Omada by tp-link

Datasheet

Omada 5 GHz 867 Mbps Ultra-Range Indoor/Outdoor Wireless Bridge

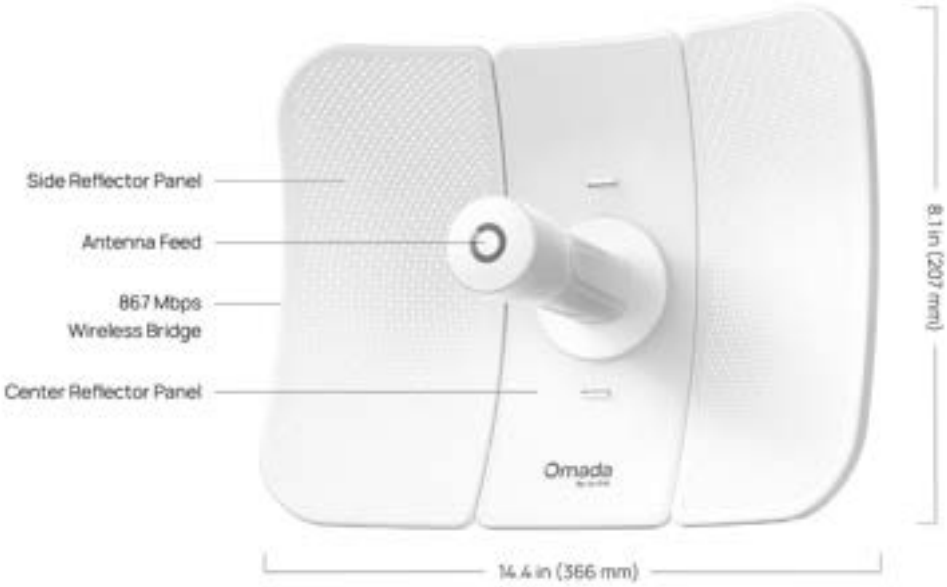
Model: Beam Bridge 5 UR KIT

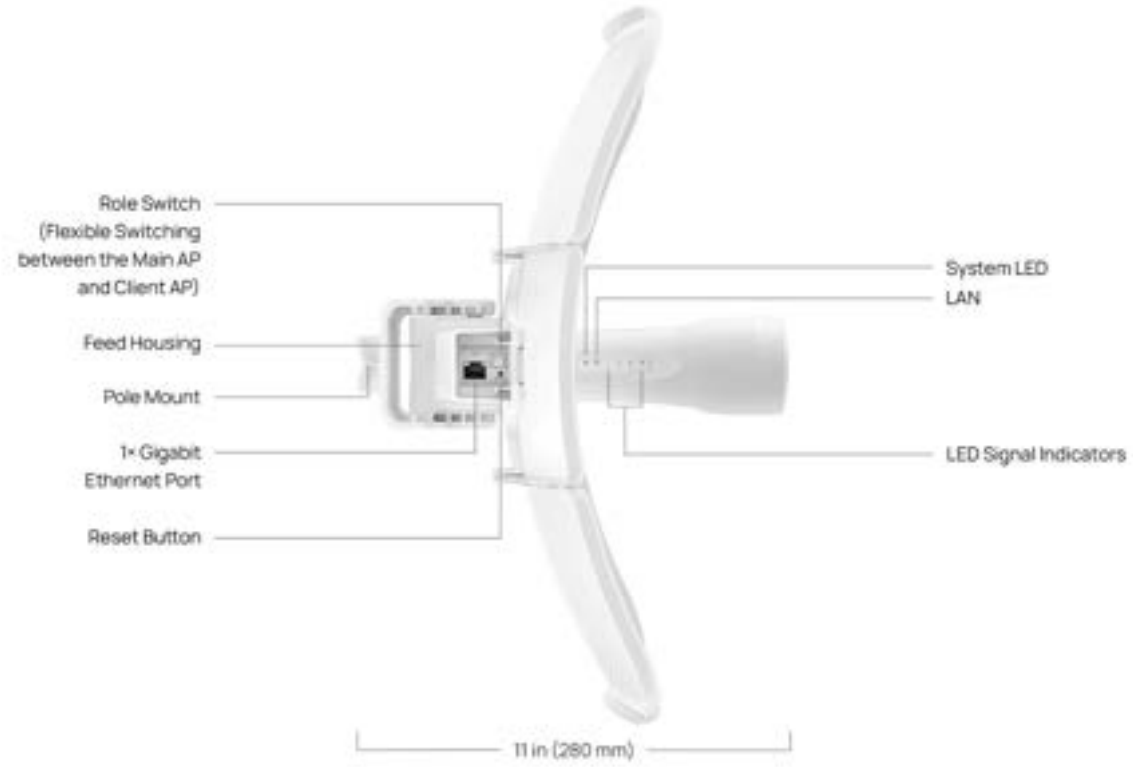
Product Overview

Omada 5 GHz 867 Mbps Indoor/Outdoor Wireless Bridge Beam Bridge 5 UR KIT is an enterprise-grade Wi-Fi bridge kit engineered for ultra-range transmission up to 9.3 miles (15 km). It delivers reliable point-to-point connectivity in remote outdoor environments—ideal for forests, mining sites, islands, and other hard-to-reach locations where extending network access is critical.

- **Business-Grade up to 9.3 mi (15 km) Ultra-Range Wireless Transmission:** With 23dBi high-gain directional antennas.*
- **Plug-and-Play with Preconfigured Kit:** Preconfigured for instant PtP auto-pairing, the bridges deliver instant connectivity right out of the box.
- **App-Guided Alignment:** Visualized app-guided alignment for long-distance setups and instant speed testing for installation verification.
- **Simple PoE Deployment and Power Supply:** 1× Gigabit PoE port supports both 802.3af PoE (1,2pins; 3,6pins) and 24V or 48V Passive PoE (+4,5pins; -7,8pins) for simplified wiring and lower deployment costs.
- **Designed for Outdoor Durability & Reliability:** IP65 weatherproof enclosure, 6 kV lightning protection and operating range of -40 ℃ to +70 ℃.**
- **Remote Monitoring & Management:** Standalone mode or Omada SDN mode for remote centralized management via Web UI or App.†

Product Appearance





Feature Descriptions

Business-Grade 15-km Ultra-Range Wi-Fi Connectivity

It delivers reliable Wi-Fi with low latency and strong signal integrity, equipped with 23 dBi high-gain directional antennas for ultra-range, uninterrupted wireless transmission, and it is ideal for connecting remote sites in rural and hard-to-wire environments.

Effortless Plug-and-Play Setup

Preconfigured for instant PtP auto-pairing, the bridges deliver instant connectivity right out of the box. Simply power on and go, ideal for quick and easy deployments.

App-Guided Alignment for Optimal Performance

Simply bridge alignment with real-time signal strength visualization on the Omada app. Perfect for installations where bridges are far apart, this feature ensures optimal alignment and connectivity. The Omada app also allows users to easily verify installations, test transmission speeds, and troubleshoot connections for optimal performance.

Simple Deployment with PoE Support

1× Gigabit PoE port delivers both power and data through a single cable, cutting deployment costs and outdoor wiring complexity. It supports both 802.3af PoE and Passive PoE power supply.

Outdoor-Ready Design for Extreme Conditions

Beam Bridge 5 UR KIT supports IP65 weatherproof and 6kV lightning protection safeguard your network in harsh outdoor environments. Additionally, an extended temperature tolerance of -40 ℃ to 70 ℃ makes it ideal for extremely hot and cold environments.

Remote Monitoring & Management

Use the Omada app for easy on-site setup-no internet required. For additional flexibility, switch to Omada SDN, enabling cloud management via the Omada app or web portal for seamless control, and monitor from anywhere.

Specifications

Hardware Specifications

Item	Description	
Wi-Fi Standards	5 GHz: IEEE 802.11a/n/ac	
Transmission Distance	15km	
802.11ac	Spatial Streams	• 5 GHz: 2×2 Downlink MU-MIMO with 2 spatial streams
	Frequency Bands	5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A (DFS Channel) 5.470 to 5.725 GHz U-NII-2C (DFS Channel) 5.725 to 5.850 GHz U-NII-3/ISM *Note: Country-Specific Restriction Apply
	Bandwidth	5 GHz: 20 MHz/40 MHz/80 MHz
	Wireless Data Rate	• 5 GHz: 8.6 Mbps to 866 Mbps (MCS0-MCS9, NSS=1 to 2, VHT20/40/80)
	Radio Technology	OFDM (Orthogonal Frequency-Division Multiplexing)
	Modulation Type	256-QAM. 64-QAM, 16-QAM, QPSK, BPSK
	Frame Aggregation	• A-MPDU (Aggregate MAC Protocol Data Unit) for Tx/Rx • A-MSDU (Aggregate MAC Service Data Unit) for Tx/Rx
802.11n	Spatial Streams	• 5 GHz: 2×2 MIMO with 2 spatial streams
	Frequency Bands	5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A (DFS Channel) 5.470 to 5.725 GHz U-NII-2C (DFS Channel) 5.725 to 5.850 GHz U-NII-3/ISM *Note: Country-Specific Restriction Apply
	Bandwidth	20 MHz/40 MHz
	Wireless Data Rate	• 5 GHz: 8.6 Mbps to 300 Mbps (MCS0-MCS7, NSS=1 to 2, HT20/40)
	Radio Technology	OFDM (Orthogonal Frequency-Division Multiplexing)
	Modulation Type	64-QAM, 16-QAM, QPSK, BPSK
	Frame Aggregation	• A-MPDU (Aggregate MAC Protocol Data Unit) for Tx/Rx • A-MSDU (Aggregate MAC Service Data Unit) for Tx/Rx

Item	Description	
Antenna	Wi-Fi	• 5 GHz: 2 × 23 dBi (peak gain), external directional antennas *Note: The gains above are the single-antenna peak gains.
	IoT	• None
Interfaces	• 1 x 10M/100M/1000Mbps Gigabit Ethernet Port (RJ45); PoE in	
IoT	None	
Memory	• Flash: 128Mbit • DRAM: 1024Mbit	
Button	1 × Reset button: Press the button for longer than 5 seconds to make the device restore to factory settings. 1 × System Mode Selection Button: Slide the switch to switch the device roles (Main AP or Client AP)	
Indicator	1 × multi-color system LED indicates on the front: • Power-on status • Firmware initialization or upgrade status • Uplink service status • Auto pair • Before reset • Led locate • Error status 1 × LAN LED 4 × RSSI LEDs • Device enters the pair state by default, LEDs indicate RSSI flashing collectively	
Reliability	MTBF (Mean Time between Failure)	360000- hours at the operating temperature of 25℃ (77℉)
Power Supply	Input	802.3af PoE (1,2pins; 3,6pins) 24V or 48V Passive PoE (+4,5pins; -7,8pins)
	Output	/
Power Consumption	• 802.3af (PoE): 15.8w, 5GHz radio 2×2, wired link rate can be up to 1 Gbps, etc. • Idle mode: 2.87W(PoE)	
Surge/Lightning Protection	Ethernet Ports: ±6 kV	
ESD/EMP Protection	• Air discharge: ±30 kV • Contact discharge: ±4 kV *Note: ESD/EMP Protection means Electrostatic Discharge/Electromagnetic Pulse Protection independently.	

Item	Description	
Tx Power	Maximum transmit power	CE (ERIP) • 5 GHz: 23 dBm in U-NII-1, 23 dBm in U-NII-2A, 30 dBm in U-NII-2C, FCC (Conducted Power) • 5 GHz: 27 dBm in U-NII-1, 27 dBm in U-NII-3 *Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.
	Minimum transmit power	CE (ERIP) • 5 GHz: 6 dBm in U-NII-1, 6 dBm in U-NII-2A, 6 dBm in U-NII-2C, 6 dBm in U-NII-3 FCC (Conducted Power) • 5 GHz: 4 dBm in U-NII-1, 4dBm in U-NII-3 *Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.
	Adjustable power increment	1 dBm
Environment	Temperature	• Operating: -40℃ to +70℃ (-40℉ to +158℉) • Storage: -40℃ to +70℃ (-40℉ to +158℉)
	Humidity	• Operating: 10% to 90% (non-condensing) • Storage: 5% to 90% (non-condensing)
	Altitude	• Storage: up to + 2000 m (6561 feet) • Operating: up to + 2000 m (6561 feet)
	Windproof	Class 16
	Weatherproof Enclosure	IP65 for Pole Mount
Unit	Dimensions (W×D×H)	• Main Unit: 366 × 280 × 207 mm (14.41 × 11.02 × 8.15 in.) • Shipping Unit: 390 × 296 × 165 mm (15.35 × 11.65 × 6.50 in.)
	Weight	• Main Unit: 1.1 kg (2.43 lb) • Mounting Unit: 0.048 kg (0.11 lb) • Shipping Unit: 3.74 kg (8.25 lb)
	Mounting	• Pole Mount (Kits included)

Software Specifications

Item	Description	
	Maximum number of associated STAs	8
	Guest Network	Yes
	ACS (Automatic Channel Selection)	Yes
	Airtime Fairness	No
	TDMA	No
	Speed Test	Yes
	PtP	Yes
	PtMP	4
	Channel Optimization	Yes
	Antenna Alignment	Yes
	802.11 Rate Control	No
	Rogue AP Detection	Yes
	WLAN Optimization	No
	Lock to AP	No
	Rate Limit	• SSID Rate Limit • Client Rate Limit
	Load Balance	No
	MLO	No
	Multicast/Broadcast Management	• Multicast/Broadcast Rate Limit
Security and Authentication	ACL	
	• None • WPA/WPA2 • WPA/WPA2	
	Radius Accounting	
	EAP Types	• EAP-TLS • EAP-TTLS • EAP-PEAP • EAP-CHAP • EAP-SIM • EAP-AKA • EAP-GTC • EAP-FAST • EAP-PEAP • EAP-MD5 • EAP-MSCHAPv2 • PEAPv0

Item	Description	
		• PEAPv1
Management methods	Omada Controller	• Omada Controller V5.15.24 and above • Omada Essential V5.15.24 and above
	App	Omada App V4.25 and above
	Standalone Management	Yes
	Standalone Mesh	No
	SSH	Yes
	SNMP	v1, v2c, v3
Operating Modes	AP	Yes
	Repeater	No
	Mesh	No
System Feature	System Log	Yes
	Reboot Schedule	Yes
	WLAN Schedule	Yes
	NTP (Network Time Protocol)	Yes
	Email Alerts	Yes
	Firmware Upgrade	Yes
	Restore & Backup	Yes
	LED Control	Yes
Network Features	VLAN	• SSID VLAN • Management VLAN
	Static IP / DHCP Client	Yes
	IPv4	Yes
	LLDP (Link Layer Discovery Protocol)	Yes
	mDNS	Yes
	Tools	• Ping / Traceroute • Packet Capture • Terminal

Standards Compliance and Certifications

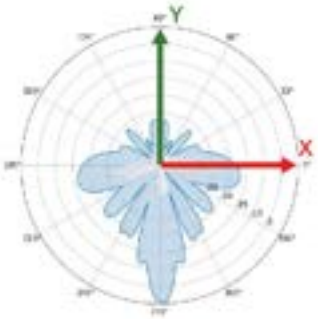
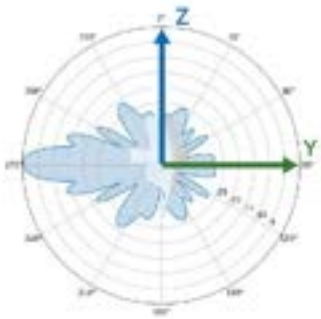
Item	Category	Description
Standards compliance	IEEE Standards	• IEEE 802.11a/n/ac • IEEE 802.1q • IEEE 802.3at • IEEE 802.3ab • IEEE 802.3x
	Radio Standards	• ETSI EN 300 328 • ETSI EN 301 893 • FCC Part 15E • EN 50385 • EN IEC 62311 • EN 62232
	EMC standards	• EN 55032 • EN 55035 • EN 301489-1 • EN 301489-17 • FCC Part 15C • ICES-003
	Safety Standards	• EN 62368-1 • IEC 62368-1
	Security Standards	• WPA-Personal/Enterprise • WPA2-Personal/Enterprise
	RoHS	• Directive 2011/65/EU, Directive (EU) 2015/863 • EN IEC 63000: 2018
	Others	
Certifications	• FCC/CE	

RF Performance

Frequency Band	Wi-Fi Protocol & Bandwidth	MCS Index / Data Rate	EU/US Maximum Transmit Power (dBm) per transmit chain	Receiver Sensitivity (dBm) per receive chain
5 GHz	802.11a	6M	10/24	-95
		54M	10/18	-76
	802.11ac, VHT20	MCS0	10/24	-92
		MCS8	10/18	-68
	802.11ac, VHT40	MCS0	10/24	-88
		MCS9	10/18	-64
	802.11ac, VHT80	MCS0	10/24	-86
		MCS9	10/18	-60

Antenna Radiation Patterns

5 GHz

XY Plane	XZ Plane	YZ Plane
		

Package Contents

Item	Quantity
Beam Bridge 5 UR	2
Passive PoE Adapter	2
Power Cord	2
Mounting Kit	2
Installation Guide	1

Support Services

We are committed to providing you with comprehensive and reliable support services to ensure seamless experience with Omada products.

- Contact Support: https://support.omadanetworks.com/#contact-us
- Warranty Services: https://www.omadanetworks.com/support/replacement-warranty/

Revision History

Version	Date	Description
V1.0	2025-09-15	Initial release.
V1.1	2025-11-06	Updated software specifications.

* The advertised coverage is calculated based on laboratory testing. Actual coverage is not guaranteed and will vary as a result of the performance of the equipped antennas, client limitations, and environmental factors.

** Protection against lightning and electro-static discharge 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.

† These functions require the use of an Omada controller.

Some models featured in this guide may be unavailable in your country or region. Visit TP-Link website for local sales information: **https://www.omadanetworks.com**. Specifications are subject to change without notice.