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 Mobile MESH, IP communications unit that delivers ad-hoc direct wireless mobile communication 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 a 360º multi-facet, multi-tiers ICE cybersecurity solution integrated within the unit, it offers a superior MESH security with three facets comprised of Immunity, Cybersecurity and Encryption. The 360º multi-faceted and multi-tiers suite 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.

Ruggedized

Lite

Maximizing the Performance-to-Gram ratio.

Highlights

- **ICE (Immunity, Cybersecurity, Encryption) suite**
- **MIMO Advanced Antenna Processing**
- **Mobile MESH**
- Fully synchronized system (GPS or w/o GPS)
- Real-Time GPS
- Wide Frequency Range - 75 MHz to 5.9 GHz
- Low power consumption
- Highest form-to-performance ratio
- Compact and lightweight
- NDAA compliant

MOBILICOM

End-to-end provider
of Cybersecurity and
Smart solutions

Radio and Modem MCU-30

Range	Up to 15km (omni) 20-30km (directional)
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	Max -101dBm
Radio Access Method	OFDM - TDMA
Duplexing	TDD
Diversity Support	MIMO 2X2; Tx & Rx Diversity
Channel BW	2.5- 8.4MHz Other BW are available upon request
Frequency Resolution	0.25MHz
Latency	15ms
Throughput	0.95Mbps-8Mbps Up to 20Mbps upon request
Synchronization	GPS & 1PPS W/O 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
Lite	168 gr. - w/o fan	5.9 oz. - w/o fan
Ruggedized	550 gr.	19 oz.

ICE Cybersecurity suite

Cyber protection level	▪ Primary (Standard) ▪ Professional (Optional License)
Multi Facet / Multi-Tier	▪ Prevention of cyber-attacks against CPU's Operating System Integrity and embedded software protection ▪ Interference Avoidance System (IAS) - Real-time interference detection, cognitive radio sensing, and avoidance ▪ Multi-layer data protection, Preforms cryptographic operations for collected and transmitted data ▪ Prevent man in the middle attack ▪ Prevent Eavesdropping ▪ Real time protection against RF Links Jamming, enables adjacent networks operation ▪ Transmission Security (TranSec) - interception resistance ▪ Unique key link identification

Interfaces

Data	Ethernet 10/100Mbps
Ethernet	Full Ethernet Protocol Transparency (IP, TCP, UDP, RTP, HTTP VLAN, VPN)
Optional Interfaces	RS232 (optional RS485 / 422), 1pps input/output, 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

CYBERSECURE DATA LINK   NDAA COMPLIANT   AUVSI Trusted CYBER

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