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 OCRCA (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.

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Nuera GX-800 MSBG is an all-in-one, Multi-Service Business Gateway solution, designed to provide converged Voice & Data services for small-to-mid size business (SMB) customers, and to form a well-managed point of demarcation for service providers. The GX-800 MSBG is based on Nuera’s VoIP/PerfectHD best-of-breed Media Gateway technology; integrating a variety of communication functions into a single platform to support fundamental services, such as VoIP mediation, Data Routing, WAN access, Voice & Data security, survivability services, and value added services applications. These services allow simple, smooth connectivity to cloud services.

Best-of-Breed Small-to-Mid-size Enterprise Class Media Gateway

Nuera GX-800 MSBG is built upon an highly interoperable VoIP Media Gateway that can be delivered in several pre-defined configurations, supporting single E1/T1/T1 trunk, up to 4 E1/T1 or up to 12 analog (FXS/FXS) ports. In addition, the GX-800 MSBG provides enhanced dialing plane and voice routing capabilities along with SIP to SIP mediation, allowing businesses customers to enjoy the benefits of SIP Trunking services, IP Centrex connectivity, Unified Communications, as well as flexible PSTN and legacy PBX connectivity to VoIP.

LAN, Data Routing and WAN Access

Nuera GX-800 MSBG is optimized for wire-speed delivery of data and wireless services supporting up to 8 10/100 Base-T and 4 10/100/1000 Base-T PoE LAN ports (802.3af) and an integrated Wi-Fi (802.11a/b/g/n) Access Point. The integrated switch modules enable support for IP Phones and other PoE-powered devices. The GX-800 MSBG is equipped with a versatile WAN interface supporting 10/100/1000 copper and optical Gigabit Ethernet, and a selection of serial data transmission interfaces, providing great flexibility in connecting to Service Provider network. Data routing capabilities are provided by static as well as dynamic routing protocols, including support for RIP, OSPF and BGP.

Session Border Controller (SBC) and Security Services

Nuera GX-800 MSBG is designed as a secured VoIP and Data platform. Enhanced Media Gateway security features include encryption schemes, such as SRTP for media, TLS for SIP control, 9-to-9 for management, and additional features. A fully featured Enterprise-class Session Border Controller provides a secured voice network deployment, based on the embedded Back-to-Back User Agent (SBCUA). Data Security features include integrated Stateful Firewall, IPS/IDS, and SSL for remote user access and site to site VPN.

Quality of Service (QoS) and Quality of Experience (QoE)

Nuera GX-800 supports enhanced IP Quality of Service (QoS) enforcement and Quality of Experience (QoE) Monitoring. Leveraging a BroadSoft PacketSmart embedded agent – a SBC-based Lifecycle management solution, the GX-800 enables service providers and multi-site enterprises to assess networks, certify VoIP deployments, and measure, monitor, track, and help optimize the QoE of their VoIP services. The PacketSmart solution is either offered as a public cloud service or within the customer's data center in a private cloud deployment. Nuera GX-800 also supports enhanced IP Quality of Service (QoS), including Ethernet frame tagging (802.1p), IP packet marking (Diffserv), and traffic shaping.

Survivability Services

Customers served by a centralized, SIP-based IP Centrex server or branch offices of distributed enterprises, may face service discontinuities in case of a WAN failure. The integrated SAS (Stand Alone Survivability) feature of the GX-800 enables internal office communication between SIP clients (e.g. IP Phones), along with PSTN fallback, in case of disconnection from the centralized IP Centrex server or IP-PBX.

Value Added Services by an Open Platform for 3rd Party Applications

Nuera GX-800 MSBG extends the flexibility of the Multi-Service Business Gateway with the built-in Open Solution Network (OSN) server option (based on an Intel processor). Independent Software Vendors and OEm customers can utilize this integrated, general purpose server to host their own applications (e.g. IP-PBX, IVR, Call Center, Conferencing and more). In addition, an advanced, on-board DSP Resource Farm enables the implementation of narrowband as well as wideband High Definition VoIP (HD VoIP) media processing services, such as announcements, recording, iVR, conferencing and transcoding, all controlled by standard protocols (e.g., SIP and MUC). Utilizing Nuera dedicated DSP resources, enables a more robust and predictable voice performance, as compared to typical software implementations, based on general purpose CPU’s.

Benefits of Service Providers

- A highly integrated device for VoIP, Data, Security & Access, forming a single managed point of demarcation
- SIP Mediation that enables secure SIP Trunking in a variety of IP-PBX environments
- Simplified management & maintenance using a unified management tool
- Standalone Survivability
- Quality of Experience (QoE) lifecycle management solution

Benefits for SMB Customers

- All-in-one box reducing CAPEX and OPEX, simplifying maintenance and management
- Smooth connectivity to cloud services
- Enhanced Voice and Data Security, based on an embedded Enterprise-Class Session Border Controller and Firewall
- SIP mediation for flexible SIP Trunking service
- Multiple service provider connectivity to optimize tariff rates
- Ready for hosting IP-PBX applications and additional office Value Added Services for increased productivity

Benefits for OEM and Value Added Services Developers

- An integrated and compact platform, ready for hosting a variety of business applications
- Relieving interoperability and Integration “pain” with Media gateways, Media Servers, SIP Routes, etc.
- Built-in SIP-controlled media processing resources for advanced voice applications (Conferencing, Streaming, etc.)
- Embedded SIP mediation and transcoding, enabling SIP trunking services
- Enhanced Voice and Data Security

Product Highlights

- A direct evolution of the field-proven and highly interoperable GX-1K MSBG, MP and GX VoIP gateways
- Enterprise-Class Session Border Controller
- IP-to-IP Protocol normalization and Media transcoding
- Full Data security suite including Firewall, IDS/IPS, VPN & SSL
- Support wireless and wireless LAN access
- Integrated static as well as dynamic routing capabilities
- Advanced Media Processing and generic application processor
- Embedded BroadSoft PacketSmart agent for QoE Lifecycle management

Nuera GX-800 MSBG Multi-Service Business Gateway
GX-800 MSBG Multi-Service Business Gateway

GX-800 MSBG in Service Provider Networks
As SMBs strive to drive their cost control, voice and data applications and equipment costs, outsourcing a Voice and Data infrastructure to a Service Provider is becoming an attractive option. The GX-800 MSBG offers service providers, who are delivering hosted and managed communication services, a clear and easy-to-manage demarcation point, combining Data Routing and Security, WAN Access, Secured VoIP and the Stand Alone Survivability feature. Using the GX-800 MSBG, Service Providers' SMB customers can easily and securely consume cloud-based SaaS services.

GX-800 MSBG in Distributed Enterprise Networks
Enterprises are motivated to be more productive, efficient, and responsive to their internal users. The convergence of secured voice services, Stand Alone Survivability, Data Routing, Security and WAN Access into a branch office's unified platform, ensures a high level of investment protection, cost-optimization and support for the growing communication needs of the Enterprise.

The GX-800 can be utilized at the company’s remote branches, providing a suite of services, which include secured SIP Trunking by an Enterprise-class Session Border Controller, a survivable VoIP media gateway, and a cost-effective IP-PBX platform. In addition, the higher-density GX-1K MSBG is a well-suited platform for converging VoIP Gateways and a Session Border Controller, thereby improving the enterprise headquarters’ service level.

Target Applications
- SIP Trunking
- IP Centrex and hosted services
- IP-PBX for SMB/SOHO
- Remote connection to IP-PBX in distributed Enterprise branches
- Unified Communications mobility and Value Added Services for SMB/SOHO

Specifications

### Interfaces

| PSTN Capacity | Voice interfaces. The GX-800 is equipped with up to 12 analog PSTN interfaces: 4 BRI and single E1/T1/J1 span |
| Digital Interfaces (Optional) | Single span E1/T1 using RJ44 connectors |
| Analog Interfaces (Optional) | 4 ports FXS, 4 ports FXO, 12 FXO ports, 2 FXO ports or 12 FXO ports using RJ-11 connectors |
| BRI Interfaces (Optional) | E1 ports (b-cam), network ST interfaces, E1 or T1 termination |

### WAN Interfaces (Optional)

- WMI (Optional): WAN interface 10100/1000Base-T Copper
- LAN: 2 configurations: 4 ports 10/100/1000Base-T plus optional 8 10/100Base-T links, 2 ports 10/100/1000Base-T
- PPP: Power-Over-Ethernet on all ports is optional (Compliant to 802.3af and 802.3af-Ed) up to 15.4W per port.
- Management: Power-Over-Ethernet for RPS 12V TIA/568

### OSN Server Platform (Optional)

- Single Chassis Integrations: Embedded, open Network Solution Platform for third-party services
- OPC: intranet/Internet
- Memory: 1GB RAM
- Storage: 512MB SATA storage

### Media Processing

- VoIP Codecs: G.711, G.723.1, G.729, G.722, AMR-WB
- T.38 Fax Support: Independent dynamic receive selection per channel
- Codec Cancellation: DTX, DTMF, DTMF, IETF, ITU-T, H.320
- SIP Trunking: Fully featured SIP Trunking and gateway; No added cost for additional SIP Trunks
- Fax: 56K Fax over IP/Network interface; automatic fax to email
- Two-Way Transport: 56K Fax over Network interface; automatic fax to email

### Regulatory Compliance

- UL60950-1, EN60950-1, CB certification including national deviations
- EN55024, EN55022 Class A
- EN61000-3-3, EN61000-3-2, EN61000-3-2
- FCC Part 15 Class A
- VCCI Class B

### Hardware Specifications

- Power Supply: Dual, internal variable AC or DC
- Physical Dimensions: 320mm x 345mm x 1U

*Future Release*