



# MCK EXTender™ 4000 for IP

This single-user CPE enables teleworkers and home-based call center agents to be seamlessly connected to the corporate voice system over a managed IP network

MCK EXTender™ 4000

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

The MCK EXTender™ 4000 utilizes a teleworker's existing IP network connection through a router or DSL modem, other remote access device or a company's private network to connect to the corporate voice and data systems.

The MCK EXTender 4000 can be connected to all standards-compliant DSL customer premises equipment (CPE) equipped with a 10Base-T Ethernet port.

MCK's Distributed Voice Solutions affordably and seamlessly extend the features and functionality of existing corporate voice systems to:

- Home - Based Call Center Agents
- Teleworkers

across traditional and next-generation networks.



## PRODUCT OVERVIEW

By the year 2003, Gartner estimates that more than 137 million users worldwide, including one-third of the U.S. workforce, 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.

The MCK EXTender 4000 provides a teleworker or a home-based call center agent with the same digital telephone set and access to 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 one of MCK's EXTender PBXgateways located at the corporate site, the MCK EXTender 4000 allows voice traffic to be seamlessly carried over an existing data network.

## VOICE LOOKS LIKE DATA

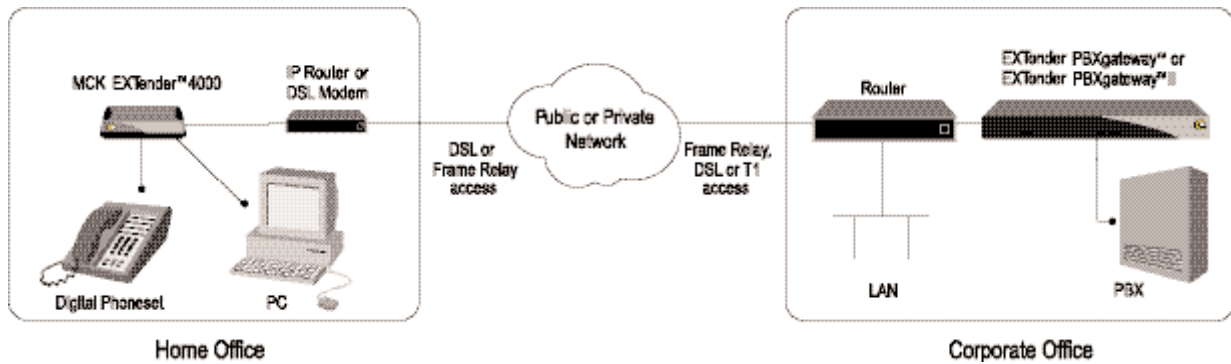
MCK's Remote Voice Protocol over Internet Protocol (RVPoIP)™ converts voice and signaling information into IP data packets, which can be transmitted over any TCP/IP network. The MCK EXTender 4000 performs sophisticated echo cancellation and noise detection algorithms to improve voice service quality.

MCK's packetized voice can be transmitted over any managed IP network that can guarantee sufficient bandwidth and Quality of Service (QoS). The MCK EXTender 4000 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 to access all of the features and capabilities supported on the corporate PBX.
- **Simplified Administration**  
A system administrator, via the gateway unit located at the corporate office, can manage all of the remote users' setup and administration virtually. 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. And the user 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.
- **PBX/KTS Compatibility**
  - Alcatel: 4400 and 4200
  - Avaya™: DEFINITY® ECS release 3 or later) MERLIN MAGIX™ (release 2 or later)
  - Ericsson: MD110
  - NEC: i-Series 28i, 124i, 124ie, 384i and 704i
  - Nortel: BCM, Meridian® and Norstar®
  - Panasonic: DBS 576 and 576HD

# MCK EXTender™ 4000



## KEY FEATURES

- Auto Connect Mode
- Comfort Noise Generation
- Dynamic and Static IP Addressing
- Support for IP Precedence and DiffServ QoS mechanisms

## GENERAL SET-UP GUIDELINES

- The MCK EXTender 4000 must be terminated by an MCK EXTender PBXgateway at the corporate office.
- The MCK EXTender 4000 supports MCK's RVPoIP over any managed IP network.
- Internal hub allows the MCK EXTender 4000 to plug directly into a LAN via 10Base-T Ethernet port for intranet use, or plug the MCK EXTender 4000 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 MCK EXTender 4000.
- 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 phone menus at teleworker's location.

## ONLINE RESOURCE

- Quick Installation Guide available at [www.mck.com](http://www.mck.com) in the Service & Support section

## SOFTWARE SUPPORT

- TCP/IP protocol support for IP traffic

## NETWORK MANAGEMENT

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

## OPERATING SYSTEM & UPGRADE

- Wind River's VxWorks®
- Software upgradeable via LAN FTP



BACK VIEW

## HARDWARE

Form Factor: Small footprint, desktop or wall mountable unit

Connectors included on unit:

- One RJ-45 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

Other Components:

- Motorola 68EN302 processor
- 4 MB flash memory
- DSP Analog Devices 2185 (52 MIPS)

## VOICE PROTOCOLS

- Choice of voice compression algorithms:
  - G.729A (8 kbps)
  - G.726 (24 or 32 kbps ADPCM)
  - G.711 (64 kbps PCM)
- G.165 echo canceller software, with MCK proprietary 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, CE Mark, VCCI Class 1 and CIS PR 22 Class A

## WARRANTY

- One-year limited warranty for parts and labor

Product specifications subject to change without notice.

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\*MCK's IP-based products utilize Voice over IP (VoIP) technology to deliver remote voice solutions. The voice quality of these solutions is dependent on variables such as available bandwidth, network latency and quality of service (QoS) initiatives, all of which are controlled by the network and Internet service providers. Because these variables are not in MCK's control, it cannot guarantee the performance of the user's IP-based remote voice solution.

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