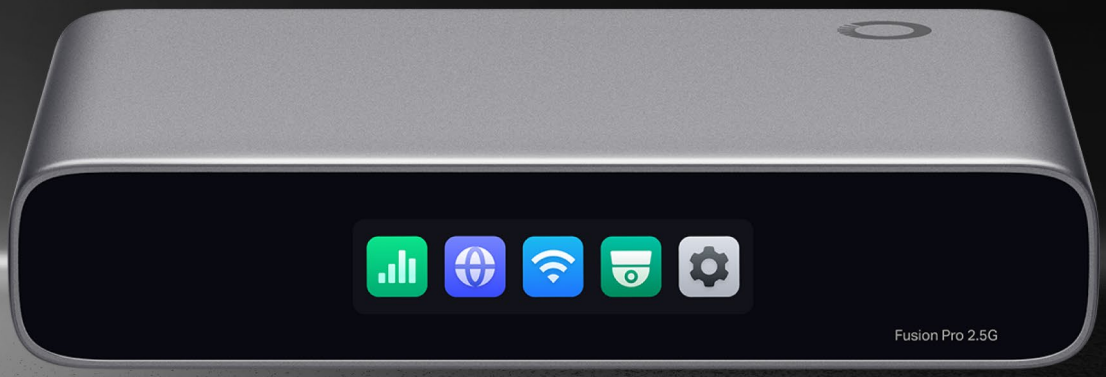
Omada by tp-link

Datasheet

Enterprise Solution

Omada Fusion Pro 2.5G Gateway



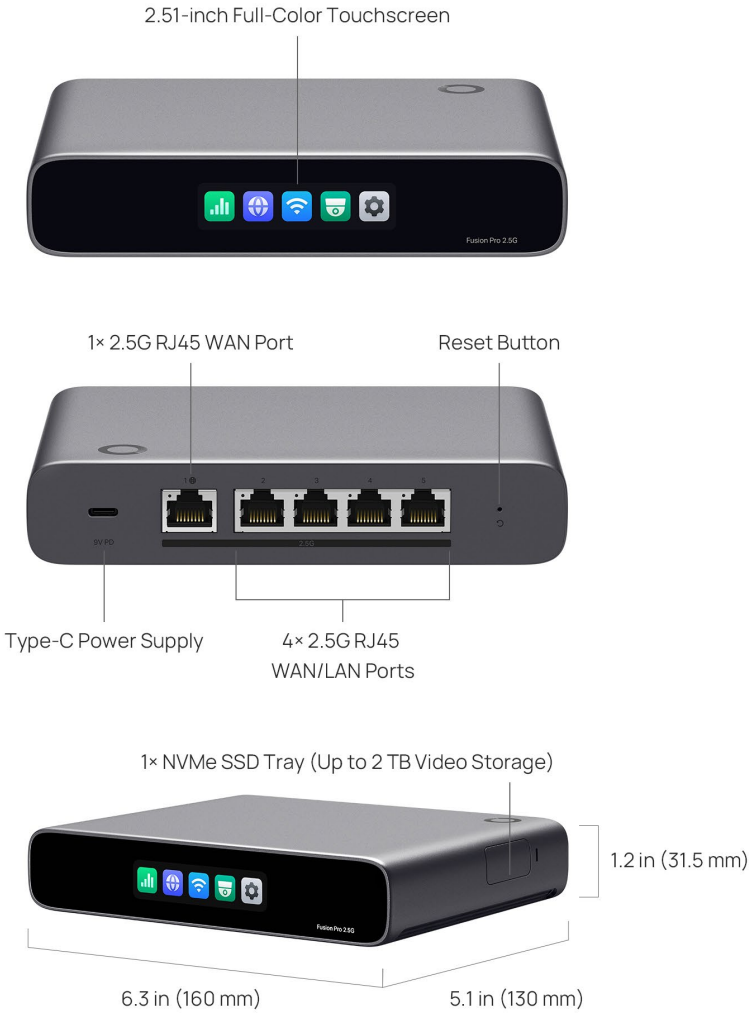
Model: Fusion Pro 2.5G

Product Overview

Omada Fusion Pro 2.5G is a gateway with a built-in controller & video management system (VMS), serving as the center of the Omada ecosystem. Integrating Omada Networking and Omada Guard unifies network management and video monitoring on a single platform. With easier setup and license free cloud management, it simplifies deployment, operations, and maintenance—boosting efficiency and profitability. Ideal for surveillance networks and small businesses such as restaurants, high-end residential, retail shops, and clinics.

- **One Platform for Networking & Surveillance:** Centrally manage Omada APs, switches, cameras, and an NVR.
- **Simplified Setup:** App-guided onboarding via Bluetooth and one-tap bulk device adoption.
- **License-Free Cloud Management:** Advanced networking & AI-powered surveillance with DPI, QoS, and Smart Search*.
- **Enterprise-Grade Performance:** Quad-core CPU, 5× 2.5G ports, 2.3 Gbps IPS/IDS throughput†.
- **Flexible Storage Options:** 1× NVMe SSD tray for 2TB video storage or an external NVR expansion for up to 24× cameras‡.
- **Quick Troubleshooting via Touchscreen:** Speed test, fault alerts, traffic insight, and more.
- **Advanced Software Capabilities:** Full-featured VPNs, full mesh SD-WAN, auto QoS, content filtering
- **Professional Video Monitoring:** Smart Search, case management, third-party camera support, and cloud drive & NAS archive.

Product Appearance



*Smart Search is currently available on VIGI Insight cameras.

†Actual throughput may vary depending on traffic conditions, enabled features, and network environment.

‡SSD not included.

Feature Descriptions

Unified Control for Networking & Surveillance

Centrally manage Omada APs, switches, gateways, cameras, and an NVR for simplified management at scale—all in a single interface. Instantly detect and resolve network and surveillance issues without switching systems.

License-Free Cloud Management

Access all features from day one with zero license fees, including advanced networking and AI-powered surveillance. Connect up to 20 sites with Full Mesh SD-WAN and manage all IPCs centrally through a unified interface via the Omada Cloud portal or app, anytime, anywhere.

Simplified Setup for Faster Deployment

Easily set up the Fusion Gateway via Bluetooth using the Omada app. Automatically discover and batch adopt all other Omada devices at once. Desktop, wall, and rack mounting ensure flexible installation in a wide range of scenarios.***

Superior Hardware and Performance

Powered by a high-performance quad-core CPU and five 2.5G RJ45 ports. Supports up to 4-WAN load balancing with auto failover, a built-in SSD tray for up to 2 TB of local storage, and high-throughput IPS/IDS with an optimized VPN for fast, secure connectivity.

Touchscreen for On-Site Troubleshooting

A 2.51-inch integrated touchscreen provides access to network health scores, speed tests, alerts, and real-time traffic, enabling basic diagnostics and troubleshooting directly on the device.

Secure Remote Network Access

Fusion Pro 2.5G supports Omada LightLink VPN for secure remote access. Smart Split Tunneling routes only designated traffic through the VPN, reducing tunnel load while maintaining network performance.

Advanced Software Capabilities

Supports application- and category-level access control. QoS enables traffic prioritization, ensuring critical applications receive sufficient bandwidth. It also supports content filtering with flexible, category- and time-based rules for centralized policy enforcement.

Professional Video Monitoring

Quickly find footage with AI-powered people and vehicle search. Manage investigations in the Case Center and enjoy broad camera compatibility with flexible cloud and NAS storage options.

Intelligent O&M Efficiency for Always-On Reliability

Keep surveillance running with continuous recording via ANR. Quickly resolve issues with remote camera reboot and intelligent recovery (enhanced PoE Auto Recovery), while built-in cable testing helps pinpoint faults for reliable, uninterrupted monitoring.[△]

***Magnetic mount plate and rack mount kit sold separately.

[△]These features require implementation with compatible cameras and PoE switches.

Specifications

Overview		
Built-In Omada OS Applications		Network Application (Network Management) Guard Application (Surveillance Management)
Managed Omada Network Devices		30 (Recommended)[§]
Managed Cameras		• Up to 24 Cameras[§] • Recommended Capacity: 16× HD / 14× 5MP / 12× 8MP / 6× 12MP Cameras[§]
Managed Omada/VIGI NVRs		Up to 1
Client Capacity		300 (Recommended)[§]
Interface		• 1× 2.5G RJ45 WAN Port • 4× 2.5G RJ45 LAN/WAN Ports • Up to 4 Simultaneous WAN Ports
Mounting		• Desktop • Wall-Mount (Magnetic-Mount Plate Sold Separately) • Rack-Mount (Rackmount Kit Sold Separately)
Dimensions		6.3 × 5.12 × 1.24 in (160 × 130 × 31.5 mm)
Hardware		
Standards and Protocols		IEEE 802.3, IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.1q, IEEE 802.1p, IEEE 802.1ab, TCP/IP, DHCP, ICMP, NAT, PPPoE, NTP, HTTP, HTTPS, DNS, IPSec, PPTP, L2TP, OpenVPN, WireGuard VPN, SNMP, LLDP
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) 2.5GBASE-T: UTP category 5, 5e, 6 cable (Max 100 m)
CPU		Quad-core ARM® Cortex®-A73@1.8GHz
Memory		4 GB DDR4
Storage		64 Mbit NOR Flash + 32 GB eMMC
SSD Tray		1× NVMe SSD Tray (Up to 2 TB Video Storage)
Touchscreen		2.51-inch Color LCM Touchscreen
Button		Reset Button
Enclosure		Polycarbonate
LED		Ethernet
Fan	Quantity	1
	Noise	Max: 24.5 dBA@1m
		Min: Fanless Mode
Antenna		1× BLE Antenna
Net Weight		Without SSD: 1.37 lb (620 g)
Power Supply		USB Type C (9V DC / 3A) (Adapter Included)
Max Power Consumption		14.35 W (With Power Adapter)

[§]Controller and management features may vary depending on connected Omada devices, software versions, and deployment modes. The stated management capacity is based on laboratory testing. Actual management capacity and performance may vary depending on deployment and network conditions.

Surge Protection	4 kV Surge Protection
ESD Protection	±8 kV (Air) ±6 kV (Contact)
Onboarding	Bluetooth or Ethernet
MTBF	429,864 h @ 25 °C
Performance[†]	
Concurrent Sessions	150,000
New Sessions/Second	10,000
Static IP NAT Throughput (Upload/ Download)	2,370 Mbps / 2,374 Mbps
DHCP NAT Throughput (Upload/ Download)	2,374 Mbps / 2,373 Mbps
PPPoE NAT Throughput (Upload/ Download)	2,335 Mbps / 2,350 Mbps
L2TP NAT Throughput (Upload/ Download)	2,149 Mbps / 2056 Mbps
PPTP NAT Throughput (Upload/ Download)	1,932 Mbps / 2,172 Mbps
66 Byte Packet Forwarding Rate (Upload/Download)	3,585,051 pps / 3,555,709 pps
1,518 Byte Packet Forwarding Rate (Upload/Download)	203,185 pps / 203,181 pps
Omada LightLink VPN Throughput	1,017 Mbps
IPSec VPN Throughput	ESP-SHA1-AES256: 1,332 Mbps ESP-SHA256-AES256: 1,285 Mbps ESP-SHA384-AES256: 1,317 Mbps ESP-SHA512-AES256: 1,227 Mbps
OpenVPN Throughput	393 Mbps
L2TP VPN Throughput	1,109 Mbps
PPTP VPN Throughput	404 Mbps
SSL VPN Throughput	371 Mbps
WireGuard VPN Throughput	1,044 Mbps
IPS Throughput (Upload/Download)	2,357 Mbps / 2,364 Mbps
DPI Throughput (Upload/Download)	2,370 Mbps / 2,374 Mbps
Environment & Certifications	
Environment	Operating Temperature: 14°F to 104°F (-10 °C to 40 °C) Storage Temperature: -22°F to 158°F (-30 °C to 70 °C) Operating Humidity: 10% to 90% non-condensing Storage Humidity: 5% to 90% non-condensing
Certifications	CE, FCC

[†] Rated specifications may vary depending on traffic conditions, enabled features, and network environment.

Software Features

Network Application

Centralized Monitoring and Management	
Dashboard-Overview/Wi-Fi/Clients/ Traffic	√
Dashboard-Network Topology	√
Health Monitoring	√
Device Management	Automatic Device Discovery
Switch Ports	√
Client Management	√
Reports	√
Logs	Alerts / Events / Audit Logs
Maintenance	
Network Tools	Ping Test / Packet Capture / Terminal / Cable Test / Interference Detection / Remote Access
IntelliRecover	√
Network Config	
SNMP	v1/v2c/v3
Bonjour/mDNS	√
WAN Connection	Static IP / Dynamic IP / PPPoE / PPTP / L2TP / MAP-E / DS-Lite
Dynamic DNS	Dyndns / No-IP / Peanuthull / Comexe / TP-Link DDNS / DDNS Customization
Multi-WAN Failover & Load Balancing	√
DHCP	DHCP Server DHCP Options Customization DHCP Address Reservation Multi-IP Interfaces Multi-Net DHCP WAN DHCP Option 60
IPv6	Static IP / SLAAC / DHCPv6 / PPPoE / 6to4 Tunnel / Pass-Through / Non-Address Mode
VLAN Segmentation	802.1Q VLAN
MAC Clone	√ (Customizable WAN MAC Address)
Bridge VLAN	√
SSID	√
PPSK	√
WLAN Optimization	√
Route	Static Route / Policy Routing
IPTV	IGMP v2/v3 Proxy / Custom Mode / Bridge Mode
Session Limit	IP-Based Session Limit
QoS	√

NAT	Virtual Server NAT-DMZ FTP/H.323/SIP/IPSec/PPTP ALG UPnP One-to-One NAT Disable NAT
OUI-Based VLAN	√
VRRP	√
Portal	√
802.1X	√
EoGRE Tunnel	√
Bluetooth	√
MAC-Based Authentication	√
Security	
IDS/IPS	Signature-Based IPS / IDS Threat Detection
DPI	Deep Packet Inspection (DPI) Application Filter
ACL	Source/Destination IP-Based ACL Application-Based ACL Stateful ACL IPv4/IPv6 ACL Nation-Based ACL FQDN
Content Filtering	URL Category / Ad Block / Allow List / Block List / Safe Search
Secure DNS	DNSSEC / DoH / DoT / DNS Redirection
Firewall	Stateful Firewall / Attack Defense
ARP Inspection	√
MAC Filtering	√
IP-MAC Binding	√
Attack Defense	√
IMPB	√
VPN & SD-WAN	
Omada LightLink VPN	Invite by Link Invite by Email Max LightLink Clients: 253
SD-WAN[§]	Full Mesh Mode
Site-to-Site VPN	WireGuard VPN / IPsec VPN
VPN Server	WireGuard VPN / OpenVPN / IPsec VPN / SSL VPN / L2TP VPN / PPTP VPN
VPN Client	WireGuard VPN / OpenVPN / L2TP VPN / PPTP VPN

[§]SD-WAN can only be configured via the Omada Cloud Portal.

IPSec VPN	Max IPSec VPN Tunnels: 20 LAN-to-LAN, Client-to-LAN Main and Aggressive Negotiation Modes DES, 3DES, AES128, AES192, and AES256 Encryption Algorithms IPSec Failover IKE v1/v2 MD5, SHA1, SHA256, SHA384, and SHA512 Authentication Algorithms NAT Traversal (NAT-T) Dead Peer Detection (DPD) Perfect Forward Secrecy (PFS)
PPTP VPN	PPTP VPN Server Max PPTP VPN Clients: 10 Max PPTP VPN Tunnels: 16 PPTP with MPPE Encryption
L2TP VPN	L2TP VPN Server Max L2TP VPN Clients: 10 Max L2TP VPN Tunnels: 16 L2TP over IPSec
OpenVPN	OpenVPN Server Max OpenVPN Clients: 10 Max OpenVPN Tunnels: 110 "Certificate + Account" Mode Full Mode Split Mode
SSL VPN	Max SSL VPN Tunnels: 80
Virtual WAN	WAN Connection Type: Static IP, Dynamic IP, PPPoE Max Virtual WAN Entries: 3
VPN Status	√

Guard Application

Videos	Live View Playback
Devices	Device Management
Events	Event List Notification Settings
Smart Search	Human Event Vehicle Event
Case Center	Add Case Case List Video Clips
Recording	Recording Management
Logs	Alerts System Events Audit Logs
Storage Management	Disk Management Loop Recording Pre-recording Time Delay-recording Time Auto Delete Old File ANR
Smart Analytics	√
Auto Discover Device	√
Archiving Management	√

Omada OS & Cloud Portal

Management	Cloud Access On-Premises Management Omada App Omada Guard App Account & Role Multi-Site Management
Maintenance	Restore & Backup
OS / Portal Config	System Settings OS & Applications

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