# Enjoy!

## INTRODUCTION

The UbiBot® WS1 Pro is a smart multi-sensor device with both WiFi and mobile data* capabilities. It makes environmental monitoring easier than ever with its accurate sensors and automatic wireless data synchronisation. The device comes with a free subscription to our advanced IoT Platform offering custom monitoring, analysis, reports and alerts. Device readings are displayed on the built-in LCD screen and are synchronised to the IoT Platform. You can access the data any time using our App or via the web. Some models come with a built-in RS485 ModBus*.

⚠ *Depending on the specific model purchased.
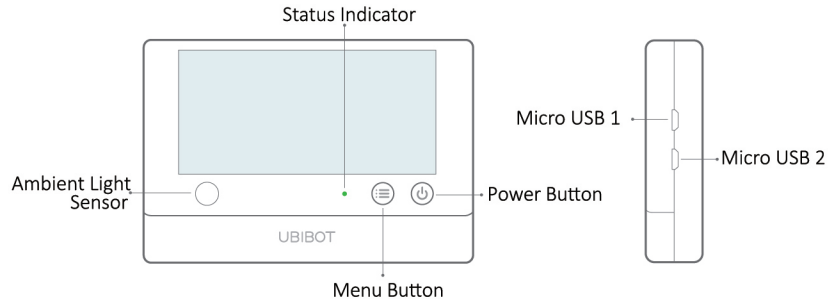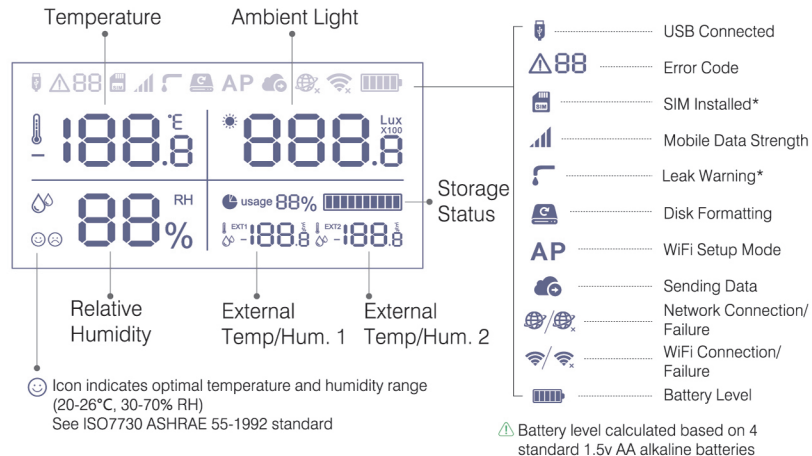
Micro USB 1
Used for USB charging or external DS18B20 temperature probe (optional extra). Also provides PC connectivity.

Micro USB 2
Used for USB charging or external DS18B20 temperature probe (optional extra). Optional built-in RS485 ModBus

Icon indicates optimal temperature and humidity range (20-26°C, 30-70% RH)
See ISO7730 ASHRAE 55-1992 standard

| Icon | Description |
|---|---|
| USB Connected |
| ⚠88 | Error Code |
| SIM Installed* |
| Mobile Data Strength |
| Leak Warning* |
| Disk Formatting |
| AP | WiFi Setup Mode |
| Sending Data |
| Network Connection/ Failure |
| WiFi Connection/ Failure |
| Battery Level |

⚠ Battery level calculated based on 4 standard 1.5v AA alkaline batteries

- ### Switch On
  To switch the device on, press and hold the power button for 3 seconds until the indicator starts blinking green. Release the button and the indicator will turn off after a couple of seconds. The device is now on.

- ### Switch Off
  To switch the device off, press and hold the power button for 3 seconds. The indicator will flash red once and the device is now off.

- ### WiFi Setup Mode
  With the device switched on, press and hold the menu button for 3 seconds. The indicator will start flashing alternate red and green and the AP icon will display on the screen. Release the button at this point.

- ### Manual Data Synchronisation
  With the device switched on, press either button once to trigger a manual data sync. The indicator will flash green while the data is being transferred. If the server cannot be contacted, the indicator will flash red once.

- ### Reset to Default Settings
  Switch the device off. Now press and hold the menu button and power buttons together for at least 8 seconds. Release the buttons when the indicator is constantly flashing red.

  > **[!] IMPORTANT** ALL STORED DATA WILL BE LOST IF YOU RESET YOUR DEVICE TO DEFAULT SETTINGS! REMEMBER TO SYNCHRONISE THE SENSING DATA TO THE UBIBOT® IoT PLATFORM OR EXPORT THE DATA TO YOUR COMPUTER BEFORE RESETTING IT.

- ### Switch On/Off Voice Guide
  Press the menu button twice in quick succession to enable or disable the voice guide. This will also sync the data to the IoT platform.
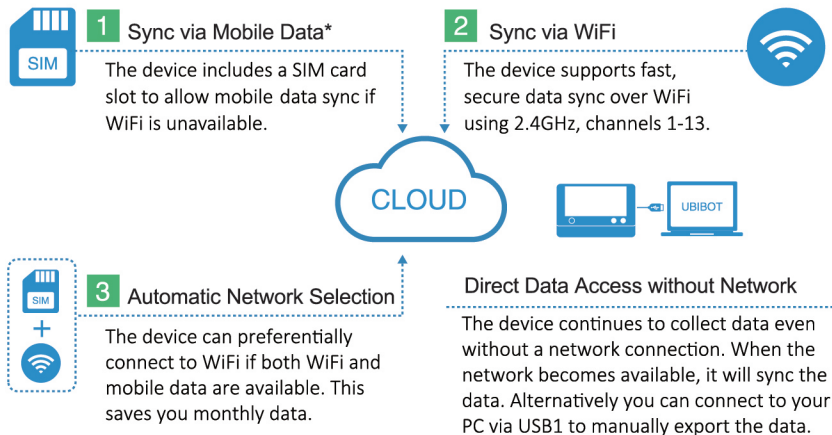
- ### Display Backlight
  Pressing either of the buttons will switch on the display backlight for a short time.

- ### Toggle Celsius or Fahrenheit
  Press the power button twice to toggle between displaying Celsius or Fahrenheit.

## DATA SYNC MODES

**1** Sync via Mobile Data*

The device includes a SIM card slot to allow mobile data sync if WiFi is unavailable.

**2** Sync via WiFi

The device supports fast, secure data sync over WiFi using 2.4GHz, channels 1-13.

CLOUD

UBIBOT

**3** Automatic Network Selection

The device can preferentially connect to WiFi if both WiFi and mobile data are available. This saves you monthly data.

Direct Data Access without Network

The device continues to collect data even without a network connection. When the network becomes available, it will sync the data. Alternatively you can connect to your PC via USB1 to manually export the data.

⚠ *Depending on the specific model purchased.

## App INSTALLATION

**1** App Installation

Download the App from www.ubibot.io/setup
Or
Search for "UbiBot" on the App Store or Google Play.

(The UbiBot App requires Android 4.2+, iOS 9.0+)

**2** Direct Access Tool Installation

Download the Tool from www.ubibot.io/setup

(The Direct Access Tools needs Winows 7+)

# STEP1.

Launch the App, register an account if needed and log in. On the home screen click the "**+**" to add your device. Scan the QR code on the back of the device, or manually enter the serial number.
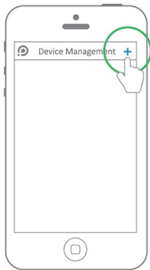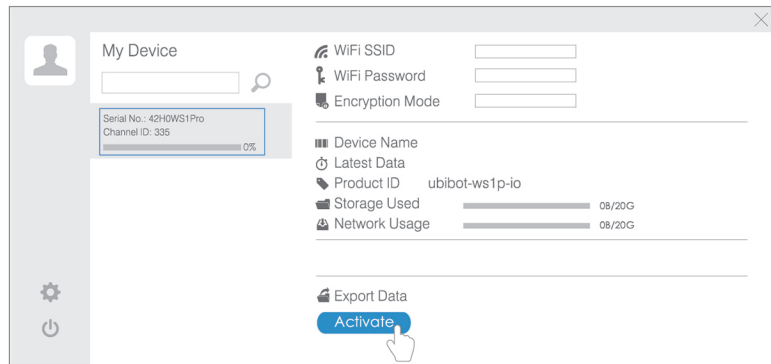
Add your device          Scan the QR code

# STEP2.

Put your device into WiFi setup mode (see p.3). The indicator should flash alternately red and green and the AP icon is shown on the screen.

# STEP3.

The device will ask you to enter your WiFi password. Check that the correct SSID is selected and enter the password. The App will now prompt you to go to your phone settings screen. Change to the UbiBot-xxx network and return to the App.

## STEP4.

The device will now complete the setup process, register with the server and do the initial data sync. Your phone will automatically switch back to its normal WiFi network. If the connection failed, repeat the process and ensure you entered the correct WiFi details in step 3.



Devcie Setup
Successful!

## STEP1.

With the device off, insert a Micro SIM card into the slot in the direction shown (with the notch facing out and the silver contacts downwards). Now switch the device on.



Micro SIM Slot

Micro
SIM

Insert a Micro SIM card into the slot

Press the power button
to activate the device
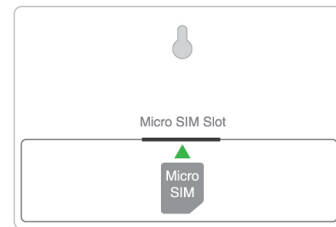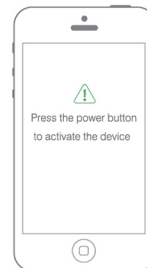
Activate the device

⚠ *Depending on the specific model purchased.

## MOBILE DATA SETUP

### STEP2.

Launch the app, register if needed and log in. On the main screen, click the "+" to add your device. Scan the QR code on the back of the device, or manually enter the serial number.

### STEP3.

The device will automatically contact the server and synchronise over mobile data. NB, if you have no data allowance on the SIM card, this step will fail.

## SETUP VIA USB CABLE

### STEP1.

Launch the Direct Access Tool on your PC and log in.

## SETUP VIA USB CABLE

## STEP2.

Turn on the device and connect it to the PC using USB1. If you are using a SIM card for mobile data, insert this before switching the device on.

## STEP3.

Go to the setup page on the Direct Access Tool and select the device you want to configure from the list shown (make sure you select the device you just attached). Follow the instructions and fill in the necessary data on the right side of the screen. Here you can set up the network and activate the device.

## ERROR CODES

01 System Protection.
Please follow the instructions to properly configure the device. Unconfigured devices will revert to system protection mode.

02 WiFi Connection Failed
Please confirm your WiFi password and check your router.

03 Failed to Connect to Server
Please check your router.

04 Device Activation Failed
Please check the network details and confirm the device is properly added in the App/Direct Access Tool.

05 Data Save Failure
This can happen when the power is disrupted while data is being saved.

## ERROR CODES

**06** Incorrect Data Format
This can happen when there is a power disruption while saving data.

**07** Data Sync Failed
Please check your network connection and ensure you haven't used up all your mobile data allowance.

**08** No SIM Card Found
Please check the SIM card is inserted in the right direction.

**09** Mobile Data Network Failure
Please check your SIM card is set up correctly and has been activated. Or, check if the battery are too flat to send data. Then try replacing batteries or use USB power.

## TECHNICAL SPECIFICATIONS

WiFi, 2.4GHz, channels 1-13

Flame resistant ABS + PC

4 x AA batteries (not included) OR

Micro USB power (DC 5V/2A)

143g±3g, not including batteries

4.96'' x 0.88'' x 3.38''

2 x Micro USB (one with optional embedded RS485 interface)

Built-in Memory: >300,000 sensing data

Supports Micro SIM card (15mm x 12mm x 0.8mm)

Supports up to 2 DS18B20 temperature probes (optional extra)

Optimal working conditions-20–60℃, 10-90% RH

## TECHNICAL HIGHLIGHTS

The UbiBot WS1 Pro uses state-of-the-art industrial-grade sensors from Sensirion and Texas Instruments. The device integrates these sensors to create an efficient and highly-accurate IoT environmental monitoring solution.

**Temperature Sensor**
Precision    ± 0.3°C[①]
Range    -20 to 60°C

**Humidity Sensor**
Precision    ± 3%RH[②]
Range    0—100%

**Accurate and reliable environmental monitoring**

**Ambient Light Sensor**
Precision    ± 2%[③]
Range  0.01—83K lux

Supports external waterproof DS18B20 temperature probe (optional extra).
RS485 communication via built-in ModBus.
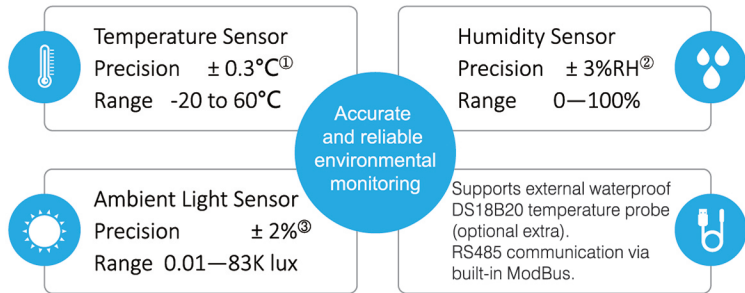
[①] Quoted temperature precision applies between 0-60°C; [②] Quoted precision for temperature of 25°C and RH range of 10-90%. Otherwise the precision is ±4% RH. [③] Quoted precision applies when light level >40 lux.
The sensor precision will suffer in extreme conditions. We recommend you only use the device under the optimal conditions listed on page 17.

## PRODUCT CARE

☑ Please always follow the instructions contained in this manual.

☂ The device is not waterproof. Please keep away from water during operation, storage and shipping. The optional DS18B20 temperature probe is water proof.

⊕ Always mount the device on a stable surface.

🔥 Keep away from acidic, oxidising, flammable or explosive substances.

⊗ When handling the device, avoid using excessive force and never use sharp instruments to try and open it.

## 1.Network Setup Failure/ Data Sync Failure

① Check WiFi Password: Go through the WiFi setup again, making sure you set the correct password.

② WiFi Router: Check that your WiFi router has access to the Internet using another device.

③ WiFi Frequency: The device can only connect to 2.4GHz networks, channels 1-13.

④ Signal Strength. Check you are in range for your WiFi, or if using mobile data, make sure you have a good signal.

⑤ Low Battery: WiFi needs a lot of power. If your batteries are flat your device may still switch on but be unable to send data. Try replacing the batteries or use USB power.

⑥ Server maintenance error message. Wait a few minutes and try connecting again. If you still have problems, email customer support using the address on the back of this manual.

## 2.Failure to Connect to PC via USB Cable/ Failure to Download Data by Using Direct Access Tool

Please ensure you are using a USB data cable with 4 wires. Many cheap USB cables are only able to provide power.

## 3.WiFi Setup Failure

Please switch the device off and follow the steps to enter the WiFi configuration mode again. If you still cannot enter WiFi setup, try replacing the batteries.

## 4.Failure to Sync Data over Mobile Data

Check that your SIM card is activated. If it is, check that your batteries or USB power connection are able to provide 2A current.

## TROUBLESHOOTING

### 5.Can I use the device without a network connection? How do I access the data?

The device will continue working without a network connection and can store over 300,000 readings in its memory. Real-time readings are displayed on screen and you can access the data in the following ways:

① Move the device into range of WiFi, or set it up with a Micro SIM card (see p.11). Once you are in range of the network, press the power button once to sync all data with the IoT platform.

② Connect the device to PC via USB cable. Use the Direct Access Tool to download data.

Still having problems? Please visit www.ubibot.io/setup/ to see more FAQs.

## WARRANTY INFORMATION

1. This device is warranted to be free of defects in materials and workmanship for a period of up to one year from the original purchase date. This warranty does not cover damage caused by normal wear, misuse, abuse or incorrect repair. To claim under this limited warranty and to obtain warranty service, email UbiBot® Customer Support at support@ubibot.io to obtain instructions on how to pack and ship the product back to us.

2. The following situations will not be covered by the warranty:

① Issues arising after the warranty period has ended.

② Malfunction or damage caused by improper handling or not operating the device according to the instructions.

③ Damage occurring from operating device outside the recommended temperature and humidity range, damage from contact with water, damage from applying excessive force to the device or any cables and connectors.

④ Natural wear and aging of materials.

⑤ Failure or damage caused by unauthorized removal of the product.

⑥ We are only liable for faults due to manufacturing or design. We are not responsible for damage caused by Force Majeure or acts of God.

## WARRANTY CARD

Thank you for buying the UbiBot WS1 Pro. If you have any problems and wish to claim under the limited warranty, first contact our customer service team using the email address on the back of this book. If Customer Service asks you to return you product to us, please complete the following details and include this form in the package.

| Product Details | |
|---|---|
| Product Name | |
| Product ID | |
| Product Serial No. | |
| Date of Purchase | |
| Online Purchase Store | |
| Customer Details | |
| Name | |
| Phone | |
| Address | |
| Email | |

## REPAIR HISTORY

| | Problems Description | Reason for Problems | Repair Description |
|---|---|---|---|
| **First Repair** | | | |
| | Date of Repair: | | Repaired by: |
| | Problems Description | Reason for Problems | Repair Description |
| **Second Repair** | | | |
| | Date of Repair: | | Repaired by: |

⚠ Only to be completed by UbiBot technicians