V2-100G Test Module

The V2-100G is a new generation test module launched by Xinertel, which can meet the needs of NEM from functional test to high-density port performance test. It can be used to verify whether the network system can achieve the desired goals when deploying network solutions for enterprises, operators, and data centers customers.

Key features

- Support native QSFP28 100G interface，and compatible with 40G/25G/10G
- Support L2-3 traffic generation and protocol emulation
- Support FPGA based 100% line rate traffic generation, statistics, and packet capture
- Support the benchmark test suites such as RFC2544, RFC2889, and RFC3918
- Language for test software GUI: English and Chinese
- Language for test report: English and Chinese

Models

V2-100G-4QSFP28-Q Test Module
4-port 100G/40G/25G/10G test module

V2-100G-2QSFP28-Q Test Module
2-port 100G/40G/25G/10G test module

V2-100G-4QSFP28-T Test Module
4-port 100G/40G/10G test module

V2-100G-2QSFP28-T Test Module
2-port 100G/40G/10G test module

V2-100G-4QSFP28-D Test Module
4-port 100G/25G test module

V2-100G-2QSFP28-D Test Module
2-ports 100G/25G test module

V2-100G-4QSFP28-S Test Module
4-port 100G test module

V2-100G-2QSFP28-S Test Module
2-ports 100G test module

Specifications

Hardware and electrical characteristics	
Port speed	100G/40G/25G/10G
Port density	Up to 4 ports for single test module
Interface standards	100G: 100GBASE-SR4, 100GBASE-LR4; 40G: 40GBASE-SR4, 40GBASE-LR4; 25G: 802.3by 25GBASE-SR; 10G: 10GBASE-SR; 100G FEC: 100GBase-SR4 RS-FEC91; 25G FEC: 25GBase-SR RS-FEC108, 25GBase-SR FEC CL74, 25GBase-SR RS-FEC CL91
User reservation	Reservation by port
Port speed switching	Auto negotiation
Weight (kg)	1.2
Dimensions (W*H*D)	196mm x 35.5mm x 271mm
Temperature	0° C to 35° C
Humidity	20% to 85%
Max power consumption (W)	48W
Traffic generation	
Max streams per port	100G/40G: 1024； 25G/10G: 256
Frame length (byte)	64-16383
Frame length controls	Fixed, Increment, Decrement, Random, Auto, and IMIX
Dynamic fields	4 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	8 nanoseconds
Built-in protocol templates	VLAN, ICMP, PPPoE, GRE, DHCP, L2TP, IPv6, MPLS, GTP, GOOSE, VXLAN, OSPF, TCP and UDP, etc.
Customized frame	Support customizing the frame, and the edited frame template can be saved; Customized field can be checked with checksum.
User-defined data	100G/40G: support importing the 128K bytes customized payload, the first 128 bytes can be adjusted with jumping 25G/10G:support importing the 32K bytes customized payload, the first 128 bytes can be adjusted with jumping
Packet error generation	CRC error, Undersize frame,Oversize frame
Flow control	Full duplex flow control, half duplex back pressure
Statistics	
Statistical streams per port	100G/40G: 2048； 25G/10G: 512
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)	32K
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.
Protocol emulation	
Routing and MPLS	RIPv1v2, RIPng, OSPFv2, OSPFv3, ISISv4, ISISv6, BGP, BGP4+, SR for BGP/OSPF/ISIS, SRv6 for ISISv6/BGP BGP SR TE Policy, LDP, MPLS IP VPN, 6VPE/6PE, BGPVPLS, LDPVPLS, PWE, LSP Ping
Access	PPPoE Client/Server、DHCPv4 Client/Server、DHCPv6 Client/Server、DHCPv6 PD Client/Server、L2TPv2、802.1x
Multicast	IGMPv1/v2/v3、MLDv1/v2、IGMP/MLD Querier、PIM-SMv4/v6、PPPoE over Multicast
Data center	VXLAN IPv4/IPv6, VXLAN EVPN IPv4/IPv6, OVSDB, OpenFlow 1.3 Controller, BGP/EVPN for VxLAN, LACP
other	BFD, 802.1ag, 802.3ah, IPv6 automatic configuration, Y.1731
Test suites	RFC2544, RFC2889, RFC3918, Asymmetric Test, Smart Scripter
Software platform	
Client software	RENIX
API	Tcl, Python3.x, GUIToTcl, GUIToPython
GUI language	English, Simplified Chinese
Hardware platform	
Chassis	BigTao220、BigTao6200
Chassis operating system	Linux CentOS7.X