



SKY HOPPERCOMBO



CYBERSECURE DATA LINK

GEN 2

Bi-Directional SDR & LTE data link for commercial and industrial IOT

The Combo Solution

SkyhopperCOMBO device -

Enjoy the benefits of having 3 solutions in 1 unit and set your preference based on operational needs. With the COMBO you choose between using a bi-directional Software Defined Radio (SDR) and LTE Technology Data Link as well as ICE Cybersecurity suite. The SkyhopperCOMBO is allowing utilization of non-infrastructure and infrastructure environments.

ControliT -

Cloud base Management software that enables: devices configuration, networks' management, tracking and operation logs and statistics

The solution is specifically designed for commercial and industrial IIOT (drones/robotics/Teleoperation, M2M, Autonomous platforms) and provides the best solution for autonomous UAV systems.

SkyHopperCOMBO Key Features:

- A combination of a Cybersecure bi-directional Software Defined Radio (SDR) Data Link & dual SIM LTE modem
- Selection between SDR & LTE modes
- Bi-directional and configurable Data Link
- Supports multi bands LTE operations
- Up to 5km Line-of-Sight (LOS) range using SDR, BVLOS via LTE network coverage
- Compact and lightweight solution



Product Highlights:

- Operation anywhere-always connected (with or without network infrastructure)
- Dual solution SDR Data Link and LTE with a secured server
- Dual Nano-SIM cards
- ICE (Immunity, Cybersecurity, Encryption) suite
- LTE double tier encryption
- Long range and BVLOS operation
- Superior communication through N-LOS & urban areas
- Built-in flexibility to best optimize to specific customer challenges
- Pure IP/Ethernet universal solution and serial interfaces





SKY HOPPERCOMBO

SDR Specifications

Range	Up to 5km/3.1miles (LOS, uninterrupted conditions) For extended range, other solutions avail.
Throughput	Configurable from 1.6-6 Mbps; For extended throughput, other solutions avail.
Network Topologies	Bidirectional configurable data link
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

LTE Specifications

Range	BVLOS Network dependent
Throughput	CAT 4 (100 Mbps Downlink, 50 Mbps Uplink)
Diversity Support	MIMO 2x2, Tx & Rx Diversity
Encryption	Dual encryption levels
Authentication	Secured authentication to a secured server

Environmental Temperature

In Casing	-20 - 45° C (-4 – 113° F)
-----------	---------------------------

Dimensions	(H x W x D) mm	(H x W x D) inch
In Casing	32 x 54 x 74	1.2 x 2.1 x 2.9

Weight	Grams	Ounces
In Casing	160	5.4

ICE Cybersecurity suite

Cyber level	<ul style="list-style-type: none"> Primary (Standard) Professional (Optional License) Premium (Optional License)
Multi Facet / Multi-Tier	<ul style="list-style-type: none"> 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	5x MMCX : 2*SDR, 2*LTE, GPS
LTE	2x Nano SIM cards

Configuration & Management

Unit Monitoring and controlling /configuration	Web-Based Application
Program Interface	API (only on the PRO part)

Power

DC Voltage	7.4 – 24 V DC
------------	---------------

