G6

Universal Gateway

Many service providers still run legacy TDM switching to serve subscribers across large areas. These platforms are increasingly costly to maintain, and the pool of people who know how to support them keeps shrinking. Aging switches also carry real risk: unplanned outages, hard-to-source parts, and no path to modern IP services

Ribbon's G6 Universal Gateway helps operators retire aging TDM switches and connect legacy subscribers to SIP, and mobile services. Many customers are slow to migrate to IP, so the G6 lets operators modernize on their own timeline while keeping existing access equipment in service.

The G6 is part of Ribbon's Media Gateway portfolio and is designed to replace TDM switches. Ribbon's G5 Line Access Gateway connects directly to copper pair line interfaces; the G6 provides a full array of trunk interfaces. It connects to access trunks such as PBX-centric PRI and T1/E1, and to lines served by Digital Loop Carrier/Access Nodes and DMS, EWSD, and DCO switch line frames. The G6 also supports intermachine trunks, so operators can migrate a central office switch by switch.

A Practical Path for Access Replacement

The G6 connects directly to Ribbon's C20 Call Controller or other IP-based call control. Paired with the G5 for line frame replacement, an operator can shut down and remove a TDM switch, recovering floor space and cutting operating cost. New services can then be delivered to those same subscribers. TDM access becomes another on-ramp to SIP services and mobility instead of a dead end, which helps operators hold onto lines during the transition.

Features

The G6 Universal Gateway is a carrier-class access and trunking gateway that supports multiple VoIP service architectures at the same time, including IMS, VoIP, and TDM core. It is built for reliable VoIP and fax/modem handling in a low-power, small-footprint chassis. The G6 is NEBS Level 3 certified, fully redundant, produced in a TL9000 quality system, and deployed in ILEC, PTT, RLEC, CLEC, and cable MSO networks worldwide. A single chassis supports 240 to 16,128 ports (DS0s).

PSTN

- Simultaneous Calls: 240 to 16,128 non-blocked
- Interconnection Modes: IMT, MF, CAS, PRI, V5.x, GR-303, TR-08, PWE3
- Up to 50 V5.2, 100 GR-303 and 175 TR-08 Interface Groups
- PSTN Interfaces: E1, T1, STS-1/CH DS-3, OC-3/STM-1
- Echo Cancellation: G.165, G.168, 0-128ms
- Codec Support: G.711 PCM, Mu/A-law, G.726 ADPCM, G.729, G.729A (codecs are application dependent)
- Silence Suppression
- Idle Channel Suppression
  - Transparent Fax/Modem Detection, Upspeed, and Codec
- Negotiation, T.38; RFC 2833

Packet

- 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, SIP, SIGTRAN IUA
- IP QoS: Priority Queuing, ToS, DiffServ
- 802.1q (VLANs) with 802.1p prioritization

Redundancy and Availability

- 99.999% Availability per Telcordia
- System Control: 1+1
- GbE/IP: 1+1, LACP Messaging
- TDM: T1/E1 1:N, STS-1/DS-3 6:1, OC-3/STM-1 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)
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Management

- Ribbon EMS, SNMPv2/v3, CLI, Telnet, XML

Non-Operating Temperature

- - 40°C to +70°C

Emergency Stand Alone (ESA)

- ESA for H.248 VoIP endpoints/phones
- ESA for phones served by legacy DLCs, ANs, line frames,
- Broadband Loop Carriers, DMS-100 peripherals
- Supports up to 32,000 subscribers with Packet Line Gateway, up to 89,000 with DMS ABI solution

Clock Specifications

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

Chassis, Power, and Operating Specs

- 18 slot, 19" or 23" rack mount, front or mid-mount, or 450mm and 500mm ETSI
- 22.75"/577.85mm H (13 RU) x 11.02"/280mm D
- Chassis per 7' Rack: 3
- Active cooling with replaceable fi lter
- Power: Ultra-low power at 425W loaded; Dual A&B rails, -40V to -60V DC, 9.0A max
- Temperature: Operating: +5C to 40C; Short-Term Operating: -5C to 50C; Storage: -40C to 70C; Humidity: 5% to 90% non-condensing; non-operating - 40°C to +70°C

Compliances

- Safety: UL 60950-1 (USA), CSA C22.2 No. 950 (Canada), IEC 60950-1 (Europe), EN 60 825 (Europe), ACA TS001 (Aus), AS/NZS 3260 (NZ)
- 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 (NZ)
- NEBS Level 3 Certifi ed per Telcordia SR-3580: Telcordia GR-63-CORE, Telcordia GR-1089-CORE, CE Mark
- Certification of Terminal Equipment:

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