

## 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. 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 and ships generated power; the multifunctional MCU-200 is susceptible to extreme power fluctuations and delivers reliable and consistent high network performance. The multifunctional MCU-200 ruggedized unit offers a wide frequency range from 75 MHz to 5.9 GHz.

#### 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



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)
- Real-time GPS
- Wide Frequency Range 75 MHz to 5.9 GHz
- Operating at full voltage spectrum: 10V-48V
- Outdoor & indoor operation
- Rain proof and extreme temperature range
- NDAA compliant



Radio and Modem MCU-200	
Range	Up to 30Km (omni); Up to 50km (directional)
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

Environmental		
<b>Ruggedized</b>		
Temperature Range	Operating	Storage
	-20 to 50°C	-50 to 85°C
Humidity	5 to 95% non-condensing	
Sealing	Outdoor, Rain Proof	
Environmental casing	Shock, Vibration, Salt	

Dimensions	[HxWxD] cm	[HxWxD] inch
	31.5x21x7.5	12.4x8.3x3

Weight	Kilograms	Pounds
	2.8 Kg	6.2 Lbs



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

Interfaces	
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

Configuration and Management	
Unit Monitoring Application	Web GUI & API
Network Management Application	Web GUI & API

Power	
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.