MegaMesh Rail

Certified for rolling stock applications, **MegaMesh Rail** is the ultimate broadband connectivity solution for high-speed vehicles and trains. Powered by our patent HyMesh technology, **MegaMesh Rail** combines 5G/LTE capabilities with WiMesh (Wi-Fi6 based) to offer higher data transmission speed for video and other bandwidth-intensive applications.

Thanks to LuceorOS fast mobility algorithms, **MegaMesh Rail** ensures seamless IP transmissions with the ground at up to 350 km/h (220mph) with exceptionally high throughput. Designed to withstand extreme outdoor environments, this platform makes it ideal for outdoor scenarios with severe industrial requirements, such as Railways, Transportation, Manufacturing, Mining, Oil and Gas, etc.

WIMESH

5GNR/LTE/WCDMA

OUTDOOR ROUTER

KEY FEATURES

1 x 2x2 MIMO 802.11ax radio transceiver

1 x 5G NR and LTE-A CAT20 dual mode

Wide range of external MIMO antennas

2.5G WAN/LAN & 1G LAN and diverse industry interfaces

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

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

Automatic and optimum switching between WiMesh and 5G/LTE to ensure reliable connectivity

Web, TR069 and SNMP based device management

Plug-and-Play installation

Outdoor rated: Ruggedized, anti-vibration, shock-resistant, lightning-proof, IP67, CE EN50155

3D VIEWS

HARDWARE SPECIFICATIONS

Cellular	Frequency Bands	5G NR	n1/n2/n3/n5/n7/n8/n12/n20/n28/n38/n40/n41/n48/n66 n71/n77/n78/n79
		LTE	**FDD:** B1/B2/B3/B4/B7/B8/B9/B12/B13/B14/B17/B18/ B19/B20/ B25/B26/B28/B29/B30/B32/B66/B71 **TDD:** B34/B38/B39/B40/B41/B42/B43/B46/B48
		WCDMA	B1/B2/B3/B4/B5/B6/B8/B19
	TX/RX	2TX/4RX	
	MIMO	DL: 4x4 MIMO UP: 2x2 MIMO	
	Network Mode	Supports SA/NSA	
	ENDC	Supported	

WLAN	2x2 MIMO 802.11ax radio transceiver
Navigation	Multi-constellation GNSS : GPS, Galileo, GLONASS, Beidou, QZSS
Antenna Ports	2 x TNC connector for NR&LTE antenna 3 x TNC connector for NR&LTE&GNSS antenna 2 x TNC connector for 2.4&5GHz Wi-Fi/WiMesh antenna
External Ports	1 x M12 for power supply 1 x M12 for 2.5G WAN/LAN + 1G LAN 1 x M12 for RS232 + 2 x DI + 2 x DO 1 x M12 for RS485 2 x Nano SIM slot (4FF, dual SIM single standby, dual eSIM supported)
LED Indicators	1 x power indicator 1 x network status indicator 1 x RSSI indicator
Button	1 x reboot or restore button
Power Supply	24 VDC
Power Consumption[1]	< 20 W
Dimensions	290 x 189 x 56mm 11.42 x 7.44 x 2.20 in.
Weight	< 2.5 Kg < 5.5 lb.
Temperature	Operating temperature: -40 °C ~ 70 °C | -40 °F ~ 158 °F Storage temperature: -40 °C ~ 85 °C | -40 °F ~ 185 °F
Humidity	Operation humidity: 5% - 95% (non-condensing) Storage humidity: 5% - 95% (non-condensing)
IP code	IP67

[1]Power consumption depends on transceiver configuration

SOFTWARE SPECIFICATIONS

Data Services	4 x APNs (2 for data, 1 for voice, 1 for management)
	Multiple PDN (up to 16 PDNs)
	IPV4/IPV6 compliance
LAN	IEEE 802.1Q VLAN
	DHCPV4/ DHCPV6 server/ client
	DNS and DNS proxy
	DMZ
	UPNP
	ALG
	Multi-cast/ Multi-cast proxy
	MAC address filtering
	GPS broadcast to LAN

	Version Management	Image checksum
		Active version and backup version
		Rollback mechanism when upgrade fails
	HTTP/FTP auto-upgrade	
	TR069	Upload/ Download the ACS specified file
		Download the configuration file
		Configure & queries parameters
		Remote upgrade
		Remote debugging operations
		Cycle monitor
	SNMP	
	WebGUI/ CLI	Various level of user login priority with different limitation and display
		Encryption backup current settings and restore the backup settings
		Export current diagnosis results and operation logs
		Statistics of LAN link status, transmit and receive traffic and up time
	Diagnostics	
	USIM PIN management and card authentication	
	USIM activation	
VPN & Routing	Route mode	
	Bridge mode/ Bypass mode	
	NAT mode	
	Static mode	
	Port mirror	
	ARP	
	IPV4/IPV6 dual stack	
	Port forwarding	
	IPSec	
	PPTP	
	GRE tunnel	
	L2TP V2/V3	
	VPN pass-through	
Security	Firewall	
	Mac address filtering	
	IP address filtering	
	URL filtering	
	Access control	

	HTTPS login from WAN
	DDOS attack protection
	Hierarchical user management

STANDARDS AND CERTIFICATIONS

FCC / CE	
Protection rating	EN60529:IP67
Salt mist	IEC68-2-11
Shock	IEC60068-2-27/EN50155/EN61373
Free Fall	IEC60068-2-32 (1 meter height with package)
Vibration	IEC60068-2-6/EN50155/EN61373

ORDERING INFORMATION

OWR-1000AX-5G	MegaMesh Rail with one 5GHz, 2x2 MIMO, 802.11ax and one 5G NR and LTE-A CAT20 dual mode transceivers

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