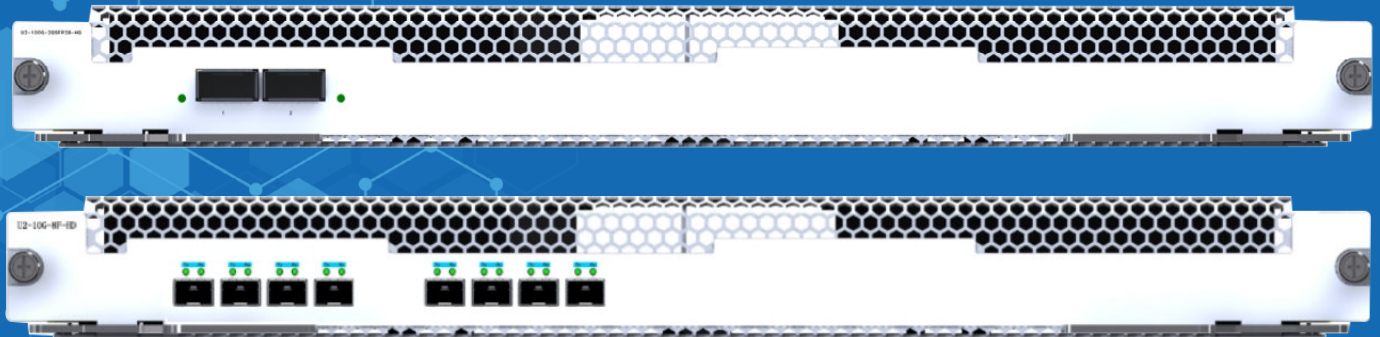


# U2 Application and Security Test Module



The U2 high-performance L4-7 test module is launched by Xinertai 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) based on PCT architecture, 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 ALPS supports audio and video quality testing.

## Key features

- **Comprehensive interfaces**

Supporting 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**

Support simulation of multiple attack traffic, virus traffic simulation, and network shooting range simulation.

## 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 up to 73 types of DDoS attacks, including L2/L4 DDoS attacks (ARP/ICMP/UDP/TCP/IP/IGMP, etc.) and L7 Application Attacks (DNS Reflection, Slowloris slow attacks, etc.)
Virus and attack libraries	Covering over 7000 types of vulnerability attacks, over 40000 types of virus files, and 73 types of DDoS attacks.
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	GMTLSv1.1, SSLv3, TLSv1.0, TLSv1.1, TLSv1.2, TLSv1.3

## Specifications

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

