



Air Monitor Pro

AMP220 User Guide

2018-10-v.1.0

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First off...

Congratulations on your purchase of Acer Air Monitor Pro. It is a first, positive step in helping you improve the air you breathe and your quality of life. This simple device monitors the air quality within its immediate surroundings.

The Air Monitor Pro allows you to monitor critical indicators of indoor air quality. These are:

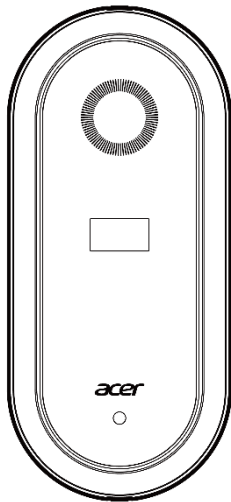
- The Air Monitor allows you to monitor six critical indicators of indoor air quality. These are:
- Temperature - This metric directly relates to comfort and mood.
- Humidity - Moisture leads to colds, flus, and risk of toxic mold formations.
- VOCs - Volatile Organic Compounds are toxic chemicals that can cause skin and respiratory irritation.
- Particulates - PM_{2.5}/PM₁₀ (fine/coarse particulate matter) travels deep into our respiratory system and can trigger asthma, allergies and other related health problems.
- CO₂ - Carbon dioxide content in the fresh air is typically measured around 400 PPM (Parts Per Million), depending on the location. People in a high CO₂ environment will feel drowsy, dizzy, have headaches, and experience hearing and visual dysfunction. It may also cause unresponsiveness and decision delay.
- Formaldehyde – One of volatile organic matter indoor. From the toxicology research, it has been confirmed as carcinogenic substances. Formaldehyde can stimulate human skin, respiratory tract, central nervous system and cause other unhealthy effects.
- CO - Carbon monoxide is toxicity to human body. People in a high CO environment will feel dizziness, headache, dyspnea and may cause other poisoning phenomenon.
- O₃ – Oxygen is an irritant gas. It can stimulate the eyes and respiratory tract, and may cause cough, chest discomfort and other symptoms.

Air Monitor Pro AMP220 series are configurable. You can choice sensor and wireless configuration for your environmental applications. To verify your Air Monitor model, please check the label located on the back of the Air Monitor. The user manual is based on the latest Air Monitor firmware and App version; please follow the user manual to operate it.

Through visual indicators on the device, as well as more detailed information on the app, the Acer Air Monitor helps track and gives advice on how to improve the air quality, your health, and the health of the ones you care about.

Package contents

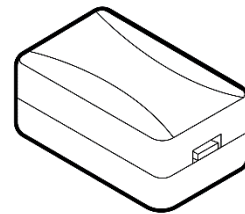
Make sure the following items are in your package. If anything is missing, contact your authorized dealer or distributor.



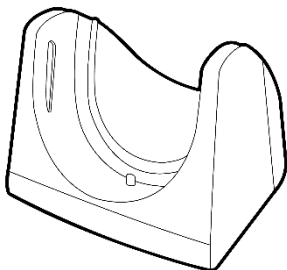
Air Monitor Pro



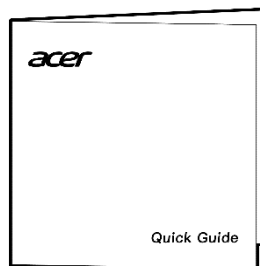
USB Cable



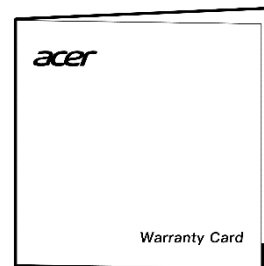
USB Power Adapter



Desktop Holder



Quick Guide

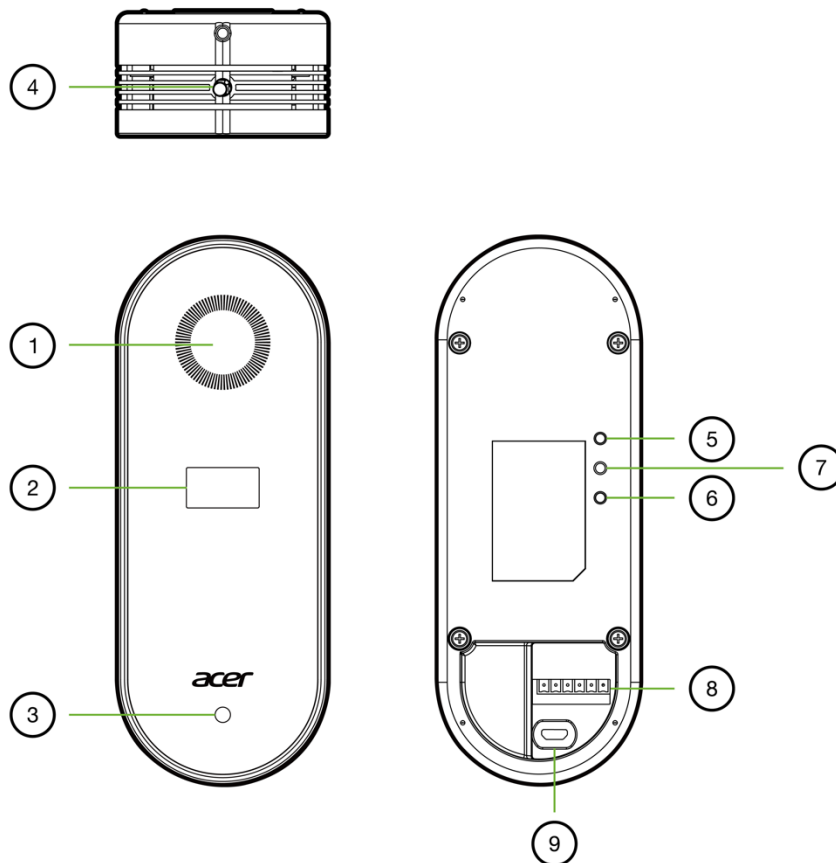


Warranty Card

Note: Actual items might differ from illustrations.

A tour of the device

Product Appearance

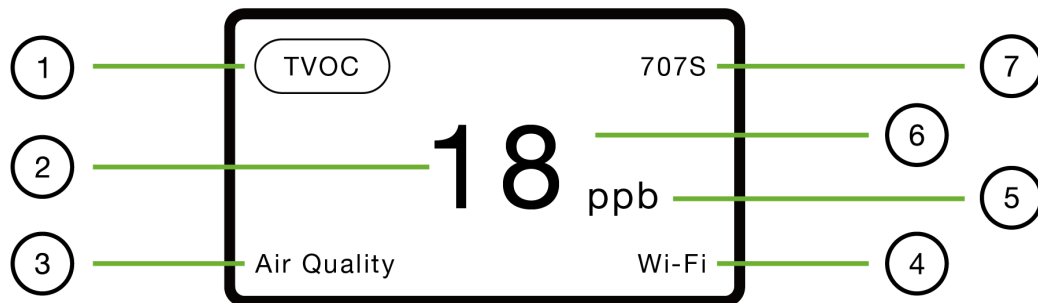


	Item	Description
1	Breathing LED light	Lights up using different colors to show the current air quality.
2	Display	Show the air quality index and individual concentrations.
3	Light Sensor	Measure the ambient illumination.
4	Function button	Tune On/Off the Breathing LED light. When the LED light is off, the display will display indoor air quality index only.

5	Wi-Fi Green LED	Wi-Fi Status	Red LED	Green LED
		Booting	Flash	Off
6	Wi-Fi Red LED	Wait for setup	On	Off
		Connecting to access point	Off	Slow Flash
		Connected to access point	Off	Fast Flash
		Connected to cloud	Off	On
		Resetting	Flash	Flash
7	Wi-Fi Reset Button	To reset Wi-Fi configuration, please use an unfolded paperclip to press and hold this button until the Wi-Fi Red LED lights up.		
8	Communication Ports	Communication and I/O Ports : 1. NO2: Dry contact 2 2. NO1: Dry contact 2 3. A+: RS485 A+ 4. B-: RS485 B- 5. GND: Ground 6. VCC +5V: +5V output		
9	Micro-USB	Connect to power adapter		

Air Monitor Pro Display

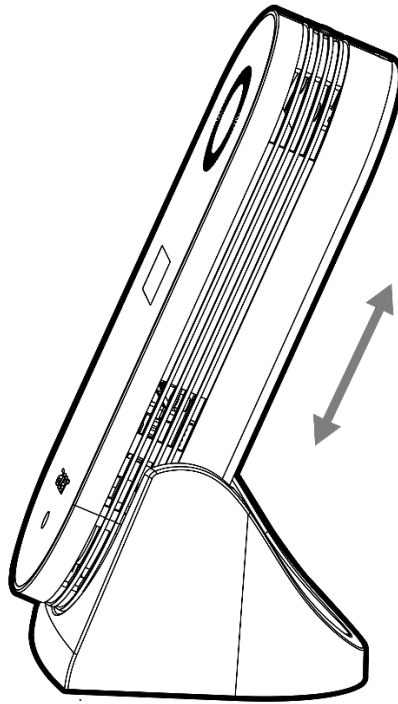
The display by default show the value detected by each sensor sequentially. When you press the function button, you can fix it on the Indoor Air Quality index (IAQ) screen. When you press it, you can switch back to the carousel mode.



	Item	Description
1	Sensor Name (Note: Air Monitor Pro has different configuration of sensors. Please check your product configuration.)	IAQ: Indoor Air Quality Temp: Celsius Humi.: Relative Humidity PM2.5: Particular Matter size < 2.5 µm PM10: Particular Matter size < 10 µm TVOC: Volatile Organic Compound CO2: Carbon Dioxide CO: Carbon Monoxide HCHO: Formaldehyde Ozone: O ₃ Illum.: Environment illumination
2	Real-time Measurement	The latest measurement of sensor.
3	Version	Air Quality and sensor version.
4	Wireless Status	Show the exists of Wi-Fi and Bluetooth hardware
5	Unit	The unit corresponding sensor
6	Warming Up	If it shows a blue point, it means the corresponding sensor is warming up.
7	Counter	Counting timer in second from booting.

Getting started

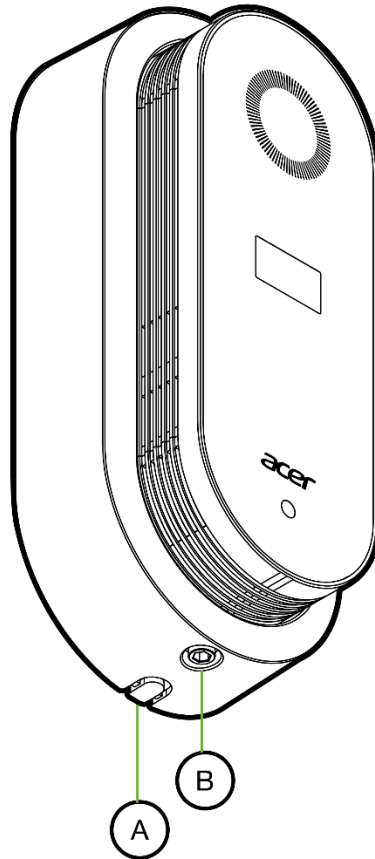
Install on a desktop holder



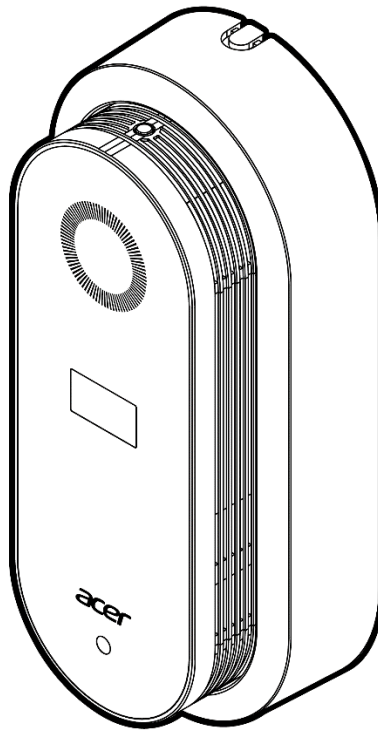
1. Attach the appropriate power adapter plug to the USB power adapter.
2. Gently insert and secure Air Monitor Pro along the two inner grain of the desktop holder.

Install onto a wall mount holder

Note : Wall mount holder is optional.



1. There are two outlet holes on the wall mount holder. You may remove the piece of plastic (A) to open the hole accordingly.
2. The wall mount can be fixed to the wall. You may use attached screws to fix it.
3. Connect USB cable and Air Monitor Pro
4. Place Air Monitor Pro into the holder and secure it by Screw (B)
5. Plug to the USB power adapter



Note:

- The breathing LED light will first cycle through the different colors and begin gathering data.
- To get the most accurate data, please always place the Air Monitor such as the function key is facing upwards
- Do not cover the light sensor or place the device in the shade in order to ensure the best experience.

Download the Air Monitor Pro app from either the iOS App Store or the Google Play store.

Note: Mobile system requirements:

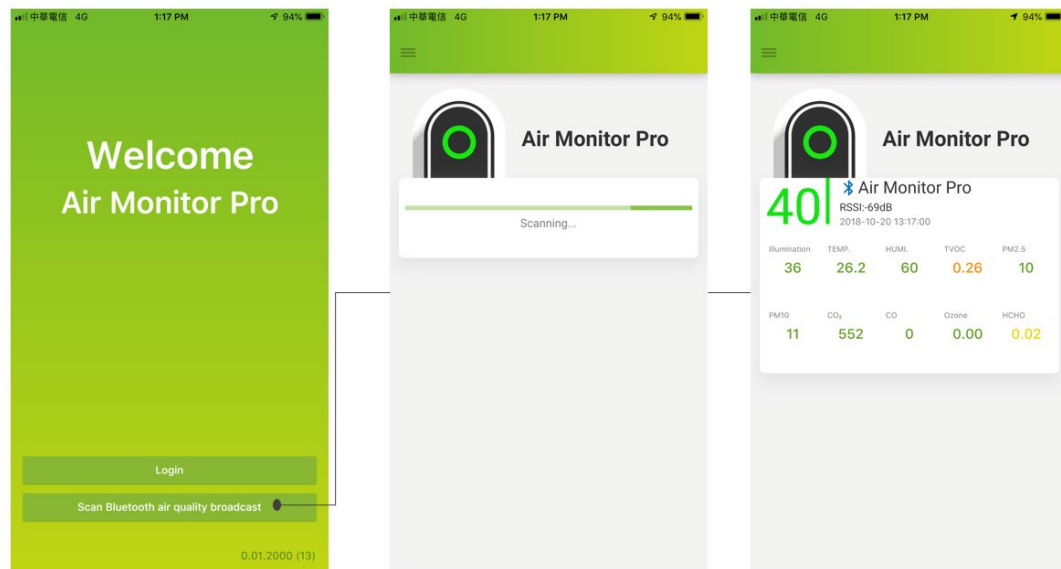
Android : Android 5.0 and above

iOS : iOS 10.0 and above

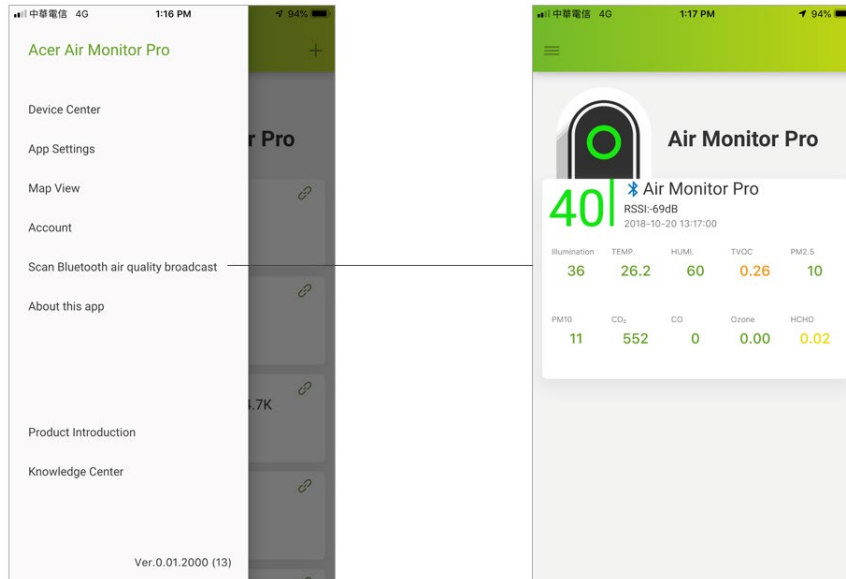
Using Air Monitor Pro APP

Scan Bluetooth air quality broadcast

You can directly scan and read the immediate value without logging in to the account.



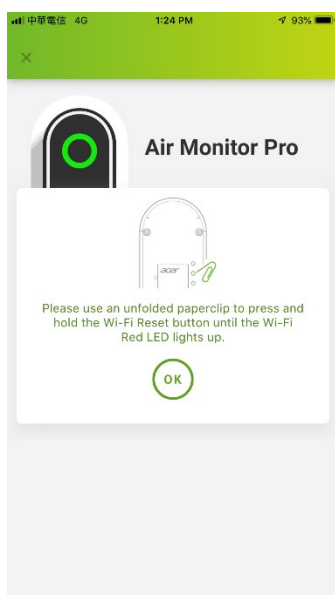
If you have logged in to your account, you can go through the menu.



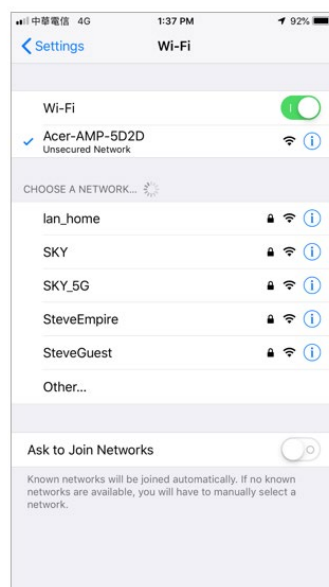
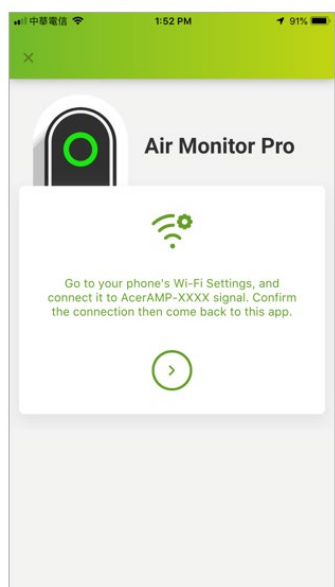
Setup Wi-Fi connection

Please press Add icon in the upper right corner of the main page to set up Wi-Fi connection. It will guide you step by step to setup Air Monitor Pro for remote monitoring.

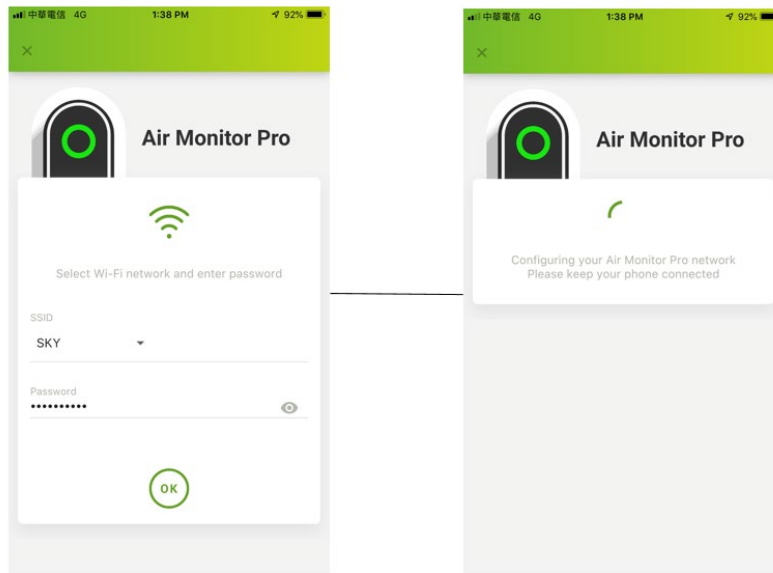
1. Please use an unfolded paperclip to press and hold the Wi-Fi Reset button until the Wi-Fi Red LED lights up. Your Air Monitor Pro will show an temporary Wi-Fi access point named AcerAMP-XXXX, where XXXX are 4 English alphabet or number.



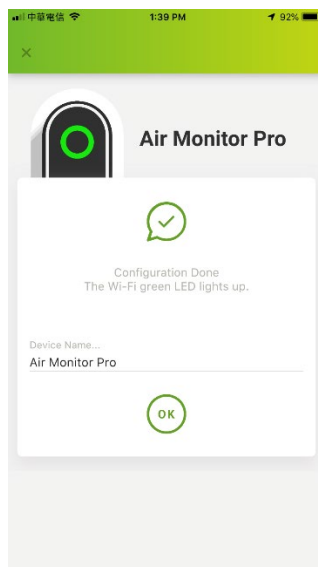
2. Go to your phone's Wi-Fi Settings, and connect it to AcerAMP-XXXX signal.



3. Switch back to Air Monitor Pro setting page. Select an SSID of Wi-Fi access point that allows your Air Monitor Pro to connect to the Internet.

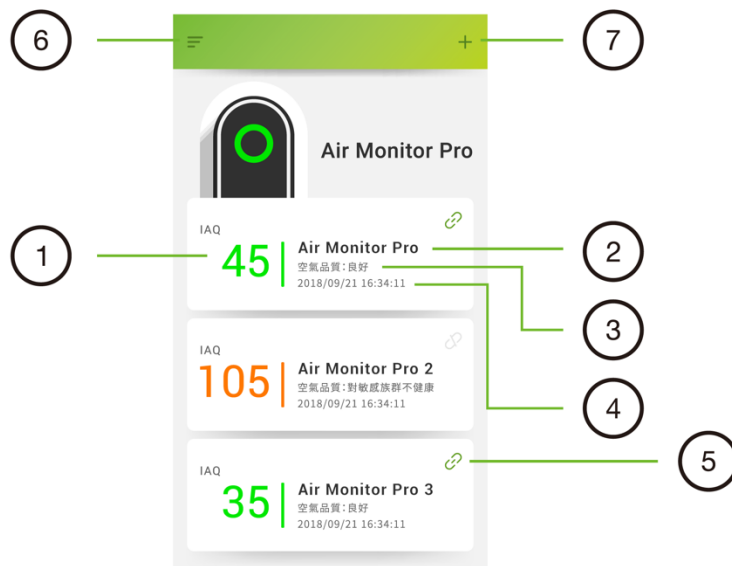


4. After completing the Wi-Fi setup process, you can update the name of Air Monitor Pro.



Device List

This page lists Air Monitor Pro, which has been set up for your account, and displays summary information.



	Item	Description
1	Indoor Air Quality (IAQ) Index	IAQ index is calculated from PM2.5, PM10, TVOC, and CO2 values.
2	Device Name	The Name of Air Monitor Pro that user can define it.
3	Air Quality Description	The description is generated according to the IAQ.
4	Update Time	Show the latest update time of sensor measurements.
5	Connection Status	Green: Connected Grey: Disconnected
6	Menu	List all functions supported by this APP.
7	Add Device	Add device with current account.

Individual Air Monitor Pro Page

Display the details of individual Air Monitor Pro.

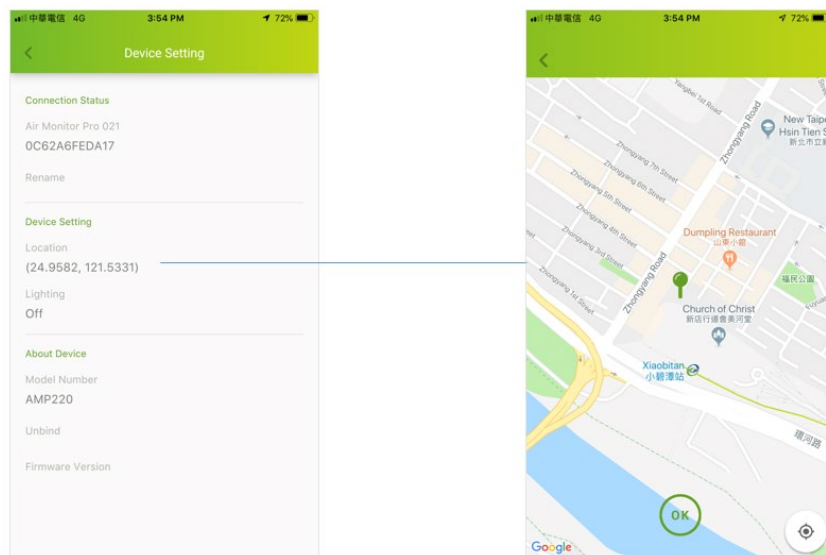


	Item	Description
1	Device Name	Name of the Air Monitor Pro
2	Indoor Air Quality (IAQ) Light	Green: 0-50 Yellow: 51-100 Orange: 101-150 Red: 151-200 Purple: >200
3	Indoor Air Quality (IAQ) Index	The Indoor Air Quality Index calculated from PM2.5, PM10, TVOC, and CO2 values.
4	IAQ description	Description of current indoor air quality
5	Sensor (Note 1: Air Monitor Pro has different sensor configurations.) (Note 2: Grey color means the sensor is warming up.)	Illumination: Ambient environmental brightness Temp: Temperature HUMI.: Relative Humidity TVOC: Total Volatile Organic Compounds PM2.5: Particulate Matter with size less than 2.5 µm PM10: Particulate Matter with size less than 10 µm CO2: Carbon Dioxide CO: Carbon Monoxide Ozone: O ₃ HCHO: Formaldehyde

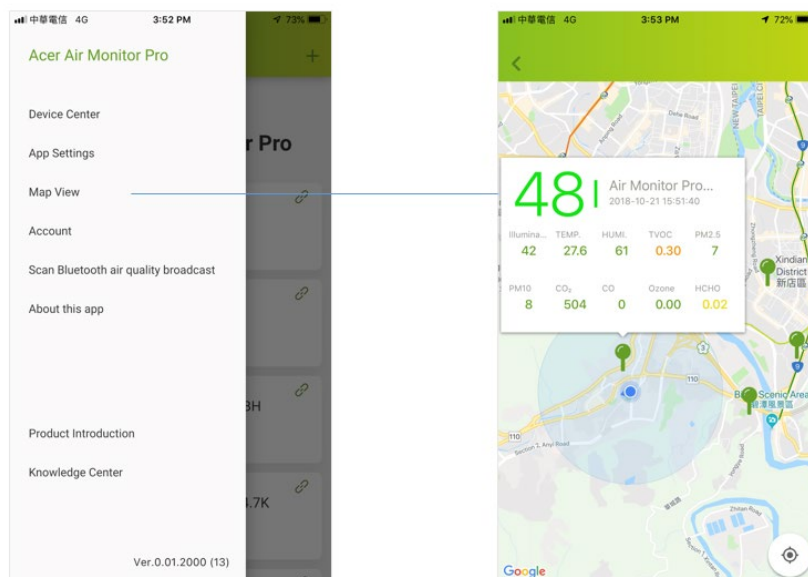
6	Update Time	Latest update time of sensor value
7	Knowledge Center	Tutorial of Indoor Air Quality Pollutants
8	Sensor Value	User select a sensor item and show the current value here and chart below.
9	Sensor History Chart	The history data of individual sensor selected by user.
10	Return	Back to the device list page
11	Device Settings	Press this icon can switch to the setting page of this Air Monitor Pro

Using Map

The MAP page can show the location of your Air Monitor Pro. The location of Air Monitor Pro is set by user. Please switch to the device settings page to set up the location.



Press the Menu and select “Map View” to show the map.



Understanding the breathing LED light

The breathing LED light lights up to show the current air quality using specific defined colors for each air quality level.

Refer to the table below for a quick description of these lights:

Color	IAQ Readings	Description
Green	0 – 50	Good
Yellow	51 – 100	Moderate
Orange	101 – 150	Unhealthy for sensitive group
Red	151 – 200	Unhealthy
Purple	> 200	Very Unhealthy

Note : You can press function button to turn on/off the breathing LED light.

General safety information

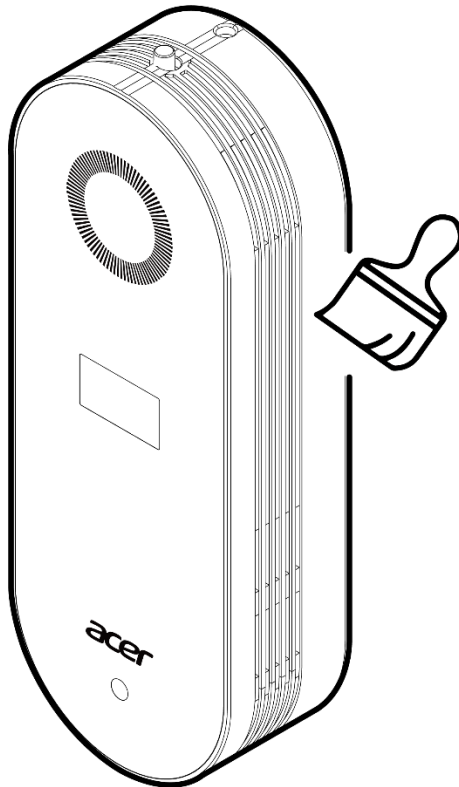
- Never inject gases, pollutants, or blow smoke/fumes directly towards the device.
Exposure to an excess of pollutants may permanently damage the sensors.
- Never use the Air Monitor Pro...
 - Under conditions of extreme temperature or humidity
 - Outdoors
 - Near potted plants
 - In a dusty environment, such as a building with ongoing renovations
 - Close to silicone-based glue or any product releasing silicone fumes
- Never place the Air Monitor Pro...
 - Near heat or flames
 - In/under/next to liquids
 - With anything on top of it or covering it
 - Inside a closet or drawer

Misuse can cause burns, fire, electrocution, and other hazards.

- Never clean the Air Monitor Pro with the following:
 - Water or spray
 - A feather duster
 - A vacuum cleaner
- Do not open the device or make modifications to it as it will void the warranty.
- Do not use the device if it has any damage or isn't working properly.
- Do not plug/unplug the device frequently.
- Use only accredited accessories.
- Unplug the device when unused for long periods of time.
- Do not block any ventilation openings.

Taking care of your device

Please check the ventilating holes of the device every six months. If there is any dirt, please use a brush to gently remove the dust and keep the vents clear.



Frequently Asked Questions (FAQs)

For frequently asked questions, please refer to our website
(<http://home.cloud.acer.com/tw/airmonitor/#qaa>) °

Specifications

Power

- Voltage range/frequency: 100~240V AC, 50/60 Hz
- DC Output: 5V / 2A

Connectivity

- Bluetooth 4.2LE
- Wireless LAN 802.11 b/g/n 2.4GHz
- This radio equipment operates with the following frequency bands and maximum radio-frequency power:
 - Bluetooth: <20dBm
 - 802.11bgn: <20dBm
- RS-485
 - Baud rate: 9600 bps 8-n-1
 - Protocol: MODBUS RTU

Sensors (Note: according to configuration of Air Monitor Pro)

Sensor	Specification	Detection Method
Temperature	Unit: °C; Range: 0 - 80; Resolution: 0.1; Accuracy: ±1.0	Semiconductor
Relative Humidity	Unit:%; Range: 0 - 100; Resolution: 0.1; Accuracy: ±5.0	Semiconductor
TVOC	Unit: PPM; Range: 0.02 - 10.00 ; Resolution: 0.001; Accuracy: Relative Accurate	Semiconductor
CO2	Unit: PPM; Range: 0 - 10,000; Resolution: 1; Accuracy: ±70	NDIR (Nondispersive infrared sensor)
CO	Unit: PPM; Range: 0 - 500; Resolution: 1; Accuracy: ±20 or ±5%	Electrochemical
Formaldehyde	Unit: PPM; Range: 0 - 1.60; Resolution: 0.01; Accuracy: Relative Accurate	Electrochemical
PM2.5	Unit: µg/m³; Range: 0 - 1,000; Resolution: 1; Accuracy: ±15% (>100) or ±15 (<100)	Laser light scattering

PM10	Unit: $\mu\text{g}/\text{m}^3$; Range: 0 - 1,000; Resolution: 1; Accuracy: Relative Accurate	Laser light scattering
Ozone	Unit: PPM; Range: 0.2 - 10.00; Resolution: 0.01; Accuracy: Relative Accurate	Electrochemical
Illumination	Unit: Lux; Range: 0 - 10,000; Resolution: 1; Accuracy: Relative Accurate	Semiconductor

Operating Temperature

- 0°C~45°C

FCC Warning Statement

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 undesired 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.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8inches) during normal operation.