X2-100G-high-density 100G Test Module

The demand for network bandwidth continues to grow rapidly. Network equipment manufacturers are developing high-performance products to support 100/50/40/25/10GbE. Service providers and large-scale data centers are also deploying high-density and multi rate network infrastructure solutions to meet these needs.

With the industry's outstanding L2-3 traffic generation and analysis capabilities, the X2-100G high-density test module supports large-scale routing and switch protocols and traffic simulation, benchmark tests(such as RFC2544/RFC2889/RFC3918), functional tests, performance tests, long-term stability and reliability tests for 100GE network equipment, and supports testing and verification of the functions and performance of RDMA networks and lossless switches.

Key Features

- Native QSFP28 100G interface, support 12 x 100G L2-3 test ports, or support 6 100G RoCE test ports
- Support the generation and transmission of RoCEv2 traffic
- Supports QoS settings for L2(VLAN) and L3(DSCP)
- Support ECN/PFC enabling and priority setting
- Support the selection of traffic endpoints based on QP
- Support the performance test of routing, multicast, access, MPLS, VXLAN, segmented routing(SR) and other protocols
- FPGA based 100% line speed traffic generation, statistics and capture
- Support RFC2544, RFC2889, RFC3918 and other benchmark test suites

Models

Product name	Product description	Product classification
X2-100G-12QSFP28-Q test module	12 port 100G test module	DarYu series test module

Specifications

Hardware and electrical characteristics	
Port speed	Native 100G QSFP28, support 100/50G
Port density	12
User reservation	Reservation by port
Weight(kg)	8.5
Dimensions (W x H x D)	438mm x 46 mm x 580mm
Temperature	0 ° C to 35 ° C
Humidity	20% to 85%
Max power consumption(W)	380W
Traffic	
Max streams per port	16K
Frame length (byte)	64-16383
Frame length controls	Fixed, Increment, Decrement, Random, Auto, and IMIX
Dynamic fields	6 dynamic fields are available for each stream ; Support multiple dynamic controls such as Fixed, increment, Decrement, List, and Random.
Transmit mode	Continuous, Burst, and Time Burst modes based on port; Continuous and Burst modes based on flow
Bandwidth modification	Modify by port or flow
Latency and jitter	LIFO, FIFO, LILO, and FILO
Timestamp resolution	2.5 nanoseconds
Built-in protocol templates	VLAN, ICMP, PPPoE, GRE, DHCP, L2TP, IPv6, MPLS, GTP, GOOSE, VXLAN, OSPF, TCP and UDP, etc.
Customized frame	Support user-defined frame, and the edited frame template can be saved, Supports the checksum check of custom fields
Customized payload	Support importing the 16K bytes customized payload and the first 128K bytes can be adjusted with jumping
Flow control	Full duplex flow control
Packet error generation	CRC error, Oversize frame
Statistics	
Statistical streams per port	16K
Statistical pattern	Csv statistics, chart statistics, automatic saving of csv files
Statistics(Port)	Tx/Rx Frames, Tx/Rx Frame Rate, Rx Bandwidth, Error Frame Statistics, Filter Statistics, and Customized Statistics, FCS Error Statistics, TCP/UDP Checksum Errors, Pause Frame Statistics, etc.
Statistics(Flow)	Tx/Rx Frames, Tx/Rx Flow rate, Rx Bandwidth, Error frame statistics, Real-time packet loss statistics, out of order statistics, delay, jitter and customized statistics, etc.
Statistics operation	Support sorting of statistical results, performing mathematical operations such as addition, subtraction, multiplication, and division, and customizing the number of statistical entries for each page, etc.
Capture	
Capture buffer (Byte)	2M
Capture pattern	Capture of data and receive frames of the control plane; Capture of transmitted and received frames of the control plane; Capture based on filter templates; Capture filtered error packets; Capture buffer overwriting; Support specifying the number of downloaded capture packets.