

MBT5210

4 × 25G Bit Error Ratio Tester

Version 4.6



Product Description

Semight Instruments MBT5210 is a high-performance bit error ratio tester with wide range data rate from 9.953~28.2 Gbps.

MBT5210 provides 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 ± 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 FUSE: T2AL 250 VAC
Warm-up time	10 minutes
Dimensions (mm)	412*265*105(with foot pad/handle)
Weight	Net weight 5.1 kg

Pattern Generator:

The following PRBS pattern is supported: $2^7-1, 2^9-1, 2^{15}-1, 2^{23}-1, 2^{31}-1$, 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	9.953~28.2 Gbps
Frequency accuracy (typ.)	± 50 ppm
Output amplitude (differential)	600~800 mVp-p
Rise time (20~80%)	<16 ps
Fall time (20~80%)	<16 ps
Jitter	<515 fs
Connector	2.92mm female, 50 Ω



Channel1



Channel 2



Channel 3



Channel 4

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

mm 2.92 cable;

Clock and Trigger Output

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

Output amplitude	>300 mV
Output type	Differential, AC-coupled
Connector	2.92mm female, 50Ω

Error Detector

Input type	Differential
	Single-ended
Input impedance	100Ω
Input amplitude	<1000 mVp-p
Sensitivity	<40 mV
Termination	AC-coupled
Data patterns PRBS	2 ⁷ -1, 2 ⁹ -1, 2 ¹⁵ -1, 2 ²³ -1, 2 ³¹ -1
Data rate	9.953~28.2 Gbps
Input amplitude range (differential)	40~1000 mV
Clock mode	Built-in clock recovery
Synchronization type	Auto Synchronization (level/phase)
Connector	2.92mm female, 50Ω

Ordering Information

Power cord, USB cable, Measurement Software and Drivers.

MBT5210	4×25G Bit Error Ratio Tester
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Contact us

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*This information is subject to change without notice.