uAvionix

High-Integrity Position Source with Baro

FYXnav-B

Overview

FYXnav-B combines the high-integrity FYX GPS module with a high-resolution barometer. The FYX GPS module includes an integrated RAIM processor for health monitoring and SBAS corrections. Resilient against jamming, spoofing and GPS range errors, FYXnav-B provides reliable navigation in challenging environments. The barometer provides accurate pressure altitude output for use with the Ping ADS-B and transponder families.

Features

- Performs in low sensitivity or high GPS multipath areas.
- Supports all satellite augmentation systems.
- GPS/SBAS GNSS constellations.
- Battery backup fast TTFF.
- Directly connects to Ping2020 or Ping1090 ADS-B transceiver.
- UTC timing output for multiple uses including UAT ADS-B medium synchronization.
- Integrated RAIM processor for Security and Integrity Protection.
- Advanced jamming and spoofing detection.
- Uses SBAS corrections and health messages to detect and correct satellite range errors.
- Satellite pseudo-range step errors detected and excluded.
- SBAS fast and long term corrections applied.
- High-resolution barometer for pressure altitude
- Patents pending.

Technical Specifications

Specification	Value
Input Power	5V 500mW
Size	42x18mm
Weight	27grams
Receiver Sensitivity	
Tracking	-166dBm
Reacquisition	-160dBm
Cold Start	-148dBm
Hot Start	-156dBm
Quality Metrics	
NACp	11 – EPU < 3meters
NACv	4 – 0.3 m/s
SDA	1 - 1E-3
SIL	1 – 1E-3
NIC	7 – <0.2 NM
Barometer	
Resolution	10cm
Supported Interfaces	
UTCtic	1pps
UART	115200 Baud
Protocols	
uAvionix binary	

Regulatory

- Designed to meet the 2020 ADS-B position source requirements for operation below FL18,000’ in 14 CFR 91.225 (b)(1)(ii) TSO-C154c, (b)(2) 14 CFR91.227.
- Meets DO-160G Sections 4 and 5

ECCN 7A994

uAvionix

High-Integrity Position Source with Baro

FY nav-B

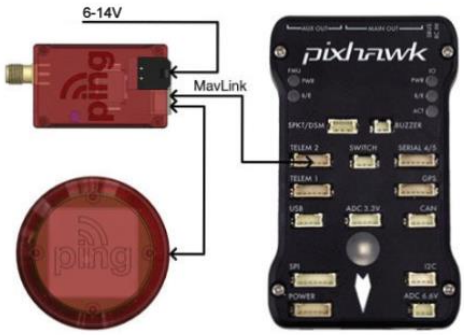
Electrical Specification

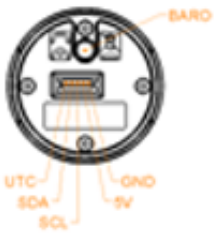
Navigation Source Interface

Pin	Type	
1	Output	UTC
2	Output	TXD
3	Input	RXD
4	Power	5V
5	Ground	Ground

Mating Connector: JST ZHR-5
Pins: SZH-002T-P0.5

Mechanical Specification





ECCN 7A994