SKY HOPPER**PRO**

CYBERSECURE DATA LINK

GEN 2

Cybersecure Bi-Directional Data Link for Commercial & Industrial Drones & Robotics

SkyHopperPRO offers a cybersecure bi-directional Data Link specifically designed for commercial and industrial drones. By employing leading wireless technologies, the SkyHopper PRO delivers long range and Non-Line of Sight (N-LOS) communication that supports Point-to-Point, Point-to-Multipoint, fleet management and autonomous UAV systems.

SkyHopperPRO GEN 2 offers Immunity, Cybersecurity and Encryption (ICE) suite a multi-faceted and multi-layered software that protects the platform, safeguards communication channels, and encrypts the data that is transmitted and collected. The ICE is an AI-based 360° software that can detect, prevent, and respond to multiple drone or robotics cyber-attacks in real-time without requiring intervention by an operator.

SkyHopperPRO Key Features:

- Cybersecure bi-directional, configurable software defined radio (SDR) Data Link
- Up to 5km Line-of-Sight (LOS) range
- Robust N-LOS & Urban operation
- Broadcast, Multicast and Unicast transmission modes
- Control & Telemetry
- Broadband link capable of delivering real-time full HD video
- Relay operation (Repeater)
- Compact and lightweight solution available as standalone, embedded and OEM versions

PRO   PRO Lite   PRO Micro

Product Highlights:

- ICE (Immunity, Cybersecurity, Encryption) suite

- NDAA compliant

- Relay system for extending LOS range and overcoming dead spots in urban or industrial areas

- Enabling operation in multi-platform environment without degradation in throughput or performance

- MIMO

- Build in Spectrum Analyzer

- Universal solution with no integration needed for all IP payloads

- Compatible and integrated with a broad range of flight controllers, mission software and payloads

NDAA Compliant

Radio & Modem Specifications

Range	Up to 5km / 3.1 miles per hop (LOS, uninterrupted conditions) For extended range, other solutions available
Throughput	Configurable from 1.6-6 Mbps For extended throughput, other solutions available
Network Topologies	Point-to-Point, Point-to-Multipoint, Relay (Repeater)
	Multiple Synchronized Point-to-Point Links
Modes of Operation	Broadcast, Multicast, Unicast Unlimited number of receivers/viewers
Sensitivity	Max -101dBm
Diversity Support	MIMO 2x2, Tx & Rx Diversity
Transmission Technology	OFDM, TDD
Encryption	128 AES – Standard Package 256 AES and other options also available for purchase (custom export control may apply)
Frequencies	2.4 GHz (ISM) or 5.8 GHz (ISM) Other frequencies available upon request

Environmental Temperature

PRO Casing Model:	-20 – 45° C (-4 – 113° F)

Dimensions

Dimensions	(H x W x D) mm	(H x W x D) inch
PRO Casing Model:	26 x 54 x 74	1.0 x 2.1 x 2.9
Embedded Model (PRO Lite):	19 x 54 x74	0.8 x 2.2 x 2.9
PRO Micro:	13.6 x 43 x 60	0.53 x 1.7 x 2.36

Weight

Weight	Grams	Ounces
PRO Casing Model:	105	3.7
Embedded model (PRO Lite):	99	3.49
PRO Micro:	62	2.16

Power

7.4 – 24 V DC	7.4 – 24 V DC

Product versions available to accommodate FCC, CE & TELEC standards

ICE Cybersecurity suite

Cyber level	• Primary (Standard) • Professional (Optional License) • Premium (Optional License)
Multi Facet / Multi-Tier	• 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 • 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

Interfaces

Telemetry & Control	Serial RS232
Ethernet	Full Ethernet Protocol 802.3 (TCP/IP, UDP, and others)
Antenna	MMCX (x2)

Configuration & Management

Unit Monitoring	Web-Based Application
Program Interface	API

For Integrated Video Processing, SkyHopper PRO V is available.
For Integrated LTE, SkyHopperCOMBO is available