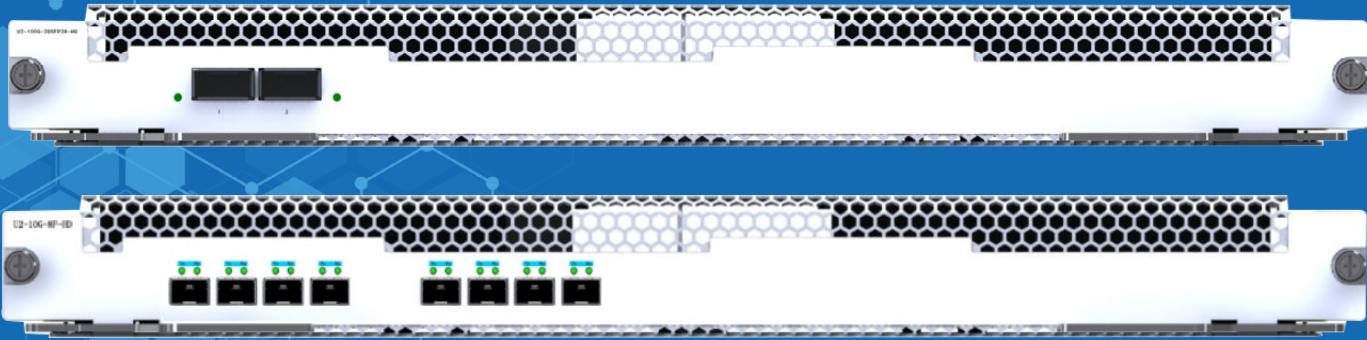


U2 Application and Security Test Module



The U2 high-performance L4-7 test module is launched by Xinertel for voice, video, data applications, and network security test. It accurately simulates the network access behavior of millions of real end users, and performs pressure and performance tests on application and security devices(such as Firewall/IPS/IDS/WAF/DPI, etc.) or the entire system; By simulating a large amount of real attack traffic and malicious software and virus traffic, the detection and defense capabilities of network security devices and systems against attacks and viruses can be verified and tested. At the same time, the control and recognition capabilities of the tested device over traffic can be confirmed by replaying real environment traffic.

Collaborating with B/S architecture test software ALPS(Application Layer Protocol Simulator), which supports real application layer traffic simulation(such as application layer protocol HTTP/FTP/TCP/DNS, voice: VoIP SIP&RTP, video: RSTP/RTP/IPTV, etc.), its HTTP/TCP can create millions of new connections and billions of concurrent connections; ALPS can simulate real attack traffic(DDoS attacks/botnets/custom attacks, etc.), malicious traffic, virus traffic, and also supports voice and video quality testing.

Key Features

- **Comprehensive interfaces**

Supports 100G/50G/40G/25G/10G/1G

- **Ultra high application protocol simulation capability**

The high application protocol simulation capability of a single test module supports millions of new TCP connections, billions of concurrent TCP connections, and supports 2 100G QSFP28 ports or 8 SFP+ports.

- **Support security device performance and capacity testing**

Including firewalls, load balancers, WAFs, URL filters, antivirus, anti spyware, HTTP/HTTPS accelerators, WAN accelerators, IDS/IPS, and IPsec VPN gateways, etc

- **Support application server performance testing**

Including web servers, mail servers, DHCP services, FTP servers, DNS servers, RTSP/RTP QuickTime streaming servers, multicast servers, etc

- **Support security testing**

Supports simulation of multiple attack traffic, virus traffic, and cyber range.

Protocols

Application	TCP, UDP, SCTP, WebSocket, DNS, HTTP, HTTPS, HTTP2, FTP, SSH, Telnet, TFTP, RTMP, H.225, H.245, SMB, RPC, ONVIF, Chat applications (SKYPE, QQ, WeChat, etc.), E-mail applications (SMTP, POP3, IMAP, etc.), Gaming applications, video applications (Tencent Video, iQIYI, HLS, etc.), Download applications (BitTorrent, eDonkey, Xunlei, etc.), Social news applications (Tiktok, Toutiao, etc.), Payment applications, Database applications (Oracle, MySQL, MSSQL, etc.)
Industrial control protocol	ECHONET Lite, BACnet, Modbus, OPCUA, MQTT, ProfiNet (PNIO CM), OPC DA, IEC104, EtherNet/IP, ProfiNet (DCP), ENIP, IEEE C37.118 Synchronizer Omron Fins, S7comm, DNP3, Ether-S-I/O, CoAP
Voice	SIP/RTP, Voice Codec (PCMU, PCMA, G.723, G.728, G.729, G.726-32, G.729AB, G.729A, G.723.1), MOS score
Video	RTSP/RTP, Multicast, Video Codec (H.261, H.262/MPEG-2, H.263, H.264, H.265, MPEG-TS, MPEG-1, MPEG-4)
DDoS	Support more than 90 types of DDoS attacks, including L2/L4 DDoS attacks (ARP/ICMP/UDP/TCP/IP/IGMP, etc.) and L7 Application Attacks (DNS Reflection, SlowRios, etc.)
Virus and attack libraries	Covering over 7000 types of vulnerability attacks, over 40000 types of viruses. The virus and attack library is updated once a month
Access Protocol	IPv4, IPv6, 802.1Q (QinQ), DHCPv4/DHCPv6 client, DHCPv4/DHCPv6 server, PPPoEv4/PPPoEv6 client, PPPoEv4/PPPoEv6 server, IPsecv4/IPsecv6, GTP, 802.1x, IP/TCP+UDP/TCP/UDP, custom IPv6 extension headers and stream labels
Routing Protocol	SRv6 BE/SRv6 TE
Data encryption and decryption	SSLv3, TLSv1.0, TLSv1.1, TLSv1.2, TLSv1.3

Specifications	
Port and Speed	<ul style="list-style-type: none"> U2-100G-2QSFP28-HQ: 2 100G QSFP28 ports, compatible with 50G/40G/25G/10G speeds, built-in acceleration card U2-10G-8F-HD: 8 10G SFP+, supporting 10G/1G speed, with built-in acceleration card
Supporting Platforms	DarYu3000/DarYu12000

Ordering information

Product Name	Product Description	Product Classification
DarYu3000	DarYu chassis, supports up to 3 test modules	DarYu3000 chassis
DarYu12000	DarYu chassis, supports up to 12 test modules	DarYu12000 chassis
U2-100G-2QSFP28-HQ	U2 100G test module, 2 100G QSFP28 ports, compatible with 50G/40G/25G/10G speed	U2 test module
U2-10G-8F-HD	U2 10/1G test module, 8 10G/1G ports	U2 test module