COMPACT & HARDENED GATEWAY

The G2™ Compact Gateway is a carrier class, multipurpose gateway leveraging an environmentally hardened, small form factor chassis. Purpose-built for highly reliable VoIP, the G2 uses the latest generation of advanced, all-in-one DSPs and platform architecture for high quality VoIP and fax/modem handling. A NEBS Level 3 certified platform, the G2 is fully redundant, produced in a TL9000 quality system and deployable in ILEC, PTT, RLEC, CLEC, and MSO networks. The G2 is stackable and scales to 24 E1/PRI/T1s (720 DS0s) in a 2RU chassis.

A compact universal gateway, the G2 provides connectivity at the border between the IP and TDM/circuit switched networks. Highly versatile, the G2 advances VoIP in service provider and enterprise networks supporting multiple solutions including:

- Voice over FTTx: The G2 interworks V5.2, GR-303, and TR-08 with IP protocols including MGCP and H.248, allowing local exchange circuit switches to provide voice services in GPON, IP DSLAM, and other IP-based access networks; E1/T1/PRI over FTTx is also supported via PseudoWire Emulation over IP

- C.O. Modernization: With its Packet Line Gateway feature, the G2 allows NGN softswitches, SIP application servers, and IMS cores to control customer lines on access platforms like Digital Loop Carriers (DLCs), Access Nodes (ANs) and proprietary local exchange line frames and remotes

- Cable VoIP: Sharing the software code base of the PacketCable qualified G6 platform, the G2 provides a full range of cable trunking, access, and commercial services

- PBX Trunking: Working with GENBAND's S-Series security platforms, the G2 provides SIP to PRI and SIP to CAS trunking at the enterprise or service provider border

- IP Trunking: The G2 enables voice trunking between legacy TDM/PSTN and IP networks via MGCP, H.248, and SIP call control where a smaller form factor is required

- Network Survivability: With its Emergency Stand Alone feature, the G2 provides call control if softswitch or IMS core connections are disrupted to TDM or IP endpoints

INTEROPERABILITY

The G2 is compatible with IMS, TISPAN NGN, MSF, and PacketCable networks, and interoperable with the world's leading softswitches, SIP application servers, GENBAND border gateways, IP and TDM access equipment, and CPE.

MANAGEMENT

The GenView EMS is a robust GUI-based element manager for the G2, providing complete FCAPS support, and the G2 also has a fully-featured Command Line Manager (CLI)

PSTN CONNECTIVITY

- Simultaneous Calls: 720 (1,440 in simplex)
- Interconnection Modes: IMT, MF, CAS, PRI, GR-303, V5.x, TR-08, PWE3, R2*
- V5.2/GR-303/TR-08 Interface Groups: 10
- PSTN Interfaces: Up to 24 E1/PRI/T1 per system
- Echo Cancellation: G.165, G.168, 0-128ms
- CODEC Support: G.711 PCM, G.726 ADPCM, G.729, Mu/A-law
- Silence Suppression
- Idle Channel Suppression
- Transparent Fax/Modem Detection, Upspeed, and Codec Negotiation

ETHERNET/IP CONNECTIVITY

- IP Interfaces: Dual-Port Gigabit Ethernet
- GbE redundancy to ensure stateful switchover from facilities failures on VoIP and PWE flows
- VoIP Signaling: H.248, MGCP (rfc3435), TGCP, SIP (rfc2543), NCS, SIGTRAN
- PseudoWire Emulation: SAToP, CESoPSN
- IP QoS: Priority Queuing, ToS, DiffServ
- 802.1q (VLANs) with 802.1q prioritization

MANAGEMENT

- GenView EMS, SNMP, CLI, TL-1, Telnet, XML

EMERGENCY STAND ALONE (ESA)

- Supports up to 10,000 subscribers
- ESA for MGCP/H.248 VoIP endpoints
- ESA for legacy DLCs, line frames, Broadband Loop Carriers

CLOCK SPECIFICATIONS

- Sources: Dual BITS inputs, PSTN T1/E1 Interfaces, Internal Stratum 3 clocking (with holdover)

REDUNDANCY AND AVAILABILITY

- 99.999% Availability
- System Control: 1+1
- GbE/IP: 1+1, LACP
- TDM: 1+1
- Power: 1+1
- Management Interface/Facility: 1+1
- System Clock: Primary, Secondary, Tertiary
- Fan Subsystem: N+1
- Hot-swappable Components
- Non-Service Affecting (Hitless) Upgrades
- Emergency Stand Alone (ESA)

CHASSIS, POWER, AND OPERATING SPECS

- Hardened, OSP standards (-40°-> +65°)
- Up to 24xDS1, 24xE1 redundant
- Up to 48xDS1, 48xE1 simplex*
- 2xGbE2 or 100/1000Base-T/X
- Active cooling with replaceable filter
- 2 RU (3.5"); - 48VDC powering
- 19" or 23" rack mount, mid or flush mount
- Front and rear cabled options

REGULATORY COMPLIANCE

- Safety: UL 60950-1 (USA), CSA C22.2 No. 950 (Canada), IEC 60950-1 (Europe), EN 60 825 (Europe), ACA TS001 (Australia), AS/NZS 3260 (New Zealand))
- Electromagnetic Compliance (Emissions): FCC Class A (USA), ICES-003 Class A (Canada) EN 55 022 Class B (Europe), VCCI Class B (Japan) AS/NZS 3548 Class B (New Zealand)
- NEBS Level 3 Certified per Telcordia SR-3580: Telcordia GR-63-CORE, Telcordia GR-1089-CORE
- Certification of Terminal Equipment: FCC Part 68 (US), CS-03 (Canada)

FEATURES

- Access gateway feature connecting circuit switch call control to FTTx networks
- Packet Line Gateway connecting NGN /IMS call control to legacy access (DLC, AN, DCO, EWSD)
- PSTN trunking for NGN softswitches, IMS cores, and SIP application servers via MGCP, SIP, H.248, TGCP
- Emergency Stand Alone for packet and TDM endpoints
- NEBS Level 3 and ETSI compliant