

GigaMesh



GigaMesh is the high-end of the Luceor industrial routers ranges with the capacity to act as the core infrastructure of a WiMesh mobile backhaul network. GigaMesh comes with our unique LuceorOS operating system embedded. It dynamically selects the best network available path for the ultimate combination of end-to-end performance, resilience, security, mobility, rapid deployment, and minimal operating cost.

With its three radios architecture, combined with LuceorOS multi-radio intelligence, it offers up to 1.5Gbit/s of throughput. It can be configured for any network topology, including point-to-point, point-to-multipoint, relay, mesh, Wi-Fi AP, and mixed.

Designed for harsh industrial outdoor environments, GigaMesh offers the core power you need for your critical field applications in any circumstance.

3 x WIMESH

ROUTER

OUTDOOR RATED

KEY FEATURES

3 x 2x2 MIMO 2.4/5GHz 802.11a/b/g/n/ac radio transceivers with useful throughput up to 500Mbps per radio

Wide range of external 2x2 MIMO antennas (up to 6 ports)

1x 10/100/1000Mbps Ethernet, Passive POE input voltage range 10 to 60V

1x 10/100/1000Mbps Ethernet, 802.3at POE input voltage range 37 to 57V

GNSS interface (GPS, Galileo, GLONASS, Beidou, ZQSS)

LuceorOS manages network traffic by dynamically and intelligently selecting the best connection

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 1.5GHz ARM SoC, 2GBytes DDR4 and 8GBytes eMMC Flash Memory		
WLAN	Interface	3 x Radios, 2x2 MIMO, 802.11a/b/g/n/ac, dual-band 2.4/5GHz	
	Frequency¹	2412-2472 MHz 5150-5825 MHz	
	Modulation	OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)	
	Max. Physical Layer Data Rate Per Radio	866 Mbps	
	Max. RFTX Power^{2,3}	27dBm	
	RX Sensitivity⁴	2.4GHz	-93dBm @ nHT20, MCS0 to -76dBm, nHT20, MCS7
	5GHz	-93dBm @ n/ac HT20, MCS0 to -71dBm, n/ac HT20, MCS8	-88dBm @ n/ac HT80, MCS0 to -65dBm, n/ac HT80, MCS9

Navigation	Multi-constellation GNSS : GPS, Galileo, GLONASS, Beidou, ZQSS
External Ports	1 x RJ45, 10/100/1000 Mbps Ethernet, auto MDI/MDIX, passive POE 1 x RJ45 10/100/1000 Mbps Ethernet, auto MDI/MDIX, active POE, IEEE 802.3at 1 x USB3.0 1 x DC IN, 8~60 VDC 1 X DC OUT, 8~60 VDC , Max. 50W
Antennas	6 x N-Female for WLAN 1 x SMA for GPS
LED Indicators	1 x Power indicator 2 x Status indicator
Power Supply	8~60 VDC IN connector 36~57 VDC 802.3at POE 10~60 VDC passive POE
Power Consumption⁵	Max. 25W
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

⁵Power 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)
	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/WPA3 authentication and encryption
	Wireless intrusion detection system (WIDS) and wireless intrusion prevention system (WIPS)
	WPA/WPA2/WPA-WPA2-802.1x authentication and encryption
	IP Source Guard
	VPN with public key security (SSL/TLS mode) using client & server certificates.
	WPA, WPA2, and WPA-WPA2 support TKIP and CCMP encryption algorithms, where CCMP uses 256-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
	Queue mapping and scheduling
	User-based bandwidth limiting
Adaptive bandwidth management (automatic bandwidth adjustment based on the user quantity and radio environment)	

STANDARDS AND CERTIFICATIONS

FCC	Part 15.C Part 15.E Part 15.407
ETSI	EN 300 328 V2.2.2 EN 301 893 V2.1.1 EN 301 489-1 V2.1.1 EN 303 413 V1.1.1

EN 62 311

IEC 62 368-1

IEC 60 950-22

Environmental**IEC 60529 (IP67)**

ORDERING INFORMATION

OWR-3000AC-AGigaMesh with three radio transceivers , dual-band 2.4/5GHz, 2x2 MIMO,
802.11a/b/g/n/ac
