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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 37704A

Rate Class Sts1: 51.84 Mb/s SONET electrical Optical Family: OC-1 OC-3 OC-12 with plug-in modules Remote Class: HP-IB capable 37704-family instruments From HP 37704A SONET Test Set product literature (to 622 Mb/s STS-12, VT/DS1 and DS3 mapping, 37771A/37772A/37776A interfaces). Optical reach and connector style follow the installed interface module. Optical Family: OC-1 OC-3 OC-12 with plug-in modules Remote Class: HP-IB capable 37704-family instruments From HP 37704A SONET Test Set product literature (to 622 Mb/s STS-12, VT/DS1 and DS3 mapping, 37771A/37772A/37776A interfaces). Optical reach and connector style follow the installed interface module.



MODEL

**Agilent / Keysight
37704A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

37704A

LISTING

<https://aumictechlabs.com/products/37704a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 37704A is a field-portable digital transmission analyzer for testing and verifying SONET, DS3, and DS1 digital communication systems up to 622 Mb/s (STS-12). It generates and analyzes Virtual Tributary (VT) DS1 and DS3-mapped SONET signals with precise control over section, line, and path overhead bytes. The instrument stresses network equipment through error, alarm, and T1X1 pointer movement generation, validating performance to ANSI standards and beyond. Technical Specifications Supported Rates & Formats DS1 at 1.544 Mb/s (B8ZS coded) DS3 at 44.736 Mb/s (B3ZS coded) STS-1 at 51.84 Mb/s (B3ZS coded electrical;

1310 nm optical) STS-3 at 155.52 Mb/s (CMI coded electrical; 1310 nm optical) STS-12 at 622.08 Mb/s (1310 nm optical) Signal Mapping Standards DS1 to ANSI T1.105 and Bellcore TA-TSY-000253 DS3 to ANSI T1.105 and Bellcore TA-TSY-000253 Optical Interfaces 1310 nm wavelength at 51.84 Mb/s, 155.52 Mb/s, and 622.08 Mb/s Electrical Interfaces B8ZS at 1.544 Mb/s B3ZS at 44.736 Mb/s and 51.84 Mb/s CMI at 155.52 Mb/s

Key Features Full control of section, line, and path overhead bytes for SONET signal generation Error, alarm, and T1X1 pointer movement generation for equipment stress testing Modular plug-in architecture supporting optional optical and electrical interface cards Field-portable design for on-site network installation and maintenance

Typical Applications SONET network equipment validation and compliance testing DS1 and DS3 circuit generation and analysis Equipment stress testing and fault simulation Network installation, maintenance, and monitoring

Compatibility & Integration Optional Interface Modules 37771A: STS-3 Electrical Interface Module 37772A: OC-1/OC-3 Optical Interface Module 37776A: OC-12/OC-3 Optical Interface Module

37704A Characteristics / Specifications

PARAMETER	VALUE
Model	37704A
Instrument Type	portable SONET DS3 DS1 test set
Maximum Rate	622 Mb/s (STS-12)
Mapped Payloads	VT DS1 and DS3
Overhead Layers	section line and path
Pointer Stress	T1X1 pointer movements
Standards Family	ANSI SONET
Partner Electrical Module	37771A STS-3 electrical interface
Partner Optical Oc1 Oc	37772A OC-1/OC-3 optical interface
Partner Optical Oc	37776A OC-12/OC-3 optical interface
Related Portable Set	37744A to 155 Mb/s
Use Case	field SONET installation and maintenance
Manufacturer	HP Agilent Keysight
Form Factor	field portable robust test set
Measurement Types	overhead and mapped payload
Alarm Generation	errors and alarms to stress equipment
Rate Class Sts	51.84 Mb/s SONET electrical
Ds1 Payload Rate	1.544 Mb/s
Ds3 Payload Rate	44.736 Mb/s
Optical Family	OC-1 OC-3 OC-12 with plug-in modules
Display Class	portable SONET tester UI
Remote Class	HP-IB capable 37704-family instruments

37704A Specifications

PARAMETER	VALUE
HP Agilent 37704A SONET DS3 DS1 Test Set	Overview
Applications	SONET circuit installation, maintenance, and mapped DS1/DS3 payload testing through OC-12/STS-12.
Key Features	Combined SONET, DS3, and DS1 in one field set
Technical Specifications	Model: 37704A

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
Model	37704A
Instrument Type	portable SONET DS3 DS1 test set
Maximum Rate	622 Mb/s (STS-12)
Mapped Payloads	VT DS1 and DS3
Overhead Layers	section line and path
Pointer Stress	T1X1 pointer movements
Standards Family	ANSI SONET
Partner Electrical Module	37771A STS-3 electrical interface
Partner Optical Oc1 Oc3	37772A OC-1/OC-3 optical interface
Partner Optical Oc12	37776A OC-12/OC-3 optical interface
Related Portable Set	37744A to 155 Mb/s
Use Case	field SONET installation and maintenance
Manufacturer	HP Agilent Keysight
Form Factor	field portable robust test set
Measurement Types	overhead and mapped payload
Alarm Generation	errors and alarms to stress equipment
Rate Class Sts1	51.84 Mb/s SONET electrical
Rate Class Sts3	155.52 Mb/s
Rate Class Sts12	622.08 Mb/s
Ds1 Payload Rate	1.544 Mb/s
Ds3 Payload Rate	44.736 Mb/s
Optical Family	OC-1 OC-3 OC-12 with plug-in modules
Display Class	portable SONET tester UI
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Notes

From HP 37704A SOnET Test Set product literature (to 622 Mb/s STS-12, VT/DS1 and DS3 mapping, 37771A/37772A/37776A interfaces). Optical reach and connector style follow the installed interface module.

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