

# Technical Specifications

## Business Communications Manager Release 3.6

### Base unit

Physical dimensions	BCM400	BCM200
Depth	46.5 cm; 18.3 in.	46.5 cm; 18.3 in.
Width	44.5 cm; 17.5 in.	44.5 cm; 17.5 in.
Height	18.0 cm; 7.1 in.	9.0 cm; 3.5 in.
Weight	Std. 11.0 kg; 24.3 lb Redundant 17.0 kg; 37.6 lb	Std. 10.1 kg; 22.4 lb

Components	BCM400	BCM200
Media bay module bays	Four	Two
CPU processor	Intel 1.2 GHz	Intel 850 MHz
Memory (RAM)	256 MB SDRAM	256 MB SDRAM
Hard drive	20 GB EIDE	20 GB EIDE

### System status LEDs

Power status, hard drive activity, system status, PCI device monitoring (MSC, WAN, NIC 1, NIC 2), chassis/CPU temperature, fan activity reset button.

The system status monitor card controls and monitors fans, power supply, chassis temperature and OS status.

### Mounting options

Rack-mounted standard 19-inch rack (brackets included); stand-alone (feet included); wall-mount (optional wall mount bracket available separately).

### Power supply specifications

Standard power supply	Redundant power supply (BCM400 only)
Auto-sensing	Auto-sensing
300 W	300 W
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

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

### Mechanical requirements

NEBS (GR-63-CORE) compliant for transportation and operational vibration and package drop shock resistance per IEC 68-2-27, transportation bounce to IEC 68-2-55 and unpackaged drop to ISTA Project 1A.

### Regulatory compliance

#### Electromagnetic emissions

Radiated Air	Australia AS3548 Class A
	North America CISPR22 Class A
	EU EN55022 Class A

#### Conducted Power Leads

Australia AS3548 Class A
North America CISPR22 Class A
EU EN55022 Class A

#### Immunity (narrow band RF interference)

Radiated	North America customer driven (based on EN 61000-4-3)
	International EN55024 : 1998, EN50082-1 : 1997

Conducted	North America customer driven (Based on EN 61000-4-6)
	EU EN55024 : 1998

#### Immunity to electrostatic discharge

Indirect	No functional impairment up to +/- 15 kV No damage up to +/- 20 kV
Direct	Un-mated I/O ports and connectors, no damage up to +/- 5 kV Mated connector and cords, no functional impairment up to +/- 15 kV, no damage up to +/- 15 kV

#### 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 TS038/31/03/04/01, ACA TS001, AS/NZS 3260

CALA/APAC except Australia EN 60950 (with national deviations), CSA 22.2 No.950/UL 60950

North America UL1950 Ed.3, CSA C22.2 No.950-95, UL 60950

EU CTR12/13/3/4/21, EN 60950 (with national deviations)

United Kingdom EN60950

## Telephony components

### Media Services Card (MSC)

One 8-pin modular jack (RJ-45) connection for expansion chassis (Only on BCM400 not BCM200)

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 50 mA (non-inductive) at 40 V (maximum)

Page relay switch capacity of 50 mA (non-inductive) at 40 V (maximum)

Page output 600 ohms impedance

Music-on-hold mono input

Media Services Processor Expansion Card (PEC-III) slots  
BCM400 – four slots, two equipped from factory  
BCM200 – two slots, one equipped from factory

Supports maximum of 8 DS-30s. Allows 2/6 and 3/5 IP/TDM splits.

### Media Bay Modules (cards) supported

#### 16+ Digital Station 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
- Utilises 1/2 DS-30 (with DIP switch set appropriately)
- Power consumption max. 17.25 W (with all ports used)

#### 32+ Digital Station 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
- Utilises one DS-30
- Power consumption max. 34.5 W (with all ports used)

### Analog Station Module (ASM 8+)\*

- One Amphenol (male) connector (25 pair)
- Maximum modem connection speed: 28.8 Kbps
- Eight analogue phone ports
- Two LEDs: power, status
- Utilises 1/4 DS-30 (with DIP switch set appropriately)

### Digital Trunk Module (DTM)

- One RJ-45C modular jack
- LEDs: power, status, in-service, loop-back, test, receive alarm, receive error, transmit alarm, transmit error
- 30 digital channels with ETSI PRI Interface
- Utilises one DS-30

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

- Four RJ-45C modular jacks
- Supports four S or T interfaces (8 B-channels)
- T-interface for network connections or an S-interface to connect ISDN terminals
- Supports ETSI 300–102 and 300–403 and National ISDN BRI
- Two LEDs: power, status
- Utilises 1/4 DS-30
- Power consumption 3 W
- Ports are non-powered

### Global Analog Trunk Module (GATM 4)\*

- One Amphenol (male) connector for analogue North American, UK, and Australia standard
- Four loop start lines plus one auxiliary port for power fail transfer
- Two LEDs: power, status
- Utilises 1/4 DS-30
- Power consumption 2.5 W

### Global Analog Trunk Module (GATM 8)\*

- One Amphenol (male) connector
- Eight loop start lines plus one auxiliary port for V.90 modem, fax, analogue telephone connection, or power fail transfer
- Two LEDs: power, status
- Utilises 1/2 DS-30
- Power consumption 5 W

\* for selected markets only

### **Fibre Expansion Module (FEM)\***

- Six fibre ports
- Connects up to six Norstar fibre-based trunk or station modules
- Two LEDs: power, status
- Utilises one DS-30 for each Norstar fibre trunk or station module connected (up to 6)

### **DECT Mobility Module**

- Supports up to eight radio base stations through eight RJ-45 connectors
- Each BCM system can support one DECT module with a maximum of 32 DECT handsets
- Each DECT radio base station supports up to four simultaneous calls
- A maximum of eight simultaneous calls can be established between DECT handsets and the BCM core
- Two LEDs: power, status
- Utilises one DS-30

## **Data networking components**

### **Embedded v.92 Modem\***

- BCM Release 3.6 for UK and North America only
- Mounted on system motherboard
- V.92 56 Kbps ITU standard
- V.34 33.6 Kbps ITU standard
- RJ-11 connector
- V.42/MNP 2-4 error control
- V.42/MNP 5 data compression

### **10/100 Ethernet LAN Interface**

- 10/100BASE-T Ethernet ports (on board the mainboard)
- Supports IEEE 802.3 Ethernet frame format
- Uses Carrier Sense Multiple Access with Collision Detection (CSMA/CD)
- Full-duplex support
- Routing
  - Fast LAN to LAN routing
  - LAN traffic smoothing
- PPPoE (enabled using keycode)

## **WAN interface**

### **Two-port PCI Card (field installable)**

- Each port can be independently configured to Frame Relay or PPP
- Each port supports maximum 8 Mbps bandwidth
- STAC compression is available
- Two versions available
  - Two serial ports (V.35)
  - Two serial ports (V.35 and X.21)

### **ISDN via MBMs**

- MLPPP: up to 16 ISDN B-channels
- Supported on PRI or BRI
- Dial on demand, persistent, or WAN backup

## **Expansion cabinet (BCM400 and BCM1000 only)**

### **Connections**

- Six Media Bay Module slots
- An 8-pin modular DS256 connector for the interface to the Business Communications Manager base unit (5-metre cable)

### **Standard expansion cabinet**

Depth 46.5 cm; 18.3 in.

Width 44.5 cm; 17.5 in.

Height 13.6 cm; 5.4 in.

Expansion cabinet with no Media Bay Modules 11.25 kg; 24.75 lbs.

Expansion cabinet with six Media Bay Modules 17.75 kg; 39 lbs.

### **Redundant expansion cabinet (redundant power supply and fans)**

Depth 53.8 cm; 20 in.

Width 44.6 cm; 17.6 in.

Height 13.6 cm; 5.4 in.

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

Expansion cabinet with six Media Bay Modules ; 21 kg; 46.2 lb.

### **Power requirements**

#### **Standard power supply**

#### **Redundant power supply**

Auto-sensing

Auto-sensing

300 W

300 W

90/264 VAC

90/264 VAC

6.0 A/3.0 A

7.0 A/3.5 A

60/50 Hz

60/50 Hz

### **Power consumption**

Min. 15 W

Max. 357 W

Max. heat dissipation 0.030 kWh/105 BTU

\* for selected markets only

## United Kingdom

Nortel Networks  
Maidenhead Office Park  
Westacott Way, Maidenhead  
Berkshire SL6 3QH, UK

## Europe

European Customer Information Centre

Telephone: 00 800 8008 9009\*

+44 (0) 870 907 9009

\*Number accessible from most countries

Email: euroinfo@nortelnetworks.com

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## Environmental ranges (expansion cabinet)

Operating temperature	32° F to 104° F; 0° C to 40° C
Operating humidity	10% to 90% relative humidity, non-condensing
Storage temperature	-67° F to 158° F; -55° C 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

### Digital Telephones

#### Business Series Terminals (BST)

	EMEA	Dimensions (mm)	Loop Length (m)	With SAPS sets (m)
	T7000	185 x 135 x 85	300	780
	T7100	200 x 180 x 113	300	780
	T7208	200 x 195 x 113	300	780
	T7316E	200 x 260 x 113	300	780
	T24 KIM	196 x 90 x 85	Connects to T7316E	

#### 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. four OKIMs without power supply per position; max. nine OKIMs with power supply per position

#### IP Telephones

	Dimensions (mm)
• i2004 Internet Telephone	300 x 165 x 134
• i2002 Internet Telephone	208 x 165 x 168
• i2050 Software Telephone	N/A
• i2001 Internet Telephone – available Q3 04	

#### DECT Handsets

	Dimensions (mm)
• C4050	143 x 51 x 26
• C4010Ex	135 x 58 x 19

#### Accessories

BST Digital Doorphone

USB Headset and Adaptor for i2050

Station Auxiliary Power Supply (SAPS) – extending loop lengths for BST telsets

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