



## Technical Specification

### Nortel IP Phone 1140E

Professional-level IP Phone supports a new dimension in desktop communications features and application presentation

*The award-winning Nortel IP Phone 1140E with Gigabit Ethernet brings a new dimension in communication features and capabilities to the professional desktop IP Phone. Ideally suited for managers and knowledge workers, the multi-line Nortel IP Phone 1140E supports standards-based Session Initiation Protocol (SIP), delivering choice to customers in deployment options with support on Nortel or third-party Communication Servers. The IP Phone 1140E also enables presentation of converged voice and data applica-*

*tions, leveraging its integrated high-resolution, graphical eight-level grayscale pixel-based display. Application navigation is flexible and powerful with the IP Phone 1140E's integrated USB port, supporting both standard USB mice and keyboards. Combined with rich telephony feature sets as delivered from Nortel Communication Servers, deployment of the Nortel IP Phone 1140E 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 supports up to 12 line/programmable feature keys<sup>1</sup>, 14 fixed keys and four context-sensitive soft-label keys<sup>2</sup>
- › High-resolution, fully-backlit, graphical, eight-level grayscale, 240 x 160 pixel display with anti-glare screen, combined with a flexible five-position adjustable footstand, optimizes viewing under varied lighting conditions



**Nortel IP Phone 1140E**



<sup>1</sup> Six programmable line/feature keys are supported with IP Phone 1140E as the standard offer. Support of seven to twelve programmable line/feature keys requires use of the shift function and is Nortel Communication Server dependent. Consult Nortel server documentation of choice for support details.

<sup>2</sup> Context-sensitive soft label keys are Nortel Communication Server/minimum release dependent. Consult Nortel server documentation of choice for further support details.

# The Nortel IP Phone 1140E positions customers to meet both today's and tomorrow's communications needs.

- › Advanced collaborative communications support with graphical presence notification and secure instant messaging (SIP firmware only)<sup>3</sup>
- › Four-way navigation cluster with Enter key maximizes user choice and flexibility in navigation
- › Integrated USB port powers standard USB mice and keyboards, providing input and navigation options for application interaction and simpler menu selection
- › Integrated *Bluetooth*<sup>®</sup> 1.2 audio gateway supports *Bluetooth* headsets, boosting productivity with greater freedom at the desktop
- › Integrated 10/100/1000 Base-T Ethernet switch with LAN and PC ports reduces costs, enabling a single cable drop to support both the phone and a collocated PC
- › Supports Gigabit Ethernet, positioning the phone's internal switch to accommodate growing multimedia-intensive PC-based applications, thus aligning with investment made in the wiring closet
- › Supports 802.3af standard-based PoE and local AC power via power adapter
- › Secured communications with standards-based signaling encryption, media encryption and user-based authentication for network access control
- › Supports Unicode for expanded language and complex font presentation on the IP Phone 1140E display<sup>4</sup>

- › Proactive Voice Quality Management (PVQM) for enhanced administration and diagnostics<sup>5</sup>
- › Lockable Tools Menu offers local access to configuration, diagnostic and user preference options
- › Supports converged (voice and data) applications via the Nortel Application Gateway 1000/2000, enriching users' experience with advanced multimedia interaction
- › Supports both Nortel Communication Server protocol (UNISim) and RFC 3261 compliant Session Initiation Protocol (SIP) firmware for business telephony feature integration<sup>6</sup>
- › Added convenience and time savings with field-upgradeable firmware using Trivial File Transfer Protocol (TFTP) or for sites requiring enhanced secure firmware upgrades: UNISim File Transfer Protocol (UFTP)<sup>7</sup>

## Technical specifications

### Platform support

#### Nortel Communication Protocol

- Communication Server 1000, 2000 and 2100
- Media Gateway 1000B Expansion Chassis
- Business Communications Manager 50/200/400

- Survivable Remote Gateway 50/200/400
- Multimedia Communication Server 5100/5200

#### Session Initiation Protocol (SIP)

- Nortel Multimedia Communication Server 5100
- Nortel Communication Server 1500 (firmware release 1.1 and later)
- Nortel Communication Server 2000 (SN09U and later - planned for October 2007)
- Nortel Communication Server 2100 (initial support with SE10 and later)
- Nortel Application Server 5200
- BroadSoft BroadWorks Release 14

#### Display

- High-resolution, graphical, eight-level grayscale, monochrome Film Super Twist Nematic (FSTN) Liquid Crystal Display, 240 x 160 pixel, fully bitmapped, fully-backlit, anti-glare screen
- Backlit LCD with local contrast settings enhances viewing
- Configurable backlight timer extends the quality in display experience with 5, 10, 15, 20 minute, 1 and 2 hour settings; "Sleep never" setting for 24x7 environments
- Supports Unicode for expanded language and complex font presentation on IP Phone 1140E display<sup>8</sup>

#### IP Phone footstand adjustments

- Desktop viewing adjustments: 32.5, 40, 47.5 and 55 degree angles
- Wall mount adjustment: minus 5 degrees

#### Fixed and soft-label keys

- Fourteen fixed keys (Handsfree, Headset, Volume Up and Down, Mute, Hold, Goodbye, Directory, Inbox/Message, Outbox/Shift, Quit, Copy, Services and Expand)
- Four context-sensitive soft-label keys for easy-to-use navigation<sup>9</sup>

#### Navigation cluster

- Four-way navigation cluster (left, right, up, down arrows) plus Enter key

<sup>3</sup> SIP Firmware is supported on selected Nortel and third-party communication servers. See specification details for a listing of supported servers.

<sup>4</sup> Unicode support is on Nortel Communication Server protocol only and is Nortel Communication Server/minimum release dependent. Consult Nortel server documentation of choice for support details.

<sup>5</sup> Nortel Communication Server protocol only. Consult Nortel server documentation of choice for support details.

<sup>6</sup> SIP Firmware is available via factory installation or via subsequent firmware migration.

<sup>7</sup> UFTP is Nortel Communication Server/minimum release dependent. Consult Nortel server documentation of choice for support details.

<sup>8</sup> Unicode supported on Nortel Communication Protocol only and is Nortel Communication Server/minimum release dependent. Consult Nortel server documentation of choice for further support details.

<sup>9</sup> Context-sensitive soft keys are Nortel Communication Server/minimum release dependent. Consult Nortel server documentation of choice for further support details.

## USB port

- Single integrated USB port for standard USB mice, keyboards, keyboard emulation devices and powered hubs

## Bluetooth

- Integrated *Bluetooth* 1.2 audio gateway for *Bluetooth* headset profiles
- Supports up to 10 m/33 ft. range from gateway (*Bluetooth* power class 2)

## Expansion Module

- Supports Expansion Module for IP Phone 1100 Series (18-button)<sup>10</sup>

## Call Recording

- Supports transmission of duplicate media streams with Nortel Contact Recording and Quality Monitoring (CRQM)<sup>11</sup>

## User Selectable Ringtones

### Headset support

- Supports third-party wired and wireless headsets

### Languages supported

- Language support is platform and protocol dependent. Consult platform documentation of choice for further details.

## Administration and Security

- Static, Partial and Full Dynamic Host Control Protocol (Full DHCP factory default)
- 802.1x and Extensible Authentication Protocol (EAP-MD5) for network authentication and access control
- Standards-based signaling encryption with Advanced Encryption Standard (AES) 128-bit<sup>12</sup>
- Media path encryption with RFC 3711 compliant Secure Real-time Protocol (sRTP) pre-shared key and public key infrastructure<sup>13</sup>
- 802.1ab Link Layer Discovery Protocol for network auto-discovery and inventory management
- Proactive Voice Quality Management (PVQM) for enhanced administration and diagnostics<sup>14</sup>

## Dimensions and Weight (approximate)

- Size (W x D x H)
  - 7.9 in x 7.4 in x 8.1 in/200mm x 188mm x 207mm — 55 degree footstand desktop configuration
  - 7.9 in x 8.7 in x 6.3 in/200mm x 191mm x 163mm — 32.5 degree footstand desktop configuration
  - 7.9 in x 8.6 in x 4.0 in/200mm x 220mm x 101mm — minus 5 degree footstand desktop configuration

<sup>10</sup> Number of Expansion Modules supported is Nortel Communication Server dependent. Consult Nortel server documentation of choice for support details.

<sup>11</sup> Nortel Communication Server Protocol only.

<sup>12</sup> May require deployment of Secure Multimedia Controller 2450 (SMC 2450) which is Nortel Communication Server dependent. Consult Nortel server documentation of choice for requirement details.

<sup>13</sup> Public Key Infrastructure is Nortel Communication Server/minimum release dependent. Consult Nortel server documentation of choice for support details.

<sup>14</sup> Nortel Communication Server Protocol only.

- Weight (phone, handset, and handset cord)
  - 2.47 lbs/1.12 kg

## Color

- Graphite with silver metallic bezel finish

## Connectivity/data rates

- Integrated 10/100/1000 Base-T Auto-Sensing Ethernet switch for shared PC access (one LAN port and one PC port) supports switching of PC traffic through IP Phone 1140E
- Manually configurable for 10 and 100 Mbps speeds when used with Ethernet Switches which do not support auto-sensing
- Minimum Category 5e cabling required for Gigabit Ethernet deployment (Category 5e cable included as standard)

## Power

- Supports IEEE 802.3af Power over Ethernet, Nortel pre-standard
- Power dissipation: IEEE Power Class 3. Gigabit Ethernet — 8 watts idle; 10.5 watts full utilization (not including cable loss). 100 Mbps — 6 watts idle; 8 watts full utilization (not including cable loss)
- Optionally available universal local AC power adapter (“brick style”) supported (90-260 VAC, 50/60Hz power adapter delivering 48V DC @ 520mA max)
- AC power cable (country specific) — orderable separately

## Protocols

- E.164 dialing
- SIP Protocols:
  - **RFC2327** — SDP: Session Description Protocol
  - **RFC2617** — HTTP Authentication: Basic and Digest Access Authentication
  - **RFC2976** — The SIP INFO Method
  - **RFC3087** — Control of Service Context Using SIP Request-URI
  - **RFC3108** — Conventions for the use of Session Description Protocol: ATM Bearer Connections
- **RFC3204** — MIME Media Types for ISUP and QSIG Objects
- **RFC3261** — Session Initiation Protocol (SIP)
- **RFC3262** — Reliability of Provisional Responses in the Session Initiation Protocol
- **RFC3263** — Session Initiation Protocol (SIP): Locating SIP Servers
- **RFC3264** — An Offer/Answer Model with Session Initiation Protocol (SIP)
- **RFC3265** — Session Initiation Protocol: Specific Event Notification
- **RFC3311** — Session Initiation Protocol (SIP) UPDATE Method
- **RFC3313** — Private Session Initiation Protocol (SIP) Extensions for Media Authorization
- **RFC3323** — A Privacy Mechanism for the Session Initiation Protocol
- **RFC3325** — Private Extensions to the Session Initiation Protocol for Asserted Identity within Trusted Networks
- **RFC3329** — Security Mechanism Agreement for the Session Initiation Protocol
- **RFC3361** — Dynamic Configuration Host Protocol (DHCP-for IPv4) Option for Session Initiation Protocol Servers
- **RFC3420** — Internet Media Type Message/sipfrag
- **RFC3428** — Session Initiation Protocol Extension for Instant Messaging
- **RFC3489** — Simple Traversal of User Datagram Protocol (UDP) Through Network Address Translators
- **RFC3515** — The Session Initiation Protocol Refer Method
- **RFC3550** — RTP: A Transport Protocol for Real-Time Applications
- **RFC3551** — RTP Profile for Audio and Video Conferences with Minimal Control
- **RFC3556** — Session Description Protocol (SIP) Bandwidth Modifiers for RTP Control Protocol (RTCP) Bandwidth
- **RFC3605** — Real-Time Control Protocol (RTCP) attribute in Session Description Protocol (SDP)

## Special features (SIP Firmware only)

### Presence

- Supports Presence Notification on phone display
- User Presence Selection

### Instant Messaging

- Secure Instant Messaging from phone display
- Message Waiting indication of Instant Messages via blue LED illumination
- On/Off automatic pop-up notification of Instant Messages
- Instant Message log access via Expand Key
- Icons for read, unread, replied to Instant Messages
- Special character support for meaningful text entry

### Other

- Graphical status for calls (calls missed, number for each user)
- Incoming and Outgoing Privacy Settings
- Selectable ringtones (up to five) via .wav file storable on set (administrator provisioned)
- Localized language support (up to five storable on deskset at one time)

## **Bluetooth**

- USA: FCC Part 15 Wireless Certification
- Canada: IC RSS 210 Wireless Certification
- EN 300 328
- EN 301 489-1/EN 301 489-17
- Japan METI Wireless approval
- Korean Wireless approval

## **Audio Quality of Service**

- G.711 a-law, G.711  $\mu$ -law, G.729a and Annex B
- 802.1p/Q, DiffServ and VLAN tagging of telephony LAN port traffic
- Supports echo cancellation and silence suppression

## **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° to +158°F

## **EMC**

- United States: FCC 47 CFR Part 15 Class B
- Canada: ICES-003 Class B
- Australia/New Zealand:
  - AS/NZS 3548 Class B
  - CISPR 22 Class B
- European community:
  - EN55022:1998: A1+A2 (Class B)
  - EN 55024:1998: A1 + A2
  - EN 61000-3-2
  - EN 61000-3-3
- Japan – VCCI
- Korea MIC
- China CCC

## **Safety**

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

## **US/Canada/Australia/EU Countries**

- US/Canada: Hearing Aid Compatibility (HAC) as per FCC Part 68 and Industry Canada CS-03 Part V
- Australia: AS/ACIF 004
- Complies with CE Marking Requirements: This device complies with the essential requirements and other relevant provisions of Directive 1999/5/EC
- Complies with Reduction of Hazardous Substances (RoHS) – (6 of 6) as part of European Union Environmental Directive
- American Disabilities Act (ADA) compliant dialpad