# Omada Gateway | Datasheet

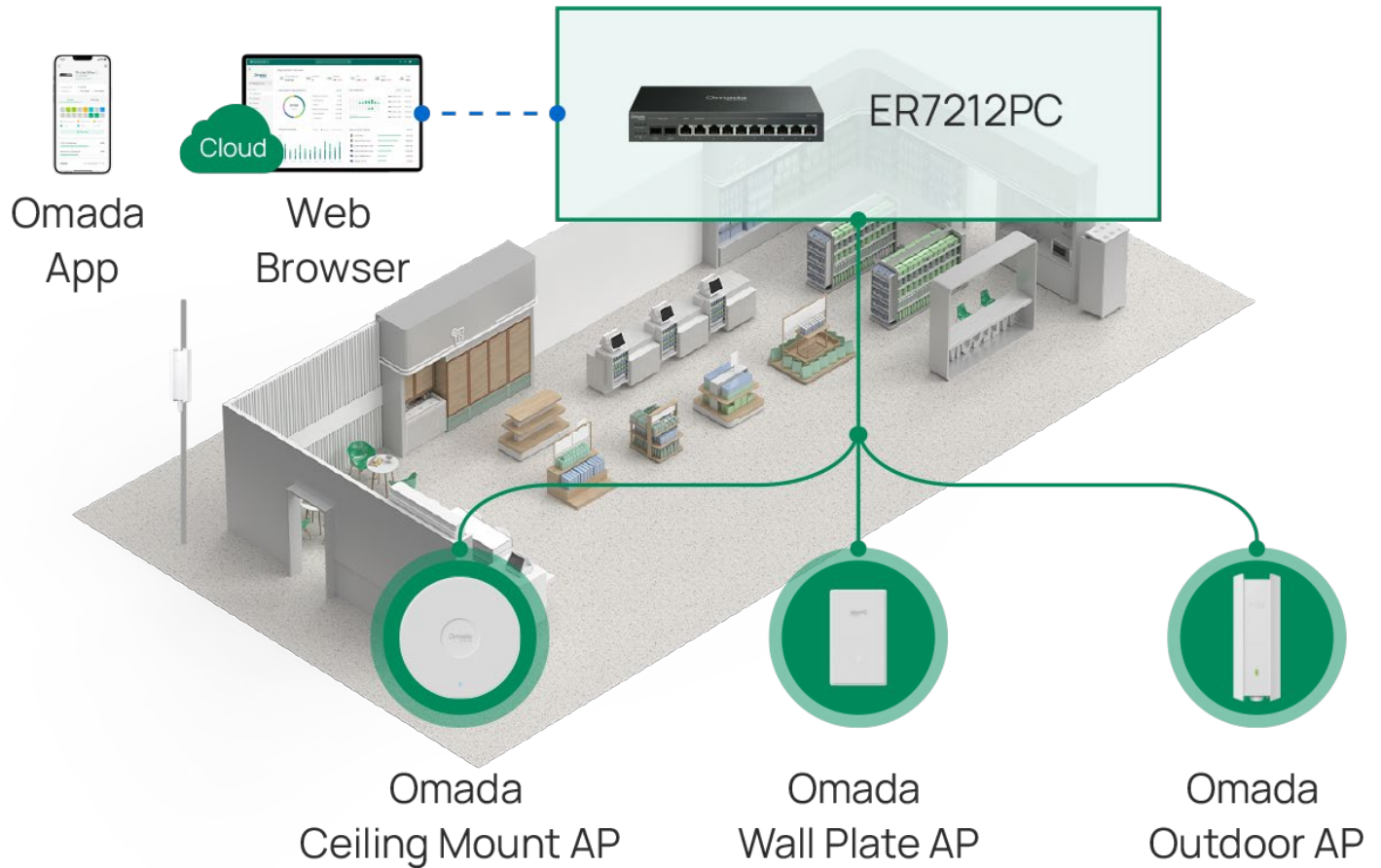## ER7212PC

Omada 3-in-1 Gigabit VPN Gateway
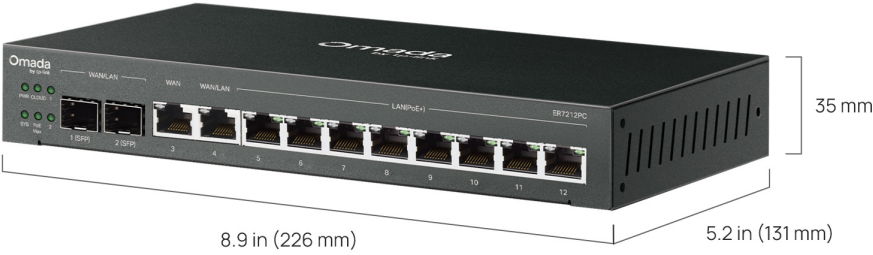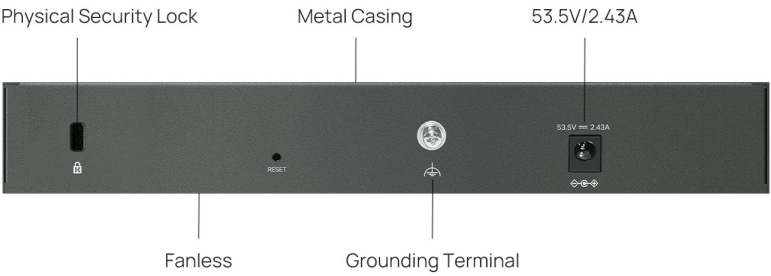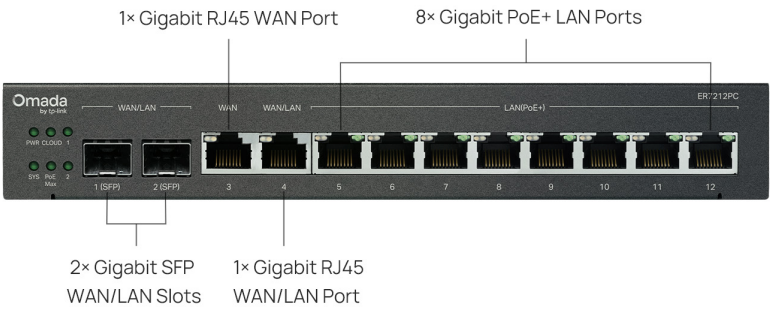


## Highlights

- 3-in-1 Gateway: Integrates 8× PoE+ ports and centralized management capability.
- Up to 24 Omada devices (2 gateways, 22 switches and EAPs in total) can be centrally managed.
- Up to 12× Gigabit ports bring high-speed network.
- Up to 4× WAN Ethernet ports for a stable network.
- Centralized Management: Cloud access and the Omada app for easy management.
- Highly Secure VPN: Supports multiple VPN protocols including OpenVPN/IPSec/ SSL/ WireGuard/ L2TP/PPTP VPN.
- Easy Installation: Fanless and compact design for desktop and wall mounting.

# Omada Solution

The ER7212PC is a VPN Gateway that integrates 8× PoE+ ports and centralized management capability. It supports hybrid cloud technology to remotely control the whole network anywhere, anytime. It is designed for Home and Small Business Networking.



Omada App

Web Browser

Cloud

ER7212PC

Omada Ceiling Mount AP

Omada Wall Plate AP

Omada Outdoor AP

# Product Pictures

1× Gigabit RJ45 WAN Port

8× Gigabit PoE+ LAN Ports

2× Gigabit SFP WAN/LAN Slots

1× Gigabit RJ45 WAN/LAN Port

Physical Security Lock

Metal Casing

53.5V/2.43A

Fanless

Grounding Terminal

35 mm

8.9 in (226 mm)

5.2 in (131 mm)

# Specifications

| Model | | ER7212PC |
|---|---|---|
| **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, SNMP, LLDP |
| | Interface | 2 Gigabit SFP WAN/LAN ports[1]<br>1 Gigabit WAN port<br>1 Gigabit LAN/WAN port<br>8 Gigabit LAN ports |
| | Network Media | 10BASE-T: UTP category 3, 4, 5 cable (Max 100 m)<br>EIA/TIA-568 100Ω STP (Max 100 m)<br>100BASE-TX: UTP category 5, 5e cable (Max 100 m)<br>EIA/TIA-568 100Ω STP (Max 100 m)<br>1000BASE-T: UTP category 5, 5e, 6 cable (Max 100 m) |
| | Button | Reset button |
| | Power Supply | 53.5VDC/2.43A Adapter |
| | Flash | 32Mbit Nor+8GB eMMC |
| | DRAM | 2 GB DDR4 |
| | PoE | 8 ports PoE+ output, 110 W PoE Budget |
| | Surge Protection | 6kV |
| | ESD Protection | ±8kV air discharge<br>±4kV contact discharge |
| | Dimensions ( W x D x H ) | 8.9 × 5.2 × 1.4 in (226 × 131 × 35 mm) |
| | Net Weight | 1 Kg |
| | Fan | Fanless |
| | Enclosure Materials | Steel |
| | Installation | Desktop/Wall-mount/Rack-mount (rackmount kit sold separately) |
| | MTBF | 1034487h@25℃ |
| | Max Power Consumption | 131 W (110 V/60 Hz) (With 110 W PD connected) |
| **SDN Support** | Integrated Controller Software | Automatic Device Discovery<br>Intelligent Network Monitoring<br>Abnormal Event Warnings<br>Unified Configuration<br>Reboot Schedule<br>Captive Portal Configuration<br>Management up to 24 Omada devices (2 gateways, 22 switches and EAPs in total)<br>OpenAPI |
| **Performance[2]** | Concurrent Session | 50,000 |
| | New Sessions /Second | 3,800 |
| | Static IP NAT Throughput (Upload / Download) | 940.2 Mbps / 947.5 Mbps |
| | DHCP NAT Throughput (Upload / Download) | 947.8 Mbps / 948.6 Mbps |
| | PPPoE NAT Throughput (Upload / Download) | 943.1 Mbps / 942.6 Mbps |
| | L2TP NAT Throughput (Upload / Download) | 898.4 Mbps / 915.8 Mbps |

1. The SFP port of ER7212PC does not support direct-attach cable connection, including SM5220-1M, SM5220-3M, etc.
2. Rated specifications are based on test results using specifi software version. Device performance may vary as a result of the actual scenario.

| Model | | ER7212PC |
|---|---|---|
| Performance | PPTP NAT Throughput (Upload / Download) | 909.7  Mbps / 912.8 Mbps |
| | 66 Byte Packet forwarding rate (Upload / Download) | 1,453,459 pps / 1,453,459 pps |
| | 1,518 Byte Packet forwarding rate (Upload / Download) | 81,272 pps / 81,272 pps |
| | IPSec VPN Throughput | ESP-SHA1-AES256: 984.7 Mbps, ESP-SHA2-AES256: 990.5 Mbps, ESP-SHA384-AES256: 983.9 Mbps, ESP-SHA512-AES256: 985.8 Mbps |
| | OpenVPN Throughput | 233.1 Mbps |
| | L2TP VPN Throughput | Unencrypted: 1,273.9 Mbps<br>Encrypted: 851.8 Mbps |
| | PPTP VPN Throughput | Unencrypted: 1293.5 Mbps<br>Encrypted: 297.1 Mbps |
| | SSL VPN Throughput | 243.1 Mbps |
| | WireGuard VPN Throughput | 576.2 Mbps |
| | IPS Throughput | TCP: 939 Mbps; UDP: 936 Mbps |
| | DPI Throughput | TCP: 942 Mbps; UDP: 940 Mbps |
| Basic Functions | WAN Connection Type | Static IP<br>Dynamic IP<br>PPPoE<br>PPTP<br>L2TP |
| | DHCP | DHCP Server<br>DHCP Options Customization<br>DHCP Address Reservation<br>Multi-IP Interfaces<br>Multi-Net DHCP<br>WAN DHCP 60 |
| | IPTV | IGMP v2/v3 Proxy, Custom Mode, Bridge Mode |
| | IPv6 | StaticIP / SLAAC / DHCPv6 / PPPoE / 6to4Tunnel / PassThrough / Non-Address mode |
| | VLAN | 802.1Q VLAN |
| | MAC Clone | Modify WAN Address |
| | mDNS Repeater | √ |
| | Quality of Service | √ |
| | Bridge VLAN | √ |
| Transmission | Load Balance | Intelligent Load Balance<br>Application Optimized Routing<br>Link Backup<br>Online Detection |
| | NAT | Multi-Net NAT<br>One-to-One NAT<br>Port Forwarding<br>NAT-DMZ<br>FTP/H.323/SIP/IPSec/PPTP ALG<br>UPnP<br>Disable NAT |
| | Routing | Static Routing<br>Policy Routing |
| | Session Limit | IP-based Session Limit |
| | Bandwidth Control | IP-based Bandwidth Control |

| Model | | ER7212PC |
|---|---|---|
| VPN | IPSec VPN | 20 IPSec VPN Tunnels<br>LAN-to-LAN, Client-to-LAN<br>Main, Aggressive Negotiation Mode<br>DES, 3DES, AES128, AES192, AES256 Encryption Algorithm<br>IPsec Failover<br>IKE v1/v2<br>MD5, SHA1, SHA2-384 and SHA2-512 Authentication Algorithm<br>NAT Traversal (NAT-T)<br>Dead Peer Detection (DPD)<br>Perfect Forward Secrecy (PFS) |
| | PPTP VPN | PPTP VPN Server<br>PPTP VPN Client (10)<br>16 Tunnels<br>PPTP with MPPE Encryption |
| | L2TP VPN | L2TP VPN Server<br>L2TP VPN Client (10)<br>16 Tunnels<br>L2TP over IPSec |
| | OpenVPN | OpenVPN Server<br>OpenVPN Client (10)<br>16 OpenVPN Tunnels<br>"Certificate + Account" Mode<br>Full Mode |
| | WireGuard VPN | √ |
| | SSL VPN | 80 Tunnels |
| Security | Attack Defense | TCP/UDP/ICMP Flood Defense<br>Block TCP Scan (Stealth FIN/Xmas/Null)<br>Block Ping from WAN |
| | Filtering | URL Categories and URLs Filtering |
| | ACL | Source/Destination IP Based ACL<br>Stateful ACL<br>IPv4/IPv6 ACL<br>National Based ACL<br>FQDN |
| | DNS Proxy | DNSSEC, DoH, DoT, DNS Override |
| | DPI | Deep Packet Inspection<br>Support 2421 type Applications |
| | IDS/IPS | Signature-based IPS/IDS threat detection |
| | ARP Inspection | Sending GARP Packets<br>IP-MAC Binding<br>ARP Detection |
| Authentication | Web Authentication | No Authentication<br>Simple Password<br>Hotspot (Local User / Voucher / SMS / Radius)<br>External Radius Sever<br>External Portal Sever |

| Model | | ER7212PC |
|---|---|---|
| Management | Service | Dynamic DNS (Dyndns, No-IP, Peanuthull, Comexe, DDNS Customization) |
| | Maintenance | Web Management Interface<br>Remote Management<br>Export & Import Configuration<br>SNMP v1/v2c/v3<br>Diagnostics (Ping & Traceroute)<br>NTP Synchronize<br>Port Mirroring<br>Syslog Support |
| Others | Certification | CE, FCC, RoHS |
| | Package Contents | ER7212PC, Power Adapter, Power Cord, Quick Installation Guide |
| | System Requirements | Microsoft Windows 98SE, NT, 2000, XP, Vista™ or Windows 7/8/8.1/10/11<br>MAC OS, NetWare, UNIX or Linux |
| | Environment | Operating Temperature: -5 °C to 45 °C<br>Storage Temperature: -40 °C to 70 °C<br>Operating Humidity: 10% to 90% non-condensing<br>Storage Humidity: 5% to 90% non-condensing |

# Ordering Information

## Host Gateway

| Model | Description |
|---|---|
| ER7212PC | Omada Gigabit VPN Gateway with PoE+ Ports and Controller Ability |

## 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 |

*PoE budget calculations are based on laboratory testing. Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.

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

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