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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 37701B

The HP 37701B is a portable T1/datacom tester for installation and maintenance of T1, fractional T1, and datacom circuits. OEM HP digital-transmission-tester literature lists complete T1 and fractional T1 bit-error and signal measurements, auto code/frame/pattern detection, BER, alarm and event generation, ESF encode/decode, DS1 signal level and frequency, fractional T1 n x 56 or n x 64 kb/s contiguous or non-contiguous, G.821 analysis, and optional pulse-shape (001) plus datacom module HP 15901A Option 002 for RS-232-C, RS-449, and V.35 to 1.544 Mb/s. Out-of-service terminal testing and in-service monitor, through, and drop-insert testing of T1 and fractional T1 spans, with optional DTE/DCE datacom interfaces. Use Case: T1 and datacom installation and maintenance Results Display: bar charts and graphical logging with time stamp Signaling: bit control and capture or dialing From HP 37701B/37702A T1/Datacom Tester product literature in the HP Digital Transmission Testers family brochure. DDS functions described there belong to 37702A, not 37701B.



MODEL

**Agilent / Keysight
37701B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

37701B

LISTING

<https://aumictechlabs.com/products/37701b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 37701B is a portable T1 datacom tester for installation and maintenance of T1, fractional T1, and datacom circuits. It delivers comprehensive measurement solutions in a single unit, supporting out-of-service terminal testing and in-service monitoring including through mode and drop-insert testing. The instrument performs bit error rate testing (BERT) on

unchannelized and channelized circuits, signaling bit control with capture and dialing, and G.821 measurements with timestamped graphical logging. Technical Specifications Maximum datacom interface speed: 1.544 Mb/s (with optional HP 15901A Option 002) Internal multiplexer capacity: up to 384 kb/s for test pattern/tone/data insertion or extraction Power requirement: three-conductor line power outlet with protective earth ground Key Features T1 and fractional T1 circuit testing and maintenance Unchannelized BERT with wide digital pattern selection Channelized BERT with VF tones and digital patterns Signaling bit control, capture, and dialing Time slot delay measurement Monitor, through mode, and drop-insert test modes Transmit, receive, and through operational modes Portable, lightweight form factor Datacom Capabilities Optional HP 15901A Option 002 module enables RS-232-C, RS-449, and V.35 interface testing up to 1.544 Mb/s, extending the instrument's functionality for dedicated datacom measurements. Compatibility & Integration Instrument control and data transfer supported via GPIB, USB, and LAN interfaces through Agilent/Keysight IO Libraries Suite.

37701B Characteristics / Specifications

PARAMETER	VALUE
Model	37701B
Instrument Type	T1 / datacom tester
Primary Rate	T1 1.544 Mb/s
Fractional T	n x 56 kb/s or n x 64 kb/s contiguous or non-contiguous
Measurements	auto code, frame, and pattern detection, error monitoring, BER, alarms, events
Framing	ESF decode and encode
Signal Measurements	DS1 signal level and frequency
Error Analysis	G.821
Datacom Module	HP 15901A Option 002
Datacom Interfaces	RS-232-C, RS-449, V.35
Datacom Rate Maximum	1.544 Mb/s with built-in synthesizer
Pulse Shape Option	001
Internal Battery Option	003
Virtual Remote Option	V01
Test Modes	out-of-service terminal; in-service monitor, through, drop-insert
Patterns	wide selection for unchannelized BERT plus VF tone/digital for channelized BERT
Breakout	RS-232-C break-out box on datacom module
Timing Analysis	control-circuit timing analysis on datacom module
Mechanical Package	portable single box
Manufacturer	HP Agilent Keysight
Use Case	T1 and datacom installation and maintenance
Auto Setup	yes
Results Display	bar charts and graphical logging with time stamp
Timeslot Delay	yes

PARAMETER	VALUE
Signaling	bit control and capture or dialing

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes

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Ordering Information

OPTION	DESCRIPTION
Option 002	for RS-232-C, RS-449, and V.35 to 1.544 Mb/s.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.