

GX-3K



- Deliver competitive, complete, best-of-breed media gateway functionality, featuring highest voice quality
- Build Voice over Packet (VoP) networks based on advanced high availability featured media gateway technology
- Supports High Availability with load sharing or switch over schemes between redundant modules
- Ideally suited for IP Multimedia Subsystem (IMS) and Fixed Mobile Converged (FMC) networks
- Use as a medium-sized media gateway designed for converged wireless, wireline, cable, broadband access and fixed-mobile convergence VoIP networks on a single media gateway platform
- Connect to high density, cost effective SONET/SDH PSTN interface or 1 to 3 T3 (DS3) interfaces
- Integrate 3G and 2G packet-enabled media gateway functionality into end-to-end system solution
- Meet the needs for VoIP Trunking, IP Centrex, and VoIP Access Gateway markets with a cost-effective media gateway
- Deploy globally with a rich offering of PSTN interfaces and signaling
- React quickly to dynamic market requirements

The IMS-ready **GX-3K** Media Gateway enables Network Equipment Providers (NEPs) and System Integrators (SIs) to offer Service Providers a compact media gateway solution targeted towards mid-sized carrier environment. Supporting 480 to 2,016 Low-Bit-Rate voice channels with OC-3/STM-1 or T3 (DS3) PSTN interfaces, the GX-3K addresses mid-density wireline, wireless, cable, broadband access and fixed-mobile-convergence applications. Building on Nuera's experience in the VoIP market, the GX-3K supports a rich variety of VoIP, cellular and cable vocoders, standards-compliant signaling and call control, state of the art Echo Cancellation, T.38 fax transmission and integrated SIGTRAN-compliant Signaling Gateway interworking. At a height of only 2U, the GX-3K platform requires only minimal rack space. The GX-3K is based on the VoIPerfect™ architecture, Nuera's underlying best-of-breed core media gateway technology for all of its products.

Deploy a Right-Sized Solution

The GX-3K provides a right-sized media gateway solution for mid-sized carrier networks. The small footprint of the GX-3K Media Gateway is especially attractive for central office locations where space is at a premium. The GX-3K provides PSTN and IP interfaces on a standard basis and supports 1+1 blade redundancy configuration.

Facilitate Flexible Deployment

The GX-3K Media Gateway system immediately addresses global opportunities that utilize a myriad of legacy circuit-switched infrastructure features and functionalities. The GX-3K can communicate with PSTN (TDM), IP Radio Access Network (RAN) and centralized Mobile Switching Center (MSC) servers to enable 2G and 3G IP-enabled cellular systems, centralized Mobile Switching Center (MSC) servers to enable complete 2G and 3G enterprise solutions. The GX-3K allows superior deployment flexibility for these solutions which include Softswitches, Cable Call Management Servers (CMS), Media Terminal Adaptors (MTAs) PacketCable solutions, Broadband Wireless Local Loop (WLL), Voice over WiFi/WiMAX, IMS core networks and FMC solutions. The GX-3K extends the flexibility of the Media Gateway family with additional OC-3c/STM1 and T3 (DS3) deployment options.

GX-3K Features

- NEBS Level 3
- Field-proven, high voice quality
- SONET/SDH or T3 (DS3) PSTN interfaces
- Wide support of PSTN protocol termination
- Megaco (H.248), MGCP or SIP controlled
- SIGTRAN Backhauling (SS7: M2UA/M3UA, PRI: IUA)
- SS7 tunneling over IP
- Easy connectivity with emerging VoIP networks
- Packet telephony standards-compliant
- Supports IMS
- UMTS, GSM and CDMA supported
- Matches UMA applications
- Supports PacketCable Standards
- Flexible deployment options
- Small footprint

GX-3K

Specifications

Capabilities

Capacity	Up to 2,016 channels in 1+0 configuration Up to 2,016 channels in 1+1 configuration
Voice Coders	G.711, G.723.1, G.726/7, G.729A/B GSM-FR, AMR (8 rates), iLBC EVRC ¹ , EVRC-A ¹ G.729E ¹ Independent dynamic vocoder selection per channel (within each group)
Echo Cancellation	G.165 and G.168 compliant
Fax Support	T.38 (IP) compliant Group 3 fax relay and fax bypass (automatic fallback to G.711)
DTMF	Packet side or PSTN side detection and generation, RFC 2833 compliant
Voice over Packet Capabilities	Call progress tones, VAD, CNG, Dynamic programmable jitter buffer, DTMF detection and generation

Signaling

PSTN	ISDN PRI, CAS, MFC-R2, MF-R1, SS7 (MTP2/MTP3)
SIGTRAN	ISDN-IUA/SCTP SS7- M2UA/SCTP, M3UA/SCTP SS7 and TDM Tunneling using M2UA over SCTP/IP
IP Transport	IETF RFC 3550, RFC 3551 RTP/IP Transport, TCP, UDP GSM / UMA (AMR): RFC3267 CDMA: IETF RFC 2658 and RFC 3558 RTP/UDP/IP
Control Protocols	MGCP (RFC 3435), MEGACO (H.248, RFC 3015), SIP (RFC 3261) IMS Mn - TS 29.332
Security	IPSEC ¹ – for control protocols and for Management Interfaces HTTPS, SRTP, AES

Maintenance

Management	Element Management System, SNMP v2
Maintainability	All shelf modules are hot swappable, including boards, power supplies, fans
Redundancy Scheme	Power supply, fans: N+1 load shared Media Gateway blades (including PSTN interfaces): 1+1 Optical Interfaces (PSTN): 1+1, APS protected

Hardware Specifications

Interfaces	PSTN: 1 OC-3 or STM-1 APS optical links, 1-3 T3 (DS3) electrical links IP: Dual Redundant 100/1000 BASE-T Ethernet ports
Enclosure	4-slot, 2U cPCI chassis
Dimensions (HxWxD)	88 mm x 482.6 mm x 296.8 mm
Weight	Approx. 35.27 lbs. (16 kgs.), fully loaded
Mounting	Per EIA Standard RS-310-C in 19-inch rack specification
Power	48 V DC Dual Feed, with up to 2 DC Power modules
Cooling	Replaceable fan tray & filter

Regulatory Compliance

Telecommunication Standards	FCC part 68, TBR4 and TBR13
Safety and EMC Standards	UL60950 FCC part 15 Class A CE Mark (EN55022 Class A, EN60950, EN55024, EN300 386)
Environmental	NEBS Level 3: GR-63-Core, GR-1089-Core, Type 1 & 3, ETS300 019

¹ Reduced channel capacity

Applications

- PBX Networking
- IP-Centrex/Hosted IP-PBX
- Partner Applications (e.g., IP-PBX, Call Center, Conferencing Messaging)
- Remote Office Applications

About Nuera Communications

Nuera Communications designs, manufactures & sells packet voice gateways to communication service providers worldwide. These products work over any medium (cable, wireless, copper and fiber). Nuera's ORCA (Open Reliable Communications Architecture) product portfolio of VoIP gateways, softswitches, and management systems provide telephony solutions for cable and DSL networks, international long distance networks and enterprise networks. Nuera is a leader in the broadband telephony market.

Nuera Communications Inc. Asia Pacific / Middle East Office

371 Beach Road, KeyPoint #08-07
Singapore 199597
Tel: +65-6391-9030
Fax: +65-6299-4925

US Office

9890 Towne Centre Drive, Suite 150
San Diego, CA 92121, USA
Tel: +1-858-625-2400
Fax: +1-858-625-2422

Website: www.nuera.com

©2006 Nuera Communications, Inc. All rights reserved. Nuera, the Nuera logo and the other trademarks noted above are trademarks and registered trademarks of Nuera Communications, Inc.

Ref. # LTRM-04003 11/06 Rev. 02



NUERA®