

224 Gbps/112 GBaud (800G / 1.6T) Receiver Test Solution

Save \$250K USD on the Infiniium UXR and M8050A real-time error detection solution bundle - SD7150A

When working with 112 Gbaud rates or higher, your internal error counter functionality may not be adequate for traditional BER measurements. Luckily, Keysight offers a new method to address this issue by using a high-speed real-time oscilloscope to capture the digital signal, determine BER through software decoding, and compare it with the expected pattern. With the introduction of PAM4 signaling and FEC, the raw BER targets of 112 Gbps links are now in the range of $2.4E-4$ (optical) to $1E-5$ or $1E-6$ (electrical), making the real-time oscilloscope BER measurement achievable.

The Keysight Infiniium UXR-series oscilloscope is an example of this new method, with up to 110 GHz bandwidth, configured as a real-time error detector (RED) with the M8070B BERT control software. This speed improvement dramatically decreases the time required for engineers to successfully debug their device under test.

Details

Start Date: January 1, 2023

Bundle Code: SD7150A




Availability: Worldwide



The oscilloscope captures and converts the incoming signal into digital form, and these bits are sent over USB/LAN to a controlling PC running the BERT control software, which compares this data against the expected pattern to generate a BER measurement. The M8070B software also handles all necessary setup and control of the real-time oscilloscope. The pattern generator, which can either be a BERT PG (e.g., M8050A) or an AWG (e.g., M8199B), provides flexibility in terms of transmitter equalization (de-emphasis capabilities, raised cosine filtering, error insertion, etc.) The real-time oscilloscope offers high sensitivity, flexible clock recovery, and enhanced automated receiver equalization capabilities such as FFE, DFE, CTLE. This solution can handle multiple modulation formats such as NRZ, PAM4, PAM6, PAM8, and data rates up to 240 Gbps (120 GBd).

SD7150A Bundle Conditions

- Bundle applies to items listed in eligible models and options table
- Keysight Technologies reserves the right to modify or discontinue this offer
- Bundle applies to new equipment only
- Eligible items must be on a single quote
- Bundle cannot be combined with other promotions

Model	Function	Requirement
Infiniium UXR-Series 	Capture the digital signal and send it to M8070B for error detection	Infiniium UXR 80 GHz 2 channel or above. With D9020ASIA and D9020PAMA
M8050A BERT 	Generate up to 120 GBaud pattern	M8042A-G12 120 GBd pattern generation M8042A 0G4 with 0G1 or 0G2 pre-selected module with de-emphasis
M8070B BERT control software 	Compares captured data against the expected pattern to generate a BER measurement	M8070ADVB Advanced Measurement Package M8070EDAB Error Distribution Analysis Package

For more information

- Contact your Keysight representative for any questions, to request a quote, or place an order:
[keysight.com/find/contactus](https://www.keysight.com/find/contactus)

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