

Sophos XGS 87w

Sophos XGS 87w Next-Gen Firewall User Manual

Model: XGS 87w

1. INTRODUCTION

The Sophos XGS 87w is a next-generation firewall designed to provide robust network security for small to medium businesses. This device integrates advanced threat protection, Wi-Fi capabilities, and comprehensive network management features to safeguard your network infrastructure. This manual provides essential information for setting up, operating, and maintaining your Sophos XGS 87w firewall.

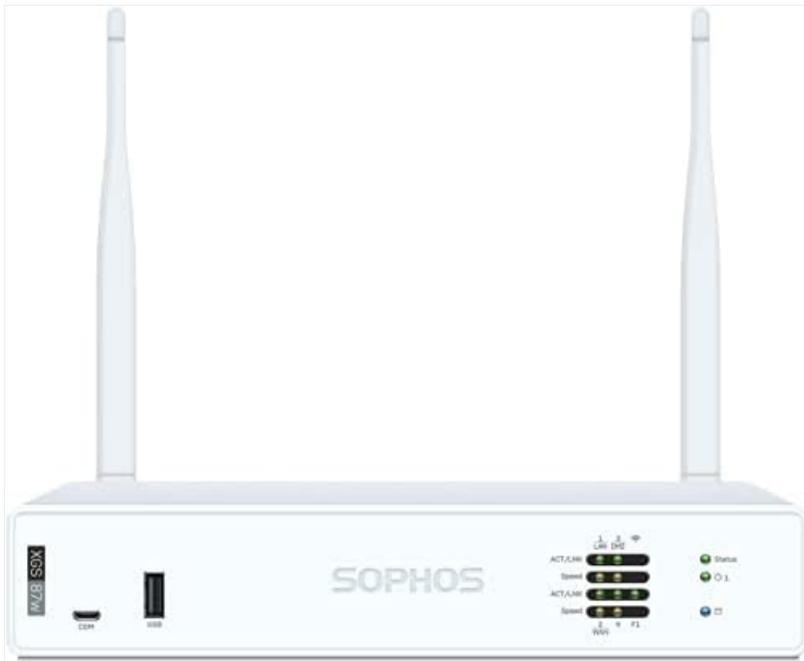
2. PACKAGE CONTENTS

Verify that all items are present in your Sophos XGS 87w package:

- Sophos XGS 87w Firewall Appliance
- Power Adapter (US Power Cord)
- Ethernet Cable
- Quick Start Guide (if applicable)
- Warranty and Safety Information

3. HARDWARE OVERVIEW

3.1 Front Panel



The front panel of the Sophos XGS 87w features status indicators and connectivity ports. From left to right, you will find the XGS 87w model label, a COM port, a USB port, the Sophos logo, and a series of LED indicators for activity, link status, speed, and overall device status. These LEDs provide quick visual feedback on the device's operational state and network activity.

3.2 Rear Panel



The rear panel includes power input, additional ports, and antennas. From left to right: DC IN 1 (12V power input), a COM port, a USB port, an F1 port, and multiple LAN/WAN ports (1/LAN, 2/WAN, 3, 4). Two external antennas are present for wireless connectivity. A reset button is also located on the far right.

4. SETUP INSTRUCTIONS

4.1 Physical Connection

1. **Connect Antennas:** Attach the two external antennas to the connectors on the rear panel.

2. **Connect to Network:** Connect your internet service provider's modem or router to the **2/WAN** port using an Ethernet cable.
3. **Connect to Local Network:** Connect your local network devices (computers, switches) to the **1/LAN, 3, or 4** ports using Ethernet cables.
4. **Connect Power:** Plug the power adapter into the **DC IN 1 (12V)** port on the rear panel, then plug the adapter into a power outlet.
5. **Power On:** The device will automatically power on. Observe the front panel LEDs for boot-up status.

4.2 Initial Configuration

After physical setup, access the device's web-based management interface for initial configuration. Refer to the Quick Start Guide included with your product for the default IP address and login credentials. It is recommended to change default credentials immediately after the first login.

5. OPERATING THE FIREWALL

The Sophos XGS 87w operates as a next-generation firewall, providing comprehensive security features. Key operational aspects include:

- **Network Protection:** Utilizes advanced threat protection, intrusion prevention, and web filtering.
- **Wireless Connectivity:** Provides Wi-Fi access (802.11ac, 802.11ax) for wireless devices.
- **Traffic Management:** Manages network traffic flow and prioritizes critical applications.
- **Reporting:** Generates reports on network activity and security events.

5.1 Protection Modules and Licensing

The Sophos XGS 87w supports various protection modules that can be customized based on your security needs. These modules enhance the firewall's capabilities in areas such as network protection, web protection, email protection, and advanced threat response. Licensing options determine the available features and duration of protection.

All Licensing Options

We recommend the Xstream Protection bundle for the ultimate in security, but if you prefer to customize your protection, all subscriptions are also available for individual purchase.

Xstream Protection Bundle:	
Base License	Networking, Wireless, Xstream Architecture, Unlimited Remote Access VPN, Site-to-Site VPN, reporting
Network Protection	Xstream TLS and DPI engine, IPS, ATP, Security Heartbeat, SD-RED VPN, reporting
Web Protection	Xstream TLS and DPI engine, Web Security and Control, Application Control, reporting
Zero-Day Protection	Machine Learning and Sandboxing File Analysis, reporting
Central Orchestration*	SD-WAN VPN Orchestration, Central Firewall Advanced Reporting (30-days), MTR/XDR ready
Enhanced Support	24/7 support, feature updates, advanced replacement hardware warranty for term

* Expected soon

Custom Protection: If you only require basic protection or want to customize your protection, you can choose the Standard Protection Bundle or purchase any of the protection modules separately.

Standard Protection Bundle:	
Base License	Networking, wireless, Xstream Architecture, unlimited Remote Access VPN, Site-to-Site VPN, reporting
Network Protection	Xstream TLS and DPI engine, IPS, ATP, Security Heartbeat, SD-RED VPN, reporting
Web Protection	Xstream TLS and DPI engine, Web Security and Control, Application Control, reporting
Enhanced Support	24/7 support, feature updates, advanced replacement hardware warranty for term

Additional Protection Modules:	
Email Protection	On-box antis spam, AV, DLP, encryption
Web Server Protection	Web Application Firewall

Sophos Central Management and Reporting: All Sophos Firewalls include cloud management and reporting at no extra charge.

Sophos Central Management and Reporting (included at no charge):	
Sophos Central Management	Group firewall management, backup management, firmware update scheduling
Sophos Central Firewall Reporting	Prepackaged and custom report tools with seven days cloud storage for no extra charge (see other options)

Additional Protection: Extend your protection further with these additional products and services.

Additional Protection Services, Products and Modules:	
Managed Threat Response	24/7 threat hunting, detection and response delivered by an expert team (more info)
Sophos Intercept X Endpoint with XDR	Sophos Central managed next-gen endpoint protection with EDR (more info)
ZTNA	Sophos Central managed Zero Trust Network Access (more info)
Central Email Advanced	Sophos Central managed antis spam, AV, DLP, encryption (more info)

Support: Enhanced support is included in all protection bundles, but you can enhance your support experience further by upgrading.

Additional Support Options:	
Enhanced Plus Support Upgrade	Upgrade your support with VIP support, HW warranty for add-ons, TAM option (extra cost)

Cloud, Virtual and Software Appliance Licensing Options: If you're deploying Sophos Firewall in the cloud, in a virtual environment, or as software on your own hardware, the licensing guide below can help you find the right option.

Model	Equivalent AWS Instance	Equivalent Azure VM	Software/Virtual License*
XGS 87	t3.medium	Standard_F2s_v2	2C4
XGS 107			
XGS 116			
XGS 126	c5.large		4C6
XGS 136	m5.large	Standard_F4s_v2	6C8
XGS 2100			
XGS 2300	c5.xlarge		
XGS 3100	m5.xlarge	Standard_F8s_v2	8C16
XGS 3300			
XGS 4300	c5.2xlarge		
XGS 4500			
XGS 5500	c5.4xlarge	Standard_F16s_v2	16C24
XGS 6500			Unlimited

** Based upon CPU cores and RAM

For a complete list of features included in each protection subscription see the [Sophos Firewall Feature List](#).

This image displays the various licensing options available for Sophos XGS series devices, detailing the features included in different protection bundles like Base License, Network Protection, Web Protection, Zero Day Protection, and Enhanced Support. It also lists additional protection modules such as Email Protection and Web Server Protection.

Protection Modules

You can choose from a number of modules to customize the protection offered by your firewall to your individual needs and deployment scenario.

Base Firewall

The Sophos Firewall Base license includes the Xstream Architecture, networking, wireless, SD-WAN, VPN, and reporting.

Xstream Architecture

Enables high performance TLS 1.3 inspection, deep-packet inspection, and network flow FastPath to accelerate trusted SaaS, SD-WAN, and cloud application traffic. Note that Network and Web Protection are required to get the full benefits of the Xstream Architecture.

Networking and SD-WAN

Includes networking, routing, and SD-WAN capabilities with zone-based stateful firewall, NAT, VLAN support, multiple WAN link options with SD-WAN routing, fail-over, and fail-back.

Secure Wireless

Built-in wireless controller for Sophos APX wireless access points. Plug-and-play access point discovery makes setup easy. Support for multiple SSIDs, hotspots, guest networks, and the diverse encryption and security standards.

VPN

Provides standards-based site-to-site and remote access VPN (free up to the capacity of the firewall) with support for IPsec and SSL. Sophos Connect remote access VPN client for Windows and Macs offers seamless and easy deployment and configuration options. Sophos unique SD-RED layer 2 site-to-site tunnels offers a light-weight robust VPN alternative.

Reporting

Extensive on-box reporting provides valuable insights into threats, users, applications, web activity, and much more. Note that specific reporting functionality may be dependent on other protection modules to get the full benefits (for example, Web Protection or web and app reports).

The Base Firewall is included with every appliance.

Web Protection

Unmatched visibility and control over all your user's web and application activity.

Powerful user and group web policy

Provides enterprise-level Secure Web Gateway policy controls to easily manage sophisticated user and group web controls. Apply policies based upon uploaded web keywords indicating inappropriate use or behavior.

Application Control and QoS

Enables user-aware visibility and control over thousands of applications with granular policy and traffic-shaping [QoS] options based on application category, risk, and other characteristics. Synchronized Application Control automatically identifies all the unknown, evasive, and custom applications on your network.

Advanced Web Threat Protection

Backed by SophosLabs, our advanced engine provides the ultimate protection from today's polymorphic and obfuscated web threats. Innovative techniques like JavaScript emulation, behavioral analysis, and origin reputation help keep your network safe.

High-performance traffic scanning

Optimized for top performance, our Xstream SSL inspection provides ultra-low latency inspection and HTTPS scanning while maintaining performance.

Web Protection is included in the Xstream and Standard Protection bundles and is also available for separate purchase.

Central Orchestration*

Sophos Central cloud-managed VPN orchestration, firewall reporting, and MTR/XDR integration.

Sophos Central VPN Orchestration

Makes VPN orchestration easy. Wizard-based tunnel configuration helps create full mesh networks, hub-and-spoke models, or complex tunnel setups between multiple firewalls a quick point-and-click exercise. Seamlessly integrates multiple WAN link and SD-WAN functionality and routing optimizations to improve resilience and performance and also integrates with user authentication and Synchronized Security Heartbeat to control access.

Central Firewall Reporting Advanced (30-day)

Cloud-based reporting with several pre-packaged common reports for threats, compliance, and user activity. Includes advanced options for creating custom reports and views with the option to save, schedule or export your custom reports. Includes 30 days of log data retention with the option to add additional storage for additional historical reporting needs.

MTR/XDR Ready

Sophos MTR provides optional 24/7 threat hunting, detection and response delivered by an expert team as a fully-managed service. Sophos XDR offers extended detection and response managed by your own team. Regardless of whether you manage it yourself, or Sophos manages it for you, your Sophos Firewall is ready to share the necessary threat intelligence and data to the cloud.

Network Protection

All the protection you need to stop sophisticated attacks and advanced threats while providing secure network access to those you trust.

Next-Gen Intrusion Prevention System

Provides advanced protection from all types of modern attacks. It goes beyond traditional server and network resources to protect users and apps on the network as well.

Security Heartbeat

Creates a link between your Sophos Central protected endpoints and your firewall to identify threats faster, simplify investigation, and minimize impact from attacks. Easily incorporate Heartbeat status into firewall policies to automatically isolate compromised systems.

Advanced Threat Protection

Instant identification and immediate response to today's most sophisticated attacks. Multi-layered protection identifies threats instantly and Security Heartbeat provides an emergency response.

Advanced VPN technologies

Adds unique and simple VPN technologies, including our clientless HTML5 self-service portal that makes remote access incredibly simple or utilize our exclusive light-weight secure SD-RED (Remote Ethernet Device) VPN technology. Network Protection is included in the Xstream and Standard Protection bundles and is also available for separate purchase.

Zero-Day Protection

AI-driven static and dynamic file analysis techniques combine to bring unprecedented threat intelligence to your firewall and so effectively identify and block ransomware and other known and unknown threats.

Powered by SophosLabs

Powered by the industry-leading SophosLabs, the Zero-Day Protection subscription includes a fully cloud-based threat intelligence and threat analysis platform. This provides deep learning-based file analysis, detailed analysis reporting, and a threat meter to show the risk summary for a file.

We use layers of analytics to identify known and potential threats, reduce unknowns, and derive verdicts and intelligence reports for the most commonly used file types.

Static File Analysis

By harnessing the power of multiple machine learning models, global reputation, deep file scanning, and more, you can quickly identify threats without the need to execute the files in real time.

Dynamic File Analysis

Execute a file in a secure cloud-based sandbox to observe its behavior and intent. Screenshots provide added insight into any key events during the analysis.

Threat Intelligence Analysis Reporting

Rich intelligence reports provide you with much more than just a 'good,' 'bad,' or 'unknown' verdict. Full insight into the nature and capabilities of a threat are delivered through the use of data science and SophosLabs research.

Zero-Day Protection is included in the Xstream Protection bundle and is also available for separate purchase.

Email Protection

Consolidate your email protection with anti-spam, DLP, and encryption. We recommend Sophos Central Email Advanced for the best cloud-based email protection solution. If you require on-box email protection, this module offers essential anti-spam, DLP and encryption.

Integrated Message Transfer Agent

Ensures always-on business continuity for your email, allowing the firewall to automatically queue mail in the event servers become unavailable.

Live Anti-Spam

Provides protection from the latest spam campaigns, phishing attacks, and malicious attachments.

Self-serve Quarantine

Gives employees direct control over their spam quarantine, saving you time and effort.

SPX Email Encryption

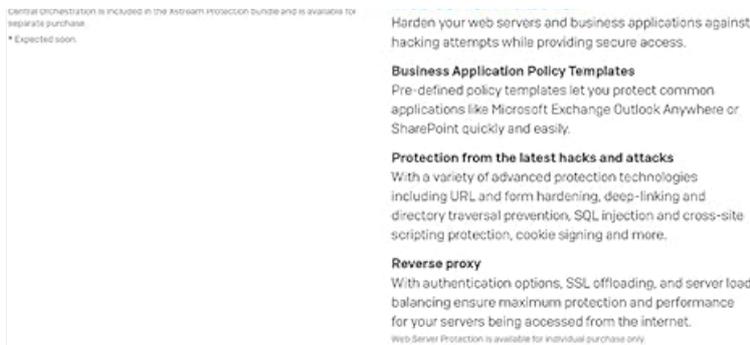
Unique to Sophos, SPX makes it easy to send encrypted email to anyone, even those without any kind of trust infrastructure, using our patent-pending password-based encryption technology.

Data Loss Prevention

Policy-based DLP can automatically trigger encryption or block/notify based on the presence of sensitive data in emails leaving the organization.

Email Protection is available for individual purchase only.

Web Server Protection



This image provides a detailed overview of the protection modules offered by Sophos, including Base Firewall, Network Protection, Web Protection, Email Protection, and Advanced Threat Protection. Each module's function, such as blocking unknown threats, exposing hidden risks, and automatically responding to incidents, is described.

6. MAINTENANCE

To ensure optimal performance and security of your Sophos XGS 87w firewall, regular maintenance is recommended:

- **Firmware Updates:** Regularly check for and apply the latest firmware updates from the Sophos support portal to ensure you have the most current security features and bug fixes.
- **Configuration Backups:** Periodically back up your firewall configuration to prevent data loss in case of an unforeseen issue.
- **Security Policy Review:** Review your security policies and rules regularly to ensure they align with your current network requirements and threat landscape.
- **Physical Inspection:** Ensure the device is in a well-ventilated area and free from dust accumulation.

7. TROUBLESHOOTING

If you encounter issues with your Sophos XGS 87w, consider the following troubleshooting steps:

- **No Power:** Verify the power adapter is securely connected to both the device and a working power outlet. Check the power LED on the front panel.
- **No Network Connectivity:** Check Ethernet cable connections to the WAN and LAN ports. Ensure your modem/router is functioning correctly. Verify link/activity LEDs on the front panel.
- **Wi-Fi Issues:** Ensure the wireless antennas are properly attached. Check Wi-Fi settings in the management interface.
- **Device Unresponsive:** If the device is unresponsive, try performing a soft reboot through the management interface. If inaccessible, use the reset button on the rear panel (refer to the Quick Start Guide for specific reset procedures, as this may revert to factory defaults).
- **Consult Documentation:** For more detailed troubleshooting, refer to the comprehensive documentation available on the Sophos support website.

8. SPECIFICATIONS

The following table outlines the technical specifications for the Sophos XGS 87w firewall.

Sophos XGS Series Desktop: SMB and Branch Office

XGS 87 and XGS 87w

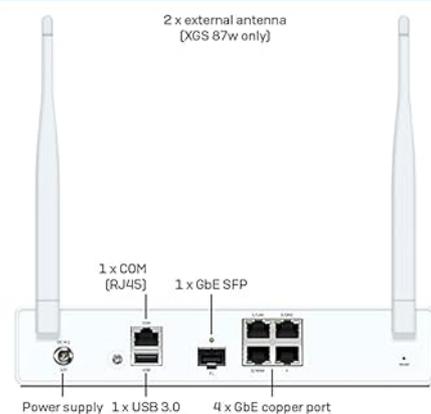
Technical Specifications

Note: The XGS 87 and 87w do not support some advanced features like on-box reporting, dual AV scanning, WAF AV scanning and the email message transfer agent (MTA) functionality. If you need these capabilities, the XGS 107(w) is recommended.

Front View



Back View



Physical specifications

Mounting	Rackmount kit available (to be ordered separately)
Dimensions Width x Height x Depth	230 x 44 x 205.5 mm
Weight	1.36 kg/3 lbs (unpacked) 2.75 kg/6.06 lbs (packed) (w-model minimally more)

Environment

Power supply	External auto-ranging AC-DC 100-240VAC, 1.7A@50-60 Hz 12VDC, 5A, 60W
Power consumption	23.2 W / 79.16 BTU/hr (87) [idle] 27.1 W / 92.13 BTU/hr (87w) [idle] 43.4 W / 148.09 BTU/hr (87) [max.] 46.8 W / 159.69 BTU/hr (87w) [max.]
Operating temperature	0°C to 40°C (operating) -20°C to +70°C (storage)
Humidity	10% to 90%, non-condensing

Product Certifications

Certifications	CB, CE, UL, FCC, ISED, VCCI, CCC, KC, BSMI, NOM, Anatel (87 only)
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Performance	XGS 87(w)
Firewall throughput	3,700 Mbps
Firewall IMIX	2,500 Mbps
Firewall Latency (64 byte UDP)	6 µs
IPS throughput	1,015 Mbps
Threat Protection throughput	240 Mbps
Concurrent connections	1,600,000
New connections/sec	35,700
IPsec VPN throughput	-
Xstream SSL/TLS Inspection	375 Mbps
Xstream SSL/TLS Concurrent connections	8,192

Note: For performance testing methodology see page 12

Wireless Specification (XGS 87w only)

No. of antennas	2 external
MIMO capabilities	2 x 2:2
Wireless interface	802.11a/b/g/n/ac (2.4 GHz / 5 GHz)

Physical interfaces

Storage	16 GB eMMC
Ethernet interfaces (fixed)	4 x GbE copper 1 x SFP fiber*
Management ports	1 x COM RJ45 1 x Micro-USB (cable incl.)
Other I/O ports	1 x USB 2.0 (front) 1 x USB 3.0 (rear)
Number of expansion slots	0
Optional add-on connectivity	SFP DSL module (VDSL2) SFP transceivers

* SFP transceivers sold separately

This image provides detailed technical specifications for the Sophos XGS 87w, including firewall throughput, IPS throughput, concurrent connections, wireless specifications (number of antennas, MIMO capabilities, wireless interface), physical interfaces (ports, SFP), physical specifications (dimensions, weight), power consumption,

operating temperature, humidity, and certifications.

Sophos XGS 87w Key Specifications

Feature	Specification
Model	XGS 87w
Firewall Throughput	3,700 Mbps
IPS Throughput	1,015 Mbps
Threat Protection Throughput	490 Mbps
Concurrent Connections	1,600,000
New Connections/sec	35,700
IPsec VPN Throughput	375 Mbps
Xstream SSL/TLS Inspection	375 Mbps
Wireless Interface	802.11a/b/g/n/ac (2.4 GHz / 5 GHz)
Number of Ports	7 (1x COM RJ45, 1x Micro-USB, 4x 2.5 GE, 1x SFP)
Dimensions (HxWxD)	230 x 44 x 205.5 mm
Weight	1.36 kg / 3 lbs (unpacked)
Power Supply	External auto-ranging AC-DC 100-240V, 50-60Hz
Operating Temperature	0°C to 40°C (32°F to 104°F)
Humidity	10% to 90%, non-condensing

For a complete list of specifications and performance test methodology, refer to the official Sophos documentation.

Sophos XGS Series Appliances

All XGS Series firewall appliances are built upon a dual-processor architecture, combining a high-performance, multi-core CPU with a dedicated Xstream Flow Processor for targeted acceleration at the hardware level. This gives you all the flexibility and adaptability of an x86 based firewall plus a significant performance boost over legacy firewall designs.

Product Matrix

Model	Tech Specs				Throughput			
	Form Factor	Ports/Slots (Max Ports)	w-model*	Swappable Components	Firewall (Mbps)	IPsec VPN (Mbps)	Threat Protection (Mbps)	Xstream SSL/TLS (Mbps)
XGS 87(w)	Desktop	5/- (5)	Wi-Fi 5	n/a	3,700	-	240	375
XGS 107(w)	Desktop	9/- (9)	Wi-Fi 5	Second power supply	7,000	-	330	420
XGS 116(w)	Desktop	9/1 (9)	Wi-Fi 5	Second power supply, 3G/4G, Wi-Fi**	7,700	-	685	650
XGS 126(w)	Desktop	14/1 (14)	Wi-Fi 5	Second power supply, 3G/4G, Wi-Fi**	10,500	-	900	800
XGS 136(w)	Desktop	14/1 (14)	Wi-Fi 5	Second power supply, 3G/4G, Wi-Fi**	11,500	-	1,000	950
XGS 2100	1U	10/1 (18)	n/a	Optional external power	30,000	-	1,250	1,100
XGS 2300	1U	10/1 (18)	n/a	Optional external power	35,000	-	1,400	1,450
XGS 3100	1U	12/1 (20)	n/a	Optional external power	38,000	-	2,000	2,470
XGS 3300	1U	12/1 (20)	n/a	Optional external power	40,000	-	2,770	3,130
XGS 4300	1U	12/2 (28)	n/a	Optional external power	75,000	-	4,800	8,000
XGS 4500	1U	12/2 (28)	n/a	Optional internal power	80,000	-	8,390	10,600
XGS 5500	2U	16/3 (48)	n/a	Power, SSD, Fan	100,000	-	12,390	13,500
XGS 6500	2U	20/4 (68)	n/a	Power, SSD, Fan	115,000	-	17,050	16,000

* 802.11ac Wave 2

** Second Wi-Fi module option for XGS 116w, 126w and 136w only

Performance Test Methodology

General: Maximum throughput measured under ideal test conditions using industry standard Keysight-Ixia BreakingPoint test tools. Actual performance may vary depending on network conditions and activated services.

- **Firewall:** Measured using HTTP traffic and 512 KB response size.
- **Firewall IMIX:** UDP throughput based on a combination of 66 byte, 570 byte and 1518 byte packet sizes.
- **IPS:** Measured with IPS with HTTP traffic using default IPS ruleset and 512 KB object size.
- **IPsec VPN:** HTTP throughput using multiple tunnels and 512 KB HTTP response size.
- **TLS inspection:** Performance measured with IPS with HTTPS sessions and different cipher suites.
- **Threat Protection:** Measured with Firewall, IPS, Application Control, and malware prevention enabled using HTTP 200 KB response size.

This image presents a product matrix for the Sophos XGS Series Appliances, comparing various models based on form factor, ports/slots, Wi-Fi model, swappable components, and throughput metrics like Firewall, IPsec VPN, Threat Protection, and Xstream SSL/TLS. The XGS 87w is included in this comparison.

9. WARRANTY AND SUPPORT

The Sophos XGS 87w typically includes a 1-year standard protection plan. For detailed warranty information, including terms and conditions, please refer to the warranty documentation provided with your product or visit the official Sophos website.

For technical support, product registration, and access to the latest software and documentation, please visit the [Sophos Support Portal](#).

