

Product Description

GigaSMART[®] technology extends the intelligence and value of the Gigamon Visibility Fabric[™] architecture by enhancing your monitoring infrastructure and improving tool performance. A range of applications are available to enable the modification, manipulation, transformation, and transport of traffic from your network to the tools you rely upon for management, monitoring, and security.

Network monitoring tools perform more efficiently by eliminating unwanted content with the de-duplication and packet slicing features. Masking allows network security teams to hide confidential information like passwords, financial accounts, or medical data allowing companies to meet SOX, HIPAA and PCI compliance regulations. Organizations can improve accuracy by adding source or timing information at the point of collection with the source port labeling and time stamping capabilities. Enhanced packet distribution features available with Adaptive Packet Filtering or Layer 7 load balancing enable enhanced visibility into packet contents and, when combined with header stripping, allows tools to operate more effectively by removing unwanted protocol headers.

The advanced processing capabilities of the GigaSMART card can also be leveraged to summarize and generate NetFlow statistics from incoming traffic streams. Offloading NetFlow Generation to the out-of-band Gigamon Visibility Fabric eliminates the risk of expending expensive production network resources in generating these analytics. Enhanced flow-level visibility across remote locations and Big Data environments can be used to derive usage patterns, top talkers, top applications, and more for effective capacity planning and enforcing security policies.

With GTP Correlation, service providers can reliably filter and forward specified subscriber sessions (both GTP-c and GTP-u) to monitoring and analytic tools. Gigamon's FlowVUE[™] application offers a subscriber IP-based sampling paradigm that allows for sampling of active subscriber's device IPs (UE IPs) across GTP-u tunnels. The integrity of the sampled subscriber flows is preserved by forwarding all the packets associated with the user-endpoint to the probes. The ability to filter and sample on subscriber devices and transmit all the associated sessions of interest to the monitoring tools, intelligently reduces the amount of data while enabling Big Data throughput processing, with existing cost structures.

The GigaSMART technology is available on the GigaVUE-2404, GigaVUE HD Series, and GigaVUE-HB1 Visibility Fabric nodes. GigaSMART operations can be applied to any network or tool port on the chassis or the entire cluster, allowing maximum flexibility in configuration and provisioning.



Table 1: Software Features and Benefits

GigaSMART Features/Applications	Benefits
Packet Slicing	<ul style="list-style-type: none"> • Slice selected packets between a 64-9000 byte offset • Process fewer bits while maintaining the vital, relevant portions of each packet • Significantly increase the capacity of forensic recording tools • Boost efficiency of protocol analysis, sniffer, and network optimization tools
Masking	<ul style="list-style-type: none"> • Conceal private data including financial and medical information • Empower network monitoring tools to perform their task and maintain SOX, PCI, and HIPAA compliance
Source Port Labeling	<ul style="list-style-type: none"> • Add labels to packets indicating the ingress port • Identify where a packet is coming from easily
Tunneling	<ul style="list-style-type: none"> • Encapsulate and forward packets to monitoring tools between networks on separate routed paths • Enable routing of data from lights-out data centers to central monitoring facilities
ERSPAN Termination	<ul style="list-style-type: none"> • Provides tunnel termination of ERSPAN sessions enabling consolidation, filtering, and forwarding of relevant ERSPAN traffic • Enable analysis tools to receive filtered traffic from remote networks

Table 1: Software Features and Benefits continued

GigaSMART Features/Applications	Benefits
De-duplication	<ul style="list-style-type: none"> Relieve tool processing resources when packets are gathered from multiple collection points along a path by only forwarding a packet once Remove packet duplication caused by inter-VLAN communication or incorrect switch configuration
Header Stripping	<ul style="list-style-type: none"> Eliminate the need for monitoring tools to decipher protocols Allow easy filtering, aggregation, and load balancing of packets with headers removed Support for ISL header/trailer removal, Cisco FabricPath Headers, VXLAN, VN-Tag, VLAN, MPLS, and GTP-U tunnel stripping
Time Stamping	<ul style="list-style-type: none"> Time stamp packets for subsequent analysis Support Network Time Protocol (NTP), GPS, or local time setting Synchronize data more accurately to enhance quality of service (QoS) timing Allow network analysis to be performed at one location, instead of at various network endpoints
Layer 7 Load Balancing	<ul style="list-style-type: none"> Distribute traffic among multiple ports based on fixed or variable matching fields Apply filtering and traffic distribution capabilities to any field in the packet beyond Layer 2 – Layer 4 and into the application layer
GTP Correlation	<ul style="list-style-type: none"> Optimize tool infrastructure by accurate filtering, replicating, and forwarding of monitored subscriber sessions Correlate subscriber sessions (control and data) to offload tools, increasing throughput Facilitate drilldowns into roaming users across peer networks
FlowVUE	<ul style="list-style-type: none"> Sample flows of active subscriber devices to selectively reduce traffic Turn Big Data in to manageable data with deterministic results at a fraction of the data rate Reduce traffic bound to monitoring and analytic tools Preserve or increase CEM based on real-time reduced data analytic throughput
Adaptive Packet Filtering	<ul style="list-style-type: none"> Filter across advanced encapsulation headers including VXLAN, VN-Tag, GTP, MPLS, etc., and inner (encapsulated) Layer 3/Layer 4 packet contents Apply pattern matching on plain text or regular expressions
NetFlow Generation	<ul style="list-style-type: none"> Increase infrastructure efficiencies by offloading NetFlow Generation to the Visibility Fabric Generate NetFlow records without sampling to facilitate true response and root cause capability Export records to up to six (6) collectors supporting NetFlow v5/v9 and IPFIX

Product Specifications

Table 2: Software Features

Optional GigaSMART Features	GigaVUE- 2404 (line card)	GigaVUE-HB1 (integrated)	GigaVUE-HC2 (module)	GigaVUE HD Series (line card)
Packet Slicing	•	•	•	•
Masking	•	•	•	•
Source Port Labeling	•	•	•	•
Tunneling	•	•	•	•
ERSPAN Termination	•	•	•	•
De-duplication	•	•	•	•
Header Stripping	•	•	•	•
Time Stamping	•	–	–	– ¹
Layer 7 Load Balancing	•	–	–	–
GTP Correlation	–	–	•	•
FlowVUE	–	–	•	•
Adaptive Packet Filtering	–	•	•	•
NetFlow Generation	–	•	•	•

•YES – NO

¹Time stamping provided by the GigaPORT-X12-TS line card

Table 3: GigaSMART Performance




Product	Description
GigaSMART for GigaVUE-2404 	Processing: up to 16Gb per line card Number of blades: up to 2 per chassis Multiple GigaSMART line cards can be combined into a single system to provide scalable performance up to 32Gb Includes 6 SFP+ ports that support the following transceiver types: <ul style="list-style-type: none"> • 10Gb (10GBASE-SR/LR/ER/LRM) • 1Gb optical SFP (1000BASE-SX/LX/ZX) • 1Gb SFP copper (RJ45, 1000BASE-T)
GigaSMART for GigaVUE-HD4/HD8 	Processing up to 80Gb per line card No additional ports Multiple GigaSMART line cards can be combined into a single system to provide scalable performance up to 120Gb on the GigaVUE-HD4 and 240Gb on the GigaVUE-HD8
GigaSMART for GigaVUE-HC2 	GigaSMART rear module Processing up to 40Gb No additional ports
GigaSMART for GigaVUE-HB1 (integrated)	Processing up to 10Gb

Table 4: Physical Dimensions & Weight

GigaSMART Line Card/Module	Height	Width	Depth	Weight
For GigaVUE-2404 Fabric Node	1" (2.54cm)	14.87" (37.76cm)	9.125" (23.17cm)	3.53lbs (1.6kg)
For GigaVUE-HD4 and GigaVUE-HD8 Fabric Nodes	1.61" (4.08cm)	15.75" (40.01cm)	11.55" (29.33cm)	9.06lbs (4.11kg)
For GigaVUE-HC2 Fabric Node GigaSMART Rear Module	1.6" (4.1cm)	9.3" (23.5cm)	13.2" (33.6cm)	4.39lbs (1.99kg)

Table 5: Power Requirements

Specification	GigaSMART Line Card
Current (nominal)	1.8 A @ 110V AC / 3.8 A @ -48V DC
GPS Antenna Signal Requirements	+3.3 VDC+/-0.3 VCD at 110mA: Frequency is 12.504 Mhz+/-3Khz (GigaVUE-2404 only)

Table 6: Warranty & Support

Part Number	Description
Hardware	Gigamon 5-Year Hardware Limited Warranty included with purchase
Software	1-Year Software Limited Warranty included with purchase
Support	1-Year Standard Support included with purchase

Gigamon offers a range of premium support and extended services. For details regarding warranty and support, visit:

<http://www.gigamon.com/gigamon-technical-support>

Ordering Information

Table 7: GigaSMART for the GigaVUE-2404 Fabric Node

Part Number	Description
SMT-436	GigaSMART 6 port GigaVUE-2404 blade (no licenses included)
SMT-BSE	GigaSMART-Base Configuration (Packet Slicing, Masking, Source Port Labeling) features module license per GigaSMART blade
SMT-TSP	GigaSMART-Time Stamp feature module license per GigaSMART blade
SMT-DDP	GigaSMART-De-Duplication feature module license per GigaSMART blade
SMT-TUN	GigaSMART-Tunneling feature module license per GigaSMART blade
SMT-HST	GigaSMART-Header Stripping feature module license per GigaSMART blade
SMT-LBG	GigaSMART-Load Balancing Group feature module license per GigaSMART blade

Table 8: GigaSMART for the GigaVUE-HD4 and GigaVUE-HD8 Fabric Nodes

Part Number	Description
SMT-HD0	GigaSMART, HD Series blade (includes Slicing, Masking, Source Port & GigaVUE Tunneling De-Encapsulation SW)
SMT-HD0-DD1	GigaSMART, HD Series, De-Duplication feature license per GigaSMART blade
SMT-HD0-HS1	GigaSMART, HD Series, Header Stripping feature license per GigaSMART blade
SMT-HD0-AT1	GigaSMART, HD Series, Advanced Tunneling feature license per GigaSMART blade
SMT-HD0-APF	GigaSMART, HD Series, Adaptive Packet Filtering feature license per GigaSMART blade
SMT-HD0-NF1	GigaSMART, HD Series, NetFlow Generation feature license per GigaSMART blade
SMT-HD0-FVU	GigaSMART, HD Series, FlowVUE feature license per GigaSMART blade
SMT-HD0-GTP250	GigaSMART, HD Series, GTP Filtering & Correlation feature license per GigaSMART blade, 250K subscribers
SMT-HD0-GTP500	GigaSMART, HD Series, GTP Filtering & Correlation feature license per GigaSMART blade, 500K subscribers
SMT-HD0-GTPMAX	GigaSMART, HD Series, GTP Filtering & Correlation feature license per GigaSMART blade, Maximum subscribers

Table 9: GigaSMART for the GigaVUE-HC2 Fabric Node

Part Number	Description
SMT-HC0-R	GigaSMART, HC Series, Rear Module (includes Slicing, Masking, Source Port & GigaVUE Tunneling De-Encapsulation SW)
SMT-HC0-DD1	GigaSMART, HC Series, De-Duplication feature license per GigaSMART blade
SMT-HC0-HS1	GigaSMART, HC Series, Header Stripping feature license per GigaSMART blade
SMT-HC0-AT1	GigaSMART, HC Series, Advanced Tunneling feature license per GigaSMART blade
SMT-HC0-APF	GigaSMART, HC Series, Adaptive Packet Filtering feature license per GigaSMART blade
SMT-HC0-NF1	GigaSMART, HC Series, NetFlow Generation feature license per GigaSMART blade
SMT-HC0-FVU	GigaSMART, HC Series, FlowVUE feature license per GigaSMART blade
SMT-HC0-GTP250	GigaSMART, HC Series, GTP Filtering & Correlation feature license for 250K simultaneous subscribers per GigaSMART blade
SMT-HC0-GTP500	GigaSMART, HC Series, GTP Filtering & Correlation feature license for 500K simultaneous subscribers per GigaSMART blade
SMT-HC0-GPTMAX	GigaSMART, HC Series, GTP Filtering & Correlation feature license for maximum supported subscribers per GigaSMART blade

Table 10: GigaSMART for the GigaVUE-HB1 Fabric Node

Part Number	Description
SMT-HB1-BSE	GigaSMART, HB license combo, includes Slicing, Masking, & Source Port features
SMT-HB1-DD1	GigaSMART, HB license, De-Duplication feature
SMT-HB1-HS1	GigaSMART, HB license, Header Stripping feature
SMT-HB1-TUN	GigaSMART, HB license, Tunneling feature (includes tunnel generation/termination & ERSPAN termination)
SMT-HB0-APF	GigaSMART, HB license, Adaptive Packet Filtering feature
SMT-HB0-NF1	GigaSMART, HB license, NetFlow Generation feature

For More Information

For more information about the Gigamon Visibility Fabric architecture or to contact your local representative, please visit:

www.gigamon.com