

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 37701A

Agilent Keysight 37701A T1 Datacom Tester The HP 37701A isaT1/datacom transmission tester in the HP 3770x handheld/portable family used for DS1 BER and datacom interface testing. OEM 37701-family product summaries list T1 (1.544 Mbit/s) pattern generation and error analysis with AMI/B8ZS coding and common datacom interfaces on optioned units; the related 37702A adds DDS testing. Installation and maintenance of T1 spans, CSUs, and datacom circuits; BER and alarm testing in the field. T1 1.544 Mbit/s pattern generation and BER

The HP 37701A isaT1/datacom transmission tester in the HP 3770x handheld/portable family used for DS1 BER and datacom interface testing. OEM 37701-family product summaries list T1 (1.544 Mbit/s) pattern generation and error analysis with AMI/B8ZS coding and common datacom interfaces on optioned units; the related 37702A adds DDS testing. Installation and maintenance of T1 spans, CSUs, and datacom circuits; BER and alarm testing in the field. T1 1.544 Mbit/s pattern generation and BER Datacom interface testing on optioned 37701-family units



MODEL

**Agilent / Keysight
37701A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

37701A

LISTING

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

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 37701A is a digital data tester for installation, maintenance, and troubleshooting of T1, fractional T1, DDS, and datacom circuits. It delivers full transmit, receive, and through-path capabilities for comprehensive in-service and out-of-service testing across

central offices, remote locations, and user premises. The unit integrates T1 and DDS testing with built-in CSU emulation and multiplexer/demultiplexer functionality, enabling technicians to validate circuit performance and insert test patterns into individual timeslots, subrates, and overhead channels before connecting user equipment.

Technical Specifications

Measurement Capabilities:

- Bit-error rate (BER) testing - simple and full error analysis modes
- Signal level measurements on T1 circuits
- Error detection, analysis, and logging across all test patterns
- Frame slips measurement
- G.821 compliance testing with digital and analog measurements
- Time slot delay measurement
- Optional D4 jitter measurement
- Pulse shape, clock slips, and wander measurement (Option 001)

Test Patterns: PRBS: 2^{15} , 2^{20} , 2^{23}

T1/DS1 frame formats: D4, ESF, T1DM, SLC-96 QRSS, 3 in 24, 8-bit word, loop, and control codes

DDS stress patterns: TA55 256-byte user patterns (DSO only)

Interfaces: DS0 A/B, DS1, DSIC RS-232-C, RS-449, V.35 (with optional datacom module supporting rates up to 1.544 Mb/s) HP-IB and RS-232 remote control

Key Features

- Built-in CSU emulation for pre-connection circuit verification
- Integrated multiplexer/demultiplexer for timeslot, subrate, and overhead insertion/extraction
- Monitor, through, and drop-insert modes for live-circuit analysis
- Auto-configuration capability
- Results storage and graphic presentation (Option 003)

Typical Applications

- T1 and fractional T1 circuit commissioning and maintenance
- DDS/Dataport service validation
- Datacom testing up to 1.544 Mb/s
- Signal integrity analysis in telecom networks

Compatibility & Integration

The 37701A supports standard T1/DS1 interfaces across D4, ESF, T1DM, and SLC-96 frame formats. Optional datacom module integration (e.g., HP 15901A Option 002) extends capabilities to RS-232-C, RS-449, and V.35 interfaces.

37701A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	T1 / datacom transmission tester
Series Family	HP 37701A / 37702A
Primary Rate	T1 1.544 Mbit/s
Line Coding Class	AMI and B8ZS
Error Analysis Class	bit error ratio and T1 alarm detection
Sibling Model	37702A T1/DDS tester
Operating Mode	in-service monitor and out-of-service BER class
Pattern Generation	PRBS and fixed patterns class of 3770x T1 testers
Interface Class	DS1 and datacom on optioned configurations
Framing Class	D4/ESF T1 framing class of 37701-family testers
Form Factor	transportable T1 tester
Remote Class	HP-IB/RS-232 on optioned 3770x units
Application Domain	T1 span and CSU maintenance
Clocking Class	recovered and internal T1 clock class
Input Impedance Class	100 ohm balanced T1 class
Monitor Mode Class	protected monitor-point testing class
Alarm Detection Class	AIS, LOS, and yellow/RAI class of T1 testers
Documentation	HP 37701A T1/datacom tester operating literature
Family Successor Class	later OmniBER and 37717 multi-rate sets
Power	AC/battery class of handheld 3770x testers where fitted
Display	dedicated T1/datacom results display
Specification Source	HP 37701/37702 family product summaries

37701A Specifications

PARAMETER	VALUE
Agilent Keysight 37701A T1 Datacom Tester	Overview
Applications	Installation and maintenance of T1 spans, CSUs, and datacom circuits; BER and alarm testing in the field.
Key Features	T1 1.544 Mbit/s pattern generation and BER
AMI and B8ZS line coding class	Datacom interface testing on optioned 37701-family units
Technical Specifications	Instrument Type: T1 / datacom transmission tester

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	
Specifications	
PARAMETER	VALUE
Instrument Type	T1 / datacom transmission tester
Series Family	HP 37701A / 37702A
Primary Rate	T1 1.544 Mbit/s
Line Coding Class	AMI and B8ZS
Error Analysis Class	bit error ratio and T1 alarm detection
Sibling Model	37702A T1/DDS tester
Operating Mode	in-service monitor and out-of-service BER class
Pattern Generation	PRBS and fixed patterns class of 3770x T1 testers
Interface Class	DS1 and datacom on optioned configurations
Framing Class	D4/ESF T1 framing class of 37701-family testers
Form Factor	transportable T1 tester
Remote Class	HP-IB/RS-232 on optioned 3770x units
Application Domain	T1 span and CSU maintenance
Clocking Class	recovered and internal T1 clock class
Input Impedance Class	100 ohm balanced T1 class
Monitor Mode Class	protected monitor-point testing class
Alarm Detection Class	AIS, LOS, and yellow/RAI class of T1 testers
Documentation	HP 37701A T1/datacom tester operating literature
Family Successor Class	later OmniBER and 37717 multi-rate sets
Power	AC/battery class of handheld 3770x testers where fitted
Display	dedicated T1/datacom results display
Specification Source	HP 37701/37702 family product summaries
Notes On Sparse Table: full pulse-mask and jitter numbers belong on the 37701A specification sheet for the installed options	
Notes	
Identity, T1 1.544 Mbit/s, AMI/B8ZS, and 37702A sibling from HP 37701A/37702A family product summaries.	

Pulse-mask, jitter, and datacom-rate numeric tables were not in the short public blurbs; do not invent them. Confirm options on the unit label.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

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