Omada Gateway | Datasheet

ER706W-4G

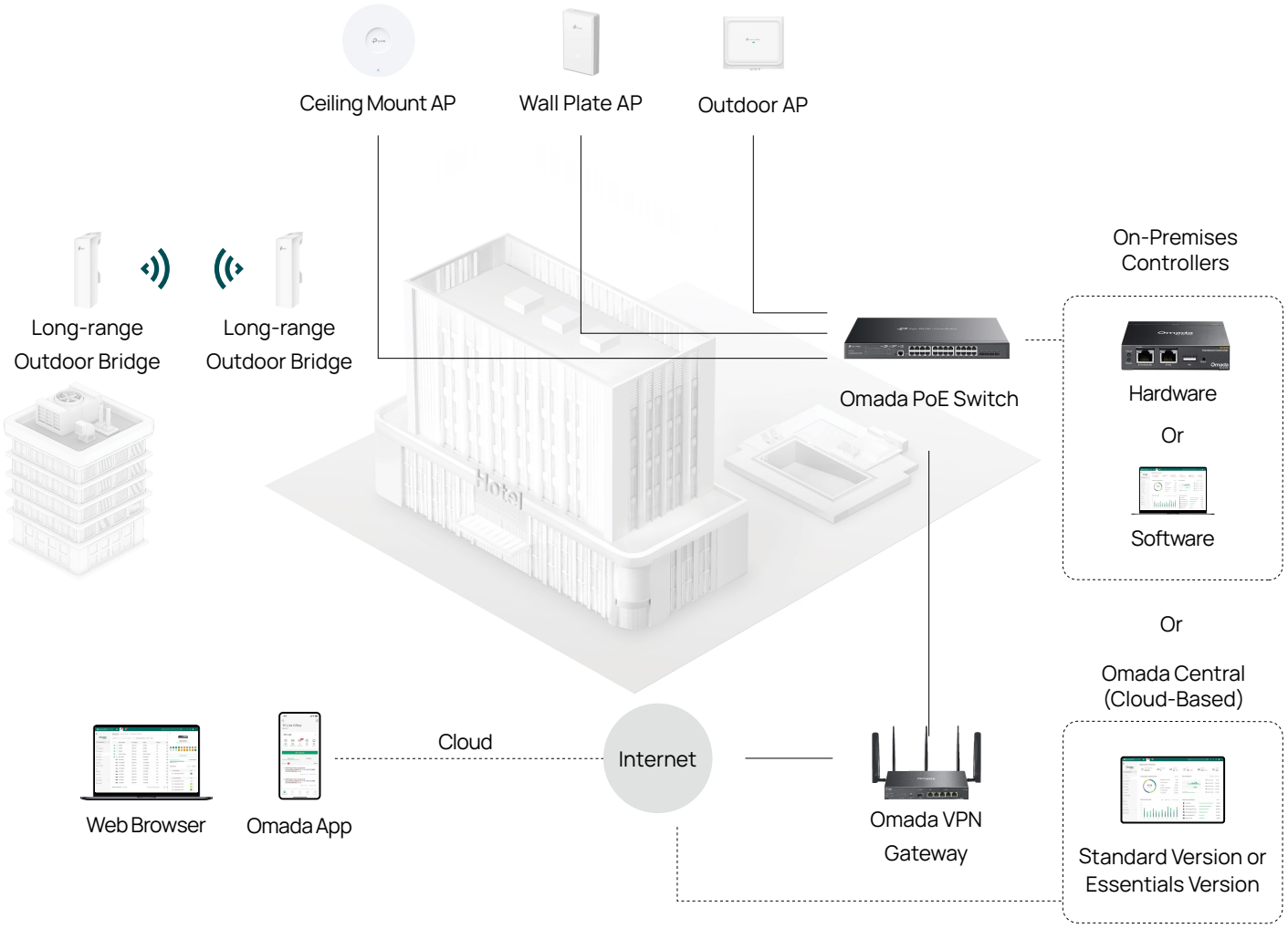
Omada 4G+Cat6 AX3000 Gigabit VPN Gateway



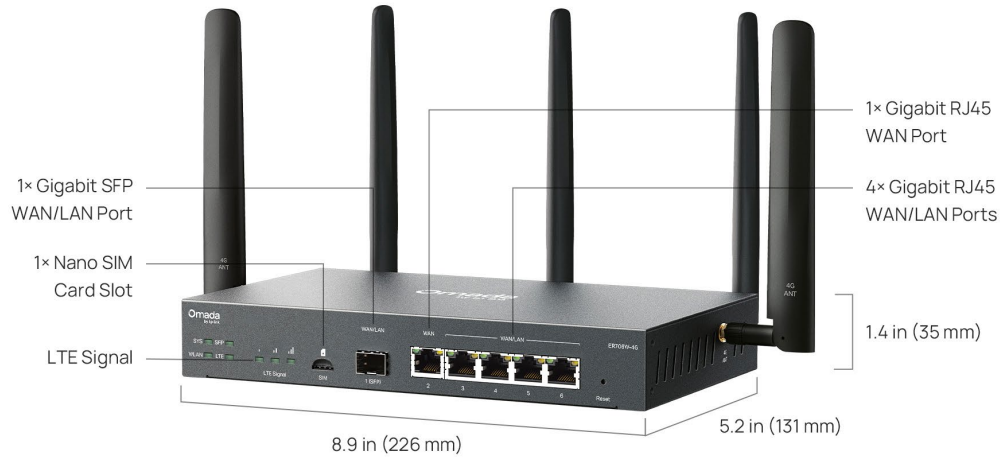
Highlights

- Support 4G+ Cat6 up to 300 Mbps* (Not compatible with AT&T's Text & Data plans** in the US).
- AX3000 Dual-Band WiFi 6 with 2402 Mbps on 5 GHz and 574 Mbps on 2.4 GHz***
- 1× Gigabit WAN Port, 5× Gigabit WAN/LAN Ports
- 5 × High-Gain Detachable Antennas
- Centralized Management
- Omada Mesh Technology.*△
- IPSec/L2TP/PPTP/OpenVPN/GRE/WireGuard/SSL VPN.△

Omada Solution



Product Pictures





Specifications

Model		ER706W-4G
Hardware	Standards and Protocols	IEEE 802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3z, IEEE 802.3x, IEEE 802.1q, TCP/IP, DHCP, ICMP, NAT, PPPoE, NTP, HTTP, HTTPS, DNS, IPSec, PPTP, L2TP, OpenVPN, WireGuard VPN, GRE VPN, SNMP, LLDP, 802.11a/b/g/n/ac/ax
	Interface	1 Gigabit SFP WAN/LAN Port 1 Gigabit WAN Port 4 Gigabit LAN/WAN Ports
	LTE	1 Nano SIM slot (4G+ Cat6)
	LTE Speed	Downlink: 300 Mbps, Uplink: 50 Mbps
	Wi-Fi Speed	2.4 GHz: 574 Mbps 5 GHz: 2402 Mbps HE160
	Antennas	Wi-Fi: Three 5GHz 5.5dBi & 2.4GHz 4.5dBi dual-band detachable antennas LTE: Two 4.0dBi omnidirectional detachable antennas
	Network Media	10BASE-T: UTP category 3, 4, 5 cable (Max 100 m) EIA/TIA-568 100Ω STP (Max 100 m) 100BASE-TX: UTP category 5, 5e cable (Max 100 m) EIA/TIA-568 100Ω STP (Max 100 m) 1000BASE-T: UTP category 5, 5e, 6 cable (Max 100 m)
	Network Type	LTE Band of US: • 4G LTE-FDD: B2/B4/B5/B7/B12/B13/B14/B25/B26/B29/B30/B66/B71 (1950/2100/850/2600/750/750/750/1950/850/700/2350/2150/650 MHz) • 4G LTE-TDD: B41/B48 (2500/3600 MHz) Carrier Aggregation of US: B2+B2/B4/B5/B7/B12/B13/B14/B29/B30/B48/B66/B71 B4+B4/B5/B7/B12/B13/B29/B30/B71 B5+B5/B7/B25/B30/B41/B66 B7+B7/B12/B66 B12+B12/B25/B30/B66 B13+B66 B14+B30/B66 B25+B25/B26/B41 B26+B41 B29+B30/B66 B30+B66 B41+B41 B48+B48 B66+B66/B71

Model		ER706W-4G
Hardware	Button	Reset button
	Power Supply	12VDC / 2A Power Adapter
	Flash	128 MB NAND
	DRAM	512 MB DDR4
	LED	SYS, WLAN, SFP, LTE Signal, WAN (1000M Link/Act, 100/10M Link/Act), WAN/LAN (1000M Link/Act, 100/10M Link/Act)
	Max Power Consumption	17.3W
	Surge Protection	4 kV surge protection
	Mounting	Desktop/ Wall-mounting/Rackmount (rackmount kit not provided)
	Dimensions (W x D x H)	8.9 × 5.2 × 1.4 in (226 × 131 × 35 mm) (Antenna dimensions not included)
	MTBF	844969h@25℃ 689168h@40℃
SDN Support	Hardware Controller	Automatic Device Discovery Intelligent Network Monitoring Abnormal Event Warnings Unified Configuration Reboot Schedule Captive Portal Configuration ZTP (Zero-Touch Provisioning)[1]
	Software Controller	
	Omada App	
Performance[2]	Concurrent Session	150,000
	New Sessions /Second	5,100
	IPS Throughput	TCP: 939 Mbps UDP: 937 Mbps
	DPI Throughput	TCP: 933 Mbps UDP: 927 Mbps
	Static IP NAT Throughput (Upload / Download)	943 Mbps/941 Mbps
	DHCP NAT Throughput (Upload / Download)	942 Mbps /941 Mbps
	PPPoE NAT Throughput (Upload / Download)	940 Mbps/937 Mbps
	L2TP NAT Throughput (Upload / Download)	868 Mbps/877 Mbps
	PPTP NAT Throughput (Upload / Download)	845 Mbps/889 Mbps
	66 Byte Packet forwarding rate (Upload / Download)	1,453,489 pps / 1,453,488 pps
	1,518 Byte Packet forwarding rate (Upload / Download)	81274 pps/ 81275 pps

1. Zero-Touch Provisioning is supported only when using Omada Cloud-Based Controller.
2. Rated specifications are based on test results. Device performance may vary as a result of the actual scenario.

Model		ER706W-4G
Performance	IPSec VPN Throughput	ESP-SHA1-AES256: 627.5 Mbps ESP-SHA256-AES256: 606.8 Mbps ESP-SHA384-AES256: 620.0 Mbps ESP-SHA512-AES256: 620.9 Mbps
	GRE	Unencrypted: 974 Mbps Encrypted: 601 Mbps
	WireGuard VPN	335.1 Mbps
	SSL VPN	114.6 Mbps
	OpenVPN	101.8 Mbps
	L2TP VPN Throughput	Unencrypted: 990.0 Mbps Encrypted: 502.5 Mbps
	PPTP VPN Throughput	Unencrypted: 1057.5 Mbps Encrypted: 204.6 Mbps
Basic Functions	WAN Connection Type	Static IP Dynamic IP PPPoE (supports MRU Configuration) PPTP L2TP
	DHCP	DHCP Server DHCPv6 PD Server (only in Standalone Mode) DHCP Options Customization DHCP Address Reservation Multi-IP Interfaces Multi-Net DHCP WAN DHCP 60
	MAC Clone	Modify WAN Address
	IPTV	IGMP v2/v3 Proxy, Custom Mode, Bridge Mode
	SMS	Receive / Send SMS
	IPv6	StaticIP / SLAAC / DHCPv6 / PPPoE / 6to4Tunnel / PassThrough / Non-Address mode
	Stateful ACL	√
	mDNS Repeater	√
	Quality of Service	√
	Bridge VLAN	√
	VLAN	802.1Q VLAN
	LAN DNS	√

Model		ER706W-4G
Wireless Function	Wireless Encryption	WPA/WPA2/WPA3 Personal, WPA/WPA2/WPA3 Enterprise
	Multiple SSIDs	16 in total (8 per radio)
	Enable/Disable Wireless Radio	√
	Enable/Disable SSID Broadcast	√
	Guest Network	√
	Automatic Channel Selection Algorithm	√
	Transmit Power Control	Adjust transmit Power on dBm
	Seamless Roaming	√
	Mesh	√ (with EAP that supports Mesh)
	OFDMA	√
	Beamforming	√
	MU-MIMO	√
	Rate Limit	Based on SSID/Client
	Load Balance	√
	Airtime Fairness	√
	Band Steering	√
	RADIUS Accounting	√
	MAC Authentication	√
	Reboot Schedule	√
	Wireless Schedule	√
	Support Data Rates	802.11ax: 8 Mbps to 2402 Mbps (MCS0-MCS11, NSS = 1 to 2 HE20/40/80/160) 802.11ac: 6.5 Mbps to 2166.7 Mbps (MCS0-MCS11, NSS = 1 to 2 VHT20/40/80/160) 802.11n: 6.5 Mbps to 300 Mbps (MCS0-MCS15, HT20/40) 802.11g: 6, 9, 12, 18, 24, 36, 48 ,54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48 ,54 Mbps

Model		ER706W-4G
Transmission	Load Balance	Intelligent Load Balance Application Optimized Routing Link Backup (Timing, Failover) Online Detection
	NAT	One-to-One NAT Multi-Net NAT Virtual Server Port Triggering[1] NAT-DMZ FTP/H.323/SIP/IPSec/PPTP ALG UPnP Disable NAT
	Routing	Static Routing Policy Routing RIP[2] OSPF[2]
	Session Limit	IP-based Session Limit
	Bandwidth Control	IP-based Bandwidth Control
VPN	IPSec VPN	100 IPSec VPN Tunnels LAN-to-LAN, Client-to-LAN Main, Aggressive Negotiation Mode DES, 3DES, AES128, AES192, AES256 Encryption Algorithm IPsec Failover IKE v1/v2 MD5, SHA1, SHA2-384 and SHA2-512 Authentication Algorithm NAT Traversal (NAT-T) Dead Peer Detection (DPD) Perfect Forward Secrecy (PFS)
	PPTP VPN	PPTP VPN Server PPTP VPN Client (10)[3] 50 Tunnels PPTP with MPPE Encryption
	L2TP VPN	L2TP VPN Server L2TP VPN Client (10)[3] 50 Tunnels L2TP over IPSec
	GRE	√ (Only in Standalone Mode)
	SD-WAN	√ (Only in Controller Mode)
	WireGuard VPN	√
	SSL VPN	50 Tunnels
	OpenVPN	OpenVPN Server OpenVPN Client (5)[3] 55 OpenVPN Tunnels "Certificate + Account" Mode Full Mode

1. Port Triggering is supported only in Standalone Mode.
2. RIP and OSPF are supported only in Standalone Mode.
3. For PPTP VPN and L2TP VPN, ER706W-4G can connect with up to 10 VPN servers. For OpenVPN, ER706W-4G can connect with up to 5 VPN servers.

Model		ER706W-4G
Security	Attack Defense	TCP/UDP/ICMP Flood Defense Block TCP Scan (Stealth FIN/Xmas/Null) Block Ping from WAN
	Filtering	Web Group Filtering[1] URL Filtering Web Security[1]
	DNS Proxy	DNSSEC, DoH, DoT, DNS Override
	ARP Inspection	Sending GARP Packets ARP Scanning[2] IP-MAC Binding ARP Detection
	Access Control	Source/Destination IP Based ACL Stateful ACL IPv4/IPv6 ACL National Based ACL FQDN
	DPI	Deep Packet Inspection Support 2788 type Applications[3]
	IDS/IPS	Signature-based IPS/IDS threat detection
Authentication	Web Authentication	No Authentication Simple Password[4] Hotspot (Local User / Voucher[4] / SMS[4] / Radius[4]) External Radius Server External Portal Server[4] LDAP[5]
Management	Service	Dynamic DNS (Dyndns, No-IP, Peanuthull, Comexe, DDNS Customization)
	Maintenance	Web Management Interface Remote Management Export & Import Configuration SNMP v1/v2c/v3 Diagnostics (Ping & Traceroute) NTP Synchronize[5] Port Mirroring CLI (only in Standalone Mode) Syslog Support
Others	Certification	FCC
	Package Contents	ER706W-4G, Power Adapter, Rubber Feet, Quick Installation Guide
	System Requirements	Microsoft Windows 98SE, NT, 2000, XP, Vista™ or Windows 7/8/8.1/10/11 MAC OS, NetWare, UNIX or Linux
	Environment	Operating Temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage Temperature: -40 °C to 70 °C (-40 °F to 158 °F) Operating Humidity: 10% to 90% non-condensing Storage Humidity: 5% to 90% non-condensing

1. Web Group Filtering and Web Security are supported only in Standalone Mode.
2. ARP Scanning is supported only in Standalone Mode.
3. The number of applications that can be identified may vary by the model/firmware version or the DPI signature database. Refer to the management page for the actual count.
4. The following web authentication methods are supported only in Controller Mode: Simple Password, Voucher, SMS, Radius, and External Portal Server.
5. LDAP NTP Synchronize are supported only in Standalone Mode.

Ordering Information

Host Gateway	
Model	Description
ER706W-4G	Omada 4G+ Cat6 AX3000 Gigabit VPN Gateway

SFP Modules	
Model	Description
SM311LS	Gigabit SFP module, Single-mode, LC interface, Up to 20km distance
SM311LM	Gigabit SFP module, Multi-mode, LC interface, Up to 550m distance
SM321A	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 20 km
SM321A-2	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 2 km
SM321B	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 20 km
SM321B-2	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 2 km

RJ45 SFP Modules	
Model	Description
SM331T	1000BASE-T RJ45 SFP Module

⋆ Some models featured in this guide may be unavailable in your country or region. Visit the website for local sales information: www.omadanetworks.com.

*Actual 4G downlink speeds vary between buildings. Factors affecting 4G speeds include the internet service plan, real-time network capacity, equipment and client limitations, and environmental factors.

** "Text & Data plans" refer to plans supporting both SMS text messaging and data services. Such plans from AT&T may not be compatible with our products.

***Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and coverage are not guaranteed and will vary.

*△Omada Mesh Technology requires the use of EAPs that support mesh functionality. Please refer to https://www.omadanetworks.com/omada-mesh/product-list/ to confirm which Omada EAPs are compatible with Omada Mesh. Additionally, ER706W-4G also supports standalone mesh. Please refer to https://www.omadanetworks.com/standalonemesh/product-list/ to confirm the specific models.

△For PPTP VPN and L2TP VPN, ER706W-4G can connect with up to 10 VPN servers. For OpenVPN, ER706W-4G can connect with up to 5 VPN servers.

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