

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E4832A/E4835A/E4838A

The Keysight Technologies (formerly Agilent) E4832A is a VXI-based 675 Mb/s Generator/Analyzer Module designed for the ParBERT 81250 system. This module houses up to four E4838A Generator front-end plug-in cards and up to two E4835A Analyzer front-end plug-in cards, enabling highly flexible parallel bit error ratio testing for Gigabit Ethernet, digital video, and telecom standards up to OC-192.

SPECIFICATIONS

General

Interfaces	SMA (front panel I/O), VXIbus (backplane)
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Physical

Power Supply	Powered via VXI mainframe backplane
Operating Temperature	10 °C to 40 °C °C
Dimensions (W×H×D)	30.5 mm × 233 mm × 340 mm mm

Generator Performance

Data Rate Range (Generator)	333 kb/s to 675 Mb/s
Data Output Configuration	Differential
Output Voltage Amplitude Range	0.1 V to 3.5 V pp
Variable Transition Time Range (10%-90%)	< 0.5 ns
Intrinsic Jitter (Data Mode)	< 100 ps pp (80 ps typical)
Generator Memory Depth per Channel	2 Mbit

Analyzer Performance

Data Rate Range (Analyzer)	333 kb/s to 675 Mb/s
Data Input Configuration	Differential or single-ended
Input Impedance	50 Ω
Input Sensitivity	50 mV (differential)
Input Voltage Range	-2.0 V to +3.0 V
Analyzer Memory Depth per Channel	2 Mbit

Pattern & Sequence Generation

Supported PRBS Polynomials	Standard PRBS up to $2^{31} - 1$
Supported Pattern Types	Pseudo random word sequences (PRWS), standard PRBS, user-defined data, or mixed data from parallel ports

Multi-Channel & Module Configuration

Form Factor	C-size VXI Module
Module Slot Width	1 VXI slot
Maximum Generator Front-End Cards per Module	Up to 4 E4838A cards
Maximum Analyzer Front-End Cards per Module	Up to 4 E4835A cards
System Compatibility	Agilent / Keysight ParBERT 81250 VXI Mainframes

Delay Control

Delay Resolution	2 ps
Delay Range	0 to 3.2 μ s

Analyzer Input

Threshold Voltage Range	-2.0 V to +3.0 V
Threshold Resolution	2 mV
Threshold Accuracy	$\pm(20 \text{ mV} + 1\% \text{ of setting})$
Termination Voltage Range	-2.0 V to +3.0 V

Generator Output

Output Voltage Window	-2.0 V to +4.5 V
Output Amplitude Range	0.1 V to 3.5 V
Output Voltage Resolution	5 mV

Environmental

Operating Humidity	20% to 80% RH (non-condensing)
Storage Temperature	-40 °C to +70 °C

Inputs & Outputs

Generator Output Connectors	SMA (female)
Analyzer Input Connectors	SMA (female)

Module Configuration

Generator Channels per E4835A Module	0
Analyzer Channels per E4838A Module	0

Electrical Specifications

Data Output Impedance	50 Ohm
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System Specifications

VXI Device Type	Register-based
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TECHNOLOGY

Parallel Bit Error Ratio Testing (ParBERT)

APPLICATIONS

Telecom and datacom testing (Gigabit Ethernet, Digital Video, and up to OC-192 standards)

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.