Omada Gateway | Datasheet

ER703WP-4G-Outdoor

Omada 4G+Cat6 AX3000 Outdoor/Indoor Gateway

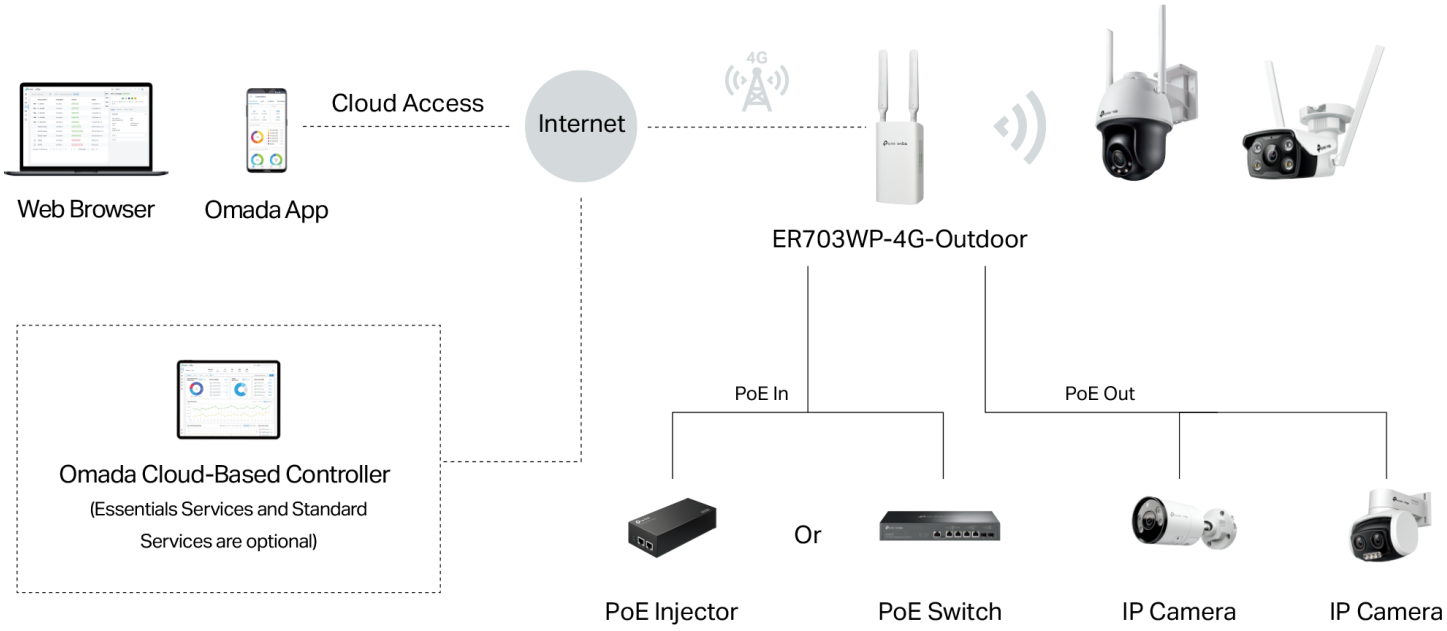
Highlights

- 4G+ Cat6 up to 300 Mbps*
- AX3000 Wi-Fi 6 with 2402 Mbps on 5GHz and 574 Mbps on 2.4GHz[†#]
- 3 × Gigabit WAN/LAN Ports (2 × PoE Out, 1 × PoE In)
- 1 × Nano SIM Card Slot
- 802.3at/bt PoE or 12V/2A DC Power Supply
- 4G and Ethernet WAN Auto Backup with Load Balancing
- IPSec/L2TP/PPTP/OpenVPN/GRE/WireGuard/SSL VPN[§]
- Centralized Management
- IP55 Weatherproofing

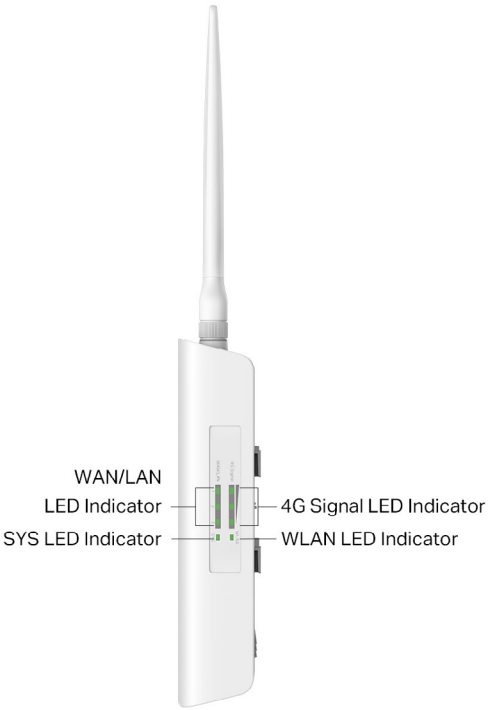
Application Scenario

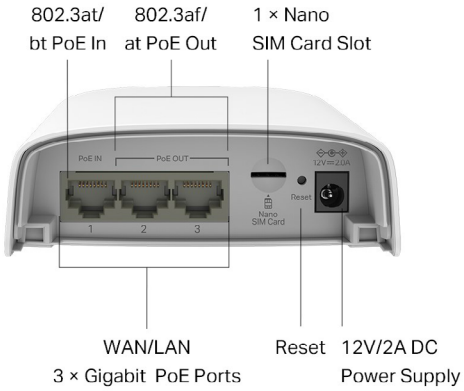
Combing 4G internet access, Wi-Fi 6 wireless technology and 3 Gigabit PoE in/out ports all in one device, the ER703WP-4G-Outdoor is a powerful and versatile gateway with easy deployment. It is ideal for remote areas and outdoor use.

Ideal for Remote Areas and Outdoor Use



Product Pictures





Specifications

Model		ER703WP-4G-Outdoor	
Product Description		Omada 4G+Cat6 AX3000 Outdoor/Indoor Gateway	
Hardware	Standards and Protocols	IEEE 802.3, IEEE802.3u, IEEE802.3ab, 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, 802.11a/b/g/n/ac/ax	
	Interface	3 Gigabit WAN/LAN Ports	
	LTE	1 Nano SIM slot (4G+ Cat6)	
	LTE Filter	√	
	LTE Speed	Downlink: 300 Mbps, Uplink: 50 Mbps	
	Wi-Fi Speed	2.4 GHz: 574 Mbps 5 GHz: 2402 Mbps HE160	
	Antennas	2 internal Wi-Fi antennas 2 external LTE 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)	
	PoE	PoE Standard	802.3at/bt PoE in for port 1 802.3af/at PoE out for port 2-3
		PoE Power Budget	45 W when powered by 802.3bt Type 4 (90 W) 27 W when powered by 802.3bt Type 3 (60 W)
	Network Type	LTE Band of EU: 4G LTE-FDD: B1/B3/B5/B7/B8/B20/B28/B32 (2100/1800/850/2600/900/800/700/1450 MHz) 4G LTE-TDD: B38/B40/B41 (2600/2300/2500 MHz) 3G DC-HSDPA/HSPA+/HSDPA/HSUPA/WCDMA: B1/B3/B5/B8 (2100/1800/850/900 MHz) Carrier Aggregation: B1+B1/B3/B5/B7/B8/B20/B28/B38/B40/B41 B3+B3/B5/B7/B8/B20/B28/B38/B40/B41 B5+B5/B7/B38/B40/B41 B7+B7/B8/B20/B28/B32 B8+B32/B38/B40/B41 B20+B32/B38/B40 B28+B32/B38/B40/B41 B38+B38 B40+B40 B41+B41	

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Hardware	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: 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
	Button	Reset button
	Power Supply	802.3at/bt PoE or 12V/2A Adapter Power Adapter is not included
	Flash	256 MB NAND
	DRAM	512 MB DDR4
	LED	4G Signal, WLAN. WAN/LAN, SYS
	Max Power Consumption	14.5W without PoE 63W with PoE
	Surge Protection	4 kV surge protection
	Mounting	Wall-mounting/ Pole-mounting
	Dimensions (W x D x H)	3.9 × 1.5 × 6.7 in (100 × 38.5 × 170 mm)(excluding antennas)
	MTBF	628675h@ 25℃ 516330h@ 60℃
SDN Support	Hardware Controller	Automatic Device Discovery Intelligent Network Monitoring Abnormal Event Warnings Unified Configuration Reboot Schedule Captive Portal Configuration
	Software Controller	
	Omada App	

1. Rated specifications are based on test results using specific software version. Device performance may vary as a result of the actual scenario.

Model		ER703WP-4G-Outdoor
Performance[1]	Concurrent Session	120 000
	New Session/Second	3800
	DPI Throughput	TCP; 1131 Mbps UDP: 974 Mbps
	Static IP NAT Throughput(Upload/ Download)	945.9Mbps/950.2 Mbps
	DHCP NAT Throughput(Upload/ Download)	947.3 Mbps /949.4 Mbps
Performance[1]	PPPoE NAT Throughput(Upload/ Download)	916.9 Mbps /946.3 Mbps
	L2TP NAT Throughput(Upload/ Download)	878.9 Mbps /778.9 Mbps
	PPTP NAT Throughput(Upload/ Download)	852.2 Mbps /775.9 Mbps
	66 Byte Packet forwarding rate (Upload/Download)	1453489 pps /1453489 pps
	1518 Byte Packet forwarding rate (Upload/Download)	81275 pps/81275pps
	IPSec VPN Throughput	ESP-SHA1-AES256: 568.3 Mbps ESP-SHA256-AES256: 559.8 Mbps ESP-SHA384-AES256: 565.6 Mbps ESP-SHA512-AES256: 555.0 Mbps
	GRE	Unencrypted: 450.3 Mbps Encrypter: 277.6 Mbps
	Wireguard VPN	462.8 Mbps
	SSL VPN	86.6 Mbps
	OpenVPN	85.1 Mbps
	L2TP VPN	Unencrypted: 858.7 Mbps Encrypter: 467.0 Mbps
	PPTP VPN	Unencrypted: 876.2 Mbps Encrypter: 182.6 Mbps

Model		ER703WP-4G-Outdoor
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
	MAC Clone	Modify WAN Address
	IPTV	IGMP v2/v3 Proxy, Custom Mode, Bridge Mode
	IPv6	StaticIP / SLAAC / DHCPv6 / PPPoE / 6to4Tunnel / PassThrough / Non-Address mode
	Stateful ACL	√
	mDNS Repeater	√
	Quality of Service	√
	Bridge VLAN	√
	VLAN	802.1Q VLAN
	SMS	Receive/Send SMS

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, the gateway can connect with up to 10 VPN servers. For OpenVPN, the gateway can connect with up to 5 VPN servers.

Model		ER703WP-4G-Outdoor
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

1. Web Group Filtering and Web Security are supported only in Standalone Mode.
2. ARP Scanning is supported only in Standalone Mode.
3. The following web authentication methods are supported only in Controller Mode: Simple Password, Voucher, SMS, Radius, and External Portal Server.
4. Diagnostics (Ping & Traceroute) and NTP Synchronize are supported only in Standalone Mode.

Model		ER703WP-4G-Outdoor
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
	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
	WireGuard VPN	√
	SSL VPN	50 Tunnels
	OpenVPN	OpenVPN Server OpenVPN Client (5)[3] 55 OpenVPN Tunnels "Certificate + Account" Mode Full Mode

Model		ER703WP-4G-Outdoor
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, and DoT
	DPI	Deep Packet Inspection
	ARP Inspection	Sending GARP Packets ARP Scanning[2] IP-MAC Binding
	Access Control	Source/Destination IP Based Access Control
Authentication	Web Authentication	No Authentication Simple Password[3] Hotspot (Local User / Voucher[3] / SMS[3] / Radius[3]) External Radius Server External Portal Server[3] LDAP
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)[4] NTP Synchronize[4] Port Mirroring CLI (only in Standalone Mode) Syslog Support
Others	Certification	CE, FCC, RoHS
	Package Contents	ER703WP-4G-Outdoor Gateway, Antennas, Mounting Kits, 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: -30 °C to 60 °C Storage Temperature: -40 °C to 70 °C Operating Humidity: 5% to 95% non-condensing Storage Humidity: 5% to 90% non-condensing

Ordering Information

Host Gateway	
Model	Description
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*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.
†Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage are not guaranteed and will vary.
ΔThe Omada cloud-based controller offers the Essentials version of cloud services for free, while the Standard version, which includes advanced features, requires a license.
§GRE VPN is supported only in Standalone Mode.
#Use of Wi-Fi 6 and other features including OFDMA, MU-MIMO, 1024-QAM, and BSS Color requires clients to also support the corresponding features.
**Protection against lightning may be achieved through proper product setup, grounding, and cable shielding. Refer to the instruction manual and consult an IT professional to assist with setting up this product.

*Some models featured in this guide may be unavailable in your country or region. Visit TP-Link website.