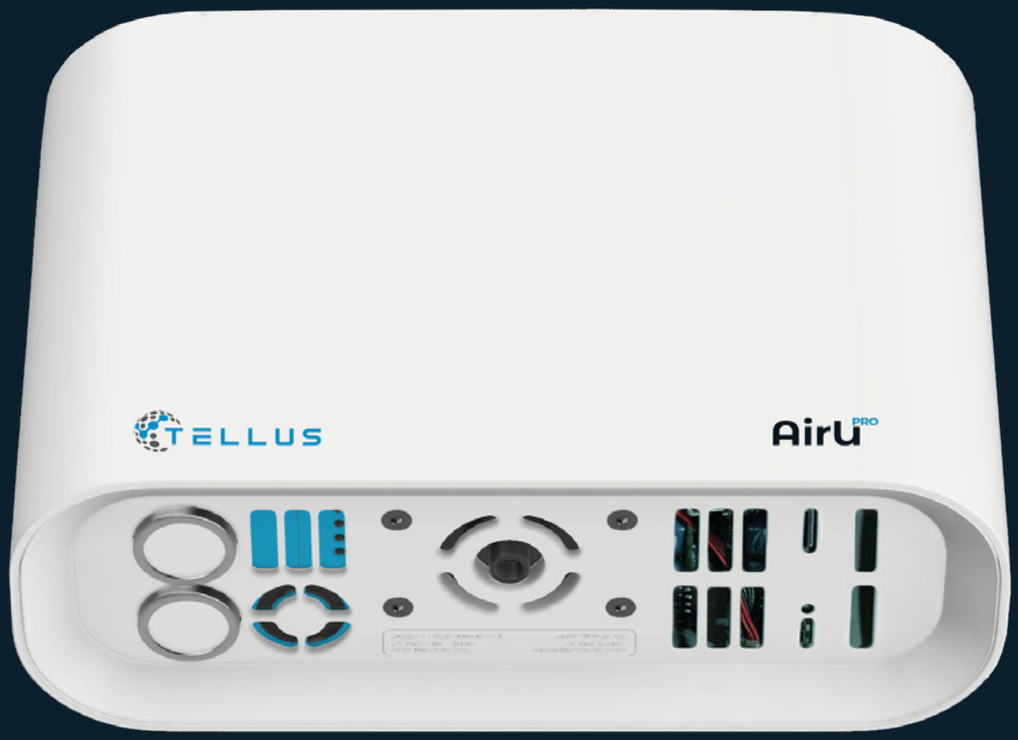
TELLUS

AirU PRO

LoRa User Manual



Welcome!

Thank you for choosing the AirU Pro for monitoring air quality. This manual provides step-by-step instructions for powering, setting up, and connecting your device, as well as accessing data through the AirView app.

Getting Started

Download the AirView App

The AirView app allows you to view and manage air quality data from your AirU Pro.

1. Download the AirView App
2. Open the app and create an account, or log in if you already have one.
3. Tap the + icon in the Monitors tab and follow the setup steps.

Apple:
Enable Bluetooth & allow access to app

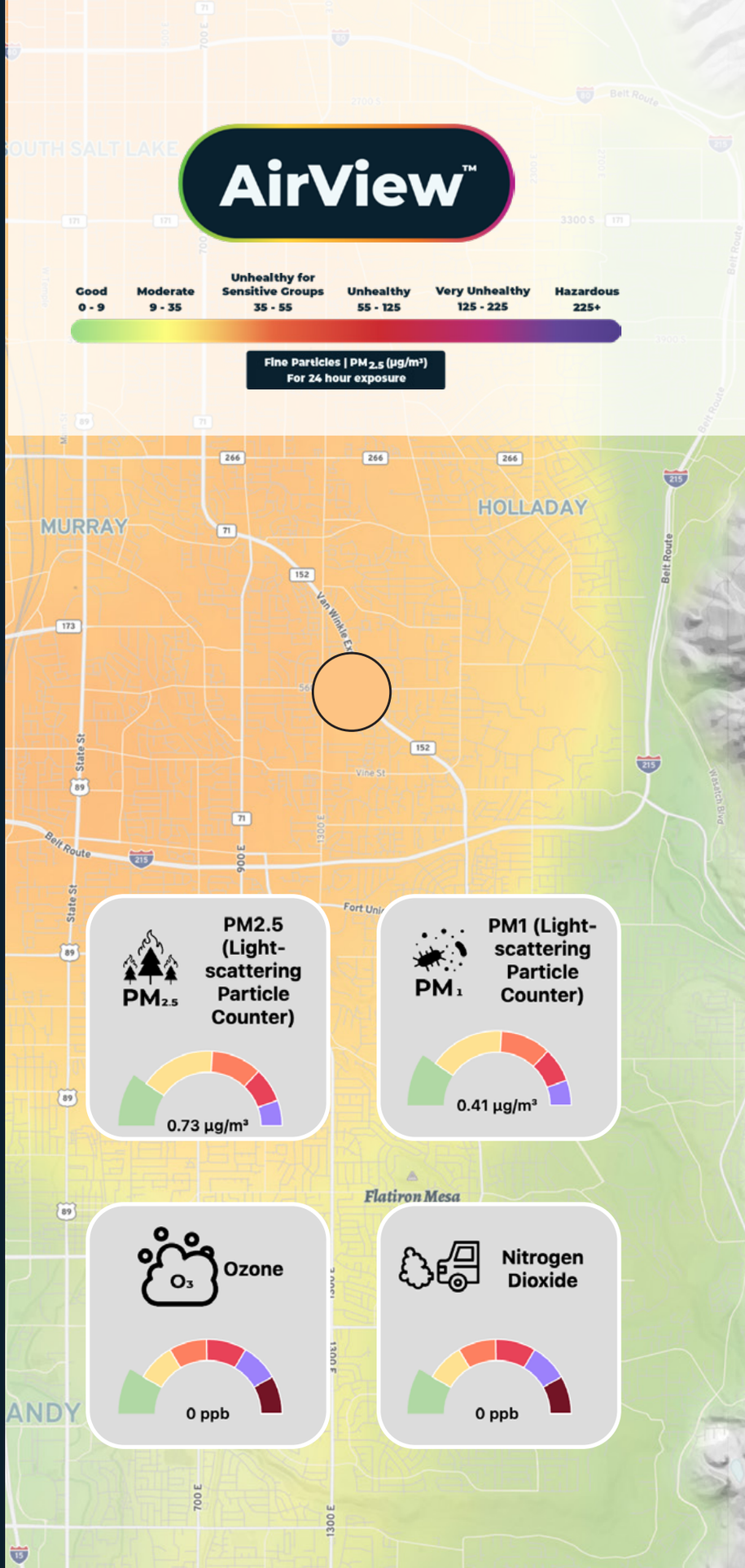
Android:
Enable Location Services

AirView™

AirView offers real-time data on particulate levels and pollutants, helping you stay informed and make decisions for your health and environment.

For the best experience, access AirView on your desktop.

AIRVIEW.TELLUSENSORS.COM



Installation & Mounting

Mounting the AirU Pro

- Use the two plastic brackets to securely mount the device.
- Ensure brackets are not overstressed to prevent damage.
- Mount the AirU Pro upright with the logo at the top and openings at the bottom.

Flat Surface Placement

- Place the device on its backside on a flat surface, ensuring the bottom ports stay clear.

Water Protection

- Keep the device safe from water underneath, such as a sprinkler. It can handle rain from the top and sides but must stay dry inside.

Power Options

- **Solar Panel:** Connect the external battery using the solar cable and USB-C.
- **Wall Outlet:** Plug in with the included USB-C power supply.

Placement Height

Position your AirU at breathing height or above for the most accurate air quality data.

LED Functions

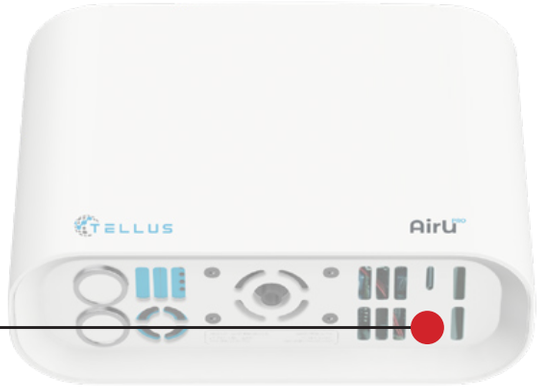
- **Red LED:**
  On: Device has not yet joined LoRa Network Server
  Off: Device has successfully joined LoRa Network Server
  Blinking: Device is joined, but failed to receive message verification from gateway. Blinking will cease when next message verification is received, signifying a valid gateway is in range.

- **Blue LED:**
  On: No current GPS fix.
  Off: Current GPS fix is obtained.

- **Green LED (PM10 option only):**
  On: PM10 readings are in discard window (occurs during first 15 seconds of operation) or PM10 read error detected.

- **Yellow LED:**
  Blinking: FUOTA download is in progress

- **All LEDs:**
  Blinking: FUOTA upgrade is in progress



Connection Procedure

The AirU LoRa device will automatically begin trying to join the LoRa Network Server upon applying power.

Register the device to your LoRa Network Server (LNS) using the DevEUI, JoinEUI, and AppKey from the AirView App device page.

The device will try to send join requests on a number of different frequency groups, pausing for 30-60 seconds in between each attempt. **This means the joining process can take several minutes.**

A successful join is indicated by the red LED turning off and can also be observed in the device's entry in the LNS management portal.

If the device appears to not join after >5 minutes of operation, consider trying the following:

- Double-check correct AppKey, JoinEUI, and DevEUI are registered in LNS
- Confirm nearest Gateway is online and operational
- Confirm device is within reasonable range of Gateway
- Power-cycle AirU LoRa device

Viewing Data

Using AirView

After creating your account and connecting your monitor, you can access your data on the AirView website or app.

- **AirView Tab:** View an air quality map showing public devices and your personal AirU Monitors. Use filters to customize your view.
- **Dashboard Tab:** Monitor real-time and historical data for your AirU Monitors. Select devices from the left-hand list to view data. Use the Historical Data section to set a date range and metric for analysis.
- **Settings Tab:** Manage your AirU Monitors. Under Settings → Devices, you'll see a table of your devices. Click a Device ID to access its settings, view meta data, or update parameters like VOC calibration factors.

To invite others, follow these steps as the primary AirU owner:

1. Click "SETTINGS" in the top bar of the AirView desktop dashboard.
2. Click 

3. Enter all the email addresses you'd like to give access to.

Each person needs an AirView account to receive an invitation

Troubleshooting

AirU Pro not showing on AirView:

1. Check if the fan is running.
2. Verify all connections between the solar panel, power supply, and AirU Pro.
3. Ensure the solar panel gets enough sunlight. A fully discharged battery may take a day to recharge in strong sunlight

AirU Pro shows in the AirView dashboard but not on the map:

- Devices without GPS won't appear on the map.
- Weak signals (e.g., indoors) can prevent GPS validation.

FAQs

WWW.TELLUSENSORS.COM/FAQ

Specifications

Wireless Modes Available:

- LoRaWAN
- WiFi 2.4GHz (enabled with internal jumper configuration or by request)

LoRaWAN:

- **LoRaWAN MAC Version:** 1.0.4
- **Region:** US915
- **Regional Parameters**: RP002-1.0.3
- **Activation:** OTAA
- **Device Class:** C
- **Package Versions:**
    - Remote Multicast Setup: v2.0.0
    - Fragmented Data Block Transport: v1.0.0
    - Application Layer Clock: v1.0.0

FUOTA:

Enabled: Yes

Maximum Fragment Size: 242

Maximum Fragments: 2000

Maximum Delta Image Size: 484kB

Operating Temperature:

-10˚to 45˚C

Power:

USB-C 5V Power Supply (included)

FCC Notice

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause ndesired operation.

Note:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

ISED Notice

Canada

This device complies with ISED Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'ISDE Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. l'appareil ne doit pas produire de brouillage;
2. l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with FCC and IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Énoncé d'exposition aux rayonnements: Cet équipement estconforme aux limites d'exposition aux rayonnements ioniques RSS-102 Pour un environnement incontrôlé. Cet équipement doitêtre installé et utilisé avec un Distance minimale de 20 cm entrele radiateur et votre corps.

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