



DarYu-X series high performance network tester

With high performance, high density, high speed, and multiple chassis cascading, DarYu-X series launched by Xinertel are designed for high end routers, high end switches, data center switches, and high performance security devices test.

Product Introduction

The DarYu-X series high-performance network tester features modular design and consists of chassis, test modules, and test software. The test port covers a variety of ethernet speeds from 1G to 400G and offers the scalable expansion capabilities, enabling users to easily cope with the rapid growth of test business and future business development.

With the new generation of test software RENIX based on the PCT architecture and X series test modules, DarYu-X series supports L2-7 traffic test and protocol simulation for network devices and network systems, providing comprehensive test solutions in terms of functionality, performance, and security to meet the testing needs in the process of research and development, experimentation, and quality control.



DarYu 3000



The DarYu3000 is a rack-mount chassis which supports Xinetel's new generation of 1G to 400G multi-rate test modules. With built-in LCD screen, intelligent power supplies, fan control, and fast firmware upgrades, DarYu3000 reduces the costs of network equipment effectively .

With the new generation of test software RENIX based on the PCT architecture and X series test modules, DarYu 3000 supports L2-7 traffic test and protocol simulation for network devices and network systems, providing comprehensive test solutions in terms of functionality, performance, and security to meet the testing needs in the process of research and development, experimentation, and quality control.

Key features

- A unified platform for high-performance L2-7 test, supporting large-scale routing and switch protocol simulation and application test
- Ultra-high performance 3-slot chassis, support up to 12 *100GE ports
- Support 400G/100G/40G/25G/10G/5G/2.5G/GE
- Modular design, power supply and fan can be replaced on site
- Support for multiple chassis cascades of daisy chains for easy expansion for large-scale test
- Support hot swap of test module
- Support multiple management IP modification methods
- Support to download client software based on web browsers
- Support API interface for Renix and supports TCL automated test

Ordering information

Product Name	Product Description	Product classification
DarYu 3000 chassis	DarYu 3000 3-slot chassis, including a main control module (running the Linux CentOS system), a clock module, a power module, a fan module, and power cords	DarYu series chassis
DarYu 3000 main control module	DarYu 3000 main control module (running Linux CentOS system)	DarYu 3000 chassis accessories
DarYu 3000 power module	DarYu 3000 110V AC/220V AC power module	DarYu 3000 chassis accessories
DarYu 3000 fan module	DarYu 3000 Fan Module	DarYu 3000 chassis accessories
DarYu 3000 clock module	DarYu 3000 clock module	DarYu 3000 chassis accessories

Specifications

Slot	3
Dimensions (WxDxH)	482.6mm × 178mm × 686mm
Weight	Chassis only : about 25kg; Chassis with 2 test modules: about 46kg
Chassis power supply	The empty chassis power is 300W, and the maximum power fully loaded with test modules is 3300W
Switch/Display	<ul style="list-style-type: none"> • Rear AC power supply • Power, Fan, Temp, Link LED indicator, LCD • Reset button of the main control of the chassis • LCD control button of the chassis
I/O	<ul style="list-style-type: none"> 1 DB15 display interface 1 RJ45 10/100/1000M management interface 1 RJ45 10/100/1000M 1588 clock input interface (reserved) 1 RJ45 RS232 serial port 1 SYNC-OUT, 1 SYNC-IN chassis cascade interface 1 DB9 GPS RS232 serial port 1 PPS, 1 10MHz input BNC 2 USB Type A interfaces
Temperature	Storage: -40° C to 70° C
Humidity	Storage: 20% to 85%
Chassis power supply	4*110V AC/220V AC 50/60Hz @10A single-phase power input
Operating system	CentOS 7.X, 64bit
Network management	<ul style="list-style-type: none"> • IPv4 management network; support panel button to modify IP address and query status • Support Telnet/SSH terminal to modify IP and query status • Support external display and keyboard to modify IP and query status • Support web page download client, modify IP, query status • Support License management and hardware management through client software
Client software	Renix, ALPS
Client system requirements	<ul style="list-style-type: none"> • System: Microsoft Windows 7/ Windows 10/Windows Server 2012 R2 Standard Edition CPU: i3-6100 CPU @ 3.70GHz and above • Memory: 4 GB and above
Test modules supported	<ul style="list-style-type: none"> • X2-10G-16F-HD, fiber port test module (1G/10G) • X2-10G-16C-HQ, cooper port card (100M/1G/2.5G/5G/10G) • X2-100G-4QSFP28, 4-port 100G multi-rate test module (10G/25G/40G/100G) • X2-400G-2QDD-HQ, 2-port 400G high-rate test module

DarYu 12000



The DarYu12000 is a rack-mount chassis which supports Xinetel's new generation of 1G to 400G multi-rate test modules. With built-in LCD screen, intelligent power supplies, fan control, and fast firmware upgrades, DarYu3000 reduces the costs of network equipment effectively .

With the new generation of test software RENIX based on the PCT architecture and X series test modules, DarYu 12000 supports L2-7 traffic test and protocol simulation for network devices and network systems, providing comprehensive test solutions in terms of functionality, performance, and security to meet the testing needs in the process of research and development, experimentation, and quality control.

Key features

- A unified platform for high-performance L2-7 test, supporting large-scale routing and switch protocol simulation and application test
- Ultra-high performance 12-slot chassis, support up to 48 *100GE ports
- Support 400G/100G/40G/25G/10G/5G/2.5G/GE
- Modular design, power supply and fan can be replaced on site
- Support for multiple chassis cascades of daisy chains for easy expansion for large-scale test
- Support hot swap of test module
- Support multiple management IP modification methods
- Support to download client software based on web browsers
- Support API interface for Renix and supports TCL automated test

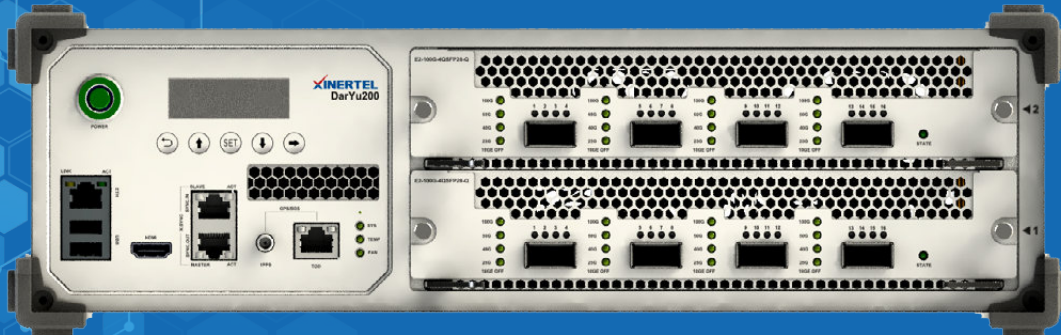
Ordering information

Product Name	Product Description	Product classification
DarYu 12000 chassis	DarYu 12000 12 slot chassis, including main control module (running Linux CentOS system), power module, fan module, power cord	DarYu series chassis
DarYu 12000 main control module	DarYu 12000 main control module (running Linux CentOS system)	DarYu 12000 chassis accessories
DarYu 12000 power module	DarYu 12000 110V AC/220V AC power module	DarYu 12000 chassis accessories
DarYu 12000 fan module	DarYu 12000 fan module	DarYu 12000 chassis accessories
DarYu 12000 clock module	DarYu 12000 clock module	DarYu 12000 chassis accessories

Specifications

Slot	12
Dimensions (WxDxH)	442mm × 622.3mm × 815mm
Weight	Chassis only : about 108kg; Chassis with 2 test modules: about 209kg
Chassis power supply	The power of the empty frame is 650W, and the maximum power can be 12000W (4 power modules) or 24000W (8 power modules) The empty chassis power is 650W, and the maximum power with 4 power modules is 12000W, 24000W with 8 power modules
Switch/display	Rear AC power supply Power, Fan, Temp, Link LED indicators, LCD Chassis master reset button Chassis LCD control button
I/O	One DB15 display interface One RJ45 10/100/1000M management interface One RJ45 10/100/1000M 1588 clock input interface (reserved) One RJ45 RS232 serial port 5 SYNC-OUT, 1 SYNC-IN chassis cascade interface One DB9 GPS RS232 serial port One 1PPS, one 10MHz input BNC 4 USB Type A interfaces
Temperature	Working: 0 ° C to 35 ° C Storage: -40 ° C to 70 ° C
Humidity	Working: 20% to 85%; Storage: 20% to 85%
Chassis power supply	8 x 110V AC/220V AC 50/60Hz @ 16A single-phase power input
Operating system	CentOS 7.X, 64bit
Network management	<ul style="list-style-type: none"> • IPv4 management network; support panel button to modify IP address and query status • Support Telnet/SSH terminal to modify IP and query status • Support external display and keyboard to modify IP and query status • Support web page download client, modify IP, query status • Support License management and hardware management through client software
Client software	Renix, ALPS
Client system requirements	<ul style="list-style-type: none"> • System: Microsoft Windows 7/ Windows 10/Windows Server 2012 R2 Standard Edition CPU: i3-6100 CPU @ 3.70GHz and above • Memory: 4 GB and above
Test modules supported	<ul style="list-style-type: none"> • X2-10G-16F-HD, fiber port test module (1G/10G) • X2-10G-16C-HQ, cooper port card (100M/1G/2.5G/5G/10G) • X2-100G-4QSFP28, 4-port 100G multi-rate test module (10G/25G/40G/100G) • X2-400G-2QDD-HQ, 2-port 400G high-rate test module

DarYu 200



The DarYu 200 is a portable chassis which supports Xinetel's new generation of 1G to 100G multi-rate test modules. With built-in LCD screen, intelligent power supplies, fan control, and fast firmware upgrades, DarYu 200 reduces the costs of network equipment effectively .

With the new generation of test software RENIX based on the PCT architecture and X series test modules, DarYu 200 supports L2-7 traffic test and protocol simulation for network devices and network systems, providing comprehensive test solutions in terms of functionality, performance, and security to meet the testing needs in the process of research and development, experimentation, and quality control.

Key features

- A unified platform for high-performance L2-7 test, supporting large-scale routing and switch protocol simulation and application test (E2 series test module supports L23 test, U3 series test module supports L47 test)
- Support 100G/50G/40G/25G/10G/5G/2.5G/GE (planned)
- 2.5U height, strong portability
- Support for multiple chassis cascades of daisy chains for easy expansion for large-scale test
- Supports multiple management IP modification methods
- No need to learn new GUI of software
- Support to download client software based on web browsers
- Support API interface for Renix and supports TCL automated test

Ordering information

Product Name	Product Description	Product classification
DarYu 200 chassis	DarYu 200 2-slot chassis	DarYu 200 Chassis
E2-100G-4QSFP28-Q	4-port, 5-speed 100G/50G/40G/25G/10G test module (planned)	DarYu 200 Chassis test module

Specifications

Slot	2 slots
Dimensions (WxDxH)	390mm × 113mm × 420mm
Weight	Chassis only : about 10.5kg; Chassis with 2 test modules: about 15kg
Switch/Display	<ul style="list-style-type: none"> • Rear AC power supply • Power, Fan, Temp, Link LED indicator, LCD • Reset button of the main control of the chassis • LCD control button of the chassis
I/O	<ul style="list-style-type: none"> • 1 HDMI display interface • 1 RJ45 10/100/1000M management interface • 1 SYNC-OUT, 1 SYNC-IN chassis cascade interface • 1 RJ45 GPS RS232 serial port • 1 PPS input BNC • 2 USB Type A interfaces
Temperature	Storage: -40° C to 70° C
Humidity	Working : 20% to 85%; Storage : 20% to 85%
Chassis power supply	1 x 110V AC/220V AC 50/60Hz @10A single-phase power input
Noise	The noise of the complete machine is ≤ 69dba at typical speed and ≤ 85dba at full speed
Operating system	CentOS6.7 and above, 64bit
Network management	<ul style="list-style-type: none"> • IPv4 management network; support panel button to modify IP address and query status • Support Telnet/SSH terminal to modify IP and query status • Support external display and keyboard to modify IP and query status • Support web page download client, modify IP, query status • Support License management and hardware management through client software



DarYu-X series

Hardware and electrical characteristics	E2-100G-4QSFP28-Q
Port speed	Fiber port: 100G/50G/40G/25G/10G (planned)
Port density	4
Interface standards	<ul style="list-style-type: none"> • 100G: 100GBASE-SR4, 100GBASE-LR4 • 40G: 40GBASE-SR4, 40GBASE-LR4 • 25G: 25GBASE-SR • 10G: 10GBASE-SR QSFP28 to SFP28 breakout cable options: Clause 74 BASE-R FEC, Clause 91 RS- FEC, and Clause 108 RS-FEC
User reservation	Occupied by single port
Port speed switching	Switch speed by port group, 2 ports in a group
Dimensions (W*H*D)	229.9mm * 45.32mm * 289.4mm
Temperature	0° C to 35° C
Humidity	20% to 85%
Traffic	E2-100G-4QSFP28-Q
Max streams per port	100G/50G/40G: 16K 25G/10G: 8K
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 , LIFO, 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 customizing the frame, and the edited frame template can be saved; Customized field can be checked with checksum.
Customized payload	Support importing the 16K bytes customized payload and the first 256 bytes can be adjusted with jumping
Flow control	Full duplex flow control
Packet error generation	CRC error, Oversize frame



Statistics	E2-100G-4QSFP28-Q
Statistical streams per port	100G/50G/40G: 16K 25G/10G: 8K
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..
Traffic capture	E2-100G-4QSFP28-Q
Capture buffer (Byte)	100G/50G/40G: 2MB25G/10G port 512K
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	E2-100G-4QSFP28-Q
Routing and MPLS	RIPv1v2, RIPng, OSPFv2, OSPFv3, ISISv4, ISISv6, BGP, BGP4+, LDP, MPLS L3VPN, VPLS, VLL, 6VPE, 6PE
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-SM
Data center	VXLAN, OpenFlow, OVSDDB, EVPN, LACP
Other	BFD, 802.1ag, 802.1ah, IPv6 automatic configuration
Test suite	RFC2544, RFC2889, RFC3918, Asymmetric Test, Smart Scripter
Stateful L47Protocol	HTTP, HTTPS, TCP, FTP, DNS, Mail (SMTP/POP3/IMAP), SSH, TFTP, Telnet, UDP, Application replay, etc
Software platform	E2-100G-4QSFP28-Q
Client software	Renix,ALPS
API	Tcl, Python3.x, GUIToTcl, GUIToPython
GUI language	English , Simplified Chinese
Hardware platform	E2-100G-4QSFP28-Q
Chassis	DarYu 200
Chassis operating system	Linux CentOS 7.1