



EXTender PBXgateway™

This 8- or 12-port voice network gateway extends a feature-rich PBX or KTS to branch offices, call centers, home-based call center agents and teleworkers over traditional and next-generation networks, terminating MCK client devices

The EXTender PBXgateway™ is a high performance unit that resides at the corporate voice system and terminates up to twelve remote users from any combination of MCK's Remote Voice Protocol over IP (RVPoIP)™ products including:

- MCK EXTender™ 6000 for Branch Offices
- MCK EXTender™ 4000 for IP

The EXTender PBXgateway also operates in serial Remote Voice Protocol (RVP)™ mode over traditional networks.

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

- Branch Offices
- Call Centers
- Home-Based Call Center Agents
- Teleworkers

across traditional and next-generation networks.



PRODUCT OVERVIEW

With the MCK EXTender PBXgateway, your remote workers can now enjoy all the features of your corporate PBX, wherever they are located. That's because the EXTender PBXgateway extends all the capabilities of your PBX to remote employees over circuit- or packet-based networks.

The EXTender PBXgateway can be configured to operate in either a managed IP packet network or a point-to-point synchronous WAN environment over traditional networks. In a traditional WAN environment, up to two MCK EXTender 6000s can connect into the EXTender PBXgateway running MCK's Remote Voice Protocol (RVP). RVP relies on HDLC encapsulation over a serial port to transmit voice signals.

REMOTE VOICE PROTOCOL OVER IP CONNECTIONS (RVPoIP)

To extend remote voice capability over a managed IP network, simply install an EXTender PBXgateway at your corporate site and then choose a combination of remote IP client units to meet your needs. Up to 12 users can be terminated at the EXTender PBXgateway. Branch offices, call centers, teleworkers and home-based call center agents can be connected using standard IP network termination devices such as IP routers or DSL modems.

As long as the IP network can be managed to ensure sufficient bandwidth and Quality of Service (QoS), MCK's solution will deliver high quality voice.

You can now extend full corporate PBX capabilities over IP networks, making voice and data convergence a reality.

MCK's Remote Voice Protocol converts digital voice and phone signaling into highly efficient data packets. Sophisticated software features include a G.165-compliant echo canceller enhanced with extremely robust double-talk performance, manufacturer-provided PBX protocols and a range of industry standard voice compression options.

MANAGEMENT FEATURES

MCK's business voice solutions have been designed for operational simplicity. All of the system's configuration, management, and administrative and diagnostic functions may be managed from the EXTender PBXgateway using a serial connection, Telnet or an inband network connection from a remote client. This flexibility allows you to maximize your company's system administration resources and lowers operating costs.

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KEY BENEFITS

- **Flexibility**
Mix and match remote modules up to a total of 12 users. This gateway supports up to two MCK EXTender 6000 for Branch Offices on serial RVP mode.

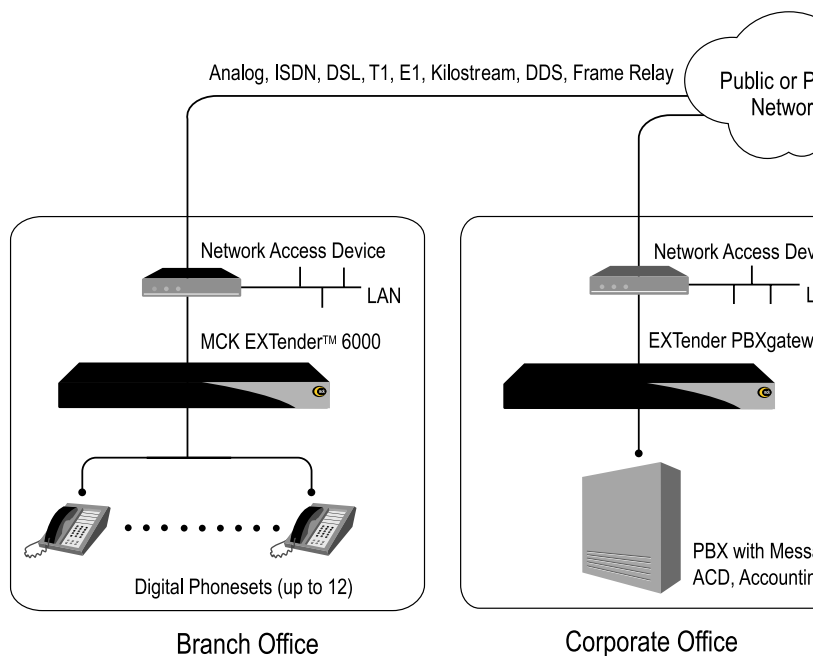
Configure the EXTender PBXgateway to operate in managed IP network (Layer 3) or in traditional circuit switched and frame relay (Layer 2) environments.
- **Increased Productivity**
Remote employees are able to use the same full-featured digital sets to access corporate PBX functions, like voicemail, call accounting systems, unified messaging and ACD systems.
- **Network Efficiency**
A choice of network topologies and variable compression rates minimizes communications cost.

Leverage IP data network infrastructure for both voice and data traffic.



FRONT VIEW

DB-9 console port for easy system management



- **Ease-of-Use**
Simple installation process.

Easy-to-use configuration tools enable virtual management of remote users from a central location.
- **Investment Protection**
MCK is committed to providing you with flexible product solutions for today's, and tomorrow's, needs.

KEY FEATURES

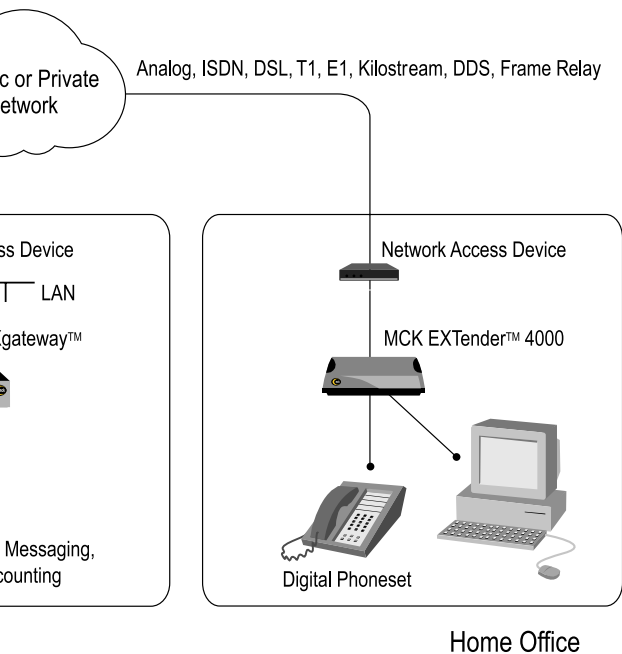
- Synchronous transmission
- Support for asynchronous terminal adapters
- Encrypted username and password allocated by system administrator to each port
- Network down recovery
- Call suspend mode on ISDN lines with Asynch terminal adapter
- Support for IP Precedence and DiffServ QoS mechanisms

PBX/KTS COMPATIBILITY

- Alcatel: 4400 and 4200
- Avaya: DEFINITY® ECS (all G3 releases) MERLIN MAGIX™ (G3V2 or later)
- Ericsson: MD110
- Iwatsu: ADIX APS
- NEC: NEAX2000™, NEAX2400™, NEAX Express, Electra Elite and i-Series 28i, 124i, 124ie, 384i and 704i
- Nortel: Meridian® and Norstar®
- Panasonic: DBS 576 and 576HD
- Toshiba: Strata DK

GENERAL SET-UP GUIDELINES

- The EXTender PBXgateway is deployed within 500 feet from the PBX/KTS at the corporate office.
- The EXTender PBXgateway can be configured to run on IP transport or traditional circuit-switched and frame relay networks.



- When running RVPoIP, the gateway connects to a network access device via the 10Base-T LAN port.
- When running serial RVP, this gateway connects to a network access device via one of the DB-25 WAN ports and supports up to two MCK EXTender 6000s.
- The MCK EXTender 6000 is the remote module that supports serial RVP in point-to-point mode.
- Remote clients that support RVPoIP are the MCK EXTender 6000 and the MCK EXTender 4000.
- The EXTender PBXgateway can support both serial RVP and RVPoIP remote clients simultaneously, up to 12 ports total.
- Network access device should be configured to provide Quality of Service* (QoS) support in order to guarantee voice quality.

- The EXTender PBXgateway is available in 8-port and 12-port configurations.
- Minimal setup programming required, accomplished via Telnet, HTML, RS-232 console interface, or inband RVP.
- List of recommended network access devices available at www.mck.com in the Products & Solutions section

ONLINE RESOURCES

SOFTWARE SUPPORT

- TCP/IP protocol support for IP traffic and management access
- RVPoIP uses UDP/IP protocol for voice transmission
- Serial RVP uses HDLC encapsulation for voice transmission
- Management and Utilities – Telnet, inband RVP, RS-232 console interface, SNMP and HTML
- Wind River's VxWorks® operating system
- Software upgradeable via LAN FTP, RS-232 serial port to PC, or inband connection between the EXTender PBXgateway and the MCK EXTender 6000



BACK VIEW

CONNECTORS INCLUDED IN BACKPLANE OF UNIT:

- Internal power supply
- One Amphenol connector for 50-pin RJ-21 cable for interface with digital telephone sets
- Two DB-25 WAN ports for serial RVP connection. Redundant interfaces include V.35, RS-232 or RS-530
- One RJ-45 10Base-T Ethernet for RVPoIP and Telnet/HTML system management

EXTender PBXgateway™

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 MCK proprietary double-talk detection enhancement
- MCK Remote Voice Protocol (RVP)
- MCK Remote Voice Protocol over IP (RVPoIP)
- IP voice packets are tagged for network traffic prioritization using IP Precedence or DiffServ

HARDWARE

Form Factor: Low profile, 1U rack mountable unit

Other Components:

- Motorola 68MH360, 33 Mhz CPU
- 4 MB Flash Memory, 512 Kb ROM, 4 MB DRAM
- DSP Analog Devices 2185 (52 MIPS)

POWER SUPPLY

- Internal
- Universal auto ranging
- Line voltage: 100 – 240 V
- Frequency: 47 – 63 Hz
- Maximum power consumption: 75 Watts

QUICK REFERENCE CHART

EXTender PBXgateway™	EXTender PBXgateway™ II
Scalable in 8 and 12-user increments	Scaleable in 24-user increments
Supports the MCK EXTender™ 6000 and the MCK EXTender™ 4000	Supports all MCK EXTenders
Equipped with one DB-9 console port	Equipped with two DB-9 console ports
Outfitted with one 10Base-T LAN port	Outfitted with two 10/100 Base-T LAN ports

DIMENSIONS

- Size: 17" x 8" x 1¾"
(432mm x 203mm x 44mm)
- Weight: 6.5 lbs (3 kg)

OPERATING ENVIRONMENT

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

REGULATORY APPROVALS

- FCC Part 15 Class A, CE Mark, NRTL/CSA, VCCI Class 1 and CISPR 22 Class A

WARRANTY

- One-year limited warranty for parts and labor



Service Provider
Solution Partner

*Supported by the EXTender PBXgateway running software release 2.0 or later.

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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