Novus ONE PLUS L2-7 Fixed Chassis

Multi-rate Ethernet testing — Anywhere, anytime

The Keysight Novus ONE PLUS is a high-density portable fixed chassis, offering complete Layer 2-7 network and application testing in a compact form-factor.

With Novus ONE PLUS's unique combination of portability and performance — up to 16 Dual-PHY ports per fixed chassis, you can create cost-effective Ethernet test environments for 3-Speed 10GE / 1GE / 100M or 5-Speed 10GE / 5GE / 2.5GE / 1GE / 100M over copper and fiber media.

The Novus ONE PLUS also supports 100Base-T1 and 1000Base-T1 automotive interfaces, enabling validation of Electronic Control Units (ECU) and in-vehicular network.

A platform capable of Time Sensitive Networking (TSN), Novus ONE PLUS provides a powerful time synchronization underlay that includes the ability to synchronize with an external clock reference or GPS signal powered by Keysight's Metronome Timing System.

Novus ONE PLUS supports up to line-rate L2/3 traffic generation and analysis, high-performance routing/bridging protocol emulation, and true L4-7 application traffic generation and subscriber emulation — all with one fixed chassis!

Novus ONE PLUS

KEYSIGHT

Highlights

- Meet high-density test requirements with full-featured Dual-PHY (RJ45 and SFP+) 3-speed or 5-speed fixed chassis.
- Test using multiple chassis with Keysight STAR and Metronome Synchronization support.
- Test networks and devices cost-effectively with the industry's highest-density portable appliance.
- Optimize lab space and power use with compact form factor and reduced power requirements.
- Enable broad test functions across L2-7 with unified architecture that supports the Keysight IxNetwork, IxExplorer, and IxLoad applications.
- Validate enterprise and service provider environments with appliance that is purpose-built to test high-performance, low-latency devices.
- Validate automotive and industrial IoT (IIoT) networks.
- Test with a platform that is TSN-capable with a time synchronization underlay.

Novus ONE PLUS is available in 3-Speed and 5-Speed models to match your requirements and budget:

- **Novus ONE PLUS 3-Speed 10GE/1GE/100M**
  - 16-port fixed chassis
  - 8-port fixed chassis
  - 4-port fixed chassis
- **Novus ONE PLUS 5-Speed 10GE/5GE/2.5GE/1GE/100M**
  - 16-port fixed chassis
  - 8-port fixed chassis
  - 4-port fixed chassis
- **Upgradable**: To support evolving test needs, users can perform a software field-upgrade to convert the 8- and 4-port products to a full 16-port Novus 3-Speed or 5-Speed fixed chassis.

Portability and performance — small footprint and power

Equipped with powerful multi-core, multi-threaded network processors, Novus ONE PLUS uses the Keysight next-generation architecture designed to meet high-throughput testing needs. Due to its compact form-factor and reduced power requirements, the Novus ONE PLUS is a great option for customers who need high-performance testing yet are constrained by space and power availability in their lab.

A single Novus ONE PLUS allows emulation of up to 160Gbps of stateless application traffic and 20 Gbps of stateful application traffic. The system uses inline Ffield Programmable Gate Arrays (FPGAs) for enhanced accuracy pertaining to latency measurements, with a resolution of up to 2.5ns to deliver line-rate performance, including small 64-byte packets.

Key features

- Full line-rate traffic generation to evaluate ASIC designs, FPGAs, and hardware switch fabrics
- High scale and performance for emulating L2/3 protocols to validate performance and scalability of routing/switching and data center test cases by using Keysight's IxNetwork application
- Support for testing SFP+ and 10GBase-T RJ-45 copper ports at different speeds simultaneously
- Industry-standard RFC tests and protocol emulation on 10G, 5G, 2.5G, 1G, and/or 100M ports in a single test — to benchmark data-plane and performance and scale of network equipment
- 3-Speed 10G, 1G, and 100M or 5-Speed 10G, 5G, 2.5G, 1G, and 100M line-rate packet capture and decode tools to detect and debug data transmission errors
- Support for IxExplorer, IxNetwork, and IxLoad applications and related Tcl and automation APIs
- Flexible 4:1 CPU and memory aggregation, for high-scale protocol emulation and performance
- Real-time latency with latency resolution of up to 2.5ns
- Extensive port and traffic flow statistics
- Keysight synchronization support: STAR (secondary only) and Metronome synchronization
- Support for preamble customization is now available on IxNetwork for the Novus 1GE / 10GE 5-Speed and 3-Speed load modules. Customization is available for both the preamble length and the preamble data of frames.

Specifications

Novus ONE PLUS product description

Preamble customization	Available for preamble length and preamble data					
Port speeds	3-Speed 10GE/1GE/100M			5-Speed 10GE/5GE/2.5GE/1GE/100M		
Number of ports	16	8	4	16	8	4
Part number	941-0063	941-0064	941-0065	941-0066	941-0067	941-0068
Hardware specifications						
Physical interfaces	Dual-PHY SFP+ / 10GBASE-T RJ-45					
Synchronization	Keysight STAR and Metronome Synchronization, enabling Keysight inter-chassis latency synchronization					
CPU and memory	Multicore processor with 2GB of CPU memory per port pair					
Cable media	• Fiber • CAT5e • CAT6 • CAT6A					
Appliance dimensions	• 13.2" (W) x 3.0" (H) x 18" (D) • 335mm (W) x 76mm (H) x 457mm (D)					
Appliance weights	• Appliance only: 27.4 lbs (12.41 kg) • Shipping: 34.5 lbs (15.65 kg)					
Temperature (ambient air)	• Operating: 41°F to 95°F (5°C to 35°C) • Storage: 41°F to 122°F (5°C to 50°C)					
Power	• Input voltage: 90V to 264V • Total max power: 750W					
Humidity (ambient air)	• Operating: 0 % to 85 %, non-condensing • Storage: 0 % to 85 %, non-condensing					
Operating system	Native IxOS					
Transmit feature specifications						
Transmit engine	Wire-speed packet generation with timestamps, sequence numbers, data integrity signature, and packet group signatures					
Max. Streams per port	512					
Max. Streams per port in data center Ethernet	256					
Stream controls	Rate and frame size change on the fly, sequential and advanced stream scheduler					
Minimum frame size	10GbE: • 49 bytes at full line rate without UDF • 60 bytes at full line rate with UDF 1GbE and 100MbE: • 49 bytes at full line rate					
Maximum frame size	16,384 bytes					
Maximum fame size in data center Ethernet	9,216 bytes					
Priority flow control	• 8 line-rate-capable queues, each supporting up to 2,500-byte frame lengths • 1 queue supporting up to 9,216-byte frame lengths					
Frame length controls	Fixed, increment by user-defined step, weighted pairs, uniform, repeatable random, IMIX, and Quad Gaussian					
User-Defined Fields (UDF)	Fixed, increment or decrement by user-defined step, sequence, value list, and random configurations; up to five, 32-bit-wide UDFs are available					
Value lists (max.)	2M across 5 UDF					

Novus ONE PLUS product description

Sequence (max.)	512
Error generation	Generate good CRC or force bad CRC, undersize and oversize standard Ethernet frame lengths, and bad checksum
Hardware checksum generation	Checksum generation and verification for IPv4, IP over IP, ICMP/GRE/TCP/UDP, L2TP, GTP
Link fault signaling	10GE: Reports, no fault, remote fault, and local fault port statistics; ability to select the option to have the transmit port ignore link faults from a remote link partner
Latency measurement resolution	2.5 nanoseconds
Transmit line clock adjustment	Ability to adjust the parts-per-million line frequency over a range of -100 ppm to +100 ppm across all ports on the appliance
Receive feature specifications	
Receive engine	Wire-speed packet filtering, capturing, real-time latency, and inter-arrival time for each packet group, with data integrity, sequence and advanced sequence checking capability
Trackable receive flows per port	• 1M without Tx/Rx Sync and sequence checking • 512k with Tx/Rx Sync and sequence checking
Minimum frame size	• 64 bytes at full line rate into the capture buffer • 49 bytes at less than full line rate
Filters (User-Defined Statistics, UDS)	2 SA/DA pattern matchers, 2x16-byte user-definable patterns with offsets capability for start of: frame, IP, or protocol; up to 6 UDS counters are available
Hardware capture buffer	512MB per port
Statistics and rates	Link state, line speed, frames sent, valid frames received, bytes sent/received, fragments, undersize, oversize, CRC errors, VLAN tagged frames, 6 user-defined stats, capture trigger (UDS 3), capture filter (UDS 4), 8 QoS counters, data integrity frames, data integrity errors, sequence and advanced sequence checking frames, sequence checking errors, ARP, and PING requests and replies
Latency/Jitter measurements	Cut-through, store and forward, forwarding delay, up to 16 time bins, MEF jitter, and inter-arrival time
Layer 2-3 Protocol support	
Routing and switching	BGP4/BGP4+, OSPFv2/v3, ISISv4/v6, EIGRP/EIGRPv6, RIP/RIPng, BFD, IGMP/MLD, PIM-SM/SSM, STP/RSTP/MSTP, PVST+/RPVST+, Link Aggregation (LACP), LISP
Software defined network	OpenFlow, Segment Routing, BGP Link State (BGP-LS), PCEP, VXLAN, EVPN VXLAN, OVSDB, GENEVE
MPLS	RSVP-TE P2P/P2MP, LDP/LDPv6/mLDP, LDP L2VPN (PWE/VPLS), BGP VPLS, L3VPN/6VPE, 6PE, BGP RFC3107, MPLS-TP, MPLS OAM, EVPN/PBB-EVPN, Multicast VPN Rosen Draft, NG Multicast VPN
Broadband and authentication	PPPoX/L2TPv2, DHCPv4/DHCPv6, ANCP, IPv6 Autoconfiguration (SLAAC), IGMP/MLD, IPTV, 802.1x, WebAuth, EAPoUDP, Cisco NAC
Industrial Ethernet	Link OAM (IEEE 802.3ah), CFM/Y.1731, PBB/PBB-TE, ELMI, TWAMP, Sync-E ESMC, IEEE 1588v2 (PTP), gPTP (IEEE 802.1AS), MSRP (IEEE 802.1 Qat), IEEE 1722
Data center Ethernet	DCBX/LLDP, FCoE/FIP, PFC (IEEE 802.1Qbb), TRILL, Cisco FabricPath, SPBM, VEPA
Layer 4-7 Application traffic testing support	
Data	HTTP, HTTPS, TCP Session, FTP, DNS, Mail (SMTP, POP3, and IMAP), TFTP, AppReplay, AppLibrary
Video	RTSP, IPTV, VoD, Adobe Flash Client, Apple HLS Client, Microsoft Silverlight Client, Adobe HDS Client, DASH Client; includes Video Quality VQMON and TCP Video Quality
Voice	Advanced VoIP SIP and RTP, Audio and Video Codecs, VoLTE, MSRP, Telepresence, SMS; includes: Voice Quality and Video Quality for conversational video traffic
Storage	iSCSI, CIFSv1, CIFSv2 (SMB2), SMB3, NFSv3 Client, NFSv4 Client, NFS4.1 Client, Cloud Storage Client
Access	IPv4, IPv6, IPsec, VLAN, Emulated Routers, DNS, DHCP

Ordering Information

3-Speed Novus ONE PLUS

941-0063

IXIA Novus ONE PLUS 10/1GE16DP Fixed Chassis, 16-port, SFP+/10GBASE-T Dual-PHY 10GE/1GE/100M, 1-slot Dual-PHY with 16-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

941-0064

IXIA Novus ONE PLUS 10/1GE8DP Fixed Chassis, 8-port, SFP+/10GBASE-T Dual-PHY 10GE/1GE/100M, 1-slot Dual-PHY with 8-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

941-0065

IXIA Novus ONE PLUS 10/1GE4DP Fixed Chassis, 4-port, SFP+/10GBASE-T Dual-PHY 10GE/1GE/100M, 1-slot Dual-PHY with 4-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

5-Speed Novus ONE PLUS

941-0066

IXIA Novus ONE PLUS 10/5/2.5/1GE16DP Fixed Chassis, 16-port, SFP+/10GBASE-T Dual-PHY 10/5/2.5/1GE/100M, 1-slot Dual-PHY with 16-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

941-0067

IXIA Novus ONE PLUS 10/5/2.5/1GE8DP Fixed Chassis, 8-port, SFP+/10GBASE-T Dual-PHY 10/5/2.5/1GE/100M, 1-slot Dual-PHY with 8-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

941-0068

IXIA Novus ONE PLUS 10/5/2.5/1GE4DP Fixed Chassis, 4-port, SFP+/10GBASE-T Dual-PHY 10/5/2.5/1GE/100M, 1-slot Dual-PHY with 4-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

TAA 3-Speed Novus ONE PLUS

941-0063-T

IXIA TAA Compliant, Novus ONE PLUS 10/1GE16DP Fixed Chassis, 16-port, SFP+/10GBASE-T Dual-PHY 10GE/1GE/100M, 1-slot Dual-PHY with 16-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

941-0064-T

IXIA Novus ONE PLUS 10/1GE8DP Fixed Chassis, 8-port, SFP+/10GBASE-T Dual-PHY 10GE/1GE/100M, 1-slot Dual-PHY with 8-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

941-0065-T

IXIA TAA Compliant, Novus ONE PLUS 10/1GE4DP Fixed Chassis, 4-port, SFP+/10GBASE-T Dual-PHY 10GE/1GE/100M, 1-slot Dual-PHY with 4-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

TAA 5-Speed Novus ONE PLUS

941-0066-T

IXIA TAA Compliant, Novus ONE PLUS 10/5/2.5/1GE16DP Fixed Chassis, 16-port, SFP+/10GBASE-T Dual-PHY 10/5/2.5/1GE/100M, 1-slot Dual-PHY with 16-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software.

941-0067-T

IXIA TAA Compliant, Novus ONE PLUS 10/5/2.5/1GE8DP Fixed Chassis, 8-port, SFP+/10GBASE-T Dual-PHY 10/5/2.5/1GE/100M, 1-slot Dual-PHY with 8-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software

941-0068-T

IXIA TAA Compliant, Novus ONE PLUS 10/5/2.5/1GE4DP Fixed Chassis, 4-port, SFP+/10GBASE-T Dual-PHY 10/5/2.5/1GE/100M, 1-slot Dual-PHY with 4-ports each of the SFP+ and 10GBASE-T RJ45 physical interfaces. L2-7 support. Includes installation of the latest production released version of the IxOS software

Port upgrade option

905-1006

IXIA NOVUS-UPGRADE, additional 8-port enablement for a FIELD UPGRADE to the following products: NOVUS10/1GE8DP (944-1143), Novus10/5/2.5/1/100M8DP (944-1149), Novus10/5/2.5/1/100M8DP-R (944-1155), NOVUS-NP10/1GE8DP (944-1163), Novus ONE-3-Speed 8-Port Appliance (941-0061), Novus ONE PLUS 3-Speed 8-Port Fixed Chassis (941-0064) and Novus ONE PLUS 5-Speed 8-Port Fixed Chassis (941-0067)

Note 1. This creates a total of 16-ports enabled on the load module or Fixed Chassis. Note 2: For the additional 8-port upgrade purchase please provide the serial number of the desired load module or Fixed Chassis to install the option on at the time of order placement

905-1037

IXIA NOVUS-UPGRADE, additional 12-port enablement for a FIELD UPGRADE to the following products: Novus ONE 4-port 3-Speed Appliance (941-0062), Novus ONE PLUS 4-port 3-Speed Fixed Chassis (941-0065) and Novus ONE PLUS 4-port 5-Speed Fixed Chassis (941-0068)

Note 1. This creates a total of 16-ports enabled on the load module. Note 2: For the additional 12-port upgrade purchase please provide the serial number of the desired load module to install the option on at the time of order placement

Cables and transceivers

988-0011

SFP+10GBASE-SR/SW and 1000BASE-SX Dual-Rate pluggable optical transceiver for 10/1 Gigabit Ethernet LAN/WAN load modules with pluggable SFP+ interface, 850nm. Compatible with all 10/1 Gigabit Ethernet Novus, PerfectStorm and Firestorm load modules and appliances. Note: Multi-mode fiber LC-LC, 3-meter cable included

988-0012

SFP+10GBASE-LR/LW and 1000BASE-LX Dual-Rate pluggable optical transceiver for 10/1 Gigabit Ethernet LAN/WAN load modules with pluggable SFP+ interface, 1310nm, 10km reach. Compatible with all 10/1 Gigabit Ethernet Novus, PerfectStorm and Firestorm load modules and appliances. Note: Single-mode fiber LC-LC, 10 ft. cable included

948-0013

SFP+10GBASE-SR/SW, Accessory, SFP+ Transceiver for 10 Gigabit Ethernet LAN/WAN load modules with pluggable SFP+ interface, 850nm; Operates with 944-0050 (LSM10GXM4S-01), 944-0051 (LSM10GXM8S-01), 944-0052 (LSM10GXMR4S-01), 944-0053 (LSM10GXMR8S-01), 944-0054 (LSM10GXM2S-01), 944-0055 (LSM10GXMR2S-01); and 944-0022 (LSM10G1-01) with 948-0012 (SFP+ADAP-01); or 944-0024 (LSM10GL1-01) with 948-0012 (SFP+ADAP-01)

948-0014

SFP+10GBASE-LR/LW, Accessory, SFP+ Transceiver for 10 Gigabit Ethernet LAN/WAN load modules with pluggable SFP+ interface, 1310nm; Operates with 944-0050 (LSM10GXM4S-01), 944-0051 (LSM10GXM8S-01), 944-0052 (LSM10GXMR4S-01), 944-0053 (LSM10GXMR8S-01), 944-0054 (LSM10GXM2S-01), 944-0055 (LSM10GXMR2S-01); and 944-0022 (LSM10G1-01) with 948-0012 (SFP+ADAP-01); or 944-0024 (LSM10GL1-01) with 948-0012 (SFP+ADAP-01)

948-0015

SFP+10GBASE-LRM, Accessory, SFP+ Transceiver for 10 Gigabit Ethernet LAN/WAN load modules with pluggable SFP+ interface, For multimode fiber, 1310nm; Operates with 944-0050 (LSM10GXM4S-01), 944-0051 (LSM10GXM8S-01), 944-0052 (LSM10GXMR4S-01), 944-0053 (LSM10GXMR8S-01), 944-0054 (LSM10GXM2S-01), 944-0055 (LSM10GXMR2S-01); and 944-0022 (LSM10G1-01) with 948-0012 (SFP+ADAP-01); or 944-0024 (LSM10GL1-01) with 948-0012 (SFP+ADAP-01); NOTE: SFP+10GBASE-LRM does not support the 10GbE WAN mode in any of the load modules listed above

948-0016

SFP+10GSFP+Cu, Accessory, passive, copper Direct Attach Cable Assembly for 10 Gigabit Ethernet LAN/WAN load modules with pluggable SFP+ interface, 3-meter length; NGY 10GE SFP+ modules, Xdensity modules, and Xcellon-Flex 10GE SFP+ FE and AP modules

SFP-LX

SFP 1 Gigabit Ethernet Transceiver - 1310nm LX

SFP-SX

SFP 1 Gigabit Transceiver - 850nm SX

SFP-FX-100M-XCVR

SFP 100BASE-FX 100M pluggable optical transceiver, MMF (multimode), 1310nm, 2km reach

948-0062

IXIA SFP TRANSCEIVER, AUTOMOTIVE ETHERNET, 1000BASE-T1, 100BASE-T1, 1GBPS/100MBPS. 1G/100M Automotive Ethernet (1000BASE-T1 and 100BASE-T1) transceiver for use with the NOVUS 10GE/1GE/100M Modules (944-1142, 944-1143, 944-1146 and 944-1141) OR NOVUS 10/5/2.5/1/100M Modules (944-1148 and 944-1149) OR the Novus One 10GE/1GE/100M Appliances (941-0060 and 941-0061) OR Novus ONE PLUS fixed chassis (941-0063, 941-0064, 941-0065, 941-0066, 941-0067 and 941-0068). Requires IxOS 9.00 EA Patch 2 or later

TAA transceivers

SFP-PLUS-LR-XCVR-T

Ixia, TAA compliant, SFP+ 10GBASE LR pluggable optical transceiver, 1310nm, SMF (single mode fiber), 10km reach, LC (948-0057). COMPATIBLE NETWORK TEST PRODUCTS: Novus 10/1 3 Speed (944-1141, 944-1142, 944-1143, 944-1146), Novus 10/1 5 Speed (944-1148, 944-1149, 944-1154, 944-1155) and Novus ONE PLUS (941-0063, 941-0064, 941-0065, 941-006,6 941-0067, 941-0068)

SFP-PLUS-SR-XCVR-T

Ixia, TAA compliant, SFP+ 10GBASE SR pluggable optical transceiver, MMF (multimode fiber), 850nm, 300m reach, LC (948-0048). COMPATIBLE NETWORK TEST PRODUCTS: Novus 10/1 3 Speed (944-1141, 944-1142, 944-1143, 944-1146), Novus 10/1 5 Speed (944-1148, 944-1149, 944-1154, 944-1155) and Novus ONE PLUS (941-0063, 941-0064, 941-0065, 941-006,6 941-0067, 941-0068)

SFP-LX-I-XCVR-T

Ixia, TAA Compliant, Industrial temperature rate 1G LX transceiver (995-0060). COMPATIBLE NETWORK TEST PRODUCTS: Novus 10/1 3 Speed (944-1141, 944-1142, 944-1143, 944-1146), Novus 10/1 5 Speed (944-1148, 944-1149, 944-1154, 944-1155) and Novus ONE PLUS (941-0063, 941-0064, 941-0065, 941-006,6 941-0067, 941-0068)

SFP-SX-I-XCVR-T

Ixia, TAA Compliant, Industrial temperature rate 1G SX transceiver (995-0061). COMPATIBLE NETWORK TEST PRODUCTS: Novus 10/1 3 Speed (944-1141, 944-1142, 944-1143, 944-1146), Novus 10/1 5 Speed (944-1148, 944-1149, 944-1154, 944-1155) and Novus ONE PLUS (941-0063, 941-0064, 941-0065, 941-006,6 941-0067, 941-0068)

SFP-PLUS-LR-XCVR-D-T

Ixia, TAA compliant, SFP+ 10/1GBASE Dual Rate LR pluggable optical transceiver, 1310nm, MMF (single mode fiber), 10km reach, LC (948-0070). COMPATIBLE NETWORK TEST PRODUCTS: Novus 10/1 3 Speed (944-1141, 944-1142, 944-1143, 944-1146), Novus 10/1 5 Speed (944-1148, 944-1149, 944-1154, 944-1155) and Novus ONE PLUS (941-0063, 941-0064, 941-0065, 941-006,6 941-0067, 941-0068)

SFP-PLUS-SR-XCVR-D-T

Ixia, TAA compliant, SFP+ 10/1GBASE Dual Rate LR pluggable optical transceiver, 1310nm, MMF (single mode fiber), 10km reach, LC (948-0070). COMPATIBLE NETWORK TEST PRODUCTS: Novus 10/1 3 Speed (944-1141, 944-1142, 944-1143, 944-1146), Novus 10/1 5 Speed (944-1148, 944-1149, 944-1154, 944-1155) and Novus ONE PLUS (941-0063, 941-0064, 941-0065, 941-006,6 941-0067, 941-0068)

IxNetwork product packages for Novus ONE PLUS

Note: Novus ONE PLUS only supports the products listed below which are perpetual node-locked packaged licenses and IxNetwork HW subscription tier licenses. It does not support other node-locked a la carte licenses, bundle licenses and tier licenses

930-2220 (TAA Version 930-5006-T)

Ixia IxNetwork, All Inclusive package for Novus ONE PLUS. Supports all IxNetwork software features with exclusion; Excludes: 930-3461 IxNetwork AppLibrary Slot Bundle, Layer 4-7 Performance Test Application; 930-2222 IxNetwork Encryption test package for Novus ONE PLUS. Any optional script package or IxSuiteStore optional test suite is not considered as part of IxNetwork software features*

*Note: Novus ONE PLUS does not support traditional IxNetwork a la carte license, bundle license and tier licenses

930-2221 (TAA Version 930-5005-T)

Ixia IxNetwork, Basic package for Novus ONE PLUS; INCLUDES: IxNetwork Base, RFC2544/2889/3918 QuickTest

930-2222

Ixia IxNetwork, Encryption Test package for Novus ONE PLUS; INCLUDES: MACsec Emulation; REQUIRES: 930-2221 IxNetwork Basic package for Novus ONE PLUS; Recommend with: 930-3461 IxNetwork AppLibrary Slot Bundle, Optional Software, Layer 4-7 Performance Test Application for additional encryption/decryption capability in Static MACsec emulation

930-2530

Ixia IxNetwork perpetual, Bundle - basic package (930-2221) and AVB/TSN for Novus ONE PLUS Fixed Chassis, includes IxNetwork Basic, 802.1AS-2011, 802.1AS 2020, Qbv Scheduled Traffic, Qbu Frame preemption ,1CB Redundancy, Qav CBS, MSRP, 1722 and 1733 protocol emulation

930-9521

IXIA IxNetwork Tier1 One-Year FLOATING Subscription Per User License for use with IXIA Hardware (930-9521); Support IxNetwork base with Traffic and Statistics, RFC2544/2889/3918 QuickTest, Protocol Emulation of Routing, Switching, MPLS/VPN, relevant control plane QuickTest, for a duration of 1-Year

930-9522

IXIA IxNetwork Tier2 One-Year FLOATING Subscription Per User License for use with IXIA Hardware (930-9522); Support IxNetwork base with Traffic and Statistics, RFC2544/2889/3918 QuickTest, Protocol Emulation of Routing, Switching, MPLS/VPN, Carrier Ethernet, Timing, Data Center Ethernet, Broadband/Authentication, relevant control plane QuickTest, for a duration of 1-Year

930-9523

IXIA IxNetwork Tier3 One-Year FLOATING Subscription Per User License for use with IXIA Hardware (930-9523); Support IxNetwork base with Traffic and Statistics, RFC2544/2889/3918 QuickTest, Protocol Emulation of Routing, Switching, MPLS/VPN, Carrier Ethernet, Data Center Ethernet, Broadband/Authentication, SDN, Timing, TSN, 5G, relevant control plane QuickTest, AppLibrary, for a duration of 1-Year

930-9530

Ixia IxNetwork, node-locked 12-month subscription Bundle - basic package (930-2221) and AVB/TSN for Novus ONE PLUS Fixed Chassis, includes IxNetwork Basic, 802.1AS-2011, 802.1AS 2020, Qbv Scheduled Traffic, Qbu Frame preemption ,1CB Redundancy, Qav CBS, MSRP, 1722 and 1733 protocol emulation

Ixload product packages for Novus ONE PLUS

IxLoad software license bundles for appliances listed below are supported on Novus One Plus:

925-6321 (TAA Version 925-0507-T)

IxLoad, Appliance Multiplay, Software Bundle, Layer 4-7 Performance Test Application. Enables IxLoad Data, Voice, Video, Access, VPN and Storage on PerfectStorm ONE and Novus ONE appliances. Includes:

- 925-6121   IxLoad Appliance DATA
- 925-6112   IxLoad Appliance VIDEO
- 925-6113   IxLoad Appliance VOICE
- 925-6117   IxLoad Appliance Access and VPN

925-6104 (TAA Version 925-0504-T)

IxLoad Appliance Basic, Optional Software, Layer 4-7 Performance Test Application. Enables IxLoad Basic functionality on PerfectStorm ONE and Novus ONE appliances. Includes: HTTP, HTTPS, DNS, ADVNET-DHCP, WAP, Stateless Peer.

925-6121 (TAA Version 925-0505-T)

IxLoad Appliance Data, Software, Layer 4-7 Performance Test Application. Enables IxLoad DATA functionality on PerfectStorm ONE and Novus ONE appliances. Includes:

- 925-6104 IxLoad Appliance BASIC (HTTP, HTTPS, DNS, ADVNET-DHCP, Stateless Peer)
- FTP, DHCP, IMAP, POP3, SMTP, TFTP, App-Replay, TCPsession HTTP Quick Test, RFC 3511 Quick Test
- Storage: NFSv3, NFSv4, NFSv4.1, SMBv3, CIFS, CIFSv2 iSCS, iSCSI Quick Test

925-6112

IxLoad Appliance VIDEO, Software Bundle, Layer 4-7 Performance Test Application. Enables IxLoad Video functionality on PerfectStorm ONE and Novus ONE appliances. Includes:

- RTSP, IPTV, Video-ADVANCED
- FLASH, APPLE HLS, Silverlight, Adobe HDS, MPEG-DASH
- Video Quality VQMON engine for up to 10Gbps
- TCP VQ—Video quality for TCP video traffic for up to 10 Gbps

925-6113

IxLoad Appliance VOICE, Software Bundle, Layer 4-7 Performance Test Application. Enables IxLoad Voice functionality on PerfectStorm ONE and Novus ONE appliances. Includes:

- Advanced SIP, SIP endpoint, Proxy and Cloud emulation
- TLS, SRTP
- Audio, Video Conference, Telepresence, MSRP
- Voice Quality engine for up to 10Gbps
- Video Quality engine for up to 10Gbps video conversation traffic

925-6117 (TAA Version 925-0506-T)

IxLoad Appliance ACCESS + VPN, Software, Layer 4-7 Performance Test Application. Enables IxLoad Access and VPN functionality on PerfectStorm ONE and Novus ONE appliances. Includes:

- 925-6104 IxLoad Appliance BASIC (HTTP, HTTPS, DNS, ADVNET-DHCP, Stateless Peer)
- IPsec, IPsec SUITES B, IPsec Quick Tests, PPP, L2TP, L2TP/IPsec
- IPv6 Transitioning: SLAAC, 6rd, DSLite
- ADVNET: DHCP, DHCPv6 (client and server), RADIUS; ADVNET-802.1X, ADVNET-NAC, ADVNET-WEBAUTH

925-3461

IxLoad AppLibrary Slot Bundle, Software Bundle, Layer 4-7 Performance Test Application; Enables support for AppLibrary on a single load module. It includes AppLibrary Slot Feature (925-3462) and Slot Subscription service (925-3460) to access new application flows for one year; Requires previous purchase of 925-3040 (IXLOAD Base) or higher bundle

More information

https://www.keysight.com/in/en/products/network-test/network-test-hardware/novus-one-plus-l2-7-fixed-chassis.html

KEYSIGHT