



## Product Brief

### Nortel Business Communications Manager 450

*A new, scalable platform that's ideal for businesses with 30 to 250 employees*

The way we do business has changed substantially over recent years. Traditional work places that relied on paper-based transactions, hardware-based solutions, basic computers, and networking capabilities have evolved together with globalization, distributed workforces, electronic and web transactions. Companies operate much differently now and the challenge is choosing a communications system that meets the needs of the 'hyperconnected' world we live in — a world in which anything that can be connected does get connected. This new paradigm will continue to accelerate, leading to more complex and diverse business environments that will demand more bandwidth, sophisticated networks, applications and services.

Faced with these challenges, how can you maintain your competitive advantage and still deliver the high-quality services your customers have come to expect? The answer: Nortel's new Business Communications Manager 450 (BCM450) — the latest addition to Nortel's award-winning, widely-deployed BCM portfolio.

Designed specifically for small and medium-sized businesses (SMBs), Nortel's Business Communications Manager 450 supports both IP and traditional digital technologies

simultaneously, paving the way for smooth migration from an IP-enabled to a pure IP deployment; so that you can participate in the benefits of the latest technologies while leveraging your existing investments.

IP is transforming the way we do business — how we connect our employees, meet with our partners, and engage our customers. Today's increasingly mobile and dispersed workforce demands flexible and fully-integrated communication solutions. These solutions can only be delivered by a truly converged voice and data network, like the Business Communications Manager 450 (older technologies such as TDM don't offer the same network capabilities or feature

benefits). With a voice over IP (VoIP) communications framework at its core, the Business Communications Manager 450 has a lot to offer: several integrated, value-added business applications, an extensive telephony feature set, advanced networking, centralized configuration/monitoring and embedded security throughout. SMBs that choose to move towards an IP platform will benefit from proven efficiencies in network operations and productivity gains fueled by better collaboration and reduced time to decision. However, above all, SMBs choosing an IP platform can expect higher customer satisfaction achieved by greater accessibility and enriched service experiences.



If you are currently a Norstar Modular Integrated Communications System (MICS) customer, now is the time to make the switch to Business Communications Manager 450 and start converging your voice and data into one integrated IP communications network. By supporting a hybrid (mixed) deployment, the Business Communications Manager 450 lets you easily transition from digital to pure IP — without a complete infrastructure overhaul. In fact, the Business Communications Manager 450 is capable of extending beyond the MICS capacity of 224 digital sets to accommodate the needs of any IP or digital mix of up to 300 users. In addition to the capital savings, by supporting the digital phones and a similar telephony feature set, with Business Communications Manager there is no incremental end user training required. This helps make the migration to IP simple and affordable.

### Did you know?

You can migrate from a Norstar Modular Integrated Communications System (MICS) to the Business Communications Manager 450 platform and still retain your existing phones, fiber trunk and station modules — this can add up to 70 percent of the total cost of a new telephony system.

### Two things that go hand in hand with the Business Communications Manager 450 — accelerating your business and saving you money!

The Business Communications Manager 450 offers powerful applications and features that reduce operating costs, enhance employee productivity and increase customer satisfaction. Let's have a closer look at how the Business Communications Manager 450 can help increase operational efficiencies by:

- Using your Wide Area Network to securely transmit voice and fax calls while avoiding long distance charges and capitalizing on advanced applications and conferencing capabilities.
- Centralizing and simplifying administration, configuration and management across your multiple sites with the Nortel Network Configuration Manager (NCM).
- Template-based sets provisioning makes it easier to program phones by reusing existing profiles across a network of Business Communications Managers, dramatically reducing



### Why choose Business Communications Manager 450?

**High capacity:** Supports up to 100 users with the base model — any mix — and up to 300 users with the new pluggable Capacity Expansion Card (CEC).

**Operability:** Several significant operability enhancements build upon a solid foundation, established by previous releases from the Business Communications Manager portfolio, including the Business Communications Manager 50 Release 3.0. Some of the key improvements include new capabilities for Business Element Manager that make the initial installation and ongoing management easier, new GUI-based System Reset and Reboot Optimization functions, and a comprehensive task-based Troubleshooting Guide for all operations on the Business Communications Manager system.

**Simplified hardware platform:** New Business Communications Manager hardware components, including the Base Function Tray (BFT), Chassis Interface Board (CIB) and Capacity Expansion Card (CEC), simplify installation, connectivity and expandability.

**Robust business applications:** The addition of Meet-Me Conferencing (MMC) and further enhancements made to Intelligent Contact Center (ICC) and Unified Messaging (UM) round out an already impressive suite of rich features and capabilities.

set-up time by adding or deleting models, importing or exporting files for reuse, or creating a library of set templates per function (e.g., executives, sales, marketing).

- Taking advantage of the system reset function to enable system restoration to the default factory setting using a simplified reset logic.
- Consulting the comprehensive suite of technical guides, developed using the Modular Task-Based Information (MTBI) standard, when executing procedures in the operation of your Business Communications Manager. With topics ranging from installation to administration and configuration, users will benefit from significant time savings and greater accuracy in executing these various tasks.

### Enhance employee productivity

Secure remote Internet access and VoIP, and enhanced 'near the office' mobility enables users to stay in touch any time they're away from their desks.

### Increase revenues and business

Take advantage of optional intelligent contact center and self-service voice menu applications (i.e., automated attendant) that make it easier and more enjoyable for customers to do business with you. Skills-based routing, for

## Going greener...

What's good for business can also be good for the environment. The Business Communications Manager 450 enables anywhere-anytime communications, thereby reducing the need for employee travel, office space and energy consumption. In an ongoing commitment to reduce carbon footprint and also to reduce Total Cost of Ownership, Nortel continues to enhance its products to minimize overall power consumption. Check out what Nortel is doing to make the business world greener — visit [nortel.com](http://nortel.com).

example, sends callers promptly to the agent most qualified to help them.

## Business Communications Manager 450: Get ready for flexibility and scalability

The Business Communications Manager 450 base offering provides ample capacity to meet the growth requirements of most small and medium-sized businesses. By adding the Capacity Expansion Card (CEC), the Business Communications Manager 450 expands up to 300 users with trunk capacity and interfaces to effectively support a variety of applications and global networking demands. The number of conferencing ports also scales in line with the maximum supported users. What does this mean for your organization? A simple and flexible solution that scales as your business needs grow.

## Big-business applications — without a big price tag

The Business Communications Manager 450 comes with hundreds of telephony features and a full suite of integrated applications pre-loaded "in the box" — and as your business needs evolve, you can easily activate more capabilities without having to purchase additional expensive hardware. Rich multimedia applications can be activated to voice- and chat-enable a website. These features are all orderable via simple software keycodes and do not require extra hardware.

## Meet-Me Conferencing

The easy-to-use Meet-Me Conferencing functionality allows parties to establish a teleconference for up to 120 total participants using the CEC, with 60 simultaneous participants on one conference, by calling into a specified telephone number and extension at an agreed-upon time. The application includes a rich set of user controls, enabling the "chairperson" to start, stop, secure and control the conference. This makes it ideal for larger conferences, specifically those involving outside suppliers or customers.



**Figure 1. Business Communications Manager 450**

### Ad-hoc Conferencing

Now it's easy to get the team together for a meeting at the spur of the moment, regardless of where they're located. Simply and efficiently initiate a teleconference call with up to 120 total participants using the CEC, with 60 simultaneous participants on one conference, without the need for a conference operator or service.

### Intelligent Contact Center (ICC)

Through integrated Intelligent Contact Center (ICC) capabilities, you can increase customer satisfaction and business productivity by directing clients to the right person at the right time quickly. By default, when activated, the ICC has two agents and one skill set; however, you can then order any combination of agents and skill sets as well as advanced reporting and multimedia applications for maximum customization and flexibility.

### Unified Messaging

Business Communications Manager 450 consolidates voice, fax and email messages onto users' PCs, laptops or PDAs, and manages them through one standard application such as Microsoft Outlook or Exchange. This means that

important messages are sent and received regardless of terminal or device — a real time saver and productivity booster.

### Automated Attendant

This always-on-duty "administrative assistant" answers calls to your business with your personalized greetings and menu options, and routes calls to the right people, departments or voice mailboxes, delivering much greater efficiency and more satisfied customers.

### Computer Telephony Integration (CTI)

Simple to activate, set up and manage, CTI enables you to use third-party, PC-based applications to control telephone services such as a click-to-call company directory or automatic screen "pops" with customer information when they call.

### Activity Reporter

Business Communications Manager 450's flexible reporting enables you to better understand and optimize your call flows, for improved customer service, increased employee productivity and cost savings. The basic version Activity Reporter is an on-box reporting system that provides reports on Business Communications Manager telephony

data metrics (e.g., Call Accounting, Auto Attendant Call Routing and Voicemail). The full version is an off-box system offering more advanced reporting capabilities and greater flexibility, enabling you to organize information the way you want.

### Advanced Paging Productivity (APP) Pack

APP Pack<sup>1</sup> is a suite of advanced applications that can increase employee productivity, improve customer service and streamline business processes — almost anywhere paging and text messaging are used. APP Pack works with IP and digital stations and includes features such as One Button Paging, One Button Text Messaging and Scheduled Announcements.

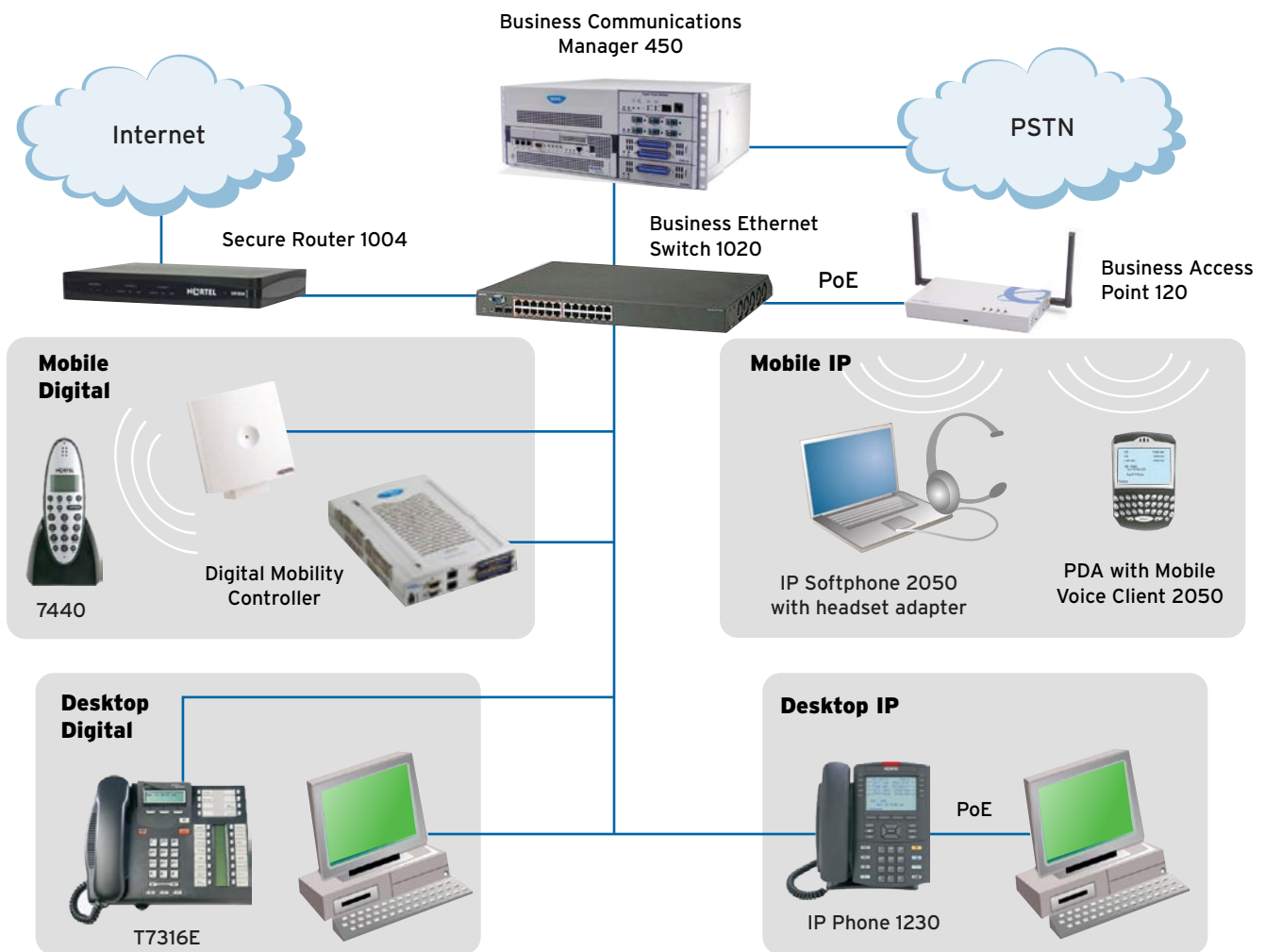
### Message Forwarding

Message Forwarding<sup>2</sup> adds yet another powerful unified communications capability to the Business Communications Manager, enabling employees to stay connected to customers and each other while on the move. With Message Forwarding, text emails are forwarded to another desktop or mobile device when a voice or fax message arrives in a subscriber's voice mailbox. There is also an option to attach a compressed WAV file to the forwarded email, so the user can play the voice message or display the fax message on the destination device. It's flexible to use with a wide variety of email clients and PDAs. It removes unnecessary long distance charges when retrieving messages. Most of all, it's simple to install, use and maintain with no add-on client software or firmware required. This feature can be activated with the existing BCM Unified Messaging authorization codes.

<sup>1</sup> APP is supported in North America only.

<sup>2</sup> Will be available one to two months after BCM450 General Availability via the BCM Value Add Program.





**Figure 2. Solution scenario, medium/large business**

**Buy what you need today.  
Easily expand to what  
you need tomorrow.**

**Pick and choose the features  
you want.**

Since all features and applications are pre-loaded onto the Business Communications Manager 450 system, these too can be easily activated through the use of a simple keycode. If you're not sure which applications are right for your business, Nortel makes it easy to decide by offering a 60-day free trial for most applications.

**Upgrade without an overhaul**  
Through standards and an "ever-green" development strategy, Business Communications Manager 450 fits well in hybrid environments that contain a mix of analog, digital, IP and wireless services. And since the platform interworks with other Nortel key/PBX systems, larger Business Communications Manager systems and Nortel's portfolio of convergence call servers, you have the flexibility to evolve your network — wherever the future leads you.

**Easy to install.  
Easy to manage.**

**Simplify system administration  
with integrated management  
tools**

Through a built-in, intuitive software management application, you can monitor and program the entire system, including its many capabilities. You won't need a PC or IP connection to manage Business Communications Manager 450 because most functions can be programmed through any connected telephone set.

### **Easily manage large, distributed networks**

If your network includes multiple systems, including Business Communications Manager 50, 200, 400 and 450 solutions, you can manage each of these platforms from a central location. Nortel Network Configuration Manager helps you create and maintain a centralized database of configurations for up to 2,000 systems. This makes it fast and easy to bring new systems online, back-up and restore information — whether you need to manage a small or large network.

### **Take advantage of centralized applications**

You can further streamline administration by centralizing applications for messaging and management, and distributing these capabilities over your IP network. In addition to cost savings, your business also benefits from global administration and a consistent interface and user experience across the network.

### **Nortel's data portfolio**

Combining the Business Communications Manager 450 with Nortel's impressive data portfolio of Ethernet Switches (Business Ethernet Switch 1020 or Ethernet Routing Switch 2500), Wireless LAN Access Points (Business Access Point 120) and Secure/VPN Routers (Secure Router 1004 and VPN Router 1750) results in a completely

converged solution. Nortel's data portfolio is not only standards-based, it also boasts high-speed data transfer, secure Internet access, VPN connectivity, VoIP Quality of Service (QoS) and Power over Ethernet (PoE) capabilities.

### **Support for a broad range of phones**

Nortel has some of the most advanced IP and digital phones in the market, and continues to evolve and expand its portfolio, most recently with the new IP Phone 1200 Series. We also offer industry-leading feature integration across these sets. Unlike many competitors who rely exclusively on third-party products, have limited selection and/or capabilities, or do not support the same phones on all platforms, Nortel takes a more strategic, longer-term approach in serving customer needs.

For example, Business Communications Manager supports the Nortel Business Series Terminals (BST), providing significant investment protection for Norstar installed base customers by up to 70 percent when they migrate to the Business Communications Manager platform.

### **Affordable, converged voice and data communications**

When it comes to your communications needs, count on Nortel. We've been delivering telephony and data systems to service providers and enterprises for decades — the company that pioneered the digital revolution, reinvented business networking in the Internet Age, and leads the market in small and medium business telephony today.

To find out more about Nortel Business Communications Manager 450, visit [www.nortel.com/bcm450](http://www.nortel.com/bcm450).



**Figure 3. BCM client portfolio overview**



**Note:** The T7000 is used primarily in EMEA (not available in North America). The T7406E is available only in North America, Mexico and the Caribbean (except Trinidad and Jamaica). The Digital Mobility 7430 is available in North America, China and Argentina only. Equivalent handsets include the 4135 (EMEA and Hong Kong), 4136 (Australia and New Zealand) and 7434 (South America). The Digital Mobility 7440 is available in North America, China and Argentina only. Equivalent handsets include the 4145 (EMEA and Hong Kong), 4146 (Australia and New Zealand) and 7444 (South America).

## Business Communications Manager 450 Technical Specifications

Base unit	
<b>Physical dimensions</b>	
<b>Depth</b>	18.3 in.; 46.5 cm
<b>Width</b>	17.5 in.; 44.5 cm
<b>Height</b>	7.1 in.; 18.0 cm
<b>Weight</b>	Standard power supply: 14.18 kg; 31.25 lbs  Redundant power supply: 18.24 kg; 40.20 lbs

Components	
<b>Media Bay Modules</b>	Up to four
<b>CPU Processor</b>	Freescale (1.3GHz core)
<b>Memory (RAM)</b>	512MB DDR2 SDRAM
<b>Hard Drive</b>	80GB SATA
<b>DSP</b>	3 TI 600MHz DSPs
<b>Capacity Expansion Card (optional)</b>	Expansion Daughter Card with 4 TI 600MHz DSPs

System status and LEDs	
Power on self-test with LED feedback	
Two System Status LEDs (Power and Status)	
Three hard drive activity LEDs (HDD1, HDD2, RAID) (RAID LED not supported on BCM450 RIs. 1)	
Reset button	
Platform Status Monitor monitors CPU load, memory load, HDD space, temperature, fans, power, network throughput	
BCM Monitor monitors overall system status, IP telephony functions, utilization of resources, operation of telephony applications and status of PRI, BRI and IP trunks	

Mounting options	
Rack-mount (standard 19-inch rack, pre-installed); Stand-alone (feet included); Wallmount (optional)	

Power supply specifications	
Standard power supply	Redundant power supply (field install only)
Auto-sensing	Auto-sensing
300 Watts	350 Watts
90/264 VAC	90/264 VAC
6.0 A/3.0 A	7.0 A/3.5 A
60/50 Hz	60/50 Hz

Environmental specifications	
<b>Operating temperature</b>	32° to 104°F; 0° to 40°C
<b>Operating humidity</b>	10% to 90% relative humidity, non-condensing
<b>Storage temperature</b>	-67° to 158°F; -55° to 70°C
<b>Storage humidity</b>	Up to 95% relative humidity

Mechanical requirements	
NEBS (GR-63-CORE) compliant for Transportation and Operational Vibration per IEC 68-2-27, Package Drop Shock resistance per IEC 68-2-32, Transportation Bounce to IEC 68-2-55 and Unpackaged Drop to ISTA Project 2A	

Regulatory compliance	
<b>Electromagnetic emissions</b>	
<b>Radiated Air</b>	Australia / NZ CISPR22 Class A  North America FC Part 15 & CISPR22 Class A  EU / International EN55022 Class A
<b>Conducted Power Leads</b>	Australia / NZ CISPR22 Class A  North America FC Part 15 & CISPR22 Class A  EU / International EN55022 Class A

Immunity (ESD, RF Radiated, EFT, Surge, RF Conducted, and Dips / Short Interrupts)	
<b>Radiated</b>	North America customer driven  EU / International EN55024
<b>Conducted</b>	North America customer driven  EU / International EN55024
<b>Harmonics and Flickers</b>	EN 61000-3-2 and EN 61000-3-3

Network protection	
Australia TS038/31/03/04/01	
EU CTR12/13/3/4/21	
North America/CALA FCC Part 68, CS 03 Issue 8	

Safety and surge/transient	
Australia TS038/31/02/03/04, ACA TS001, AS/NZS 3260	
NA/CALA/APAC IEC/EN 60950-1 (including all group and national deviations) and CSA C22.2 No. 60950-1, UL60950-1	

## Business Communications Manager 450 Technical Specifications (continued)

### I/O (Input/Output interfaces)

One 8-pin modular jack (RJ-45) connection for Expansion Chassis

Four 3.5 mm (1/8 inch) standard miniature stereo (3-conductor), Safety Extra Low Voltage (SELV) jacks for auxiliary ringer, page relay, page output and music on hold

- Auxiliary ringer switch capacity of 50mA (non-inductive) at 40 V (maximum)
- Page Relay switch capacity of 50mA (non-inductive) at 40 V (maximum)
- Page Output 600 ohms impedance
- Music on hold mono input

Serial Interface (DB9 RS232) for basic maintenance/configuration CLI

2 USB 2.0 ports

1 10/100 Ethernet OAM port

2 10/100 Ethernet Customer ports (switched)

### Remote Access for Management Applications

Embedded Soft Modem v.34 for dial in and dial out

ISDN BRI / PRI (single B-Channel) for dial in or dial out

### Media Bay Modules

#### 16 Station Digital Station Media Bay Module+ (DSM 16+)

One Amphenol (male) connector (25 pair)

Individual interfaces are current connector (25-pair); limited to 80 mA

16 digital phone ports

Two LEDs: Power, Status

Utilizes 1/2 DS-30 (with DIP switch set appropriately)

#### 32 Station Digital Station Media Bay Module+ (DSM 32+)

Two Amphenol (male)

Individual interfaces are current connectors (25 pair); limited to 80 mA

32 digital phone ports

Two LEDs: Power, Status

Utilizes 1 DS-30 (with DIP switch set appropriately)

#### 8 Station Analog Station Media Bay Module (GASM 8)

One Amphenol (male) connector (25 pair)

Maximum modem connection speed: 28.8 kbps

8 analog phone ports

Loop length 26G 2600 ft, 24G 4000 ft; 22G 6500 ft

Disconnect Supervision-850 ms. Momentary Disconnect (Open Switch Interval (OSI) as per TIA/EIA 464)

Two LEDs: Power, Status

Utilizes 1/4 DS-30 (with DIP switch set appropriately)

*\* Note: Please refer to the engineering documentation for regional availability and signalling standards.*

### Digital Trunk Media Bay Module (DTM)

One 8-pin RJ-45C modular jack

T1 trunk interface with integrated CSU

24 B channels with T1 interface (supports DSX-1 and DS1 interfaces)

23 B channels with North American PRI interface

LEDs: Power, Status, In-service, Loop-back, Test, Receive Alarm, Receive Error, Transmit Alarm, Transmit Error

30 digital channels with ETSI PRI Interface

Utilizes 1 (one) DS-30

### Basic Rate Interface Media Bay Module (BRIM S/T)

Four modular RJ-45 jacks

Supports four S/T interfaces (8 B-channels)

T-interface to connect to an NT1 device or an S-interface to connect ISDN terminals

Supports ETSI and National ISDN BRI

Two LEDs: Power, Status

Utilizes 1/3 DS-30

### Global Analog Trunk Module (GATM 4)

One Amphenol (male) connector (25 pair)

Four loop start CLASS/CMS lines plus one auxiliary port for V.90 modem, fax, analog telephone connection or Power Fail Transfer

Two LEDs: Power, Status

Utilizes 1/4 DS-30

*\* Note: Please refer to the engineering documentation for regional availability and signalling standards.*

### Global Analog Trunk Module (GATM 8)

One Amphenol (male) connector (25 pair)

Eight loop start CLASS/CMS lines plus one auxiliary port for V.90 modem, fax, analog telephone connection or Power Fail Transfer

Two LEDs: Power, Status

Utilizes 1/2 DS-30

*\* Note: Please refer to the engineering documentation for regional availability and signalling standards.*

### Fiber Expansion Media Bay Module (FEM)

Six fiber ports

Connects up to six Norstar\* fiber-based trunk or station modules

Two LEDs: Power, Status

Utilizes 1 DS-30 for each Norstar fiber trunk or station module connected (up to 6)

## Business Communications Manager 450 Technical Specifications (continued)

### Global 4X16 Module

#### (4 Caller ID trunks + 16 Station sets, G4x16)

One Amphenol (male) connector (25 pair) to support four loop start CLASS/CMS lines plus one auxiliary port for V.90 modem, fax, analog telephone connection, or Power Fail Transfer

One Amphenol (male) connector (25 pair) to support 16 digital phone ports

Individual Station interfaces are current limited to 80mA

Two LEDs: Power, Status

Utilizes 1 1/4 DS-30s

*\* Note: Please refer to the engineering documentation for regional availability and signalling standards.*

### Global 8X16 Module

#### (8 Caller ID trunks + 16 Station Sets, G8X16)

One Amphenol (male) connector (25 pair) to support eight loop start CLASS/CMS lines plus one auxiliary port for V.90 modem, fax, analog telephone connection or Power Fair Transfer

One Amphenol (male) connector (25 pair) to support 16 digital phone ports

Individual Station interfaces are current limited to 80mA

Two LEDs: Power, Status

Utilizes 1 1/2 DS-30s

*\* Note: Please refer to the engineering documentation for regional availability and signalling standards.*

### ADID Module

#### (Analog Direct Inward Dial 4-Port or 8-Port, ADID4 and ADID8)

One Amphenol (male) connector (25 pair) to support four or eight ADID lines

Two LEDs: Power, Status

Utilizes 1/4 DS-30 (ADID4) or 1/2 DS-30 (ADID8)

Supports North American DID standard and is only available in NA, CALA and GC (Hong Kong)

### Expansion Cabinet

#### Connections

Six Media Bay Module slots

An 8-pin modular DS256 connector for the interface to the Business Communications Manager base unit (5 meter cable); supporting 8 DS-30 buses

#### Standard Expansion Cabinet

**Depth** 18.3 in.; 46.5 cm

**Width** 17.5 in.; 44.5 cm

**Height** 5.4 in.; 13.6 cm

Expansion Cabinet with no Media Bay Modules 24.75 lb.; 11.25 kg

Expansion Cabinet with six Media Bay Modules 39 lb.; 17.75 kg

### Redundant Expansion Cabinet

#### (redundant power supply and fans)

**Depth** 20 in.; 53.8 cm

**Width** 17.6 in.; 44.6 cm

**Height** 5.4 in.; 13.6 cm

Expansion Cabinet with no Media Bay Modules 31.9 lb.; 14.5 kg

Expansion Cabinet with 6 Media Bay Modules 46.2 lb.; 21 kg

### Power requirements

Standard Power Supply Redundant Power Supply

Auto-sensing Auto-sensing

300 Watts 350 Watts

90/264 VAC 90/264 VAC

6.0 A/3.0 A 7.0 A/3.5 A

60/50 Hz 60/50 Hz

### Environmental ranges

**Operating temperature** 32° to 104°F; 0° to 40°C

**Operating humidity** 10% to 90% relative humidity, non-condensing

**Storage temperature** -67° to 158°F; -55° to 70°C

**Storage humidity** Up to 95% relative humidity

### Mounting options

Rack-mount (standard 19-inch rack); Stand-alone (feet included)

Wall-mount (optional wall-mount bracket available separately)

### Telephones and Adapters

#### Station Sets

#### Business Series

	Dimensions (Inches)	Loop Length (26G)	With SAPS sets
T7000*	7.3D x 5.5Wx3.5H	1,000 ft.	2,600 ft.
T7100	8.1D x 7Wx3.5H	1,000 ft.	2,600 ft.
T7208	8.1D x 7.7Wx3.5H	1,000 ft.	2,600 ft.
T7316E	8.1D x 10.3Wx3.5H	1,000 ft.	2,600 ft.
T24 KIM	7.7D x 3.6Wx3.4H	Connects to T7316E	
NACU**	12.5 x 12Wx2H	1,000 ft.	2,600 ft.

\* Not available in NA

\*\* Available only in NA, CALA and GC (Hong Kong)

## Business Communications Manager 450 Technical Specifications (continued)

### T24 Kim—requires T7316E

T24 EKIM (Enhanced KIM – used as CAP) – max. 12 positions per system; max 4 EKIMs per position

T24 OKIM (Ordinary KIM – used for answer/DSS/BLF) – unlimited per system; max 4 OKIMs without power supply per position; max 9 OKIMs with power supply per position

### IP Stations

Nortel IP Phone 1110E

Nortel IP Phone 1120E

Nortel IP Phone 1140E

Nortel IP Phone 1210

Nortel IP Phone 1220

Nortel IP Phone 1230

Nortel IP Phone 2001

Nortel IP Phone 2002

Nortel IP Phone 2004

Nortel IP Phone 2007

Nortel IP Phone 2033

Nortel IP Softphone 2050 (PC, Laptop or Windows Mobile Client)

### Expansion Modules for IP Phones

Key Expansion Module 2000 Series IP Phones

Key Expansion Module 1100 Series IP Phones - 18 Key

Key Expansion Module 1200 Series IP Phones - Display 12 Keys

Key Expansion Module 1200 Series IP Phones - Paper 18 Key

### WLAN

WLAN Handset 2210

WLAN Handset 2211

WLAN Handset 2212

WLAN Handset 6120

WLAN Handset 6140

WLAN IP Telephony Manager 2245

WLAN Applications Gateway 2246

Nortel Mobile Voice Client 2050

### Digital Mobility

Digital Mobility Controller

Digital Mobility Base Station

Digital Mobility Repeater

Digital Mobility Handsets 7420, 743x, 744x, 413x, 414x

### Mobility – Cordless

T7406E: up to 8 user per system - available in NA, Mexico and Caribbean countries (except for Jamaica and Trinidad) only

### Accessories

BST Doorphone

Norstar Audio Conferencing Unit (NACU)

Station Auxiliary Power Supply (SAPS)

ATA-2 Analog Terminal Adapter (separate models for NA, Europe and Australia)

**In the United States:**

Nortel  
35 Davis Drive  
Research Triangle Park, NC 27709 USA

**In Canada:**

Nortel  
195 The West Mall  
Toronto, Ontario M9C 5K1 Canada

**In Caribbean and Latin America:**

Nortel  
1500 Concorde Terrace  
Sunrise, FL 33323 USA

**In Europe:**

Nortel  
Maidenhead Office Park, Westacott Way  
Maidenhead Berkshire SL6 3QH UK  
Email: [euroinfo@nortel.com](mailto:euroinfo@nortel.com)

**In Asia:**

Nortel  
United Square  
101 Thomson Road  
Singapore 307591  
Phone: (65) 6287 2877

Nortel is a recognized leader in delivering communications capabilities that make the promise of Business Made Simple a reality for our customers. Our next-generation technologies, for both service provider and enterprise networks, support multimedia and business-critical applications. Nortel's technologies are designed to help eliminate today's barriers to efficiency, speed and performance by simplifying networks and connecting people to the information they need, when they need it. Nortel does business in more than 150 countries around the world. For more information, visit Nortel on the Web at [www.nortel.com](http://www.nortel.com). For the latest Nortel news, visit [www.nortel.com/news](http://www.nortel.com/news).

For more information, contact your Nortel representative, or call 1-800-4 NORTEL or 1-800-466-7835 from anywhere in North America.

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