



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



### 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





**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	(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 x 74	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	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	<ul style="list-style-type: none"> <li>• Primary (Standard)</li> <li>• Professional (Optional License)</li> <li>• Premium (Optional 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>• Anti-Spoofing / Hijacking attacks - real-time sensing, detection, alarm, and autonomous response</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>• Alarm &amp; protect against GNSS Jamming</li> <li>• Safeguard against cloud servers' attacks</li> </ul>

**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