

MBT5210

4×25G Bit Error Ratio Tester

Version 4.3





Product Description

Semight Instruments MBT5210 is a high performance 4 × 25G bit error ratio tester, supporting either single or dual channel configuration. The data rate covers 10Gbps~28.2Gbps.

Semight Instruments MBT5210 high signal quality: Fast rising edge, low inherent jitter; Standard pseudo-random bit sequences (PRBS) can be generated functionally: 7, 9, 11, 15, 23, 31; The trigger clock supports up to half rate clock (high speed) and other frequency division output (low speed);

Built-in clock recovery; Support switching input polarity; High repeatability and traceability to standard test results. Can be fully controlled by calling external API control (LabView, C #) through the USB control interface.

Applications

- High speed serdes test;
- 25G line card;
- Active optical cable (AOC), direct connection cable (DAC), SFP+, zQSFP, QSFP+, CFP/2, CXP and QDR, eCPR tests and applications;
- Optical transceiver module test;
- DVT test of telecommunication/data communication, devices/modules and systems;
- Assist maintenance and test of network equipment;

Technical Specification

Working Condition

Temperature 23°C±5°C;

Humidity 30%~80% Relative Humidity;

The calibration period is 1 year;

Data Rate:

9.953Gbps~28.2Gbps and other standard rates;

Environment Indicators

Environment	Indoor
Work	0°C~+55°C, 30%~80% Relative Humidity with no condensation
Storage	-30°C~70°C, 10%~90% Relative Humidity with no condensation
Altitude	Operation: 0m to 2000m, Storage: 0m to 4600m
Power	LINE: 100-240VAC, 50/60Hz, 250W FUUSE: T2AL 250 VAC
Warm-up time	10 minutes



Dimensions (mm)	89(H2U)*286(W)*412(L)
Weight	Net weight 5.0kg

Pattern Generator:

The following PRBS pattern is supported: 2⁷-1, 2⁹-1, 2¹⁵-1, 2²³-1, 2³¹-1, Square Wave, User Defined Pattern;

Data Output	
Output type	Differential /Single-ended
Modulation format	NRZ
Data patterns PRBS	2 ⁷ -1, 2 ⁹ -1, 2 ¹⁵ -1, 2 ²³ -1, 2 ³¹ -1, Square Wave, User Defined Pattern
Data rate	9.953Gbps~28.2Gbps
Frequency accuracy (typ)	±50ppm
Output amplitude(differential)	600~800 mVpp
Rise time (20~80%)	< 12.48ps
Fall time (20~80%)	< 12.48ps
Jitter	< 515fs
Connector	2.92mm Female, 50Ω



- Data rate=25.78125Gbps;
- DCA 86100D with precise time base host and N1045A module are used for testing under 450mm 2.92 cable;



Clock and Trigger Output

Support differential/single ended clock output, clock division ratio can be set

Output Amplitude	> 300mV
Output Type	Differential, AC-coupled
Connector	2.92mm Female, 50Ω

Error Detector

Input type	Differential
	Single-ended
Input impedance	100Ω
Input amplitude	< 1000mVpp
Sensitivity	< 40mV
Termination	AC-coupled
Data patterns PRBS	2 ⁷ -1, 2 ⁹ -1, 2 ¹⁵ -1, 2 ²³ -1, 2 ³¹ -1
Data rate	9.953Gbps~28.2Gbps
Input amplitude range(differential)	40~1000mV
Clock mode	Built-in clock recovery
Synchronization type	Auto Synchronization (level/phase)
Connector	SMA, Front Panel

Ordering Information

Power cord, USB cable, Measurement Software and Drivers.

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About Semight Instruments

Semight Instruments is a leading provider of global high-end test instrument and equipment. The company provides products and service to the development, fabrication and service of high-speed communication, optical chip and semiconductor testing fields. Semight's flagship testing instrument includes high-speed bit error ratio tester, network analyzer, broadband sampling oscilloscope, high-precision wavelength meter, optical spectrum analyzer, and digital Source Measure Unit. In addition, the company delivers optoelectronic hybrid ATE, laser chip burn-in system, laser chip tester, silicon photonics wafer tester, power chip tester, wafer level burn-in system, semiconductor parametric test system to domestic and international customers.

Semight Instruments adheres to the customer-centric, employee-based, innovation-driven, and subtle and broad corporate culture, and continues to provide customer trusted, cost-effective and high-performance products and service.

Visit www.semight.com for more information.

*Product specifications and descriptions in this article can be changed without notice