



UWA-100 User Manual

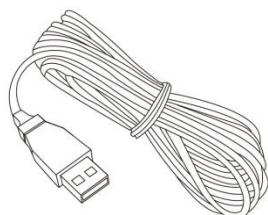
2020/11 V1

I Product Information

I-1 Package Content



UWA-100



USB Cable

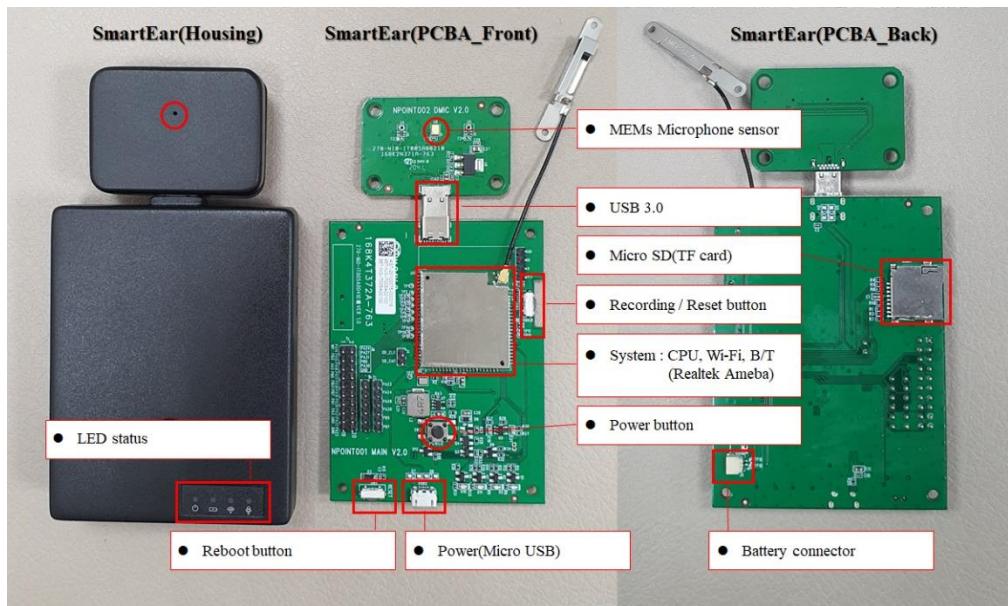


Quick Installation Guide



Mounting

I-2 LED / button Indicator



LED	Color	LED Status	Description
	Red	On	Device power on
		Off	Device Power off
Battery	Red	On	Device Battery on

		Flashing	Device low battery
		Off	Device Battery off
	Green	On	<i>Wi-Fi/ BLE wireless activity (transferring/receiving data).</i>
		Quick Flashing	<i>Reset factory settings</i>
		Off	<i>Wi-Fi/ BLE not active.</i>
	Green	Flashing	Device is not record
		On	Device is recording
	Open		Press and hold the button for 1 seconds
	Close		Press and hold the button around 6 seconds
	Record		Press and hold the button for 1 seconds
	Reset to factory default		Press and hold the button around 10 seconds
	Reboot to factory default		Press and hold the button for 10 seconds

II Installation

This section will guide you through the steps to connect your UWA-100 to the Internet.

II-1 Install Android APK

This tool support at Android phone or tablet and kernel version 5~10, please scan below QR code to download the file and install at Android phone or tablet, when install successful then can see APP icon as below.

Android APK



APP ICON



This app the purpose is manage GWB-100 series gateway setting functions, won't impact or damage your Android phone or tablet functions or system, when pop-up the

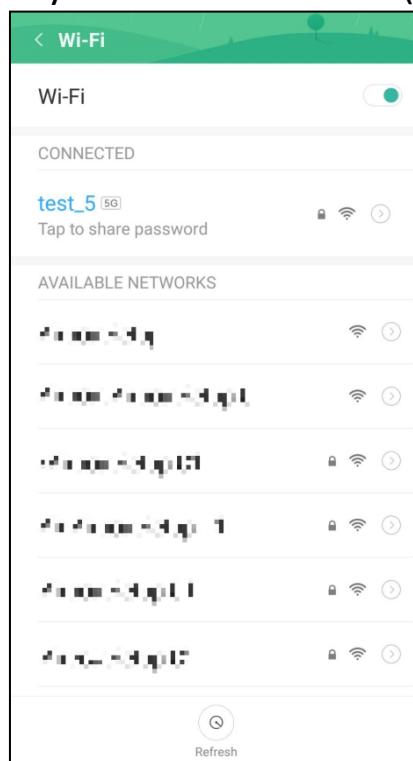
risk warm message during the installation process, please allow then to complete whole process.

This app need two functions authority, one is location for “site survey” another “photograph” for scan QR- code.

II-2 Site Survey

Before deploying GWB-100, please do a site survey on the Internet Wi-Fi signal at the desired deployment location. This will ensure that the GWB-100 can remain connected to the Internet for up-to-date sensor data transfer.

1. Please bring your android smart device to the desired deployment location.
2. Go to the Wi-Fi page on your android device (e.g. **Settings → Wi-Fi**).



3. Please find your desired Wi-Fi connection and check the signal strength icon.

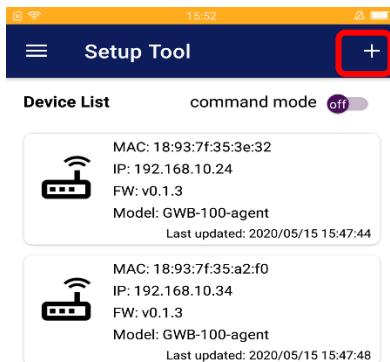


If the icon displays **2 bars or more signal strength**, please go to the next section.

If the icon displays **1 bar or no signal strength**, please find another location to do the site survey process again till to find the suitable location.

II-3 Connecting Device to the Internet

1. Please plug the power adapter to a power socket and connect the Device using the USB cable.
2. Open the app and tap the **+** icon for “**Add New Device**” on the top right corner of the screen.



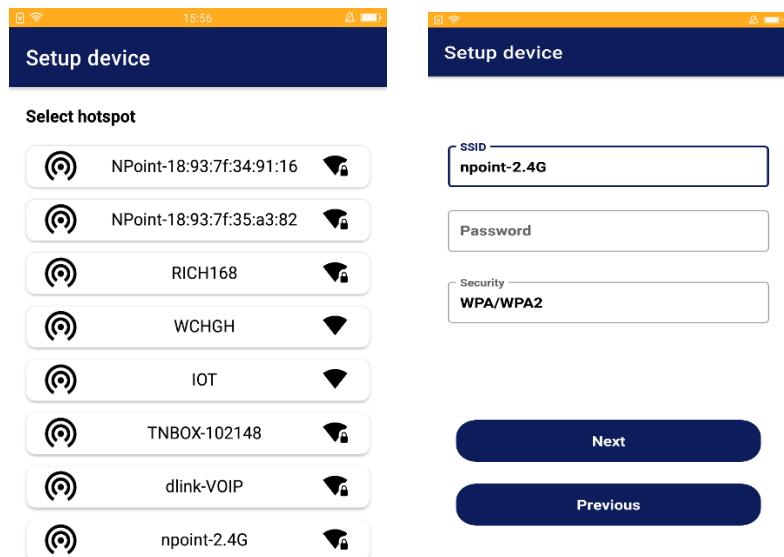
3. Select the set up device from the **Available wireless device list**.



4. Setup the cloud URL by barcode, please get this cloud URL barcode from your system supplier.



5. Select your Wi-Fi network from the list and, where applicable, enter the Wi-Fi password. Tap the “**Next**” icon to complete setup. If you cannot find the desired Wi-Fi network SSID, please refresh network list.



6. Setup is complete, and please wait two minutes to check the device list.

Setup device



Setup succeeded

It might take a while for device to complete setting

Complete

Setup Tool

Device List

command mode

MAC: 18:93:7f:35:3e:32
IP: 192.168.10.24
FW: v0.1.3
Model: GWB-100-agent

Last updated: 2020/05/15 15:57:45

MAC: 18:93:7f:34:b1:7e
IP: 192.168.10.10
FW: v0.1.3
Model: GWB-100-agent

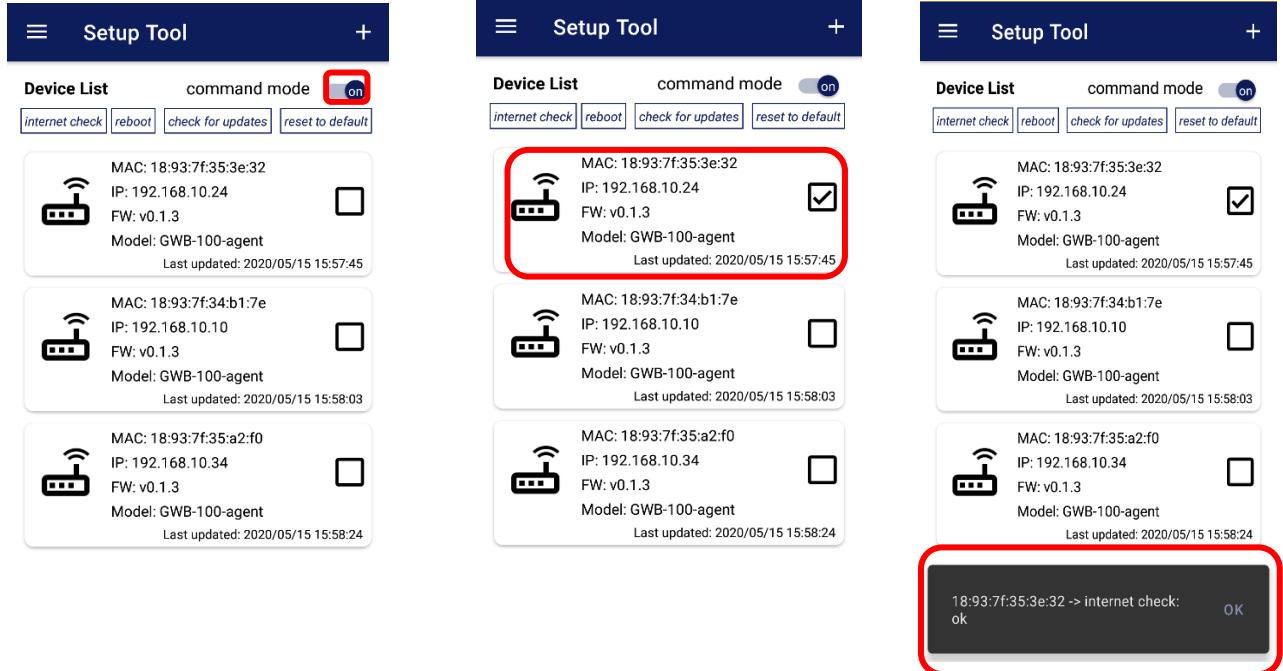
Last updated: 2020/05/15 15:58:03

MAC: 18:93:7f:35:a2:f0
IP: 192.168.10.34
FW: v0.1.3
Model: GWB-100-agent

Last updated: 2020/05/15 15:58:24

III Internet Check

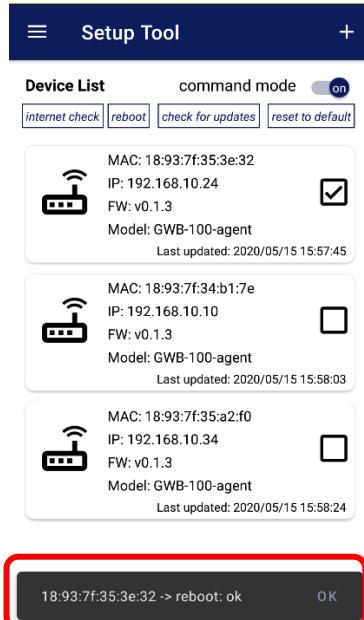
Check device internet status, change the command mode to be “**on**”, Select the set up device from the **Available wireless device list**, and click the “**Internet check**” button, then will get the testing status at bottom of page.



The screenshots show the 'Setup Tool' interface with the 'command mode' switch turned on. The 'Device List' shows four available wireless devices. In the second screenshot, the first device is selected (indicated by a checked checkbox) and the 'internet check' button is highlighted with a red box. In the third screenshot, the status bar at the bottom displays the message '18:93:7f:35:3e:32 -> internet check: ok'.

IV Reboot Setting

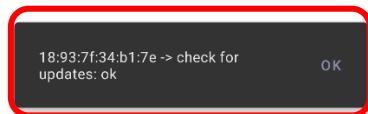
Device reboot process to change the command mode to be “**on**”, Select the set up device from the **Available wireless device list**, and click the “**reboot**” button, then will get the testing status at bottom of page.



The screenshot shows the 'Setup Tool' interface with the 'command mode' switch turned on. The 'Device List' shows four available wireless devices. In the bottom status bar, the message '18:93:7f:35:3e:32 -> reboot: ok' is displayed, indicating a successful reboot attempt.

V OTA Setting

Device OTA process to change the command mode to be “”, Select the set up device from the **Available wireless device list**, and click the “**check for updates**” button will update the latest firmware version, once device version is less than this,, then will get the testing status at bottom of page.



VI Reset Setting

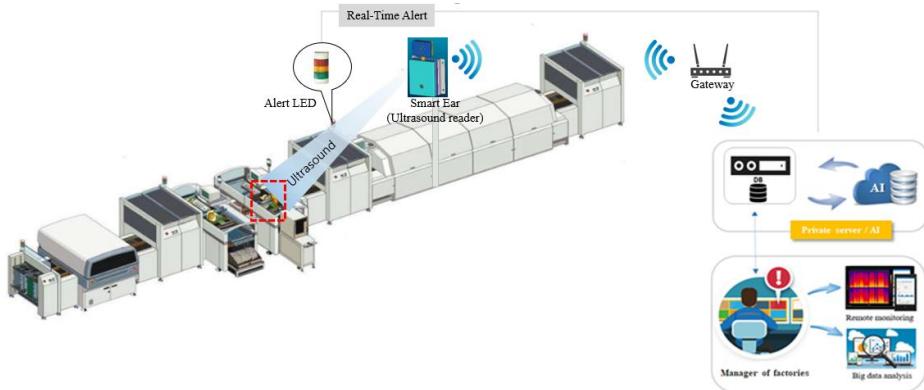
Device reset process to change the command mode to be “”, Select the set up device from the **Available wireless device list**, and click the “**reset to default**” button, then will get the testing status at bottom of page.



VII Product Features

VII-1 Application Scenario

The UWA-100 collects sound and data from sound identifies anomalies, classifies equipment failure modes, and predicts the problem before interrupts production.



VII-2 Data Collect

The UWA-100 through the microphone sensor to collect sound and data.

VII-3 Web dashboard

1. Project : Recorded sounds data by UWB-100 will be stored at cloud or physical server(IoT server) and user can see stored sensor data as real-time as spectrogram image(PNG file format) and audio(WAV file format).
2. Training : Based on recorded sounds data at cloud or physical server(IoT server), user can run one of training models(Machine Learning) after selecting training data by time period.
3. Testing : After training sensor data, the trained data will be stored at cloud or physical server(IoT server). And user can adjust threshold value that AI analysis and machine learning recommends. When beyond threshold

sound values are detected by UWA-100, cloud or physical server(IoT server) will notice to user.

4. Status : All of training status and testing status can be checked at this features
5. Management : User can add new UWA-100 or edit details of UWA-100 or delete current operating UWA-100 from cloud or physical server(IoT server).
6. Alert notice : User can see all abnormal detected cases here and compare between randomly created standard spectrogram image by AI and abnormal spectrogram image.

This screenshot shows the 'Project' section of the N.POINT Smart Ear interface. It displays a list of files uploaded from a 'Hospital server'. The list includes 'User uploaded' (3000KB, 2020.01.01 / 10:00 AM) and 'Cloud dataset' (5000KB, 2020.01.01 / 10:00 PM). The interface has a dark blue header and sidebar with various icons for training, testing, status, management, and alert notice.

[Project]

This screenshot shows the 'Training' section. It displays a training configuration for 'Hospitalserver'. The 'Training name' is 'Hospitalserver_Room #2'. The 'Training model' is 'Knn'. The 'Notice' is set to 'Email' with the address 'jhee@nimbolab.com'. The 'Training name' is 'Hospitalserver_Room #2'. The 'Training process' is shown as 68.00% with a progress bar. A 'Start' button is visible at the bottom.

[Training]

This screenshot shows the 'Testing' section. It displays a 'Real-time testing' configuration for 'Hospitalserver_Room #2'. The 'Threshold' is set to 200. The 'Notice' is set to 'Email' with the address 'jhee@nimbolab.com'. The 'Result' is shown as 'Success' with a green button. A 'Start' button is visible at the bottom.

[Testing]

This screenshot shows the 'Status' section. It displays a table of training and testing status. The table includes columns for 'Task ID', 'Project ID', 'Training name', 'Training model', 'Method', 'Status', and 'Details'. It shows two entries: 'Training task has been successful.' and 'Testing task has been successful.' The interface has a dark blue header and sidebar.

[Status]

This screenshot shows the 'Management' section. It displays a table of UWA-100 devices. The table includes columns for 'No.', 'Project ID', 'Unit name', 'Location', 'Line status', 'Date', and 'Status'. It shows two entries: 'UWA-100, Smart factory' and 'UWA-100, Home #2'. The interface has a dark blue header and sidebar.

[Management]

This screenshot shows the 'Alert notice' section. It displays a table of detected anomalies. The table includes columns for 'No.', 'Date', 'Testing name', 'Threshold', 'Testing file', 'Score', 'Alerts', and 'More info'. It shows one entry: 'Hospitalserver_Room #2' with a score of 200. Below the table, there is a 'Data comparison' section showing two spectrograms: 'Training sample/Standard (Comparing data)' and 'Testing file/Comparing data'. The 'Score' is 200. A 'Start' button is visible at the bottom.

[Alert notice]

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

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.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device 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 undesired operation.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

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