Vision ONE Security Without Sacrifice

Amplify your security without changing a cable. Keysight Vision ONE provides IT Operations the ability to deploy resources where they are needed most and secure any traffic in their network.

Keysight Vision ONE acts as the first step to security, providing reliable inline connectivity for security tools such as intrusion prevention systems (IPS), data loss prevention (DLP), and Web firewalls. It simultaneously connects out-of-band monitoring tools like intrusion detection systems (IDS) and data recorders.

Integrated intelligence features enable you to access encrypted traffic using inline or out-of-band decryption, reduce analysis traffic using advanced packet processing, and precisely select traffic by application type, and geography. Keysight Vision ONE forwards selected traffic in a variety of formats to interoperate with any security tool.

Highlights

- Extends the reach of security tools to access the entire network
- Supports inline and out-of-band monitoring use cases
- Inline and Out-of-Band Decryption options with stateful, clear text output
- Supports VOIP / VoLTE (SIP/RTP Correlation)
- Supports line-rate packet deduplication, header stripping and other advanced features, including cascading operations
- Supports L2GRE termination from vTap and L2GRE Origination to WAN
- Supports protocol header stripping for **all** known protocols, standard or proprietary
- Enables identification of applications by bandwidth, session, and geography
- Supports simultaneous packet forwarding and generation of NetFlow v9 and v10 (IPFIX) records and JSON records
- Supports both fan-in and fan-out to increase 10/40G port density
- "Double your ports" when ports are in simplex mode
- Delivers frequent updates via ATI subscription
- Priority-based filtering including inline and HA configuration supported
- IFC clustering with other Vision platforms to offer single pane of glass management
- IFC clustering and inline HA are recognized as the best in the industry

KEYSIGHT TECHNOLOGIES

Key features:

- **Powerful GUI** allows you to focus on security rather than configuration—the industry-leading user interface and patented filter compiler make configuration simple for both inline and out-of-band topologies

- **CLI support for NetStack and inline features**

- **Inline Decryption** the ability to decrypt and re-encrypt traffic as a transparent proxy for both inline and out-of-band tool deployments. Offloads the decryption burden from tools to improve ROI and security performance

- **Out-of-Band Decryption** provides downstream security tools with plain text content, so they do not need to support or incur the performance overhead of decrypting traffic to find hidden threats

- **VOIP / VoLTE** support provides correlation, sampling and whitelisting of SIP/RTP traffic. Allows visibility into Evolved Packet Core (EPC) and IP Multimedia Core Network Subsystem (IMS) interfaces based on SIP messaging.

- **Zero-loss advanced packet processing** improves security tool efficiency through techniques such as deduplication and packet trimming without dropping packets.

- **Classify traffic in real time** with hundreds of pre-loaded application signatures, and direct it to the correct tool according to parameters such as application type, geolocation, or even handset type—so tools get just the traffic type they need, again optimizing your investment in tool infrastructure

- **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

- **Space efficient 1RU design** saves rack space in your data center

- **Secure serial console port with authentication**

Product Capabilities

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 Keysight Vision ONE can have different HB so multi-tier design is possible to increase overall resilience for High Availability (HA)
• Advanced load balance options include weight based LB and high-and-low watermark LB
• Inline coordinated responses include Bypass Port Pari (BPP) triggered response, and Inline Tool Resource (ITR) selective synchronization between HA primary and secondary units
• Easily combine decryption offload with a service chain of security tools
• ThreatARMOR bundles eliminate decryption of known-bad traffic, and reduce attack surface and non-actionable security alerts

PacketStack Capabilities

- Full, line rate intelligent packet processing. Modify every packet at line-rate using any combination of Keysight's PacketStack capabilities
- Deduplication, trimming, timestamping, 1G burst protection and data masking
- Head stripping that includes VLAN, FabricPath, ETag, VNTag, GTP, MPLS, VxLAN, L2GRE, ERSPAN, Supports cascaded header stripping
- Newly introduced Generic Header Stripping can be used to strip protocols headers not in above list. Examples are: L3GRE, GENEVE, JMirror, PBB-TE, LISP, VSL, OTV, PPPoE
- Selective packet trimming for HTTPs and GQUIC traffic. Traffic can be GTP encapsulated, or no encapsulation
- L2GRE tunnel termination as well as tunnel origination
- Source Port Labeling adds new TLV in Keysight's Trailer to indicate which chassis, which card, and which port the incoming traffic is from. This feature can be used in conjunction with timestamping and report of original packet length when trimming
- Flexibly assign 160Gbps total processing capacity to any port in 10 Gbps increments

AppStack Capabilities

- Classifies traffic based on the following:
  - Application, geography, device information, and service provider
  - Application signatures are regularly updated via ATI subscription
- Regular expression matching
- Multiple actions can be taken on matching sessions
  - Forward all related packets to an analysis tool
  - Drop traffic that matches certain filter
  - Perform packet modification such as L4-7 data masking, MAC header rewrite
  - Enhanced NetFlow v9 and v10 (IPFIX), optionally IxFlow can be generated and sent to up to 10 collectors
- Simple pricing
  - ATI subscription includes all current and new features and application signatures released
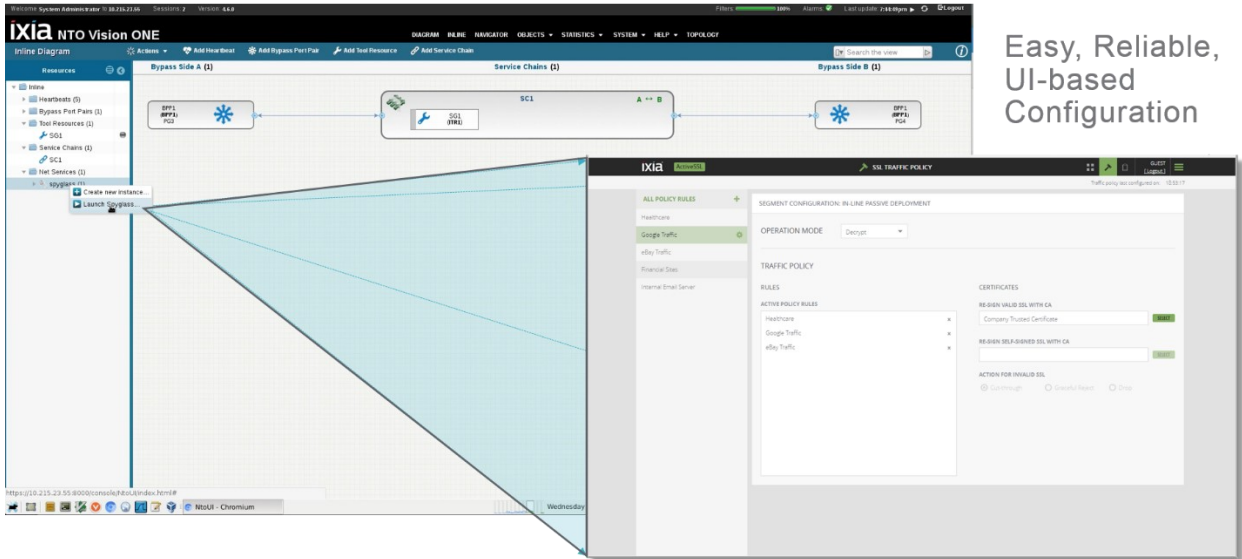
Figure 1. Keysight's AppStack capabilities provides easy-to-use graphical displays of the traffic captured by Keysight Vision ONE

SecureStack Capabilities		
Data Masking Plus	To protect sensitive data such as credit cards and personally identifiable information (PII) • Default regular expressions provided for commonly request data patterns such as credit card numbers • Target field identified by user-definable regular expression	
	Out-of-Band Decryption	**Inline Decryption**
SSL/TLS Versions	SSL 3.0 TLS1.0 – 1.2	TLS1.0 - TLS1.3
Asymmetric Key Exchange	RSA and ECDH	RSA, ECDH, ECDHE
Symmetric Keys	AES, 3DES, and RC4	AES and 3DES
Hashing Algorithms	SHA and MD5	SHA and AEAD
Maximum concurrent sessions	Over 1,000,000	Up to 200,000
Private Key Storage	Encrypted and 'write only'	Encrypted and 'write only'
Throughput	Up to 20 Gb on VAM or 8 Gb in AppStack	Up to 15 Gb

Keysight's Inline Decryption Capability

- Delivered through a visibility application module with dedicated cryptographic processor
- Transparently intercepts and decrypts SSL/TLS traffic, allows inspection by tools connected to Keysight Vision ONE, then re-encrypts it and transmits to the server
- Supports all modern SSL/TLS encryption schemes
- Support both forward proxy and reverse proxy
- Supports host categorization for decryption bypass
- Software performance licenses and upgrades
- Offload decryption from a service chain of multiple security tools
- **Dedicated high-performance cryptographic processor handles up to 15 Gb aggregate decrypted traffic**, does not impact ability to use any Network Packet Broker or AppStack or PacketStack capabilities

VisionONE integration for flexible, resilient deployments

Easy, Reliable, UI-based Configuration

Figure 2. Vision ONE GUI is easy to utilize and resolves filter overlaps automatically.

MobileStack VoLTE Capabilities

- Correlate VoLTE calls on various EPC and IMS interfaces based on SIP messaging
- Sample VoLTE traffic coherently across multiple sites – all RTP packets for a call are captured
- Whitelist prevents calls from being sampled via a phone number that is then always correlated regardless if call originated by Callee or Caller
- Provide Statistics for current/max/avg # calls, new call rate/s, # of timeouts, SIP & RTP pps
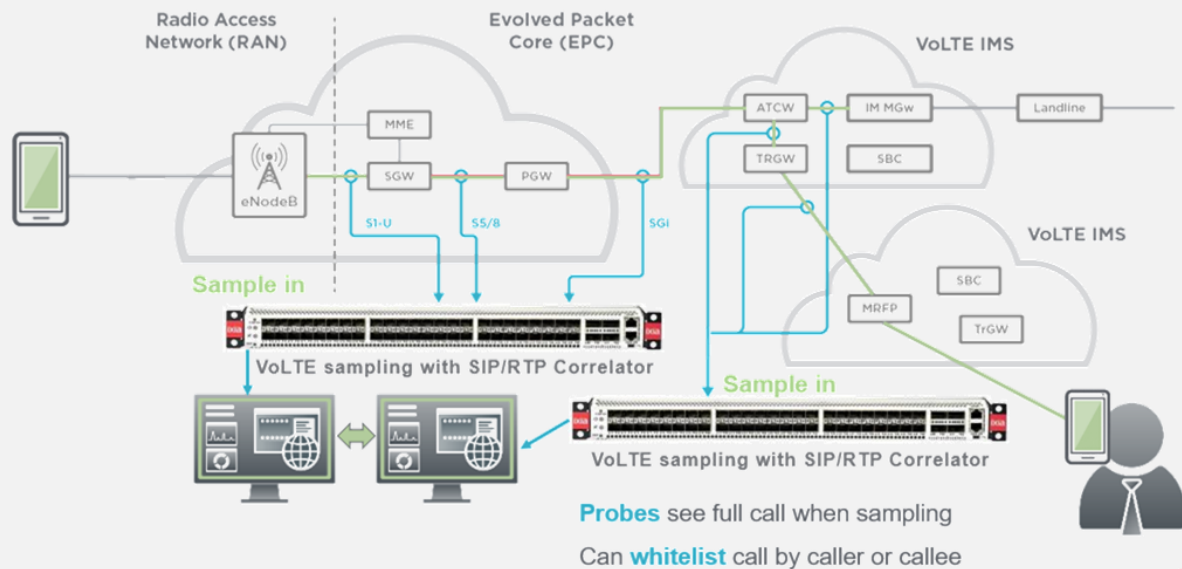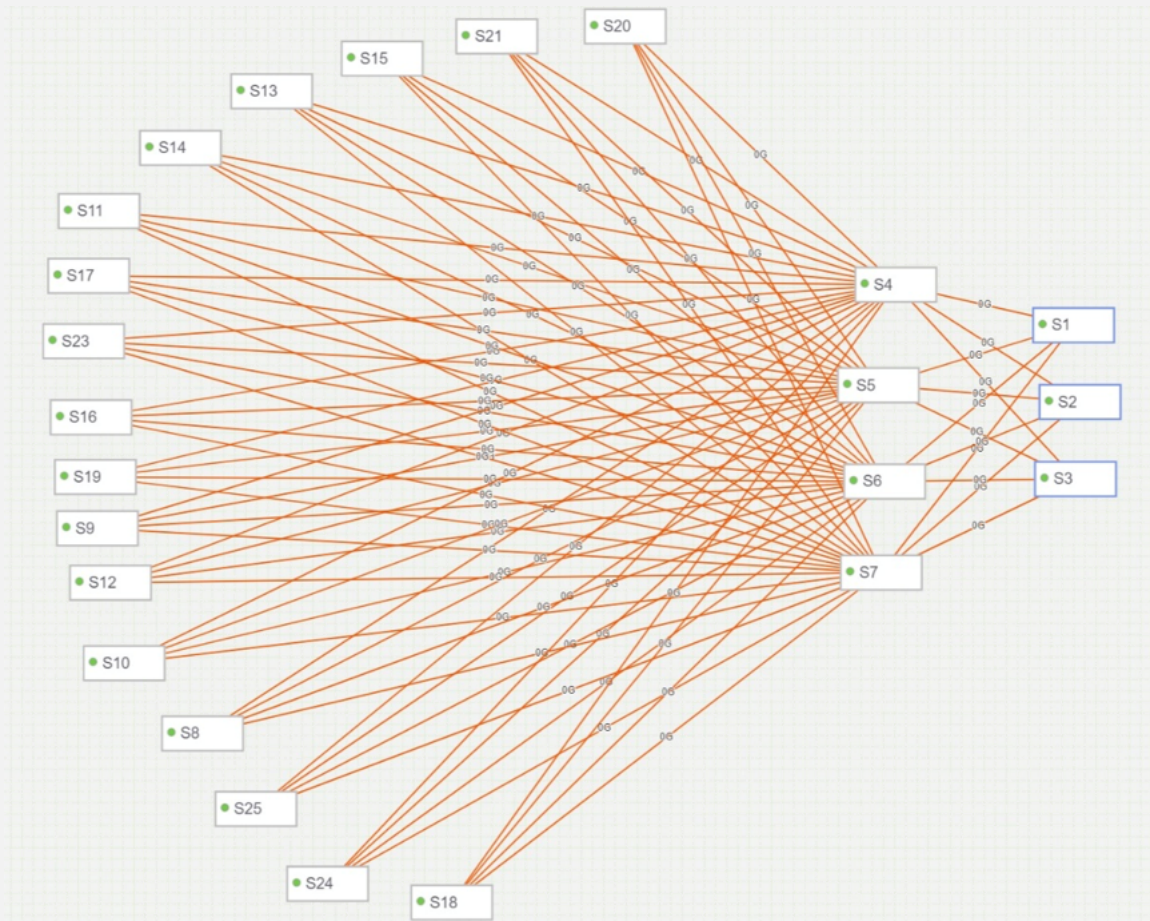
VoIP / VoLTE Visibility

Figure 3. Vision ONE with MobileStack VoIP provides SIP/RTP correlation, sampling and whitelisting

Keysight Fabric Controller (IFC) Clustering
• Keysight Fabric Controller (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/7300/X platforms
• Typical topologies supported include: hub-and-spoke, spine-and-leaf, tree, ring, full mesh, partial mesh, or any combination of above
• User configurable number of Controller Node vs. Fabric Node to maximize resiliency
• 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
• LLDP auto discovery of IFC interconnects
• Interconnects auto failover to increase resiliency
• IFC cluster size >=50 nodes
• 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
• User triggered path re-optimization to avoid failed links or nodes

Specifications

General Specifications	
Performance	**Management**
• 1U Security Appliance	• SNMP v1, v2, v3 support
• In-band or passive deployment	• Supports IEEE / Precision Time Protocol (PTP) time synchronization
• Full line rate across all ports with blocking enabled	• Local, RADIUS, and TACACS+ support (members and groups)
• Reporting, blocking, or fail-safe bypass operation	• Granular access control features
• Always-on ATI cloud security service	• Event monitoring and logging
• Heat/power dissipation for module at 100% traffic load: 660 W / 2252 BTU/hour	• Syslog
	• IT Automation control with RESTful API

Physical Specifications	
Keysight Vision ONE Size, Weight and Compliance • 1RU high 19" rack-mountable chassis • Dimensions: 17.5 W x 29.5 L x 1.75 H (inches) / 44.5 W x 75.0 L x 4.5 H (cm) • Weight: 36.4 lb / 16.5 kg • ROHS • IEC-60950-1:2005, UL60950-1, and CSA C22.2 No. 60950-1, EN 60950-1, CE, FCC, AS/NZS CISPR 22 & 24, 55022, 55024, IEC-003 • MTBF: 94,924 hours	**Power for Keysight Vision ONE (AC)** • Dual AC power supplies • Hot Swappable • Nom. current: 6.6 A @ 100 VAC, 2.75 A @ 240 VAC • Max. operating input current: 7.7 A @ 100 VAC • Max. operating input current: 3.2 A @ 240 VAC **Power for Keysight Vision ONE (DC)** • Dual AC power supplies • Hot Swappable • Operating input voltage: 40 to 60 VDC • Nom. current: 12.5 A @ 53 VDC • Max. operating input current: 19.25 A @ 40 VDC

Operating Specifications	
Temperature • Operating: 5 °C to 40 °C • Short-term*: -5 °C to 55 °C (*not to exceed 96 consecutive hours) • Short-term* with fan failure: -5 °C to 40 °C (*not to exceed 96 consecutive hours)	**Humidity** • Operating: 5% to 85% (non-condensing) • Short-term*: 5% to 90% (non-condensing) (*not to exceed 96 hours)

Ordering Information

Solution Ordering Information

Solutions include Keysight Vision ONE hardware with 48 physical SFP/SFP+ ports and 4 QSFP+ ports. Transceivers are not included. Compatible transceivers are available and may be purchased from Keysight. All solutions are configured with dual power supplies. Additional licenses may be added to a system to enable additional ports, Advanced Packet Processing, or Application and Threat Intelligence.

Keysight Vision ONE Base Units	Number of Physical Ports		Licensed Ports		
Solution part number	1/10G HW Ports included	40G HW Ports included	Ports Licensed for 1G Use	Ports Licensed for 10G Use	Ports Licensed for 40G Use
SYS-V116PX8PGAC	48	4	8	16	0
SYS-V116PX8PGDC	48	4	8	16	0
SYS-V14PX16PGAC	48	4	16	4	0

License Ordering Information

Software licenses can be added to any of the Keysight Vision ONE hardware components or solutions. A fully licensed chassis supports 48 ports of 1 G/10G, 4 ports of 40G, 160 Gbps of PacketStack and AppStack.

Keysight Vision ONE Port Licenses	
Hardware component part number	Description
LIC-V1-8PX-U	Vision ONE License for upgrading (8) SFP/SFP+ ports from 1G operation to 1/10G speeds. (993-0088)
LIC-V1-24PX	Vision ONE port license - 10G SFP+ ports QTY (24) (993-0089)
LIC-V1-8PX	Vision ONE port license - 10G SFP+ ports QTY (8) (993-1112)
LIC-V1-4PX	Vision ONE port license - 10G SFP+ ports QTY (4) (993-0096)
LIC-V1-24PG	Vision ONE port license - 1G SFP+ ports QTY (24) (993-1113)
LIC-V1-4P4X	Vision ONE port license - 40G QSFP+ ports QTY (4) (993-0091)

Keysight Vision ONE PacketStack Throughput Licenses	
Hardware component part number	Description
LIC-V1-PS8X	Vision ONE - PacketStack capability license – 80 Gbps - QTY (1) (993-0092)
LIC-V1-PS4X-F	Vision ONE PacketStack full license - to enable 40 Gbps of functionality - QTY (1) (993-0099)
LIC-V1-PSX-E	Vision ONE PacketStack entry license - to enable 10 Gbps of functionality - QTY (1) (993-0098)
LIC-V1-PS4X-U	Vision ONE -PacketStack upgrade license, from entry level 10 Gbps to full 40 Gbps of processing - QTY (1) (993-0103)

Vision ONE PacketStack Capability Licenses	
Component part number	Description
LIC-V1-TUNL	Vision ONE - PacketStack - GRE Tunneling license - QTY (1) (993-0105)
LIC-V1-STRP	Vision ONE - PacketStack - Header stripping feature license - QTY (1) (993-0106)
LIC-V1-DDUP	Vision ONE - PacketStack - de-duplication feature license - QTY (1) (993-0107)
LIC-V1-TMSP	Vision ONE - PacketStack - Timestamping feature license - QTY (1) (993-0108)

Keysight Vision ONE APPSTACK Hardware enablement Licenses

Component part number	Description
SUB-V1-SSAS	Vision ONE subscription of one-year SecureStack (Passive SSL Decryption) and AppStack license. Includes Passive SSL Decryption and all AppStack features, including the ATI Subscription. (993-0113)
LIC-V1-SSAS-E	Vision ONE hardware enablement license for SecureStack (Passive SSL Decryption) and AppStack at entry-level performance - QTY (1) (993-0101)
LIC-V1-SSAS-F	Vision ONE hardware enablement license for SecureStack (Passive SSL Decryption) and AppStack at full performance - QTY (1) (993-0102)
LIC-V1-SSAS-U	Vision ONE hardware enablement upgrade license to enable SecureStack (Passive SSL Decryption) and AppStack capabilities (from entry-level to full performance) - QTY (1). Requires additional licenses for features. (993-0104)

Keysight Vision ONE AppStack Licenses

Component part number	Description
LIC-V1-APFL	Keysight Vision ONE, AppStack Application Filtering perpetual license for App Filtering, Masking and Regex. QTY (1) per system (993-0330)
LIC-V1-NTFL2	Keysight Vision ONE, AppStack – MetaData generation feature perpetual license – QTY (1) (993-0331)
SUB-V1-SSAS-APFL	Keysight Vision ONE AppStack one year subscription license. Includes App Filtering, Masking and Regex. QTY (1) per system (993-0334)
SUB-V1-SSAS-NTFL	Keysight Vision ONE, AppStack one year subscription license for MetaData generation (993-0335)
SUB-V1-APTL2	Keysight Vision ONE AppStack one-year subscription license. Includes Application Identification & Filtering, Geolocation & tagging, Application and Threat Intelligence (ATI) data feed - QTY (1) (993-0112)

Keysight Vision ONE Inline Decryption Hardware/License Bundles for Installation Into Existing Vision One Chassis

Bundle part number	Description
MV1-ASSL-1G	Visibility Application Module bundled with Secure Stack - Inline Decryption license included – 1 Gbps (992-0087)
MV1-ASSL-2G	Visibility Application Module bundled with Secure Stack - Inline Decryption license included – 2 Gbps (992-0088)
MV1-ASSL-4G	Visibility Application Module bundled with Secure Stack - Inline Decryption license included – 4 Gbps (992-0089)
MV1-ASSL-10G	Visibility Application Module bundled with Secure Stack - Inline Decryption license included – 10 Gbps (992-0086)
SUB-ASSL-HCS-1G	Host Categorization Service subscription for 1G SSL (993-0125)
SUB-ASSL-HCS-2G	Host Categorization Service subscription for 2G SSL (993-0126)
SUB-ASSL-HCS-4G	Host Categorization Service subscription for 4G SSL (993-0127)
SUB-ASSL-HCS-10G	Host Categorization Service subscription for 10G SSL (993-0128)

Keysight Vision ONE Plus Inline Decryption Hardware/License Bundles

Bundle part number	Description
BD-V1-ASSL-1G	Security Bundle includes: Vision ONE, with a license for 8x1G ports and the Inline feature, and Visibility Application Module bundled with Secure Stack – Inline Decryption license – 1 Gbps (991-0192)
BD-V1-ASSL-2G	Security Bundle includes: Vision ONE, with a license for 8x1G ports and the Inline feature, and Visibility Application Module bundled with Secure Stack – Inline Decryption license – 2 Gbps (991-0193)
BD-V1-ASSL-4G	Security Bundle includes: Vision ONE, with license for 4x10G and 8x1G ports and the Inline feature, and Visibility Application Module bundled with Secure Stack – Inline Decryption license – 4 Gbps (991-0194)
BD-V1-ASSL-10G	Security Bundle includes: Vision ONE, with license for 4x10G and 8x1G ports and the Inline feature, and Visibility Application Module bundled with Secure Stack – Inline Decryption license – 10 Gbps (991-0195)

Keysight Vision ONE Out-of-Band Decryption Hardware & Licenses

Part number	Description
MV1-VAM	Keysight Vision ONE Visibility Application Module, for use in Vision ONE Network Packet Broker (992-0142)
LIC-V1-PSSL2	Keysight Vision ONE Decryption Out-of-band perpetual feature; Licensed for the Vision ONE Visibility Application Module (VAM) (993-0225)
SUB-V1-PSSL	Keysight Vision ONE, One (1) year Decryption Out-of-Band subscription; Licensed for the Vision ONE Visibility Application Module (VAM) (993-0178)

Keysight Vision ONE TAA Compliance Bundles

TAA part number	Description
SYS-V1-48PX-AC-T	Ixia TAA Compliant Vision ONE System AC power with license for (48) SFP/SFP+ ports to operate 10 Gbps and/or 1 Gbps respectively. (991-1132)
SYS-V1-48PX-DC-T	Ixia TAA Compliant Vision ONE System DC power with activation license for (48) SFP/SFP+ port licenses to operate 10G and/or 1G respectively (991-1133)
SYS-V116PX8PGAC-T	Ixia TAA Compliant Vision ONE System AC power with (16) 10G and (8) 1G port licenses enabled. (991-1134)
SYS-V116PX8PGDC-T	Ixia TAA Compliant Vision ONE System DC power with (16) 10G and (8) 1G port licenses enabled. (991-1135)
SYS-V14PX16PGAC-T	Ixia TAA Compliant Vision ONE System AC power with (4) 10G and (16) 1G port licenses. This base bundle includes a 10 Gbps PacketStack (AFM) license and entry-level AppStack (ATIP) capability (991-1136)

Keysight Vision ONE Advanced INLINE Capabilities License	
Hardware component part number	Description
LIC-V1-INLN	Vision ONE series feature license - to enable inline functionality - QTY (1) (993-0094)

Keysight Vision Mobilestack License	
Bundle part number	Description
MV1-MS-SRC	Visibility Application Module bundled with MobileStack; Includes SIP/RTP for VOIP / VoLTE license; Requires previous or adjunct purchase of Vision ONE system. One license per system. (992-0095)

Additional Licenses Ordering Information

Keysight Vision ONE Accessories, and Spare Licenses	
Hardware component part number	Description
SYS-V1-FAN-ASSY	Vision ONE System - Spare Fan assembly module. (991-2020)
SYS-V1-ACPS	Vision ONE System - Spare AC power module. (991-3023)
SYS-V1-DCPS	Vision ONE System - Spare DC power module. (991-3024)
LIC-V1-SPR	Vision ONE series - Cold spare system port license (993-0097)

Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

KEYSIGHT
TECHNOLOGIES