NEC

i-Series Single IP Extender

This i-Series Single IP Extender enables call center agents, telecommuters and branch office employees to be seamlessly connected to the corporate voice and data systems over a managed IP network, including DSL and Cable.

Remote employees can now experience true network convergence – connectivity to the corporate voice and data networks over a LAN, public or private packet networks.

The i-Series Single IP Extender utilizes a teleworker's existing IP network connection through a router, DSL or cable modem, other remote access device or a company's private network to connect to the corporate voice and data systems.

The i-Series Single IP Extender can be connected to all standards-compliant cable and DSL customer premise equipment (CPE) equipped with a 10Base-T Ethernet port.

NEC's Distributed Voice Solutions affordably extends the features and functionality of existing corporate voice systems to:

- Branch Offices
- Remote Call Center Agents
- Telecommuters
- Mobile Workers

across traditional and next-generation networks.

PRODUCT OVERVIEW

By the year 2003, it is estimated that more than 137 million users worldwide, including one-third of the U.S. work force, will engage in at least part-time telecommuting as a function of their employment contracts. Teleworking has become a strategic advantage for many companies, allowing them to recruit and retain skilled employees, save money on real estate and increase employee productivity. But to be truly productive, remote workers need access to the same set of tools at their home that they have in their office – high-speed data connectivity and a feature-rich telephone system.

NEC's i-Series Single IP Extender provides a teleworker or remote call center agent with the same digital telephone set and all the features they have in the corporate office or call center. By sending the voice traffic and signaling over a managed IP network back to an i-Series Gateway located at the corporate site, the i-Series Single IP Extender allows voice traffic to be seamlessly carried over an existing data network.

VOICE LOOKS LIKE DATA

Remote Voice Protocol over IP (RVPoIP)™ converts voice and signaling information into IP data packets, which can be transmitted over any TCP/IP network. The i-Series Single IP Extender performs sophisticated echo cancellation and noise detection algorithms to improve voice service quality.
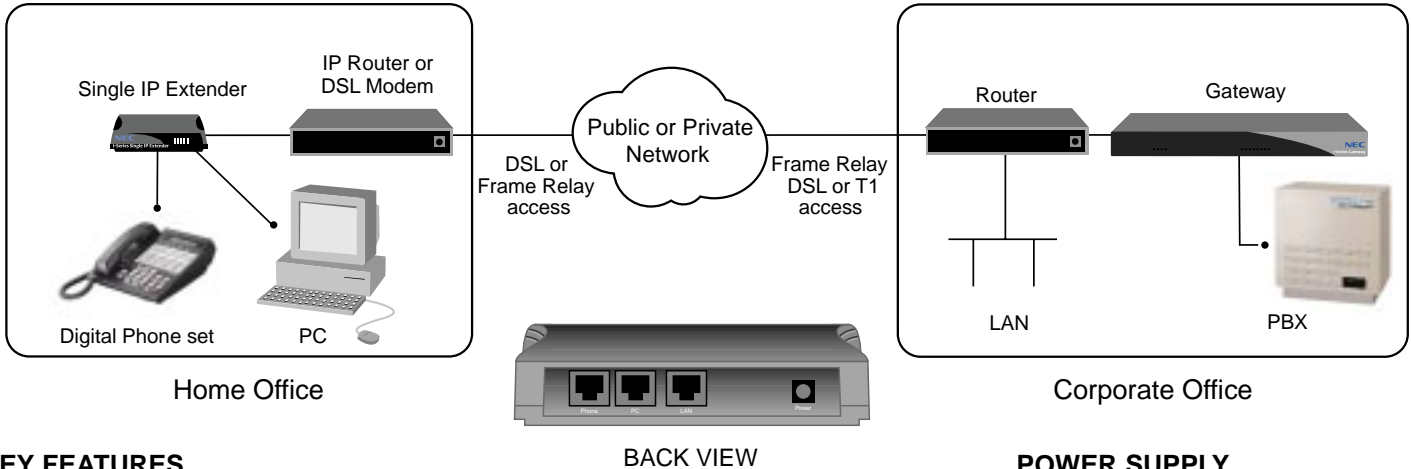
Packetized voice can be transmitted over any managed IP network that can guarantee sufficient bandwidth and Quality of Service (QoS). The i-Series Single IP Extender performs best over managed networks, such as DSL or a private campus network.

KEY BENEFITS

- **Converged Network Services**
  Off-premises employees enjoy full remote access to both voice and data networks over a single packet network connection to the corporate office.

- **Increased Productivity**
  Remote workers use the same phones with all of the features and capabilities that are supported on the corporate PBX.

- **Simplified Administration**
  A system administrator, via one i-Series Gateway unit located at the corporate office, can manage all of the remote users' set-up and administration. Only one network infrastructure to manage for voice and data.

- **LAN or WAN Access**
  Integrated hub outfitted with two 10Base-T Ethernet ports permits two configurations. A LAN or WAN network access device can be attached to one port. The user also has the option of connecting a PC to the second Ethernet port.

- **Flexibility**
  Works with any managed TCP/IP network today and provides a path to tomorrow's emerging next generation network topologies.

- **KTS/PBX Compatibility**
  NEC: i-Series 28i, 124i, 124ie, 384i and 704i

- **i-Series Telephone Compatibility**
  92550 Digital Single Line
  92750 22 Button Handsfree
  92753 22 Button Handsfree Display
  92760 28 Button Handsfree
  92763 28 Button Handsfree Display
  92773 34 Button Handsfree Super Display
  92783 34 Button Handsfree Display

Distributed Voice For The Extended Enterprise

i-Series Single IP Extender

Home Office

BACK VIEW

Corporate Office

KEY FEATURES

- Auto Connect Mode
- Comfort Noise Generation
- Dynamic or Static IP Addressing
- Support for IP Precedence and DiffServ Quality of Service (QoS) Mechanisms

GENERAL SET-UP GUIDELINES

- The i-Series Single IP Extender must be terminated by an i-Series Gateway at the corporate office.
- The i-Series Single IP Extender supports NEC's RVPoIP™ over any managed IP network.
- Internal hub allows the i-Series Single IP Extender to plug directly into a LAN via 10Base-T Ethernet port for intranet use, or plug the i-Series Single IP Extender into a 10Base-T interface on a network access device for connection to the WAN for remote access applications.
- Second 10Base-T Ethernet port available for PC connection to the i-Series Single IP Extender.
- Network should be configured to provide Quality of Service* (QoS) support in order to guarantee voice quality.
- Minimal setup programming required, accomplished via Telnet, inband RVP™ or telephone menus at teleworker's location.

SOFTWARE SUPPORT

- TCP/IP protocol

NETWORK MANAGEMENT

- Telnet, inband RVP™, SNMP, HTML (monitoring only), phone display (limited features)

OPERATING SYSTEM & UPGRADE

- Wind River's VxWorks®
- Software upgradeable via direct connection, inband or LAN

HARDWARE

- Form factor: small footprint, desktop or wall mountable unit
- Connectors included on unit:
  - One RJ-11 port for digital telephone set
  - One RJ-45 10Base-T Ethernet for PC connection
  - One RJ-45 10Base-T Ethernet for LAN or WAN connection
  - One power supply
- Internal Components:
  - Motorola 68EN302 processor
  - 4 MB flash memory
  - DSP analog devices 2187 (52 MIPS)

VOICE PROTOCOLS

- Choice of voice compression standards:
  - G.729A (8 kbps)
  - G.726 (24 or 32 kbps ADPCM)
  - G.711 (64 kbps PCM)
- G.165 echo canceller software, with an innovative double-talk detection enhancement
- Voice packets are tagged for network traffic prioritization using IP Precedence or DiffServ

POWER SUPPLY

- External adapter (included)
- Line voltage: 120 VAC
- Voltage requirement: 12 VDC
- Power supply: 800 mA
- Maximum power draw: 16 Watts

OPERATING ENVIRONMENT

- Temperature: 32°–130°F (0°–55°C)
- Relative humidity: 5 to 95% (non-condensing)

DIMENSIONS

- Size: 6.3" x 5.35" x 1.35" (160mm x 136mm x 34.25mm)
- Weight: 0.6 lb (0.3 kg)

REGULATORY APPROVALS

- FCC Part 15 Class B, NRTL/CSA and CE Mark

communications without compromise.

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