



ATL1307 is a powerful and flexible 3G, FMC and IMS Analyzer, Tester and Probe/Simulator. It provides monitoring/analysis, load generation, regression and conformance test capabilities for for CAS, ISDN, SS7, INAP, MAP, CAP, Sigtran, SIP, FTP, HTTP, CIFS and a wide variety of other protocols.

124 64/56 Kbps SS7 data links as well as HDLC HSL, ATM HSL and SCTP/IP signaling links are supported.

ATL1307 is a stand alone, 8.5 x 5.0 x 1.5 inch (22 x 13 x 4 cm) portable unit controlled by Linkbit software running on a PC host. ATL1307 can be placed anywhere on IP network the controlling host could reach it.

ATL1307 has on board:

- Freescale MPC8560 CPU
- TI TMS320C6416C DSP
- 256Mb-1Gb DDR Memory
- 2 x Infineon Quad FALC (4 xT1/E1 ports, 8 Rx)
- Marvell 88E6063 100/10 Mbps Switch

ATL1307 has 4 E1/T1 TDM ports for monitoring and termination of E1/T1 spans. Each port can be configured for monitoring or termination of a different protocol. In the monitoring mode two Quad FALC chips with 8 Rx lines allow to capture messages from 4 full-duplex E1/T1 spans simultaneously.

ATL1307 has 4 x 10/100 Mbps Ethernet Ports with 2 independent MAC addresses. These Ports are used for monitoring/generation of IP traffic.

The TDM and Ethernet ports can be used together to simultaneously monitor or terminate PSTN and IP sides of modern communications equipment. A single test can send, receive and manipulate SS7, PRI and IP messages.

Capture, full decode and analysis of MTP2 MSUs with encapsulated PDUs (ISUP, TCAP, MAP, etc.) and data link messages (LSSU, FISU) are supported. Similar functionality is supported for Sigtran links (M3UA, M2UA, M2PA, SUA, IUA, DUA). Monitoring/analysis, testing and verification of PCM and RTP media is supported as well.

Trace files in Ethereal and Wireshark Pcap format or Hex data files can be imported, edited and replayed using only point-and-click operations.

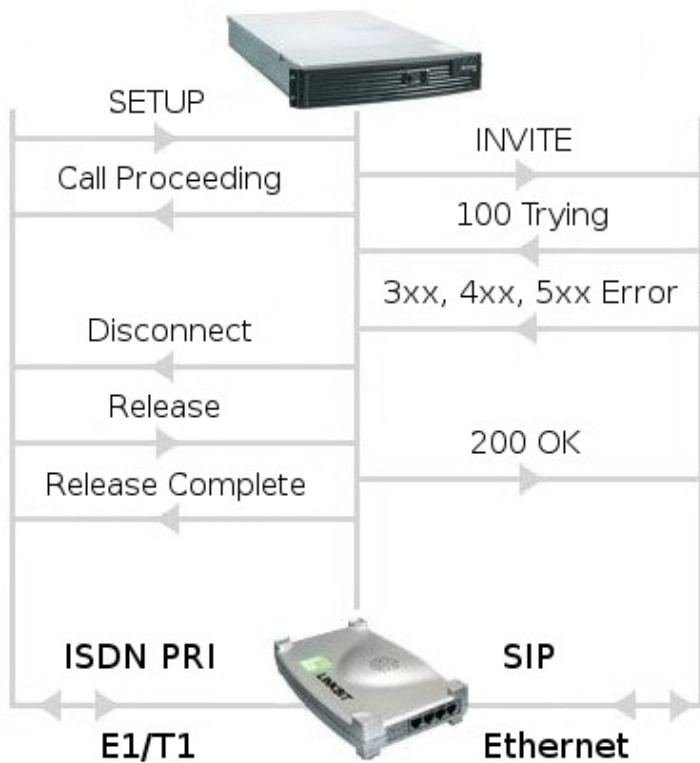
ATL1307 support for multiple TDM and IP protocols makes it an ideal testing tool for today's converging networks.

Below are some examples of ATL1307 use.

### Example 1: Testing ISDN-SIP Gateway

ATL1307 makes it possible to place PRI calls over to SIP- ISDN gateway and terminate them on the

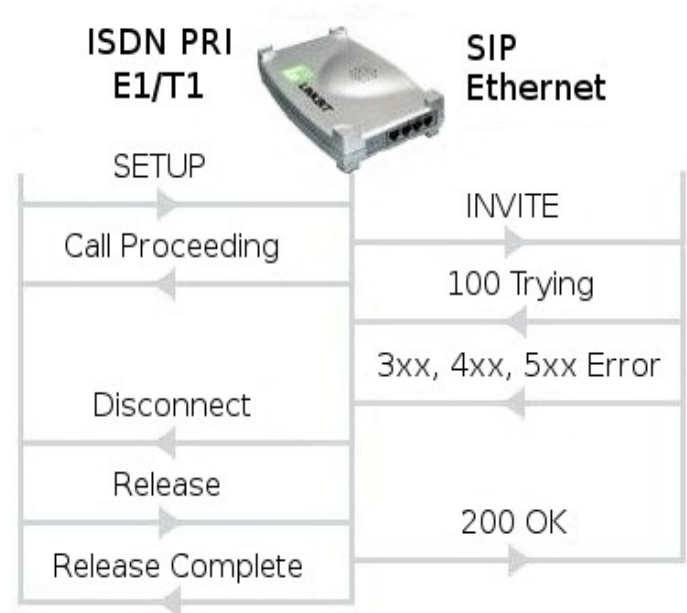
#### ISDN-SIP Gateway



### Example 2: Simulating Gateway

ATL1307 can simulate SIP-ISDN Gateway, while customer equipment originates and terminates the calls on both sides. Linkbit Simulation Studio software makes it easy to build and execute any SIP to ISDN and ISDN to SIP message mapping.

#### Simulation of ISDN-SIP Gateway



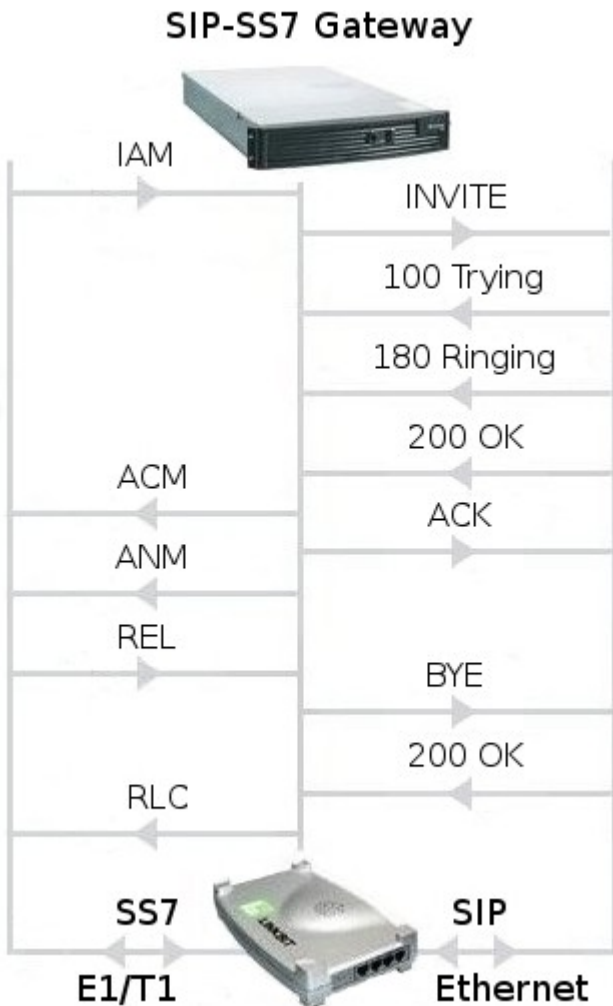
other side as SIP. Alternatively, calls can be originated as SIP and terminated on ISDN side. Call flows on both sides are completely programmable. On the fly and post-capture filtering, call/transaction analysis and correlation between TDM and IP sides are available.

It is also possible to send arbitrary Hex data, with or without HDLC framing, or industry standard BERT patterns into TDM time slot(s) for debugging or negative testing of ISDN or SS7 Layer 2 signaling.

AT1307 software allows a user to create any SS7 and IP (SIP, SIGTRAN) message mapping for simulation of SS7-SIP or SS7-Sigtran gateways. SS7 messages (ISUP, TCAP, MAP, INAP, CAP etc.) are received on a TDM port, repackaged, and sent via SIP or Sigtran and vice versa.

### Example 3: Testing SS7-SIP Gateway

ATL1307 makes it possible to place SS7 ISUP calls over E1/T1 to SIP-SS7 gateway and terminate them on the other side as SIP. Alternatively, calls can originate as SIP and terminate on SS7 side.



Tests can include media path on both sides of the gateway. Linkbit software supports media path simulation over TDM and IP with industry standard codecs. RFC 3398, RFC 3372, SS7 MLPP and Assured Services SIP (AS-SIP) standards are supported.

### Example 4: Testing IMS

ATL1307 can simulate different IP based protocols at the same time. IMS network elements handling of SIP, Sigtran, DIAMATER, DNS, H.248 and other IP protocols can be tested.

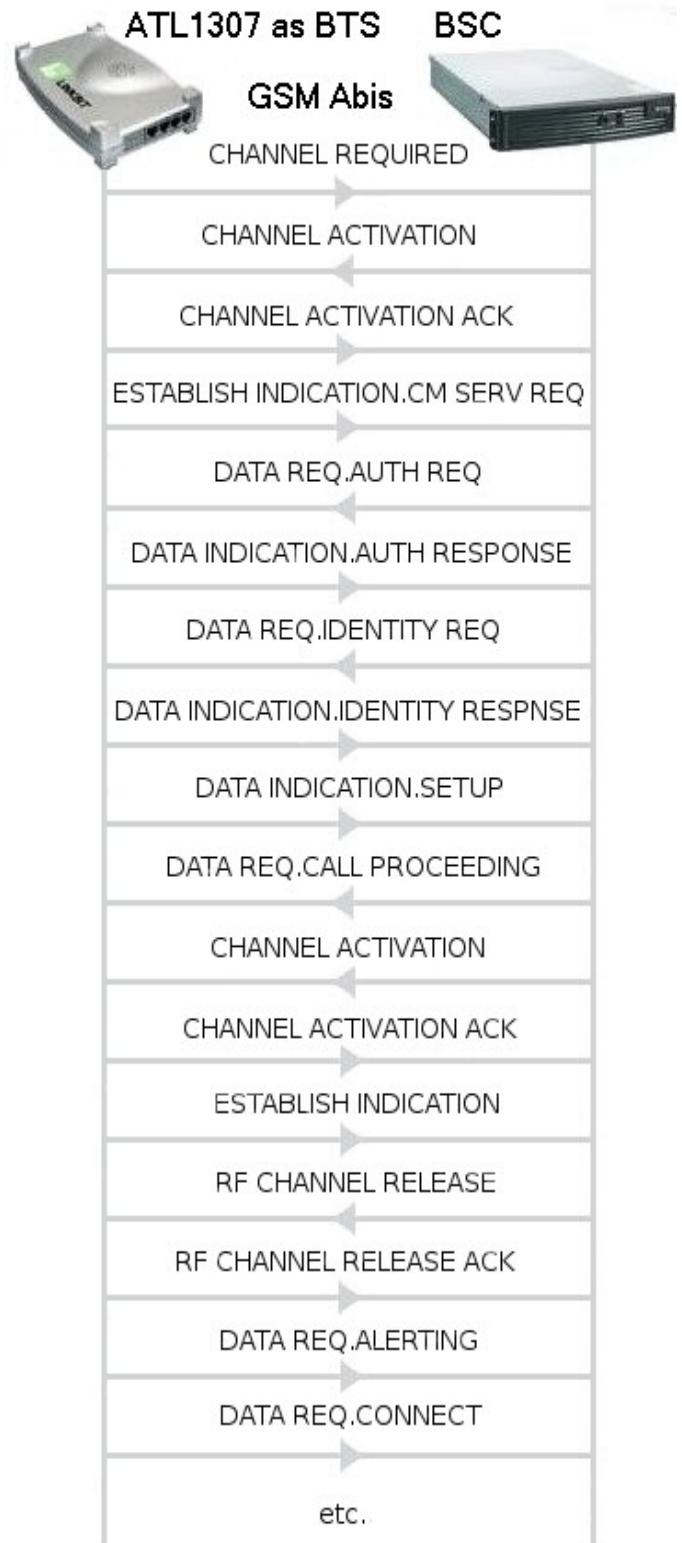


### Example 5: Testing BSC

ATL1307 makes it possible to simulate any functionality of MSC, HLR, SMSC and other elements of Mobile networks. Linkbit software allows users to quickly build test cases for ISUP, CAP, MAP, A-Interface, Ater, Abis, PCM voice, TRAU voice and other mobile interfaces and protocols.

Complete protocol stacks from Layer 3 (Layer 2 in some cases) can be simulated. For example, a message with any legal MAP/TCAP/SCCP/MTP3 PDU payload can be created with a sequence of point-and-clicks and passed to independently running MTP2 stack for delivery.

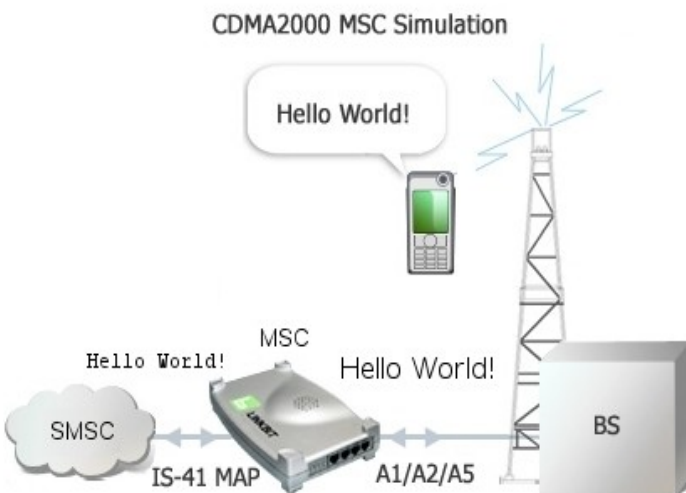
AT1307 can simulate BTS and BSC functionality. Abis-L3, Abis O&M, Radio L3, SM-CP, BSSAP, BSSAP-LE, DTAP, BSSMAP, DTAP-LE, BSSMAP-LE, LCS, SM-TP, GMM/SM and other Abis protocols are supported. TRAU 8 and 16 Kbps channels are supported.



### Example 6: Simulating MSC

ATL1307 can simulate MSC functionality. It can originate/terminate PSTN SS7 signaling and voice circuits, and support communications with HLR/VLR, SMSC and other mobile network nodes.

TCAP application traffic can run over ITU-T or ANSI SCCP/MTP signaling links. ATL1307 supports simulation of GSM/3GPP MAP applications over ANSI networks and IS41/3GPP2 MAP over ITU-T SS7 networks.



### Supported protocols

The list of supported protocols is long and growing:

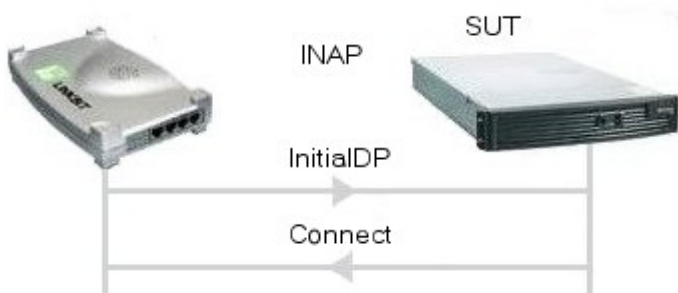
- GSM (DTAP, BSSMAP, BSSAP, SCCP, TCAP, MAP, etc.)
- UMTS (AAL5, AAL2, IuB, IuCS, IuPS, etc)
- IS-41C/D/E
- CDMA2000 (A1, A8/9, A10/11, WIN etc.)
- SS7 (ANSI/ITU ISUP, BTNUP, INAP, MLPP etc.)
- ISDN (EDSS1, NI2, 5ESS, DPNSS/DASS2 etc.)
- R2MF, R2DTMF, R1.5, RBS
- SIGTRAN (M2UA, M2PA, M3UA, SUA, DUA, IUA etc.)
- IPv6, SCTP
- MEGACO/H.248
- H.323
- MGCP
- SIP/SDP, AS-SIP, SIP-T
- RADIUS, DIAMETER
- RTP/RTCP
- CEsPSN
- TELNET, FTP, HTTP, CIFS

### TDM Performance

Signaling link type	Number of links	ISUP CPS	TCAP TPS
56/64 Kbps SS7 Signaling Links	1	100	84
	31	3100	1400
	124	3500	1400
ATM or HDLC SS7 High Speed Link	1	3500	1400
	4	3500	1400

### IP Performance

Test Type	CPS	TPS
SIP Calls	2000	
SS7 ISUP over M3UA	800	
INAP over M3UA		1500



INAP Transaction used for TPS measurements.



SIP call flow used for CPS measurements.



ISUP call flow used for CPS measurements.

For more information please contact us at [sales@linkbit.com](mailto:sales@linkbit.com) or call +1-408-9699940 ext 102.