



FYXnav TSO Certified GPS navigation source



Overview

FYXnav is world's smallest and lightest TSO Certified GPS navigation source. FYXnav brings aviation integrity to unmanned aircraft, combining a high precision WAAS GNSS sensor with an integrated RAIM processor. Resilient against jamming, spoofing and GPS range errors FYXnav provides reliable navigation in challenging environments. Exceeding the requirements of TSO-C199, FYX is the smallest, lightest and most affordable aviation compliant navigation source for UAS BVLOS operations.



Features

- Performs in low sensitivity or high GPS multipath areas.
- 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.
- 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	1 – 10 m/s
SDA	1 - 1E-3
SIL	1 – 1E-3
NIC	6 – 0.5NM
Supported Interfaces	
UTctic	1pps
UART	115200 Baud
Protocols	
	uAvionix binary

Regulatory

- Exceeds the requirements of TSO-C199 TABs Class B.
- Meets DO-160G Sections 4 and 5

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Electrical Specification

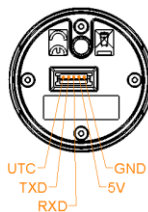
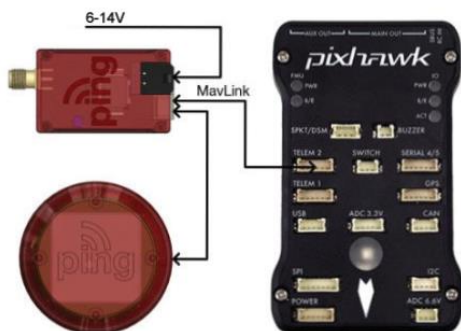
Navigation Source Interface

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



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