

# Nusoft Firewall MHG-900



Since the reliance on the Internet has proliferated with the growth of cloud services, any network interruption will cause tremendous loss and damage. Therefore, the top priority of implementing a network is to ensure a reliable Internet connection.

Accordingly, Nusoft MHG-900, an SPI firewall with multi-WAN interfaces, helps you establish the zero trust (2FA Text Message) and SD-WAN architecture and ensures the security of your information.

Its multi-WAN capabilities and USB modem support deliver stability and continuity to your network through link failover and load balancing capabilities, as well as serves as an internal firewall for advanced controls.

Besides, it comes equipped with AP controller, policy-based routing (PBR), QoS manager, Web filter, AAA Server, application blocker, anomaly traffic detection, total VPN connectivity and more, presenting you an all-in-one solution to cost-effectively simplify the management of your wired / wireless network, bandwidth and LAN users.

## Product Features

### Custom NIC Ports & Groups

Up to 6 GbE RJ45 ports are available for defining as LAN, WAN (5 out of 6 ports at the most), DMZ, or isolated NIC groups. The user-definable interface frees you from the limits of default NIC properties and offers flexibility to network implementation.

### SPI / Internal Firewall

Based on ICSA-certified SPI firewall technology, MHG-900 can be deployed at the network perimeter to fully protect against various security threats. In addition, the NIC Teaming feature enables it to physically segment a network, adding an extra layer of protection by serving as an internal firewall to deliver advanced controls (authentication, QoS, schedule, etc.), efficaciously increasing the security of internal network.

### Zero Trust Security (2FA Text Message)

The 2-factor authentication text message feature is provided. A security code is sent to the authenticated users' registered phone number. (authenticated for VPN connection or network access) Users should enter the code to gain access. This feature could strengthen user access security and protect against leakage of confidential data.

### One-Time Password Authentication

An unpredictable and unrepeatable password can be generated at each login using Nusoft OTP (available on iOS and Android), offering your network a two-factor authentication protection.

### AAA Server

**Authentication:**Manages the Internet access by internal or external (RADIUS / POP3 / LDAP) authentication.

**Authorization:**Permits access to a specific resource or service.

**Accounting:**Provides detailed connection logs for future network policy adjustment.

### Bi-Directional Load Balancing & Policy-based Routing

Supporting multiple WAN ports with load balancing, the MHG-900 can distribute outbound traffic across WAN links, due to which it delivers bandwidth aggregation and link failover capabilities, making the most of bandwidth, and yet connecting reliably. Besides, inbound traffic to your company website can be evenly load-balanced across each link to mitigate the load of Web requests, ensuring the accessibility to the website should any link failure occur.

Moreover, the network traffic generated from a specific service or user can be routed through a designated WAN link based on the company's network policies.

### Global Server Load-Balancing (GSLB)

When the datacenters are geographically centralized, the services provided to users usually ceased due to server failures. Accordingly, the Global Server Load-Balance feature is integrated in MHG-900. This feature enables you to locate the servers separately around the world, in addition, services continuity is ensured by its cross-datacenter failover feature. The traffic can also be distributed across servers located in different datacenter, preventing single server from being overloaded. Furthermore, by providing the service to the users who are geographically close to them, it can reduce time latency and improve the response time, bettering the user experience.

### Internet-based Application Blocking

The use of instant messaging (both login and file transfer), peer-to-peer sharing, multimedia streaming, web-based email service, online gaming, VPN tunneling and remote controlling can be effortlessly blocked by their packet signatures.

### Web Filtering

Administrators are allowed to use black/white list and restrict file transfers, MIME types and browser scripts, as well as provided with detailed logs and statistics for diagnosis.

## Wireless AP Controller

With the AP controlling capability, MHG-900 is able to centrally manage a number of access points, allowing you to perform a unified configuration, view AP status on Google Maps, check wireless client status, detect rogue APs, etc. It also helps prevent traffic from being congested to a specific AP by evenly load balancing wireless connections, effectively avoiding network bottleneck. Additionally, a dedicated mobile app for monitoring on the go is made available on both iOS and Android.

As for wireless client access, network policies can be applied to implement various authentication mechanisms (Captive Portal / RADIUS / LDAP / POP3), QoS, charge guests for Wi-Fi service, block Internet-based applications and more, fulfilling all your wireless management needs.

Note: The AP controller feature is only applicable for Nusoft APs.

## Anomaly Traffic Detection & Switch Co-Defense

MHG-900 is capable of proactively blocking DoS attacks as well as notifying the victim client and network administrator at the initial stage. A core switch may be incorporated to perform a co-defense by disabling the switch port containing the source of the attack.

## Flexible Bandwidth Management

MHG-900 adds flexibility to bandwidth management not only by delivering guaranteed or maximum bandwidth along with prioritized access, but also by limiting the individual QoS or traffic quota. Besides, the bandwidth-intensive services (e.g., P2P) can be regulated to prevent bandwidth from being exhausted by minorities.

## USB Modem Support

The USB modem can be plugged into MHG-900 to be used as a WAN interface. In addition, stability and continuity are delivered to wireless network through the link failover, load balancing and policy-based routing capabilities. This is suitable for environments where non-stop wireless connectivity is needed.

## Total VPN Solution and SD-WAN Architecture

With the built-in IPSec / PPTP / L2TP/ SSL/ Open VPN support, MHG-900 provides you a fast, reliable and safe private connection.

It features SD-WAN to deliver link failover and bandwidth aggregation capabilities to VPN tunnels, greatly increasing the speed and stability of your Internet connection. This can be used to reduce the ownership cost of network infrastructure by replacing the expensive leased line with multiple low-cost DSL links, as well as to ensure the continuity of mission-critical services.

Moreover, it also can effectively boost the security of VPN connectivity using its controls (authentication, QoS, etc.).

## Business Promotion via Facebook Page Sharing / Weibo Check-in

By combining Wi-Fi authentication with Facebook page sharing / Weibo check-in, the free Wi-Fi service can be provided to customers who check in to your business location on Weibo or share your Facebook page. This combination can not only attract customers, but also grow your business exposure. When customers check in to use your Wi-Fi service, their friends can see your Facebook page/ Weibo in their News Feed, which gets your Facebook page/ Weibo to spread virally, allowing you to reach out to potential customers and increase profits for your business.

## Business Promotion via Image/ Video Advertising

By combining Wi-Fi authentication with Sponsored Ad, customers are presented with the video/ image advertisement before starting to surf the Internet. This combination not only can attract customers but also can help promote your businesses and events.

## Business Promotion via LINE, LINE@ / WeChat Official Account

By integrating LINE, LINE@ / WeChat official account with Wi-Fi authentication, the free Wi-Fi service can be provided to customers who have friended the business's LINE@ account/ WeChat official account.

This helps business strengthen ties with their customers and draws potential customers from online channels to physical stores.

(Online-to-offline commerce)

## Built-in USB Port

The MHG-900 includes a USB port to attach a USB hard drive or a 3G/4G USB modem:

### USB hard drive:

Data and logs can be stored in the USB hard drive for long-term storage and future reference.

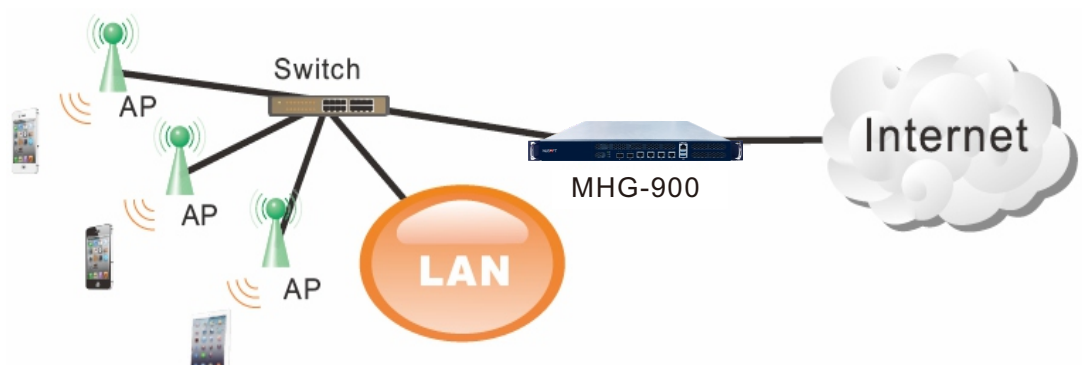
### USB modems:

The USB modems can be plugged into MHG-900 to be used as a WAN interface. In addition, stability and continuity are delivered to wireless network through the link failover, load balancing and policy-based routing capabilities. This is suitable for environments where non-stop wireless connectivity is needed.

## Full IPv6 Compatibility

MHG-900 is fully compatible with IPv6 addressing, the mainstream Internet protocol in the future. No additional budget is required for implementing another IPv6-based gateway simply for IPv4-to-IPv6 address translation.

## Deployment





## Product Highlights

Highlight	Benefit	Third-Party Product
Full IPv6 compatibility	Saves the budget for an IPv6-based gateway simply for IPv4-to-IPv6 address translation.	Either fully or partially (Web filtering, application blocking, policy-based routing, etc.) incompatible with IPv6 addressing.
Customizable & scalable NIC modules	Enables you to define and group NIC ports, as well as allows you to create multiple virtual WAN links over a physical WAN link.	Either fixed to factory default or incapable of multi-WAN load balancing.
Unified network management	Provides an effortless network management through a unified user interface.	Merely a firewall equipped with simple security mechanisms and cluttered management interfaces; operation requires a separate configuration for each feature.
LAN security mechanisms	Secures LAN networks with anomaly flow detection and switch co-defense capabilities, as well as offer protection by serving as physical internal firewall.	No protection against DoS attack initiated from within the network.
Flexible bandwidth management	Adds flexibility to bandwidth management by applying settings of guaranteed/ maximum bandwidth, priority, traffic quota, P2P QoS, etc.	Lacks flexibility in bandwidth management due to the only option being maximum bandwidth.
Manageable VPN with link failover and bandwidth aggregation capabilities	Manages VPN connections using policy settings. Besides, IPSec and PPTP deliver link failover and bandwidth aggregation capabilities to VPN tunnels.	Network security is at risk due to the lack of link failover, bandwidth aggregation and advanced controls.
Open/ L2TP VPN	Allows you to connect to an internal network or establish a VPN tunnel using your iPhone.	Only provides PPTP VPN which is no longer supported by Apple since iOS 10.
Various authentication mechanisms	Greatly increases the network security by using hardware information (CPU ID, hard disk serial number, etc.) and one-time password for user authentication.	Network security is at risk due to sole reliance on user credentials for authentication.
Policy-based routing	Allows in- / outbound traffic to be routed based on network policies.	The IP routing mechanisms are neither disclosed nor manageable.
Internet-based application blocking	Restrains the use of Internet-based applications such as IM clients, P2P software, etc.	Lacks management of the use of Internet-based application.
Zero trust security	The security code is sent to the authenticated users' mobile devices. Users should enter the code to gain access.	Users' password and account are at risk due to sole reliance on users credentials for authentication.
Bi-directional load balancing, GSLB	Ensures stable connectivity to the Internet and reliable access to your website.	Fails to meet the needs of building network service and global server load-balance.
Session persistence capability (for online banking & gaming)	Performs load balance by source IP to avoid connection interruption when connecting the online banking and gaming services.	No solution available for online banking or gaming service interruption due to IP inconsistency.
AP & Wi-Fi client management	Centrally manages a number of APs as well as applies network policies to wireless client access (e.g., QoS, website category, etc.).	Requires a purchase of an AP controlling device.
Free Wi-Fi Marketing	The combination of Wi-Fi service and Facebook/ Weibo check-in, Image/ Video advertising and LINE@/ WeChat official account can be used for business promotion.	Requires an annual fee for business promotion via social networking site.
Long-term file storage (a USB hard disk is required)	By connecting to a USB hard disk, files can be stored for long term for future reference.	Unable to store files for long term due to the lack of storage space.
USB Modem support	Uses USB modem as a WAN interface with link failover, load balancing and policy-based routing capabilities.	Lacks either USB 3G/4G modem support or link failover and load balancing capabilities.



SPI Firewall



Custom NIC Ports



SD-WAN



Total VPN Solution



Zero Trust Security



OTP Authentication



Policy-based Management



Switch Co-Defense



Up-/ Download Blocking



PBR



Free Wi-Fi Marketing



AP Controller



Multi-WAN Load Balancing



Link Failover



GSLB



Application Blocking



QoS



Anomaly Traffic Detection



## MHG Series Product Comparison

Model		NFW-460	MHG-700	MHG-900	MHG-1700A	MHG-2800	MHG-3800
Networking	No. of NIC Ports	5 GbE	4 (GbE)+2 (10GbE)	4 (GbE)+2 (10GbE)	6 (GbE)+4 (10GbE)	10~26(GbE/10GbE)	10~32(GbE/10GbE)
	Connector Type	RJ45	RJ45 & SFP+*	RJ45 & SFP+*	RJ45 & SFP+	RJ45/SFP/SFP+	RJ45/SFP/SFP+
	Custom NIC Ports	○	○	○	○	○	○
Power Redundancy		×	×	×	×	×	○
Form Factor		8.5" Desktop	1U Rackmount	1U Rackmount	1U Rackmount	1U Rackmount	2U Rackmount
<b>Features</b>							
IPv6 Compatibility		○	○	○	○	○	○
Virtual WAN		×	○	○	○	○	○
SPI / Internal Firewall		○	○	○	○	○	○
AP Controller	No. of Supported APs	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
	AP Unified-Configuration	○	○	○	○	○	○
	Status Info of APs	○	○	○	○	○	○
	Connection Status Notification	○	○	○	○	○	○
	Wi-Fi Client Management	○	○	○	○	○	○
	AP Load Balancing	○	○	○	○	○	○
	E-Map	×	○	○	○	○	○
	Active Client List	×	○	○	○	○	○
	Wi-Fi Billing	×	○	○	○	○	○
	Dedicated App	×	○	○	○	○	○
Free Wi-Fi Marketing	Facebook/Weibo Marketing	○	○	○	○	○	○
	Image/ Video Advertising	○	○	○	○	○	○
	LINE/ WeChat Marketing	○	○	○	○	○	○
In/ Outbound Load Balancing		○	○	○	○	○	○
GSLB		×	○	○	○	○	○
AAA Server (Authentication, Authorization, Accounting)		○	○	○	○	○	○
VPN Connectivity	IPSec / PPTP	○	○	○	○	○	○
	SSL / L2TP / Open	○	○	○	○	○	○
	SD-WAN	○	○	○	○	○	○
Zero Trust Security (2FA Text Message)		×	○	○	○	○	○
QoS	Guaranteed/ Maximum/ Prioritized	○	○	○	○	○	○
	Quota	○	○	○	○	○	○
	P2P	○	○	○	○	○	○
USB Port	Hard Disk (Log Storage)	○	○	○	○	○	○
	Hard Disk (File Storage)	○	×	×	×	×	×
	3G/4G modem	○	○	○	○	○	○
Policy-based Routing		○	○	○	○	○	○
FQDN Management		○	○	○	○	○	○
Up- / Download Blocking		○	○	○	○	○	○
Web Application Blocking		○	○	○	○	○	○
VLAN / VLAN Trunking		○	○	○	○	○	○
High Availability		×	○	○	○	○	○
OTP Authentication		○	○	○	○	○	○

\* Only supports SFP+ module.

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