

### Overview

ping200X is a complete system designed to meet the Transponder and Automatic Dependent Surveillance – Broadcast (ADS-B) requirements for operating Unmanned Aircraft Systems (UAS) in controlled airspace. The system is fully configurable as any combination of Mode A, Mode C, Mode S transponder and Extended Squitter ADS-B transmitter. Also included is a barometric sensor and encoder.



### TSO Certification Pending

- TSO-C88b internal altitude sensor/encoder
- TSO-C112e Level 2els, Class 1 Mode S transponder
- TSO-C166b Class B1S Extended Squitter transmitter
- Configurable, non-TSO variant available as Modes A/C only, Mode S only, ES only, Modes A/C + ES, Mode S + ES, and Modes A/C, S + ES
- Meets the U.S. ADS-B Out equipment performance requirements of 14 CFR 91.227
- Static pressure with TSO accuracy to 35,000ft.
- GDL90+ ownship and altitude packets
- SMA 1030/1090MHz Antenna Connector

### Conformity

- DO-181E Level 2els, Class 1
- DO-260B Class B1S
- DO-178C Level C
- DO-254 Level C
- DO-160G

### Regulatory

- FAA transmit license - manned aircraft and unmanned aircraft operating above 500ft AGL
- FCC 47 CFR Part 87 ID 2AFFTP200S

### Technical Specifications

| Specification                    | Value   |
|----------------------------------|---|
| Input Power                      | 11-34V (3S-8S LiPo)<br>1.5W Continuous On/Alt. 4W Peak (8ms maximum)        |
| Size                             | 47 x 54 x 9 mm  |
| Weight                           | 50 grams  |
| SIL/SDA                          | 3/2   |
| Operating Temperature            | -45 to 70°C   |
| <b>Transponder</b>               |   |
| MTL 1030MHz                      | -74dBm ±3dB   |
| 1090MHz Transmit Power           | 250W Nominal  |
| <b>Altimeter</b>                 |   |
| Range                            | -1000 to 35,000ft – TSO-C88b compliant<br>35,000 to 60,000ft – ±1% accuracy |
| <b>Interfaces</b>                |   |
| <b>Control</b>                   |   |
| Baudrate                         | 1200-2Mbps  |
| Protocol                         | GDL90+  |
| <b>Position</b>                  |   |
| Baudrate                         | 115200bps   |
| Protocol                         | uAvionix OEM Protocol   |
| <b>Options</b>                   |   |
| 1030/1090MHz Transponder Antenna |   |

Electrical Specification

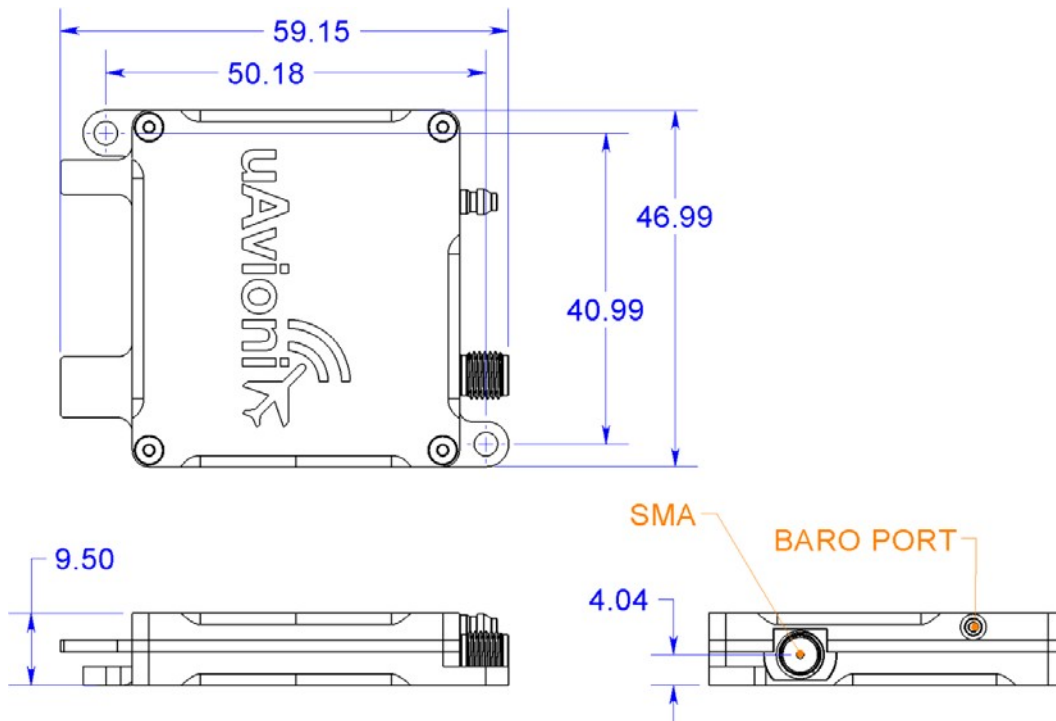
Interface

| Pin    | Type  | Physical        | Protocol              |
|--------|-------|-----------------|-----------------------|
| Black  | 22AWG | Aircraft Ground |                       |
| Red    | 22AWG | Aircraft Power  |                       |
| Orange | 24AWG | AP RXD          | UCP                   |
| Gray   | 24AWG | AP TXD          | UCP                   |
| White  | 24AWG | RXD             | uAvionix OEM Protocol |

Environmental

| Condition                                  | DO-160G | Category    |
|--|---------|-------------|
| Temperature                                | 4.0     | B2          |
| Temperature Variation                      | 5.0     | B           |
| Humidity                                   | 6.0     | A           |
| Operational Shock                          | 7.0     | B           |
| Vibration                                  | 8.0     | S (Curve M) |
| Magnetic Field                             | 15.0    | Z           |
| Power Input                                | 16.0    | BX          |
| Voltage Spike                              | 17.0    | B           |
| AF Conducted Susceptibility                | 18.0    | B           |
| Induced Signal Susceptibility              | 19.0    | AC          |
| RF Susceptibility                          | 20.0    | TT          |
| RF Emissions                               | 21.0    | B           |
| Lightning Induced Transient Susceptibility | 22.0    | A2XXXX      |
| ESD  | 25.0    | A           |

Mechanical Specification



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