

## TMGIP3200 VoIP Transcoding Gateway – Up to 2120 transcoding sessions



The TelcoBridges Ttrans™ 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:

### 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, 4733, 5806

SIP-I/SIP-T

Extensive SIP header manipulation

## TMG-CONTROL (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, load-balancing, 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

1 Ethernet control 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 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

### EMC

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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