



# Clavister Security Gateway 4500 Series

## Product Data Sheet

- Two 10GbE Interfaces (SFP+)
- Stateful Firewall
- Deep Packet Inspection
- Built-in VPN – IPsec and SSL
- Intrusion Detection & Prevention (IDP)
- Web Content Filtering
- Anti-Virus
- Anti-Spam
- SIP/VoIP Support
- Traffic Management
- User Authentication
- Server Load Balancing
- Route Load Balancing
- Scalable Licensing Model
- High Availability Clustering
- High Performance Solution
- Flexible Interface Options
- Redundant PSU Support
- Redundant Fan Support

### Introducing Clavister Security Gateway 4500 Series

The Clavister Security Gateway 4500 Series is a set of turnkey, Firewall/VPN and Unified Threat Management (UTM) network security products designed for medium and large-size enterprises and service providers that require 10 Gigabit Ethernet, high performance, excellent scalability and robustness. Based on the same award-winning technology found in all Clavister products, the Clavister Security Gateway 4500 Series has been designed to maximize firewall performance and encrypted traffic.

The Clavister Security Gateway 4500 Series supports 10 Gigabit Ethernet interfaces using two SFP+ (10GbE) connectors, with an additional two SFP (GbE) connectors and six 10BASE-T/100BASE-TX/1000BASE-T connectors for the most flexible connectivity options in any Clavister Security Gateway Series.

### Robustness and Resilience

In addition to cutting-edge performance, the Clavister SG4500 is built for demanding environments with up to two hot-swappable power supplies and three hot-swappable fan modules (see specifications on page 4 for more details). With a Mean Time Between Failure (MTBF) exceeding 324 000 hours\*, the Clavister SG4500 Series can be used in demanding networks configurations which requires 99,999% availability.

### Clavister Security Gateway 4500 Series Features

In today's converged networks, security has to be implemented interdepartmentally with support for a wide range of network types, such as VoIP networks, Video Conference solutions and Local Area Networks (LAN). In these typical scenarios, performance becomes a critical factor. Your security solution must handle the continuous demand for increased performances or it will become your central bottleneck.

This is why Clavister designed the Clavister Security Gateway 4500 Series; to be one of the world's highest performing network security gateways, capable of up to 10 Gbps in firewall performance, 5 million concurrent connections and 1.4 million packets per second. Like all Clavister Security Gateways, the Clavister SG4500 Series also features IPsec and SSL VPN functionality straight out of the box. With up to 2.5 Gbps VPN performance and 10 000 concurrent VPN tunnels; the Clavister SG4500 Series is capable of meeting even the most complex VPN needs.

\* MTBF value reflects usage with two (2) redundant PSU

## Management Options

Clavister offers you a wide range of management options to manage your Clavister Security Gateway 4500 Series. Regardless if you choose a centralized management solution or use the built-in web-based management solution, all Clavister Security Gateways Series products and services are managed in the same way.

### Clavister InControl

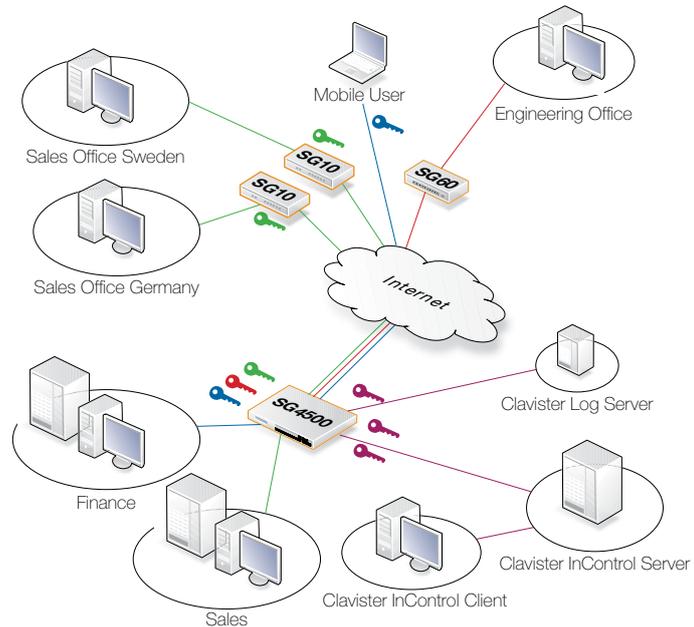
Clavister InControl offers a comprehensive centralized management solution that will assist and help you perform daily tasks faster, easier and more streamlined. Its intuitive user interface and support for task-driven workflow management will guide you through complex and repetitive tasks, thus alleviating the burden of managing large installations.

### Clavister Web Management

Clavister Web Management is an easy to use Web-based administration interface, which greatly simplifies product deployment.

### Command-Line Interface

All Clavister Security Gateway Series products also support a comprehensive command-line interface. It is a powerful tool for anyone who wants to build custom administration interfaces.



Typical network scenario featuring Clavister SG4500

The Clavister Security Gateway 4500 Series offers 10 GbE interfaces, excellent performance and a first-rate feature set for setting up network security and Unified Threat Management (UTM) services for any medium-large enterprise, telecom business or service provider.

## More Information

For more information about the Clavister Security Gateway Series of products, including virtual appliances, please see the **Clavister Security Gateway Series** brochure available from [www.clavister.com](http://www.clavister.com).

## Clavister CorePlus

At the heart of the Clavister Security Gateway 4500 Series, lays Clavister CorePlus – our in-house developed, high-performance security network operating system. Every line of code is crafted to ensure that it delivers maximum performance at all times. We take pride of delivering a product that we have full control over, rather than stitch together a solution based on a mix of open-source components.

## Flexibility and Adaptability

Not all networks are created equally. The vast difference in network configurations requires a network security gateway to be able to accommodate these differences. Clavister Security Gateway 4500 Series gives you the freedom to set routing policies with extreme granularity. A large number of parameters can be used to construct policy roles to meet even the most demanding network installation.

## Big on Performance - Low on Maintenance

Clavister Security Gateway 4500 Series share a common trait with all other Clavister products with its support for Clavister Service Provisioning Network (CSPN). This high-speed network ensures that all UTM services are kept updated and current from newly emerging threats. This gives system administrators the freedom to concentrate on running their network without having to worry about the having the latest UTM security patch installed.

## License Scalability

One of the most important aspects of the Clavister Security Gateway 4500 Series is the extreme scalability. The Clavister xPansion Lines licensing concept gives you the ability to start with your performance and functionality needs today with the ability to upgrade your Clavister Security Gateway 4500 Series incrementally in the future as your organization grows.

## Rich on Security

By integrating best-in-class Unified Threat Management (UTM) security functionality, such as Intrusion Detection and Prevention (IDP), Anti-Virus, Anti-Spam and Web Content Filtering with a stateful firewall with deep packet inspection, IPsec and SSL VPN connectivity, the Clavister Security Gateway 4500 Series is able to protect your organization against everything from network layer attacks to application layer threats, and even viruses and worms.

## Low Total Cost of Ownership

Our goal is to provide a complete security solution more cost efficient than our competitors. Clavister Security Gateway 4500 Series, with its unique combination of integrated security features, award-winning service and support, and its powerful administration system provide the best possible price/performance ratio with a low Total Cost of Ownership (TCO).

## Clavister Security Gateway 4500 Series – Key Features

MODE OF OPERATIONS		IP ADDRESS ASSIGNMENT	
Layer 2 Mode (Transparent/Route Mode)	Yes/Yes	Static	Yes
Policy-Based NAT/PAT	Yes/Yes	DHCP Client, Server and Relay	Yes
Policy-Based Server Load Balancing	Yes	Proxy ARP	Yes
Virtual IP	Yes	PPPoE	Yes
ROUTING		LOG MONITORING	
Static Routing	Yes	Syslog Support	Yes
Policy-Based Routing (PBR)	Yes	Log Export (CSV) <sup>1</sup>	Yes
OSPF/OSPF over VPN	Yes/Yes	Real-Time Performance Monitoring	Yes
Multicast - IGMP	Yes	SNMP Polling/Traps	Yes
Source-Based Routing	Yes		
GRE	Yes		
APPLICATION LAYER GATEWAYS		TRAFFIC MANAGEMENT	
FTP/TFTP	Yes/Yes	Policy-Based Bandwidth Management	Yes
SIP/H.323 with NAT/SAT Support	Yes/Yes	Guaranteed Maximum Bandwidth	Yes
HTTP	Yes	Dynamic Bandwidth Balancing	Yes
SMTP/POP3	Yes/Yes	Priority Levels	Yes
CONTENT SECURITY		INTRUSION DETECTION AND PREVENTION	
Web Content Filtering	Yes	Stateful Pattern Matching	Yes
Audit/Blocking Mode	Yes	Protocol/Rate Anomaly	Yes/Yes
Classification Categories	30+	Insertion/Evasion Protection	Yes
URL Whitelisting/Blacklisting	Yes	Dynamic IP Blacklisting	Yes
Anti-Virus	Yes	Automatic Signature Updates	Yes
Stream-Based Signatures	Yes	Stateful Signatures	Yes
Automated Signature Updates	Yes	Component-Based Signatures	Yes
Per Devices Signature Service	Yes	Application Blocking	Yes
FIREWALL		MANAGEMENT	
Stateful Firewall	Yes	Clavister InControl Support	Yes
Deep Packet Inspection	Yes	Web-Based Management	Yes
Network Attack Detection/Prevention	Yes	Local Console (RS232/SSH)	Yes
DoS and DDoS Detection/Prevention	Yes	Command-Line Remote Management	Yes
TCP Reassembly	Yes	Remote Fail-Safe Operations	Yes
HIGH AVAILABILITY		USER AUTHENTICATION	
Firewall and VPN State Synchronization	Yes	LDAP Authentication	Yes
Device Failure Detection	Yes	External RADIUS Database	Yes, multiple servers
Dead Link, Gateway and Interface Detection	Yes	RADIUS Accounting	Yes
Interface Failover	Yes	CHAP, PAP	Yes
Route Failover	Yes	Web-Based Authentication	Yes
Average Failover Time	< 800 ms	Configurable HTTP/HTTPS Front-End	Yes
		xAuth VPN Authentication	Yes
VIRTUAL PRIVATE NETWORK (VPN)			
IPsec			
Encryption	AES, 3DES, DES, Blowfish, CAST-128		
Authentication	SHA-1, MD5		
IKE Modes	Main, Aggressive		
Perfect Forward Secrecy (DH Groups)	1, 2, 5		
X.509 Certificates, Pre-Shared Keys	Yes		
Self-Signed Certificates	Yes		
IPsec NAT Traversal (NAT-T)	Yes		
IPsec Tunnel Keep-Alive	Yes		
SSL VPN	Yes		
L2TP Client, LT2P Server (LNS)	Yes/Yes		
PPTP Client, PPTP Server (PNS)	Yes/Yes		
VPN Policy Selection Through	Firewall Rule Set, Routing, PBR		

<sup>1</sup> Requires Clavister InControl, which is a separately licensed product. For more information regarding available options, please contact your local Clavister Sales Representative.

## Clavister Security Gateway 4500 Series Specifications

	Clavister SG4510	Clavister SG4520	Clavister SG4530	Clavister SG4550	Clavister SG4570
<b>Performance</b>					
Firewall Performance (Mbps)	1 500	3 000	4 000	5 000	10 000
VPN Performance (Mbps)	600	800	1 000	1 500	2 500
Firewall Packets per Second (PPS)	1 400 000				
VPN Packets per Second (PPS)	500 000				
Concurrent Connections	1 000 000	2 000 000	3 000 000	4 000 000	5 000 000
Concurrent VPN Tunnels (SSL/IPsec)	1 000/1 000	2 000/2 000	3 000/3 000	5 000/5 000	10 000/10 000
Ethernet Interfaces	2 x SFP+ (Small Form-factor Pluggable Plus) - 10GbE Interfaces 2 x SFP (Small Form-factor Pluggable) - GbE Interfaces 6 x 10BASE-T/100BASE-TX/1000BASE-T				
Virtual Interfaces (VLAN 802.1q)	64	128	256	512	1 024
Virtual Routers	5 included (upgradable to 500)				
<b>Hardware</b>					
Form Factor	1U (19" rack-mountable unit)				
Dimensions	440 mm W x 44,4 mm H x 500 mm D (17,32" W x 1,73" H x 19,69" D)				
Weight	9,0 kg (19,84 lbs)				
Power Supply	100V - 240V, AC/47Hz to 63Hz				
PSU system	Up to two (2) redundant, hot-swappable PSU; one (1) PSU is included in the standard configuration and an optional PSU can be ordered separately to gain redundancy support				
Average power consumption	101 W (single PSU) / 127 W (dual PSU)				
Average heat dissipation	345 BTU (single PSU) / 434 BTU (dual PSU)				
Mean Time Between Failure (MTBF)	324 000 hours (with two (2) redundant PSU)				
Cooling System	Three (3) redundant, hot-swappable fans				
<b>Environmental</b>					
Operating temperature	0° to 45° C (32° to 113° F)				
Humidity	20% ~ 95%, non condensing				
<b>Regulatory Approvals</b>					
Safety	UL, CE				
Approvals and Compliance	FCC Class A, CE Class A, VCCI Class A				
Warranty	All products in the Clavister Security Gateway 4500 Series come with a two (2) years standard RMA warranty and ninety (90) days Software maintenance covering all major and minor software releases counting from the Start Date.  Start Date means the earlier of Product registration or ninety (90) days following shipment from Clavister.				

Specifications subject to change without further notice.

**NOTE:** For product license options and support options, please visit: [www.clavister.com](http://www.clavister.com) or contact your local Clavister Sales Representative.

### About Clavister

For over a decade, Clavister has been delivering leading network security solutions, providing commercial advantage to businesses worldwide. The Clavister family of Carrier Telecom Security Systems, unified threat management (UTM) appliances and remote access solutions provide innovative and flexible network security with world-class management and control. Clavister is a recognized pioneer in virtualization and cloud security. This complements its portfolio of hardware appliances delivering customers the ultimate choice of network security products. Clavister products are backed by Clavister's award-winning support, maintenance and training program. Clavister boasts an unprecedented track record in pioneering network security solutions including the two largest deployments of Virtual Security Gateways in the world to date.

Clavister's solutions are sold through International sales offices, distributors, and resellers throughout EMEA and Asia.

To learn more, visit [www.clavister.com](http://www.clavister.com).

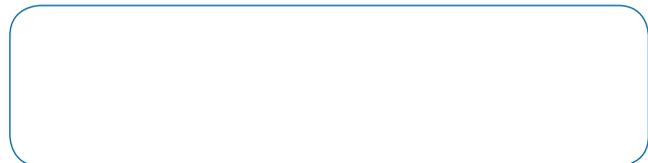
### Clavister Contact Information

#### Sales Offices

[www.clavister.com/about-us/contact-us/worldwide-offices](http://www.clavister.com/about-us/contact-us/worldwide-offices)

#### General Contact Form

[www.clavister.com/about-us/contact-us/contact-form](http://www.clavister.com/about-us/contact-us/contact-form)



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