

Omada VPN Router with 10G Ports

MODEL: ER8411



Highlights

- Dedicated Quad-core Cortex-A72 @2.2GHz CPU for outstanding performance
- 4GB DDR4 high-speed memory for high concurrent connections
- Equipped with 1 10G SFP+ WAN port, 1 10G SFP+ WAN/LAN port, 1 Gigabit SFP WAN/LAN port, 8 Gigabit RJ45 WAN/LAN ports
- Supports multiple VPN protocols including SSL VPN/ OpenVPN/ IPSec/ PPTP/ L2TP/ L2TP over IPSec, helping users to establish VPN connections more flexibly
- Supports up to 2,300,000 concurrent connections
- Abundant features including load balance, bandwidth control and access control
- Professional 4 kV lightning protection keeps your investments as safe as possible

Omada Solution



Hospitality

High Quality and Full Coverage Wi-Fi



Education

High-Density Wi-Fi



Retail

Social Marketing for O2O



Office

Wireless and Wired Connections

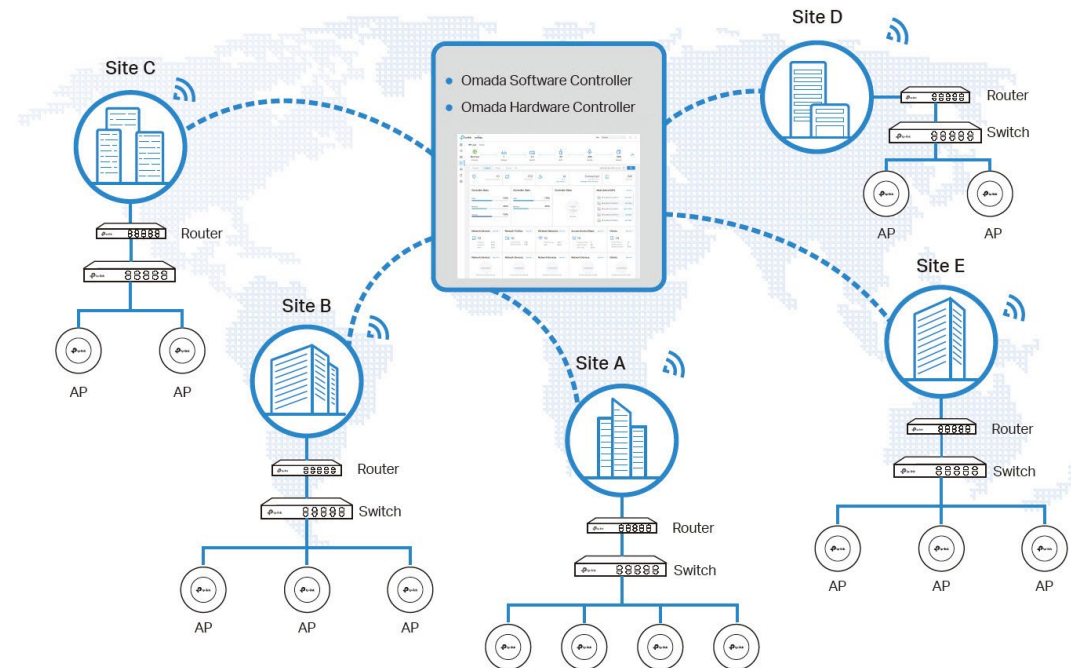


Catering

Full Wi-Fi Coverage in High-Density Environment

Software Defined Networking (SDN) with Cloud Access

Omada Software Defined Networking (SDN) platform integrates network devices, including access points, switches and gateways, providing 100% centralized cloud management. Omada creates a highly scalable network—all controlled from a single interface. Seamless wireless and wired connections are provided, ideal for use in hospitality, education, retail, offices, and more.



Hassle-Free Centralized Cloud Management

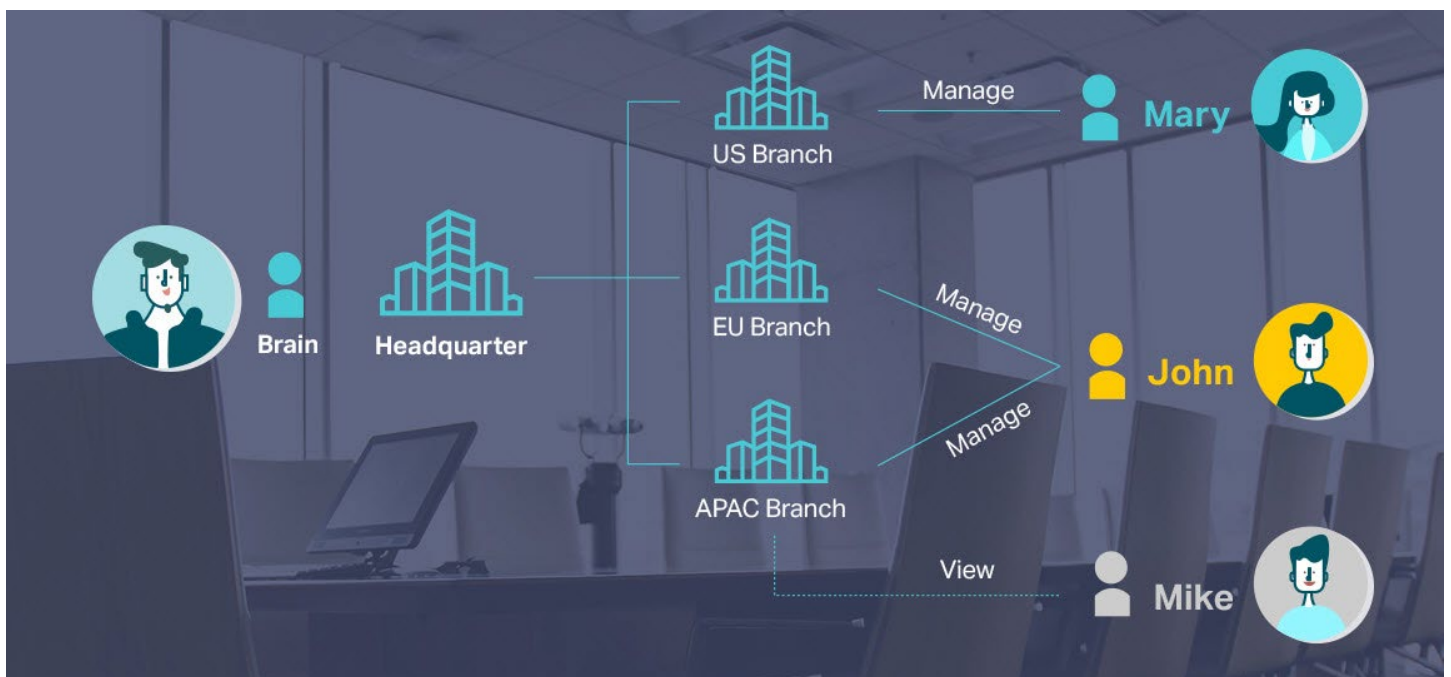
100% centralized cloud management of the whole network from different sites—all controlled from a single interface anywhere, anytime.



- ✓ No additional training needed
- ✓ Unlimited scalability
- ✓ Batch management
- ✓ Devices still work even when not connected to the Cloud

Assign Different Management Roles

Multi-user privilege assignment is available to increase management efficiency and security. Multi-person management, multi-level permissions, and the ability to add admins as needed, enable flexible network operation and maintenance.

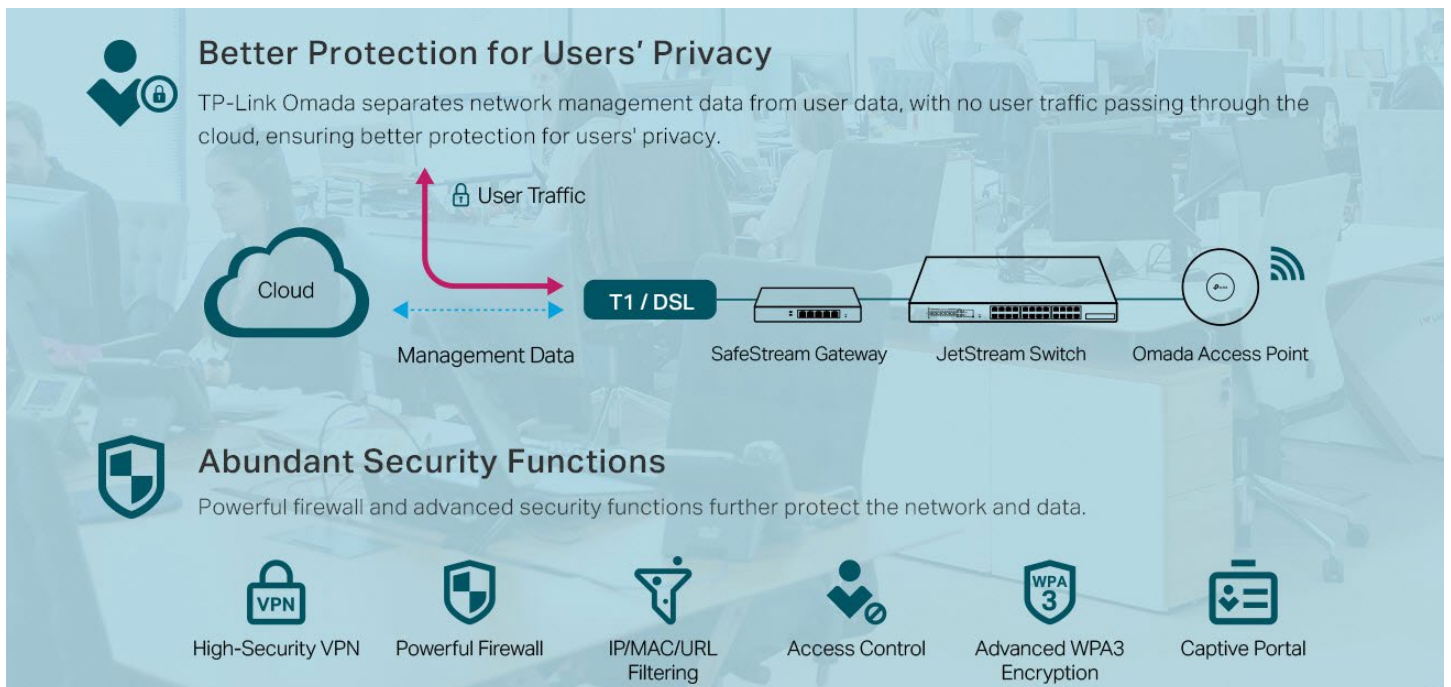


Easy and Intelligent Network Monitoring


The easy-to-use dashboard makes it easy to see your real-time network status; check network usage and traffic distribution; receive network condition logs, abnormal event warnings, and notifications; or even track key data for better business results. Network topology helps IP admins quickly see and troubleshoot connection at a glance.



Comprehensive Protection for the Whole Network



Specifications

| Model | | ER8411 |
|---------------------|-----------------------------------|--|
| Product Picture | |  |
| Product Description | | Omada VPN Router with 10G Ports |
| General | CPU | Quad-core Cortex-A72 @2.2GHz |
| | Interface | 1 10G SFP+ WAN port, 1 10G SFP+ WAN/LAN port, 1 Gigabit SFP WAN/LAN port, 8 Gigabit RJ45 WAN/LAN ports |
| | USB | 2 USB3.0 (One supports LTE backup with LTE dongle) |
| | 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 5e, 6 cable (Max 100 m) |
| | Button | Reset button |
| | Dual Redundant Power Supply | 2 Fixed AC Power Supply |
| | Power Supply | 100–240 VAC, 50/60 Hz |
| | Flash | 4MB SPI NOR + 256 MB NAND |
| | DRAM | 4 GB DDR4 |
| | Surge Protection | 4 kV surge protection |
| | FAN Quantity | 2 |
| | Max Power Consumption | 26.36W (with USB3.0 connected) 19.12W (without USB3.0 connected) |
| | Dimensions (W x D x H) | 17.3 × 8.7 × 1.7 in (440 × 220 × 44 mm) |
| SDN Support | Hardware Controller (OC200/OC300) | Automatic Device Discovery Intelligent Network Monitoring Abnormal Event Warnings |
| | Software Controller | Unified Configuration Reboot Schedule |
| | Cloud-Based Controller | Captive Portal Configuration ZTP (Zero-Touch Provisioning) ¹ |

1. Zero-Touch Provisioning is supported only when using Omada Cloud-Based Controller.

| Model | | ER8411 |
|-----------------|---|---|
| Performance | Concurrent Session | 2,300,000 |
| | New Sessions /Second | 20,000 |
| | Static IP NAT Throughput (Upload / Download) | 9445.82 Mbps / 9449.26 Mbps |
| | DHCP NAT Throughput (Upload / Download) | 9426.83 Mbps / 9426.20 Mbps |
| | PPPoE NAT Throughput (Upload / Download) | 9413.96 Mbps / 9102.01 Mbps |
| | L2TP NAT Throughput (Upload / Download) | 9064.66 Mbps / 8587.57 Mbps |
| | PPTP NAT Throughput (Upload / Download) | 8712.11 Mbps / 8505.61 Mbps |
| | 64 Byte Packet forwarding rate (Upload / Download) | 1080 Mbps / 1030 Mbps |
| | 1,518 Byte Packet forwarding rate (Upload / Download) | 9970 Mbps / 9970 Mbps |
| | SSL VPN Throughput | 4486 Mbps |
| | WireGuard VPN Throughput | 1411 Mbps |
| | IPSec VPN Throughput | ESP-SHA1-AES256: 3099.4 Mbps ESP-SHA256-AES256: 2928.4 Mbps ESP-SHA384-AES256: 2935.7 Mbps ESP-SHA512-AES256: 2878 Mbps |
| | L2TP VPN Throughput | Unencrypted: 5013.50 Mbps Encrypted: 2274.74 Mbps |
| | OpenVPN Throughput | 4424.1 Mbps |
| Basic Functions | WAN Connection Type | Static/Dynamic IP PPPoE PPTP L2TP 6to4 Tunnel IPv6 Pass-Through Mobile Broadband: 4G/3G modem for backup via USB port |
| | DHCP | DHCP Server/Client DHCP Address Reservation Multi-IP Interfaces Multi-Net DHCP |
| | MAC Clone | Modify WAN/LAN MAC Address ¹ |
| | IPTV | IGMP v2/v3 Proxy |
| | IPv6 | WAN Connection |
| | VLAN | 802.1Q VLAN |

1. LAN MAC Address can be modified only in Standalone Mode.

| Model | | ER8411 |
|--------------|-------------------|---|
| Transmission | Load Balance | Intelligent Load Balance Application Optimized Routing Link Backup (Timing ¹ , Failover) Online Detection |
| | NAT | One-to-One NAT ² Multi-Net NAT Virtual Server Port Triggering ² NAT-DMZ FTP/H.323/SIP/IPSec/PPTP ALG, UPnP |
| | Routing | Static Routing Policy Routing |
| | Session Limit | IP-based Session Limit |
| | Bandwidth Control | IP/Port-based Bandwidth Control Guarantee & Limited Bandwidth |
| VPN | SSL VPN | SSL VPN Server 500 OpenVPN Tunnels |
| | IPSec VPN | 300 IPSec VPN Tunnels LAN-to-LAN, Client-to-LAN Main, Aggressive Negotiation Mode DES, 3DES, SHA1, SHA 256, SHA 384, SHA 512, AES128, AES192, AES256 Encryption Algorithm IKE v1/v2 MD5, SHA1 Authentication Algorithm NAT Traversal (NAT-T) Dead Peer Detection (DPD) Perfect Forward Secrecy (PFS) |
| | PPTP VPN | PPTP VPN Server PPTP VPN Client (32) ³ 300 Tunnels (Shared with L2TP) PPTP with MPPE Encryption |
| | L2TP VPN | L2TP VPN Server L2TP VPN Client (32) ³ 300 Tunnels (Shared with PPTP) L2TP over IPSec |
| | OpenVPN | OpenVPN Server OpenVPN Client (10) ³ 110 OpenVPN Tunnels |

1. The Timing mode in Link Backup is supported only in Standalone Mode.
2. One-to-One NAT and Port Triggering are supported only in Standalone Mode.
3. ER8411 can work as a VPN client and can connect with up to 32 PPTP/L2TP VPN servers and 10 OpenVPN servers.

| Model | | ER8411 |
|----------------|-----------------------------|--|
| 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 |
| | ARP Inspection ² | Sending GARP Packets ARP Scanning 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 Sever External Portal Sever ³ Facebook ³ |
| Management | Service | Dynamic DNS (Dyndns, No-IP, Peanuthull, Comexe) |
| | Maintenance | Web Management Interface Remote Management Export & Import Configuration SNMP v1/v2c/v3 Diagnostics (Ping & Traceroute) ⁴ NTP Synchronize ⁴ Syslog Support |
| Others | Certification | CE, FCC, RoHS |
| | Package Contents | ER8411, Power Cord, Quick Installation Guide, Rackmount Kit, RJ45 Console Cord |
| | System Requirements | Microsoft Windows 98SE, NT, 2000, XP, Vista™ or Windows 7/8/8.1/10 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 Inspection is supported only in Standalone Mode.
3. The following web authentication methods are supported only in Controller Mode: Simple Password, Voucher, SMS, Radius, External Portal Sever, and Facebook.
4. Diagnostics (Ping & Traceroute) and NTP Synchronize are supported only in Standalone Mode.

Ordering Information

Host Router

| Model | Description |
|--------|---------------------------------|
| ER8411 | Omada VPN Router with 10G Ports |

SFP/SFP+ Modules

| Model | Description |
|--------------|--|
| TL-SM311LS | Gigabit SFP module, Single-mode, LC interface, Up to 20km distance |
| TL-SM311LM | Gigabit SFP module, Multi-mode, LC interface, Up to 550m distance |
| TL-SM321A | Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 20 km |
| TL-SM321A-2 | Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 2 km |
| TL-SM321B | Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 20 km |
| TL-SM321B-2 | Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 2 km |
| TL-SM5110-LR | 10GBase-LR SFP+ LC Transceiver, single-mode, LC connector, 1310nm, 10 km |
| TL-SM5110-SR | 10GBase-SR SFP+ LC Transceiver, multi-mode, LC connector, 850nm, 300 m |

RJ45 SFP/SFP+ Modules

| Model | Description |
|-------------|----------------------------|
| TL-SM331T | 1000BASE-T RJ45 SFP Module |
| TL-SM5310-T | 10GBASE-T RJ45 SFP+ Module |

* Some models featured in this guide may be unavailable in your country or region. Visit TP-Link website for local sales information: www.tp-link.com.

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