GigaVUE Cloud Suite for AWS

The Power of Deep Observability for Your AWS Environments

GigaVUE Cloud Suite™, a key component of the Gigamon Deep Observability Pipeline, is a fully AWS-certified product that acquires and processes traffic from your AWS environments before distributing optimized network-based intelligence to the security, monitoring, and observability tools of your choice. You get complete application, flow, and packet-level visibility into all data-in-motion running within AWS public cloud and Outposts — without having to invest in new tools.

GigaVUE Cloud Suite can be deployed in multiple public and private clouds. This data sheet describes the specific deployment with AWS, including integrations with many AWS services.

By extending your existing on-prem or cloud tools to monitor and secure your AWS workloads and applications, you can:

• Ensure a consistent security and compliance posture across hybrid and multi-cloud environments

• Eliminate network blind spots, including East-West traffic, where threats can hide

• Lower operational friction associated with cloud migration and the need to learn new tools and processes

• Speed up troubleshooting by going deeper than AWS native tools to identify exactly where, when and how a network transaction occurred

The Gigamon Deep Observability Pipeline goes even further by augmenting the capabilities of your current metrics, events, logs, and traces (MELT) or MELT-based SIEM, APM, and observability tools with actionable network-level intelligence. This powerful combination of network-based data and MELT helps NetOps, SecOps, and CloudOps teams speed issue resolution and root cause analysis. It also brings new security use cases to your current set of observability tools, such as detecting unauthorized activities like crypto mining or compliance risks such as expiring TLS certificates.

How Gigamon Works in AWS

GigaVUE Cloud Suite integrates with Amazon EC2 APIs to automatically discover new cloud instances, deploy visibility nodes in VPCs, and apply advanced traffic intelligence to streamline and load balance traffic prior to sending the data to security and monitoring tools. Traffic acquisition can be done through native AWS VPC traffic mirroring, external load balancers, or GigaVUE® Universal Cloud Tap (UCT). Best of all, there's minimal impact on AWS resources and no need to implement individual tool instances just to get traffic to a specific tool. Gigamon also supports AWS Transit Gateways to ensure visibility for tools across interconnected VPCs and on-premises networks. Visibility is also available for

workloads deployed in the Amazon Elastic Kubernetes Service (EKS). Additionally, Gigamon supports AWS Gateway Load Balancer endpoint (GWLBe) to easily deploy, scale, and manage virtual appliances.

After Gigamon is deployed, it removes operational burdens by offering the same level of elastic scalability you expect in your AWS deployments. Gigamon automatically detects changes in the number and locations of Amazon VPCs being monitored. Gigamon cloud visibility nodes are then expanded (or contracted) to whatever levels are required.
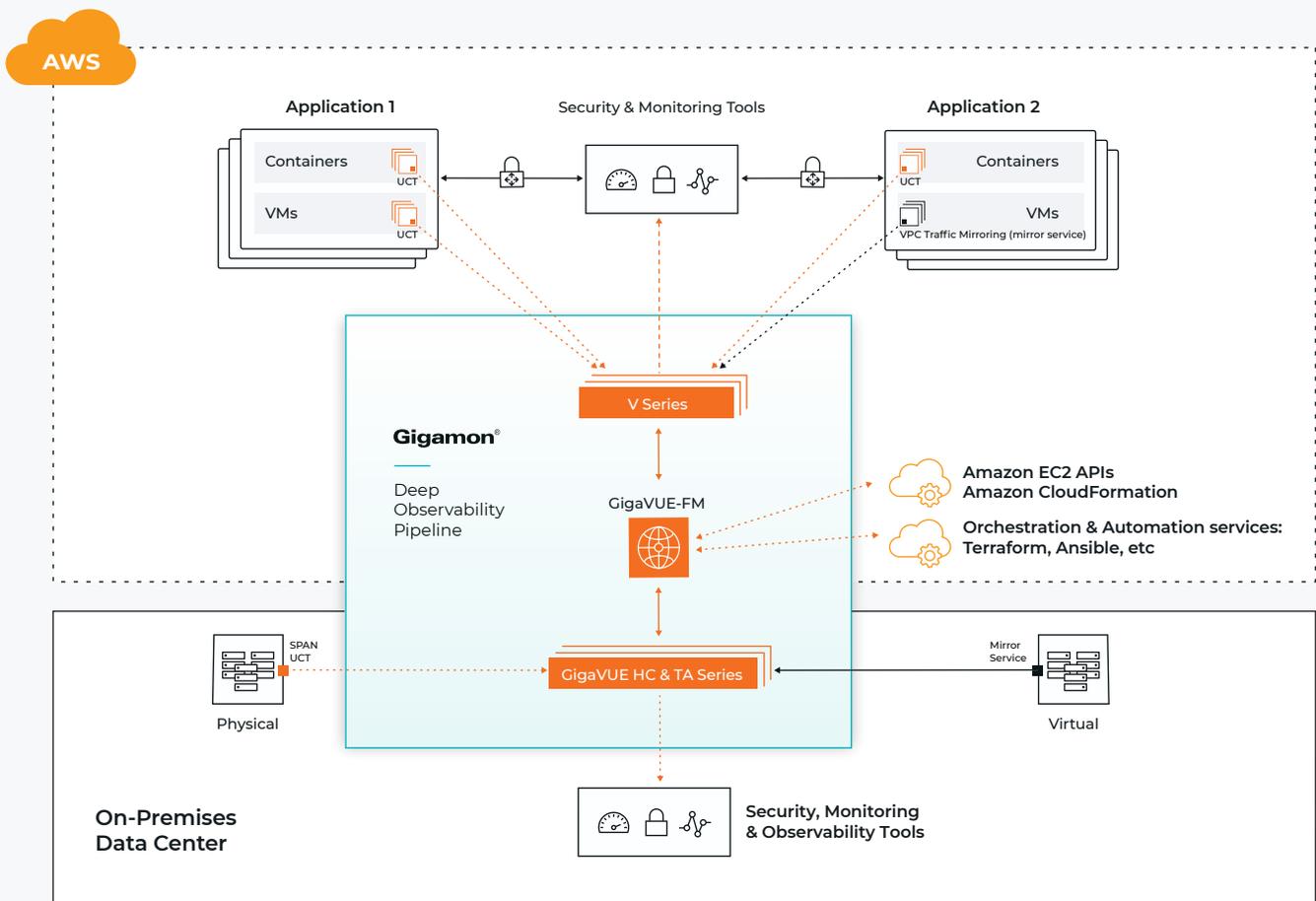

Figure 1. The Gigamon Deep Observability Pipeline acquires, processes, and forwards traffic within an AWS VPC.

The Gigamon Deep Observability Pipeline acquires traffic in AWS Infrastructure-as-a-Service (IaaS) or AWS Outposts environments, intelligently processes this data, and then sends optimized network-level intelligence to your security, observability, and monitoring tools.

Solution Highlights

Strengthen Security and Compliance Within AWS

• IT teams can use proven, familiar security tools to monitor AWS VPCs.

• Gigamon Application Metadata Intelligence (AMI), generated from deep packet inspection, provides thousands of important application attributes to observability and SIEM tools.

• AWS Top Secret Region support.

• Gigamon Precryption® technology redefines security for applications running in AWS environment, delivering plaintext visibility of encrypted lateral traffic.

• Selective Precryption is a feature of Gigamon Precryption technology that allows users to choose which workloads to exempt from Precryption analysis. This powerful functionality is useful for protecting sensitive data while still allowing security tools to detect threats.

Increase Tool Efficiency and Effectiveness

• Traffic intelligence features, such as Application Filtering Intelligence, Application Metadata Intelligence, Packet Slicing, Advanced Flow Slicing, Packet De-duplication, and NetFlow generation, work to streamline traffic and reduce the burden on monitoring and security tools.
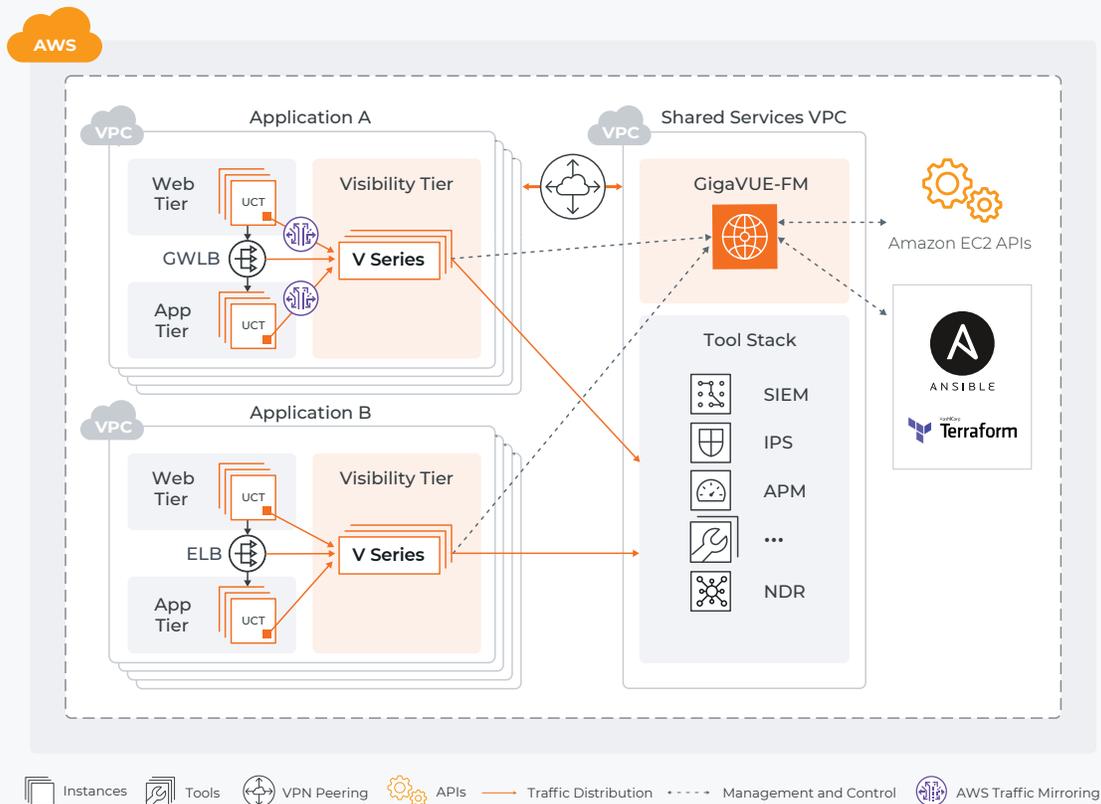

Figure 2. GigaVUE Cloud Suite acquires, processes, and forwards traffic across multiple AWS VPCs.

Easily Acquire Traffic and Scale Observability

- GigaVUE Cloud Suite supports traffic acquisition within AWS infrastructure using either AWS VPC Traffic Mirroring, external or AWS elastic load balancers, or lightweight (and free) UCT.

- AWS Transit Gateway support ensures tools also see traffic across interconnected VPCs without the inefficiency of VPC Peering or other routing complexities.

- Automatic Target Selection® enables dynamic discovery and monitoring of new workloads — without any manual action.

- Traffic steering and tool load-balancing techniques optimize traffic distribution across multiple tools to ensure high availability.

Get Unified Orchestration and Management

- One common platform — GigaVUE-FM fabric manager — supports orchestration and management of your entire observability fabric across physical, cloud, and virtual environments.

- Tight integration with AWS, as well as third-party orchestration tools like Ansible and Terraform, simplifies management.

GigaVUE Cloud Suite for AWS supports multiple VPCs and integrates with AWS cloud management tools to enable automation. Use AWS agentless native-VPC traffic mirroring, AWS external load balancers, tunnel-as-a-source, or GigaVUE UCT to collect all traffic streams.

Components of GigaVUE Cloud Suite for AWS

GigaVUE UCT

The next generation of GigaVUE UCT takes advantage of Linux and Windows functionalities to mirror production traffic and send to GigaVUE V Series nodes. This enhances performance and reduces resource impact in VM-based environments and makes it easier to tap VMs, and can be deployed using FM or third party orchestration.

GigaVUE V Series

Visibility nodes deployed in AWS aggregate, replicate, and select traffic of interest, then optimize and distribute acquired traffic to multiple tools located in any VPC. Take advantage of flow mapping and tool load balancing functions to reduce burden on tools.

GigaSMART applications

GigaSMART® applications, running on top of V Series, provide application and traffic intelligence, including Application Filtering Intelligence, Application Metadata Intelligence, Packet De-duplication, Adaptive Packet Filtering, and Packet Slicing and Masking.

GigaVUE-FM

GigaVUE-FM fabric manager provides centralized orchestration and management across all environments, including AWS, on-premises, and private clouds (Nutanix, OpenStack and VMware). Traffic policies for V Series are configured using a simple drag-and-drop user interface.

GigaVUE UCT-V Controller and GigaVUE V Series Proxy (Optional)

For hybrid and multi-VPC deployments, GigaVUE uses a controller-based design to proxy the command and control APIs while preserving existing IP addressing schemes or Network Address Translation (NAT). The UCT-V Controller proxies commands from GigaVUE-FM to the UCT instances (see Figure 3), while the V Series Proxy proxies commands from GigaVUE-FM to the GigaVUE V Series nodes.

Note: A UCT-C Controller would be required and not optional in case UCT-C is deployed.
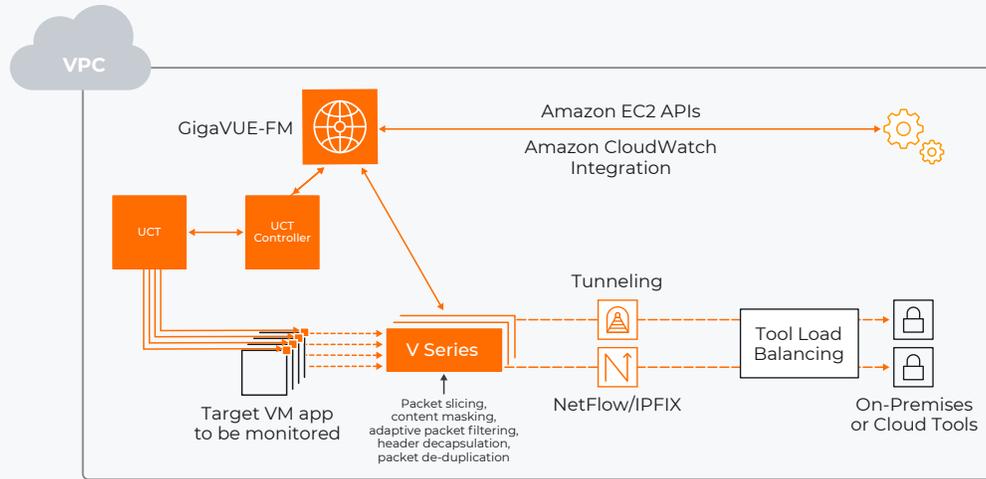
Figure 3. GigaVUE Cloud Suite for AWS is composed of GigaVUE V Series for optimization, transformation, and brokering, as well as GigaVUE-FM for management. For access to workload traffic, GigaVUE Cloud Suite also includes the components UCT and UCT Controller, which are optional, but may be preferred in situations where free workload-level visibility is preferred over paid AWS services.

Key Features and Benefits

GigaVUE UCT-V Lightweight module at no cost leveraging customer EC2 instances that mirror traffic and send to GIgaVUE V series.	**Simplified Traffic Monitoring** Deploy just one lightweight module per Amazon EC2 instance (vs. deploying one per security tool), reducing impact on EC2 CPU utilization and operational overhead. **Reduce Application Downtime** No infrastructure redesign needed to add new instances as applications or tools scale out in AWS. **Scale What's Being Monitored** Integration between GigaVUE-FM and Amazon EC2 APIs enables instances to automatically scale as EC2 instances scale. **Zero Touch Deployment** Simplify deployments in AWS, automate processes, and eliminate errors. Save time and resources with instant setup and effortless upgrades. **Minimize Production Changes** Use the production Elastic Network Interface (ENI) or a separate ENI to mirror workload traffic. The separate ENI option allows IT to preserve application traffic policies.

GigaVUE V Series

Visibility nodes that aggregate, select, optimize, and distribute traffic. V Series nodes work seamlessly with AWS native VPC mirroring, AWS Gateway Load Balancer and with AWS CloudFormation templates.

Traffic Brokering with Flow Mapping®
Acquire, Aggregate, Select, Replicate and Distribute

- Acquire traffic from multiple compute instances via VXLAN tunnels, using UCT or third-party sources.
- Support tunnel-as-a-source to gather encapsulated traffic from other virtual taps.
- Aggregate traffic from the various acquisition sources and replicate to send to different tools.
- Select traffic of interest with a variety of L2-L4 criteria policies and then forward it to specific tools. Criteria can include IP addresses/subnets, TCP/UDP ports, protocols, instance tags, and more.
- Distribute selected traffic to multiple tools anywhere: Support for 5-tuple load balancing to tool instances improves tool deployment efficiency and eliminates the need for discrete load balancers.

Traffic Intelligence:
Transform, Optimize, and Obfuscate

- Reduce traffic volume by removing duplicated packets, slicing superfluous content, and sampling packet flows to reduce tool overload and traffic backhaul.
- Remove unwanted protocols by stripping specific headers and encapsulations to reduce tool overload.
- Obfuscate confidential, private, or sensitive information by masking specific data to maintain compliance.
- Filter on encapsulated headers or on payload content via Adaptive Packet Filtering.

Application Intelligence

- Close to 6,000 protocols, applications, and user behaviors L4-7 attributes spanning over 4,000 standard and custom apps.
- Integrate with Gigamon Application Visualization, Application Filtering, De-duplication from GigaVUE-FM fabric manager.
- Leverage use case based application and attribute templates for metadata extraction.
- Export metadata in NetFlow v5/v9, IPFIX, CEF and JSON over HTTP/S and Kafka.

Elastic Scale and Performance

- Automatic Target Selection: Automatically extract traffic of interest anywhere in the infrastructure being monitored.
- Automatically scale based on varying number of EC2s, without lowering performance of visibility node.
- Process at multi-Gbps rates per instance.
- Take advantage of AWS Gateway Load Balancer (GWLB) a managed service from AWS that enables you to deploy, scale, and manage third-party virtual appliances.

GigaVUE-FM Centralized management and orchestration.	**Centralized Orchestration and Management** • Centralized orchestration and single-pane-of-glass enable visualization across your entire infrastructure — physical, virtual, and cloud. • Configure all policies in GigaVUE V Series and manage their self-registration process in conjunction with the orchestration tool used; drag-and-drop user interface simplifies definition of traffic policies. • GigaVUE-FM monitors heartbeat communications from all fabric elements to help ensure high availability and give detailed information on fabric health. • Software-Defined Networking constructs enable configuration of intelligent traffic policies.
	Automation • Tight integration with Amazon APIs detects EC2 changes in the Amazon VPC and automatically adjusts the visibility tier. • Integration with third-party orchestration tools enables instantiation of all deep observability pipeline components: UCT Instances and their Controller and V Series nodes and their Proxy (if needed). • Open REST APIs published by GigaVUE-FM can be consumed by tools to dynamically adjust traffic received or to orchestrate new traffic policies. When deployed with AWS load balancer, GigaVUE-FM automatically scales V Series based on traffic levels, not on the number of VMs.
	Topology View • Auto-discovery and end-to-end topology visualization provide insight into visibility tier and EC2 instances.

Minimum Requirements for GigaVUE Cloud Suite for AWS

Recommended minimum compute specifications

Solution Component	Minimum EC2 Instance Type	Description
UCT	UCT-V: t2.micro UCT-C: own pod	Linux: Available as an RPM or Debian package Windows: Available for Windows Server 2012/2016/2019
UCT Controller	UCT-V: t2.medium UCT-C: own pod	Command-and-Control component for the UCT instances
GigaVUE V Series Node	c5n.xlarge (x86) c7gn.xlarge (ARM)	Requires minimum of two ENIs ENI 1: Management ENI 2: Traffic acquisition and distribution ENI 3+: Optional additional data acquisition and distribution
GigaVUE-FM	m5.xlarge 40GB root disk 40GB data disk	GigaVUE-FM must be able to access both the controller instances for relaying the commands. GigaVUE-FM automatically spins up additional V Series nodes based on a pre-defined configuration in the user interface. For on-premises GigaVUE-FM requirements and ordering information, please refer to the GigaVUE-FM data sheet.

Based on the number of virtual tap points, GigaVUE V Series nodes will be auto-launched by GigaVUE-FM.

Ordering Information, Renewals

GigaVUE Cloud Suite for AWS, with all the solution components, can be purchased in the following way:

GigaVUE Cloud Suite for AWS uses a monthly term license and pricing is based on total volume of traffic processed daily. Users can purchase directly from Gigamon or associated partners via the AWS Consulting Partner Private Offers (CPPO) plan. Customers receive an unlimited number of components (e.g., UCT instances, V Series instances, and GigaVUE-FM) at no additional charge.

Part Numbers for the Solution

Part Number	Description
VBL-50T-BN-CORE	Monthly Term license for CoreVUE software up to 50TB per day in V Series for cloud and virtual environments. Capabilities included: Advanced Tunneling, Slicing, Masking, Advanced Load Balancing. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-250T-BN-CORE	Monthly Term license for CoreVUE software up to 250TB per day in V Series for cloud and virtual environments. Capabilities included: Advanced Tunneling, Slicing, Masking, Advanced Load Balancing. Min Term is 12 months. Includes bundled Elite-Plus Support.

Part Numbers for the Solution, cont'd

Part Number	Description
VBL-2500T-BN-CORE	Monthly Term license for CoreVUE software up to 2,500TB per day in V Series for cloud and virtual environments. Capabilities included: Advanced Tunneling, Slicing, Masking, Advanced Load Balancing. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-25KT-BN-CORE	Monthly Term license for CoreVUE software up to 25,000TB per day in V Series for cloud and virtual environments. Capabilities included: Advanced Tunneling, Slicing, Masking, Advanced Load Balancing. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-50T-BN-NV	Monthly Term license for NetVUE software up to 50TB per day in V Series for cloud and virtual environments. Capabilities included: CoreVUE for V Series, De-duplication, NetFlow. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-250T-BN-NV	Monthly Term license for NetVUE software up to 250TB per day in V Series for cloud and virtual environments. Capabilities included: CoreVUE for V Series, De-duplication, NetFlow. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-2500T-BN-NV	Monthly Term license for NetVUE software up to 2,500TB per day in V Series for cloud and virtual environments. Capabilities included: CoreVUE for V Series, De-duplication, NetFlow. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-25KT-BN-NV	Monthly Term license for NetVUE software up to 25,000TB per day in V Series for cloud and virtual environments. Capabilities included: CoreVUE for V Series, De-duplication, NetFlow. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-50T-BN-SVP	Monthly Term license for SecureVUE Plus software up to 50TB per day in V Series for cloud and virtual environments. Capabilities included: NetVUE for V Series, App Metadata Intelligence, App Filter Intelligence. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-250T-BN-SVP	Monthly Term license for SecureVUE Plus software up to 250TB per day in V Series for cloud and virtual environments. Capabilities included: NetVUE for V Series, App Metadata Intelligence, App Filter Intelligence. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-2500T-BN-SVP	Monthly Term license for SecureVUE Plus software up to 2,500TB per day in V Series for cloud and virtual environments. Capabilities included: NetVUE for V Series, App Metadata Intelligence, App Filter Intelligence. Min Term is 12 months. Includes bundled Elite-Plus Support.
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Note: Licenses are activated from GigaVUE-FM.

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 intelligence 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.

Gigamon®

Worldwide Headquarters
3300 Olcott Street, Santa Clara, CA 95054 USA
+1 (408) 831-4000 | gigamon.com