GigaVUE HC Series

Scalable Traffic Intelligence for Small to Large Enterprise, Service Providers, and Public Sector

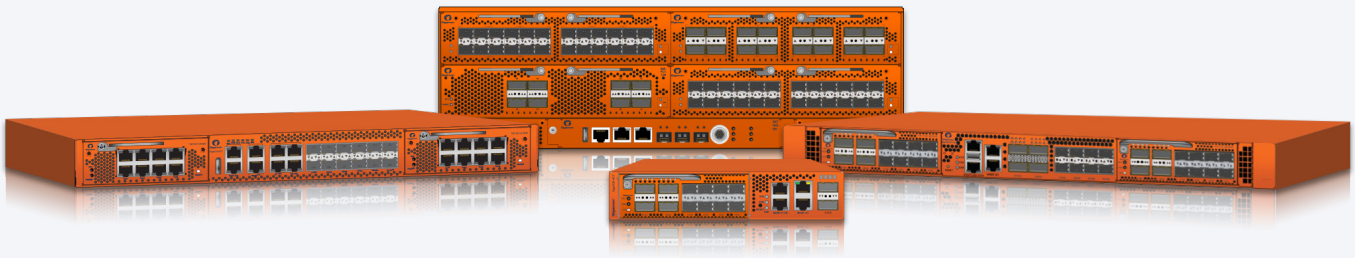


Figure 1. The GigaVUE® HC Series consists of four models: GigaVUE-HCT, GigaVUE-HC1, GigaVUE-HC1-Plus, and GigaVUE-HC3.

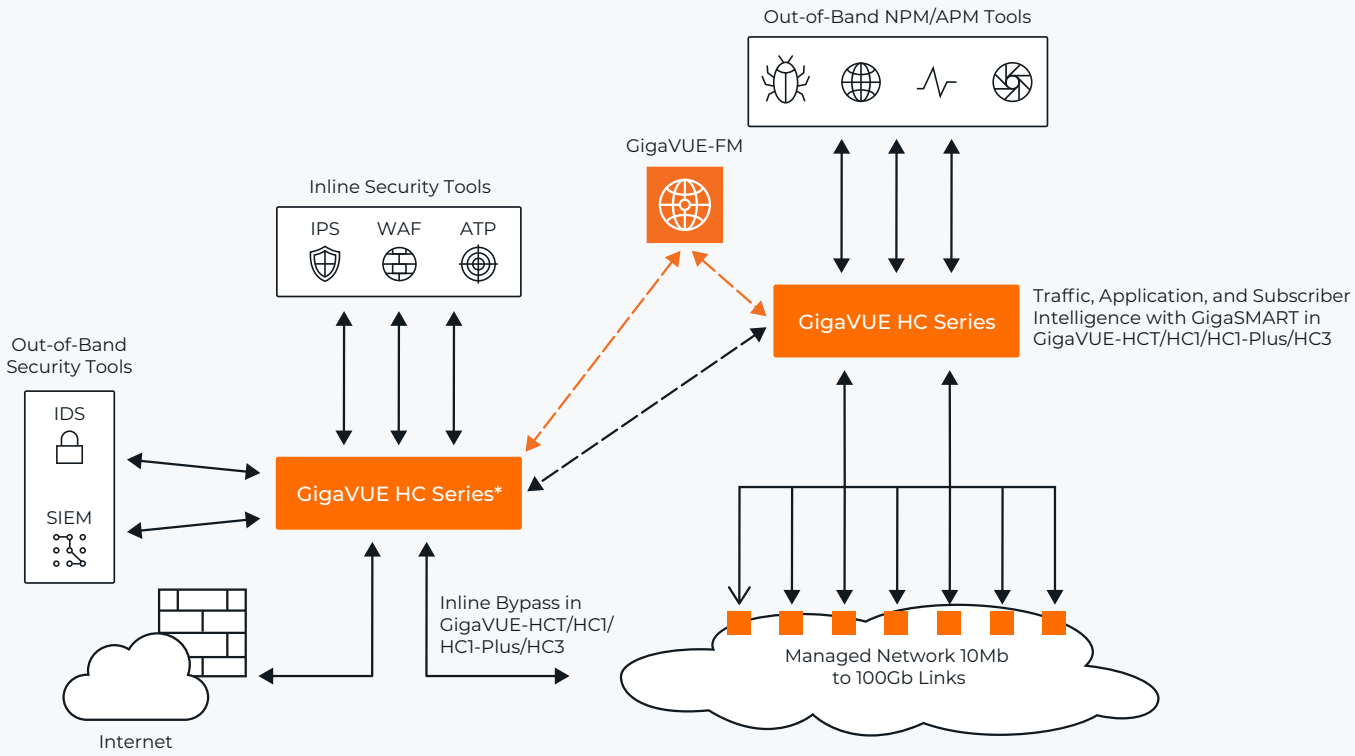
Key Benefits

Management, Integration, and Installation

- Small footprint with low space, power, and cooling needs
- Modular for flexibility and scalability as needs change
- Rapid programmatic response to detectable events
- Advanced integration with tools, controllers, and other infrastructure systems

Traffic Forwarding for Network and Security Operations

- Optimize the delivery of your network traffic to your monitoring and security tools:
  - Eliminate contention for network data access
  - Target specific flows to specific tools with network and application awareness
  - Share traffic load across multiple tools' instances, even for encapsulated traffic
- Selectively aggregate and replicate traffic at line rate
- Optimize the content of the delivered traffic:
  - Remove duplicate packets
  - Feed non-packet-based tools with flow and/or rich metadata
  - Remove unwanted/undesirable protocol headers and/or payload content
  - Obfuscate private or sensitive data
- Gain visibility into encrypted traffic
- Identify and filter traffic based on application
- Reduce bandwidth usage by slicing payloads and packets from long data flows
- Reuse existing tools for current and new network links
- Scale network coverage and tool deployment with continuous visibility



* Inline TLS decryption not supported on GigaVUE-HCT.

Figure 2. GigaVUE HC Series is used to provide visibility for active and passive security as well as network and application monitoring.

As a key product family within the Gigamon Deep Observability Pipeline, the GigaVUE® HC Series enables comprehensive traffic and security intelligence at scale. These next-generation network packet brokers are an ideal choice to enhance your security and monitoring solutions.

Offering up to 25Tbps of traffic intelligence across 32 clustered nodes, the GigaVUE HC Series enables greater network traffic visibility into data-in-motion, minimizes traffic overloads, and provides more effective options for deploying both inline and out-of-band security and monitoring tools.

The GigaVUE HC Series Models

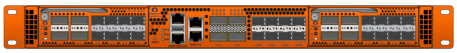
GigaVUE-HCT

A 1RU, half-width form factor that enables comprehensive traffic and security intelligence, satisfying the needs of customers who want to leverage compact mobile, edge and tactical deployable units.

GigaVUE-HC1

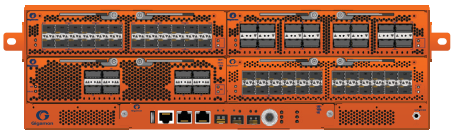
A 1RU form factor that meets the needs of remote and small branch offices.

GigaVUE-HC1-Plus



A 1RU form factor that enables traffic intelligence at scale for security and monitoring solutions.

GigaVUE-HC3



A 3RU form factor that offers traffic intelligence at scale to meet the demands of large enterprises and service providers.

Key Features and Benefits

Network and Traffic Access	**Four modular chassis models with port speed and media options:** • 10Mb, 100Mb, 1000Mb, and 10Gb copper • 1Gb, 10Gb, 25Gb, 40Gb, and 100Gb multimode and single-mode fiber Compatible with SFP, SFP+, QSFP+, and QSFP28 MSA-compliant transceivers, as offered by Gigamon • Scale from low- to high-density systems: – Cost-effective for only what is needed – Increased flexibility
	Port configurability: • Full flexibility in selecting ports as ingress, intermediate, interconnect, or egress functions • Unidirectional and bi-directional ports • Tunneling (e.g., L2GRE, ERSPAN, VXLAN) • Enable agile response to changes in monitoring infrastructure and monitoring needs • Facilitate passive out-of-band and active inline monitoring via the same HC node • Allow virtualized traffic to be accessed, or backhauled between locations, over an IP network
Core Intelligence	**Flow Mapping®:** • Aggregation and replication – Selective any-to-any port mapping • Filtering – Layer 2 to 7 rules – Ingress aggregate and egress • Load balancing – Layers 2 to 4 hashing criteria – Session stickiness • Access traffic from any link to any tool, even for different link rates • Remove issues with asymmetric routing and link aggregation (LAG) • Optimize tools by forwarding only traffic of interest or dropping traffic not of interest • Spread load across multiple tool instances of same type

Key Features and Benefits, cont'd

Core Intelligence cont'd	**Inline Bypass:** • Optional physical bypass for 10M/100M/1G/10G/25G/40G/100G link rates and copper/fiber (multimode, single mode) media types • Aggregate multiple network segments • Filter and load balance toward inline applications/tools • Easily configure simple and complex tool chains • Customizable heartbeat packets for positive (through-path) and negative (block) tests • Remove multiple points of network failure • Provide full visibility for each inline security tool type (e.g., IPS, WAF) • Easily deploy security in layers solutions, for both active and passive scenarios • Seamlessly migrate tools from passive out-of-band to active inline mode • Reduce likelihood of network impact due to malfunctioning active inline tools
	VLAN tagging • Add VLAN tags to packets based on ingress port or packet filter criteria • Associate specific traffic sources or packet profiles captured on monitoring tools • Improve traffic analysis and troubleshooting • Obscure VLAN infiromation to maintain secrecy
	MAC and IP address modification • Obscure original MAC and IP information to meet privacy needs with retained ability to distinguish traffic sources • Allow certain tool types to ingest traffic that meets specific MAC and IP address requirements
Traffic Intelligence	Adaptive Packet Filtering, Advanced Load Balancing, De-duplication, Header Stripping, Masking, NetFlow Generation, Slicing, Advanced Tunneling, Advanced Flow Slicing Refer to the GigaSMART® data sheet found here
Application Intelligence	Application Filtering, Application Metadata, Application Visualization Refer to the GigaSMART data sheet found here
Subscriber Intelligence	5G Correlation, GTP Correlation, Subscriber-Aware Load Balancing, Subscriber-Aware Sampling, Subscriber-Aware Forward-Listing Refer to the GigaSMART data sheet found here
Security Intelligence	TLS/SSL Decryption Refer to the TLS/SSL Decryption feature brief found here

Key Features and Benefits, cont'd

Management	**Local and remote management using:** • Command line interface (CLI) • SSH • XML API (HTTP/HTTPS) • Fabric manager (HTTP/HTTPS) • SNMP (v1, v2, v3) • Syslog • Easy to manage via CLI for users already familiar with Cisco • Easy integration with applications using CLI or RESTful API • Support SDN paradigm • Manage and orchestrate from single pane of glass • Alerts can be received by any syslog server or SNMP manager
	User access: • Role-based access control (RBAC) – Multi-tenant user access – Flexible user/role-defined privileges, screen views, and access • AAA security with local and remote authentication (LDAP, RADIUS, TACACS+) • Automatic Certificate Management Environment (ACME) • Adhere to corporate IT security policies • Meet corporate IT authentication policy • Automates updating of authentication certificates from an enterprise's certificate management and repository systems
System	**Field-replaceable hardware:** • Port modules • Hot-swappable AC and DC power supplies • Fan trays • Control card • Achieve five-nines highly available uptime • Without needing to replace or remove the chassis, you can: – Scale as needs change – Upgrade features and capabilities

Key Features and Benefits, cont'd

System cont'd	**Metrics and statistics:** • Management CPU resources • Switching ASIC resources • Port utilization • Flow map throughput • Facilitate troubleshooting • Guide capacity planning and traffic forward rules

Chassis Maximum Capabilities

Attribute	GigaVUE-HCT	GigaVUE-HC1	GigaVUE-HC1-Plus	GigaVUE-HC3
Size	Small (1RU, half width)	Small (1RU)	Small (1RU)	Large (3RU)
Throughput	500Gbps	604Gbps	1.8Tbps	6.4Tbps
No. of Port Modules	1	2	2	4
No. of GigaSMART Modules	1	3 (2 front, 1 built-in)	3 (2 front, 1 built-in)	4 (front)
No. of GigaSMART Engines	1	3	3	8 (2 per module)
No. of Ports and Speeds				
10/100Mb	12	32 (4 built-in RJ45)	–	–
1Gb	12	40 (12 built-in SFP+ and 4 built-in RJ45)	32 (8 built-in SFP28)	–
10Gb	32	60* (12 built-in SFP+)	72* (8 built-in SFP28 and 4 built-in QSFP28)	128*
25Gb	12	–	72* (8 built-in SFP28 and 4 built-in QSFP28)	128*
40Gb	6	8	12 (4 built-in QSFP28)	64
100Gb	2	–	12 (4 built-in QSFP28)	64
Physical bypass options	10/100/100Mb copper, 1/10Gb SX/SR fiber, 1/10Gb LX/LR fiber	1/10Gb SX/SR fiber, 1/10Gb LX/LR fiber, 10/100/1000Mb copper	1/10Gb SX/SR fiber, 1/10Gb LX/LR fiber, 1000Mb copper	40/100Gb SR4 fiber, 10/25Gb SR fiber (using breakout), 40/100Gb LR4 fiber

* Maximum density requires using port breakout, such as G-TAP PNL-M341

Maximum Capabilities: Filter Entries

Filtering Type Attribute	GigaVUE-HCT	GigaVUE-HC1	GigaVUE-HC1-Plus	GigaVUE-HC3
Flow Mapping filtering (per slot)	3k	16k	36k	6k
Egress filtering (per slot)	448	448	448	448
Slots per chassis	1	2	2	4

GigaVUE-HC1 Series Models

Product	Description	GigaVUE-HCT	GigaVUE-HC1	GigaVUE-HC1-Plus
BPS-HC1-D25A24	Bypass Combo Module, GigaVUE-HC1-Plus/HC1/HCT, 2 SX/SR 50/125 BPS pairs, 4 10G SFP+ cages.	✓	✓	✓
BPS-HC1-D25A60	Bypass Module, GigaVUE-HC1-Plus/HC1/HCT, 6 1/10G SX/SR 50/125 BPS pairs.	✓	✓	✓
BPS-HC1-D35C60	Bypass Module, GigaVUE-HC1-Plus/HC1/HCT, 6 1/10G LX/LR BPS pairs.	✓	✓	✓
PRT-HC1-Q04X08	Port Module, GigaVUE-HC1-Plus/HC1/HCT. On GigaVUE-HC1, the port speeds are 4 x 40G, 8 x 10G. On GigaVUE-HC1-Plus, the port speeds are 4 x 100G, 8 x 25G. On GigaVUE-HCT, the port speeds are 4 x 40G, 4 x 25G, 4 x 10G.	✓	✓	✓
PRT-HC1-X12	Port Module, GigaVUE-HC1-Plus/HC1/HCT, 12 x 1/10G SFP+ cages.	✓	✓	✓
PRT-HC1-G12	Port module, GigaVUE-HCT, 6 x 10/100/1000M copper ports, 6 x 100/1000M SFP cages.	✓	—	—
SMT-HC1-S	Gen3 GigaSMART module on GigaVUE-HC1-Plus/HC1/HCT. Includes Slicing, Masking, & Source Port ID Software (Only works with feature licenses & bundles that have a 'SMT-HC1-Gen3' prefix).	✓	✓	✓
TAP-HC1-G10040	TAP and Bypass module, GigaVUE-HC1-Plus/HC1/HCT, 10/100/1000M Copper, 4 TAPs or Bypass pairs. On GigaVUE-HC1, the port speeds are 10/100/1000M. On GigaVUE-HC1-Plus/HCT, the port speed is 1000M only.	✓	✓	✓

GigaVUE-HC3 Modules

Product	Description
SMT-HC3-C08	Gen3 GigaSMART, GigaVUE-HC3, 8x100G QSFP28 cages (includes Slicing, Masking, Source Port, and GigaVUE Tunneling Decapsulation software) (only works with feature licenses and bundles that have a 'SMT-HC3-Gen3' prefix).
PRT-HC3-X24	Port module, GigaVUE-HC3, 24x10G.
PRT-HC3-C08Q08	Port module, GigaVUE-HC3, 8x100G QSFP28 cages and 8x40G QSFP+ cages.
PRT-HC3-C16	Port Module, GigaVUE-HC3, 16x100G QSFP28 cages. Requires Control Card Version 2.
BPS-HC3-C25F2G	Bypass combo module, GigaVUE-HC3, 2x 40/100Gb SR4 BPS pairs, 16x 10G cages.
BPS-HC3-Q35C2G	Bypass combo module, GigaVUE-HC3, 2x 40Gb LR BPS pairs, 16x 10G cages.
BPS-HC3-C35C2G	Bypass combo module, GigaVUE-HC3, 2x 100Gb LR BPS pairs, 16x 10G cages.

Physical Dimensions and Weights

Product	Name	Height	Width	Depth	Weight
GigaVUE-HCT	GigaVUE-HCT base chassis	1.75in (4.5cm)	8.4in (21.3cm)	12.5in (31.75cm)	5.8lbs (2.63kg)
	PRT-HC1-Q04X08 module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.4lbs (0.64kg)
	BPS-HC1-D25A24 module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	2.2lbs (0.99kg)
	Tap-HC1-G10040 module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.50lbs (0.68kg)
	SMT-HC1-S module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	2.54lbs (1.15kg)
	PRT-HC1-X12 module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.50lbs (0.68kg)
	BPS-HC1-D25A60 module	1.6in (4.06cm)	4.65in (11.8cm)	10.13in (24.98cm)	2.2lbs (0.99kg)
	BPS-HC1-D35C60 module	1.6in (4.06cm)	4.65in (11.8cm)	10.13in (24.98cm)	2.2lbs (0.99kg)
	PRT-HC1-G12 module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.3lbs (0.58kg)

Physical Dimensions and Weights, cont'd

Product	Name	Height	Width	Depth	Weight
GigaVUE-HC1	GigaVUE-HC1 base chassis (includes built-in second-generation GigaSMART engine)	1.75in (4.5cm)	17.26in (43.85cm) without ears	19.5in (495mm) With PSU handle and card ejector: 20.92in (53.18 cm)	20.88lbs (9.47kg) With ears: 21.12lbs (9.58kg)
	PRT-HC1-X12 module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.50lbs (0.68kg)
	PRT-HC1-Q04X08 module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.50lbs (0.68kg)
	BPS-HC1-D25A24 module	1.6in (4.10cm)	4.65in (11.80cm)	10.13in (24.98cm)	2.2lbs (0.99kg)
	BPS-HC1-D25A60 module	1.6in (4.06cm)	4.65in (11.8cm)	10.13in (24.98cm)	2.2lbs (0.99kg)
	BPS-HC1-D35C60 module	1.6in (4.06cm)	4.65in (11.8cm)	10.13in (24.98cm)	2.2lbs (0.99kg)
	Tap-HC1-G10040 module	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.50lbs (0.68kg)
	SMT-HC1-S module	1.6in (4.10cm)	4.65in (11.80cm)	10.13in (24.98cm)	2.54lbs (1.15kg)
GigaVUE-HC1-Plus	GigaVUE-HC1-Plus base chassis (includes built-in third-generation GigaSMART engine)	1.7in (4.32cm)	17.0in (43.18cm) without ears	23.0in (58.4cm)	33.8lbs (15.36kg)
	BPS-HC1-D25A60 module	1.6in (4.06cm)	4.65in (11.8cm)	10.13in (24.98cm)	2.2lbs (0.99kg)
	BPS-HC1-D35C60 module	1.6in (4.06cm)	4.65in (11.8cm)	10.13in (24.98cm)	2.2lbs (0.99kg)
	PRT-HC1-Q04X08 module	1.6in (4.06cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.50lbs (0.68kg)
	PRT-HC1-X12 module	1.6in (4.06cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.50lbs (0.68kg)
	SMT-HC1-S module	1.6in (4.06cm)	4.65in (11.80cm)	10.13in (24.98cm)	2.54lbs (1.15kg)
	Tap-HC1-G10040	1.6in (4.10cm)	4.65in (11.8cm)	10.13in (24.98cm)	1.50lbs (0.68kg)
	BPS-HC1-D25A24	1.6in (4.10cm)	4.65in (11.80cm)	10.13in (24.98cm)	2.2lbs (0.99kg)

Physical Dimensions and Weights, cont'd

Product	Name	Height	Width	Depth	Weight
GigaVUE-HC3	GigaVUE-HC3 base chassis	3RU 5.25in (13.34cm)	17.26in (43.85cm) without ears	29.1in (74.0cm) without cable management 33.5in (85.0cm) with cable management	88.0lbs (40.00kg)
	PRT-HC3-C16 module	1.9in (4.7cm)	8.5in (21.7cm)	16.1in (41.0cm)	6.00lbs (2.72kg)
	PRT-HC3-C08Q08 module	1.9in (4.7cm)	8.5in (21.7cm)	16.1in (41.0cm)	2.40lbs (1.09kg)
	PRT-HC3-X24 module	1.9in (4.7cm)	8.5in (21.7cm)	16.1in (41.0cm)	2.12lbs (0.96kg)
	BPS-HC3-C25F2G module	1.9in (4.7cm)	8.5in (21.7cm)	16.1in (41.0cm)	6.40lbs (2.90kg)
	BPS-HC3-Q35C2G module	1.9in (4.7cm)	8.5in (21.7cm)	16.1in (41.0cm)	6.05lbs (2.74kg)
	BPS-HC3-C35C2G module	1.9in (4.7cm)	8.5in (21.7cm)	16.1in (41.0cm)	6.05lbs (2.74kg)
	SMT-HC3-C05 module	1.9in (4.7cm)	8.5in (21.7cm)	16.1in (41.0cm)	4.40lbs (2.00kg)
	SMT-HC3-C08 module	1.9in (4.7cm)	8.5in (21.7cm)	16.1in (41.0cm)	4.40lbs (2.00kg)

Power Specifications

Product Line	Component	Specifications
GigaVUE-HCT	Power configurations	• 1 + 1 power: 2 power adapters • Hot-swappable
	Max power consumption/heat output	• 286 watts; 975 BTU/hr • Fully populated system with all ports at 100 percent traffic load"
	AC power supply modules	• Min/max voltage: Input Voltage: 90V–264V AC, 47-63Hz • Max PSM input current: 3A @ 115V, 1.5A @ 230V
GigaVUE-HC1	Power configurations	• 1 + 1 power: 2 power supply modules • Hot-swappable
	Max power consumption/heat output	• 360 watts; 1227.6 BTU/hr • Fully populated system with all ports at 100 percent traffic load
	AC power supply modules	• Min/max voltage: 100V–127V AC, 200V–240V AC, 50/60Hz • Max PSM input current: 5.8A @ 100V, 2.9A @ 200V
	DC power supply modules	• Min/max voltage: -40.5V to -60V DC • Max PSM input current: 24A @ -40.5V
GigaVUE-HC1-Plus	Power configurations	• 1 + 1 power: 2 power supply modules • Hot-swappable
	Max power consumption/heat output	• 650 watts; 2,216 BTU/hr • Fully populated system with all ports at 100 percent traffic load
	AC power supply modules	• Min/max voltage: 100–127 V AC, 200–240 V AC, 50/60Hz • Max PSM input current: 7A @ 100V, 3.5A @ 200V
	DC power supply modules	• Min/max voltage: -40.5 to -60 V DC • Max PSM input current: 20A @ -40.5V

Power Specifications, cont'd

Product Line	Component	Specifications
GigaVUE-HC3	Power configurations	• 1 + 1 power: 2 power supply modules • 2 + 2 power: 4 power supply modules • Hot-swappable
	Max power consumption/heat output	• 1850 watts; 6312.4 BTU/hr (Control Card version 1) • 2000 watts; 6824.3 BTU/hr (Control Card version 2) • Fully populated system with all ports at 100 percent traffic load
	AC power supply modules	• Min/max voltage: 100V–115V AC, 200V–240V AC, 50/60Hz • Max PSM input current: 14A @ 100V, 10A @ 200V
	DC power supply modules	• Min/max voltage: -40V to -72V DC • Max PSM input current: 48A @ -40V

Environmental Specifications

Aspect	Specifications
Operating temperature	32° F to 104° F (0° C to 40° C)
Operating relative humidity	20 to 80 percent, non-condensing
Recommended storage temperature	-4° F to 158° F (-20° C to 70° C)
Recommended storage relative humidity	15 to 85 percent, non-condensing
Altitude	Systems: Up to 13,000 ft (3.96km) Power Supply Modules: Up to 10,000 ft (3.05km)

Compliance

	Product	Description
Safety	GigaVUE-HC1, GigaVUE-HC3	CSA C22.2 60950-1-07; IEC 60950-1; EN 62368-1
	GigaVUE-HCT, GigaVUE-HC1-Plus	UL623681-1/CSA C22.2 No. 62368-1
Emissions	GigaVUE-HC1	FCC Part 15, Class A; VCCI Class A; EN55032/EN55035/ CISPR-32 Class A; Australia/New Zealand AS/NZS CISPR-22 Class A: RCM; EU: CE Mark EN 55032 Class A, China CCC, Taiwan BSMI, Korea KCC, Russia EAC, Brazil Anatel
	GigaVUE-HCT, GigaVUE-HC1-Plus, GigaVUE-HC3	FCC Part 15, Class A; EU:CE Mark EN 55032, EN 55035. Class A, UK UKCA FCC Part 15, Class A; VCCI Class A; CISPR-32 Class A; Australia/New Zealand AS/NZS CISPR-22 Class A; EU:CE Mark EN 55032, EN 55035. Class A; Taiwan BSMI, Korea KCC, Russia EAC[3], Brazil Anatel[3]
Immunity	GigaVUE-HCT, GigaVUE-HC1, GigaVUE-HC1-Plus	ETSI EN300 386 V1.3.2, EN61000-4-2, EN 61000-4-3, 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-3-2
	GigaVUE-HC3	ETSI EN300 386 V1.6.1:2012; EN61000-3-2; EN61000-3-3; EN61000-4-2; EN61000-4-3; EN61000-4-4; EN61000-4-5; EN61000-4-6; EN61000-4-8; EN61000-4-11
Environment	GigaVUE-HCT, GigaVUE-HC1, GigaVUE-HC1-Plus	RoHS 6: EU directive 2002/95/EC
	GigaVUE-HC3	EU RoHS 6, EU Directive 2011/65/EU; 2006/1907/EC (REACH); ISTA 2A
NEBS	GigaVUE-HC1, GigaVUE-HC3	Level 3
Certifications	GigaVUE-HC1, GigaVUE-HC1-Plus, GigaVUE-HC3, GigaVUE-HCT	FIPS 140-2, Common Criteria, USGv6r1, DoDIN APL

[3] Currently not supported on GigaVUE-HCT, GigaVUE-HC1-Plus

Support and Services

Gigamon offers a range of support and maintenance services. For details regarding Gigamon Limited Warranty and its Product Support and Software Maintenance Programs, visit gigamon.com/support-and-services/overview-and-benefits.

About Gigamon

Gigamon® offers a deep observability pipeline that efficiently delivers network-derived telemetry to cloud, security, and observability tools. This helps eliminate security blind spots and reduce tool costs, enabling you to better secure and manage your hybrid cloud infrastructure. Gigamon has served more than 4,000 customers worldwide, including over 80 percent of Fortune 100 enterprises, 9 of the 10 largest mobile network providers, and hundreds of governments and educational organizations. To learn more, please visit gigamon.com.

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