



### PRODUCT DESCRIPTION

The TelcoBridges **Tmedia TMG7800** is our high-level VoIP gateway. This series of VoIP gateways is defined by the highest scalability in the entire Tmedia family. Offering carriers from 16 to 1024 T1/E1s, or 1 to 48 DS3 or 1 to 16 OC3/STM1, the TMG7800 offers the redundancy required for carrier-grade networks.

A Tmedia TMG7800 system consists of 1 or 2 TMG7800-CTRL (depending on the clients need for redundancy), which then control up to 16 TMG7800 telecom units.

#### Characteristics of the TMG7800:

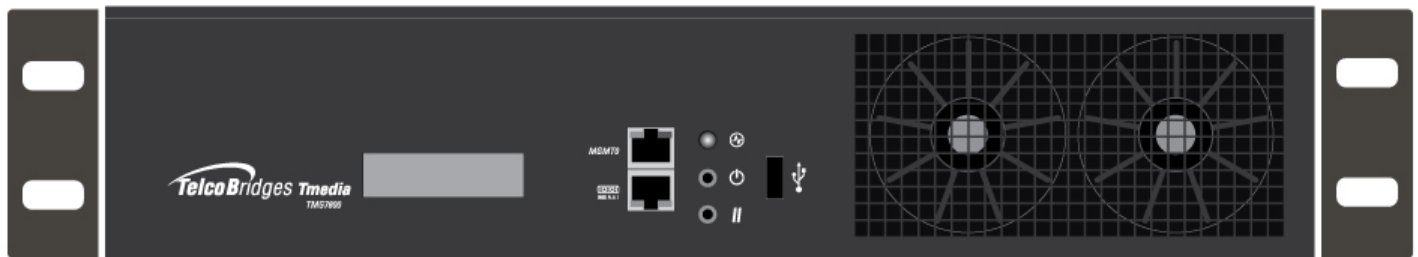
- ✓ 4U to 39U VoIP gateway
- ✓ 512 to 32,768 VoIP channels
- ✓ 16 to 1024 T1/E1s or 1 to 48 DS3 or 1 to 16 OC3/STM1
- ✓ Redundant AC or DC power supplies

#### Ordering information

Part #	Description
TMG7800-CTRL	Media controller
TMG7800-TMS	Media switch
TMG7800-TE-16	16 x T1/E1
TMG7800-TE-32	32 x T1/E1
TMG7800-TE-48	48 x T1/E1
TMG7800-TE-64	64 x T1/E1
TMG7800-DS3-1	1 x DS3
TMG7800-DS3-2	2 x DS3
TMG7800-DS3-3	3 x DS3
TMG7800-STM1	1 x STM1

Each configuration is available in redundant AC or DC power.

### ILLUSTRATIONS



Tmedia TMG7800 telecom unit, 2U VoIP / media gateway front view



Tmedia TMG7800-CTRL gateway controller front view

### Capacity and voice processing

512 to 32,768 VoIP channels (hardware and software upgrade)

#### PSTN interfaces

16 to 1024 T1/E1 (hardware and software upgradable) or  
1 to 48 DS3 (hardware and software upgradable) or  
1 to 16 OC3/STM1 (with Automatic Protection Switching – APS)  
Dual RJ48C for BITS or T1/E1 for signalling on each DS3 &  
OC3/STM1 unit

#### VoIP interfaces

Dual 100/1000Base-T per unit  
RJ45 connectors on rear of unit

#### Vocoding

Universal codecs: G.711, G.723.1, G.726, G.729ab, T.38 V.17, clear  
mode (RFC 4040)  
Other codecs: G.722.2 (AMR-WB), G.728, G.729eg, iLBC, AMR,  
EVRC, GSM-FR/EFR

#### Fax/Modem/Data

T.38 fax relay (V.17 and V.34)  
Automatic G.711 fallback, modem and data pass-through

#### DTMF relay

RFC 2833, SIP INFO Method, In-band

#### Echo cancellation

G.168 echo cancellation  
128 ms echo tail on all channels simultaneously

#### Voice processing

Dynamic and programmable jitter buffer (20 to 200 ms)  
Voice activity detection (VAD), Comfort noise generation (CNG)

#### Management interfaces

1 DB-9 serial port with RS-232C adapter  
Dual 100/1000Base-T for OAMP  
Supports virtual IP

### Signalling (Simultaneous signalling support)

#### SIP

Supported RFCs: 2327, 2976\*, 3261, 3262, 3263, 3264\*, 3311\*,  
3323\*, 3325\*, 3398, 3515, 3578\*, 3764, 3891, 4028, 3581, 3665\*,  
3666 (\*: partial compliance)

#### SIGTRAN

M2PA, M2UA, M3UA, IUA  
SS7 termination and/or relay supported

#### SS7

Up to 64 x MTP2 links (56, 64, n x 56/64 kbps, HSL)  
Multiple redundant MTP2 links  
Up to 64 MTP3 originating point codes and linksets  
ISUP variants: ITU 92, ITU 97, ANSI 88, ANSI 92, ANSI 95, Q.767,  
Telcordia 97, ETSIv2, ETSIv3, China, Singapore, UK

#### ISDN PRI

Q.931 ISDN PRI: NI-2, 4ESS, 5ESS, DMS-100, DMS-250, Euro ISDN  
ETSI NET5 (France, Germany, UK, China, Hong Kong, Korea), NTT  
(Japan), Australia

### TMG-CONTROL

#### Standalone call control

Any to any call routing (TDM-VoIP, TDM-TDM, VoIP-VoIP with  
transcoding)  
Call routing based on: trunk group, calling/called numbers, nature of  
address, ASR, time of day, load-based, cost-based, TO:, FROM:  
Request URI, redirect numbers, and other parameters  
NPA-NXX routing (100K+ table entries, Excel or CVS file upload)  
Route retries, calling/called digit manipulation, customizable call cause  
code mapping, call transfer (REFER, AT&T TR 50075)

#### H.248 (MEGACO) call control

ITU-T H.248 versions 1 and 2  
UDP, SCTP, IPSec transport  
DTMF and fax detection  
DTMF, call progress tone generation, COT generation  
Call quality and inactivity alerts  
H.248 control port redundancy (supports virtual IP)

#### Session management and billing

SIP peer availability polling  
RTP inactivity monitoring, RTCP  
CDR generation (RADIUS and text file)

### OAMP+T

#### Operation & Administration

Web-based system status and operations  
SNMP V2, V3 GET, TRAPs and alarms

#### Maintenance

Web-based interface for maintenance  
Automated system upgrade  
System backup, restore and copy

#### Provisioning

Web-based interface for configuration  
Dynamic activation  
Dynamic configuration changes

#### Troubleshooting

Per-call tracing (history and/or live)  
Signalling capture tools  
SSH command-line interface

### Electrical characteristics

#### Power input

90 to 260 VAC, 47 to 63 Hz, -40 to -60 VDC  
Redundant power supply option with dual power inputs

#### Physical characteristics (Dimensions & Weight)

Each 2U is, 3.5"(88.9mm) H x 17.4" (442mm) W x 16" (406mm) D  
20lbs (9.1kg)

#### Regulatory compliance (UL/CSA 60950, CSA C22.2)

EMC : FCC Part 15:2009, Subpart B, CE Mark (EN55022:2006, Class  
A, EM60950, EN61000, ETS 300 386)

#### Environmental

Operating temperature: 0 to +55 °C, 95% re. hum. non-condensing  
Storage temperature: -10 to +75 °C, 95% rel. hum. non-condensing  
Designed to meet NEBS Level 3, RoHS compliant