

MCU-30 Lite

When Small Form Factor Matters!

The Mobilicom multifunctional MCU-30 Lite unit is a 4G combined with Mobile MESH, IP communications unit that delivers ad-hoc direct wireless mobile communication including HD video, data and VoIP 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 inside drones and robotics, where every gram matters.

The MCU-30 Lite unit is a multifunctional unit that adapts and supports multiple network topologies on-the-move: Mobile Point-to-Point, Mobile Point-to-Multi-Point, Mobile Multi-Point-to-Multi-Point, Mobile MESH, Extended MESH and Collaborative MESH. As a multifunctional unit, the MCU-30 Lite operates as a transceiver, relay and gateway to other units in the network and will "self-manage" and "self-heal" on-the-move. Each unit transceives all data, thus eliminating the need for base stations, repeaters and transmitters and consequently can become a backup unit for all other units in the network, creating a robust and redundant communications network with no single-point-of-failure.

The multifunctional MCU-30 Lite unit offers a wide frequency range from 75 MHz to 5.9 GHz. Designed as a high-capacity small form factor unit, the MCU-30 Lite unit is 74x80x27 mm (2.3x3.1x1 in) and weighs 168 grams (5.9 oz.).

Powered by Mobilicom's Software Defined Radio (SDR), the MCU-30 Lite multifunctional unit is adaptable to any change, modification or configuration of wireless link parameters to best fit the ever changing environment conditions.

With a triple-layer security solution integrated within the unit, the multifunctional MCU-30 Lite offers a superior 4G MESH security layer comprised of AES



Maximizing the Performance-to-Gram ratio for Drones & Robotics

128 or AES 256 security standard. The second layer consists of an allocated available space within the CPU for any security software of your choice. A third layer resides within Mobilicom's proprietary technology, fully developed with in-house knowledge and insight uncovered or recognized by an external party. With changing message structures, Mobilicom ensures even greater immunity to 3rd party hacking.

The multifunctional MCU-30 Lite unit is uniquely designed to operate in an ultra-high mobility speed environment of up to 800Km/h, making it the only 4G MESH technology to truly operate in ultra-high mobility speed.

Mobilicom's MCU units are managed via a software management solution that provides encompassing management and control tools over distributed onsite MCU units in a simple, intuitive and efficient manner. Mobilicom's software management tool consolidates all relevant data, into a single powerful software platform that enables real-time monitoring of communications networks and deployment.



No Infrastructure



No Single Point of Failure



Triple Layer Security



Flexible & Scalable



Ultra-High Mobility Speed

| Radio and Modem MCU-30 Lite | |
|-----------------------------|---|
| Range | Up to 15km (omni); 20-30km (directional) Longer ranges available. |
| Frequency | 700-950 MHz 902-928 MHz (ISM) 2.4 GHz (ISM) 2.3-2.7 GHz 5.8 GHz (ISM) 4.9-5.9 GHz <ul style="list-style-type: none"> ▣ Multi Band Radio (MBR) Available ▣ Other frequencies available ranging from 75 MHz - 6 GHz |
| Antenna | Various options: Omni 0-8dBi Hemisphere, Sectorial, Directional Tracking antenna also available. |
| Antennas Connectors | 2XSMA female |
| Output Power | Up to 1W per Antenna (2W total) |
| Tx Power Control | 50dB |
| Rx Dynamic Range | 70dB |
| Sensitivity | Max -101dBm |
| Radio Access Method | OFDM - TDMA |
| Duplexing | TDD |
| Configuration | MIMO 2X2; Tx & Rx Diversity |
| Channel BW | 2.5MHz - 10MHz; Up to 20 MHz available upon request. |
| Frequency Resolution | 0.25MHz |
| FEC method | CTC |
| Modulations | QPSK / 16QAM |
| Throughput | 1.6 - 10 mbps; Up to 20 mbps upon request. |
| Synchronization | Synchronized w/o GPS. GPS & 1PPS also available. |

Highlights

- ▣ 4G Mobile MESH
- ▣ Fully synchronized system
- ▣ Outdoor & indoor operation
- ▣ Small dimensions and lightweight
- ▣ Low power consumption
- ▣ Highest form-to-performance ratio
- ▣ Software Defined Radio (SDR)
- ▣ Wide Frequency Range - 75 MHz to 5.9 GHz
- ▣ **MIMO Advanced Antenna Processing**
- ▣ Real-Time GPS
- ▣ **Triple Layer Security**
- ▣ Interference Avoidance - Contact us for details

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

| Interfaces | |
|-------------------------------------|---|
| Data | Ethernet 10/100Mbps |
| Full Ethernet Protocol Transparency | IP, TCP, UDP, RTP, HTTP Broadcast, Multicast, Unicast Ethernet, VLAN, VPN |
| Optional Interfaces | RS232 /485 / 422,GPIO, 1pps |

| Dimensions | [HxWxD] mm | [HxWxD] inch |
|------------|-------------|--------------|
| | 74x80x27 mm | 2.3x3.1x1 |

| Weight | Grams | Ounce |
|--------|-------------------|-------------------|
| | 168 gr. - w/o fan | 5.9 oz. - w/o fan |

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

| Configuration and Management | |
|--------------------------------|--------|
| Unit Monitoring Application | MC-EMA |
| Network Management Application | MC-NMA |

Making Impossible Mission Critical Communications Possible:

As a global mission-critical-communications solution provider, Mobilicom develops and delivers Mobile Private Network technology and solutions for wireless mobile networks, without the need for any infrastructure. By leveraging 4G technology combined with Mobile MESH network topology, Mobilicom assures optimal secured wireless communications. With versatile network topologies and a large product portfolio, Mobilicom caters to every deployment and project scope from small to large scale with the highest flexibility, reliability and mobility in the market.

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