TMG800 1+1 VoIP Gateway - 1 to 8 T1/E1

*T*media™ TMG800 1+1

Data Sheet

*Solution answers service providers' needs for high availability and redundancy.
Our Tmedia 1+1 solutions consist of three components:*

- A standard Tmedia Unit
- A Tmedia +1 Unit
- And a Tmedia 1+1 patch panel

The standard Tmedia unit acts as the primary (active) VoIP gateway while the Tmedia +1 unit acts as the secondary (standby). The two devices communicate with each other using their onboard VoIP ports. In the event of product malfunction, traffic is transferred from the active to the standby unit through the patch panel connection, without the need for human intervention.

The Tmedia 1+1 solution ensures power redundancy, packet network redundancy, and facility protection.

The Tmedia TMG800 +1 provides a highly availability and redundant telecommunications systems from 1 to 8 T1/E1s. Just because a deployment may be small does not mean it should be less reliable!

Product Characteristics:

- ✓ 1U VoIP gateway,
- ✓ 32 to 256 VoIP channels
- ✓ SIP, SS7, ISDN PRI, E1 CAS R2, T1 CAS R1
- ✓ 1 to 8 T1/E1
- ✓ Software upgradeable by single T1/E1 and 32 VoIP channel increments
- ✓ Single or redundant AC or DC power supplies
- ✓ 1+1 Support

Ordering information

Part #	Description
TMG800-1+1	1 x T1/E1
TMG800-2+1	2 x T1/E1
TMG800-3+1	3 x T1/E1
TMG800-4+1	4 x T1/E1
TMG800-5+1	5 x T1/E1
TMG800-6+1	6 x T1/E1
TMG800-7+1	7 x T1/E1
TMG800-8+1	8 x T1/E1

Each configuration is available in either single or redundant AC or DC power.

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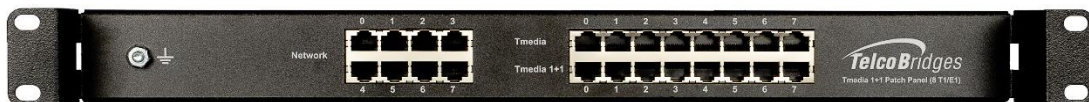**info@telcobridges.com**

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*T*media TMG800, 1U VoIP gateway **Front View**

*T*media TMG800 1U VoIP gateway **(Dual AC Power)**

*T*media TMG800 1+1, Patch Panel 8 T1-E1 **Front View**

Capacity and Voice Processing

32 to 256 VoIP channels (software
upgrade)

PSTN interfaces

1 to 8 T1/E1 (software upgrade)
Configurable per port for T1 or E1
RJ48C connectors on rear of unit

VoIP interfaces

Dual 100/1000Base-T, used separately or in bonding
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, T.38 V.34, QCELP

Fax/Modem/Data

T.38 fax relay (V.17 and V.34)
Automatic G.711 fallback, modem and data pass-
through
Clear mode (RFC 4040)

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

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

Management interfaces

Single 100/1000Base-T for OAMP+T
1 RJ45 serial port with RS-232C adapter
Supports virtual IP

Signaling

Simultaneously supports any combination or all
of the signaling protocols:

SIP

Supported RFCs: 2327, 2833, 2976, 3204, 3261,
3262, 3263, 3264, 3311, 3323, 3325, 3326, 3372,
3389, 3398, 3515, 3551, 3555, 3578, 3581, 3665,
3666, 3764, 3891, 4028, 4694, 5806
SIP-1/SIP-T

SIGTRAN

M2PA, M2UA, M3UA, (IPSP, ASP, SG), IUA
SCTP (raw IP and UDP)
SS7 termination and/or relay supported
Up to 64 M2UA / M2PA links
Up to 20 M3UA peer server processes

SS7

Up to 64 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, Brazil, SPIROU, Japan NTT
SCCP routing and global title transition

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

CAS

MFC R1 (E&M, loop start user / network side)
MFC R2 (standard ITU, Brazil, Mexico)
Customizable protocol script files

TMG-CONTROL (Embedded gateway control and management software)

Embedded Call Control

Call routing based on: trunk group, calling/called numbers digit manipulation, call cause code mapping
Advance call routing: Priority, load sharing, route retry, Nature of Address (NOA) manipulation
Programmable call routing: Access and manipulation of call parameters
RADIUS AAA (supports multiple RADIUS servers)
NPA-NXX routing (over 100,000 table entries)

H.248 (MEGACO) Call Control

ITU-T H.248 versions 1 and 2
UDP, SCTP, IPSec transport
DTMF and fax tone detection
Call progress, DTMF and COT tone 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 AAA and text file)
Integrated lawful intercept (ETSI ES 201 671 v.2.1.1)

OAMP+T (Web-based Interface)

Operation & Administration

Status, configuration and management GUI
Configuration change audit logging
Access and user management
SNMP V2, V3 GET, TRAPs and alarms

Maintenance

Automated system upgrade
System backup, restore and copy
Extensive system status display
Multiple software version archive

Provisioning

Dynamic configuration changes
Configuration validation
Multiple configuration archive

Troubleshooting (TB Analytics)

Call Trace
Test Call
TB Sigtrace – Live Signaling Capture
System Snapshot

Electrical characteristics (Power Input)

90 to 260 VAC, 47 to 63 Hz, -40 to -60 VDC
Redundant power supply option with dual power inputs
Maximum 83W power consumption

Physical characteristics (Dimensions & Weight)

1U, 19" rack mount, 1.75" (44.5mm) H x 17.4" (442mm) W x 11" (279mm) D
10lbs (4.54kg)

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