

MCU-30 GEN2

Cybersecure Mesh solution for Robotics and Unmanned systems

When Small Form Factor Matters!

The Mobilicom MCU-30 unit is a Cybersecure combined Software Defined Radio with Mesh capability that delivers ad-hoc mobile communication network without the need for any infrastructure. This low power consumption, extra lightweight, battery-operated unit delivers the highest form-to-performance ratio and is especially designed for installations where every gram matters.

With ICE cybersecurity solution integrated within the unit, it offers a superior Mesh security with three facets comprised of Immunity, Cybersecurity and Encryption. The ICE cybersecurity solution protects the platform, safeguards communication channels, and encrypts the transmitted data.

Key Features:

- Cybersecure Bi-directional, configurable software defined radio (SDR) Data Link
- Robust N-LOS operation
- Broadcast, Multicast and Unicast transmission modes
- Control & Telemetry
- Broadband link capable of delivering real-time full HD video
- Relay operation (Repeater) and Mesh Operation

Powered by Mobilicom's Software Defined Radio (SDR), the unit is adaptable to any change, modification or configuration of wireless link parameters to best fit the ever-changing environment conditions.



Highlights

- ICE (Immunity, Cybersecurity, Encryption) suite
- MIMO Advanced Antenna Processing
- Mobile MESH
- Wide Frequency Range 2.3 GHz to 2.7 GHz
- Low power consumption
- Highest form-to-performance ratio
- Compact and lightweight
- NDAA compliant



Radio and Modem MCU-30	
Range	Varies by product, configuration, and environmental factors. Specs available from sales
Frequency	700-950 MHz 902-928MHz (ISM) 2300-2700MHz 2.4GHz ISM Multi Band Radio (MBR) Available. Other frequencies available ranging from 75Mhz-6 GHz.
Networks topology	P2P, P2MP, MP2MP, Relay & Mesh
Modes of Operation	Broadcast, Multicast, Unicast
Output Power	Up to 1W per Antenna (2W total)
Sensitivity	-101dBm @2 MHz
Radio Access Method	OFDM - TDMA
Duplexing	TDD
Diversity Support	MIMO 2X2; Tx & Rx Diversity
Channel BW	2.2 /4.2/8.4 MHz Other BW are available upon request
Frequency Resolution	0.25MHz
Latency	15ms
Throughput	configurable from 0.95 to 8 Mbps Up to 20Mbps upon request *For other throughputs, other solutions available
Synchronization	Proprietary GPS-free synchronization technology *GPS Synchronization (optional)
Encryption	AES 128 as standard AES 256 upon request

Environmental		
Temperature Range	Operating	Storage
Ruggedized	-20 to 50°C	-50 to 85°C
Humidity	5 to 95% non-condensing	
Casing	EMI/RFI, Ruggedized	

Dimensions	[HxWxD] mm	[HxWxD] inch
Lite	74x80x27 mm	2.3x3.1x1
Ruggedized	120x90x60 mm	4.7x3.5x2.3

Weight	Grams	Ounce
Ruggedized	550 gr.	19 oz.

ICE Cybersecurity suite	
<p>Cyber protection level ICE capabilities</p> <p>Primary (Standard)</p>	<ul style="list-style-type: none"> Prevention of cyber-attacks against CPU's Operating System Integrity and embedded software protection Multi-layer data protection, Performs cryptographic operations for collected and transmitted data Prevent man in the middle attack enables adjacent networks operation Prevent Eavesdropping Transmission Security (TranSec) - interception resistance Unique key link identification
<p>Cyber protection level ICE capabilities</p> <p>Professional (Optional License)</p>	<ul style="list-style-type: none"> Transmission Security (TranSec) - interception resistance Multi-layer data protection, Performs cryptographic operations for collected and transmitted data Interference Avoidance System (IAS) - Real-time interference detection, cognitive radio sensing, and avoidance Real time protection against RF Links Jamming

Interfaces	
Data	Ethernet 10/100Mbps
Ethernet	Full Ethernet Protocol Transparency (IP, TCP, UDP, RTP, HTTP VLAN, VPN)
Optional Interfaces	RS232 (optional RS485 / 422, GPIO)
Antennas	SMA (x2) female

Configuration and Management	
Unit Monitoring	Web based Application
Program Interface	API

Power	
DC Voltage	7.5-24V DC
Power Consumption	10W Average Up to 12W

Information herein is subject to changes without notice and should not be considered as contractual.