IMPERVA®

SecureSphere® Appliances
Scalable. Reliable. Flexible.

Imperva SecureSphere® appliances provide superior performance and resiliency for demanding data center environments. With fail open interfaces, SecureSphere platforms offer fast and cost-effective fail over. Out-of-band management enhances security, while front panel status messages and network interfaces improve manageability. SecureSphere appliances deliver a scalable, reliable and flexible platform to power Imperva's Web, Database, and File Security solutions.

High Performance Architecture
SecureSphere appliances offer exceptional performance, allowing organizations to consolidate device management and address future bandwidth requirements. Supporting multi-gigabit throughput and tens of thousands of transactions per second, low latency SecureSphere appliances can manage heavy traffic loads without impacting application or network performance.

Fault Tolerant System Design
To maximize system uptime, the SecureSphere models offer redundant, hot-swappable components including redundant power supplies and hard drives. In the event of a hardware failure, the redundant component will automatically take over, providing continuous system operations.

Expansion Options to Address Unique Business Needs
SecureSphere appliances can be extended to provide remote, out-of-band management and monitoring, performance acceleration, and more with expansion modules. Options include:

- Intelligent Platform Management Interface (IPMI)
- Hardware Security Module (HSM)
- SSL acceleration
- Fibre Channel interfaces

Flexibility for High Throughput Environments
The X8510 and X10K appliances provide ultra-high performance by offering 5Gbps and 10Gbps throughput, respectively. These appliances are built on a common hardware platform with flexibility in mind. SecureSphere customers that start with an X8510 have the ability to later upgrade their appliance software, transforming the platform into an X10K with up to 10Gbps throughput. No matter how demanding of a data center you're running, Imperva has a high-performing platform to power SecureSphere's Web, Database, and File Security solutions.

SecureSphere Virtual Appliances
SecureSphere Virtual Appliances deliver the complete SecureSphere product line in a software-only form factor. Expanding customers' deployment options, SecureSphere Virtual Appliances provide a cost effective and flexible way to deploy SecureSphere's data security solutions and align with organizations' data center virtualization strategies.

SecureSphere for Amazon Web Services
SecureSphere WAF for AWS was designed to natively take advantage of Amazon Web Services infrastructure. Leveraging Amazon Cloud Formation, WAF instances are created and moved along with the applications they protect, including across Availability Zones, allowing for fast deployment of large enterprise-scale environments with minimal operational overhead. Instances of SecureSphere are created or removed from the deployment following Amazon's auto-scaling policies. These abstractions can dramatically improve the efficiency of IT and security operations teams.

SecureSphere Hardware Appliances

Specification		X10K	X8510	X6510	X4510	X2510
Fault Tolerance		Triple hot-swap hard drives Dual hot-swap power supplies	Triple hot-swap hard drives Dual hot-swap power supplies	Triple hot-swap hard drives Dual hot-swap power supplies	Dual hot-swap hard drives Dual hot-swap power supplies	Dual hot-swap hard drives Dual hot-swap power supplies
Throughput		10 Gbps	5 Gbps	2 Gbps	1 Gbps	500 Mbps
DAM TPS, for sizing[1]		72,000 TPS	36,000 TPS	18,000 TPS	9000 TPS	5000 TPS
RSA/Sec (2048bit)[2]		9000	9000	4500	2800	2230
Latency[3]		< 5ms	< 5ms	<5 ms	<5 ms	<5 ms
Interface Module Slot 1	Default	2 x 10G SR	4 Copper	4 Copper	4 Copper	4 Copper
	Optional	4 Copper OR 4 x 1G OR 2 x 10G SR/LR	4 Copper OR 4 x 1G OR 2 x 10G SR/LR	4 Copper OR 4 x 1G OR 2 x 10G SR/LR	4 Copper OR 4 x 1G OR 2 x 10G SR/LR	4 Copper OR 4 x 1G OR 2 x 10G SR/LR
Interface Module Slot 2	Default	N/A	4 Copper	4 Copper	4 Copper	N/A
	Optional	4 Copper OR 4 x 1G OR 2 x 10G SR/LR	4 Copper OR 4 x 1G OR 2 x 10G SR/LR	4 Copper OR 4 x 1G OR 2 x 10G SR/LR	4 Copper OR 4 x 1G OR 2 x 10G SR/LR	4 Copper OR 4 x 1G OR 2 x 10G SR/LR
Max Network Segments		Bridge (4), Reverse Proxy (9), Non-Inline	Bridge (4), Reverse Proxy (9), Non-Inline	Bridge (4), Reverse Proxy (9), Non-Inline	Bridge (4), Reverse Proxy (9), Non-Inline	Bridge (4), Reverse Proxy (9), Non-Inline
Inline Fail Open (bridging only)		Up to 4 Bypass Segments	Up to 4 Bypass Segments	Up to 4 Bypass Segments	Up to 4 Bypass Segments	Up to 4 Bypass Segments
Intelligent Platform Management Interface (IPMI) Port		1 Copper IPMI	1 Copper IPMI	Optional RJ45 Port	Optional RJ45 Port	Optional RJ45 Port
Hard Drive		3 x 2TB RE4 (RAID 5)	3 x 2TB RE4 (RAID 5)	3 x 2TB RE4 (RAID 5)	2 x 2TB RE4 (RAID 1)	2 x 2TB RE4 (RAID 1)
Memory		128 GB DDR3	128 GB DDR3	64GB DDR3	32GB DDR3	16GB DDR3
Serial Port		Console RJ45	Console RJ45	Console RJ45	Console RJ45	Console RJ45
USB Port		2 ports	2 ports	2 ports	2 ports	2 ports
Out-of-Band Port Management		2 x 100/1000 Copper	2 x 100/1000 Copper	2 x 100/1000 Copper	2 x 100/1000 Copper	2 x 100/1000 Copper
SSL Acceleration		Optional SSL High performance	Optional SSL High performance	Default SSL Standard performance Optional SSL high performance	Optional SSL standard performance	Optional SSL standard performance
Add-Ons		Default: IPMI // Optional: Fiber Channel, HSM	Default: IPMI // Optional: Fiber Channel, HSM	Optional: Fiber Channel, HSM, IPMI	Optional: Fiber Channel, HSM, IPMI	Optional: Fiber Channel, HSM, IPMI
Power Supply		Dual 600W	Dual 600W	Dual 600W	Dual 400W	Dual 400W
AC Power		100-240V	100-240V	100-240V	100-240V	100-240V
Typical Consumption (W)		Idle: 185.11,Full: 206.55	Idle: 187.53, Full: 209.73	Idle: 117.72 Full: 133.07	Idle: 93.11 Full: 108.28	Idle: 55.52 Full: 79.41
Typical Heat Output (BTU)		Idle: 633.07,Full: 706.40	Idle: 641.34,Full: 717.29	Idle: 402.60,Full: 455.09	Idle: 318.42,Full: 370.33	Idle: 189.88,Full: 271.58
Form Factor		2U	2U	2U	2U	2U
Dimensions		88 x 446 x 645mm	88 x 446 x 645mm	88*446*645mm	88*442*513mm	88*442*513mm
Weight		18.95Kg	19.25Kg	18.45kg	14.75kg	14.45kg
Operating Environment		Temperature: 5° - 40° C Relative Humidity :20% - 90%	Temperature: 5° - 40° C Relative Humidity: 20% - 90%	Temperature: 5° - 40° C Relative Humidity: 20% - 90%	Temperature: 5° - 40° C Relative Humidity: 20% - 90%	Temperature: 5° - 40° C Relative Humidity: 20% - 90%
Storage Environment		Temperature: 0° - 70° C Relative Humidity: 20% - 90%	Temperature: 0° - 70° C Relative Humidity: 20% - 90%	Temperature: 0° - 70° C Relative Humidity :20% - 90%	Temperature: 0° - 70° C Relative Humidity: 20% - 90%	Temperature: 0° - 70° C Relative Humidity: 20% - 90%
Safety Agency Approval		CE, TUV, FCC, CB, VCCI, RCM	CE, TUV, FCC, CB, VCCI, RCM	CE, TUV, FCC, CB, VCCI, RCM, KCC	CE, TUV, FCC, CB, VCCI, RCM, KCC	CE, TUV, FCC, CB, VCCI, RCM, KCC
Supported SecureSphere Products		Web Application Firewall Database Activity Monitor Database Firewall	Web Application Firewall Database Activity Monitor Database Firewall	Web Application Firewall Database Activity Monitor Database Firewall SecureSphere for SharePoint	Web Application Firewall Database Activity Monitor Database Firewall SecureSphere for SharePoint File Activity Monitor File Firewall	Web Application Firewall Database Activity Monitor Database Firewall SecureSphere for SharePoint File Activity Monitor File Firewall
Database Agents Included		100	100	100	50	25
Database Vulnerability Assessments Included		1600	800	400	200	100

1   The Imperva Database Activity Monitor TPS metric is: number of SQL requests to a database, per second. This number is used for sizing (i.e., determining) the SecureSphere appliances required for a given deployment.
2   Measured with 'high performance' SSL card
3   SSL traffic latency measured with SSL card

SecureSphere Hardware Appliances

Specification	X2010	X1010
Fault Tolerance	Not available	Not available
Throughput[4]	500 Mbps	100 Mbps
RSA/Sec (2048bit)[5]	2230	440
Latency	Sub-millisecond	Sub-millisecond
Interfaces	4 x 1G Copper 2 x 1G Copper (for management)	4 x 1G Copper 2 x 1G Copper (for management)
Max Network Segments	(2) Bridge; (5) Proxy, Non-inline	(2) Bridge; (5) Proxy, Non-inline
Inline Fail Open (Bridging only)	2 bypass segments	2 bypass segments
Hard Drive	1 TB	1 TB
Memory	8 GB	8 GB
Serial Port	RJ45 connector	RJ45 connector
USB Port	2	2
SSL Acceleration	Optional	Optional
Power Supply	250 W	250 W
AC Power	100-240V, 50-60 Hz	100-240V, 50-60 Hz
Typical Consumption	110 W	110 W
Typical Heat Output	375 BTU/Hr	375 BTU/Hr
Form Factor	1U	1U
Dimensions	17.45 x 16 x 1.73 inches 443 x 406 x 44 mm	17.45 x 16 x 1.73 inches 443 x 406 x 44 mm
Weight	14.1 lbs (6.4 kg)	14.1 lbs (6.4 kg)
Operating Environment	Temperature: 5° - 40° C - Relative Humidity 20% - 90%	Temperature: 5° - 40° C Relative Humidity: 20% - 90%
Storage Environment	Temperature: 0° - 70° C Relative Humidity 20% - 90%	Temperature: 0° - 70° C Relative Humidity: 20% - 90%
Safety Agency Approval	CE/FCC/cTUVus/VCCI/CCC/KCC/CB	CE/FCC/cTUVus/VCCI/CCC/KCC/CB
Supported SecureSphere Products	**Web Application Firewall** **Database Assessment**	**Web Application Firewall** **Database Assessment**
Database Vulnerability Assessments Included[6]	100	25

[4]   Throughput figures represent layer 7 Web application firewall performance
[5]   Measured with standard SSL card
[6]   Database vulnerability assessments only included with Database Assessment

SecureSphere Management Appliances

Imperva's SecureSphere management products deliver superior performance, scalability and unified management capabilities for any size deployment. Whether you're managing a small data center, or a large number of business units, data centers, or customers, SecureSphere products give you the visibility and control to minimize administrative overhead and ensure a strong data security posture. The Management Appliances support the SecureSphere Manager and SecureSphere Manager of Managers products.

Specification	M160	M110
Fault Tolerance	Dual hot-swap hard drives Dual hot-swap power supplies	Not Available
Memory	32GB DDR3	8 GB
Hard Drive	2 x 500GB 10K RPM (RAID 1)	500 GB
Serial Port	RJ45 connector	RJ45 connector
USB Port	2 ports	2 ports
Intelligent Platform Management Interface (IPMI) Port	Optional RJ45 Port	Not Available
Fibre Channel	Optional	Not Available
Management Port	2 x 100/1000 Copper	2 x 100/1000 Copper
Power Supply	Dual 400W	250 W
AC Power	100-240V	100-240V, 50-60 Hz
Typical Consumption	Idle: 80.40 Full: 94.71	110 W
Typical Heat Output	Idle: 274.98 Full: 323.89	375 BTU/Hr
Form Factor	2U	1U
Dimensions	88 x 442 x 513 mm	443 x 406 x 44 mm
Weight	14.15kg	14.1 lbs (6.4 kg)
Operating Environment	Temperature: 5° - 40° C Relative Humidity 20% - 90%	Temperature: 5° - 40° C Relative Humidity 20% - 90%
Storage Environment	Temperature: 0° - 70° C Relative Humidity 20% - 90%	Temperature: 0° - 70° C Relative Humidity 20% - 90%
Safety Agency Approval	CE, TUV, FCC, CB, VCCI, RCM, KCC	CE, FCC, cTUVus, VCCI, CCC, KCC
Supported SecureSphere Products	MX, SOM	MX

Ultra High Bandwidth

Imperva SecureSphere, in conjunction with our network visibility partners, delivers a scalable, high-performance data center security solution for your bandwidth-intensive applications. Leveraging solutions from Net Optics, an Ixia company, and Gigamon, SecureSphere deployments easily scale to meet the needs of high bandwidth and cloud deployments. These network visibility solutions distribute your high volume of inbound traffic across multiple SecureSphere gateways, ensuring only relevant protocols are sent to SecureSphere Web, database, and file security gateways.

SecureSphere Virtual Appliances

SecureSphere Virtual Appliance provides the complete SecureSphere product line in a cost effective, simple, and easy to install virtual appliance. IT organizations can choose between physical or virtual SecureSphere deployments depending on their datacenter virtualization strategy. With SecureSphere Virtual Appliances, customers can leverage existing hardware for appliance consolidation, maximize the utilization of their servers and network infrastructure and cut power, cooling and support costs. The simplicity and flexibility of SecureSphere Virtual Appliances enable organizations of any size to quickly provision new security services as requirements change. Within a VMware ESX server environment, SecureSphere Virtual Appliances can inspect inter-VM traffic and support disaster recovery and workload migration requirements.

	V4500	V2500	V1000	VM150
Performance				
Throughput (Web, Database and SharePoint security products[7])	Up to 1 Gbps	Up to 500 Mbps	Up to 100 Mbps	Not applicable
Throughput (File Activity Monitor and File Firewall)	Up to 4 Gbps	Up to 2 Gbps	Not applicable	Not applicable
Supported SecureSphere Products	**Web Application Firewall Database Activity Monitor Database Firewall File Activity Monitor File Firewall SecureSphere for SharePoint**	**Web Application Firewall Database Activity Monitor Database Firewall File Activity Monitor File Firewall SecureSphere for SharePoint**	**Web Application Firewall**	Manager Manager of Managers
Minimum Requirements per Physical Host				
Hypervisor	ESX/ESXi 4.x/5.0/5.1/5.5			ESX/ESXi 4.x/5.0/5.1/5.5
Processor	Dual core server Intel VTx or AMD-V			Dual core server Intel VTx or AMD-V
Memory	8 GB	4 GB	4 GB	4 GB
Hard Drive	250 GB			250 GB
Network Interface	Hypervisor-supported network interface card			Hypervisor-supported network interface card
Minimum Requirements for Each Guest SecureSphere Virtual Appliance				
CPU	4	2	2	2
Memory	8 GB	4 GB	4 GB	8 GB[8]
Disk Space	160 GB	160 GB	160 GB	160 GB

[7] SecureSphere for SharePoint not supported on V1000.
[8] Expandable to 32GB for SecureSphere V11.0 and above.

SecureSphere for AWS

SecureSphere for Amazon Web Services (AWS) protects applications in the Amazon cloud from web attacks with the industry's leading WAF solution, SecureSphere Web Application Firewall, so you can avoid costly data breaches. SecureSphere for AWS is specifically designed to leverage native AWS infrastructure capabilities, such as AWS CloudFormation, so it not only delivers superior WAF capabilities but it uniquely addresses the security needs of AWS applications.

	AV2500	AV1000	AVM150
Performance			
Supported SecureSphere Products	Web Application Firewall	Web Application Firewall	MX Management Server
Throughput	Up to 500 Mbps	Up to 100 Mbps	Not Applicable
Minimum Requirements for Each SecureSphere for AWS Instance			
Minimum AWS Instance Type	M3 Extra Large	M3 Large	M3 Extra Large
SecureSphere for AWS Technical Details			
AWS Service Integration	EC2, CloudFormation, CloudWatch, VPC		
SecureSphere Operating System	CentOS version 6.3		
Delivery Method	64-bit Amazon Machine Image (AMI)		

Imperva SecureSphere Data Center Security

Imperva SecureSphere is a comprehensive, integrated security platform that includes SecureSphere Web, Database and File Security. It scales to meet the data center security demands of even the largest organizations and is backed by the Imperva Application Defense Center, a world-class security research organization that maintains the product's cutting-edge protection against evolving threats.

WEB APPLICATION SECURITY PRODUCTS

Web Application Firewall
Accurate, automated protection against online threats

ThreatRadar Reputation Services
Leverage reputation data to stop malicious users and automated attacks

ThreatRadar Community Defense
SecureSphere deployments around the world provide crowd-sourced threat intelligence to subscribers

ThreatRadar Fraud Prevention
Stop fraud malware and account takeover quickly and easily

Incapsula SaaS WAF and DDoS Protection
Best-of-breed web application security and content delivery as a service

DATABASE SECURITY PRODUCTS

Database Activity Monitor
Full auditing and visibility into database data usage

Database Firewall
Activity monitoring and real-time protection for critical databases

Database Assessment
Vulnerability assessment, configuration management, and data classification for databases

User Rights Management for Databases
Review and manage user access rights to sensitive databases

ADC Insights
Pre-packaged reports and rules for SAP, Oracle EBS, and PeopleSoft compliance and security

FILE SECURITY PRODUCTS

File Activity Monitor
Full auditing and visibility into file data usage

File Firewall
Activity monitoring and protection for critical file data

User Rights Management for Files
Review and manage user access rights to sensitive files

Directory Services Monitor
Audit, alert, and report on changes made in Microsoft Active Directory

SHAREPOINT SECURITY PRODUCTS

SecureSphere for SharePoint
Visibility and analysis of SharePoint access rights and data usage, and protection against Web based threats