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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 70841B 3 Gbit/s Pattern Generator Module

Error Analysis Basis: CCITT Rec. G.821 class measurements on 70842B System Pattern Generator Product: 71604B class MMS Family: 70000 modular measurement system Related Combined File: hp-70001a-70841b-70842b.txt System Pattern Generator Product: 71604B class MMS Family: 70000 modular measurement system Related Combined File: hp-70001a-70841b-70842b.txt Specs from HP 71600B / 70841B / 70842B literature. This file is the 70841B pattern generator. Confirm H50 if sub-100 Mb/s operation is required. Clock source and display are separate MMS modules.



MODEL

**HP / Agilent
70841B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

70841B

LISTING

<https://aumictechlabs.com/products/70841b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 70841B is a 3 Gbit/s pattern generator module for the Agilent 70000 Series Modular Measurement System, designed to generate serial bit patterns for high-speed digital communication testing. Operating across 0.1 Gbit/s to 3 Gbit/s, the module produces PRBS sequences and user-defined patterns up to 4 Mbits in length. It integrates into the 70001A mainframe via MSIB and GPIB interfaces, providing eight I/O ports (six front panel, two rear) with Type N (F) connectors. The 70841B supports pattern types including PRBS, zero substitution/variable mark density test patterns, and word test patterns. User-defined instrument

setups - up to 10 configurations - store in non-volatile memory. An external 3 GHz clock source can drive the module, and control operates through the HP 70004A color display with optional HP-HIL keyboard attachment. Floppy disk drive storage preserves custom patterns. The module occupies one 418 MMS slot and draws power and cooling from the 70001A mainframe. Typical deployment pairs the 70841B with the 70842B error detector module for bit-by-bit pattern validation. Technical Specifications Data Rate: 0.1 Gbit/s to 3 Gbit/s User Pattern Length: Up to 4 Mbits Pattern Types: PRBS, zero substitution/variable mark density test patterns, word test patterns External Clock: Accepts 3 GHz external clock source I/O Connectors: Eight ports (six front, two rear); Type N (F) connectors Communication: MSIB and GPIB interfaces Memory: Non-volatile storage for 10 user-definable setups Module Slot: 418 MMS form factor Key Features Generates serial PRBS and custom bit patterns up to 4 Mbits Floppy disk drive for pattern storage and recall Operates with or without external controller HP-HIL connector supports 46021A or 98203C keyboard control Integrates with Agilent 70004A color display interface Typical Applications High-speed digital communication system testing Device stimulation across 0.1–3 Gbit/s range PRBS and pattern-based validation Error performance analysis when paired with 70842B detector module Compatibility & Integration The 70841B plugs into the Agilent 70001A System Mainframe and operates alongside the 70004A color display. It integrates with the Agilent 71603 Error Performance Analyzer and 71604B Pattern Generator. Pairing with the 70842B Error Detector Module enables comprehensive bit-by-bit pattern comparison testing.

Features & description

From manufacturer datasheet

Features

- 4-slot MMS pattern generator complementary to 70842B • PRBS, zero substitution, variable mark density, user words • Option H50 50 Mb/s low end • Data transitions less than 120 ps (10-90 percent) • Front/rear clock and data I/O • Hosted by 70001A; notastandalone box

70841B Characteristics / Specifications

PARAMETER	VALUE
Model	70841B
Manufacturer	Hewlett Packard / Agilent
Instrument Type	MMS pattern generator module
Family	71600B / 70841B / 70842B
Alias	HP 70841B; Agilent 70841B
Host Mainframe	70001A MMS
Module Width	4 MMS slots
Standard Bit Rate	100 Mb/s to 3 Gb/s
Data Clock Jitter	less than 15 ps rms
Data Transition 10 to	less than 120 ps
Data Transition 20 to	less than 90 ps
Clock Transition At 3 GHz	less than 120 ps 10 percent to 90 percent
Patterns	PRBS, zero substitution, variable mark density, user word
Complementary Detector	70842B 4-slot error detector
Detector Standard Bit Rate	100 Mb/s to 3 Gb/s
Detector Option H50 Low End	50 Mb/s class
Error Analysis Basis	CCITT Rec. G.821 class measurements on 70842B
Typical Display	70004A
Typical Clock Source	70311A / 70312A
System Pattern Generator Product	71604B class
System EPA Product	71603B class
I/O	front and rear clock and data ports
MMS Family	70000 modular measurement system
Related Combined File	hp-70001a-70841b-70842b.txt
Related Detector File	hp-70842b.txt

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.

Performance Analyzer. It produces PRBS, zero-substitution, mark-density, and user-word patterns from 100 Mb/s to 3 Gb/s (50 Mb/s with Option H50). Data/clock jitter is less than 15 ps rms. The module installs in a 70001A mainframe with a 70004A display and 70311A/70312A clock.

Applications
Multi-Gbit/s serial stimulus; BER systems with 70842B; telecom/datacom component verification in MMS racks; extended low-rate patterns with Option H50.

- Key Features
- 4-slot MMS pattern generator complementary to 70842B
 - PRBS, zero substitution, variable mark density, user words
 - Option H50 50 Mb/s low end
 - Data transitions less than 120 ps (10-90 percent)
 - Front/rear clock and data I/O
 - Hosted by 70001A; notastandalone box

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	70841B
Manufacturer	Hewlett Packard / Agilent
Instrument Type	MMS pattern generator module
Family	71600B / 70841B / 70842B
Alias	HP 70841B; Agilent 70841B
Host Mainframe	70001A MMS
Module Width	4 MMS slots
Standard Bit Rate	100 Mb/s to 3 Gb/s

Option H50 Low End: 50 Mb/s

Specifications

PARAMETER	VALUE
Data Clock Jitter	less than 15 ps rms
Data Transition 10 to 90	less than 120 ps
Data Transition 20 to 80	less than 90 ps
Clock Transition At 3 GHz	less than 120 ps 10 percent to 90 percent
Patterns	PRBS, zero substitution, variable mark density, user word
Complementary Detector	70842B 4-slot error detector
Detector Standard Bit Rate	100 Mb/s to 3 Gb/s

PARAMETER	VALUE
Detector Option H50 Low End	50 Mb/s class
Error Analysis Basis	CCITT Rec. G.821 class measurements on 70842B
Typical Display	70004A
Typical Clock Source	70311A / 70312A
System Pattern Generator Product	71604B class
System EPA Product	71603B class
I/O	front and rear clock and data ports
MMS Family	70000 modular measurement system
Related Combined File	hp-70001a-70841b-70842b.txt
Related Detector File	hp-70842b.txt

Notes

Specs from HP 71600B / 70841B / 70842B literature. This file is the 70841B pattern generator. Confirm H50 if sub-100 Mb/s operation is required. Clock source and display are separate MMS modules.

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.