

MCU-200 Ruggedized GEN2



Cybersecure mobile MESH network with More Power; Greater Distance; Higher Performance.

Mobilicom's MCU-200 Communication Unit is a Cybersecure Software Defined Radio supporting Mobile MESH and delivering IP communication. The MCU-200 supports ad-hoc Mobile MESH enabling direct wireless mobile communications, IP communication (including HD Video, data etc.) without the need for any infrastructure. With a ruggedized casing the MCU-200 unit is rain proof and is designed to withstand the harshest environments and conditions. With the Extended Ruggedized casing the MCU-200 is IP67 compliant. The MCU-200 unit is ideal for large scale mobile network communications including vehicles such as: mobile command post, security vehicles, first responders, trains transportation sector and towers.

Incorporating Mobilicom's unique 360° multi-facet, multi-tier ICE Cybersecurity solution integrated within the unit, the MCU-200 provides superior MESH security with three facets comprised of Immunity, Cybersecurity and Encryption, protecting the platform, safeguarding communication channels and encrypting the transmitted data.

Operating at wide voltage range, 10V-48V from vehicles, ships and air-craft generated power; the multifunctional MCU-200 is susceptible to extreme power fluctuations and delivers reliable and consistent high network performance whether in air, land or sea. The multifunctional MCU-200

Key features:

- Cybersecure Bi-directional, configurable software defined radio (SDR) Data Link
- Long Range operation
- Control & Telemetry
- Broadband link capable of delivering real-time full HD video
- Relay operation (Repeater)
- Mesh Operation

The multifunctional Ruggedized MCU-200 unit is designed to operate with the MCU-50 Aerial Data terminal (ADT).



MCU-200 Ground Data Terminal (GDT)

Highlights

- **ICE (Immunity, Cybersecurity, Encryption) suite**
- **MIMO Advanced Antenna Processing**
- Software Defined Radio (SDR)
- Fully synchronized system (GPS or w/o GPS)
- Highest form-to-performance ratio
- Real-time GPS
- Wide Frequency Range 75 MHz to 5.9 GHz
- Operating at full voltage spectrum: 10V-48V
- Outdoor & indoor operation
- Extended Ruggedized version IP67 compliant (Optional)
- Rain proof and extreme temperature range
- NDAA compliant



<i>Radio and Modem MCU-200 Ruggedized</i>	
Range	Up to 30Km (omni); Up to 50km (directional) Longer ranges available
Frequency	700-950 MHz 902-928 MHz (ISM) 2.4 GHz (ISM) 2.3-2.7 GHz Multi Band Radio (MBR) available
Network Topology	P2P, P2MP, MP2MP, Relay & Mesh
Output Power (Average per channel)	Up to 10Watt (Peak Per Antenna) (2 Watt Average, 32dBm)
Sensitivity	Max -101dBm
Radio Access Method	OFDM - TDMA
Duplexing	TDD
Configuration	MIMO 2X2; Tx & Rx Diversity
Channel BW	2.5 MHz – 8.4 MHz; Up to 20 MHz available upon request
Frequency Resolution	0.25MHz
Latency	15msec
Throughput	0.95 - 8 Mbps; Up to 20 Mbps upon request.
Synchronization	GPS & 1PPS W/O Synchronization (optional)
Encryption	AES 128 as standard AES 256 upon request

<i>Environmental</i>		
Temperature Range	Operating	Storage
Ruggedized	-20 to 50°C	-50 to 85°C
Extended Ruggedized	-20 to 60°C	-50 to 85°C
Humidity	5 to 95% non-condensing	
Ruggedized Sealing	Outdoor, Rain Proof	
Extended Ruggedized Sealing	IP67, dust, water proof, immersion in water up to 1 m	
Environment Casing	Shock, Vibration, Salt	

<i>Dimensions</i>	<i>[HxWxD] cm</i>	<i>[HxWxD] inch</i>
	31.5x21x7.5	12.4x8.3x3

<i>Weight</i>	<i>Kilograms</i>	<i>Pounds</i>
	2.8 Kg	6.2 Lbs



<i>ICE Cybersecurity suite</i>	
Cyber level	<ul style="list-style-type: none"> Primary (Standard) Professional (Required License) Premium (Required 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 Prevent man in the middle attack Anti-Spoofing / Hijacking attacks - real-time sensing, detection, alarm, and autonomous response (Optional) Prevent Eavesdropping Real time protection against RF Links Jamming, enables adjacent networks operation Transmission Security (TranSec) - interception resistance Unique key link identification Multi-layer data protection, Performs cryptographic operations for collected and transmitted data Alarm & protect against GNSS Jamming Safeguard against cloud servers' attacks

<i>Interfaces</i>	
Data	Ethernet 10/100Mbps
Ethernet	Full Ethernet Protocol Transparency (IP, TCP, UDP, RTP, HTTP, VLAN, VPN)
Optional Interfaces*	RS232 /485 / 422,GPIO, 1pps
Antennas	N-type (2) female

<i>Configuration and Management</i>	
Unit Monitoring Application	Web GUI & API
Network Management Application	Web GUI & API

<i>Power</i>	
DC Voltage	10-48V DC
Power Consumption	Up to 50W 20 W Average

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