

Ixia Vision Edge 10S (E10S) Network Packet Broker

The need for real-time visibility into network data has never been greater. Being able to know how applications and services are performing is no longer a nice to have. It is also imperative to have the ability to quickly quantify threats from within and outside of your network.

Ixia's new Vision Edge 10S (E10S) network packet brokers are perfect for remote site installations with access to network and analytics tools in the same location. It is equally suitable for data centers that aggregate and send data across LAN or WAN to central NOC/SOC for real-time network visibility operations.

Key Features

- **High density multi-speed network packet broker** that is designed for deployment in racks to aggregate traffic
- **Hardware based implementation** of Netflow generation and advanced packet processing
- **Exceptionally feature rich** stand-alone packet broker that supports 1G to 10G networks
- **Easy-to-use web-interface** allows you to focus on security rather than configuration
- **Sophisticated load balancing** distributes traffic across several tools for monitoring or inline in serial or parallel to maximize up-time and ensure that no critical data is lost
- **Comprehensive wizards** make inline tool deployment extremely easy for complex use cases that require tool sharing or VLAN translation
- **Secure** serial console port with authentication
- **Space efficient** 1RU design saves rack space in your data center

Highlights

- High density 1U platform
- Supports 1G to 10G networks
- Support both inline and OOB use cases
- Supports scaling your security infrastructure in more manageable steps
- Fully featured with Ixia's robust NetStack capabilities:
- Aggregation, replication, filtering and load balancing
- Supports line-rate packet deduplication, header stripping and other advanced packet processing features
- Supports up to 20Gbps Netflow generation
- Supports L2GRE origination and termination
- Supports Generic Header Stripping that can strip off well-known protocol headers as well as proprietary protocol headers
- Ixia's patented filter compiler and three stages of filtering for one of a kind flexibility in managing network and tool traffic profile
- Up to 40 Gbps line rate packet processing with PacketStack
- Software defined platform that offers new features without platform change



Figure 1: E10S








Figure 2: E10S Front

Use Cases

- Single site deployment with network and network and security analytics tools
- In a distributed network, Vision Edge can be used with Vision E10S with direct connect, so tools at the data center can be used for multiple branch monitoring and security
- With other Vision packet brokers to leverage more advanced packet processing capabilities

Product Capabilities

NetStack Capabilities	
The Ixia gold-standard baseline filtering functionality for network packet brokers	
 <p>Three Stages of Filtering Filter at ingress ports, in the middle and at egress ports for the maximum flexibility in designing complex Boolean logic without the need of using extra ports for loopback</p>	 <p>Dynamic Filter Compiler Patented technology that resolves rule overlaps automatically and hence makes configuration simple and eliminates human errors</p>
 <p>Aggregation Consolidate incoming traffic to optimize port usage and simplify filter logic. Support 1:1, 1:Many, Many:1 and Many:Many traffic mapping</p>	 <p>Replication At the ingress port as well as at the dynamic filter. Replication at the ingress allows the same input to connect to multiple dynamic filters. Replication at the dynamic filter allows multiple tools to get identical traffic from the same dynamic filter.</p>
 <p>Load-balancing Sophisticatedly distributes traffic across tools ports for monitoring in a session aware manner to preserve traffic integrity and also to maximize up-time with fail-over protection</p>	


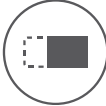






Inline Capabilities

- Supports failsafe serial service chaining, parallel load balancing with spares, or combined topologies
- Customizable heartbeat (HB) support to detect and automatically recover from monitoring and security tool failures
- Multiple HB templates allow each tool to have its own unique HB
- Asymmetric hashing supports common use cases for lawful interception
- Bypass switches and Ixia Vision E10S can have different HB so multi-tier design is possible to increase overall resilience for High Availability (HA)

PacketStack Capabilities

Full, line rate intelligent packet processing. Modify every packet at line-rate using any combination of Ixia's PacketStack (AFM) capabilities

Flexibly assign 40Gbps total processing capacity to any port in 10Gbps increments

 <p>Deduplication 40Gbps capacity (10G increments)</p>	 <p>Header Stripping Includes VLAN, FabricPath, ETag, VNTag, GTP, MPLS, VxLAN, L2GRE, ERSPAN, supports cascaded header stripping</p> <p>NEW: Generic Header Stripping added used to strip protocols headers not in above list. Examples are: L3GRE, GENEVE, JMirror, PBB-TE, LISP, VSL, OTV, PPPoE</p>
 <p>Packet Trimming (Slicing) To modify packet slice or retain only relevant data. Selective packet trimming for HTTPs and GQUIC traffic. Traffic can be GTP encapsulated or have no encapsulation</p>	 <p>Timestamping Timestamping (NTP)</p>
 <p>Extended Burst Protection 1G burst protection</p>	 <p>Tunneling L2GRE based tunneling over WAN/LAN (origination and termination)</p>
 <p>Data Masking Protect PII and sensitive data with an offset</p>	 <p>Hardware based Netflow Generation Can produce NF records for up to 1 million tcp connections per second. Also can generate NF records for high volume traffic when used in conjunction of PacketStack "Packet Trimming" and "Add original length to trailer"</p>

Netflow Fields Supported by E10S

- ingressInterface
- egressInterface
- flowEndReason
- flowStartMilliseconds
- flowEndMilliseconds
- packetDeltaCount
- octetDeltaCount
- protocolIdentifier
- tcpControlBits
- sourceTransportPort
- destinationTransportPort
- sourceIPv4Address (or sourceIPv6Address)
- destinationIPv4Address (or destinationIPv6Address)

Vision E10S Highlights	
<p>System and Performance</p> <ul style="list-style-type: none"> • 1U chassis, fixed form with hot swap redundant power and fans • Available in AC or DC models • Capable of (2) speeds - 1G, 10G • (48) 1G or (48) 10G SFP+ ports • Layer 2 forwarding of 480Gbps 	<p>Management</p> <ul style="list-style-type: none"> • Local, RADIUS, TACACS+, LDAP and LDAP/CAC support • Granular access control features • Event monitoring and logging • Syslog • IT automation with REST API • SNMP v1, v2 and v3 support • Support mgmt. port IP whitelisting

Operating Specifications

Vision E10S	
<p>Power</p> <ul style="list-style-type: none"> • Redundant (2) hot swap AC power supplies • Redundant (2) hot swap DC power supplies • AC Input voltage: 90 to 260 VAC @ 50-60 Hz, 3A, 260W max (each PSU) • DC Input voltage: -44 to -70 VDC, 6A • 3 fans in 2 sets, each set rated at 12VDC, 1.2A, 27.45-30.5 CFM) 	<p>Physical Size, Weight</p> <ul style="list-style-type: none"> • WxLxH: 17.5W x 24.5L x 1.75H inches • Weight: 30 lbs with two installed PSU • Operating Temperature: 0 to 50 degrees Celsius • Operating Humidity: 5% to 95% non-condensing • Country of Origin: USA

Vision E10s Regulatory, Safety

Regulatory

CB, EN 60950, UL/CUL, CE Class A

Safety

UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements) EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013 IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013

Emissions

EN 55032:2012/AC:2013, Class A, CFR 47, FCC Part 15B, Canada: ICES-003: Issue 6:2016, AS/NZ CISPR 32:2015 Class A, KCC – Korea

Immunity

EN 55024:2010, EN 61000-3-2:201, EN 61000-3-3:2013, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11.

Environmental

The RoHS Directive 2011/65/EU, 2006/1907/EC (REACH)

Ordering Information

Vision E10S System

Hardware	Description
SYS-E10S-16P-AC	Vision E10 System AC Chassis with fixed (48) 1G/10G; Includes license for (16) 1G/10G ports and 20Gbps of PacketStack (1G Burst Protection, Masking, Timestamp, Packet Trimming, Add Trailer); Contains two AC power supplies and fan units. Optional ports and feature licenses available
SYS-E10S-16P-DC	Vision E10 System DC Chassis with fixed (48) 1G/10G; Includes license for (16) 1G/10G ports and 20Gbps of PacketStack (1G Burst Protection, Masking, Timestamp, Packet Trimming, Add Trailer); Contains two DC power supplies and fan units. Optional ports and feature licenses available

Vision E10s Port Licenses	
Part Number	Description
LIC-E10S-16P	Vision E10S, Port license for an additional (16) 1G/10G ports; Requires previous or adjunct purchase of SYS-E10S-16P-AC or SYS-E10S-16P-DC
LIC-E10S-4P	Vision E10S, Port license for an additional (4) 1G/10G ports; Requires previous or adjunct purchase of SYS-E10S-16P-AC or SYS-E10S-16P-DC

Vision E10S PacketStack Licenses	
Part Number	Description
LIC-E10S-PS-10G	Vision E10S, Add 10Gbps PacketStack (1G Burst Protection, Masking, Timestamp, Packet Trimming, Add Trailer), Max (2) license per system
LIC-E10S-DDUP	Vision E10S, Enables PacketStack Deduplication feature, licensed per system; Up to 40Gbps supported if PacketStack is licensed at 40Gbps
LIC-E10S-STRP	Vision E10S, Enables PacketStack Header stripping feature, licensed per system; Up to 40Gbps is supported if PacketStack is licensed at 40Gbps
LIC-E10S-TUNL	Vision E10S, Enables PacketStack Tunneling feature, licensed per system, up to 40Gbps
LIC-E10S-NTFL-10G	Vision E10S, Enables up to 10Gbps Netflow generation feature; Max (2) licenses per system
LIC-E10S-IFC	Vision E10S, Enables Ixia fabric controller (IFC) for direct connect to Vision ONE or NTO 7300/3, Vision Edge 40, Vision Edge 100; licensed per system; Require previous or adjunct purchase of port licenses to operate
LIC-E10S-INLN	Vision E10S, Enables Inline feature, licensed per system. Requires previous or adjunct purchase of port licenses to operate

Vision E10S Spare	
Part Number	Description
SYS-E10S-SPARE-AC	Vision E10S System AC Chassis with no ports or features enabled; Requires short term license to be installed to operate when required; Contains two AC power supplies and fan units. PREREQUISITES: Cold spare license LIC-E10S-SPARE
SYS-E10S-SPARE-DC	Vision E10S System DC Chassis with no ports or features enabled; Requires short term license to be installed to operate when required; Contains two DC power supplies and fan units. PREREQUISITES: Cold spare license LIC-E10S-SPARE
LIC-E10S-SPARE	Vision E10S, Cold spare system license; NOTE: Includes max configuration; Activation includes all ports, and features. Short term activation only to operate Vision E10S cold spare system (SYS-E10S-SPARE-AC or SYS-E10S-SPARE-DC). Must purchase Essential/Enterprise support.

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