MOBILICOM

SkyHopper MultiBand is a secure cognitive SDR datalink that delivers continuous 1.275–2.65 GHz wideband operation for Group 1–2 drones, loitering munitions, and compact robotics. Its wideband design replaces multiple narrowband radios with a single unit, reducing hardware variants, certification effort, and integration complexity. A unified configuration enables deployment across USA, EU, NATO, and other regions through software-defined band selection.

Lower L-band operation delivers roughly twice the line-of-sight range of mid-S-band and improves performance through foliage, buildings, and terrain. With up to 1.4 GHz of accessible spectrum, the system maintains mission continuity by automatically shifting to cleaner channels as interference, congestion, or regional conditions change.

SkyHopper MultiBand delivers robust Electronic Warfare resilience through its cognitive SDR architecture, wide spectrum access, and optional ICE suite, making the link significantly more resistant to jamming, disruption, and interception. It applies Secured Autonomy principles to safeguard command links, telemetry, and mission data, and supports optional software-activated mesh networking to extend operational flexibility.

KEY FEATURES

- 1.275–2.65 GHz wideband operation in one SDR
- Adaptive frequency selection across the full 1.4 GHz L–S band range
- Lower L-band through mid S-band coverage
- Software-defined regionalization for USA, EU, and NATO bands
- Upgrade to Secured AutonomyTM protection for Communication with EW resistance

AUVSI Trusted CYBER

COMPLIANT NDAA

HIGHLIGHTS

- **Industry-leading resilience in congested and contested RF**
- **Up to twice the line-of-sight distance at lower L-band frequencies**
- **Single SDR replacing several narrowband radios**
- **Lower frequencies provide more reliable links through foliage, buildings, and terrain**
- **Secured Autonomy™ protection for command and data links**

SPECIFICATIONS

Radio and Modem	
Range	Omni ground antenna - Up to 15km / 9.3 miles per hop Directional ground antenna - Up to 50km / 31 miles per hop (LOS, uninterrupted conditions)
Frequency	1275-2650 MHz
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	Configurable from 0.95-8 Mbps
Synchronization	GPS & 1PPS W/O GPS Synchronization (optional)
Encryption	AES 128 as standard AES 256 upon request

Environmental		
Temperature Range	Operating	Storage
Environmental Temperature	-20 – 45° C	-50 to 85°C
Humidity	5 to 95% non-condensing	
Casing	EMI/RFI,	

Dimensions	
[H x W x D] mm	26 x 54 x 74
[H x W x D] inch	1.0 x 2.1 x 2.9

Weight	
Grams	137 gr.
Ounce	4.83 oz.

ICE Secured Autonomous Communications Suite	
Licensed Cyber and EW protection	• Primary (Standard Protection) • Professional (Premium EW Protection)

KEY CYBERSECURITY AND EW FEATURES

- OS and firmware hardening protects the CPU, operating system, and embedded software from tampering.
- Advanced IAS provides adaptive interference sensing and full-band spectrum avoidance.
- Cognitive RF sensing detects interference, jamming attempts, and hostile signals in real time.
- ComSec delivers multi-layer cryptographic protection for command and mission data.
- Authenticated links prevent man-in-the-middle attacks and unauthorized takeover.
- LPI/LPD techniques reduce the probability of intercept and detection for sensitive traffic.
- Automatic spectrum maneuvering responds instantly under jamming conditions.
- Adjacent-network coexistence maintains stable operation near other systems.
- TranSec features introduce unpredictable, secure link characteristics.
- Unique keyed identification ensures only trusted nodes connect.

Interfaces	
Telemetry & Control	Serial RS232
Ethernet	Ethernet 10/100Mbps Full Ethernet Protocol Transparency (IP, TCP, UDP, RTP, HTTP, HTTPS, VLAN, VPN)
Additional Interfaces	1pps input, GPIO (optional)
Antennas	MMCX (x2)

Configuration and Management	
Unit Monitoring	Web based Application
Program Interface	API

Power	
DC Voltage	7.4-24V DC
Power Consumption	12W Average Up to 15.8W

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