TSG800 SS7/Signaling Gateway - 1 to 16 T1/E1

The TelcoBridges *T*sig **TSG800** is a carrier-grade SS7/SIGTRAN gateway and converter.

Software upgradeable from 1 to 16 T1/E1, the TSG800 is the most cost-effective SS7/Signaling gateway solution for service providers that is currently available on the market.

Product Characteristics:

- ✓ 1U SS7/SIGTRAN gateway
- ✓ 1 to 16 T1/E1
- ✓ SIGTRAN, SS7
- ✓ SCCP routing with Global Title Translation (GTT)
- ✓ Supports conversion from ISDN and CAS protocols
- ✓ Software upgradeable by single T1/E1 increments
- ✓ Hot-swap redundant power supplies (AC or DC)
- ✓ *T*sig 1+1 solution option

*T*sig™
TSG800 Data Sheet

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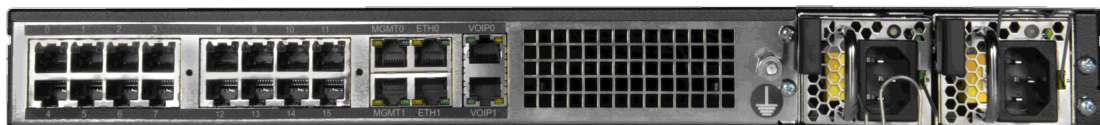
*T*sig TSG800 1U SS7/SIGTRAN gateway, front and rear view (dual AC power input shown)

Interfaces

PSTN interfaces

1 to 16 T1/E1 (software upgradeable)
Configurable per port for T1 or E1
RJ48C connectors on rear of unit

Packet interfaces

6 Ethernet ports 100/1000Base-T
RJ45 connectors on rear of unit
Up to 16 different IP addresses
Ethernet port bonding and 802.1q VLAN support

High Availability & Redundancy

Power supply redundancy
IP port redundancy
Self-recovery software
Fault tolerant software
MTP2 SS7 link redundancy

Tsig 1+1 solution (optional)

The *Tsig* 1+1 solution extends the high-availability and
redundancy features of the TSG800

SS7/SIGTRAN gateway redundancy (active/standby)
Full capacity protection (TDM and IP)
Configuration database redundancy
Seamless software upgrade
M3UA/MTP3/ISUP redundancy

*T*sig 1+1 solution consists of:
  1 active unit and 1 standby unit
  Up to two 1+1 Patch Panel(s) for TDM connectivity

1+1 Patch Panels are passive (no power required)

Signaling

Simultaneously supports any combination or all of the
following signaling protocols:

SS7

Up to 64 MTP2 links (56, 64, n x 56/64 kbps) or
  2 x HSL
Multiple redundant MTP2 links
Up to 64 originating point codes and 256 linksets
Up to 512 destination point codes
ISUP variants: ITU 92, ITU 97, ANSI 88, ANSI 92,
  ANSI 95, Q.767, Telcordia 97, ETSI v3, China,
  Singapore, UK, SPIROU, Japan NTT, Russia
Up to 384 SCCP routes and global title translations
(GTT) on called/calling party, SSN and Opcode

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 64 M3UA peer server processes

ISDN PRI

Q.931 ISDN PRI (user and network side)
ISDN variants: NI-2, 4ESS, 5ESS, DMS-100,
  DMS-250, Euro ISDN ETSI NET5 (France,
  Germany, UK, China, Hong Kong, Korea), Euro
  Numeris (VN6), NTT (Japan), Australia
ISDN NFAS with D-channel backup

CAS

MF R1 (including E&M, loop start, ground start)
MF R2 (including standard ITU, Brazil, Mexico,
  Venezuela)
Customizable script files to implement any CAS variant
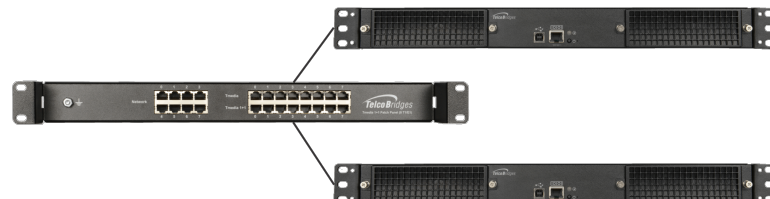
*T*sig 1+1 solution schematic

*T*ctrl (Call Control)

Call routing based on: trunk group, calling/called
    numbers (with digit manipulation) and/or
    various other protocol information/headers
Customizable routing including priority-based, load-
    balancing, black listing, call limiting, route
    retries, etc.
Customizable call cause code mapping
Programmable call routing: Access and manipulation of
    call parameters (SIP, SS7 and ISDN),
    including Nature of Address (NOA)
RADIUS authentication and authorization (supports
    multiple RADIUS servers)
NPA-NXX routing (over 5 million records)

Session management and billing
CDR generation (RADIUS and/or csv files)
Integrated lawful intercept (ETSI ES 201 671 v.3.2.1)

OAMP+T

Operations & Administration
Provisioning, management and status GUI
CLI and configuration file
Machine-to-machine interface (RESTful)
Configuration change audit logging
Access, user and privilege management
SNMP V2, V3 GET, TRAPs (alarms)
Extensive SNMP call statistics MIBs

Management
2 Ethernet ports 100/1000Base-T
1 USB Type B serial port
1 RJ45 RS232 serial port
GUI-based and CLI system upgrade
GUI-based configuration copy, backup and restore
Storage for multiple software versions
Storage for multiple configuration files
Extensive system status display

Provisioning
Non-service affecting configuration changes
Offline configuration validation
Multiple configuration file archive
Northbound API (RESTful) for automated provisioning

Network Analytics (TB Analytics)
Live call trace with protocol information and ladder
    diagrams
Live test call with media playback and recording
TB Sigtrace – Protocol signaling capture into pcap files
Media call recording (scriptable for calling and called
    numbers)

Maintenance
Replaceable fan filters

Electrical Characteristics

90 to 260 VAC, 47 to 63 Hz or -36 to -72 VDC
Hot-swap redundant power supplies (AC or DC)
Maximum 62W power consumption

Regulatory Compliance

Safety
CAN.CSA C22.2
EN 60950-1:2005
EN 60950-1:2006

EMC
FCC Part 15:2013, Subpart B,
CE Mark (EN55022:2010, Class A, EN61000, ETSI
    EN 300 386)

HS Code
8517.62.00

Dimensions & Weight

TSG800
1U, 19" rackmount
1.75" (44.5 mm)H x 16.9" (429 mm)W x 16" (406 mm)D
13.75 lbs (6.24 kg)

1+1 patch panel (8 T1/E1)
1U, 19" rack mount
1.75"(44.5 mm)H x 16.9"(429 mm)W x 5.25"(133 mm)D
3.4 lbs (1.6 kg)
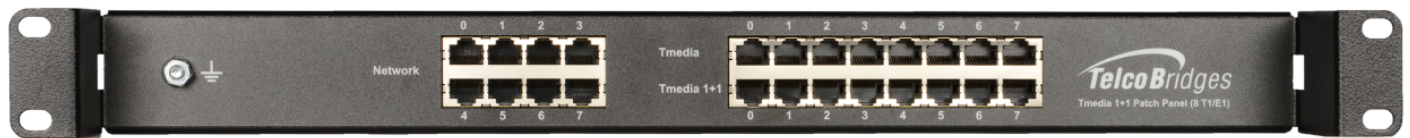
Environmental

Operating temperature:
    0 to +70 °C, 95% rel. hum. non-condensing
Storage temperature:
    -10 to +85 °C, 95% rel. hum. non-condensing
Designed to meet NEBS Level 3
RoHS compliant

*T*media TSG800 1+1, Patch Panel (front view)