

The TelcoBridges Tmedia™ TMG5800 is a high-performance, carrier-grade media gateway that meets the needs of service providers looking to drive convergence between TDM and IP networks, consolidating multiple devices for signaling, connectivity and IVR into a single unified device and simplifying OAM&P requirements. A single TMG5800 unit provides capacity of 2,048 voice ports and the flexibility to mix and match TDM and IP services such as SS7, ISDN, SIGTRAN, SIP and H.248 across T1/E1/J1, DS-3 and STM-1 interfaces.

#### AVAILABLE CONFIGURATIONS

TMG5810 – 8 x T1/E1/J1  
TMG5812 – 16 x T1/E1/J1  
TMG5814 – 32 x T1/E1/J1  
TMG5816 – 48 x T1/E1/J1  
TMG5818 – 64 x T1/E1/J1  
TMG5820 – 1 x DS-3  
TMG5822 – 2 x DS-3  
TMG5824 – 3 x DS-3  
TMG5830 – 1 x STM-1

Each configuration is available with AC or DC power.

Leveraging its integrated media gateway controller or in conjunction with an H.248-compliant softswitch, the TMG5800 delivers core network services such as media gateway, TDM switching, VOIP hairpinning, transcoding, advanced call routing and fax relay, while providing the ability to control multiple Tmedia devices. With separate chipsets for media processing and interactive voice response (IVR), and signaling performed in hardware, the TMG5800 media gateway provides full non-blocking capability of up to 2048 channels per device.

Offering the industry-leading highest density and the lowest operating cost for a media gateway in a 2U form factor, the TMG5800 media gateway easily scales as service uptake increases, with expansion cards for IVR, VoIP and TDM. With up to 2/3rds less power consumption than competing products of similar capacity, the TMG5800 media gateway supports the drive by service providers to reduce the environmental impact of their network footprint and increase their profitability and green credentials.

#### FEATURES & BENEFITS

**Density:** Supporting up to 64 T1/E1/J1, 3 DS-3 or 1 STM-1 interfaces in a single unit, the TMG5800 offers the highest port density in a 2U form factor. The TMG5800 enables consolidation of multiple signaling and connectivity devices into a single box, while providing up to 2,048 IP voice ports at an industry-leading lowest cost per port.

**Carrier-grade:** NEBS Level 3-compliant, the TMG5800 is designed to meet the need for reliability that service providers and their customers demand. The TMG5800 media gateway offers hot-swappable power supply redundancy and the ability to scale from 192 to 2,048 ports via hardware and software upgrades.

**Flexibility:** The TMG5800 media gateway supports 'any-to-any' switching across multiple network interfaces and signaling protocols (SS7, ISDN, CAS R2, SIGTRAN, SIP and H.248) in the same device. It also supports transcoding for all major wireline, wireless and internet codecs.

For more information on how the Tmedia TMG5800 media gateway can help transform your offerings, visit [www.telcobridges.com](http://www.telcobridges.com).

#### > Tmedia **TMG5800**



## TMG5800 SPECIFICATIONS

### NETWORK INTERFACES

#### Telephony

8 to 64 T1/E1/J1 TDM ports (hardware & software upgradeable); or  
1 to 3 DS-3 TDM ports (software upgradeable) + 2 T1/E1/J1 ports for SS7  
signaling or BITS synchronization; or  
1 OC3/STM-1 TDM port (with Automatic Protection Switching (APS)) + 2  
T1/E1/J1 ports for SS7 signaling or BITS synchronization

#### Capacity

TDM: 192 to 2048 channels

VoIP: 192 to 2,048 universal ports per device; even more using less complex  
codecs such as G.711

#### WAN IP

Dual 100/1000 Base-T for VoIP traffic

#### LAN

2 x 100/1000 Base-T access for OAM&P

### MEDIA PROCESSING

**PCM Coding** A-law to  $\mu$ -law encoding and conversion

**Universal Codecs** G.711, G723.1, G.726, G.729ab, T.38, iLBC

**DTMF Relay** RFC2833, SIP INFO method, in-band  
> DTMF detection, generation, suppression

**Echo Cancellation** G.168 – 128ms tail length on all channels simultaneously

**Fax Support** T.38 fax relay, Group 3, Fax/modem bypass,  
G.711 fax fallback

**Optional Codecs\*** AMR, AMR-WB (G.722.2), GSM-FR/GSM-EFR,  
EVRC/QCELP, G.728, G729eg, iLBC

>Independent dynamic codec selection per channel

### APPLICATION SOFTWARE

#### TB Media Gateway™ application

> TDM-to-TDM switching, TDM-to-IP-to-TDM gateway, IP-to-IP hairpinning  
> Transcoding, trunking, call routing, fax relay and other functions  
> Call Detail Records (CDR): user-definable text files and RADIUS  
> High availability

### CALL ROUTING FEATURES

> Fully scriptable (Ruby-based) call routing engine  
> CLI (ANI)-based routing and translation  
> DID (DNIS)-based routing and translation  
> Least cost routing (with time of day/week/year scheduling and other criteria)  
> Routing based on Nature of Address (NOA), Numbering Plan Indicator (NPI),  
and others  
> Pre-and post-routing digit translation

\* Additional licenses required.

### SIGNALING

**ISDN PRI** (14+ variants), National ISDN-2, Euro ISDN, DMS100, DMS250, 4ESS,  
5ESS, Japan INS-NET1500

**SIP**: RFC 3261 User Agent, SIP Authentication

**CAS R2**: scriptable state machine enables user-generated variants

**SS7\***: (20+ variants) MTP2, MTP3, SCCP, and ISUP

> Up to 64 SS7 links, up to 2048 CICs, HSL, redundant SS7, single or multiple  
point codes per device

**SIGTRAN\***: SCTP, M2PA, M2UA, M3UA

**H.248**: ITU-T H.248.1

### QUALITY OF SERVICE (VoIP)

Dynamic jitter buffer (adaptive and fixed), Packet loss concealment, Silence  
Suppression; Denial of Service (DoS) protection for VoIP media

### MANAGEMENT INTERFACES

1 DB-9 serial console port with RS-232C adapter

1 100/1000base-T management interface for OAM&P

### MANAGEMENT & CONTROL

#### TelcoBridges Element Management System

> Live configuration and software upgrades via HTTP  
> Monitoring via HTTP

### HARDWARE SPECIFICATIONS

#### Physical Interfaces

**PSTN**: 8 to 64 T1/E1/J1 via RJ-48; 1 to 3 dual BNC DS-3; or 1 STM-1 optical /  
electrical link (with APS). Interface or BITS synchronization

**IP**: Dual 100/1000 Base-T Ethernet VoIP ports

**OAM & Control**: 2 x 100/1000 Base-T Ethernet port

#### Dimensions

2U with dual redundant power supplies

> 3.5" H (88.9 mm) x 17.4" W (442 mm) x 16" D (406 mm)

Weight: 2U model @ 58 lbs (26.4 kg)

#### Environmental

AC Power: 90 to 260 Volts AC, 47/63 Hz

DC Power: -40 to -60 Volts DC

Power Consumption: 548 W fully loaded

Operating temperature range: 0 to +55 °C, 95% rel. hum. non-condensing

Storage temperature range: -10 to +75 °C, 95% rel. hum. non-condensing

### REGULATORY COMPLIANCE

EMC

FCC Part 15, EN55022, EN61000, ENV50204

NEBS

Designed to meet Level 3

Safety

CE, UL60950, CSA C22.2 No.60950-1-03



STM-1 connection and redundant AC power option shown;  
DC power option and T1/E1/J1 and DS-3 interfaces also available