
M39000 Sets with Rls 2 F/W	None Rls 2 Sets are not supported on Release 24.	Rls 1 capability * **NOTE:** Rls 2 Context Sensitive Keys and DBA will function	Rls 2 capability

M3900 Flash Download provides the capability to download a new firmware version from the Meridian 1 to the M3900 telephone. The following feature sets will be downloaded to sets when a download is initiated using the various releases of Software:

- Release 24C (25.08) - Updated Release 1 Firmware will be downloaded.
- Release 25.10/25.15 - Release 2 Firmware will be downloaded to the set (by default).

  Note: During the system software install process for Rls 25.10/25.15, the system administrator could select Release 1 firmware to be downloaded when the flash download process is invoked.

* **Note**: Nortel Networks recommends that a Flash Download be performed on all Release 2 sets running with Release 24C (25.08) to restore the Release 24 supported M3900 feature set.

PLEASE NOTE:

If a customer orders M3900 Release 2 telephones and places them on a system with Release 24C (25.08), then these telephones will operate at a "limited" Release 2 level. This means that the M3900 telephone will have Release 1 Features AND Context Sensitive Softkeys, and will support DBA as well. However, if a flash memory download is done to these Release 2 telephones using Release 24C (25.08) software, they will revert back to a Release 1 telephone and the Context Sensitive Keys and the DBA support will be lost and cannot be restored with Release 24C (25.08). Sets will function with all features and capabilities as purchased and supported with Release 24.

X11 Release 24C (25.08) has been made available to enable Release 24 customers to download M3900 Release 1 firmware corrections to their M3900 telephones, not to provide M3900 Release 2 features on Release 24 systems. A customer purchases M3900 Release 2 functionality by purchasing X11 Release 25.10 or higher software, not by purchasing M3900 Release 2 telephones. Customers who desire M3900 Release 2 functionality must purchase X11 Release 25.10 or higher software.

Nortel Networks cannot compensate distributors or end users who lose Release 2 features as a result of a flash download performed on Release 24C (25.08) to Release 2 M3900 sets. However, if this does happen, customers can easily restore these features by purchasing X11 Release 25.10 or higher.

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 the FWVU prompt in Overlay 32 to determine their firmware version. For Overlay 32 prompt details refer to “M3900 Digital Telephone Improvements” in Chapter 5.

Release 1 Sets:

NTMN33BA66 A0767102 Meridian M3903 Enhanced, Rel.1, Platinum

NTMN33BA70 A0767103 Meridian M3903 Enhanced, Rel.1, Charcoal

NTMN34BA66 A0767107 Meridian M3904 Professional, Rel.1, Platinum

NTMN34BA70 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 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 24C (25.08)

Release 24C (25.08) is supported by Meridian Administration Tools Release 6.6 (MAT 6.67.04) or later, or Optivity Telephony Manager 1. 0 (OTM 1.0) or later. Customers that utilize 3rd party management systems such as Switchview, must ensure that the Management System is compatible.

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.

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.
- A transition toward IP-based management solutions needed to support Optivity and Unified Networks solutions of tomorrow.
- 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.

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.

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).

Chapter 2 - Small System Advisements

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

Small System Memory Requirements for 24C (25.08)

Option 11C

Software Daughter Board Requirements

The Option 11C requires a minimum of 40Mb Total Memory (32 Mb Program Store and 8 Mb C-Drive space) in order to run Release 24C (25.08) software. This requirement is met with the NDK81AA (40 Mb) or NTTK13AA (48Mb) Software 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 24C (25.08) 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 24C (25.08).

Software Delivery Methods

Option 11C

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

Electronic Software Delivery for Small Systems

A programmed PCMCIA card can be used to upgrade an Option 11C or an Option 11C Mini system. The downloading of the software is only necessary when re-programming a PCMCIA card to update an existing Option 11C or 11C Mini system. When ordering a PCMCIA card for the first time, it can be sent pre-programmed with the current market release of software. Alternatively, a blank PCMCIA card can be ordered. This card can be used for future upgrades of software by downloading software from the Meridian 1 ESD site. The M1ESD site is at the following address: http://www.nortelnetworks.com/servsup/esd/meridian1/

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

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

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.

Software Conversion

For Option 11C, automatic conversion is supported directly to X11 Release 24C (25.08) from 24.24.

Upgrades to Rls 24C (25.08) from Rls 24.24 Option 11C

The Boot Code on the SSC may require updating before upgrading software to release 24C (25.08). Refer to the “Small Systems Memory Requirements for Release 24C (25.08)” 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.

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.

Software PEPs

Manufactured Software PEPs

There are no Manufacture Delivered PEPs on 24C (25.08).

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.

Call Processor Memory Requirements

The memory requirements for release 24C (25.08) are the same as those previously documented for Release 24.24/ 24.25 with the following exception:

Option 51C with 16Mb D-Ram on CP2 processors will need to upgrade to a minimum of 32 Mb .

Software Delivery Methods

The only supported media for large systems (Options 51C, 61C, 81 and 81C) is CD-ROM. This means that Release 24C (25.08) requires an IODU/C (NT5D61) on a system operating with Call Processor 68040 (NT9D19), 68060 (NT5D10) or 68060E (NT5D03).

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 24C (25.08) supports direct conversion from Release 24.24 and Release 24.25.

PEPs for Release 24C (25.08)

There are no Mandatory PEP required for large systems for 24C (25.08).

Chapter 4 - Documentation

Release 24C (25.08) uses the standard Release 25 documentation library suite . This chapter summarizes the documentation.

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)

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 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

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

Global Release 25.15 /24C (25.08) 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

Option 51C to 81C Release 25.15 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 Reference Library (Includes P0914249, P0914248) **	**NT5F36AA**	**A0786997**
Meridian 1 X11 Release 25 Call Processor PII & FNF Description, Installation and Administration Guide **	**N/A**	**P0914249**
Meridian 1 X11 Release 25 Call Processor PII & FNF System and Software Upgrade Guide **	**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
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**

Stand Alone Guides - Coil	Rls 25 PEC	Rls 25 CPC
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**

Data Sheets

Global Release 25 Data Sheets are available by ordering P0907149.

Release 25Condensed Library

The release 25 Condensed Docuentation Libarary is as follows:

Rls 25 Condensed Library	NTLH17AA	A0820834
Includes:		
Meridian 1 X11 Input/Output Administration Guide	N/A	P0910777
Meridian 1 X11 Input/Output Messages Guide	N/A	P09910776
Meridian 1 X11 Input/Output Maintenence Guide	N/A	P0910775
553-2001-320 - Software Conversion Procedures 553-3001-300 - System Management 553-3001-301 - X11 System Management Applications 553-3001-313 - Emergency Services Access	N/A	P0916586

Chapter 5 - Features Overview

Release 24C (25.08) is based on Release 25.10 software. As such, the following base Release 25.10 features are supported on Release 24C (25.08):

SYSTEM FEATURES

- Inventory Reporting Phase II

DESKTOP

- M3900 Digital Telephone Improvements

NETWORKING

- Private to Public CLID Conversion
- D-Channel Expansion

SYSTEM MANAGEMENT SUPPORTED ON RELEASE 24C (25.08)

- Meridian Administration Tools 6.6 (MAT 6.6)
- Optivity Telephony Manger 1.0 (OTM 1.0) - when market available

Note: No other Release 25.10 features are supported on Release 24C (25.08). For a listing of the Release 25.10 features not supported on Release 24C, refer to Chapter 1 “Feature interactions”.

For more detailed feature information refer to the following NTPs:

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

Inventory Reporting- Phase II

Description

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

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

The Inventory Reporting feature will allow a MAT6.5 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 additional cards supported by the Inventory Reporting feature as described in the following 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.

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

D-Channel Expansion

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.

Private to Public CLID Conversion

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 24C (25.08).

M3900 Digital Telephone Improvements

Description

Flash Download

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)

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

Requirement	M3901	M3902	M3903	M3904	M3905
Flash Download Flexibility Enh.	No	Yes	Yes	Yes	Yes

M3900 Flash Download LD 97 COMMANDS

Prompt	Response	Description
REQ	CHG PRT	Change Flash Download Parameters Print Flash Download Parameters
TYPE	FDL	Flash Download for M3900 sets
FDTP	x<CR>	Enter M3900 set type selected for Flash DownloadWhere X is : 3902 = M3902 3903 = M3903 3904 = M3904 3905 = M3905 All = all of the above
FDTM	 (NO) YES <CR>	Time interval restriction for Flash Download NO = Do not change time intervals YES= Proceed to change time intervals **Note 1:** Flash Download is automatically paused one hour prior to virtual midnight (see TODR in LD 17) to allow for midnight routines to run **Note 2:** This option is not applicable to reporting

Prompt	Response	Description
FDAY	dn <CR>	Enter day and number of time intervals for Flash Download. Prompt appears only if FDTM = YES **d** = day of the week (0-6 for Sunday - Saturday) **n** = number of intervals (0-4) ; to disallow / clear download for that day , enter 0. **Note :** If two or more intervals are specified, they must be non-overlapping , non consecutive, and in increasing order.
FINT	s1 <CR>	Enter starting hour and length of time for a time interval Prompted n times if n>0. S = starting hour (0-23) L = length of interval in house (1-24)
FTNR	(NO) YES <CR>	TN range restriction option for Flash Download NO = no TN restriction (default) YES = specify TN range
FSTN	lscu cu	Starting terminal number for Flash DownloadPrompt appears only if FTNR = YES
FETN	lscu cu	Ending terminal number for Flash DownloadPrompt appears only if FTNR = YES
FDNR	(NO) YES <CR>	DN range restriction option for Flash DownloadPrompt appears only if FTNR = YES
FDDN	c d1 d2 <CR>	Flash Download Prime Directory Number rangePrompt appears only if FDNR = YES c = Customer number (0-99) d1 = starting Prime DN d2 = ending Prime DN

Prompt	Response	Description
FRCE	(NO)	System-wide Flash Download control option NO = Conditional (default). System-wide Flash Download (via FDLS in LD 32) applies only to an M3900 series set whose flash version is different from the version currently found on the system disk. YES = Forced. Force System-wide Flash Download to all of the specified M3900 series regardless of their current flash firmware. **Note 1**: Use this option with caution ! Once the download tree is built(i.e., after executing the FDLS command in LD 32), this option automatically reverts to NO. **Note 2:** This option is not applicable to reporting
FVER	v <CR>	Flash Firmware version specified for full report. v = Flash Firmware version (0-99)If 0, report all versions (default) **Note :** This option is applicable to reporting only (via FSUM in LD 32)

M3900 Flash Download LD 32 COMMANDS

Prompt	Response	Description
.	FDLU l s c u	Initiate conditional download to one telephoneTerminal Number : l = loop address s = shelf address c = card address u = unit address
	FDLI l s c u	Initiate conditional download to an M3900 Series Telephone when it becomes idle.
	FDLFl s c u	Initiate a forced download to the specified M3900 Series Telephone regardless of its version and state

Prompt	Response	Description
	FWVUl s c u	Query and print the firmware versions currently on an M3900 Series Telephone
	FDLS	Initiate system-wide flash download to all or a specified type of M3900 Series Telephone, based on paramaters specified in LD 97.
	FDLC	Cancel or gracefully stop the system-wide flash download for the M3900 Series Telephones
	FSUM	Display summary report of current firmware versions on all M3900 Series Telephones.The format of the report is as follows : ** M390x Summary Report"dd - on DISKff (cc) - nnnn SETS FOUNDff (cc) - nnnn SETS FOUNDWhere : x = 2 to 5 for M3902 to M3905 dd = the flash firmware version found on the system disk PSDL file ff = the downloadable flash firmware version found on the sets cc = the core firmware found on the sets nnnn = the number of sets found with firmware version ff (cc)
	FSUM ALL	Display a complete report on all M3900 Series Telephones based on parameters set in LD 97. The format of the report is as follows: TYPE: tttt CUST: cc PDN: ddddddd TN: l s c u FW: v Where : tttt = 3902, 3903, 3904 or 3905 cc = 0 to 99 ddddddd = the Primary DN of the telephone vv = the flash firmware version

Package Requirements

There are no new packages required to support Flash Download capability in Rleease 24C (25.08).

Applicable Systems

All system types supported by Release 24C (25.08).

M3900 Resolved Problems in 24C (25.08)

The following M3900 problems are resolved on X11 Release 24C (25.08).

MP08572

Attempts being made to download non-M3900 set types like Aries, BRI. Error messages are printed, but no functional impact to any set type is evident.

MP08751

System INI during Flash Downloading. Streaming SDL1301 messages lead to a system inititalization.

MP04836

M3903, M3904 Set Labels disappear during Service Changes - Incorporated PEP MPLR12537 into RLS 25 base SW. PEP is no longer required.

MP03736

INI2000 during Service Changes for M3900 sets- Incorporated PEP MPLR12537 into RLS 25 base SW. PEP is no longer required.

MPLR12287

Corrupted Speed Call, HFA to HFD, ODAS, CFWD - Incorporated PEPS MPLR12287 into RLS 25 base SW. PEP is no longer required.

N/A

Missing M3900 Set Labels after Sysload and Initialization. Can be due to initial system installation power-up or power loss and re-power-up.

N/A

Missing labels from normal service of Hardware XNET, XPEC. Removal and re-installation of XNET, XPEC Hardware would exhibit the problem.

MP04061

Call Log Date Shows wrong month in Oct, Nov, Dec. New M3904 FW in Rls 24C.x PSDL for download. Resolution deployed into both RLS 24 and RLS 25 based FW. Fix is deployed in 1) M3904 FW version 2.9 R4 RLS 24 based production sets as of Nov 1999, 2) M3904 FW version 4.1 RLS 25 Software and RLS 25 based production sets, 3) M3904 FW version 3.0 RLS 24 compatible FW in RLS 25 Software.

MP06504

M3903 sets go into Handsfree mode. New M3903 FW in Rls 24C.x PSDL for download. Fix is deployed in 1) M3903 FW version 4.5 RLS 25 Software and RLS 25 based production sets, 2) M3903 FW version 3.0 RLS 24 compatible FW in RLS 25 Software.

MP05929

CCOS key does not work. New M3903 FW in Rls 24C.x PSDL for download. Fix is deployed in 1) M3903 FW version 4.5 RLS 25 Software and RLS 25 based production sets, 2) M3903 FW version 3.0 RLS 24 compatible FW in RLS 25 Software.

MP08750

FDLS command does not idle the PSDL properly if download does not complete during the scheduled period.

MP04133

CLS of a set can not be changed if RLFA is set.

MP05884

M3903, M3904 cannot use PVR keys. New FW in Rls 24C.x PSDL for download. Resolution deployed into both RLS 24 and RLS 25 based FW in the release. Fix is deployed in 1) M3904 FW version 2.9 R4 RLS 24 based production sets as of Nov 1999, 2) M3904 FW version 4.1 RLS 25 Software and RLS 25 based production sets, 3) M3904 FW version 3.0 RLS 24 compatible FW in RLS 25 Software. Fix is deployed in 1) M3903 FW version 4.5 RLS 25 Software and RLS 25 based production sets, 2) M3903 FW version 3.0 RLS 24 compatible FW in RLS 25 Software.

MP07089

M3903 French Option shows French and English words. New FW in Rls 24C.x PSDL for download. Fix is deployed in 1) M3903 FW version 4.5 RLS 25 Software and RLS 25 based production sets, 2) M3903 FW version 3.0 RLS 24 compatible FW in RLS 25 Software.

MP08104

M3904 Set loses DN label when viewing Call Log. New FW in Rls 24C.x PSDL for download. Fix is deployed in 1) M3904 FW version 4.1 RLS 25 Software and RLS 25 based production sets, 2) M3904 FW version 3.0 RLS 24 compatible FW in RLS 25 Software.

MP06647

On M3902 sets, the set/system will allow you to store an invalid Call Fowrd DN. When dialed, the invalid # will be dialed..

MP08226, MP08749

FDLS command does not idle the PSDL properly if downalod does not complete during the scheduled period.

MP08670

If a flash download schedule has been scheduled and after that point a technician OUT's one of the sets scheduled, the system will generate streaming SDL1301 messages and eventually INI.

M3900 Un- Resolved Problems in 24C (25.08)

Ref: MP06165	Remote Call Forward
Date reported	01/05/2000
Description of incident	Remote CFWD DN replaces the Nortel name.
Impact on system operation	LOW
Workaround	None

Ref: MP06485	CPND
Date reported	01/21/2000
Description of incident	CPND generates corrupt characters on display -scenarios to generate failure mode are limited.
Impact on system operation	LOW
Explanation/Workaround	None

Ref: MP06581	Private Line
Date reported	01/26/2000
Description of incident	Illegal call state codes sent on Private Line (PVR) resulting in sets entering predial on PVR/PDN.
Impact on system operation	LOW
Explanation/Workaround	None

Ref: MP07142	**Call Park Recall**
Date reported	02/16/2000
Description of incident	When a Call Park Recalls, it comes back on key 1 instead of key 0 when all keys are idle.
Impact on system operation	LOW
Workaround	None.

Ref: MP07627	**M3905 Connected to M2616 port**
Date reported	03/10/2000
Description of incident	Plugging in M3905 sets into a configured port for M2616 sets can cause XPEC out of service.
Impact on system operation	HIGH
Explanation/ Workaround	Wrong sets plugged in can overload messaging on an XPEC. Technician should validate port configuration, physical connections and data base prior to physical connecting a new terminal.

Ref: MP08110	**M3903 Time and Date change**
Date reported	03/27/2000
Description of incident	Display temporarily gets corrupted sometimes when the Time and Date format is changed under the Options list.
Impact on system operation	LOW
Explanation/ Workaround	Display will correct itself during ongoing use, lamp audit.

Ref: MP08296	**M3903 Display of CLID Messages w/Symposium**
Date reported	04/03/2000
Description of incident	M3903 not displaying CLID messages w/Symposium.
Impact on system operation	LOW
Workaround	Use M3905 sets for Call Center applications. M3903 sets not recommended for use as a Call Center set.

Ref: MP08297	**M3903 Symposium Agent Login**
Date reported	03/31/2000
Description of incident	M3903 - when an agent attempts to login with M3903, using and AGENT ID that is already in use, a message should appear " AGENT ID ALREADY LOGGED IN"
Impact on system operation	LOW
Workaround	Use M3905 sets for Call Center applications. M3903 sets not recommended for use as a Call Center set.

Ref: MP08482	**M3900 Flash Downloading**
Date reported	04/10/2000
Description of incident	A TN becomes locked during a FW download if the set type being downloaded to does not match the set type which is plugged into the relevant TN location
Impact on system operation	MEDIUM
Workaround	Ensure match of data base to physical set.

Ref: MP08670	**M3900 Flash Downloading**
Date reported	04/18/2000
Description of incident	If a flash download schedule has been scheduled and after that point a technician OUT's one of the sets scheduled, the system will generate steaming SDL1301 messages and eventually INI.
Impact	HIGH
Explanation/Workaround	If changes to the data base are made after a download schedule has been generated, the schedule should be Canceled, and rescheduled to ensure that the sets that have been removed are not attempted to be downloaded to.

Ref: MP05983	**CPND Message**
Date reported	12/21/1999
Description of incident	Begin CPND message not consistently sent to terminal..
Impact on system operation	LOW
Workaround	None

Ref: MP06165	**Remote Call Forward**
Date reported	01/03/2000
Description of incident	Transfer function appears slow. When operating the Transfer key on the M3904 set, you can sometimes press keys faster than the set can respond to the feature.
Impact on system operation	LOW
Workaround	None

Ref: MP07965	M3903 Time and Date Change
Date reported	01/03/2000
Description of incident	Sets will sometimes come up disabled after download. Sets need to be re-enabled in LD 32.
Impact on system operation	LOW OCCURRENCE
Workaround	In LD 32 re-enable the disalbed unit with the ENLU command.

Chapter 6 - Software ISMs & Packaging

ISM Parameters

New ISM Parameters

With the introduction of X11 Release 24C (25.08), there are seven new ISM parameters. Many of the new ISM Parameters have been introduced for future use and are not used in Release 24C (25.08). 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 24C (25.08) default ISM Parameters

ISM Parameter	Large Systems	Small Systems
ITG ISDN TRUNKS	0 (NOT USED on 24C)	0 (NOT USED on 24C)
INTERNET TELEPHONES **	0 (NOT USED on 24C)	0 (NOT USED on 24C)
ATTENDANT CONSOLES	32767 (NOT USED)	2500 (NOT USED)
CLASS TELEPHONES	32767 (NOT USED)	2500 (NOT USED)
PHANTOM PORTS	32767 (NOT USED)	2500 (NOT USED)
DATA PORTS	32767 (NOT USED)	2500 (NOT USED)
TRADITIONAL TRUNKS	32767 (NOT USED)	2500 (NOT USED)
ANALOGUE TELEPHONES	32767 (NOT USED)	2500 (NOT USED)
DIGITAL TELEPHONES	32767 (NOT USED)	2500 (NOT USED)

** INTERNET TELEPHONE ISM is for the Meridian ITG Line-side and i2004 Internet Telephone which is not available on 24C.

New and Enhanced Software Packages in 24C (25.08)

New Packages for Release 24C (25.08)

Package Name	Mnemonic	Package Number	Supported on Option 11C
M3900 Ph1 Support Package	M3900PH1	383	No

Package 383 is introduced for Large systems on Release 24C (25.08) to:

- "Turn off" the Release 25.10 features that are not supported on Release 24C (see Chapter 1" Feature Interactions")
- Re-allocate the memory on Large systems so that 24C can be run without a memory upgrade. Release 24C (25.08) has the same memory requirements as Release 24.24/24.25 (Refer to Chapter 3 " Call Processor Memory Requirements").

Enhanced Packages for Release 24C (25.08)

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

Chapter 7 - Auxiliary Processor Compatibility

Release 24C (25.08) supports the same Auxiliary Processor Release levels as Release 25.10. Below are the auxiliary appplication release levels that are compatible with X11 Release 24C (25.08).

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

Auxiliary Processor	Compatibility (Release)
Symposium Multimedia Conference	4, 5
Symposium Communicator	1.x - 2.0
Symposium Fast Call / Fast View (Windows Only)	1.x
Symposium TAPI Service Provider	2.x
Symposium Desktop TAPI Service Provider for MCA (Meridian Communicator Adapter)	1.x - 2.x
Symposium Call Manager	4.x - 5.x
Symposium Agent	1.x - 2.x
Symposium 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]

This information is subject to change.

[a] No X11 dependency.

Meridian 1

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

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