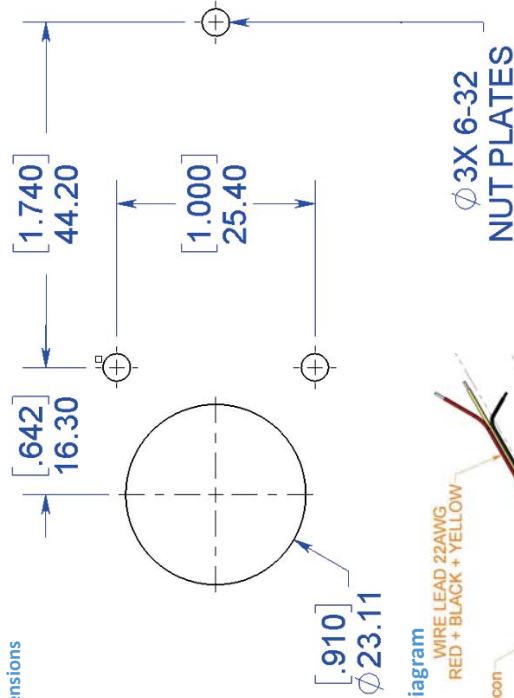
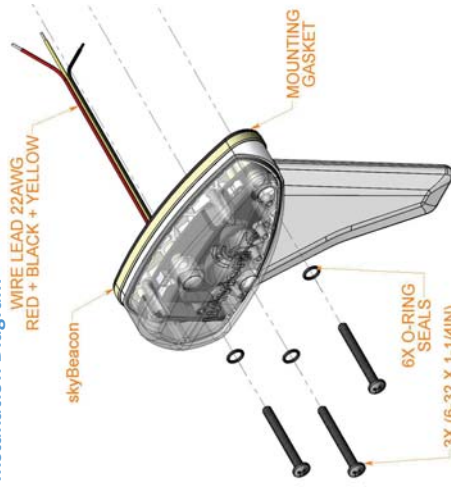


**Mounting Dimensions**



**Installation Diagram**



**WIRING CONSIDERATIONS**

Connect the red wire to the switched power wire.

Connecting the black wire to the aircraft structure should be suitable but it may be necessary to connect the black wire to the battery ground in some cases.

Connect the yellow wire to the strobe switch. The strobe power supply must be bypassed for the skyBeacon. Connecting skyBeacon to the strobe power supply will damage the device.

uAvionix products are warranted to be free from defects in material and workmanship for one year from the date of installation in the aircraft. For the duration of the warranty period, uAvionix, at its sole option, will repair or replace any product which fails in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost.

**Overview**

skyBeacon is a 2020 compliant, near zero-install, Class B1S ADS-B UAT transmitter and WAAS GPS integrated into a wing tip position light. The power transcoder decodes replies from legacy Mode C transponders. 14 CFR §91.227 compliant. Smart phone configurable over WiFi.

**Features**

UAT Transmitter

- Meets the performance requirements of TSO-154c Class B1S. RTCA DO-282B Class B1S Position Light

Position Light

- Meets performance requirements of TSO-C30c Type I

WAAS GPS

- Integrated RAIM processor for Security and Integrity protection
- SBAS corrections and health messages used to detect and correct satellite range errors
- Satellite pseudo range step errors detected and excluded
- SBAS fast and long-term corrections applied

Power Transcoder

- Decodes altitude and squawk via aircraft electrical system
- Certification
- Pending certification via approved model list (AML) for STC'd installation on hundreds of aircraft makes and models

Patents Pending

**Regulatory**

- FCC ID 2AFTUAT016R
- ADS-B Out: \$91.225, \$91.227, AC 20-165B
- GNSS Position: AC 20-165B
- Position Light: SAE/AS8037



**Technical Specifications**

Specification	Value
Input Voltage	11-31V DC
Operating Power	3watts
Size	124x116x48mm
Weight	90grams
SDA/SIL	2/3
Operating Temp	-45 to 80°C
<b>978MHz UAT Transmitter</b>	
Power Classification	DO-282B Medium Power
<b>WAAS GPS</b>	
Tracking	-166dBm
Reacquisition	-160dBm
Cold Start	-148dBm
<b>LED Position Light</b>	
Color	Aviation Red
Intensity	40 candelas
<b>Wi-Fi Configuration</b>	
Physical	802.11b/g/n
App	iOS, Android
Compatibility	
<b>Power Transcoder</b>	
Decodes Mode A and Mode C via DC input	

### Operating Limitations

The conditions and tests required for STC approval of skyBeacon are minimum performance standards. The installer must determine if the conditions are appropriate for installation on a specific aircraft.

### Continued Airworthiness

There is no requirement for periodic service, inspection or preventative maintenance for continued airworthiness of skyBeacon.

### 2020 Regulatory Compliance

skyBeacon meets the Minimum Operational Performance Standards of DO-282B Class B1S, and meets the performance requirements of TSO-C154c. When installed in accordance with the installation instructions of this guide, the device complies with the aircraft requirements of 14 CFR 91.227.

### Installation Procedures

skyBeacon is a wingtip, forward, left position light. The assembly should be mounted as far outward on the aircraft as practical, parallel to the vertical and horizontal centerlines of the aircraft. Ensure that when mounted, the fin and top of the assembly are free from obstructions.

1. Remove the existing left position light.
2. Detach the power wire(s).
3. Connect the red wire to the switched power wire.
4. skyBeacon may be grounded to the aircraft structure via the mounting screws. However, it may be necessary to connect the black wire to the battery ground.
5. Connect the yellow wire to the strobe wiring, the strobe power supply must be bypassed. Connecting skyBeacon to the strobe power supply will damage the device.

### Environmental Specifications

Conditions		DO-170D Minimum	DO-170D Maximum	Derivation of Constructed Tests
Temperature and Altitude		4.5.1	-50°C	Equipment tested to Category B2.
Low Temperature Shock Time		4.5.1	-40°C	
Low Temperature Operating		4.5.2	-40°C	
High Temperature Operating		4.5.3	+20°C	
High Temperature Shock Time		4.5.3	+20°C	
Operating Temperature Ground		4.5.3	+40°C	
Lines of Coating		4.5.3	Coating not required (+19°C operating without heat)	
Altitude		4.6.1	25,000ft	
Overpressure		4.6.2	15.2psi	Equipment tested to Category B2.
Overvoltage		4.6.3	Equipment identified as Category B2.	Equipment tested to Category B2.
Temperature Variation		5.0	Equipment tested to Category A.	
Temperature Shock		5.1	Equipment tested to Category B.	
Operational Shocks		7.2	Equipment tested to Category B.	
Vibration		8.0	Level L, Type 3 (Organic Engines to Category B level)	
			Level L, Type 3 (Organic Engines to Category B level)	
			Aviatic zone 3, Type 1 (Helicopters to Category U level)	
Explosion		9.0	Equipment identified as Category B.	no test
Waterproofness		10.0	Equipment identified as Category B.	no test
Humidity		11.0	Equipment identified as Category B.	no test
Salt and Dust		12.0	Equipment identified as Category A.	no test
Fungus		13.0	Equipment identified as Category A.	no test
Flammability		15.0	Equipment identified as Category B.	no test
Magnetic Field		16.0	Equipment identified as Category B.	no test
Power Surge		16.0	Equipment identified as Category B.	no test
RF Interference Susceptibility		18.0	Equipment identified as Category B.	no test
RF Emission		20.0	Equipment identified as Category B.	no test
RF Immunity		21.0	Equipment identified as Category B.	no test
Lightning Direct Fragment		22.0	Equipment identified as Category B.	no test
Lightning Direct Effects		23.0	Equipment identified as Category A.	no test
Electrostatic Discharge		24.0	Equipment identified as Category A.	no test
Flame Propagation		25.0	Equipment identified as Category A.	no test
Flame Retardancy		26.0	Equipment identified as Category C.	

### Configuration Procedures

Download the “uAvionix skyBeacon Installer” app from the IOS App store or Google Play.



Turn on power to your SkyBeacon

Connect to the SkyBeacon Wi-Fi network (Ping-xxxx)

Open Wi-Fi Settings

Return to this app to continue



5. Mount skyBeacon using the three supplied 6-32 screws.

Changes to the existing position light circuit breaker rating are not required.

### CONFIGURE



### Anonymous Mode:

When checked, this enables the skyBeacon to transmit a self-assigned ICAO and sets a random Call Sign when the squawk code matches the defined VFR squawk code (1200). When enabled, the operator will not be eligible to receive ATC services.

### Call Sign:

The CALL SIGN can be up to an 8 digit code that corresponds to the tail number of the aircraft. (0-9, A-F). Note: This is typically your aircraft number (eg N12345), unless otherwise advised by the FAA or ATC.

### ICAO Number:

The ICAO address is a 24-bit number issued to the aircraft by the registration authority of the aircraft. These addresses are usually written as a 6-digit hexadecimal number.

### Emitter Type:

To assist ATC tracking of aircraft, an aircraft category can be transmitted. Select the aircraft category that most closely matches the aircraft.

### Vso (knots):

This parameter allows skyBeacon to automatically switch between airborne and ground modes.

### ADS-B In Capability:

Sets the ADS-B in equipment capability reporting.

### MONITOR



The monitor screen allows the installer to check the configuration parameters and internal operation of skyBeacon, such as the GPS position and transponder reply decoder.

### Operating Procedures

skyBeacon must be enabled (turned ON) during all phases of flight including surface movement operations.

### System Status LED Operation:

- Device Failure
- Function Failure
- No Failures

Device Failure – skyBeacon is unable to transmit. Function Failure – e.g. GPS position not locked, but transmitting.