PBXgateway® II

Highly-Scalable Distributed Telephony Gateway for Branch Offices, Call Centers, Teleworkers and Home-based Call Center Agents

Designed for enterprises and call centers looking to extend corporate voice systems to distributed organizations, MCK's PBXgateway II is a highly scalable distributed telephony gateway that enables seamless remote access to corporate PBX/KTS systems and associated applications.

- Easily scales in 24 user increments
- Terminates remote EXTender client devices
- Reduces communications costs
- Ensures superior voice quality
- Ensures maximum administrative flexibility
- Reduces IT staff time
- Maximizes remote employee productivity
- Leverages your legacy PBX/KTS investments towards convergence

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Enables a seamless, integrated distributed enterprise

The PBXgateway II is a highly scalable distributed telephony gateway designed to meet the specific needs of medium size branch offices. The flagship of Verso's EXTender™ family of distributed telephony devices, the PBXgateway II enables you to seamlessly integrate your entire enterprise including branch offices and teleworkers, providing customers and employees the ease and convenience of having every employee on a common voice network, regardless of their geographic location. With just one number to reach any employee, customers will appreciate the ease with which they can communicate with your organization. Employees in remote locations can maximize their productivity with seamless access to the corporate voice network from any location.

Designed to provide business telephony to distributed organizations with branch offices, call centers, home-based call center agents and teleworkers, the PBXgateway II is Verso's most robust platform, delivering all of the features and functionality of the PBXgateway I and more.

Reduces communication costs

The flexible, versatile PBXgateway II offers a variety of network topologies and variable compression rates to maximize your network resources, improve network efficiency and reduce communications costs.

Telecommunications costs fall by an average of 30% when users are administered from a single location versus multiple platforms. Communications savings are also realized from the consolidation of long distance calling through the corporate voice network and dialing plan. Additional savings are realized because separate PBX/KTS systems in each branch office are no longer required.

Ensures superior voice quality

The PBXgateway II uses Verso's Remote Voice Protocol over IP (RVPoIP) to convert digital voice and phone signaling into highly efficient IP data packets, which can then be transmitted over any TCP/IP network. The PBXgateway II facilitates Quality of Service using Diffserv and IP Precedence packet tagging to enable routers to be configured to prioritize voice traffic. Additionally, the PBXgateway II features sophisticated echo cancellation and noise detection algorithms that help to ensure superior voice quality.

Ensures maximum administrative flexibility

As your business grows, the PBXgateway II ensures ongoing scalability, enabling you to mix and match remote modules up to a total of 24 users per unit or to stack units for larger deployments. Additionally, the PBXgateway II provides maximum flexibility for the distributed enterprise, with the capability of terminating all of MCK's EXTender clients including:

- EXTender 1000 for single-user, analog networks[1]
- EXTender 3000 for single-user, ISDN networks[2]
- EXTender 4000 for single-user, IP networks
- EXTender 6000 for multi-user networks
- EXTender 7000 for multi-user networks[3]
- RemoteConneX phone for single-user analog networks
- Cell phones for mobile workers

This highly scalable and flexible gateway can be configured to operate either in a point-to-point synchronous WAN environment over traditional networks or in a managed IP network. In a traditional WAN environment, multiple EXTender 6000s and 7000s can be connected into a single PBXgateway II. In a managed IP network environment, up to two EXTender 6000s and 7000s and multiple EXTender 4000s can be connected into a single PBXgateway II to a maximum port capacity of 24 per unit.

Reduces IT staff time

MCK's distributed telephony solutions have been designed for operational simplicity. All of the system's configurations, management, administrative and diagnostic functions are managed from the PBXgateway II using a direct serial connection, dial-up modem, HTML, Telnet or an inband network connection from a remote client. This flexibility allows companies to maximize valuable IT resources and lowers operating costs.

The PBXgateway II is equipped with dual DB-9 console ports (see diagram). These ports allow a system administrator to attach a modem to one and use the other for a local terminal connection. This versatility makes remote troubleshooting and maintenance a breeze.

Maximizes remote employee productivity

The MCK PBXgateway II helps employees in remote locations feel more connected to the corporate office and enables them to work more efficiently and effectively by delivering the same telephony experience as colleagues in the corporate office – including identical full-featured phonesets to access corporate PBX functions and applications, like voicemail, call accounting systems, unified messaging and ACD systems.

Leverages your legacy PBX/KTS investments towards convergence

The typical PBX is underutilized by as much as 50%*. Many organizations report that the capacity of their PBX is 2 to 5 times the number of users currently supported on it.

This means a valuable corporate asset is being significantly under utilized. MCK is committed to helping you leverage this investment and to provide you a managed migration path to convergence. Whenever you're ready, you can use your PBXgateway II to converge your voice and data traffic onto a single network, without the need for additional equipment or expensive and disruptive upgrades.

Technical Specifications - PBXgateway® II

PBX/KTS Compatibility

The PBXgateway II supports leading PBX protocols including:
- Alcatel: Omni PCX Enterprise and Office
- Avaya™: DEFINITY® ECS (all G3 releases) and ECLIPS Media Servers and Gateways (digital phones only)
- Ericsson: MD110
- NEC: NEAX2000™, NEAX2400™, NEAX Express and Electra Elite
- Nortel: BCM, Meridian® and Norstar®
- Panasonic: DBS 576 and 576HD
- Toshiba: Strata DK and CTX (digital phones only)

System Details

Dimensions:
- Size: 17" x 11" x 1" (432mm x 280mm x 44mm)
- Weight: 8.3 lbs (3.8 kg)

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

Key Features

- Support for synchronous and 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 adapters
- Support for IP Precedence and DiffServ QoS mechanisms

General Set-Up Guidelines

- The PBXgateway II can be ordered with or without a 2-port T1/PRI/FR network interface card.
- The PBXgateway II can be configured to run on IP transport or traditional circuit-switched and frame relay networks.
- In a managed IP environment, running RVPoIP, the PBXgateway II can be connected to the LAN via two 10/100 Base-T ports simultaneously. One port can be configured for administration access and the other can be configured for IP voice traffic, allowing both traffic types to be transmitted on separate LAN segments.
- In a point-to-point WAN environment, running serial RVP between a MCK EXTender 6000 and a PBXgateway II, the network access device is connected via one of the DB-25 WAN ports.
- In a managed IP environment, the PBXgateway II supports the EXTender 4000, 6000 and 7000.
- In a point-to-point WAN environment, the PBXgateway II supports the EXTender 1000[1], 3000[2], 6000 and 7000.
- One PBXgateway II can support both serial RVP and RVPoIP remote clients simultaneously.
- Multiple EXTender 6000s and 7000s can be connected to one PBXgateway II.
- The PBXgateway II is available with an integrated network interface card that terminates T1, PRI and FR networks directly, eliminating the need for external CSU/DSU devices.
- In IP applications, the network access device must be configured to provide Quality of Service (QoS) in order to guarantee voice quality.
- IP or packet-based networks are terminated through a router.
- Minimal setup programming required, accomplished via dial up modem, Telnet, RS-232 console interface, inband RVP or HTML interface.

Connectors included in backplane of unit:

- Internal power supply
- One PCM port for network expansion cards (optional) providing connectors to a pair of RJ45 jacks for T1/PRI/FR lines
- Two RJ-45 10/100 Base-T Ethernet for RVPoIP and Telnet/HTML system management
- Two DB-25 WAN ports for serial RVP connection. Redundant interfaces include V.35, RS-232 or RS-530
- One Amphenol connector for 50-pin RJ-21 cable for interface with digital PBX ports

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 PBXgateway II and the EXTender 6000 and 7000

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 MPC860T processor
- 16 MB Flash Memory, 16 MB SDRAM
- 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

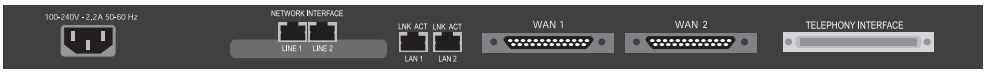
Regulatory Approvals

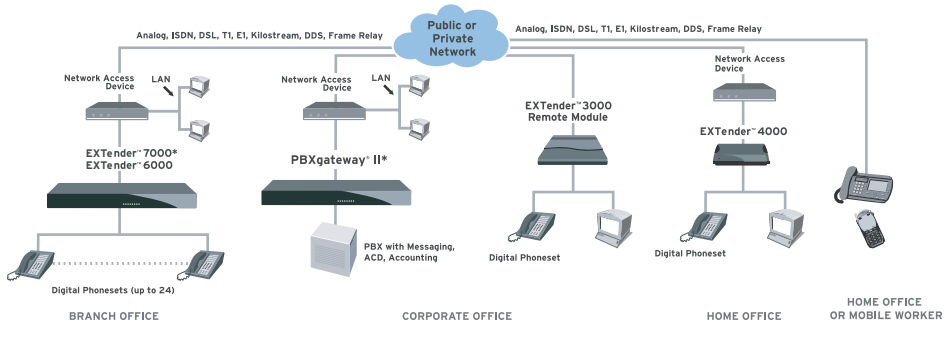
- FCC Part 15 Class A and FCC Part 68, CE Mark, Industry Canada CS-03, NRTL/CSA, VCCI Class 1 and CISPR 22 Class A

Warranty

- One-year limited warranty for parts and labor including advance replacement when a unit is shipped back for repair. Effective January 1, 2004, advance replacement will be included on all products[3] and will be retroactive to products purchased between January 1 and December 31, 2003

BACK VIEW





*Direct termination of T1, PRI and FRAME RELAY WAN

Product specifications subject to change without notice.

*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.

Software release 3.1 is required for direct termination of frame relay. MCK, the MCK logo, MCK EXTender, PBXgateway, RVP and RVPoIP are trademarks of Citel Technologies Ltd. Other brand and product names referenced herein are trademarks of their respective holders.