



ping1090

uAvionix Ping1090 ADS-B Transceiver

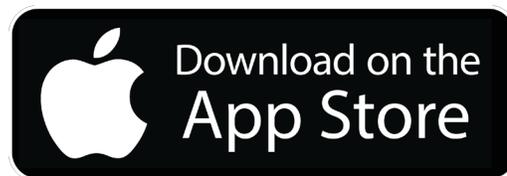
QUICK START GUIDE



Install

1

Install the uAvionix Ping App from the Apple App Store or Google Play. Search for **uAvionix Ping Installer** or use the QR codes below.



Connect the **pingUSB** to **FYXnav** using the provided **JST ZHR-5 cable**.

Connect **pingUSB** to a power source using a **Micro-USB cable**.





Join

2

Join your mobile device to the wireless network named **Ping-XXXX** using the procedure for your device. The WPA passphrase is **uavionix**. The process for iOS is shown below.

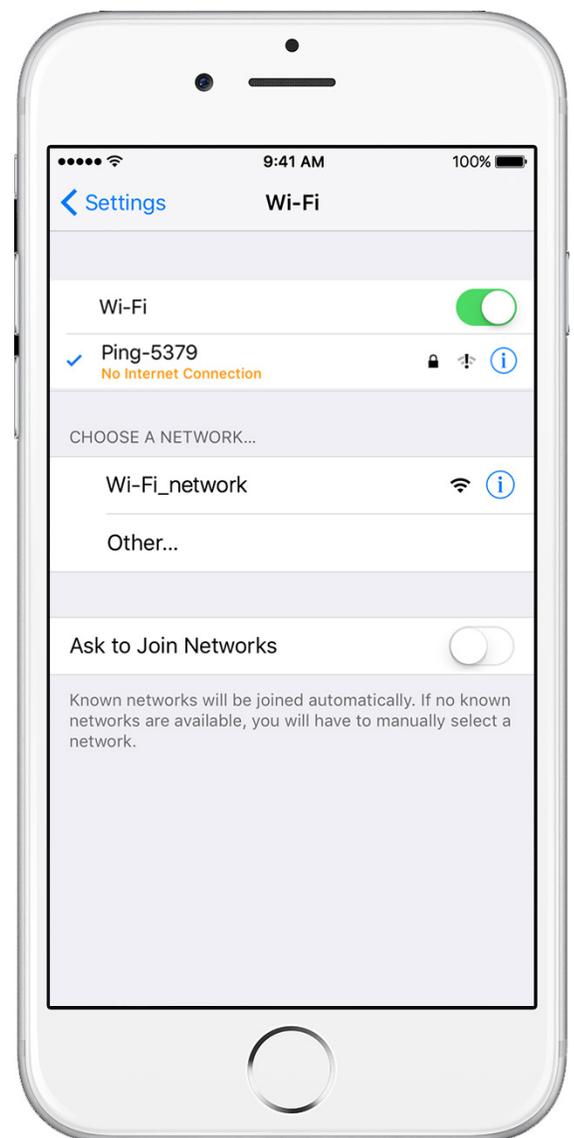
Go to **Settings > Wi-Fi**, and verify Wi-Fi is turned on.

Tap the SSID **Ping-XXXX**, where XXXX is a random string i.e. Ping-5379.

Enter **uavionix** as the WPA password for the secure Wi-Fi network, then tap **Join**

Note: *No Internet Connection* message is normal.

After device is connected proceed to step 3.





Configure

3

Launch the **uAvionix Ping** application and complete the fields as required for your device/aircraft.

Selected Device Type: Choose Ping1090

Control: This setting controls device transmit functions. The selections available will depend on the device type selected.

Transceiver selections include:

TX enabled: Transmit ADS-B message at one second intervals, receive is also enabled.

Receive: Receive only, transmit disabled.

Standby: ADS-B in/out disabled.

ICAO: Enter your ICAO Number in Hexadecimal format. If your identifier is in octal (eight digits) format you must convert it prior to entry.

Call Sign: Enter the tail number of the aircraft. (A-Z 0-9)

Emitter: This should be set to your aircraft type. UAV is the selection for unmanned vehicles.

V_{so}: Enter airspeed in knots that the aircraft typically flies at after takeoff. Default value (1)

Aircraft Length: Select the length value in meters that matches your aircraft.

Aircraft Width: Select the width value in meters that matches your aircraft.

GPS Antenna Offsets: Choose the lateral and longitudinal offset in meters from GPS to the nose of your aircraft.

The screenshot shows the configuration interface of the uAvionix Ping application. At the top, the 'ping' logo is displayed in red and grey. Below it, a green bar indicates 'CONNECTED TO DEVICE'. Two tabs are visible: 'Configuration' (active) and 'Monitor'. The configuration fields are as follows:

- Selected Device Type:** ping1090
- Control:** UAT TX enabled
- ICAO Number (hex):** e.g. 012ABC
- Call Sign:** e.g. N12345
- Emitter Category:** UAV
- V_{so} (knots):** 1
- Aircraft Length (meters):** L ≤ 15
- Aircraft Width (meters):** W ≤ 23
- GPS Antenna Offset, Lateral from roll axis (meters):** 0
- Antenna Offset, Longitudinal aft from aircraft nose (meters):** 0

An 'Update' button is located at the bottom of the screen.



Update

4

After completing all data fields tap the **Update** button.

You should receive the **Device Configured** message, tap **OK**.

Tap **Monitor**.

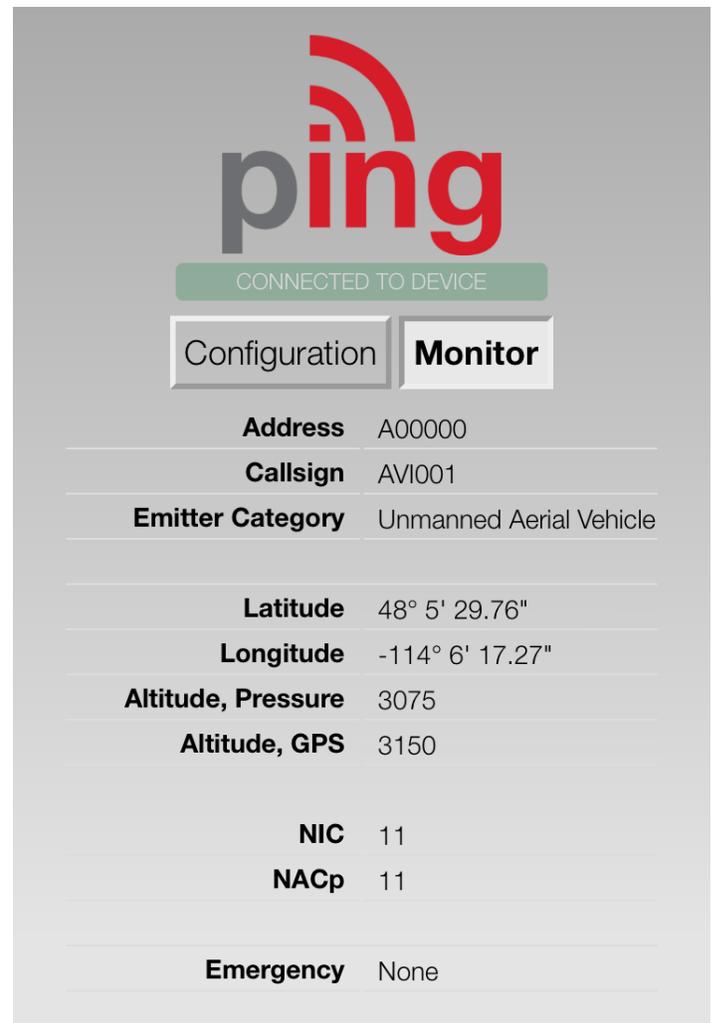
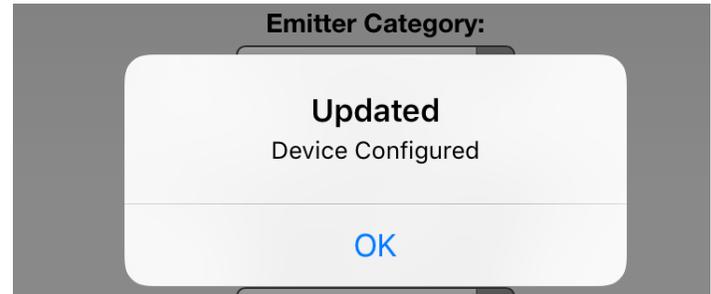
Verify all fields are correct for your aircraft.

The monitor fields will only populate when FYXNav has a GPS fix. A GPS fix is indicated by a flashing red LED.

A fix is not necessary for programming but is required to monitor the current configuration.

Disconnect power from **pingUSB**.

Disconnect **FYXnav** from **pingUSB**.





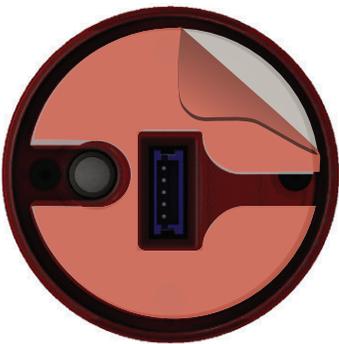
Mount

5



Prior to mounting confirm all cable lengths will be sufficient to reach power, autopilot and FYXnav GPS.

Mount ping1090 to a suitable flat surface using the provided **double-sided mounting tape**. Affix mounting tape to the label side of the transceiver and secure to the aircraft



Mount FYXnav using the provided **double-sided adhesive**.

Remove both top and bottom backing from provided double sided tape. Adhere double sided tape to the underside of FYXnav in the correct orientation so the barometer and 5-pin connector are not blocked by the adhesive.

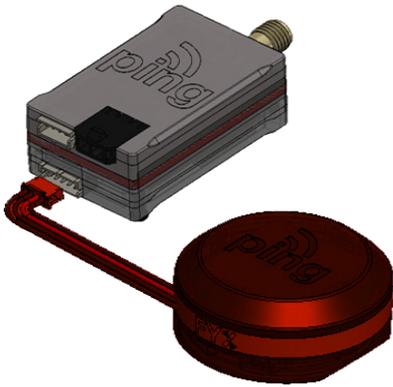


Connect the **JST ZHR-5 cable** to the 5 pin port on the bottom of **FYXnav**. Route cable through channel in adhesive. **Mount FYXnav** to a clean, smooth surface. The Ping logo on the top of the FYXNav should have an unobstructed view of the sky.



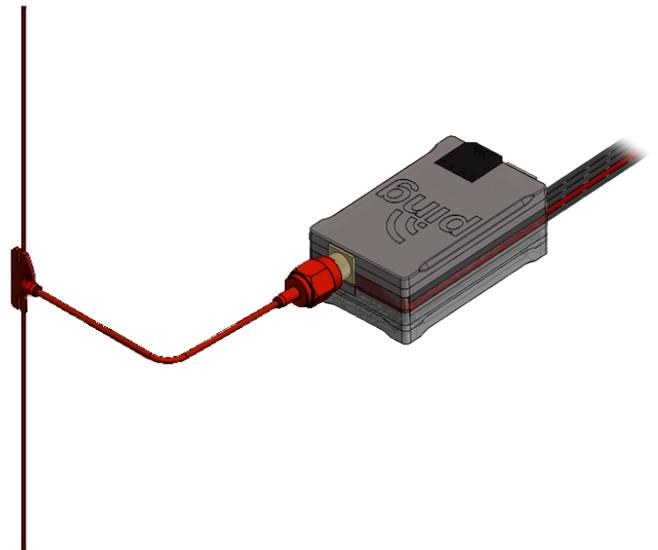
Connect

6

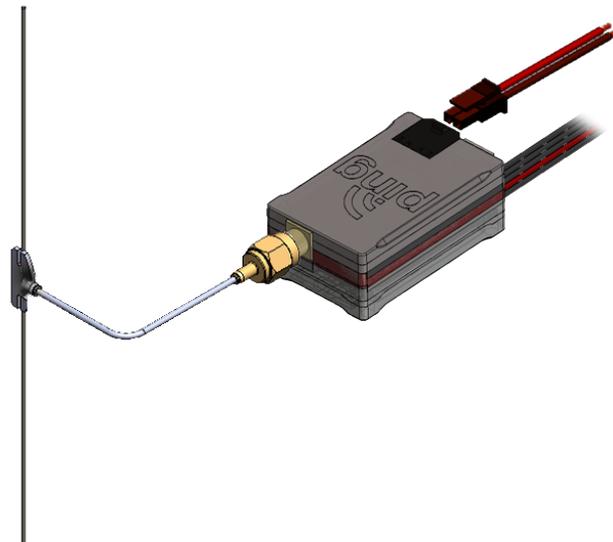


Connect remaining **5 pin** connector from **FYXNav** to **ping1090**.

Connect the **antenna** to **ping1090**. The antenna should be mounted in a vertical orientation using the provided double sided mounting foam.



Connect power harness to a 3S battery or appropriate aircraft power source.



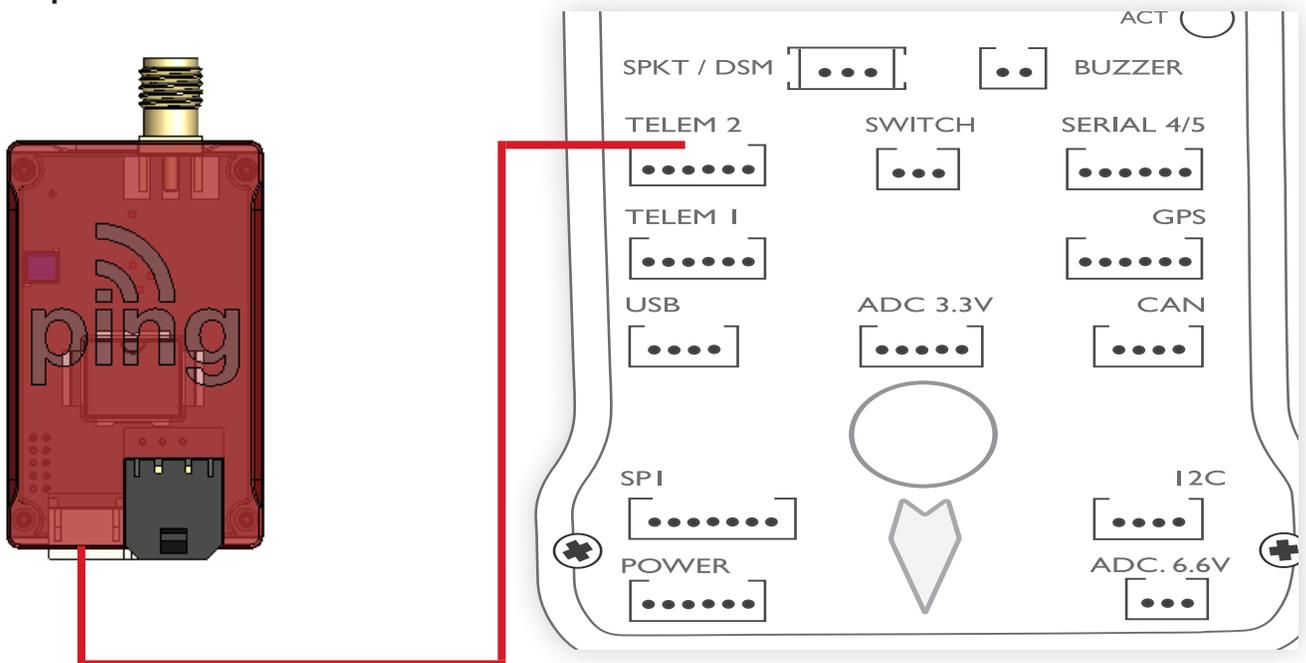


Connect Pixhawk

7

The received ADS-B data can be sent to an autopilot or ground station. Configuration is autopilot dependent, minimal setup for Pixhawk is shown below.

Connect the provided cable to the 4 pin JST port on the ping transceiver. Plug remaining 6 pin DF13 serial cable connector into TELEM2 port of Pixhawk.



Connect to your Pixhawk Autopilot using Mission Planner. Set the ADSB-ENABLE parameter to 1.

When ADS-B traffic is received the green LED will flash and the traffic should appear on the Mission Planner map.

For a full list of available Ardupilot parameters visit <http://ardupilot.org/>

For additional support: uavionix.com/support