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Data Sheet
August 13, 2026

HP / AGILENT

HP / Agilent 70842B 3 Gb/s Error Detector Module

System Pattern Generator Product: 71604B class MMS Family: 70000 modular measurement system Related Option H30: see hp-70841b-h30-70311A listings for clock-source bundles Related Combined File: hp-70001a-70841b-70842b.txt MMS Family: 70000 modular measurement system Related Option H30: see hp-70841b-h30-70311A listings for clock-source bundles Related Combined File: hp-70001a-70841b-70842b.txt Specs from HP 71600B / 70841B / 70842B literature. This file is the 70842B error detector. Confirm H50 if sub-100 Mb/s operation is required. Clock source and display are separate MMS modules.

MODEL	CALIBRATION
HP / Agilent 70842B	Available on request
CONDITION	**STATUS**
Used	In stock
RFQ / SKU	**LISTING**
70842B	https://aumictechlabs.com/products/70842b-2/

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 70842B is a 3 Gb/s error detector module designed for high-speed digital testing within modular mainframe systems. It compares incoming data against internally generated reference patterns to detect and quantify bit errors across frequencies from 100 Mbit/s to 3 Gbit/s. The module supports PRBS, zero substitution/variable mark density patterns, and word test patterns as specified by an external pattern generator such as the HP 70841B. The 70842B performs comprehensive error metrics including error count, delta error count, error ratio, delta error ratio, and errored/error-free intervals at second, decisecond, centisecond, and millisecond resolutions. It derives CCITT Rec G.821 compliance measurements: %Unavailability, %Availability,

%Errored Seconds, %Severely Errored Seconds, %Degraded Minutes, and Power-loss Seconds. Transition-based measurements (0→1 and 1→0 error counts and ratios) enable detailed error pattern analysis. Technical Specifications Operating Frequency Range: 100 Mbit/s to 3 Gbit/s Supported Test Patterns: PRBS, zero substitution/variable mark density, word test patterns Module Slot: 418 MMS I/O Ports: Five Clock: Real-time with battery backup for event logging Key Features Flexible gating modes: Manual (Run/Stop control), Single (user-initiated periods), Repeat (continuous cycling) Measurement period definition by time (1 second to 99 days), error count (10, 100, or 1000), or bit count (1E7 to 1E15) Automatic or manual pattern synchronization with selectable sync gain/loss thresholds Front-panel status indicators: Gating, Clock Loss, Data Loss, and Sync Loss LEDs External printer logging via HP-IB Typical Applications High-speed serial data validation, telecommunications compliance testing, and error performance characterization in digital communication systems. Compatibility & Integration Designed for integration into HP/Agilent 70001A and 70004A mainframe systems. Operates in conjunction with pattern generator modules such as the HP 70841B.

Features & description

From manufacturer datasheet

Features

• Complementary 4-slot detector to 70841B pattern generator • CCITT Rec. G.821 class measurements • Option H50 lowers the operating floor to 50 Mb/s • Front/rear clock and data I/O • Used in 71603B EPA / 71604B pattern-generator systems • Hosted by 70001A; notastandalone box

70842B Characteristics / Specifications

PARAMETER	VALUE
Model	70842B
Manufacturer	Hewlett Packard / Agilent
Instrument Type	MMS error detector module
Family	71600B / 70841B / 70842B
Alias	HP 70842B; Agilent 70842B
Host Mainframe	70001A MMS
Module Width	4 MMS slots
Standard Bit Rate	100 Mb/s to 3 Gb/s
Complementary Generator	70841B 4-slot pattern generator
Generator Standard Bit Rate	100 Mb/s to 3 Gb/s
Generator Option H50 Low End	50 Mb/s
Generator Data Clock Jitter	less than 15 ps rms
Generator Data Transition 10 to	less than 120 ps
Generator Data Transition 20 to	less than 90 ps
Generator Clock Transition At 3 GHz	less than 120 ps 10 percent to 90 percent
Patterns	PRBS, zero substitution, variable mark density, user word
Error Analysis Basis	CCITT Rec. G.821 class measurements
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 Option H	see hp-70841b-h30-70311A listings for clock-source bundles
Related Combined File	hp-70001a-70841b-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. Withamatching 70841B pattern generator it measures BER and G.821-class error performance from 100 Mb/s to 3 Gb/s (50 Mb/s with Option H50). The module installs in a 70001A MMS mainframe, typically with a 70004A display and 70311A/70312A clock source.

Applications
Multi-Gbit/s BER on serial telecom/datacom links; PRBS and user-pattern error analysis; MMS-rack production test; extended low-rate work with Option H50.

Key Features
- Complementary 4-slot detector to 70841B pattern generator
- CCITT Rec. G.821 class measurements
- Option H50 lowers the operating floor to 50 Mb/s
- Front/rear clock and data I/O
- Used in 71603B EPA / 71604B pattern-generator systems
- Hosted by 70001A; notastandalone box

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	70842B
Manufacturer	Hewlett Packard / Agilent
Instrument Type	MMS error detector module
Family	71600B / 70841B / 70842B
Alias	HP 70842B; Agilent 70842B
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
Complementary Generator	70841B 4-slot pattern generator
Generator Standard Bit Rate	100 Mb/s to 3 Gb/s
Generator Option H50 Low End	50 Mb/s
Generator Data Clock Jitter	less than 15 ps rms
Generator Data Transition 10 to 90	less than 120 ps
Generator Data Transition 20 to 80	less than 90 ps
Generator Clock Transition At 3 GHz	less than 120 ps 10 percent to 90 percent

PARAMETER	VALUE
Patterns	PRBS, zero substitution, variable mark density, user word
Error Analysis Basis	CCITT Rec. G.821 class measurements
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 Option H30	see hp-70841b-h30-70311A listings for clock-source bundles
Related Combined File	hp-70001a-70841b-70842b.txt

Notes
Specs from HP 71600B / 70841B / 70842B literature. This file is the 70842B error detector. 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
788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
https://aumictechlabs.com

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