uAvionix

ping1090i
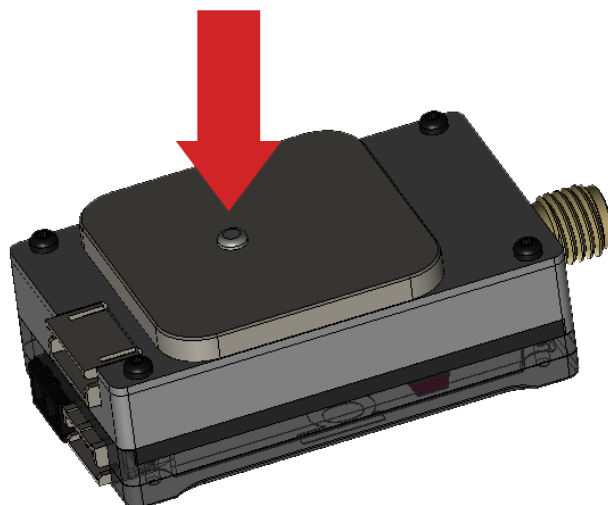
The ping1090i GPS antenna requires a clear view of the sky for proper operation. Avoid placing the device directly under props or near features that could 'shadow' or block the GPS antenna during flight. Avoid installing the ping1090i under any signal blocking materials such as carbon fiber.

GPS Antenna

Prior to mounting confirm all cable lengths will be sufficient to reach power source and autopilot.
Mount ping1090i to a suitable flat surface using the provided **double-sided mounting tape**. Affix mounting tape to the ping logo side of the transceiver and secure to the aircraft.
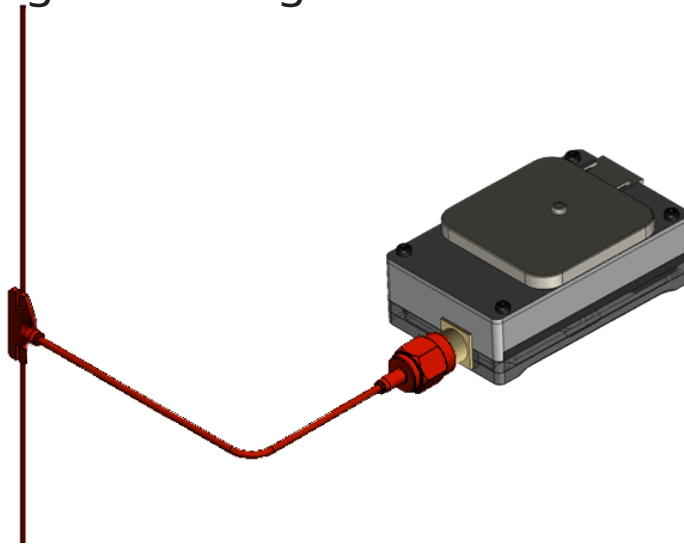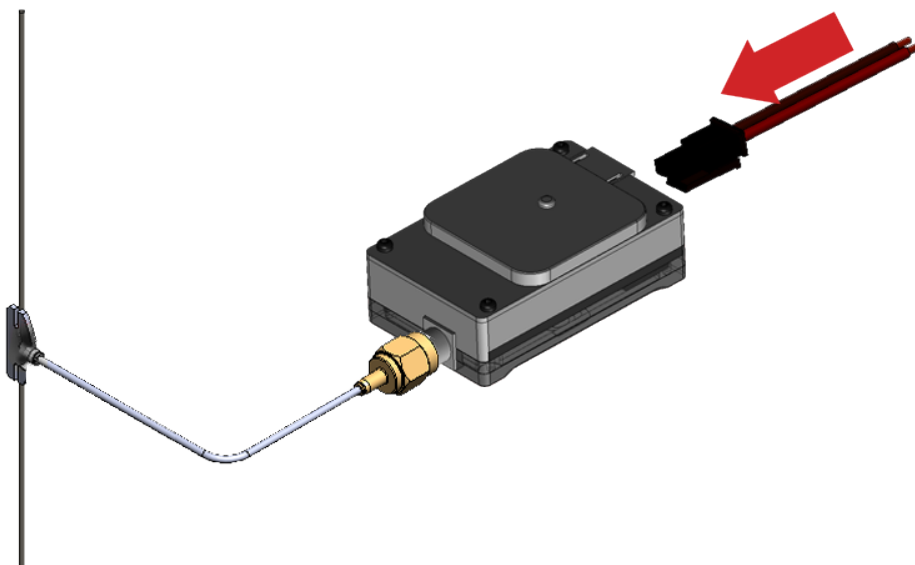
Connect the **antenna** to **ping1090i** The antenna should be mounted in a vertical orientation.

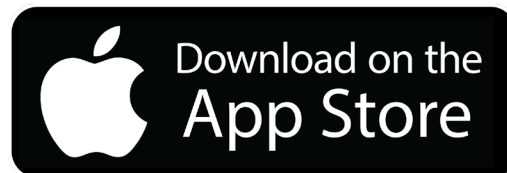Place the antenna in a location that will be least obstructed by the aircraft during normal flight.

Connect power harness to ping1090i. Connect the free end of the harness to a 3S battery or appropriate aircraft power source.
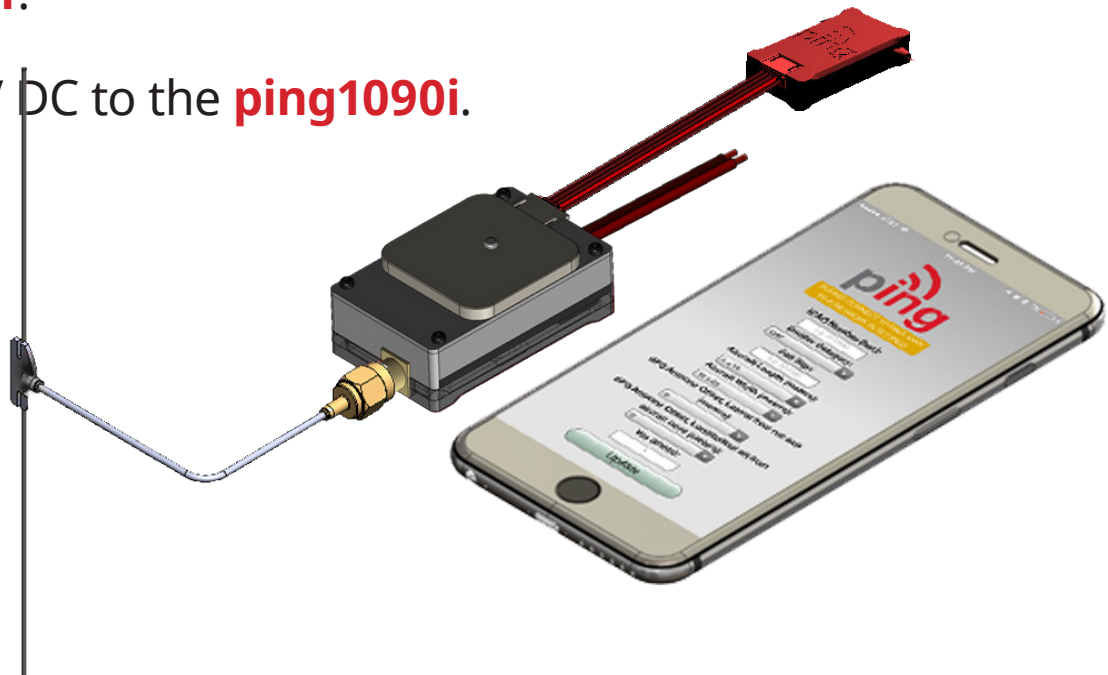
Install the uAvionix Ping App from the Apple App Store or Google Play. Search for **uAvionix Ping Installer** or use the QR codes below.

Connect the **ping Programmer** to **ping1090i** using the provided **JST ZHR-5-4 pin cable**. The 5 pin connector should be connected to the transceiver. The 4 pin should be connected to the **ping Programmer**.

Apply 11-28V DC to the **ping1090i**.

⏜ Join

Join your mobile device to the wireless network named **Ping-XXXX** using the procedure for your device. If a WPA passphrase is required enter **uavionix**. The process for iOS is shown below.
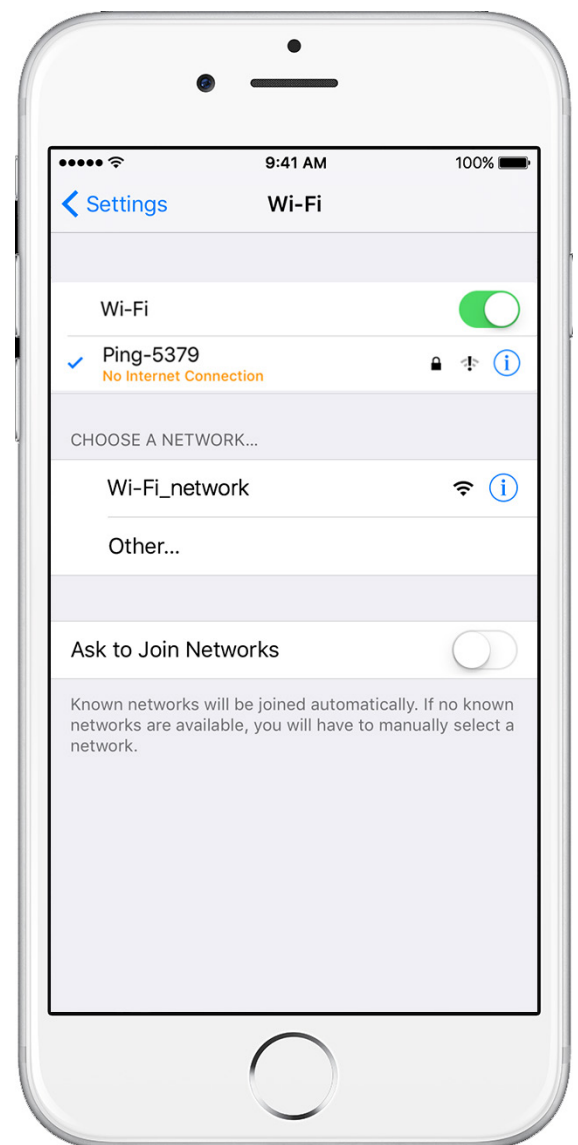
Go to **Settings > Wi-Fi**, and verify Wi-Fi is turned on.

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

Enter **uavionix** as the WPA password, if required for the network, then tap **Join**

Note: *No Internet Connection* message is normal.

After device is connected proceed to step 5.

••••• ⏜	9:41 AM	100% ▬▬

‹ Settings   Wi-Fi

Wi-Fi	🟢
✓ Ping-5379	🔒 ⏿ ⓘ
No Internet Connection	

CHOOSE A NETWORK...

| Wi-Fi_network | ⏜ ⓘ |
| Other... | |

| Ask to Join Networks | ⚪ |

Known networks will be joined automatically. If no known networks are available, you will have to manually select a network.

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_{s0}: 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.

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

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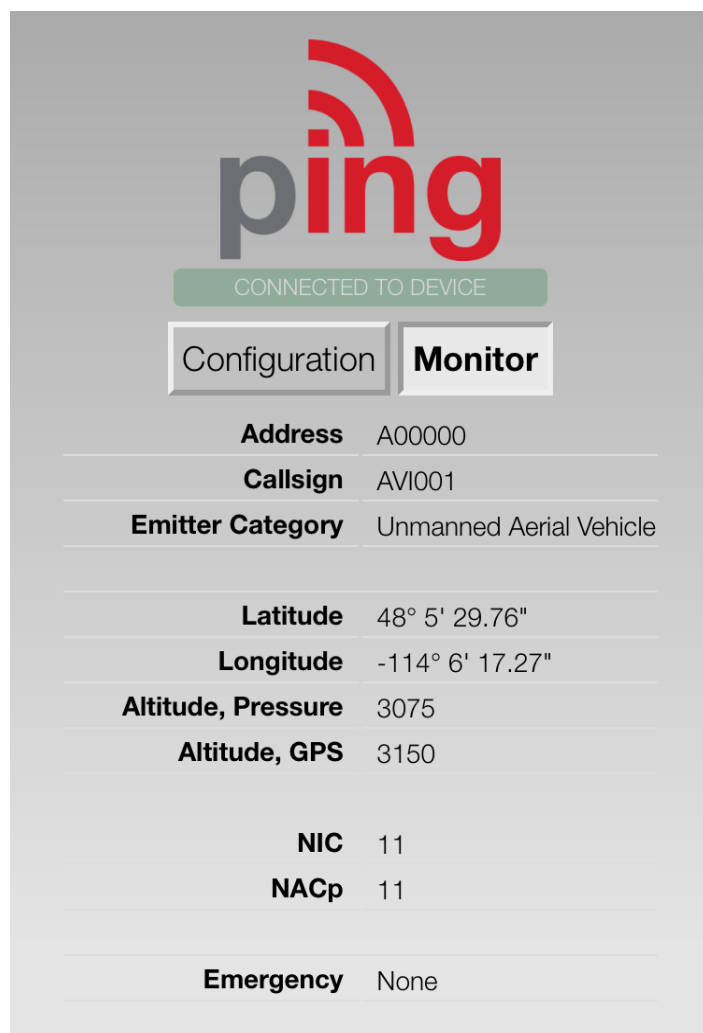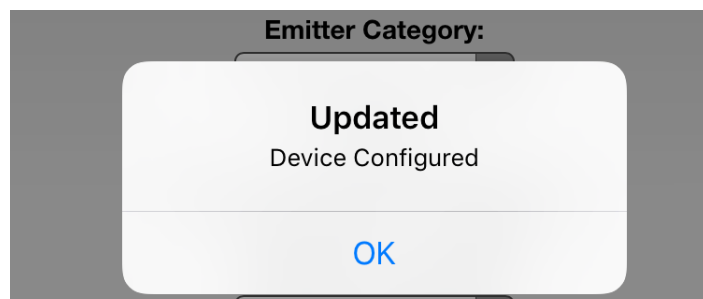
Tap **Monitor.**

Verify all fields are correct for your aircraft.

A GPS fix is not necessary for programming but is required to monitor latitude longitude and GPS altitude.

Disconnect power from **ping1090i**

Disconnect ping Programmer from ping1090i.

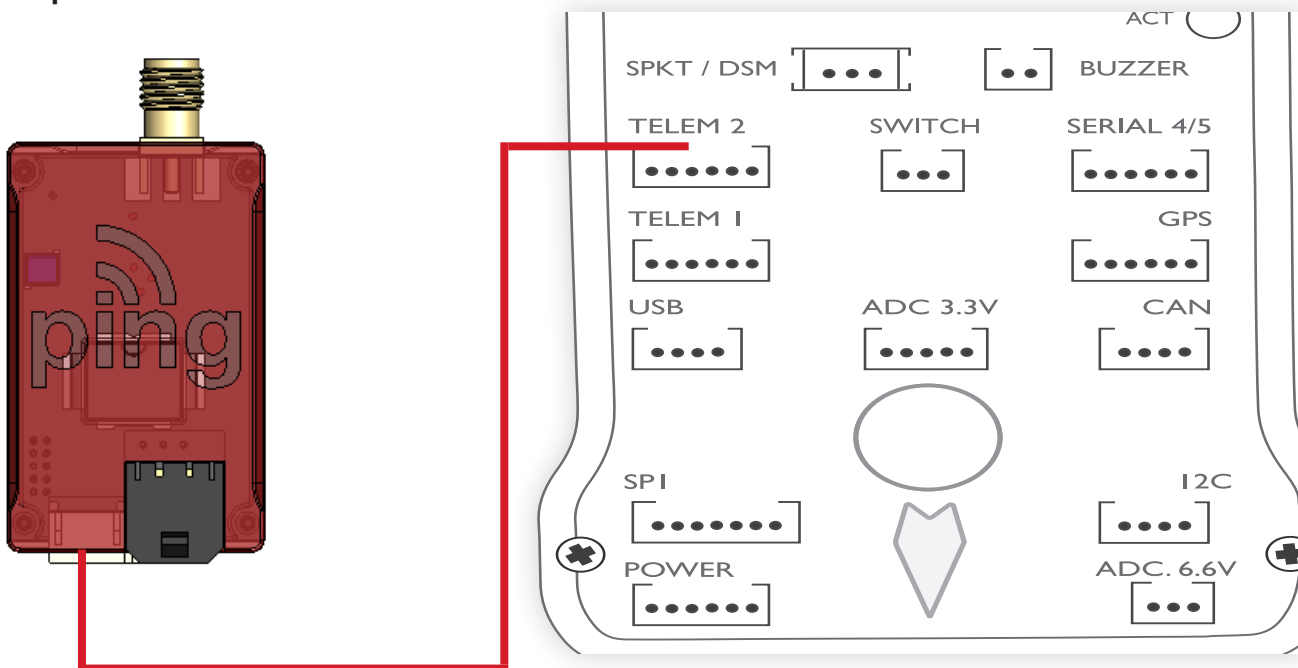**ping1090i** will not transmit if the **ping Programmer** is attached.

Emitter Category:

Updated
Device Configured

OK

ping

CONNECTED TO DEVICE

Configuration | **Monitor**

Address	A00000
Callsign	AVI001
Emitter Category	Unmanned Aerial Vehicle
Latitude	48° 5' 29.76"
Longitude	-114° 6' 17.27"
Altitude, Pressure	3075
Altitude, GPS	3150
NIC	11
NACp	11
Emergency	None

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_SELECT 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 Arudpilot parameters visit
http://ardupilot.org/