

GTH E1/T1 Probe

corelatus

Non-intrusive E1/T1 monitoring

Corelatus probes extract signalling and voice from E1 and T1 G.703 PCM links in fixed, GSM and 3G UMTS mobile telephone networks. The probes connect to E1/T1 links, decode layer 1 and layer 2 of the protocol stack and then forward the monitored data to an external server over TCP/IP.

Probes are permanently installed in the PSTN SS7 network, on GSM Gb, Abis, A, C, D, E and F links and on 3G Iub, Iucs and Iups links. The monitored data can be used for real-time billing, fraud detection, network supervision and lawful interception. It can also be used to create new services, for instance SMS welcome.

GTH hardware is in its fourth design generation and has shipped in volume since 2001.

Monitored protocols

SS7 MTP-2 in narrow-band 56/64 kbit/s and wide-band Nx64 kbit/s variants. Support for ITU-T Q.703, including Annex A, as well as ANSI T1.111.2.

Frame Relay in arbitrary channel widths from 64 kbit/s to 1984 kbit/s. Support for ITU-T Q.922.

ATM-based HSS/L Support for ITU-T I.361, ITU-T I.363.5 and ANSI T1.111.2A with interfaces at the CPCS (AAL5) and AAL0 sublayers.

ISDN LAPD, as per ITU-T Q.921.

Performance depends on the protocol. For example, a fully-equipped 1U chassis can monitor up to 48 Mbit/s of Frame Relay, as used in the GSM Gb interface.

The probe can also monitor CAS MFC-R2, SS5, DTMF, fax and modem tones.

Easy to interface

The GTH probe is controlled by an external application through an OS- and language-neutral text-over-TCP/IP/ethernet API. Sample code, examples in popular languages and an API guide are online at: <http://www.corelatus.com/gth/api/>



Hardware features

19" x 1U rack-mounted chassis, WxDxH: 482mm x 340mm x 42mm

One chassis holds up to three GTH modules, providing 16, 32 or 48 E1/T1 receivers in a 1U rack space. One chassis can thus monitor *both* directions of 8, 16 or 24 E1/T1 links.

E1/T1 receivers have software selectable E1 (2 Mbit/s) or T1 (1.5 Mbit/s) mode, 75/100/120 ohm termination compatible with -20dB (G.772) monitor points as well as nonstandard -30dB monitor points.

Dual 10/100 Mbit/s ethernet.

Power consumption typically 9W per module (27W per fully populated chassis).

Dual, independent 48VDC power inputs.

No moving parts, passively cooled.

Measured MTBF: more than 130 module-years between failures, measured over all modules shipped since 2001.

Includes all the features described in the E1/T1 Switch, IVR & Voicemail data sheet (10-0008).



Corelatus hardware is in service in public telephone networks in more than 30 countries around the world.