

# Multi-Homing Gateway

## MHG - 3600



Since the reliance on the network 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-3600, an SPI firewall with multi-WAN interfaces and USB 3G/4G modem support, delivers 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, application blocker, AAA server, anomaly traffic detection, full VPN connectivity (IPSec/ PPTP/ L2TP/ OpenVPN and trunking) 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

### Customizable & Scalable NIC Modules

Up to 8 to 32 GbE RJ45 ports (replaceable with mini-GBIC ports and expandable by using Virtual WAN feature) are available for defining as LAN, WAN, 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-3600 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.

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

Supporting multi-WAN ports with load balancing, the MHG-3600 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 your network policies.

### 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.

### Flexible Bandwidth Management

MHG-3600 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 applications (e.g., P2P) can be regulated to prevent bandwidth from being exhausted by minorities.

### Web Filtering

The Web Filtering feature employs a cloud-based URL database which is categorized into Anti-Social and Illegal, Pornographic and Abusive, Gaming and Gambling, Society and Commerce, Communication and Technology, Leisure, Information and Education, Other, and further categorized into sixty-four subcategories. Web access can be easily managed by category instead of a URL, keyword, etc.

Additionally, network administrators are allowed to restrict file transfers, MIME types and browser scripts, as well as provided with detailed logs and statistics for diagnosis.

### 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 network policy adjustment.

### Anomaly Traffic Detection & Switch Co-Defense

MHG-3600 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.

## Wireless AP Controller

With the AP controlling capability, MHG-3600 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), filter website categories, limit the user traffic, 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.

## Total VPN Solution

With the built-in IPSec / PPTP / SSL VPN support, MHG-3600 provides you a fast, reliable and safe private connection.

It features VPN trunking 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.

In addition, hardware authentication is incorporated into SSL VPN connectivity, which allows user authentication to base on hardware information, such as CPU ID, hard disk serial number, etc. Branch offices and road warriors will be provided with VNC connectivity and Wake-on-LAN capability. Moreover, it also can effectively boost the security of VPN connectivity using its advanced controls, such as privileges, authentication and QoS.

## One-Time Password Authentication

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

## Full IPv6 Compatibility

MHG-3600 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.

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

By combining Wi-Fi authentication with Facebook page / Weibo check-in, the free Wi-Fi service can be provided to customers who check in to your business location on Facebook/ Weibo. 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-3600 includes a USB port to attach a USB hard drive or a 3G/4G USB modem:

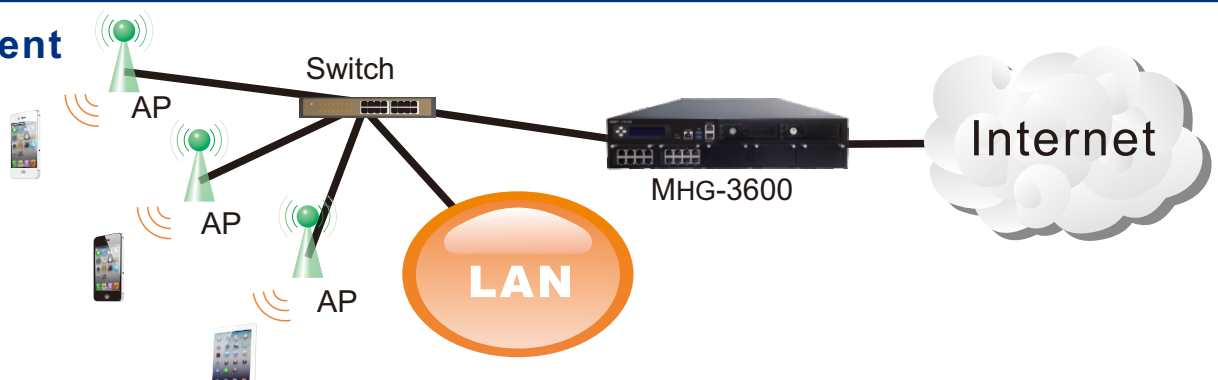
### USB hard drive:

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

### 3G/4G USB modems:

The 3G/4G USB modems can be plugged into MHG-3600 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.

## 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, group, or increase NIC ports, as well as allows you to create multiple virtual WAN links over a physical WAN.	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 serves as 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 and P2P QoS.	Lacks flexibility in bandwidth management due to the only option being maximum bandwidth.
Manageable VPN, trunking and bandwidth aggregation	Securely tunnels network connections using VPN along with policy-based management. In addition, it also supports trunking capability and bandwidth aggregation (IPSec / PPTP VPN)	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 polices.	Only comes in outbound routing capability and has no manageability.
Internet-based application blocking	Blocks the use of Internet-based applications such as IM clients, P2P software, etc.	Lacks management of the use of Internet-based application.
Web category filtering	Effortlessly regulates website access by configuring the URL category.	Less effective in filtering website access due to simple criteria such as IP, domain, keyword, etc.
Bi-directional load balancing	Ensures stable connectivity to the Internet and reliable access to your business website.	Fails to meet the needs of company websites for inbound load balancing.
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 marketing via Wi-Fi service	The combination of social networking site and free Wi-Fi service can be used for business promotion.	Requires an annual fee for business promotion via social networking site.
Long-term data storage (a USB hard disk is required)	Data and logs can be stored in the USB hard drive for long-term storage.	Unable to store the system logs for long-term storage.
USB 3G/4G Modem support	Uses 3G/4G 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.



IPv6 Compatibility



Custom NIC Ports



SPI Firewall



Total VPN Solution



Multi-WAN Load Balancing



Link Failover



Policy-based Management



User Authentication



OTP Authentication



AP Controller



Free Wi-Fi Marketing



Web Filtering



Up- / Download Blocking



PBR



Application Blocking



QoS



Anomaly Traffic Detection



Switch Co-Defense

## MHG Series Product Comparison

Model		NFW-460	NFW-650	NFW-850	NFW-1600	MHG-2600	MHG-3600
Networking	No. of NIC Ports	5 GbE	8 GbE	8 GbE	8 GbE	8~16 GbE	8~32 GbE
	Connector Type	RJ45	RJ45	RJ45	RJ45	RJ45 / Mini-GBIC	RJ45 / Mini-GBIC
	Custom NIC Ports	○	○	○	○	○	○
Power Redundancy		×	×	×	×	×	○
Form Factor		8.5" Desktop	1U Rackmount	1U Rackmount	1U Rackmount	1U Rackmount	2U Rackmount

### Features

IPv6 Compatibility		○	○	○	○	○	○
Virtual WAN		×	×	×	×	○	○
SPI / Internal Firewall		○	○	○	○	○	○
Web Filtering Database [Optional]		×	○	○	○	○	○
AP Controller	No. of Supported APs	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
	AP Unified-Configuration	○	○	○	○	○	○
	AP Status	○	○	○	○	○	○
	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		○	○	○	○	○	○
AAA Server (Authentication, Authorization, Accounting)		○	○	○	○	○	○
VPN Connectivity	IPSec / PPTP	○	○	○	○	○	○
	SSL/ L2TP/ Open	○	○	○	○	○	○
	VPN Trunking / Bandwidth Aggregation	○	○	○	○	○	○
	SSL Application	×	×	×	○	○	○
	Hardware Authentication	○	○	○	○	○	○
QoS	Guaranteed/ Maximum/ Prioritized	○	○	○	○	○	○
	Quota	○	○	○	○	○	○
	P2P	○	○	○	○	○	○
USB Port	Hard Disk (Log Storage)	○	○	○	○	○	○
	3G/4G modem	○	○	○	○	○	○
Policy-based Routing		○	○	○	○	○	○
FQDN Management		○	○	○	○	○	○
Up- / Download Blocking		○	○	○	○	○	○
Application Blocking		○	○	○	○	○	○
VLAN / VLAN Trunking		○	○	○	○	○	○
High Availability		×	×	○	○	○	○
OTP Authentication		○	○	○	○	○	○