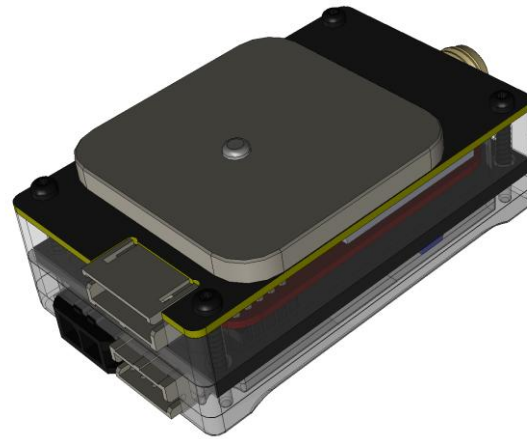


### Overview

PING-20SI is a complete system designed to meet the conspicuity requirements for operating UAS in controlled airspace.

This system includes an integrated, high integrity WAAS GPS sensor derived from uAvionix's TSO'd FYX technology, and a precision, temperature controlled, barometric sensor with accuracy beyond 80,000ft.



### Features

- Mode S transponder.
- ADS-B 1090ES DF17 transmitter.
- Integrated WAAS GPS.
- Integrated static pressure sensor.
- Meets the performance requirements of TSO-C166b Class B1S and TSO-C199 Class A and B.
- Meets the ADS-B Out equipment performance requirements of 14 CFR 91.227.
- Meets the minimum performance requirements of the following RTCA specifications:
  - DO-181E Level 2e, Class 20W
  - DO-260B Class B1S
- GPS/SBAS augmentation system. RAIM layer for Fault exclusion.
- Temperature controlled static pressure sensor accurate to 80,000ft.
- Battery backed GPS for fast TTFF.
- DO-160G environmental Cat B2.
- GDL90 compatible CONTROL serial input. Compatible with popular autopilots.
- GDL90 ownship and altitude packets.
- SMA 1030/1090MHz Antenna Connector.
- Integrated GPS antenna.
- US Patents Pending.

### Regulatory

Meets the requirements of:  
DO-181E Level 2e1s (20W output power level)  
DO-2060B Class B1S, DO-229D Class Beta 1, ICAO Annex 10, Volume IV, EuroCAE ED-115 Class LcF

### Technical Specifications

Specification	Value
Input Power	11-16V 1W Ave On/Alt. 0.5W Standby
Size	50x25x17mm
Weight	20grams
SIL/SDA	1/1
Operating Temp	-45 to 80°C
<b>Transponder</b>	
MTL 1030MHz	-81dBm
Dynamic Range	-79 to 0dBm
1090 Transmit Power	20W Nominal
<b>WAAS GPS</b>	
Augmentation	SBAS
Sensitivity	-167dBm
<b>Altimeter</b>	
Range	-1000 to 80,000ft
<b>Interfaces</b>	
Control	
Control	57600bps GDL 90
Ownship	57600bps GDL90
Programming	
Programming	115200bps GDL 90
<b>Options</b>	
PingUSB Programmer Adapter	
1030/1090MHz Transponder Antenna	

## Electrical Specification

### Power Interface

Pin	Type	
1	Power	24V
2	Ground	

Mating Connector: Molex 0436450200  
Pins: 0462350001

### Control Interface

Pin	Type		
1	Input	RXD/SDA	CONTROL
2	Output	TXD/SCL	GDL 90
3	Power	5V	
4	Ground		

Mating Connector: JST ZHR-4  
Pins: SZH-002T-P0.5

### Programmer Interface

Pin	Type		
1	Input	UTC	
2	Input	RXD	MavLink
3	Output	TXD	GDL 90
4	Power	5V	
5	Ground	Ground	

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

### Indicators

LED	ON	FLASHING
GREEN	Powered	Receiving Interrogation
RED	FAULT	Reply / Transmit

## Mechanical Specification

