



Technical Specification

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 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 business 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 8 line x 24 character LCD display and Nortel Application Gateway 2000 support enhanced user experience with a wide array of personal productivity tools
- › Fourteen fixed keys including Hold, Goodbye, Mute, Volume Bar, Headset, Handsfree, Directory, Inbox/Message, Outbox/Shift, Expand Services, Copy, Quit and four-way navigation cluster



Nortel IP Phone 2004



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

- › Supports converged applications and web services presentation on the display as delivered from External Application Servers (XAS) such as the Nortel Application Gateway 2000
- › Integrated high-quality audio two-way speaker
- › Integrated headset jack with convenient on/off button
- › Visual Ringing Alerter/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 user authentication, signaling and media-path encryption^{2,3}
- › 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)⁴

Technical specifications

Nortel platform support

- Communication Server 1000, 2000 and 2100
- Meridian 1⁵
- Business Communications Manager 50/200/400
- Multimedia Communication Server 5100/5200
- Application Server 5200
- Media Gateway 1000B Expansion Chassis
- Survivable Remote Gateway 50/200/400

Phone features

- 8-line x 24-character Liquid Crystal Display
- Six-to-twelve programmable line/feature keys⁶
- 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 two-way audio speaker
- Integrated amplifier for direct connection to third-party headsets
- Supports Nortel Application Gateway 2000 for converged application and web transformation services
- Text and Icon keycap models for global deployments
- Desk or wall mount options

Accessories

- Supports 24-button Expansion Module for IP Phone 2000 Series
- Two-to-seven Expansion Modules supported⁷
- Expansion Module for IP Phone 2000 Series supports Power-over-Ethernet and local powering option via IP Phone

Color

- Charcoal with silver-metallic bezel finish

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

User Selectable Ringtones

IP Call Recording

- Supports dual media stream IP Call Recording with Nortel Contact Recording and Quality Monitoring (CRQM)

Dimensions and Weight

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

Power

- Supports IEEE 802.3af Power over Ethernet, Nortel and selected third-party pre-standard⁸
- AC power: Localized power adapter delivering 48V DC @ 520mA
- Power dissipation: 3.2 watts idle, 4.8 watts maximum — IEEE Power Class²

² Secure Encryption requires Secure Multimedia Controller 2450 and Phase II IP Phone 2004 for support on Communication Server 1000 and Multimedia Communication Server 5100.

³ Requires Phase II IP Phone 2004.

⁴ UNIStim File Transfer Protocol (UFTP) is Nortel Communication Server dependent.

⁵ Requires Signaling Server or Voice Gateway Media Card (VGMC).

⁶ Twelve programmable line/feature keys requires support of "Shift" function — supported on Nortel Communication Server 1000.

⁷ Number of modules varies by Nortel Communication Server. Consult Communication Server documentation of choice for maximum number supported.

⁸ Third-party pre-standard switch support includes Cisco 4503 CATOS 7.6(3), 6503 CATOS 8.3(2), 3550 IOS 12.1(13).

Administration and Security

- Static, Partial and Full Dynamic Host Control Protocol (DHCP) address assignment (Full DHCP factory default)
- 802.1ab Link Layer Discovery Protocol (LLDP) for network discovery and inventory management³
- 802.1x and Extensible Authentication Protocol (EAP-MD5) for device-level authentication
- Signaling path encryption with support for 128-bit Advanced Encryption Standard (AES)^{2,3}
- RFC 3711 compliant Secure Real-Time Protocol (SRTP) Pre-shared Key and Public Key Infrastructure^{3,9}

Protocols

- E.164 dialing support

Audio Quality of Service

- G.711 a- and μ -g-law, G.723.1 and G.729a and Annex B
- 802.1p/Q, DiffServ and VLAN tagging of telephony port traffic
- Supports echo cancellation and silence suppression
- Supports Proactive Voice Quality Management (PVQM) for enhanced administration and diagnostics

Operating temperature

- +5°C to 40°C/40°F to 104°F

Relative humidity

- 5% to 95% (non-condensing)

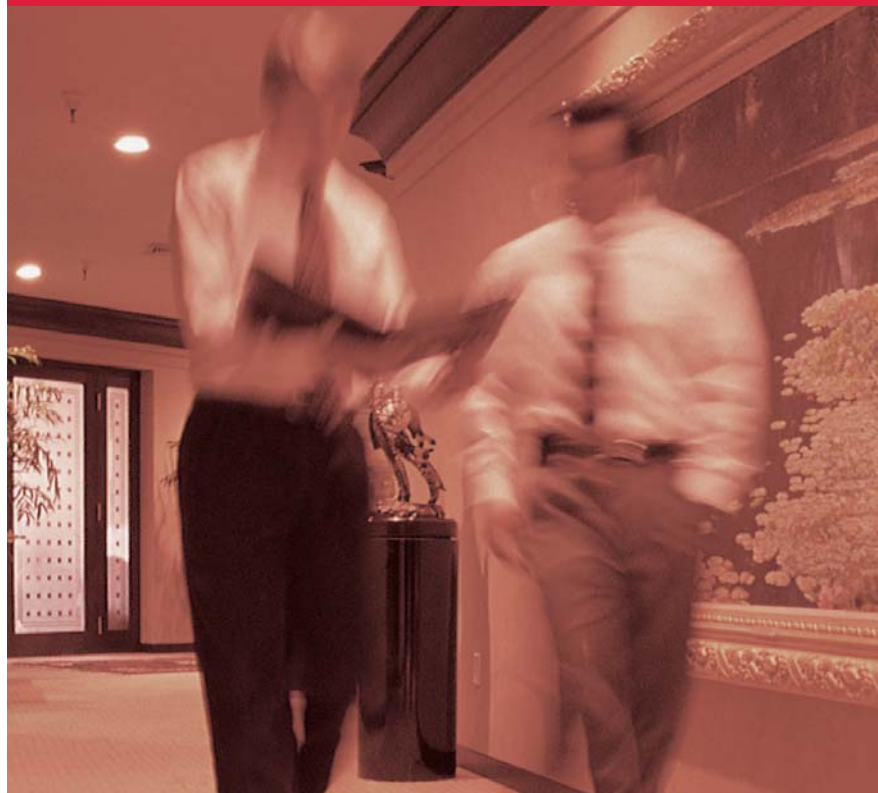
Storage temperature

- -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
 - CISPR 22



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- European community:

- EN55022 Class B:1998+A1+A2
- EN 55024:A1+A2
- EN 61000-3-2
- EN 61000-3-3

- Japan:VCCI
- Korea MIC
- China CCC

Safety

- United States: UL 60950-1
- Canada: CSA 60950-1-03
- Australia/New Zealand: AS/NZS 60950.1:2003
- European Community: EN 60950-1 +A11
- Mexico NOM approvals

Other

- FCC Part 68 HAC
- IC CS-03 HAC
- Australia AS/ACIF 004
- New Zealand PTC 220
- Complies with the essential requirements and other relevant provisions of Directive 1999/5/EC¹⁰
- Complies with Reduction of Hazardous Substances (RoHS) – (6 of 6) as part of European Union Environmental Directive
- American Disabilities Act (ADA) compliant dialpad

⁹ Public Key Infrastructure (PKI) is Nortel Communication Server dependent.

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

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