

GIGAMESH-PRO



GigaMesh-Pro is the premium version of HyMesh industrial routers with the capacity to act as the core infrastructure of a Unified Mesh Mobile Backhaul network. It combines 5G capabilities and the latest technology Wi-Fi6 to enable data, voice, and video applications.

Infused with our operating system LuceorOs, it enables the global deployment of our HyMesh technology-based network intelligence with its automatic failover and dynamic selection of the best available path for the ultimate combination of end-to-end performance, resiliency, security, mobility, and minimum operating cost.

GigaMesh-Pro is equipped with a 5G NR/LTE interface, three 802.11ax transceivers, GNSS interface and dual Gigabit Ethernet ports with support of POE+.

3 x WIMESH

5G NR/LTE/WCDMA

OUTDOOR ROUTER

KEY FEATURES

1 x 4x4 MIMO 5GHz 802.11ax radio transceiver with up to 4.8Gbps throughput
1 x 2x2 MIMO 5GHz 802.11ax radio transceiver with up to 2.4Gbps throughput
1 x 4x4 MIMO 5GNR/LTE/WCDMA with up to 3.5Gbps downlink and 900Mbps uplink
1x 2x2 MIMO 2.4GHz 802.11ax transceiver
Wide range for external MIMO antennas (up to 12 ports)
2 x 10/100/1000Mbps Ethernet, with support of POE+
GNSS interface (GPS, Galileo, GLONASS, Beidou)
Automatic and optimum switching between WiMesh and 5G to ensure reliable connectivity
MeshTool Suite software and web interface operate in tandem to configure, troubleshoot, and monitor the network architecture
Plug-and-Play installation
Outdoor rated: IP67, -40°C to +80°C temperature range

3D VIEWS



HARDWARE SPECIFICATIONS

CPU	Quad-core ARM 64bit A53 @1.8GHz, 1GB DDR3L, 32MB NOR Flash, 256MB NAND Flash			
WLAN	Interface	802.11ax 2x2 MIMO 2.4GHz	802.11ax 2x2 MIMO 5GHz	802.11ax 4x4 MIMO 5GHz
	Frequency¹	2412 – 2482 MHz	5180 – 5825 MHz	5150 – 5950 MHz
	Modulation	OFDMA	OFDMA	OFDMA: BPSK, QPSK, DBPSK, DQPSK, 16-QAM, 64-QAM, 256-QAM, 1024- QAM, 4096-QAM
	Max. Physical Layer Data Rate	2.4Gbps	2.4Gbps	4.9Gbps
	Max. RFTX Power^{2,3}	26dBm	23dBm	23dBm
	RX Sensitivity⁴			-76 dBm (11a @ 6 Mbps) to -57 dBm (11ax HE80 @ MCS11)

Cellular	Interface	4x4 MIMO 5G NR/LTE/WCDMA			
	Frequency Bands¹	5G NR	n1/3/5/7/8/20/28/38/40/41/75/76/77/78		
		LTE	FDD: B1/3/5/7/8/20/28/32 TDD: B38/40/41/42/43		
		WCDMA	B1/5/8		
	Data Rate	Peak Downlink	NR SA Sub 6	2500Mbps	
			NR NSA Sub 6	3500Mbps	
			LTE	1600Mbps	
			WCDMA	42Mbps	
		Peak Uplink	NR SA Sub 6	900Mbps	
			NR NSA Sub 6	555Mbps	
LTE			211Mbps		
WCDMA			5.67Mbps		
Max. RFTX Power^{2,3}	----				
RX Sensitivity⁵	----				
Navigation	Multi-constellation GNSS : GPS, Galileo, GLONASS, Beidou				
Antennas	8 x N-Female for WLAN 4 x N-Female for cellular 1 x SMA for GPS				
Ethernet Interfaces	2 x RJ-45, 10/100/1000BaseT, auto MDI/MDIX, active POE ,IEEE 802.3bt				
LED Indicators	1 x Power indicator 2 x Status indicator				
Button	1x push button to restore factory settings and restart the device				
Power Supply	48 VDC Passive POE / Active POE, IEEE 802.3bt				
Power Consumption⁶	30W				
Dimensions	220 x 250 x 90 mm 8.66 x 9.84 x 3.54 in.				
Weight	2.73 Kg 6 lb.				
Temperature	-40°C to 80°C -40°F to 176° F				
Wind Resistance	250Km/h				
IP code	IP67				
Materials	Aluminum				

¹Channel, Frequency Channel, frequency and bandwidth options will vary based upon regional and local regulations

²TX power is governed by local regulations and varies by frequency

³TX power Tolerance is ±2 dB

⁴RX sensitivity Tolerance is ±2 dB

⁵Cellular RX sensitivity depends on the LTE bands

⁶Power consumption depends on transceiver configuration

SOFTWARE SPECIFICATIONS

Networking	Compliance with 802.11s Mesh networking
	Compliance with IEEE 802.1q
	Proactive link-state routing protocol for Mesh networking
	SSID-based VLAN assignment
	Service set identifier (SSID) hiding
	Automatic and manual rate adjustment
	Automatic channel scanning and interference avoidance
	Frame aggregation, including A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx)
	VLAN trunk on uplink Ethernet ports
	Management channel of the AP uplink port in tagged and untagged mode
	DHCP client, obtaining IP addresses through DHCP
	Tunnel data forwarding and direct data forwarding
	STA isolation in the same VLAN
	Access control lists (ACLs)
	Link Layer Discovery Protocol (LLDP)
	Network Address Translation (NAT)
Virtual Router Redundancy Protocol (VRRP)	
Supports IPv6/ IPv4, UDP, TCP, ICMP, Telnet, SNMP, HTTP and FTP protocols	
Static IP, dynamic IP or zero-configuration deployment	
Management	Web local management through HTTP or HTTPS
	Real-time configuration monitoring and fast fault location using the NMS
	SNMPv2c and v3
	System status alarm
	Network Time Protocol (NTP)
	Control and Provisioning of Wireless devices
Remote software update	
Security	Open system authentication
	WPA/WPA2/WPA-WPA2-PSK authentication and encryption
	Wireless intrusion detection system (WIDS) and wireless intrusion prevention system (WIPS)
	WPA/WPA2/WPA-WPA2-802.1x authentication and encryption with MAC address authentication, and Portal authentication
	802.1x authentication, MAC address authentication, and Portal authentication
	DHCP snooping
	IP Source Guard
	VPN / L2TP with AES encryption
WPA, WPA2, and WPA-WPA2 support TKIP and CCMP encryption algorithms, where CCMP uses 128-bit advanced encryption standard (AES) encryption algorithm and has high security	

QoS Features	Priority mapping and packet scheduling based on a Wi-Fi Multimedia (WMM) profile to implement priority-based data processing and forwarding
	WMM parameter management for each radio
	WMM power saving
	Priority mapping for upstream packets and flow-based mapping for downstream packets

STANDARDS AND CERTIFICATIONS

FCC	Part 15.C
	Part 15.E
	Part 15.247
	Part 15.407
	Part 1.1310 & 2.1091
	Part 15.203
	Part 15.207
	Part 15.205
Environmental	IEC 60529 (IP67)
	RoHs compliance

ORDERING INFORMATION

OWR-3000AX-5G	GigaMesh-PRO with one 2.4GHz, 2x2 MIMO, 802.11ax, one 5GHz, 2x2 MIMO, 802.11ax, one 5GHz, 4x4 MIMO, 802.11ax and one 5GNR/LTE / WCDMA , 4x4 MIMO transceivers
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