

Image Intelligence in Real-Time



The SkyLink SP provides rotor-wing customers with the ability to deploy Troll's popular Skylink Mini II below landing skids and payloads that could cause signal interference. Unlike omnidirectional antennas which radiate radio frequency in all directions the SkyLink SP emits its signal energy in a narrow <math>< 30^\circ</math> cone-shaped pattern to improve range, throughput and data link reliability. The SkyLink SP's embedded INS provides GPS and heading data enabling the antenna to automatically track receive antennas on the ground.

The SkyLink SP can mount to the crosstube, aircraft step or via a Meeker Dovetail mount eliminating interference caused by the airframe, skids or external payloads such as camera systems and searchlights. Onboard the aircraft Troll's pilot is used to deploy the antenna allowing the pilot to lock the antenna in the up/safe position for landing. FAA approved and supplemental type certificate mounts are available for a variety of aircraft. At less than 20 pounds (9 kg) the SkyLink SP is appropriate for all rotor-wing aircraft types.

Installation is quick and easy. The SkyLink SP simply requires Troll's Network LinkBox and pilot panel for a complete unidirectional or bidirectional transmission system. The Network LinkBox controls all the microwave equipment including transmitters, receivers, encoders and decoders. Troll's Network LinkBox also interfaces with onboard cameras, antennas and mapping systems.

Internal Inertial Navigation System (INS)

The Mini II incorporates an embedded INS for self-calibration and stand-alone position, attitude and heading data, independent of any external navigation equipment. This eliminates the need for an external GPS or magnetometer, significantly reducing the cost and complexity of installation and certification.

Manufacture

The SkyLink Mini II has been manufactured to meet the standard MIL-STD-810. Its ruggedized gears and DO-160 tested design will withstand even the toughest airborne or ground vehicle environments.

Dual Rotary Joint Option

A dual rotary joint option allows the operation in two-frequency bands simultaneously or supports dual polarization. This option supports Ethernet links with the latest MIMO (Multiple Input, Multiple Output) technology or split-band traditional FDM bidirectional data links.

Air-to-Ground Ethernet Connectivity

SkyLink SP

Deployable Airborne Tracking Antenna



Ruggedized construction

Unique frangible safety link

Easy to install and operate

Available in L Band to Ku band

Optional dual-polarization

Internal Inertial Navigation System (INS)

DO-160 tested

STC (Supplemental Type Certificates) and
FAA certified rotorcraft mounts

Deployable SkyLink Mini II Directional Antenna

SkyLink SP

SPECIFICATIONS

Specifications subject to change without notice.

SkyLink SP Physical Characteristics

Size Long Mast: 32.5" + antenna (standard)
 Size Short Mast: 19.1" + antenna (optional)
 Weight: 20 lbs. (9kg) excluding mounting bracket
 Input Voltage: 18-32 VDC (supplied by C100 Controller)
 Input Current: 0.5A nominal, 2.0A max with external radios
 Airborne Characteristics: VNE > 200 knots - drag @ 120 knots = 22 lbs.

SKYLINK ANTENNA POD

Size: 4"W x 11"L x 4"H pod with motorized deployable arm
 Frontal Area: 76 square inches
 Azimuth Steering: Continuous rotation, 100°/second
 Pilot Panel: Full digital (RS-485) control interface utilizing AirTalk Protocol
 Data Link Control: Controls deployable arm movement
 LinkBox II



Pilot Panel



Network LinkBox II
Transmission Control System

The SkyLink MINI is the only LOS Airborne Tracking Antenna to Pass DO-160 Testing.

DO-160 Mechanical testing categories:

- Temperature and Altitude
- Temperature Variation
- Humidity
- Vibration
- Waterproofness
- Sand and Dust
- Salt Spray
- Lightning Direct Effects

DO-160 Electrical testing with EMI:

- Magnetic Effects
- Power Input
- Voltage Spike
- Audio Frequency Conducted Susceptibility
- Induced Signal Susceptibility
- Radio Frequency Susceptibility
- Emission of Radio Frequency Energy
- Electrostatic Discharge



Antenna Characteristics	L Band	S Band	Lower C	Upper C	Ku Band
Type:	Panel	Cavity	Horn	Horn	Horn
Mid-Band:	1.8 GHz	2.3 GHz	4.4 GHz	6.5 GHz	14 GHz
Beamwidth Az/EI (-3dB):	71°	64°	46°/ 26°	34°/28°	30° / 26°
Antenna Gain:	10 dBi	10 dBi	13 dBi	15 dBi	18 dBi
Polarization:	Linear	Linear	Circ/Linear	Circ/Linear	Circ/Lnear

Linear polarization can be horizontal or vertical. Circular polarization can be right or left hand polarized. Specifications subject to change without notice. Contact the factory for other frequency options.



The Data Link Experts

www.trollsystems.com



Troll Systems' products are
Made in the USA

sales@trollsystems.com

Corporate: 24950 Anza Dr.
Valencia, California 91355
+1 (661) 702-8900

