

SKYHOPPER TACTICAL

*Wearable and Secure Communication for
Dynamic Field Operations*

The SkyHopper Tactical is a wearable Software-Defined Radio (SDR) that enables tactical teams to share real-time data, video, and telemetry with their unmanned systems-drones, robots, and loitering munitions-through buildings, terrain, and complex environments where line-of-sight breaks. Operating across 2.32.7 GHz with cognitive frequency management, it maintains stable control links between operators and unmanned assets even in contested environments.

The radio applies Secured Autonomy™ principles with ICE - Immunity, Cybersecurity, and Encryption - software to protect command links, telemetry, and mission data in contested RF environments. The wideband SDR architecture supports Point-to-Point, Multipoint, Mesh, and Relay modes, automatically extending coverage as teams maneuver or unmanned platforms require additional range. Low-latency performance ensures responsive control of unmanned systems throughout the mission.

Built to MIL-STD-810 standards with IP67 protection, the unit withstands harsh field conditions in a compact, body-worn or tripod-mounted form factor. Field-swappable PRC-148 batteries and external power options enable extended missions, while glove-operable controls ensure practical operation under tactical conditions. The system is network-compatible with all SkyHopper variants, integrating seamlessly into existing deployments.

KEY FEATURES

- Wideband SDR supporting 2.3-2.7 GHz operations
- Point-to-Point, Multipoint, Mesh, and Relay modes
- Low-latency architecture for real-time unmanned system control
- ICE (Immunity, Cybersecurity, Encryption) software suite
- Network-compatible with all SkyHopper variants
- Designed & built according to MIL-STD-810 ruggedization
- IP67 protection
- External power interface with PRC-148 battery support



HIGHLIGHTS

- Body-Worn Tactical Design
- Jamming Resilience & Cyber Protection
- Real-Time UxV Control
- Adaptive Mesh Networking
- Tactical Power Integration

TACTICAL WEARABLE SDR



SPECIFICATIONS

Radio and Modem	
Network Topologies	Point-to-Point, Point-to-Multipoint, Mesh, Relay (Repeater), scalable number of viewers
	Multiple Synchronized Point-to-Point Links
Modes of Operation	Broadcast, Multicast, Unicast
Sensitivity	Max -101dBm @4.2 MHz
Diversity Support	MIMO 2X2; Tx & Rx Diversity
Transmission Technology	OFDM, TDD
Encryption	128 AES-Standard Package 256 AES-Optional
Frequencies	2.3 GHz-2.7 GHz Other frequencies available upon request

Environmental		
Temperature Range	Operating	Storage
	(-20)°C to 60°C (-4)°F to 140°F	(-40)°C to 100°C (-40)°F to 212°F

Dimensions	
[HxWxD] mm	40 x 80 x 135
[HxWxD] inch	1.57 x 3.15 x 5.31

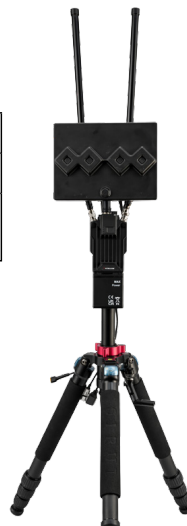
Weight (without battery)	
Grams	550
Ounce	19.4

Power	
DC Voltage	12-24 V DC including battery charging
Power Consumption	Up to 12 Watt *Depending on model
Output Power	Up to 1 Watt (Peak Per Antenna)
Battery	PRC-148 PRC-152 Optional

LINK-BUDGET PROFILE

SkyHopper Tactical Mounted on Tripod

Architecture	MIMO 2x2 with CDD
Antennas	ADT @2 dBi GDT @18 dBi
Frequency Range	1.275 - 2.65 GHz or 2.3-2.7 GHz



ICE Secured Autonomous Communications Suite	
Primary (Standard) Cyber protection level	• Transmission Security (TranSec) interception resistance • Prevention of cyber-attacks against CPU's Operating System Integrity and embedded software protection • Multi-layer data protection, Performs cryptographic operations for collected and transmitted data • Prevention of man in the middle attack • Prevention of Eavesdropping
Professional (Optional License) Cyber protection level	• Interference Avoidance System (IAS) • Real-time interference detection, cognitive radio sensing, and avoidance • Real time protection against RF Jamming • Enables adjacent networks operation • Extended Transmission Security (TranSec) interception resistance • Unique key link identification

Interfaces	
Telemetry & Control	Serial RS232
Ethernet	Ethernet 10/100Mbps Full Ethernet Protocol Transparency (IP, TCP, UDP, RTP, HTTP, HTTPS, VLAN, VPN)
Antenna Interface	TNCx2
LED	Multi Function
GPS	SMA

Configuration and Management	
Unit Monitoring	Web-GUI
Program Interface	API

