

TMGIP3200 VoIP Transcoding Gateway – Up to 2120 transcoding sessions



The TelcoBridges *T*trans[™] TMGIP is our mid-level VoIP transcoding gateway.

Recognized for its high-capacity and high-performance, the TMGIP3200 is a 203 to 2120 simultaneous G.711 to complex codec VoIP transcoding sessions gateway that offers the industry's highest density in a single box (1U) solution.

Product Characteristics:

- ✓ Up to 2120 sessions of G.726 <-> G.711
- ✓ Up to 1696 sessions of G.729A <-> G.711
- ✓ Up to 1484 sessions of G.723 <-> G.711
- ✓ Up to 1304 sessions of EFR <-> G.711
- ✓ Up to 1152 sessions of AMR-NB <-> G.711
- ✓ Up to 1112 sessions of G.723 <-> G.729
- ✓ Up to 812 sessions of AMR-WB <-> G.711
- ✓ Up to 812 sessions of G.722 <-> G.711
- ✓ 203 to 2120 simultaneous G.711 codec VoIP transcoding sessions
- ✓ Hot-swap redundant power supply (AC or DC)
- ✓ 1U VoIP gateway

Ttrans™ TMGIP3200 Data Sheet

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Ttrans TMGIP3200 1U VoIP transcoding gateway, rear view (dual AC power input shown)



Capacity and Voice Processing

VoIP interfaces

Up to 4 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

Vocoding

203 to 2120 VoIP transcoding sessions Universal codecs: G.711, G.723.1, G.726, G.729ab, T.38 V.17, clear mode (RFC 4040) Other codecs: G.722, G.722.2 (AMR-WB), G.728, G.729eg, iLBC, AMR, EVRC, GSM FR/EFR, QCELP, T.38 V.34

Fax/modem/data

T.38 fax relay (V.17 and V.34) Automatic G.711 fallback Modem and data passthrough, NSE, VBD support Clear mode (RFC 4040)

DTMF relay RFC 2833/4733, 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)

Voice recording and announcement playback Up to 2048 channels (using optional IVR mezzanine) Also available using existing VoIP channels

High Availability & Redundancy

Power supply redundancy IP port redundancy Self-recovery software Configuration database redundancy Seamless software upgrade Fault tolerant software

Signaling

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

<u>SIP</u>

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, 4733, 5806 SIP-I/SIP-T Extensive SIP header manipulation

Tctrl (Call Control)

Toolpack framework 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, loadbalancing, black listing, call limiting, route retries, etc.

- Customizable call cause code mapping
- Programmable call routing
- Access and manipulation of call parameters

RADIUS authentication and authorization (supports multiple RADIUS servers)

SIP-based local number portability and CNAM lookup

H.248 (MEGACO) call control

ITU-T H.248 versions 1 and 2 UDP, SCTP, IPSec transport DTMF and fax 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 and/or csv files) Integrated lawful intercept (ETSI ES 201 671 v.2.1.1)



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

Ethernet control ports 100/1000Base-T
 USB Type B serial port
 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 files 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 supply (AC or DC) Maximum 128W power consumption

Regulatory Compliance

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

<u>EMC</u>

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

Dimensions & Weight

1U, 19" rackmount 1.75" (44.5 mm)H x 16.9" (429 mm)W x 16" (406 mm)D 14.25 lbs (6.5 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

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