

APIS DAQ

Air Quality Monitoring Device

MODEL DAQ-02



APIS

The New Era for Smart IoT City

APIS DAQ-02

APIS DAQ-01 Detects fine dust and ultra-fine dust with CO, NO₂, SO₂, O₃

Represent the data as AQI (U.S.) and CAI (South Korea).



Designed and Engineered by APIS

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1. APIS DAQ-02

1.1 Components of Device



Figure 1 Components of Device

1	5" Capacitive Touch Display	Display the data and user can control this device
2	LTE Antenna Mount	Connect with LTE Network
3	5V DC Power	Supply the power
4	Enclosure	Optional

1.2 Explain the display

1.2.1 - 5" Capacitive Touch Display

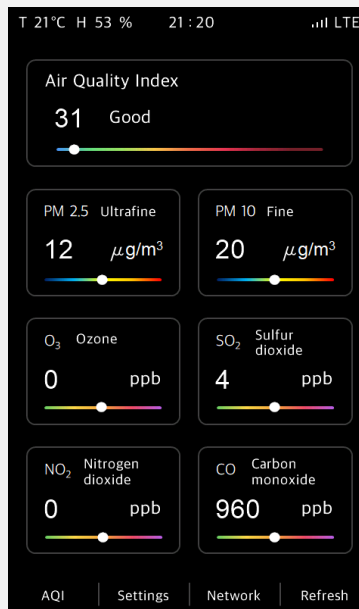


Figure 2 Display Screen

5" capacitive touch display represents real-time data and the user can control the device using HMI (Human Machine Interface) system.

The main screen shows Temperature, Humidity, CO, NO₂, SO₂, O₃ data.

1.2.2 - LTE Antenna Mount

LTE Antenna mount uploads the data to the cloud server.

1.2.3 - Power

Power adapter supply the 5V DC.

2. Specification

Model	APIS DAQ-02
Power	5V 2A DC Power Supply
Dimension	L : 154.4, H : 101.5, W : 45.9 mm
LTE	LTE Cat.M1 Internal & External (RF Switch IC Selected) B1/B2/B3/B4/B5/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28
Wi-Fi	802.11 b/g/n Bit rate : 802.11n up to 150 Mbps • A-MPDU and A-MSDU aggregation • 0.4 μs guard interval support • Center frequency range of operating channel: 2412 ~ 2484 MHz
BLE	Bluetooth 5 Bluetooth LE : Bluetooth mesh Speed : 125 Kbps, 500 Kbps, 1 Mbps, 2 Mbps
Detection Types	Temp & Humid : Bosch Temp & Humidity Sensor CO, NO ₂ , SO ₂ , O ₃ , NH ₃ , H ₂ S Analog Data Read Sensor
Detection range	Temperature : -20 °C ~ 65 °C Humidity : 0 ~ 100%RH CO : 0 ~ 100ppm NO ₂ : 0 ~ 5ppm SO ₂ : 0 ~ 5ppm O ₃ : 0 ~ 5ppm
Detection units	Temperature : 1°C Humidity : 1%RH Gas : minimum detection range : 0.1ppm : resolution : 0.01ppm (CO, NO ₂ , SO ₂ , O ₃)
LCD Display	5 inch RGB LCD Capacitive Touch Display
Adapter	220V AC to 5V DC Adapter is included

Warning	The device required at least 20min after first boot-up. LTE Network only works on LTE Service Areas.
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3. How to use

3.1 Power Supply

Boot up the device using 220V AC to 5V DC adapter.

3.2 Boot-up and device inspection

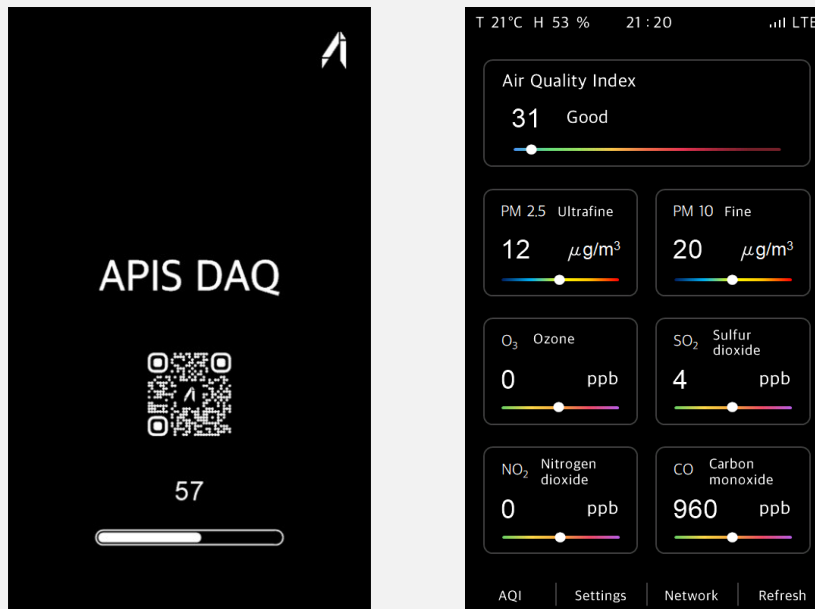


Figure 3 Device boot-up

Waiting for the boot-up gauge to change to 100 and check the device ‘s detecting data.

3.2 Boot-up and device inspection

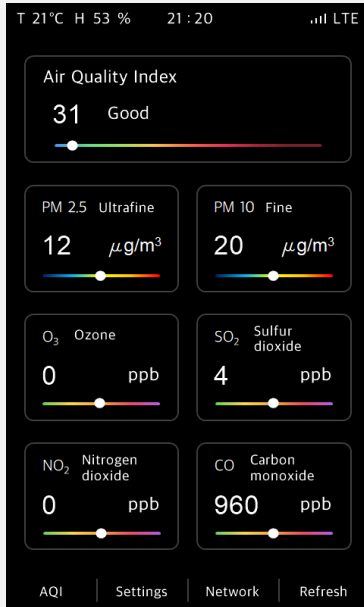


Figure 4 Menu bar

Select the menu on the bottom dock bar.

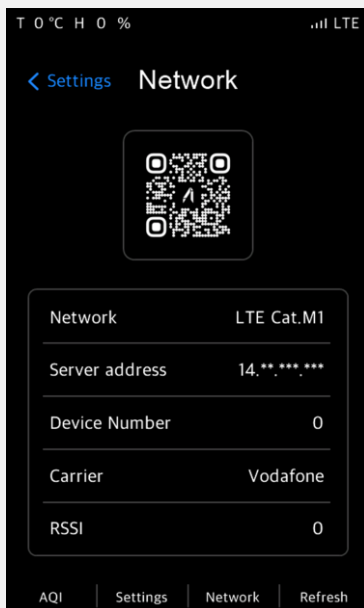


Figure 5 Network

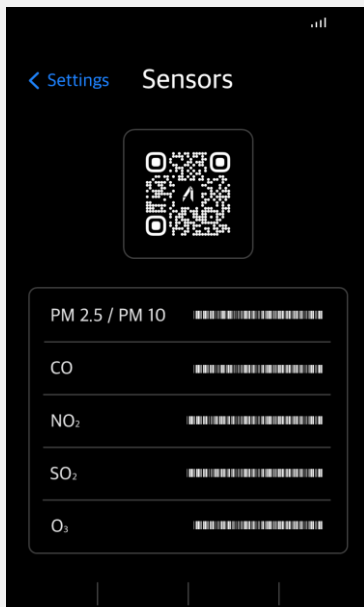
Check if the LTE communication of the device is connected normally. For normal operation, the standard time is updated on the device.

3.2 Boot-up and device inspection



Check that the information is displayed normally. Find the serial number in the settings -> information.

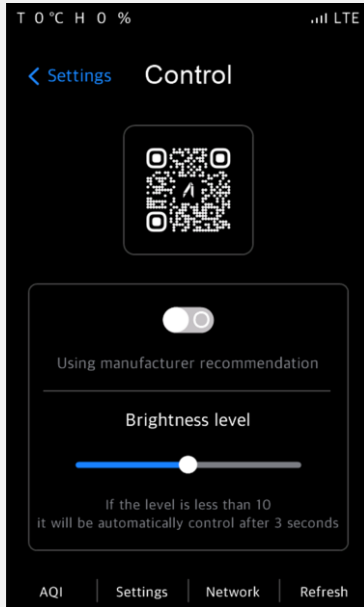
Figure 6 Device information



Verify the sensor serial number for each sensor is recognized normally. Find the sensor serial number in the settings -> sensors.

Figure 7 Sensor information

3.2 Boot-up and device inspection



Control the display brightness at settings -> control. When the recommended setting is enabled, the brightness becomes 100%, and the user can control it manually.

The brightness level is controlled to 10 to 100%.

Figure 8 Brightness control

3.3 Web Access

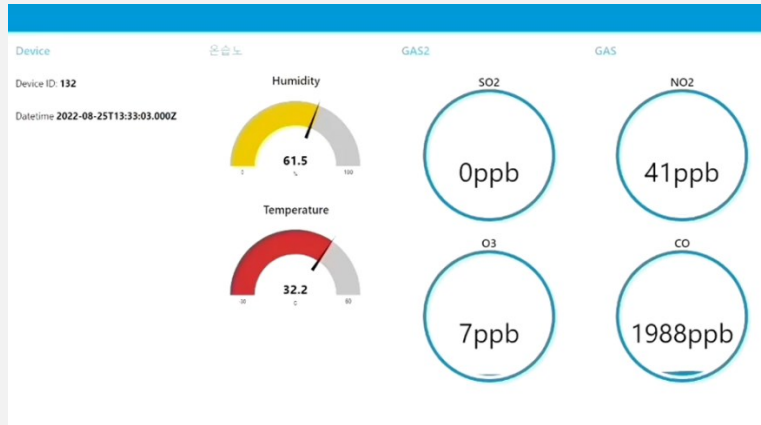


Figure 9 Web Monitoring

Manager can access to the web monitoring dashboard. The real-time data uploaded by LTE network.

4. Communication

4.1 LTE Network Setting

Communication is automatically connected to the base station within two minutes of device booting, and if the network connection is unstable even after time elapses, the device is rebooted to retry the network connection.

5. Detecting duration

5.1 Check the detecting duration

The sensor measurement of the device is conducted every minute, and the measurement interval is set by the manufacturer and released according to the subscription plan when purchasing the product.

6. Installation

6.1 Recommend Environment

For accurate data measurement of the device, it should be installed in an environment that meets the operating condition, and the manufacturer is not responsible for device malfunction or failure due to use that does not comply with it. In the case of outdoor installation, a separate enclosure is required, and measurements are carried out in an environment that does not directly receive direct sunlight.

Supports: LTE Cat.M1 cellular technologies • Some capabilities are not available in all areas and depend on your wireless network status.

Please note: LTE Service only works in the Republic of KOREA

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APIS DAQ-02 use APIS' patent

WARNING

DO NOT TEAR DOWN THE DEVICE. APIS WILL NOT GUARANTEE WHEN THE SEAL IS BROKEN.

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