Semight

NTA4100

400G Network Tester

Version 1.7

Semight

Product Description

Semight Instruments NTA4100 is specifically designed for high speed ethernet traffic test, which supports not just 400GE, but also other speeds as 200GE and 100GE. It can be used to handle comprehensive KP4 forward error correction (FEC) testing and statistics, FEC symbol error injection testing, L1 BERT and the L2 performance testing.

Key Features

- Specifically for optical module flow test:

Rich number of interfaces, and supporting multiple standard optical module interfaces:

2×QSFP-DD、4×QSFP-28 ；

For the mass framing signal test of optical modules, the switching/routing related test functions of 3 layers and above are removed, but the functions required for the full coverage optical module test are: Error statistics pre-FEC and post-FEC; FEC margin analysis: It can be customized according to the requirements of customers FEC Margin Auto Scan: Automatically and accurately find the FEC Symbol Error margin of the tested system, and set the target margin for long-term up-to-standard testing; Ethernet frame loss rate test; FEC symbol error injection; Layer 1 error statistics;

It can monitor the physical status, protection and control information of the optical module, and support the detection of module voltage, current and shell temperature; Support complete CIMS4.0 management interface function of optical module;

Whether the optical module meets IEEE 802.3 standard can be comprehensively verified according to each frequency offset and measured receiving frequency

- PAM4 encoded 400G Test；
- Support Multi-Data Rate:400GE, 200GE, 100GE (can be further extended)
- Easy to use:

It is stable and reliable, with good interoperability. It has completed the communication test with the mainstream instruments and optical modules in the industry, with high consistency of long-term test results, and supports link communication with the switch;

One click test: Optical module latency performance indicator test under line speed service;

One page over all test results display- software and hardware optimization to improve testing efficiency

Highly Integration – reduce peripheral test equipment to ensure stable and reliable production test and improve efficiency;

- Best Cost Performance – reduce the overall cost of optical transceiver testing;

Technical Specifications

Technical Indicators	Physical interface	QSFP-DD; QSFP-28
	Port Speed	400GE, 200GE, 100GE
	Ethernet interface protocol	IEEE 802.3bs 200GE & 400GE, 400GBASE-R IEEE 802.3bm 100GE,100GBASE-R
	FEC	KP4 Ethernet Forward Error Correction, Clause 119 FEC margin analysis, FEC symbol error injection Statistical analysis of FEC: Total number of error bits, maximum number of symbol errors, number of corrected codewords, total number of codewords, number of uncorrected codewords, error ratio before FEC, bit codewords distribution analysis

	Bit error ratio	Layer 1 Error, pre-FEC Error Ratio, post-FEC Error Ratio, Frame Loss Ratio
	Minimum frame size	64 bytes
	Maximum frame size	9416 bytes (Default: 9,000 bytes, configurable)
	Pattern	Pseudo random sequence, PRBS31 expandable
	Flow control	Traffic load 0%~100%
	Latency measurement resolution	400GE: 0.625 ns; 200GE: 1.25 ns; 100GE: 2.5 ns
	Error Injection	FEC Symbol Error Injection and Analysis Support sending Ethernet frames longer than the standard
	Hardware cache	400GE: 1 MB; 200GE: 1 MB; 100GE: 1 MB
	Optical module management interface	CMIS support with loopback testing MDIO read/write, alarms/errors generation and monitoring
General Indicators	Environment	Indoor
	Temperature	Operating 0°C~+40°C, Relative Humidity 20%~80%
		Storage -20°C~60°C, Relative Humidity 10%~90%
	Altitude	Operation: 0m~2000m, Storage: 0m~4600m
	Power	LINE:100-240 VAC, 50/60 Hz, 500 W

	Dimension (mm)	441 (L) x 408 (W) x 157 (H) (with foot pad)
	Weight	Less than 20 kg

Ordering Information

NTA4100	Standard Option

Contact us

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Web

Visit www.semight.com for more information.

*This information is subject to change without notice.