Margate II ADS-B Receiver

Decode ADS-B Transmissions

Features

- **Supports 978 MHz UAT and 1090 MHz ADS-B**
- **Front panel GPS, RF antenna input connections**
- **1U rack mountable or table-top design**
- **10/100/1000 Ethernet**
- **Optional DC Powered unit**

Sunhillo's Margate II ADS-B Receiver integrates technology from the Longport ADS-B Receiver and packages it into the Margate II's robust, small form factor, and versatile design. The Margate II ADS-B Receiver accepts and decodes 978 MHz UAT and 1090ES ADS-B. Sunhillo's ADS-B Receiver accepts the transmission directly into the module from a front panel TNC connector for the RF antenna feed. Additionally, the unit features a fully integrated GPS receiver with a front panel SMA Connector for the GPS input.

Outputs include a variety of destinations and formats including ASTERIX CAT021 and FAA CAT033 over ethernet.

The Margate II ADS-B Receiver is positioned as a stand alone compact unit or optioned to fit in our new slim 1U rack mountable chassis. The new chassis is designed to fit single or dual ADS-B Receivers or a combination of a RICI and a Margate II ADS-B Receiver in a single 1U solution.

When paired with the RICI in a single 1U chassis a variety of conversions can be performed including TPS75 to SGF-IP, as well as message format transformations between surveillance data in ECGP, CD-2, ASR, various ASTERIX categories, ADS-B, MAR, TPS75, Mode 4, ARTS, SGF, AIRCAT-500, Mode S, sync, Async serial and LAN formats.

The Margate II ADS-B Receiver is built upon FAA approved and deployed Sunhillo SureLine® Software providing sensor interfacing capabilities for the FAA STARS, TAMR, ASR11, as well as the military DASR program.

An optional DC powered Margate II ADS-B Receiver is now available. This is ideally suited for military operations like mounting to the back of a Humvee or other mobile vehicle.

Sunhillo's Margate II ADS-B Receiver is currently deployed to the US Air Force, US National Guard, US Army, US Marines, the National Aviation Research and Technical Park (NARTP), and the Mid Atlantic Aviation Partnership (MAAP) FAA UAS Test Site.

Rear Panels

DC Power Rear

AC Power Rear

Technical Specifications

Ethernet
- 10BASE-T, 100BASE-T, 1000BASE-T, IEEE-802.3

ADS-B Input
- Front Panel TNC Connector for ADS-B Antenna
- 978 MHz UAT and 1090 MHz ADS-B
- DF17, DF18 1090ES ADS-B

ADS-B Output Format
- ASTERIX CAT021 (v.23,v.26, v2.1, v2.4)
- ASTERIX CAT023/033 (FAA v3)
- XML SDO

Virtual Radar Output Format
- ASTERIX CAT048 (v1.18, v1.21, 1.23)
- ASTERIX CAT001 (v1.2, v1.4)
- FAA CD2/ASR9/MAR/TPS70/ARSR4/ASR11
- RDIF, CAA, AIRCAT500, CSV

ASTERIX CAT062 Output Format
- ASTERIX CAT062 (v1.16, v1.17, v1.18)

Front Panel LED Indicators
- ADS-B, UAT, GPS, Link, Power, Active

Power
- Power usage: 10.5W per unit
- 100-240 VAC, 2.0A Max, 50-60Hz
- Optional DC Version: 22-34VDC, 1.0A Max

Processor
- Internal ARM Cortex-A8 processor

USB
- Maintenance Console Connection

GPS
- Front Panel SMA Connector
- Fully Integrated GPS Receiver

MTBF
- 631,520 Hours at 30°C

Optional Rackmount Sleeve Kit (P/N 010-U-RMS)
- 1U rackmount for standard 19-inch racks
- Captive fasteners allow for fast removal and replacement
- Rackmount sleeve has space for up to two ADS-B Receivers or a combination of an ADS-B Receiver and a RICI 5000

Dimensions
Single Margate II ADS-B Receiver:
- Height: 1.61 in / 41 mm
- Width: 7.31 in / 185.68 mm
- Depth: 9.17 in / 233 mm

Populated 1U Sleeve:
- Height: 1.75 in / 44.45 mm
- Width: 17 in / 431.8 mm
- Depth: 9.25 in / 234.95 mm

Weight (unpackaged)
- Single Margate II ADS-B Receiver: 3 lbs / 1.36 kg
- Empty Sleeve: 3 lbs / 1.36 kg
- Fully Populated Sleeve: 9 lbs / 4.08 kg

Environmental (Tested to MIL-STD-810G)
- Storage Temperature: -50°C to +60°C
- Operating Temperature: 0°C to +50°C
- Operating Relative Humidity Range: 10-95%, noncondensing
- Operating Altitude: -300 ft to 10,000 ft

Certifications and Compliance
- FCC Part 15, Class B
- UL/CSA/IEC/EN 62368-1
- FAA-G-2100H: Power