

The MCU-70

A cybersecure mobile MESH network with more power, greater distance & higher performance.

Mobilicom's MCU-70 communication unit is a cybersecure Software Defined Radio (SDR) supporting Mobile MESH and delivering IP communication. The MCU-70 supports ad-hoc Mobile MESH, enabling direct wireless mobile communications and IP communication (including HD video, data, etc.) without the need for any infrastructure.

By incorporating Mobilicom's unique 360° multi-facet, multi-tier ICE cybersecurity solution within the unit, the MCU-70 provides superior MESH security with three facets, Immunity, Cybersecurity, and Encryption, protecting the platform, safeguarding communication channels, and encrypting the transmitted data.

Key Features:

- Cybersecure bi-directional, configurable Software Defined Radio (SDR) data link
- Long-range operation
- Broadcast, multicast, and unicast transmission support
- Control & telemetry
- Broadband link capable of delivering real-time full HD video
- Relay operation (Repeater)

The multifunctional MCU-70 unit is designed to operate with the Ruggedized MCU-300 Ground Data Terminal (GDT).



MCU-70 Air Data Terminal (ADT)

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
- Highest form-to-performance ratio
- NDA A compliant

Radio and Modem	
Network Topology	P2P, P2MP, MP2MP, Relay & Mesh
Range	Up to 40 km (Omni) Up to 100 km (Directional) Longer ranges available
Modes of Operation	Broadcast, Multicast, Unicast
Encryption	AES 128 as standard AES 256 upon request
Waveform	OFDM - TDMA
MIMO Configuration	MIMO 2X2; Tx & Rx Diversity
Throughput	0.95 - 8 Mbps; Up to 20 mbps upon request.
Sensitivity	Max -101dBm
Latency	15msec
Synchronization	GPS & 1PPS w/o Synchronization (Optional)
Frequency	2.4 GHz (ISM) 2.3-2.5 GHz
Frequency Resolution	0.25MHz
Channel BW	2.5 MHz – 8.4 MHz; Up to 10 MHz available upon request
Duplexing	TDD
Output Power	20W (43dBm) maximum (peak per antenna) 4W (36dBm) average (per antenna)

Environmental	Celsius	Fahrenheit
Temperature	Operating: -20 to 50°C	Operating: -4 to 122°F
	Storage: -50 to 85°C	Storage: -58 to 185°F
Humidity	5 to 95% non-condensing	
Sealing	Outdoor, Rain Proof	
Ruggedized	Shock, Vibration, Salt	

Dimensions [LxWxH]	Centimeters	Inches
	19.9 x 11.9 x 2.7	7.8 x 4.7 x 1.1

Weight	Kilograms	Pounds
	0.73 kg	1.6 lb

ICE Cybersecurity Suite	
Cyber Level	<ul style="list-style-type: none"> Primary (Standard) Professional (Optional License) Premium (Optional License)
Multi Facet / Multi-Tier	<ul style="list-style-type: none"> 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. (Optional) Multi-layer data protection performs cryptographic operations for collected and transmitted data. Prevent man-in-the-middle attack. Prevent eavesdropping Real-time protection against RF link jamming, enables adjacent networks operation. Transmission Security (TranSec) - interception resistance. (Optional) Unique key link identification Alarm & protect against GNSS jamming. (Optional) Anti-Spoofing / hijacking attacks - real-time sensing, detection, alarm, and autonomous response. (Optional)

Interfaces	
Telemetry & Control	Serial RS232
Ethernet	Ethernet 10/100Mbps Full Ethernet Protocol Transparency (IP, TCP, UDP, RTP, HTTP, VLAN, VPN)
GPA Antenna	SMA Female
SDR Antennas	TNC (x2) female
Additional Interfaces	Optional RS485/422, 1pps input/output GPIO

Configuration and Management	
Unit Monitoring	Web GUI
Program Interface	API

Power	
DC Voltage	12-24 V DC
Power Consumption	Up to 75W (peak on start) 65W Average



Information herein is subject to changes and should not be considered contractual.

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