Vision Edge 100
Network Packet Broker

(Model: Vision E100)



Product Description

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.

Current reality is that compute, storage and networks are now software defined and built by the rack and containers. And, in keeping with demand to deliver lower operating expense and offering the best-of-breed in software-defined flexibility, visibility is lost at every layer as installations get dense and traffic moves east-west within a rack and north-south between racks.

More servers, more switching layers, more virtual platform translate to more visibility blind spots.

Keysight's Vision Edge 100 (Model: Vision E100) network packet brokers are designed to provide rack-level visibility through a solution that allows seamless integration into existing hybrid SDN architectures. Offering true flexible multi-speed capability, and a comprehensive feature set for the versatility to adapt to the future, ensuring your Security Fabric's strength, all while offering a compelling total cost of ownership.

KEYSIGHT

Key Features

- High density multi-speed network packet broker that is designed for deployment in racks to aggregate traffic.
- Exceptionally feature rich stand-alone packet broker that supports 10G, 25G, 40G, 50G and 100G networks, including fan-in and fan-out support.
- Easy-to-use web-interface allows you to focus on security rather than configuration.
- Comprehensive wizards that make inline tool deployment extremely easy
- Space efficient 1RU design saves rack space in your data center.

Use Cases

- For top-of-the-rack visibility for a single site deployment with network taps and security tools
- In a leaf-spine architecture, aggregating across multiple racks in a smaller or microscale data center.
- In a distributed network, Vision E100 can be used with Vision E40/7816 or Vision ONE/Vision X to form an Ixia Fabric Controller (IFC) cluster for a single pane of glass management and operation, so tools at a central location can be shared among multiple branches.
- IFC cluster in spine-and-leaf topology offers the most resilient architecture that provides auto failover and active-active load balance.
- Taking traffic from Cisco ACI environment or other data centers and perform conditional VxLAN header stripping with matching VNI.

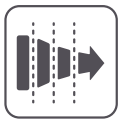
Product Capabilities

NetStack

Robust filtering, aggregation, replication and more – the gold standard for network traffic visibility.

The following traffic visibility capabilities combined as NetStack are the foundational set available as standard features for Keysight's industry-leading network packet brokers.

Three Stages of Filtering



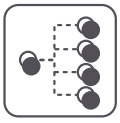
Aggregation



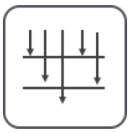
Intersection Mode Filtering



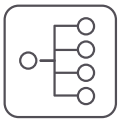
Replication



Priority Based Filtering



Load Balancing



Dynamic Filter Compiler



Source Port Labeling (VLAN Tagging)



Tunneling



Packet Capture



Learn more about NetStack features

Vision E100 features

	Feature
NetStack	Native L2GRE/VxLAN origination and termination, including conditional header stripping
	Filtering on IPv4/IPv6 fragments
	Layer 2 forwarding of 6.4 Tbps (full duplex)
	CLI support for Inline features and NetStack features
	Both OOB and Inline capable, including support of Inline HA
	IFC cluster and Inline HA are the most resilient architecture for OOB monitoring and Inline tool deployment respectively
	Packet Capture on all ports. Up to 1000 packets per capture. Up to 50MB for storage
Hardware	(32) QSFP28 front panel ports
	Supports QSFP28 (for 100G) or QSFP+ (for 40G) transceivers
	Capable of (5) speeds - 10G, 25G, 40G, 50G and 100G networks
	Each port is capable of any of the 5 speeds, set independently
	Massive density with (128) 10G ports in 1U size
	Hot swap redundant power supplies and fans
	Available in AC and DC model
IFC Clustering	Support IFC clustering with other Vision platforms to offer single pane of glass management for a cluster of NPBs. IFC cluster offers the most resilient architecture for OOB monitoring
	IFC cluster supports any-to-any topology with tools either a single hop or multiple hops away

Inline capabilities

Requirement	Inline capability
Service Chaining	Supports failsafe serial service chaining, parallel load balancing with spares, or combined topologies
	Asymmetric hashing supports common use cases for lawful interception
	Weight based load balance and LBG threshold high-and-low watermark
Heartbeat	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
Load Balance	Asymmetric hashing supports common use cases for lawful interception
	Advanced load balance options include weight-based LB and high-and-low watermark LB
High Availability (HA)	Bypass switches and Keysight Vision E100 can have different HB so multi-tier design is possible to increase overall resilience for High Availability (HA)
	Keysight's Active-Active Inline HA solution is the gold standard in the industry and offers the most resilient architecture to protect all kinds of failures

Network Packet Broker Management

Keysight Vision Orchestrator

Keysight Vision Orchestrator (KVO) offers intent-based visibility for its users and its main goal is to provide a single pane of glass for Keysight visibility solutions, covering both physical and virtual world. KVO has two key components, element management and data path management. Key functional blocks of each component are listed below:

Element Management

- KVO User management - Single Sign On
- Granular Role and Resource Based Access Control
- Custom Dashboards and Reporting
- Event Management
- Software Upgrade Automation
- Centralized License Management

Data Path Management

- Cluster Management
- Intent-based Network Policies
- Policy Scheduler
- Self-healing Visibility Fabric
- Global Change Management
- Audit Trail of Changes
- Open API for fabric management

Keysight KVO



Keysight Vision Orchestrator can manage hundreds of visibility nodes in the Cloud, Data Center, or Edge. This enables organization to scale and operate their visibility solutions across their entire environment with the ease of intent-based policies.

Learn more about Keysight's KVO

IFC (Ixia Fabric Controller) clustering

IFC Clustering helps IT Network teams achieve basic and efficient network visibility management. It supports various platforms such as Vision ONE, Vision E40, Vision E100, Vision E10S, Vision 7816 and Vision X.

	Capability
Platforms	IFC clustering offers single pane of glass management for your network packet brokers. NPBs in a distributed environment can be managed and configured, using a single User Interface, as if one centralized visibility and security fabric.
	IFC clustering supports any combination of Vision Edge 40/100/10S, Vision ONE/X/7816 platforms
Topologies	Typical topologies supported include hub-and-spoke, spine-and-leaf, tree, ring, full mesh, partial mesh, or any combination of above
	Supports direct connection for interconnects, or GRE encapsulated interconnects (limited to Vision ONE and 7300 only) when going thru DWDM or WAN devices
	Supports both single hop and multi hop cluster topology
Algorithms	Best routes are calculated based on least hop-count using Shortest Path First (SPF) algorithm
	Intelligent load balance among Equal Cost Multiple Paths (ECMP) to guarantee session integrity and avoid packet reordering
Scalability and Resiliency	User configurable number of Controller Node vs. Fabric Node to maximize resiliency
	A single IFC cluster can scale to more than 50 nodes
	Total flexibility in the number of controller nodes vs. the number of fabric nodes. Full redundancy among controller nodes
	LLDP auto discovery of interconnect links makes cluster configuration easy and error proof
	Automatic or user triggered path re-optimization to avoid failed links or nodes
	IFC cluster offers industry best resilient architecture for OOB monitoring

Learn more about IFC Clustering features

Port Configuration

System	10G	25G	40G	50G	100G
Max ports per system	128	128	32	64	32

Product Specifications

General specifications

Airflow direction	Front to Rear	
MTBF	208,889 h @ 25 °C 90,875 h @ 45 °C	
Management	Intuitive Web GUI, TLS 1.2 SNMP v1, v2, v3 Requests, Inform Requests and Traps support Supports IEEE 1588 / Precision Time Protocol (PTP) time synchronization Local, RADIUS, TACACS+ and LDAP support (users and groups) IP allowlist	Granular access control features Event monitoring and logging Syslog (cleartext or encrypted) IT Automation control with RESTful API IPv4, IPv6, static or DHCP Secure serial console port with authentication

Physical specifications

Physical size (W x D x H)	44.0 x 51.5 x 4.3 cm 17.3 x 20.3 x 1.71 inches	
Weight	10.4 kg (23 lbs)	

Electrical specifications

Power AC	2 redundant hot swap AC power supplies
Input voltage	100-240 VAC, 50-60 Hz
Input current	Max. 6 A
Power DC	2 redundant hot swap -48V DC power supplies
Input voltage	-36 to -72 VDC
Input current	Max. 16 A
Max Power	350 W without pluggable optics
Typical power consumption	310W without pluggable optics

Environmental specifications

Operating Temperature	0 to 45 °C	
Operating Humidity	5% to 95% RH (non-condensing)	
Storage temperature	-40°C to 70°C	
Storage Humidity	5 to 95% RH	
Operating Altitude	Up to 2000 m	
RoHS	RoHS Directive 2011/65/EU; Annex II, Directive (EU)2015/863 China RoHS	
WEEE	WEEE Directive 2012/19/EU	

Compliance

Regulatory type	Standard
Safety	EN IEC 62368-1
	UL 62368-1/CSA C22.2 No. 62368-1
EMC Emissions	CISPR 32, Class A, IEC 61000-3-2, IEC 61000-3-3
	EN 55032, Class A, EN 61000-3-2, EN 61000-3-3
	FCC Part 15B, Class A
	CAN ICES-003(A)/NMB-003(A)
	AS/NZS CISPR 32, Class A
	KS C 9832, Class A, KS C 9610-3-2, KS C 9610-3-3
	VCCI - CISPR 32, Class A
EMC Immunity	CISPR 35
	EN 55035
	KS C 9835

Country / Region Certifications	USA
	Canada
	EU
	UK
	Australia
	South Korea
	Japan
Country of Origin	Taiwan

Ordering Information

Base Unit Vision E100

Part number	Description
SYSE100-8PC-AC	Keysight Vision E100 System AC Chassis with fixed (32) QSFP28 100GE port; Includes licenses for (8) ports at 10G, 40G, 100G (991-0152)
SYSE100-8PC-DC	Keysight Vision E100 System DC Chassis with fixed (32) QSFP28 100GE port; Includes licenses for (8) ports at 10G, 40G, 100G (991-0153)
SYSE100-32P4X-AC	Keysight Vision E100 System AC Chassis with fixed (32) QSFP28 100GE port; Licensed for (32) port at 40G ports or (128) at 10G; 5-speed capable (10/25/40/50/100G) as upgrade; Optional ports and feature licenses available
SYSE100-32P4X-DC	Keysight Vision E100 System AC Chassis with fixed (32) QSFP28 100GE port; Licensed for (32) port at 40G ports or (128) at 10G; 5-speed capable (10/25/40/50/100G) as upgrade; Optional ports and feature licenses available
TAA Compliant	
SYSE100-32P4X-AC-T	Keysight TAA Compliant Vision E100 System AC Chassis with fixed (32) QSFP28 100GE port; Includes licenses for (32) port at 40G ports (991-1137)
SYSE100-32P4X-DC-T	Keysight TAA Compliant Vision E100 System DC Chassis with fixed (32) QSFP28 100GE port; Includes licenses for (32) port at 40G ports (991-1138)
SYSE100-8PC-AC-T	Keysight TAA Compliant Vision E100 System AC Chassis with fixed (32) QSFP28 100GE port; Includes licenses for (8) ports 100G; multi-speed supported (991-1139)
SYSE100-8PC-DC-T	Keysight TAA Compliant Vision E100 System DC Chassis with fixed (32) QSFP28 100GE port; Includes licenses for (8) ports 100G; multi-speed supported (991-1140)

Port Licenses Vision E100

Part number	Description
LIC-E100-ADD-4P	Keysight Vision E100, Port license for an additional (4) ports (993-0159)
LIC-E100-ADD-24P	Keysight Vision E100, Port license for an additional (24) ports (993-0158)
LIC-E100-32PC-U	Keysight Vision E100, Upgrade SYSE100-32P4X-AC/DC to 100G; Includes port license for all (32) ports (993-0156)
LIC-E100-4PC-U	Keysight Vision E100, Upgrade SYSE100-32P4X-AC/DC, (4) 40G port to 100G port multi-speed ports. perpetual license (993-0176)

Feature Licenses Vision E100

Product number	Description
LIC-E100-INLN	Keysight Vision E100 enables Inline feature; licensed per system (993-0162)
LIC-E100-IFC	Keysight Vision E100 license, enables Ixia Fabric Controller (IFC) Clustering for direct connection to other Vision devices supporting IFC Clustering (E100, E40, 7816, Vision ONE/X, 7300) (993-0150)
LIC-E100-TUNL	Keysight Vision E100, Enables NetStack tunneling feature, one per system (993-0149)
LIC-E100-CAPT	Keysight Vision E100, perpetual license for packet capture on all ports

Accessories Vision E100

Part number	Description
SYSE100-SPR-AC	Keysight Vision E100 System AC Chassis with no ports or features enabled (991-0160)
SYSE100-SPR-DC	Keysight Vision E100 System DC Chassis with no ports or features enabled (991-0161)
LIC-E100-SPR	Keysight Vision E100, Cold spare system license; NOTE: Includes max configuration (993-0154)
ME100-ACPS	Keysight Vision E100 (1) AC power module, for the Vision E100 chassis (992-0080)
ME100-DCPS	Keysight Vision E100 System, (1) DC power module, for the Vision E100 chassis (992-0081)
ME100-FAN-ASSY	Keysight Vision E100, (1) FAN module, for the Vision E100 chassis (992-0085)

Support

Keysight's Visibility industry-best products are backed by our industry-leading expertise. Our comprehensive product support does more than ensure uptime – it ensures a competitive edge. The Ixia support team partners with customers to:

- Avoid downtime and keep schedules on track
- Implement according to industry specifications
- Develop best practices to meet individual needs and objectives
- Maximize efficiency and reduce operating expenses
- Protect and maximize investments in test and visibility

In addition to above, Keysight customers registering for the secure area and access to the Support Site will also be able to view and download our product Security Advisories.

Access Keysight Visibility Support

About Keysight Visibility

Connect and secure the world with dynamic network intelligence

The need for always-on networks is pervasive, and expectations are high when it comes to keeping them connected and secure. As technologies advance, edge computing, cloud environments, sophisticated security threats, increasing bandwidth requirements, and demanding compliance regulations make it challenging to extract actionable insight from your network.

Keysight can help. Customers rely on our solutions to deliver rich data about network traffic, applications and users across any networking environment. This deep insight is what we call dynamic network intelligence. It helps you continuously innovate, meet aggressive service level agreements, and keep applications running smoothly and securely.

Learn more about Keysight Visibility Solutions

KEYSIGHT

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.

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