Meridian 1

Meridian Companion

Product Overview

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Introduction

The Meridian Companion system offers digital wireless capability. With Meridian Companion, users can travel around their work sites while answering, initiating, continuing, and transferring phone calls on portable telephones.

Meridian Companion works with the systems and software options shown in Table 1.

Table 1: Meridian 1 systems supporting Meridian Companion

Meridian 1 systems	X11 and X11 international software	2500 features and Message Waiting Indicator	CLID, CPND, Wireless Privacy - with package 240	Enhanced Capacity (package 350)
Options 11 through 81	Release 15–19	Yes	No	No
Options 11 through 81	Release 20B–23	Yes	Yes	No
Options 11 through 81	Release 24	Yes	Yes	Yes
To support Meridian Companion, ST/STE, RT, NT, and XT systems must be upgraded to include an IPE Module or CE/PE Module.				

A Meridian Companion system is customized to meet the needs of a specific site. Base Stations, that have two radios each for transmitting and receiving calls, are strategically placed throughout the site to provide the desired level of coverage. Standard telephone wiring connects each Base Station to the Companion Meridian Controller Card (CMCC), to a Companion Meridian

Radio Line Card (CMRC), or to a Companion Meridian Base Station Card (CMBC).

Figure 1 shows an overview of the Meridian Companion configuration.

Figure 1: Meridian Companion overview
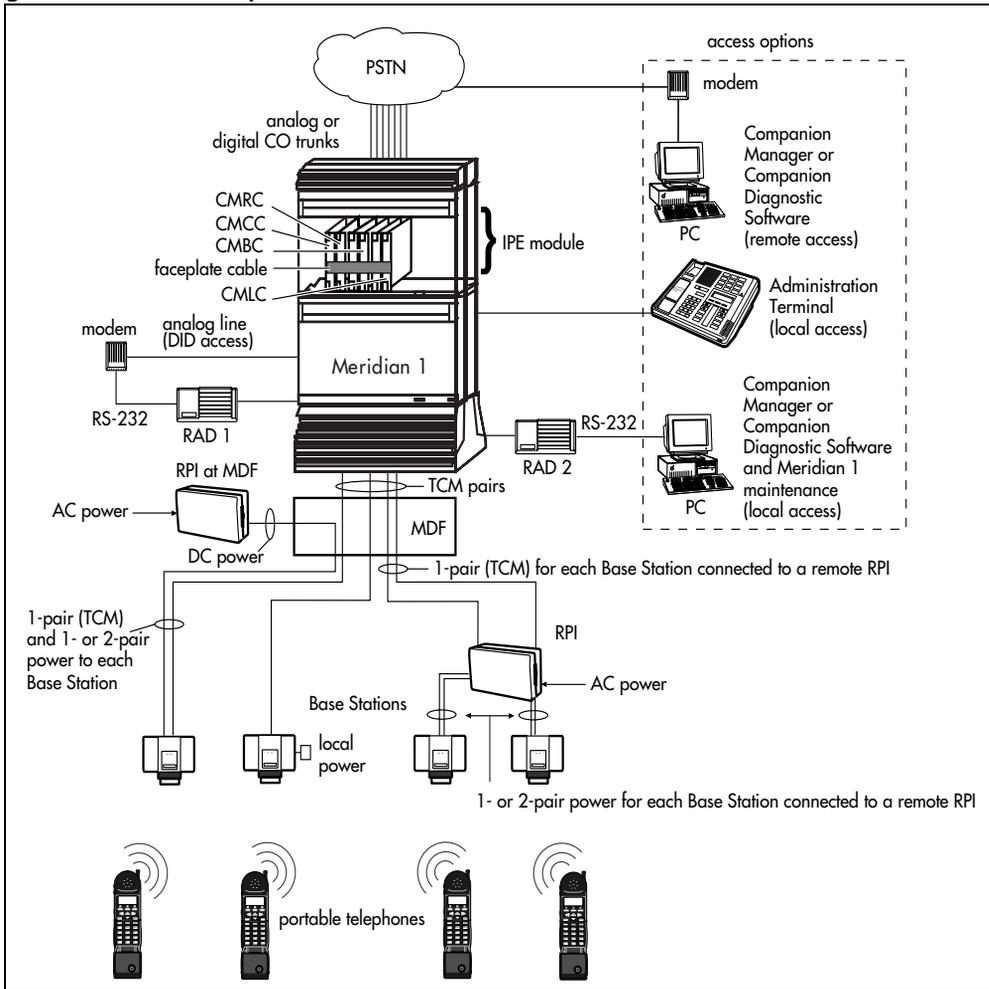
The following table summarizes what is new this release of Meridian Companion:

Table 1: Changes in this release

	Feature MC32 on M1	MC500
expanded user capacity	x	x
CMBC		x
new releases of CDS and Companion Manager		x
other feature improvements		x

System configuration

Meridian Companion software has the following components.

- Meridian 1 X11 software enables Meridian Companion to access Meridian 1 communications features.

- Companion controller software provides mobility functions, terminal-based administration, and operational and maintenance features.

The Meridian Companion Enhanced Capacity feature (M1 Pkg 350, known as feature MC32,) on any platform supporting Release 24, doubles the user capacity of the cards. On systems without feature MC32, the Companion Meridian Controller Card supports one Administration Terminal or Remote Access Device (RAD), up to 15 Base Stations, and up to 16 portable telephone users. A RAD connects an Administration PC running Companion Manager or Companion Diagnostic Software (CDS) to the Companion Meridian Controller Card. For a system that uses both a RAD and an Administration Terminal, the Companion Meridian Controller Card can support up to 14 Base Stations

With feature MC32, the Companion Meridian Controller Card supports up to 15 Base Stations (and one Administration terminal) and up to 32 portable telephone users.

Three optional expansion cards, the Companion Meridian Line Card, the Companion Meridian Radio Line Card, and the Companion Meridian Base Station Card, add user and Base Station capacity. Table 2 shows the capacity of the cards on systems with and without feature MC32:

Table 2: Capacity with feature MC32

Card	With feature MC32	Without feature MC32
CMCC	32 portables, 15 Base Stations and 1 Administration Terminal or RAD	16 portables, 15 Base Stations and 1 Administration Terminal or RAD
CMLC	32 portables	16 portables
CMRC	32 portables, 16 Base Stations	16 portables, 16 Base Stations
CMBC	16 Base Stations	16 Base Stations
* Note: Feature MC32 does not apply to Base Stations, therefore does not impact the capacity of the CMBC		

Recommended card combinations

The following tables show recommended card combinations and the number of portables and Base Stations that each combination supports. A system that supports many users in a smaller area or supports users who are infrequent callers is a user-intensive system. For a user-intensive system, use a combination of CMLCs and CMRCs. For example, 192 portable users and 63 Base Stations can be supported by a combination of two CMLCs and three CMRCs (2,3) on a system with the expanded capacity offered by feature MC32.

On a coverage-intensive system (a system that requires more Base Stations because the coverage area is greater or the traffic per cell is greater), use a combination of CMRCs and CMBCs.

Note: All systems require a CMCC card.

Table 3Recommended card combinations for user-intensive system (CMLC/CMRC)

Columns show numbers of CMLC (on left) and CMRC cards to support the required number of users and Base Stations.

Number of portable telephone users supported		Number of Base Stations supported (plus 1 Admin terminal or RAD)							
With feature MC32	Without feature MC32	15	31	47	63	79	95	111	127
32	16	0/0 (CMCC only)							
64	32	1/0	0/1	Use CMLC/CMRC combination					
96	48	2/0	1/1	0/2	See Coverage-intensive				
128	64	3/0	2/1	1/2	0/3	table			
160	80	4/0	3/1	2/2	1/3	0/4			
192	96	5/0	4/1	3/2	2/3	1/4	0/5		
224	112	6/0	5/1	4/2	3/3	2/4	1/5	0/6	
256	128	7/0	6/1	5/2	4/3	3/4	2/5	1/6	0/7
288	144	8/0	7/1	6/2	5/3	4/4	3/5	2/6	
320	160	9/0	8/1	7/2	6/3	5/4	4/5		
352	176	10/0	9/1	8/2	7/3	6/4			
384	192	11/0	10/1	9/2	8/3	Heavy line shows			
416	208	12/0	11/1	10/2	capacity of Option 11,				
448	224	13/0	12/1	limited by the number of					
480	240	14/0	card slots on the IPE shelf						

Table 4Recommended card combinations for coverage-intensive system (CMRC/CMBC)

Columns show numbers of CMRC (on left) and CMBC cards to support the required Base Stations and users.

Number of Base Stations supported	Number of portable telephone users supported (plus 1 Admin terminal or RAD)								
	32	64	96	128	160	192	224	256	**With feature MC32**
	16	32	48	64	80	96	112	128	**Without feature MC32**
15	0/0 (CMCC only)								
31	0/1	1/0							Use CMRC/CMBC combination
47	0/2	1/1	2/0						See User-intensive
63	0/3	1/2	2/1	3/0					table
79	0/4	1/3	2/2	3/1	4/0				
95	0/5	1/4	2/3	3/2	4/1	5/0			
111	0/6	1/5	2/4	3/3	4/2	5/1	6/0		
127	0/7	1/6	2/5	3/4	4/3	5/2	6/1	7/0	
143	0/8	1/7	2/6	3/5	4/4	5/3	6/2		
159	0/9	1/8	2/7	3/6	4/5	5/4			
175	0/10	1/9	2/8	3/7	4/6				Heavy line shows capacity of
191	0/11	1/10	2/9	3/8					Option 11, limited by the number of
207	0/12	1/11	2/10						card slots on the IPE shelf
223	0/13	1/12							
239	0/14								

Meridian Companion features

The Meridian Companion system provides access to a range of features available through a Meridian 1 system.

X11 releases 15 through 19 provide standard 2500 calling features. Users can access these features with special prefix (SPRE) codes or flexible feature codes (FFCs).

X11 release 20B supports the features available with earlier releases as well as the following:

- message waiting indication

- Call Party Name Display, which shows the name of the other party

- Calling Line Identification, which shows the number (or extension) of the other party

- Wireless Privacy, which provides separate calling capability for a portable telephone that is twinned with a wired telephone

Note: Message waiting indication, Call Party Name Display, and Calling Line Identification are available only on portable telephones that have a display.

X11 release 24 with package 350 supports all of the features available with X11 release 20 B as well as increased capacity.

Meridian Companion documentation set

For information about deployment, refer to *Meridian Companion Site Planning Reference Manual* and *Guide to Site Planning*.

For information about installing the system, configuration programming, or maintenance programming, refer to *Meridian Companion Installation and Maintenance Guide*.

For information about system configuration, refer to *Meridian Companion Programming and Provisioning Record*.

For information about customizing the Meridian Companion system using the Administration Terminal, refer to *Meridian Companion Administration Terminal and Operations Guide*.

For information about installation, operation, administration, and maintenance using Companion Manager, refer to *Companion Manager Installation and Operations Guide*.

For more information about using the Companion Deployment Tool (CDT), refer to *Companion Deployment Tool User Guide*.

For information about operating characteristics of a wireless system, refer to *Companion Diagnostic Software (CDS) User Guide*.

User guides and quick reference cards are provided with each portable telephone used with the Meridian Companion system.

For a description of 2500 features, refer to *X11 Features and Services*. For a complete list of prompts and service changes, refer to *X11 Input/Output Guide*.

Hardware and software requirements

Hardware

Table 5 lists the components of a Meridian Companion system. Your requirements depend on your system configuration.

Note: The part numbers that are omitted vary depending on the market and are specified in market-specific product bulletins.

Table 5 : Hardware components

NT code	Hardware component	Use
NTCK94CD A0743022	Companion Meridian Controller Card	• controls Meridian Companion system operation • supports up to 15 Base Stations, 1 Administration Terminal, and (with Pkg 350 on Rls 24) 32 wireless terminal numbers
NTCK9401 A0620505	ROM daughter card	contains software required for all systems
NTCK91AB A0634045	Companion Meridian Radio Line Card	supports up to 16 Base Stations and (with Pkg 350 on Rls 24) 32 wireless terminal numbers
NTCK93AB A0634046	Companion Meridian Line Card	(with Pkg 350 on Rls 24) supports up to 32 wireless terminal numbers

Table 5 : Hardware components (continued)

NT code	Hardware component	Use
NTCK97AA A0737536	Companion Meridian Base Station Card	supports up to 16 Base Stations
A0615589	interboard faceplate cable harness	connects cards to neighboring cards
A0616481	bypass faceplate cable harness	connects cards across the NT8D01 Controller Card (if necessary)
A0615596	Companion Meridian Radio Line Card maintenance cable	attached to cable harness to bypass a Companion Meridian Radio Line Card that is being removed
A0615597	Companion Meridian Line Card maintenance cable	attached to cable harness to bypass a Companion Meridian Line Card that is being removed
A0345353	A/B box	for PC-based operations, administration, and maintenance software
A0398761 (10 feet) A0398762 (25 feet)	null modem cable	for remote PC operations, administration, and maintenance software
A0399143 (10 feet) A0399144 (25 feet)	straight RS-232 cable	for local PC operations, administration, and maintenance software
	Companion Deployment Tool (CDT)	determines where to place Base Stations
	remote access device	for using PC operations, administration, and maintenance software
	Administration Terminal	programs and maintains Meridian Companion system

Table 5 : Hardware components (continued)

NT code	Hardware component	Use
	Base Stations (C1110) and optional external antennas (indoor directional, indoor omnidirectional, outdoor omnidirectional)	contain radios that transmit and receive signals to and from portable telephones
A0667940 (RPI-8) A0667941 (RPI-16)	remote power interconnect (RPI) unit	provides remote power for multiple Base Stations
A0386334	plug-top power supply	provides local power to a Base Station (alternative to RPI)
A0382082	lightning surge arrestor included with outdoor antenna A0637293 for PCI system	for each outdoor external antenna to protect the Meridian 1 system from electrical surges
	primary protectors for Base Stations and cards in an exposed application	provides voltage surge protection for exposed wiring where it enters a building
	secondary protectors for Base Stations and cards in an exposed application: Oneac Corp. Model 6DP or ITW LINX Model MP1A-90-27	provide overcurrent protection and voltage surge protection for exposed wiring between a primary protector and a Base Station or Meridian Companion Card
	portable telephones: Companion C3050	for making telephone calls
	personal computer (Administration PC)	to run operations, administration, and maintenance software
	9600 baud, Hayes-compatible modem	for remote connection between personal computer and RAD

Software

- Meridian 1 X11 release 15 or later

- Companion Meridian Controller Card installed on the Companion Meridian Controller Card ROM

Companion Diagnostic Software (CDS) and Companion Manager are optional.

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