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**
  - 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

Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>11-31V DC</td>
</tr>
<tr>
<td>Operating Power</td>
<td>3 watts</td>
</tr>
<tr>
<td>Size</td>
<td>124x116x48mm</td>
</tr>
<tr>
<td>Weight</td>
<td>90 grams</td>
</tr>
<tr>
<td>SDA/SIL</td>
<td>2/3</td>
</tr>
<tr>
<td>Operating Temp</td>
<td>-45 to 80°C</td>
</tr>
<tr>
<td>978MHz UAT Transmitter</td>
<td></td>
</tr>
<tr>
<td>Power Classification</td>
<td>DO-282B Medium Power</td>
</tr>
<tr>
<td>WAAS GPS</td>
<td></td>
</tr>
<tr>
<td>Tracking Reacquisition</td>
<td>-166dBm</td>
</tr>
<tr>
<td>Cold Start</td>
<td>-160dBm</td>
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<tr>
<td>-148dBm</td>
<td></td>
</tr>
<tr>
<td>LED Position Light</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Aviation Red</td>
</tr>
<tr>
<td>Intensity</td>
<td>40 candelas</td>
</tr>
<tr>
<td>Wi-Fi Configuration</td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>80.211b/g/h</td>
</tr>
<tr>
<td>App Compatibility</td>
<td>iOS, Android</td>
</tr>
<tr>
<td>Power Transcoder</td>
<td></td>
</tr>
<tr>
<td>Decodes Mode A and Mode C via DC input</td>
<td></td>
</tr>
</tbody>
</table>

Mounting Dimensions

**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.

Wiring Diagram
- 3x 6-32 NUT PLATES
- 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.
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 outboard 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.

Configuration Procedures
Download the “uAvionix skyBeacon Installer” app from the iOS App store or Google Play.

Environmental Specifications

Configuration Procedures

5. Mount skyBeacon using the three supplied 6-32 screws. Changes to the existing position light circuit breaker rating are not required.

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 N-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.