



Technical Specifications

Nortel IP Phone 2004

Professional-level IP Phone expands user experience and business potential

The Nortel IP Phone 2004 delivers a new dimension in communications with the desktop IP Phone.

An ideal solution for managers, executives and office administrators, the multi-line IP Phone 2004 features a large LCD display screen. The display is capable of presenting text-based data and web-centric applications, enhancing personal productivity.

The Nortel IP Phone 2004 is also cost-effective. An integrated IEEE 10/100

Base-T switch with PC and LAN ports supports direct connections to the network and a collocated PC, thus delivering reduced infrastructure costs with a single cable drop to the desktop.

Combined with the rich telephony feature sets, as delivered from Nortel Communication Servers, deployment of the Nortel IP Phone 2004 enhances personal productivity with delivery of a superior user experience for both today's and tomorrow's communications needs.

Key features and benefits include:

- › Multi-line IP Phone with support for up to twelve¹ programmable line/feature keys and four context-sensitive soft label keys
- › Large, high-quality 8x24 LCD display and External Application Server (XAS) support enhance user experience with a wide array of personal productivity tools



IP Phone 2004



¹ Support of twelve programmable line/feature keys requires use of the "shift" function — delivered with Nortel Communication Server 1000.

- › Fourteen fixed keys including Hold, Goodbye, Mute, Volume Bar, Headset, Handsfree, Directory, Inbox/Message, Outbox/Shift, Expand-to-PC, Services, Copy, Quit and four-way navigation cluster
- › Supports converged desktop services such as presence selection and friends list²
- › Integrated high-quality audio speakerphone
- › Integrated headset jack with convenient on/off button
- › Visual Ringing Alert/Message Waiting LED
- › Supports 802.3af standards-based PoE and local AC power via power adapter
- › Dynamic IP addressing with a standard DHCP server offers a flexible, simplified solution for handling adds, moves and changes, reducing management costs
- › Secured communications with standards-based device-level authentication, signaling and media-path encryption^{3/4}

- › Tight linkage with Nortel Communication Servers delivering robust suite of reliable telephony communication features
- › Added convenience and time savings with field-upgradable firmware using Trivial File Transfer Protocol (TFTP) or for sites requiring enhanced secure firmware upgrades: UNIStim File Transfer Protocol (UFTP)⁵

Technical specifications

Platform support

- Nortel Communication Servers 1000, 2000 and 2100
- Meridian 1⁶
- Business Communications Manager (BCM) 50/200/400
- Multimedia Communication Server 5100/5200
- Media Gateway 1000B Expansion Chassis
- Survivable Remote Gateway (SRG)/(SRG 50)

Phone features

- 8-line x 24-character Liquid Crystal Display
- Six-to-twelve programmable line/feature keys⁷
- Four context-sensitive soft-label keys
- Fourteen fixed keys including Hold, Goodbye, Mute, Volume Bar, Services, Expand-to-PC, Inbox/Message, Headset, Handsfree, Directory, Outbox/Shift, Copy, Quit

- Four-way (left, right, up, down arrow) navigation cluster
- Integrated high-quality audio speakerphone
- Integrated amplifier for direct connection to third-party headsets
- Supports External Application Servers (XAS) for text-based data application and web transformation services
- Text and Icon keycap models for global deployments
- Desk or wall mount options

Accessories

- Supports 24-button IP Key Expansion Module (IP KEM) for IP Phone 2000 Series
- Two-to-seven IP KEM modules supported⁸
- KEM supports Power-over-Ethernet and local powering option via IP Phone

Color

- Charcoal with silver-metallic bezel

Connectivity/data rates

- Integrated auto-sensing IEEE 10/100 Ethernet Switch with LAN and PC ports directly connects to network and supports a collocated PC
- Ability to manually disable PC port
- Manually configurable 10- and 100-Mbps speeds when used with Ethernet Switches that do not auto-sense

Dimensions and weight

- Dimensions (WxDxH): 11.26 in x 6.77 in x 6.57 in/ 286mm x 172mm x 167mm on footstand
- Weight: 2.65 lbs/1.20 kg

² Requires Multimedia Communication Server 5100 Release 3.5 or later and is supported on Phase II IP Phone 2004.

³ Requires Secure Multimedia Controller 2450 and Phase II IP Phones for support on Communication Server 1000 and Multimedia Communication Server 5100.

⁴ Requires Phase II IP Phones. Available via firmware update Q3 2006.

⁵ UNIStim File Transfer Protocol (UFTP) is Nortel Communication Server dependent.

⁶ Requires Signaling Server or Voice Gateway Media Card (VGMCC).

⁷ Twelve programmable line/feature keys requires support of "Shift" function — supported on Nortel Communication Server 1000.

⁸ Number of modules varies by Nortel Communication Server. Consult Communication Server documentation of choice for maximum number supported.

Power

- Supports IEEE 802.3af Power over Ethernet, Nortel and selected third-party pre-standard⁹
- AC power: Localized power adapter delivering 48V DC @ 520mA
- Power dissipation: 3.2 watts idle, 4.8 watts maximum – IEEE Power Class 2

Administration and security

- Static and Dynamic Host Control Protocol (DHCP) address assignment
- 802.1ab Link Discovery Protocol⁴
- 802.1x and Extensible Authentication Protocol (EAP-MD5)
- Signaling security with support for 128 Authentication Encryption Standard (AES)³
- Secure Real-Time Protocol (SRTP) standard (pre-shared key)⁴
- VLAN tagging of telephony and PC ports

Protocols

- E.164 dialing support
- Call Control Protocol: UNISlim subset over UDP with reliability layer
- Session Initiation Protocol (SIP)²

Codecs/Quality of Service

- G.711 a- and μ -law, G.723.1 and G.729a and Annex B
- 802.1p/Q, DiffServ and VLAN tagging for both PC and telephony port traffic

Operating temperature

- +5°C to 40°C/40°F to 104°F

Relative humidity

- 5% to 95% (non-condensing)

Storage temperature

- -40°C to 70°C/-40°F to 158°F

EMC

EMI/RFI

- United States: FCC 47 CFR Part 15 Class B
- Canada: ICES-003 Class B
- Australia/New Zealand:
 - AS/NZS 3548 Class B
- European community:
 - EN55022 Class B
 - EN 55024
 - EN 61000-3-2
 - EN 61000-3-3
 - VCCI

Safety

- United States: UL 60950
- Canada: CSA 22.2 No. 60950
- IEC 60950-1
- Australia/New Zealand: AS/NZS 60950-1
- European Community: EN 60950-1

Other

- External Application Server (XAS) for text-based data application and web transformation services
- FCC Part 68 HAC
- IC CS-03 HAC
- Australia AS/ACIF S004
- New Zealand PTC 220
- Reduction of Hazardous Substances (RoHS) compliant as part of European Union Environmental Directive (EUED)¹⁰
- American Disabilities Act (ADA) compliant dialpad

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⁹ Third-party pre-standard switch support includes Cisco 4503 CATOS 7.6(3), 6503 CATOS 8.3(2), 3550 IOS 12.1(13).

¹⁰ Nortel Product Engineering Codes (PEC) with “E5” and “E6” appendages are RoHS compliant.

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