



CONNECTION SPECIFICATIONS

Mobile	4–32 GSM/3G(UMTS)/CDMA channels, 1 antenna per 16 channels 1/6 x SIMs per channel
ISDN	1/2 x E1 4/8 x BRI
VoIP	8/16/32 x VoIP channels
Ethernet	2 x Ethernet 10/100 Base-T RJ-45
Maintenance	Remote access via IP with <i>TELES.GATE Manager</i> , <i>TELES.NMS</i> , or FTP
Power supply	2U: Power supply unit 100–240 VAC 200 W 4U: Power supply unit 100–240 VAC 400 W

PROTOCOLS AND FEATURES

Mobile	GSM: Dual Band (900/1800 or 850/1900 MHz), SMS, integrated SIM card server support 3G(UMTS): Multiple Band (850/900/1800/ 1900/2100 MHz), UMTS, GSM, integrated SIM card server support CDMA (CDMA 2000): Dual Band (800/1900 MHz), R-UIM, carrier-specific variants
ISDN	PRI: DSS1 (Q.931, national variants), SS7-ISUP (Q.767) optional, Q.SIG-BC E1/T1, TE/NT, CRC4/Double Frame BRI: TE/NT (freely assignable), DSS1 (Q.931), Q.SIG-BC; PP or PMP
VoIP	SIP (RFC 3261), H.323(v4) VoIP/Media gateway functionality STUN client Support for multiple gatekeepers, H.225(v4) Support for multiple registrars RTP multiplex bandwidth reduction ENUM client Echo cancellation G.168–2000 Silence suppression Comfort noise generation Ringtone generation Configurable ToS, Diffserv SIP registrar / location server
Codecs	G.711, G.723, G.726, G.728, G.729, GSM, iLBC, Fax T.38
IP router	Integrated IP router via GPRS or CDMA2000
SNTP	Version 2 (mandatory for correct date/time generation)
SNMP	Alarm management
System	Firmware & configuration remotely upgradeable

IP SECURITY

Firewall	IP, MAC, UDP, and TCP filter
Telnet, FTP, HTTP	Username and password
Remote access	Username and password

ROUTING

- 5000 routing entries
- Time-dependent routing
- Individual timers for each SIM / each call
- Callback server
- Number portability support
- Multilevel alternative routing
- Multiple VoIP routing profiles
- AOC generation (AOC-D, AOC-E)
- Traffic shaping

QoS alternative routing:

Quality criteria for disabling mobile ports or changing SIMs:

- ASR
- Network errors
- Announcements

Quality criteria for disabling VoIP peer for a defined amount of time:

- ASR
- Round trip delay
- Jitter
- Fraction lost

After the defined time expires the default VoIP peer is active again.

SPECIAL FEATURES

- Alert tone detection:
 - Generation of ALERT/CALL PROGRESS (user free)
- Announcement recognition and programmable options:
 - Generation of PROGRESS/CALL PROGRESS, in-band (default)
 - Generation of RELEASE with configurable cause value
 - Generation of CONNECT (when call is accepted)
- Busy-signal recognition:
 - Generation of DISCONNECT/RELEASE
- E-mail-to-SMS conversion
- Two Ethernet ports for redundancy or separation of signaling/voice and maintenance

SUPPLEMENTARY SERVICES

Mobile/ISDN to SIP	RFC 3398
Mobile/ISDN to H.323	CLIP (incoming/outgoing), CLIR, COLP, COLR
Charge Impulse	AOC-D, AOC-E

DTMF INBAND HANDLING

ISDN to ISDN	Transparent
Mobile/ISDN to VoIP	RFC 2833, inband
VoIP to Mobile	RFC 2833, outband

REQUIRED BANDWIDTH FOR VoIP

Table shows required bandwidth for pure voice data, including IP, UDP, RTP header (40Byte/Package), except Silence Suppression

Codec	Framesize	RTP Multiplexing	1 Call (kbit/s)	4 Calls (kbit/s)
G.729	20ms		24.0	96.0
G.729	80ms		12.0	48.0
G.729	20ms	X	20.4	44.4
G.729	80ms	X	11.1	35.1
G.711	20ms		80.0	320.0
G.711	80ms		68.0	272.0
G.711	20ms	X	76.4	268.4
G.711	80ms	X	67.1	259.1

RTP multiplexing is compatible with *TELES.VoIPBOX*, *TELES.VoIPGATE*, *TELES.iGATE*, *TELES.iSWITCH*, or *TELES.iXESS* on the peer side.

OPERATOR DOCUMENTATION

Manual	English, PDF, CD
Installation brochure	Customization possible

HOUSING

Material	Aluminum
Status LED	1
Mounting	19" Rack, 2U or 4U

PHYSICAL PARAMETERS

Size (WxHxD)	2U: 483 x 88 x 450mm 4U: 483 x 177 x 450mm
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ENVIRONMENTAL CONDITIONS

Temperature	+5°C to +40°C
Humidity	5% to 80% (non-condensing)

CERTIFICATES

EMC, Safety, CE

PACKAGE CONTENT

- 1 *TELES.iGATE*
- 1 Power supply cable
- 1 Ethernet cable Cat5, straight-through, 2 x RJ-45 plugs, 3m
- 1 Cross-connect cable (PRI system)
- 1 1:1 cable (PRI system)
- 4 ISDN cables (BRI system)
- 1 Installation brochure and software

CONFIGURATION & PROVISIONING (DEFAULT)

IP settings	IP address : 192.168.1.2 IP mask : 255.255.255.0
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