

TP-Link Omada SDN Solution

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Omada Cloud SDN

- **What is Omada Cloud SDN**
- **Omada Controllers**
- **Omada Access Points**
- **JetStream Switches by Omada SDN**
- **Omada Routers**



What is Omada Cloud SDN

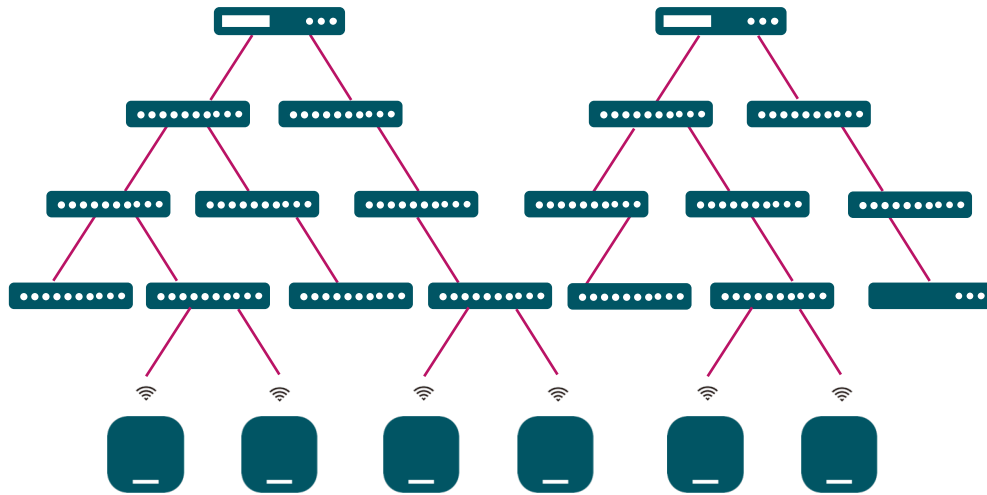
What is SDN (Software Defined Networking)

SDN is a network with a controller software system as the core to realize automatic deployment of network services and automatic data distribution.

SDN is designed to solve the problem that network deployment for traditional network architecture is complicated, difficult to maintain, and difficult to expand horizontally.

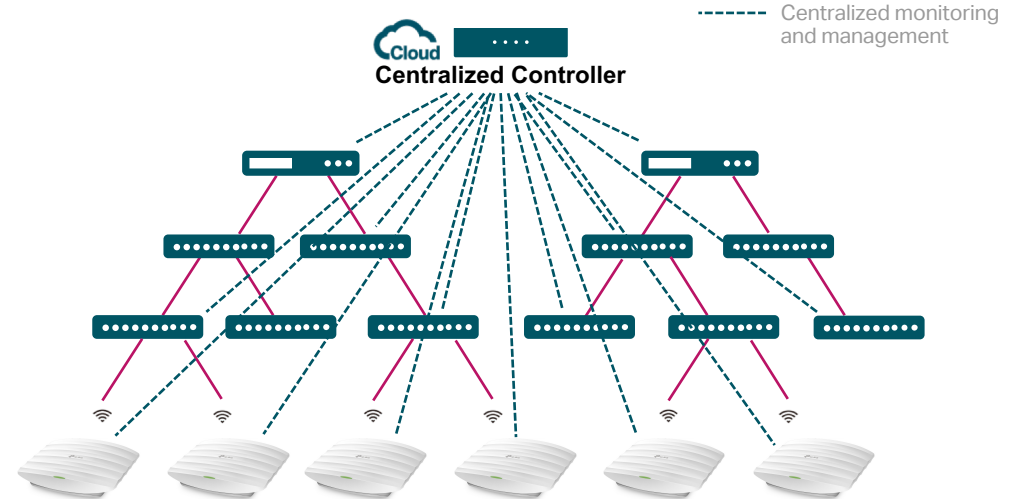
The automation of SDN solution is based on the separation of network data transfer and control, through centralized control and centralized policies of devices.

Traditional Complex Network



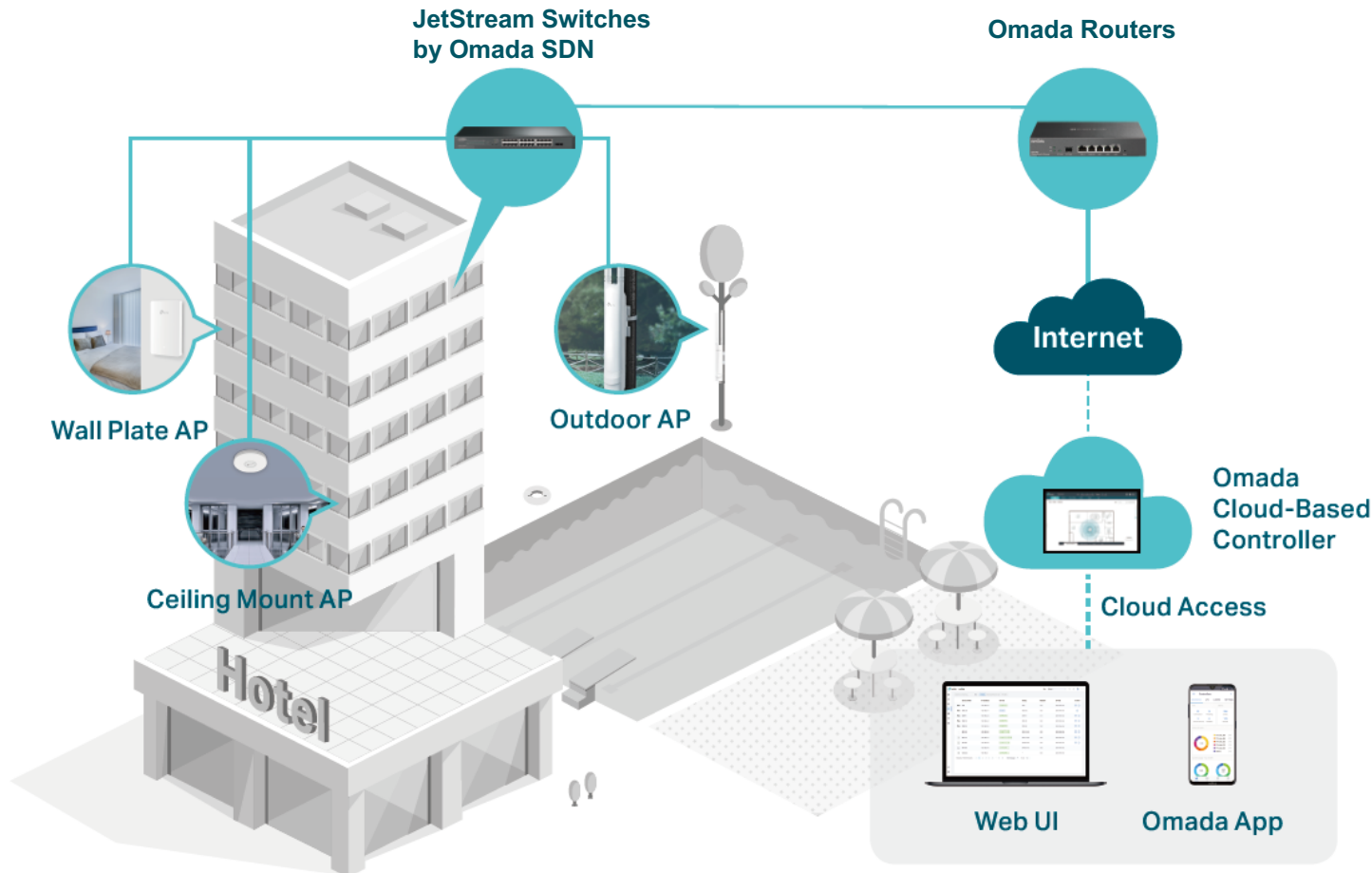
VS.

Future SDN



Omada Cloud SDN—The Smarter Cloud Solution for Business Networking

Omada's Software Defined Networking (SDN) platform integrates network devices including access points, switches, and routers, providing 100% centralized cloud management to create a highly scalable network—all controlled from a single interface.



**Omada Centralized
Management Platform
Controller + Management Interface**



Omada—Higher Efficiency



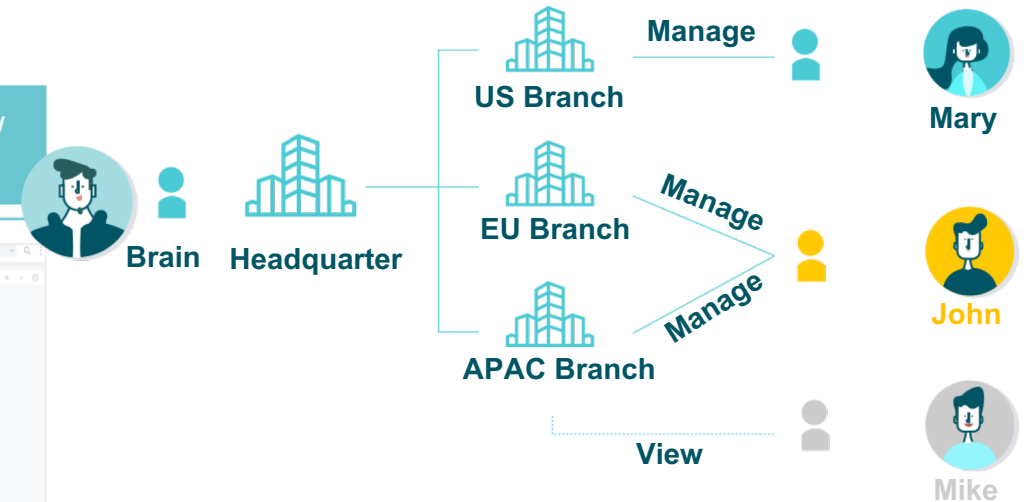
Easy Network Monitoring

The easy-to-use dashboard, makes is easy to see the real-time network status, check the network usage and traffic distribution, or even track key data for better business results.



Assign Different Management Roles

Multi-user privilege assignment is also available to increase management efficiency and security.



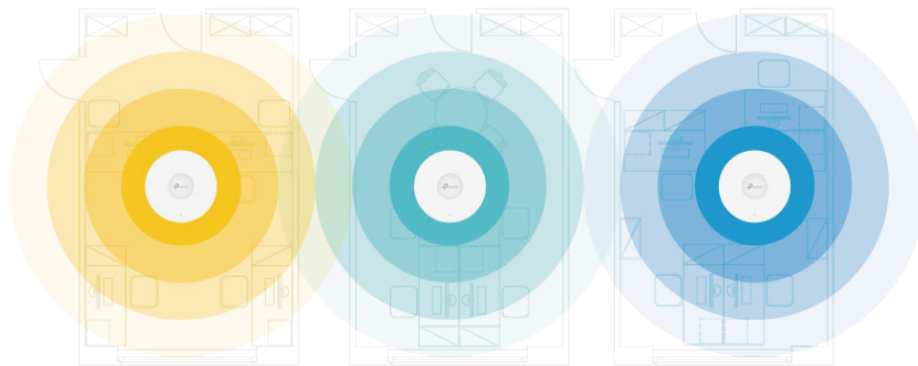
Omada—Higher Efficiency



AI-Driven Technology for Stronger Performance and Easy Network Maintenance

Auto Channel Selection and Power Adjustment

Provides powerful wireless performance while greatly reducing Wi-Fi interference by automatically adjusting the channel settings and transmission power levels of neighboring APs



● Channel 1 ● Channel 11 ● Channel 6

Intelligent Network Analysis, Warning, and Optimization

- Analyze potential network problems and receive optimization suggestions for higher network efficiency.
- Locate network faults, warn and notify users, and generate solutions for lower network risk.

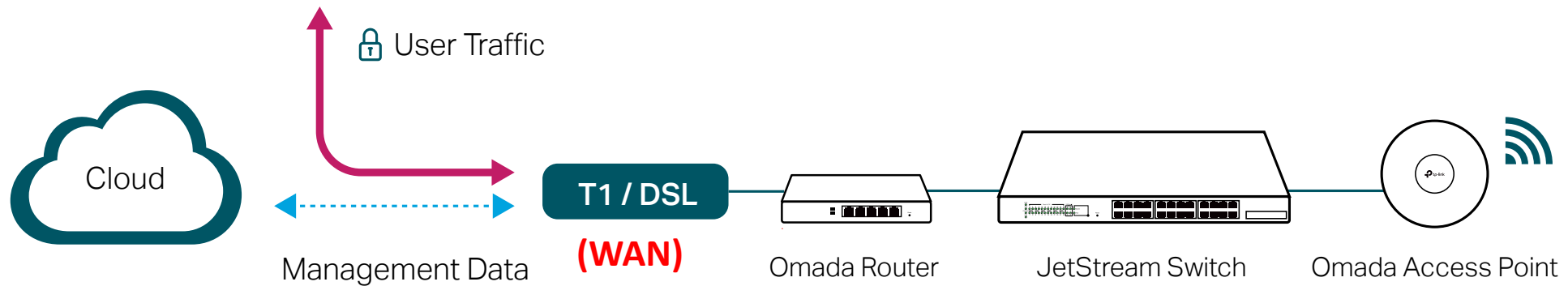


Omada—Higher Security



Better Protection for Users' Privacy

TP-Link Omada separates network management data from user data, with no user traffic passing through the cloud, ensuring better protection for users' privacy.



Abundant Security Functions

Powerful firewall and advanced security functions further protect the network and data.



High-Security VPN



Powerful Firewall



URL/IP/MAC
Filtering



Access Control



Advanced
WPA3 Encryption

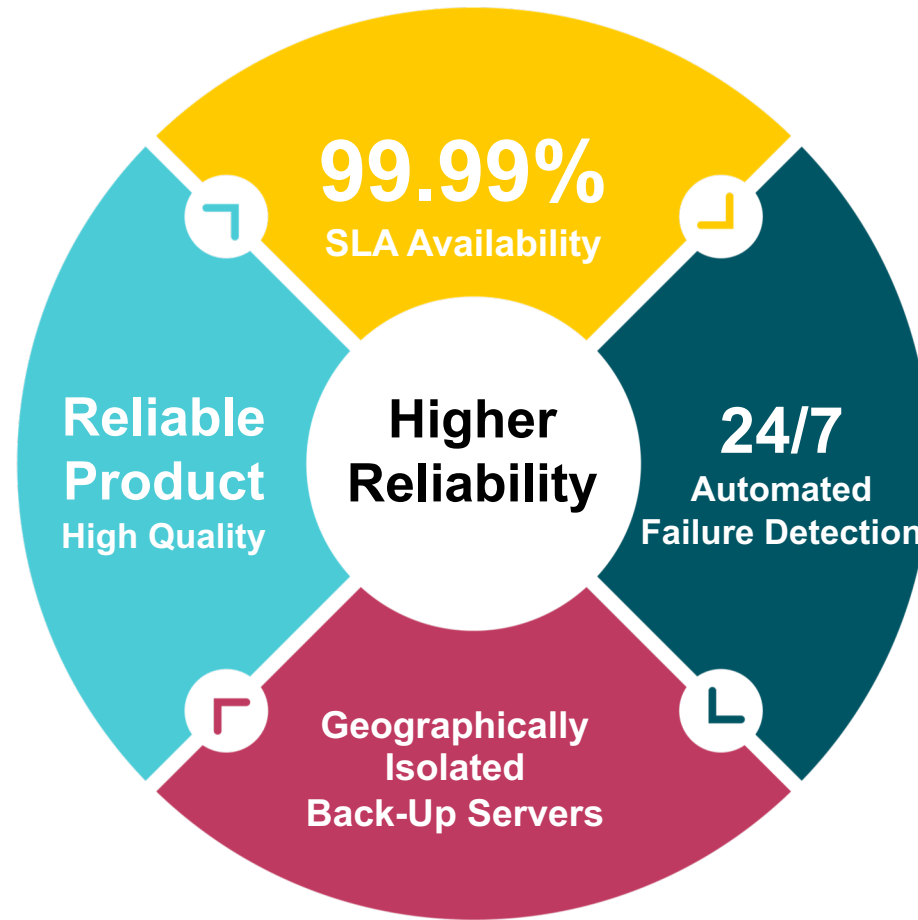


Captive Portal



Omada—Higher Reliability

Higher reliability is guaranteed with 99.99% SLA availability, 24/7 automated fault detection, geographically isolated back-up servers, and reliable product quality. The network functions even if management traffic is interrupted.





Omada Controllers



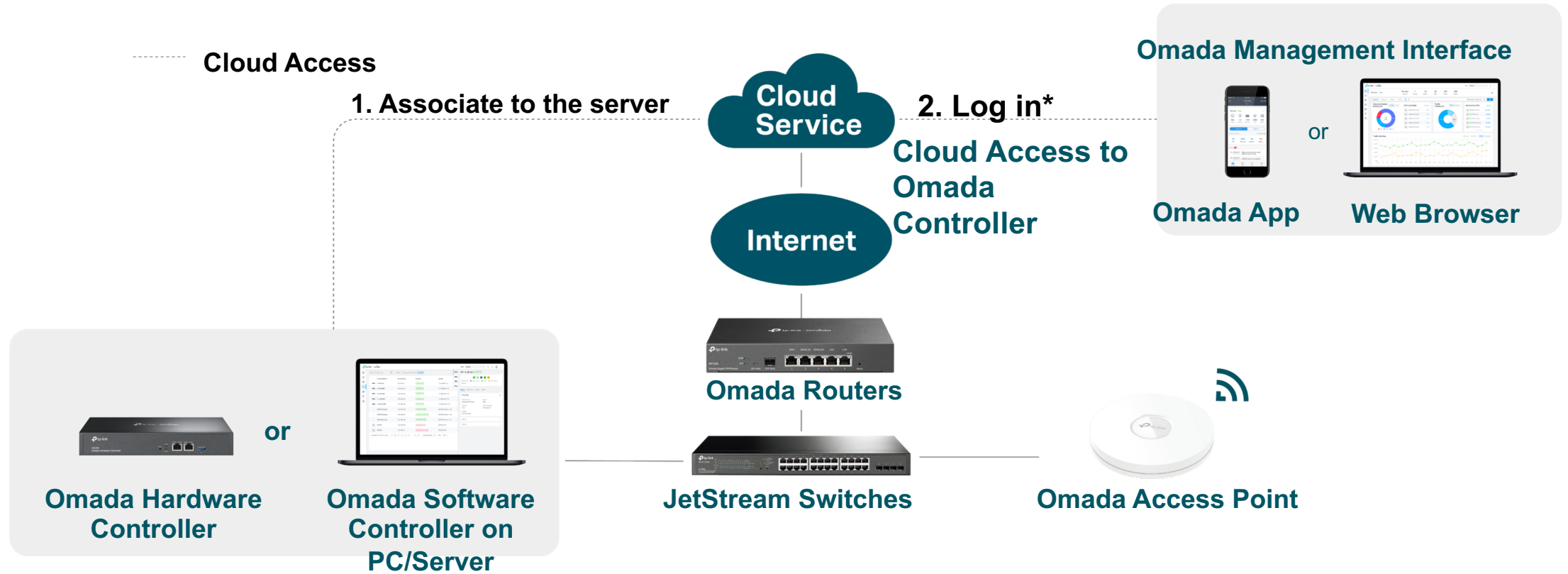
Omada Controllers — Flexible Options for Centralized Cloud Management

Omada SDN provides two ways of management—Cloud-Based Controller (completely in the cloud) and Hybrid-Cloud Controller (on-premises) with full cloud access, giving you a wide selection and full control of the whole network from the cloud to fit your business needs.

Type	On-Premises Controller (Hybrid Cloud)	
	Omada Hardware Controller	Omada Software Controller
Usage Method	Connect to the intranet	Deploy to intranet servers or private clouds
Management Scale	OC200 : ≤ 100 OC300 : ≤ 500	$\leq 1,500$
Network Type	Small/Medium local networks	Medium/Large networks
Pricing Model	Hardware Costs	Free
Cloud Access	√	√
Automatic Channel Selection	√	√

On-Premises Controller with Cloud Access

Omada offers cloud access to its on-premises centralized management platforms—Omada Software Controller or Omada Hardware Controller (OC200/OC300) —to give you control of the whole network wherever you are through the Omada app or Web UI, without any additional service subscription fees.

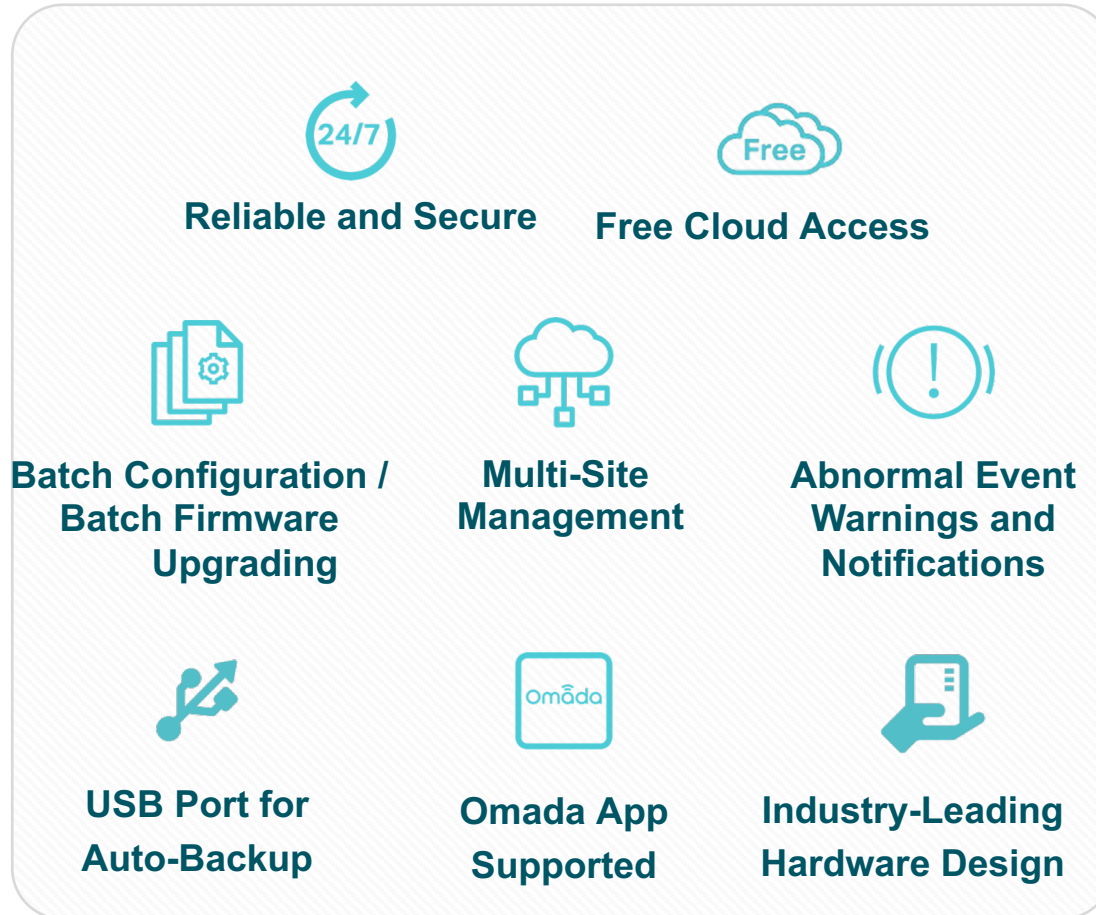


*Please go to <https://omada.tplinkcloud.com> to log in with your TP-Link ID.



Omada Hardware Controller

On-premises hardware controller is built into the product with no need to run a PC or server, allowing you to remotely control the whole network wherever you are with the cloud access. Locally manage devices with ultimate security and stability.



* Actual quantity of managed Devices and clients may vary according to network conditions.



Professional Compact Controller

OC200: Devices ≤ 100 and Clients $\leq 1,000^*$



Professional High-End Controller

OC300: Devices ≤ 500 and Clients $\leq 15,000^*$



Cloud Management with the Omada App

Follow configuration instructions on the free Omada app to get set up in minutes. Omada app lets you configure settings, monitor the network status and manage clients, all from a smart phone or tablet.



Cloud Access to
Centralized
Management



Real-time
Monitoring and
Management

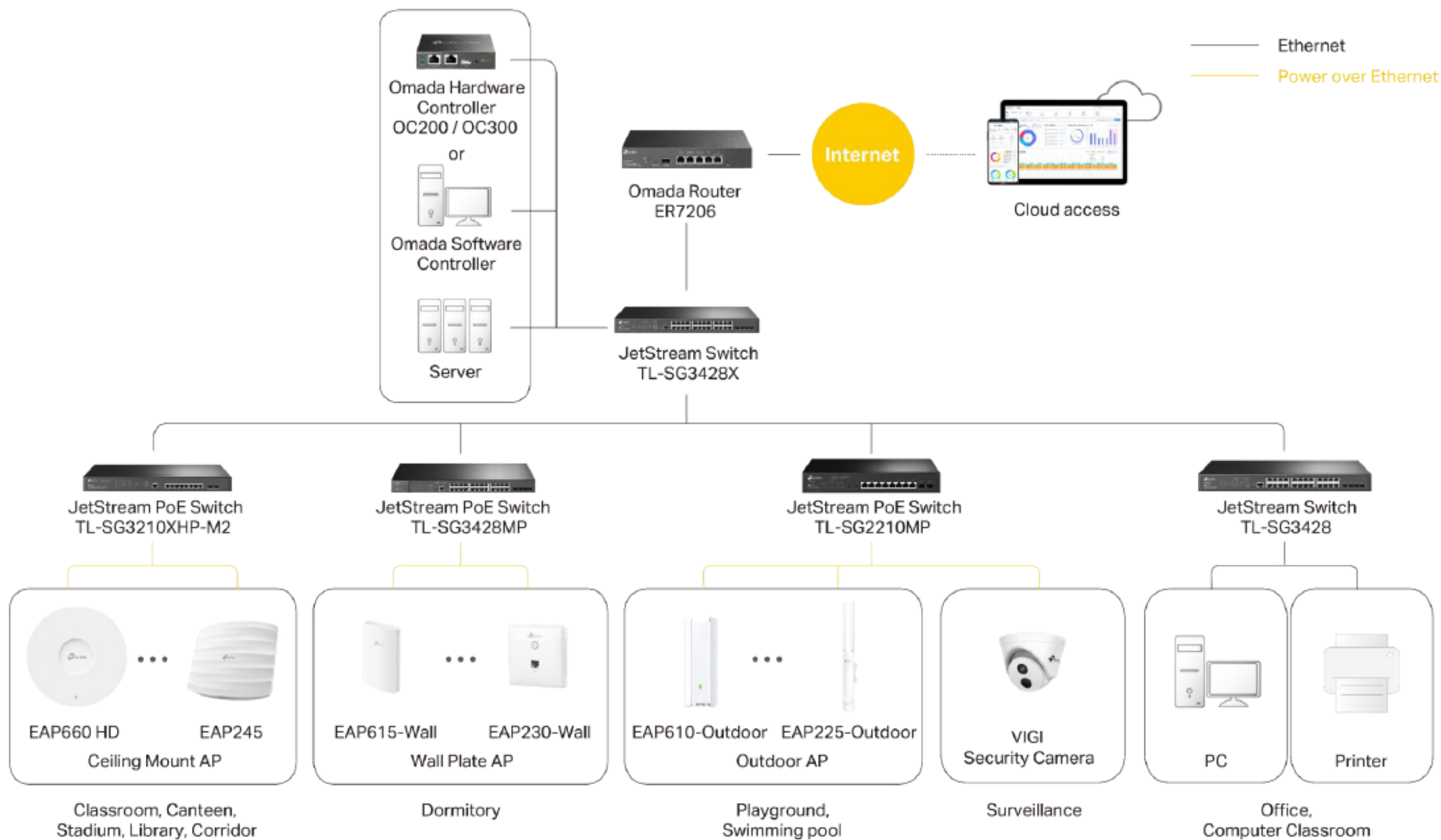


Standalone
Management

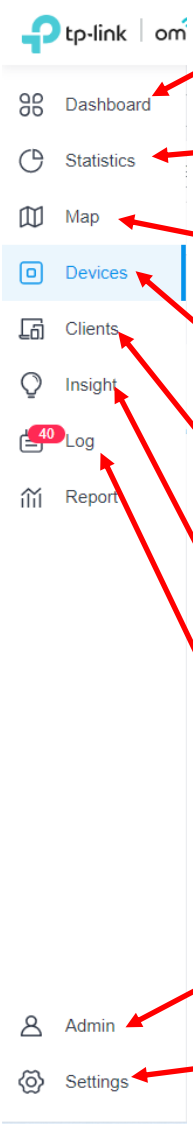




Typical Topology



The left-hand navigation bar provides access to:



Dashboard displays a summarized view of the network status through different visualizations. The widget-driven dashboard is customizable depending on your needs.

Statistics provides a visual representation of the clients and network managed by the controller. The run charts show changes in device performances over time, including the status of switches and speed test results.

Map generates the system topology automatically and you can look over the provisioning status of devices. By clicking on each node, you can view the detailed information of each device. You can also upload images of your location for a visual representation of your network.

Devices displays all TP-Link devices discovered on the site and their general information. This list view can change depending on your monitoring needs through customizing the columns. You can click any device on the list to reveal the Properties window for more detailed information of each device and provisioning individual configurations to the device.

Clients displays a list view of wired and wireless clients that are connected to the network. This list view can change depending on your monitoring need through customizing the columns. You can click any clients on the list to reveal the Properties window for more detailed information of each client and provisioning individual configurations to the client.

Insight displays a list of statistics of your network device, clients and services during a specified period. You can change the range of date in one-day increments.

Log displays logs that record varied activities of users, devices, and systems events, such as administrative actions and abnormal device behaviors. You can also configure notifications to receive alert emails of certain activities.

Admin allows you to configure multi-level administrative accounts with a hierarchy of permissions that can be configured to provide finely grained levels of access to the controller as required by your enterprise.

Settings is divided to two parts: Site Settings and Controller Settings. In Site Settings, you can provision and configure all your network devices on the same site in minutes. In Controller Settings, you can maintain the controller system for best performance.

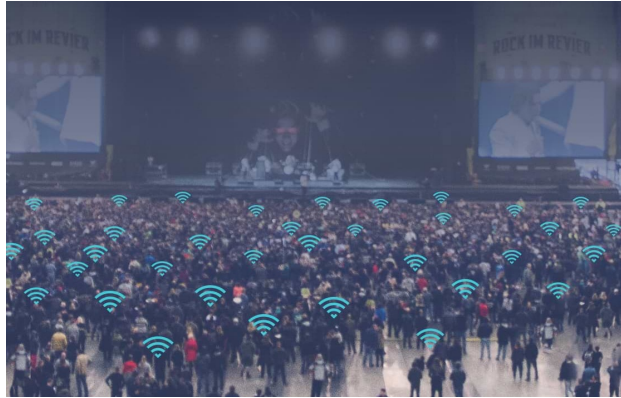


Omada Access Points



Omada Access Points

Scenario-Based Design — Specially-Designed Access Points for All Kinds of Environments



High-Density Scenarios
Wi-Fi 6 and Wi-Fi 5 Access Points



Wide Area Coverage
Ceiling Mount Access Points



Outdoor Environment
Outdoor Access Points



In-Room Wi-Fi
Wall Plate Access Points

Omada Ceiling Mount Access Points — Specifications

Ceiling Mount AP							
							
Model	EAP670	EAP660 HD	EAP653	EAP650	EAP620 HD	EAP610	EAP245
Wi-Fi Class	AX5400	AX3600	AX3600	AX3000	AX1800	AX1800	AC1750
Wi-Fi Speed (2.4 GHz)	574 Mbps	1148 Mbps	574 Mbps	574 Mbps	574 Mbps	574 Mbps	450 Mbps
Wi-Fi Speed (5 GHz)	4804 Mbps	2402 Mbps	2402 Mbps	2402 Mbps	1201 Mbps	1201 Mbps	1300 Mbps
Ethernet Ports	1×2.5G	1×2.5G	1×2.5G	1×GE	1×GE	1×GE	2×GE
Antennas	2×4 dBi (2.4G) 4×5 dBi (5G)	4×4 dBi (2.4G) 4×5 dBi (5G)	2×4 dBi (2.4G) 2×5 dBi (5G)	2×4 dBi (2.4G) 2×5 dBi (5G)	2×4 dBi (2.4G) 2×5 dBi (5G)	2×4 dBi (2.4G) 2×5 dBi (5G)	3×3.5 dBi (2.4G) 3×4 dBi (5G)
Power Supply	802.3bt PoE or 12V DC	802.3at PoE or 12V DC	802.3at PoE or 12V DC	802.3at PoE or 12V DC	802.3at PoE or 12V DC	802.3at PoE or 12V DC	802.3af PoE or 48V/0.5A Passive PoE
Software Controller	●	●	●	●	●	●	●
Hardware Controller	●	●	●	●	●	●	●
Cloud Management	●	●	●	●	●	●	●
Omada App	●	●	●	●	●	●	●
Standalone Management	●	●	●	●	●	●	●
Seamless Roaming	●	●	●	●	●	●	●
MU-MIMO	●	●	●	●	●	●	●
Beamforming	●	●	●	●	●	●	●
Airtime Fairness	●	●	●	●	●	●	●
Band Steering	●	●	●	●	●	●	●
Mesh	●	●	●	●	●	●	●
Captive Portal	●	●	●	●	●	●	●
Wireless / Reboot Schedule	●	●	●	●	●	●	●
Auto Backup	●	●	●	●	●	●	●
Load Balance / Rate Limit / Access Control	●	●	●	●	●	●	●
Notes	Shipping	Shipping	Shipping	Shipping	Shipping	Shipping	Shipping

Omada Wall Plate and Outdoor Access Points — Specifications

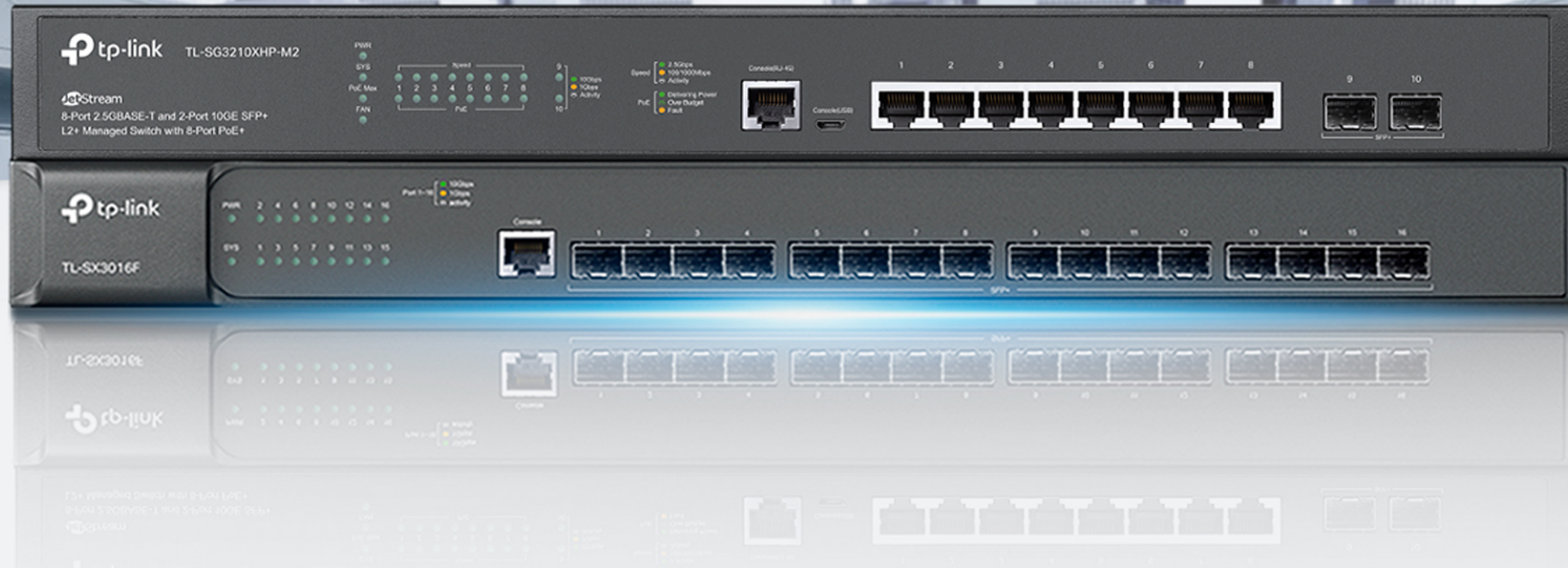
				
Model	EAP615-Wall	EAP235-Wall	EAP610-Outdoor	EAP225-Outdoor
Wi-Fi Class	AX1800	AC1200	AX1800	AC1200
Wi-Fi Speed (2.4 GHz)	574 Mbps	300 Mbps	574 Mbps	300 Mbps
Wi-Fi Speed (5 GHz)	1201 Mbps	867 Mbps	1201 Mbps	867 Mbps
Ethernet Ports	4 × GE	4 × GE	1 × GE	1 × GE
Antennas	2 × 3 dBi (2.4G) 2 × 4 dBi (5G)	2 × 4 dBi (2.4G) 2 × 4 dBi (5G)	2 × 4 dBi (2.4G) 2 × 5 dBi (5G)	2 × 3 dBi (2.4G) 2 × 4 dBi (5G)
Power Supply	802.3at / 802.3af PoE	802.3at / 802.3af PoE	802.3at PoE 48V/0.5A Passive PoE	802.3af PoE 24V/0.5A Passive PoE
Weatherproof	-	-	IP67	IP65
Software Controller	●	●	●	●
Hardware Controller	●	●	●	●
L3 Management	●	●	●	●
Cloud Management	●	●	●	●
Omada App	●	●	●	●
Standalone Management	●	●	●	●
Seamless Roaming	-	-	●	●
MU-MIMO	●	●	●	●
Beamforming	●	●	●	●
Airtime Fairness	-	-	●	●
Band Steering	●	●	●	●
Mesh	-	-	●	●
Captive Portal	●	●	●	●
Wireless / Reboot Schedule	●	●	●	●
Auto Backup	●	●	●	●
Load Balance / Rate Limit / Access Control	●	●	●	●
Notes	Shipping	Shipping	Shipping	Shipping



JetStream Switches by Omada SDN

Future-Proof Your Business with 10G

Multi-Gigabit Managed Switches Solution





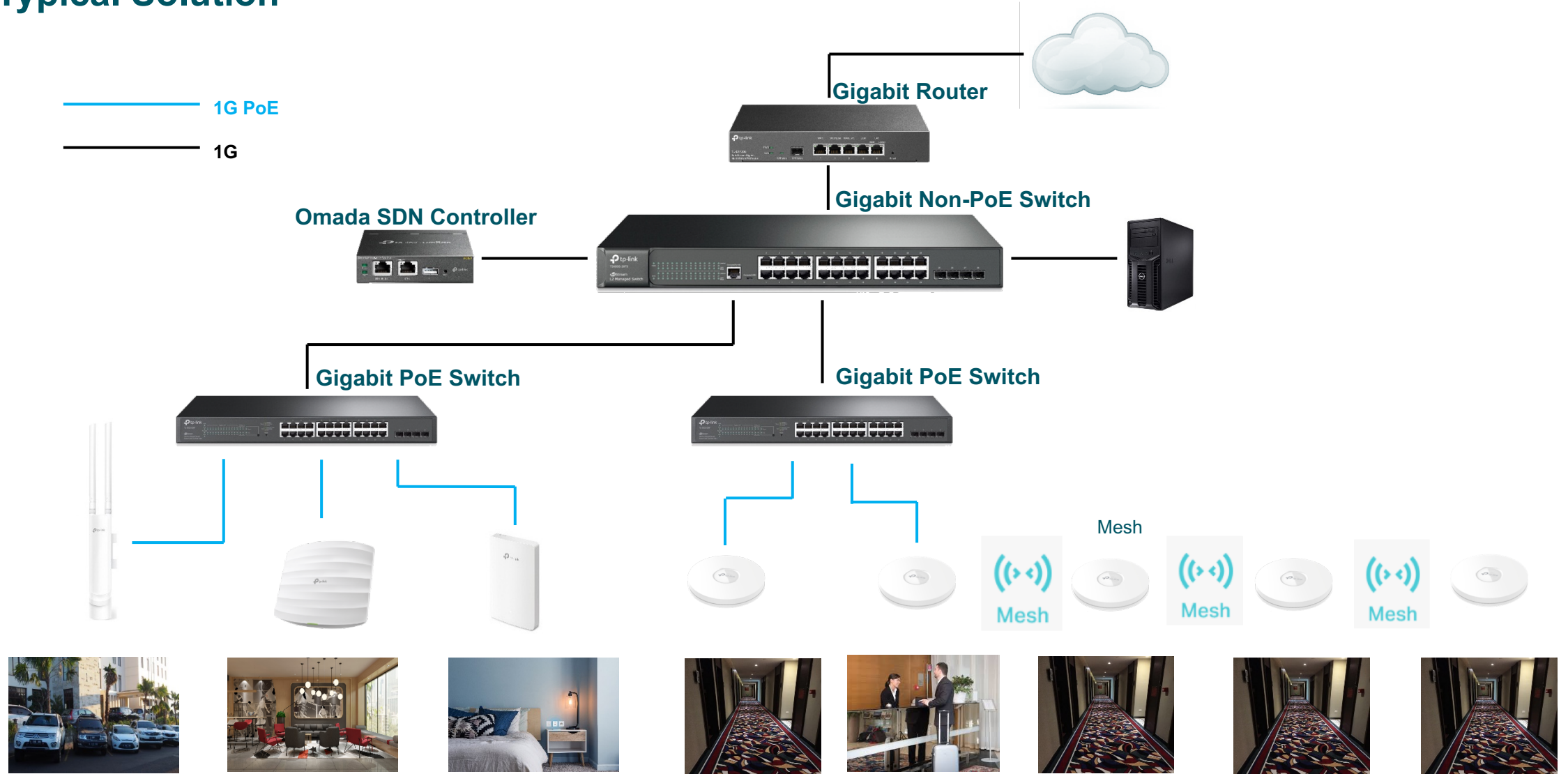
Comprehensive Portfolio of 10G/Multi-Gigabit Switches

Managed switches with 10G fiber, 10G copper, or 2.5 Gbps copper are available to fit a multitude of deployment scenarios and provide high levels of performance, scalability, and cost-effectiveness that enterprise or SMB customers require from their 10G/multi-gigabit networking solutions.

Full 10G Fiber	10G Copper with 10G Fiber Uplink	2.5G Copper with 10G Fiber Uplink	Gigabit Copper with 10G Fiber Uplink
			
• Up to 16/8× 10G SFP+ Ports • Centralized Management with Cloud Access • Built for Use in Aggregation Layers	• 4× 10GE PoE++ and 2× 10G SFP+ Ports • 802.3af/at/bt PoE++ with 200 W PoE Budget • Centralized Management with Cloud Access • Built for Connecting Wi-Fi 6 Access Points with 10G Ports, 10G NAS, and More.	• 8× 2.5GE PoE+ and 2× 10G SFP+ Ports • 802.3af/at PoE+ with 240 W PoE Budget † • Centralized Management with Cloud Access • Built for Connecting Wi-Fi 6 Access Points with 2.5G Ports, 2.5G NAS, and More.	• Up to 48/24× Gigabit + 4× 10G SFP+ Ports • Optional PoE+ and Non-PoE Switches • Centralized Management with Cloud Access • Built for Connecting Access Points, IP Cameras, IP Phones, Wired Devices, and More.



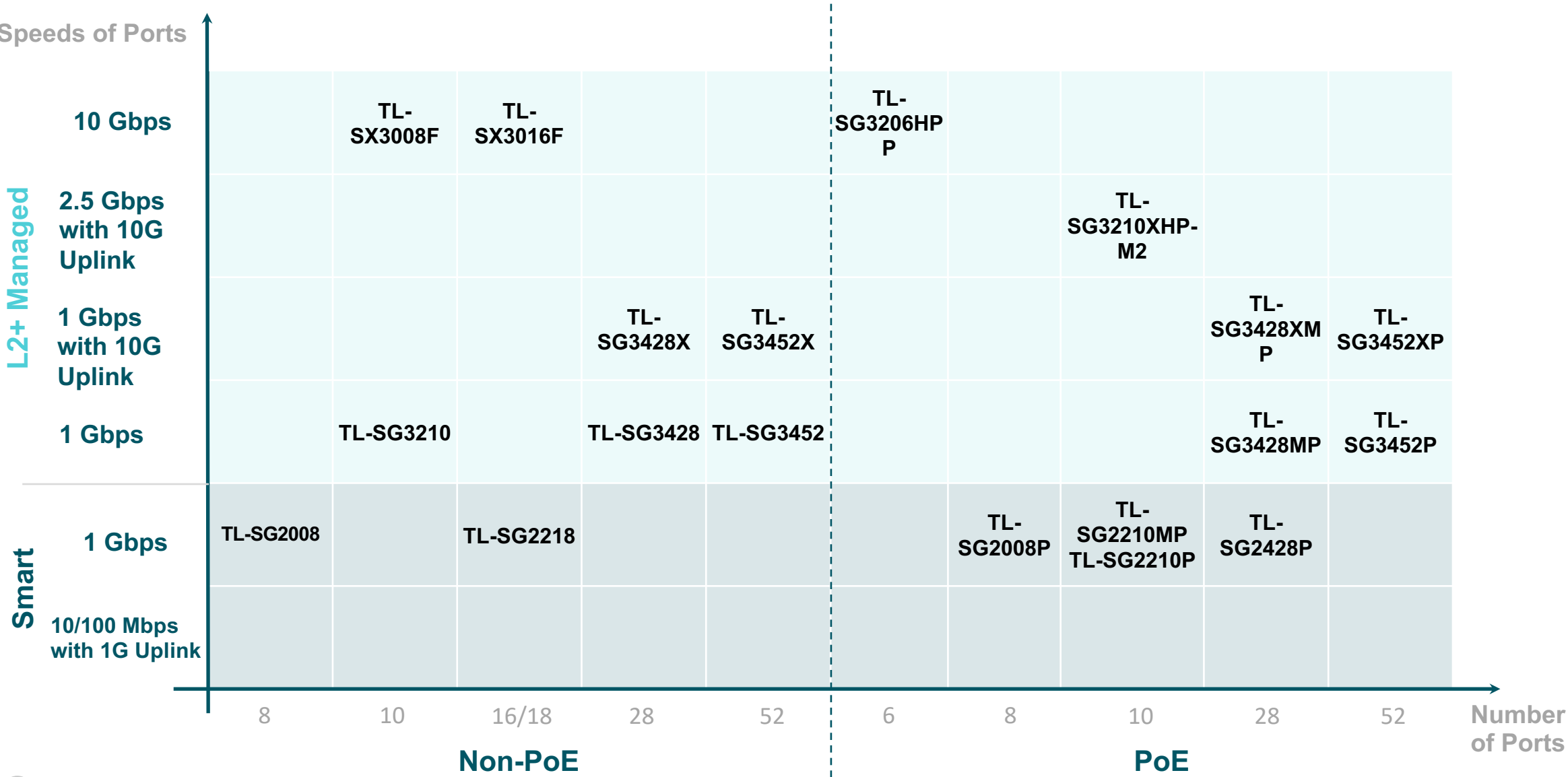
Typical Solution



- The whole network comprises full gigabit switches and gigabit routers.
- Offers a cost-competitive solution, and relatively low-speed average bandwidth for end clients.



JetStream Switches by Omada SDN



JetStream L2+ Managed Switches by Omada SDN (Full 10G)

Provide convenient full 10G link for an integrated Omada SDN solution and centralized management.

	L2+ Managed Switch		
			
Model	TL-SX3206HPP	TL-SX3008F	TL-SX3016F
RJ45 Ports	4 × 10 G	-	-
Fiber Ports	2 × SFP+	8 × SFP+	16 × SFP+
Installation	13-inch Rackmount	19-inch Rackmount	19-inch Rackmount
PoE Standards	802.3at/af/bt	-	-
PoE Ports	4	-	-
PoE Budget	200 W	-	-
Switching Capacity	120 Gbps	160 Gbps	320 Gbps
MAC Address Table	32K	32K	32K
802.1Q VLAN	●	●	●
Voice VLAN	●	●	●
Static Routing	●	●	●
STP/RSTP	●	●	●
IGMP Snooping	●	●	●
ACL	●	●	●
SNMP	●	●	●
DHCP Server	●	●	●
RPS (Redundant Power Supply)	●	-	-
Standalone Mode	●	●	●
Notes	Shipping	Shipping	Shipping



JetStream L2+ Managed Switches by Omada SDN (10G Uplink)

Provide convenient gigabit switches for an integrated Omada SDN solution and centralized management, ideal for access points, surveillance cameras, and VoIP phones.

	L2+ Managed Switch			
				
Model	TL-SG3210XHP-M2	TL-SG3428XMP	TL-SG3428X	TL-SG3452XP
RJ45 Ports	8 × 2.5GE	24 × 1GE	24 × 1GE	48 × 1GE
Fiber Ports	2 × SFP+	4 × SFP+	4 × SFP+	4 × SFP+
Installation	19-inch Rackmount	19-inch Rackmount	19-inch Rackmount	19-inch Rackmount
PoE Standards	802.3at/af	802.3at/af	-	802.3at/af
PoE Ports	8	24	-	48
PoE Budget	240 W	384 W	-	500 W
Switching Capacity	80 Gbps	128 Gbps	128 Gbps	176 Gbps
MAC Address Table	16K	16K	16K	16K
802.1Q VLAN	●	●	●	●
Voice VLAN	●	●	●	●
Static Routing	●	●	●	●
STP/RSTP	●	●	●	●
IGMP Snooping	●	●	●	●
ACL	●	●	●	●
SNMP	●	●	●	●
DHCP Server	●	●	●	●
Standalone Mode	●	●	●	●
Notes	Shipping	Shipping	Shipping	Shipping

JetStream L2+ Managed Switches by Omada SDN (1G Uplink)

Provide convenient gigabit switches for an integrated Omada SDN solution and centralized management, ideal for access points, surveillance cameras, and VoIP phones.

	L2+ Managed Switch				
					
Model	TL-SG3210	TL-SG3428	TL-SG3428MP	TL-SG3452	TL-SG3452P
RJ45 Ports	8 × 1GE	24 × 1GE	24 × 1GE	48 × 1GE	48 × 1GE
Fiber Ports	2 × SFP	4 × SFP	4 × SFP	4 × SFP	4 × SFP+
Installation	19-inch Rackmount/Desktop	19-inch Rackmount	19-inch Rackmount	19-inch Rackmount	19-inch Rackmount
PoE Standards	-	-	802.3at/af	-	802.3at/af
PoE Ports	-	-	24	-	48
PoE Budget	-	-	384 W	-	384 W
Switching Capacity	20 Gbps	56 Gbps	56 Gbps	104 Gbps	104 Gbps
MAC Address Table	8K	16K	8K	16K	16K
802.1Q VLAN	●	●	●	●	●
Voice VLAN	●	●	●	●	●
Static Routing	●	●	●	●	●
STP/RSTP	●	●	●	●	●
IGMP Snooping	●	●	●	●	●
ACL	●	●	●	●	●
SNMP	●	●	●	●	●
DHCP Server	●	●	●	●	●
Standalone Mode	●	●	●	●	●
Notes	Shipping	Shipping	Shipping	Shipping	Shipping

JetStream Smart Switches by Omada SDN (GE Ports)

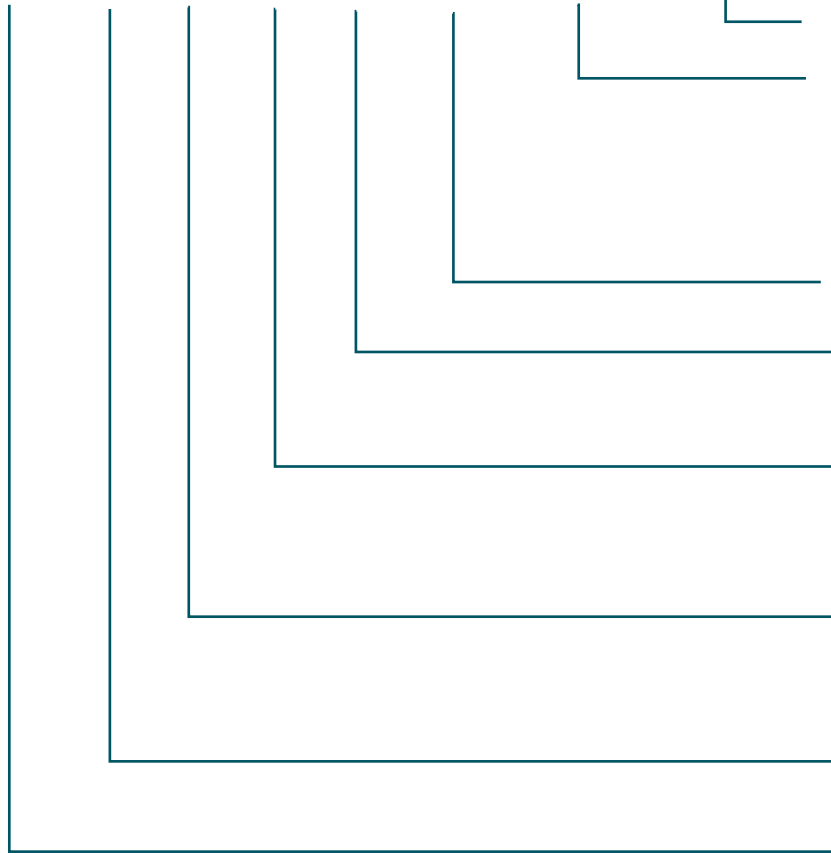
Provide convenient gigabit switches for an integrated Omada SDN solution and centralized management, ideal for access points, surveillance cameras, and VoIP phones.

	Smart Switch (1GE Ports)					
						
Model	TL-SG2008	TL-SG2008P	TL-SG2210P	TL-SG2210MP	TL-SG2218	TL-SG2428P
RJ45 Ports	8 × GE	8 × GE	8 × GE	8 × GE	16 × GE	24 × GE
Fiber Ports	-	-	2 SFP	2 SFP	2 SFP	4 SFP
RJ45/SFP Combo Ports	-	-	-	-	-	-
Installation	Desktop	Desktop	Wall-Mounting/Desktop	19-inch Rackmount/Desktop	19-inch Rackmount	19-inch Rackmount
PoE Standards	-	802.3at/af	802.3at/af	802.3at/af	-	802.3at/af
PoE Ports	-	4	8	8	-	24
PoE Budget	-	62 W	61 W	150W	-	250 W
Switching Capacity	16 Gbps	16 Gbps	20 Gbps	20 Gbps	36 Gbps	56 Gbps
MAC Address Table	8k	8k	8k	8k	8k	8k
Static Routing	●	●	●	●	●	●
802.1Q VLAN	●	●	●	●	●	●
Voice VLAN	●	●	●	●	●	●
LLDP-MED	●	●	●	●	●	●
STP/RSTP	●	●	●	●	●	●
IGMP Snooping	●	●	●	●	●	●
ACL	●	●	●	●	●	●
SNMP	●	●	●	●	●	●
DHCP Server	●	●	●	●	●	●
Standalone Mode	●	●	●	●	●	●
Notes	Shipping	Shipping	Shipping	Shipping	Shipping	Shipping



Name Rules of New Switches

TL - S G 3 (2) 10 XHP - M2



XX: Special marks, such as M2 means 2.5G products

XXX: Extension marks

M: Mini; **D**: Desktop; **E**: Easy Smart; **X**: 10G Uplink;

LP/P/MP/HP: PoE products. H, M, L means high, middle, and low average power budget of every port respectively.

PP: 802.3bt; **F**: Full SFP+ ports

XX: Total port number (including expansion ports, mirroring ports)

(X): A number (some desktop switches with metal casing don't have this number)

- Total port < 10: 0

- Total port ≥ 10: The number of uplink ports

X: The layer of the switch

1: Unmanaged/Easy Smart Switches; **2**: Smart Switches

3: L2/L2+ Managed Switches; **6**: L3 Managed Switches

X: Speeds

F: Fast Ethernet; **L**: Mixture of Fast Ethernet and Gigabit

G: Full Gigabit or 2.5G; **X**: Full 10G

S: Switches

TL: TP-Link



Omada Routers



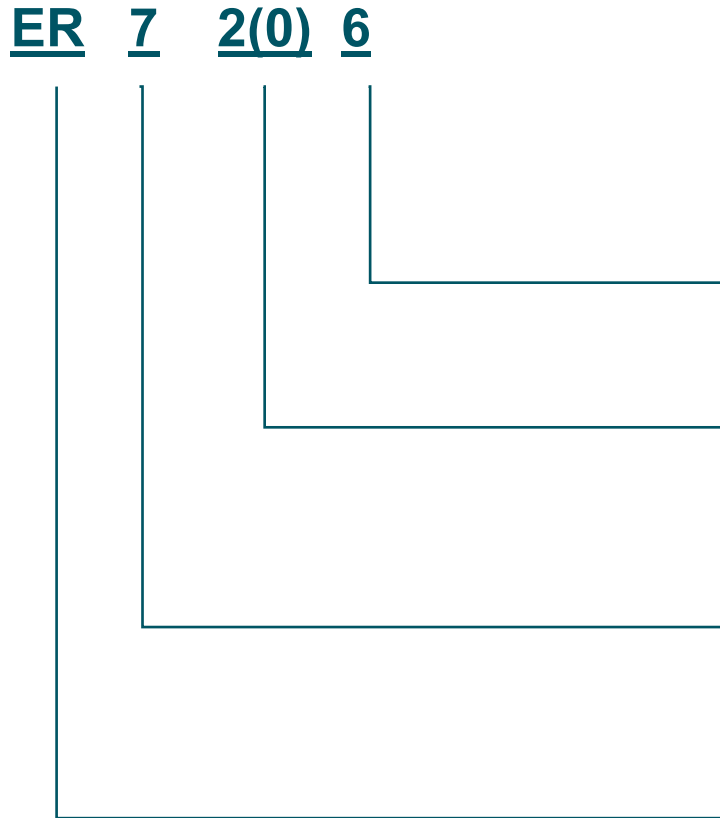
Omada Routers

Provide secure internet access for an integrated Omada SDN solution and centralized management.

Model	ER605 (TL-R605)	ER7206 (TL-ER7206)
		
Version	2.0	1.0
Product Description	Omada Gigabit VPN Router	Omada Gigabit VPN Router
Ports	5× GE RJ45 (1 WAN, 3 WAN/LAN, 1 LAN), 1 X USB Port for connecting 4G/3G Modem as WAN Backup	1× SFP WAN, 5× GE RJ45 (1 WAN, 2 WAN/LAN, 2 LAN)
Installation	Desktop	
WAN Connection Type	Dynamic / Static IP, PPPoE, PPTP, L2TP	
IP Interface	●	
IPv6	●	
VPN	IPSec, PPTP, L2TP, L2TP over IPSec, OpenVPN	
IPSec VPN Tunnel	20	100
PPTP VPN Tunnels	16	50
L2TP VPN Tunnels	16	50
OpenVPN Tunnels	16	50
Load Balance	●	
Routing	Static Routing, Policy Routing	
ACL	●	
URL Filtering	●	
Attack Defense	●	
Multi-Net DHCP/VLAN	●	
Notes	Shipping	Shipping



Name Rules of New Routers



X: Total port number (one or two digits)

X(X): Numbers

- X: 0—Reserved number with no specific meaning;
Other number—Number of CPU cores
- (X)—Reserved one number

X: One number

6: Entry-Level

7: High-performance

8: High-end

ER: Enterprise Router

Thanks for watching

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