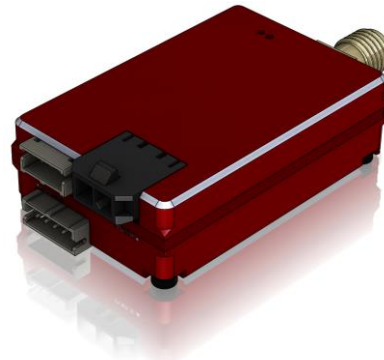![uAvionix logo]

PING2020 ADS-B Transceiver

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Overview

PING™ is the world's smallest, lightest and most affordable full range ADS-B transponder. At just 20 grams, it implements 'Sense and Avoid' for Drone operations in the national airspace. ADS-B-In on both 1090ES and 978UAT. ADS-B-Out on 978UAT. No deviations from the Minimum Performance Standards of DO-282B Class A1S.

Actual Size

Features

- Detects commercial aircraft threats on 1090MHz and 978MHz within a 100 statute mile radius in real time.
- Reports threats from commercial aircraft in a programmable spherical radius.
- Transmits ADS-B on 978MHz (UAT).
- Meets MOPS DO-282B Class A1S.
- Navigation Source (GPS and Baro) PingNav option.
- SMA Antenna Connector
- US Patents Pending

Regulatory

- Meets FCC 47CFR part 87.
- Designed to meet the 2020 ADS-B requirements for operation below FL18,000' in 14 CFR 91.225 (b)(1)(ii) TSO-C154c and (b)(2) 14 CFR 91.227

Technical Specifications

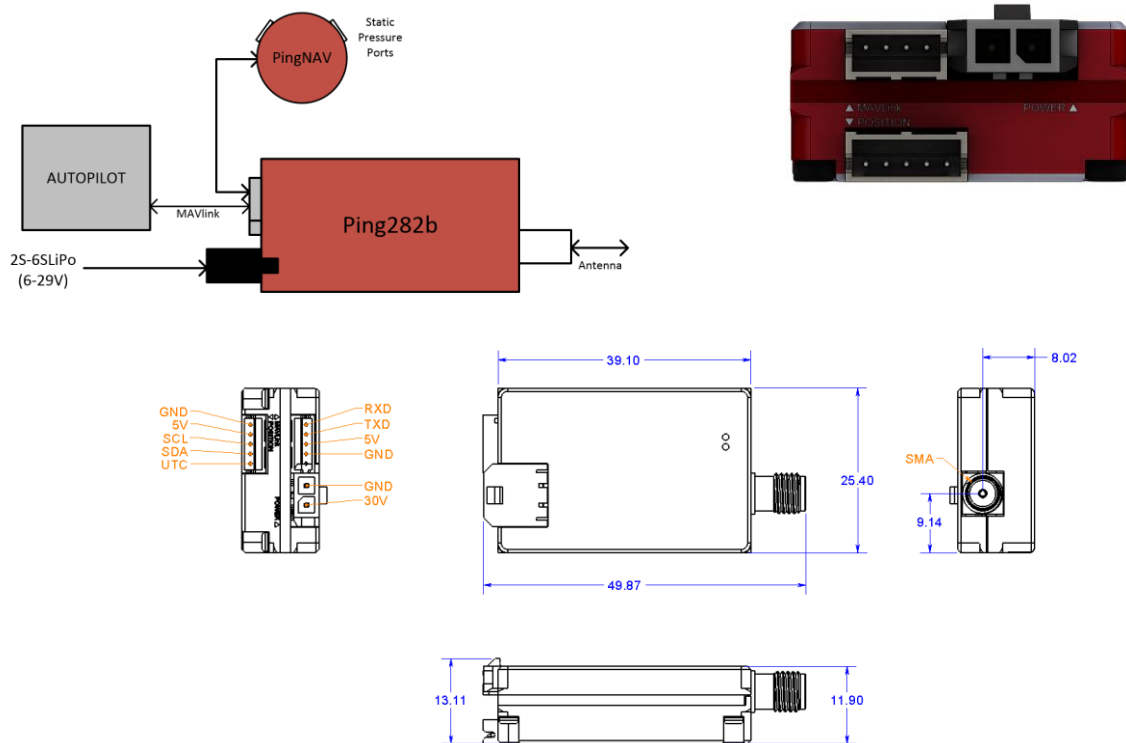| Specification	Value
Input Power	12-26V 500mW Ave. 30W Peak (400us)
Size	25x39x12mm
Weight	20grams
SDA	3
Receiver	
MTL 1090MHz	-88dBm
Dynamic Range	-79 to 0dBm
MTL 978MHz	-93dBm
Dynamic Range	-90 to -3dBm
Supported Interfaces	
Host Serial	57600bps
Nav Serial	57600bps
Transmit	
1090MHz	S/W disabled.
978MHz	16W (42dBm)
Options	
• PingNav DO-229D GPS with Barometer	

Quality Standards and Procedures

Designed and assembled in the USA, HALT and HASS tested, IPC-610 class II soldering, production functional testing. Software D.A. to DO-178B, Hardware D.A. to DO-252 Class C.

![uAvionix logo]

PING2020 ADS-B Transceiver

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Electrical Specification

Navigation Source Interface

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

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

Indicators

LED	ON	FLASHING
BLUE		1090ES Traffic
GREEN		UAT Traffic
RED	FAULT	Testing

Power Interface

Pin	Type	
1	Power	6-29V
2	Ground	

Mating Connector: Molex 0436450200
Pins: 0462350001

Data Interface

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

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

Mechanical Specification

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µAvionix

PING2020 ADS-B Transceiver

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Approved Antenna Types

Any antenna certified to TSO-C66, TSO-C74, TSO-C112 with a peak gain of 4 dBi or less, a omni-directional radiation pattern, and a VSWR of 1.8 or less at 978MHz is approved for use with this device and will ensure conformance to all applicable standards for RF emissions.

Modifications and use outside of intended scope

This device has been design and tested to conform to all applicable standards in the original form and when configured with the components shipped with the device. It's not permissible to modify the device, use the device for any use outside of the intended scope, or use the device with any antenna other than the one shipped with the device.

Important Pilot Advisory Note Regarding Safety of Radio Frequency Energy

Safe use of this device requires care as to the placement of the antenna. Place the antenna at least 4cm away from any part of your body or that of other cabin occupants. To stop all RF emissions, remove power from the equipment. Only handle the antenna when power is disconnected. Advise your passenger(s) to avoid contact with the antenna while power is applied to the equipment. Retain these instructions with your maintenance logs/files and for future reference.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits (Table 1 of 47Pt1 (i) 1.1310) set forth for a Public/Uncontrolled environment.

Warning: This transceiver is to be used to improve pilot situational awareness only and as a navigational aid. It is not intended for use in IFR flight conditions. uAvionix is not responsible for the transceiver's end use and will not be held liable for any events occurring from its use.