

# MegaMesh Pro A3



Designed for maximum performance in harsh environments, **MegaMesh Pro A3** is the HyMesh version of MegaMesh. It combines LTE capabilities with WiMesh technology to enable data, voice, and video applications.

Combined with our LuceorOs operating system, 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.

**MegaMesh Pro A3** is equipped with a cellular interface, three radio transceivers, GNSS interface and dual Gigabit Ethernet ports.

**3 x WIMESH**

**LTE/4G**

**OUTDOOR ROUTER**

## KEY FEATURES

2 x 2x2 MIMO 5GHz 802.11a/b/g/n/ac radio transceivers

1 x LTE-A Cat-7 with up to 300Mbps downlink and 150Mbps uplink

1x 2x2 MIMO 2.4GHz 802.11n transceiver

Wide range for external 2x2 MIMO antennas (up to 8 ports)

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

Automatic and optimum switching between WiMesh and 4G 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

Suitable for video surveillance, emergency services, public safety, industries, ports, monitoring systems, and other fixed and highly mobile networks

## 3D VIEWS



## HARDWARE SPECIFICATIONS

<b>CPU</b>	Quad-core CPU ARM Cortex A7 up to 717MHz, 128 MB Nand Flash, 32MB Nor Flash and DDR3L 256 MB		
<b>WLAN</b>	<b>Interface</b>	802.11a/b/g/n 2x2 MIMO 2.4GHz	2 x 802.11a/b/g/n/ac 2x2 MIMO 5GHz
	<b>Frequency<sup>1</sup></b>	2412 - 2482 MHz	5180 - 5825 MHz
	<b>Modulation</b>	DSSS, CCK, OFDM	OFDM: 256-QAM, 64-QAM, 16-QAM, QPSK, BPSK
	<b>Max. Physical Layer Data Rate</b>	300 Mbps	866 Mbps
	<b>Max. RF TX Power<sup>2,3</sup></b>	29 dBm	28 dBm
	<b>RX Sensitivity<sup>4</sup></b>	-96 dBm (@ 6 Mbps) to -70 dBm (@ MCS7, MCS15, HT40)	-96 dBm (@ 6 Mbps) to -62dBm (@ MCS9, MCS19, MCS29, HT80)

<b>Cellular</b>	<b>Interface</b>	LTE-A Cat-7 2x2 MIMO	
	<b>Frequency Bands<sup>1</sup></b>	4G LTE	B1, B3, B7, B8, B20, B28, B32, B38, B40, B41, B42, B43
		3G/ HSPA+	B1, B5, B8
	<b>Data Rate</b>	Peak Downlink	300Mbps
		Peak Uplink	150Mbps
	<b>Max. RF TX Power<sup>2,3</sup></b>	23dBm	
<b>RX Sensitivity<sup>5</sup></b>	-100 dBm (Full RB on downlink; BW: 10 MHz)		
<b>Navigation</b>	Multi-constellation GNSS (GPS, Galileo, GLONASS, Beidou)		
<b>Antennas</b>	6 x Fakra connectors for WLAN 2 x Fakra connectors for cellular 1 x Fakra connector for GPS		
<b>Ethernet Interfaces</b>	2 x RJ-45, 10/100/1000BaseT, , IEEE 802.3, auto MDI/MDIX, passive POE		
<b>LED Indicators</b>	1 x Power indicator 2 x Status indicator		
<b>Button</b>	1x push button to restore factory settings and restart the device		
<b>Power Supply</b>	24 VDC Passive POE		
<b>Power Consumption<sup>6</sup></b>	Max. 19W		
<b>Dimensions</b>	220 x 250 x 90 mm 8.66 x 9.84 x 3.54 in.		
<b>Weight</b>	2.73 Kg 6 lb.		
<b>Temperature</b>	-40°C to 80°C -40°F to 176° F		
<b>Wind Resistance</b>	250Km/h		
<b>IP code</b>	IP67		
<b>Materials</b>	Aluminum		

<sup>1</sup>Channel, Frequency Channel, frequency and bandwidth options will vary based upon regional and local regulations

<sup>2</sup>TX power is governed by local regulations and varies by frequency

<sup>3</sup>TX power Tolerance is  $\pm 2$  dB

<sup>4</sup>RX sensitivity Tolerance is  $\pm 2$  dB

<sup>5</sup>Cellular RX sensitivity depends on the LTE bands

<sup>6</sup>Power consumption depends on transceiver configuration

## SOFTWARE SPECIFICATIONS

<b>Networking</b>	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
<b>Management</b>	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
<b>Security</b>	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
<b>QoS Features</b>	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

<b>FCC</b>	Part 15.C Part 15.E Part 15.247 Part 15.407 Part 1.1310 & 2.1091 Part 15.203 Part15.207 Part 15.205 Part 15.209
<b>Environmental</b>	IEC 60529 (IP67) RoHs compliance

## ORDERING INFORMATION

<b>OWC-3000AC-B</b>	MegaMesh Pro A3 with one 2.4 GHz, 2x2 MIMO, 802.11an, two 5GHz, 2x2 MIMO, 802.11ac and one LTE-A Cat-7 , 2x2 MIMO radio transceivers
	AL-0010: 100-240VAC/24V DC 1A passive PoE power supply