



# AT909 USER GUIDE



ATID Co.,Ltd  
Ver 0.1

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## Before the Beginning

This manual has been published by **ATID Co., Ltd.** and may only be copied, edited, or distributed by **ATID Co., Ltd.** Some parts of this manual may differ from the actual device. The contents of this manual are subject to change without prior notice.

This manual is intended for users who install, configure, maintain, and operate **AT909**. It provides information on the features, installation, setup, operation, and maintenance of **AT909**.

## Safety Instructions

User safety is of the utmost importance when using this device. Please read and follow all safety precautions outlined in this document before handling or operating any **ATID** equipment. Failure to follow these precautions may result in serious injury, as well as damage to the equipment or data.

### **Warning**

Improper use or operation of the equipment may cause damage to the device.

# Product Overview

## 1. Product Overview

Welcome to the use of the AT909 UHF RFID / Barcode Reader. This high-performance handheld reader is a newly developed device by our company, designed to meet the demands of various IoT application scenarios. Equipped with Android 13 OS, it offers fast processing speed, excellent portability, and a high level of functional integration. The AT909 UHF RFID / Barcode Reader is an intelligent, multifunctional device that can be widely applied across various industries, including apparel retail, warehouse management, asset tracking, and laundry management, thanks to its versatile features.

## 2. Working Environment and Conditions

AT909 UHF RFID / Barcode Reader can be used under the following environmental conditions.

- 1) Operation Temperature :  $-20^{\circ}\text{C} \sim 50^{\circ}\text{C}$
- 2) Storage Temperature :  $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$
- 3) Operation Humidity : 5%–95% (non-condensing,  $+25^{\circ}\text{C}$ )

## 3. Safety and Protective Measures



Please refer to the precautions before use.



When using the tag reading function of the reader, the device emits strong electromagnetic waves. Do not aim it at people or animals for extended periods of time.



All wireless transmission devices, including this equipment, may interfere with the operation of medical equipment if not properly shielded. If any issues arise, please contact the manufacturer of the medical equipment. Operation of this device may also interfere with other electronic equipment.

# Performance and Parameters

## 1. Key Features

- 1) Supports EPC Global UHF Class 1 Gen 2 / ISO 18000–6C protocols.
- 2) Supports 1D and 2D barcode data capture.
- 3) Enables wireless data transmission via 4G network, WLAN, and Bluetooth.
- 4) Supports GPS positioning.
- 5) Equipped with a 5MP front camera and a 13MP rear camera.
- 6) Provides Java SDK and standard development environment for application development.

## 2. Product Specifications

| Performance              |   |   |
|--------------------------|---|---|
| Processor                | Cortex A73, Octa-Core 2.0GHz  |   |
| Memory                   | RAM 4GB / ROM 64GB  |   |
| Operating System         | Android 13  |   |
| Physical Characteristics |   |   |
| Dimensions (L x W x H)   | 170 x 80 x 145 mm   |   |
| Weight                   | 600g (with Battery)   |   |
| Power                    | 7,200mAh / Lithium-Ion Battery<br>Adaptor : DC5V / 3A                             |   |
| Display                  | 5.5 Inch IPS HD (720 x 1440)  |   |
| USB Interface            | 1 USB Port / Type-C   |   |
| Notification             | LED Indicator, Speaker, Vibrator  |   |
| Sensor                   | Accelerometer   |   |
| Slot                     | Sim Card Slot x 2<br>PSAM Card Slot x 2<br>TF Card Slot (Support up to 256GB) x 1 |   |
| Data Collection          |   |   |
| RFID (UHF)               | Protocol  | EPC GEN2, ISO/IEC 18000–6C                              |
|                          | Reading Range   | ~10m (Depending on environment and tag type)            |
|                          | Writing Range   | ~0.5m   |
|                          | RF Output   | 1W / 30 dBm (MAX)                                       |
|                          | Frequency Range   | US / FCC : 902MHz ~ 928MHz<br>EU / CE : 865MHz ~ 868MHz |
| Antenna                  | Circularly Polarized Antenna / 4.5 dBi  |   |
| Barcode                  | 2D Engine (Support to read 1D & 2D Barcodes)                                      |   |
| Camera                   | Front   | 5M Pixel  |
|                          | Rear  | 13M Pixel   |
| Communication            |   |   |
| Bluetooth                | BT V2.1+EDR / BLE V4.2  |   |
| GPS                      | GPS, Tolerance ±5m  |   |

|             |  |
|-------------|--|
| <b>WLAN</b> | 802.11 a/b/g/n/ac (2.4GHz / 5GHz)  |
| <b>WWAN</b> | 2G : GSM / GPRS / EDGE (850, 900, 1800, 1900MHz)<br>3G : WCDMA (850, 900, 1900, 2100MHz)<br>4G : TDD-LTE (Band 38, 39, 40, 41)<br>FDD-LTE (Band 1, 2, 3, 4, 5, 7, 8, 12, 17, 20) |

| <b>User Environment</b> |                               |
|-------------------------|-------------------------------|
| <b>Operating Temp</b>   | -20°C to 50°C                 |
| <b>Storage Temp</b>     | -20°C to 70°C                 |
| <b>Humidity</b>         | 5~95% (non-condensing, +25°C) |
| <b>Drop Spec</b>        | 1.5m                          |
| <b>Sealing</b>          | IP65                          |

# Structural Characteristics

## 1. Appearance Description



| No. | Function                  |
|-----|---------------------------|
| 1   | F1 Button                 |
| 2   | F2 Button                 |
| 3   | Volume                    |
| 4   | Side Button 1             |
| 5   | USB Port                  |
| 6   | Blue LED                  |
| 7   | Red LED                   |
| 8   | Receiver                  |
| 9   | Front Camera              |
| 10  | Side Button 2             |
| 11  | Power Button              |
| 12  | F3 Button                 |
| 13  | F4 Button                 |
| 14  | Trigger Button            |
| 15  | Pistol Grip Lock Button   |
| 16  | Rear Camera               |
| 17  | Camera Flash              |
| 18  | UHF RFID Module           |
| 19  | Barcode Scan Engine       |
| 20  | Cradle Pogo Pin Connector |
| 21  | UHF Antenna Metal Shield  |
| 22  | Pistol Grip               |

### 1) Camera and Barcode Engine

The camera and barcode functions are applied in a modular form. The camera can be used for functions such as taking photos and videos, and the barcode function can recognize 1D and 2D barcodes to collect data.

### 2) UHF RFID Module

The UHF RFID module part is equipped with a Circularly Polarized UHF Antenna and impinj E710 High performance UHF RFID module.

### 3) Battery

The battery can be removed only by removing the pistol grip. Once the battery is removed, there are slots for installing SIM Card, PSAM, and TF Card.



### 4) USB Port

The USB port of **AT909** is a USB Type-C standard and is used as a power input port for charging. It can also be used for data transfer between other devices or mobile devices.



### 5) Power Button

The User can turn the device 'ON' or 'OFF' with this button. For details on device operation, refer to '3. Power On / Off, Standby, Restart' section.

### 6) Side Button 1, 2

This is a function Button that allows the user to specify a function. It is generally used as a UHF reading or barcode scanning function button.

## 2. Installing and Removing the Battery

### 1) Remove the pistol grip

Move the pistol grip retaining button on the back of the device from the locked to the unlocked position. Then pull down on the pistol grip to separate it from the main unit.



### 2) Install the battery

Just install battery pack to the main body, being careful whether the battery terminals location.



### 3) Remove the battery

Simply detach the trigger grip and remove the battery in the reverse order of installing the battery.



Please remove the battery while the device is powered off.

### 3. Power On / Off, Standby, Restart

#### 1) Power On

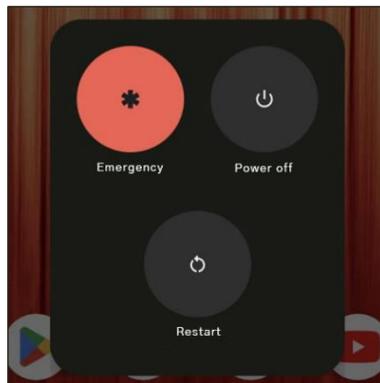
While the device is powered off, press and hold the power button on the right side of **AT909** handheld reader for 3 seconds. After a while, the boot screen will appear, and the system will start soon.

#### 2) Standby and wake up

While the device is powered on, press the power button on the right side of **AT909** briefly, the screen will turn off and the device will enter standby mode. When in standby mode, press the power button briefly again, the screen will turn on and the system will return to normal operation.

#### 3) Power off and Restart

While **AT909** is powered on, press and hold the power button for about 3 seconds, and the 'Power off / restart' icon will appear. Pressing the button will activate the allocated function.



- Selecting 'Power off' will completely turn off the screen and the system will shut down.
- Selecting 'Restart' will completely turn off the screen and the system will reboot.

#### 4) Restart 2

If the device is not functioning properly and is not responding to button operations, it may need to force a restart. Press and hold the right power button for more than 10 seconds, and the system will automatically restart.

## 4. Charging the battery

Charging the battery when using it for the first time or when it has not been used for a long period of time.



Charge the device using the included charger and USB cable. The charger and cable that are not compatible with AT909 may cause serious injury or damage to the device.



The AT909 does not support quick charging. Connecting to a quick charging adapter may damage the device.



Improperly connecting the charger can cause serious damage to the device. Damage caused by misuse is not covered under warranty.

### 1) Wired Charging

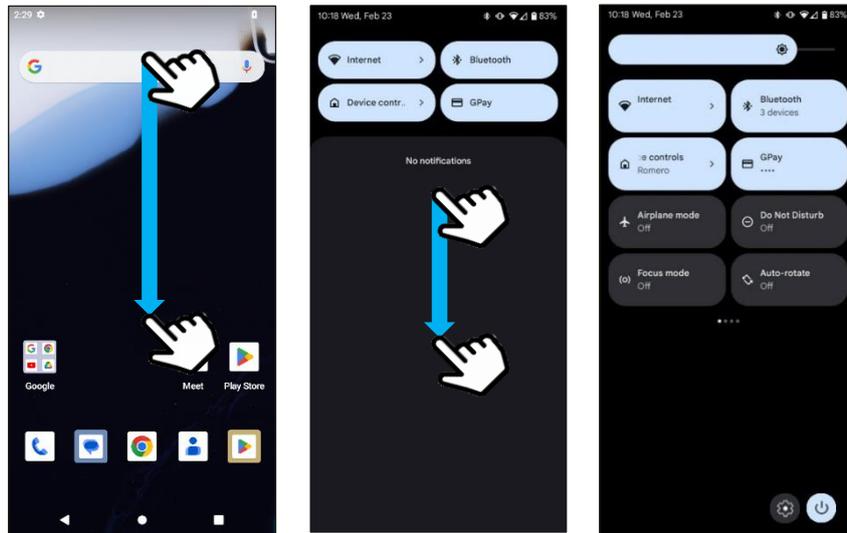
Charge the battery by connecting the USB cable to the charger and connecting the cable to the USB Type-C port on the device. After fully charging, disconnect the charger from the charger.



# Common Features and Setting

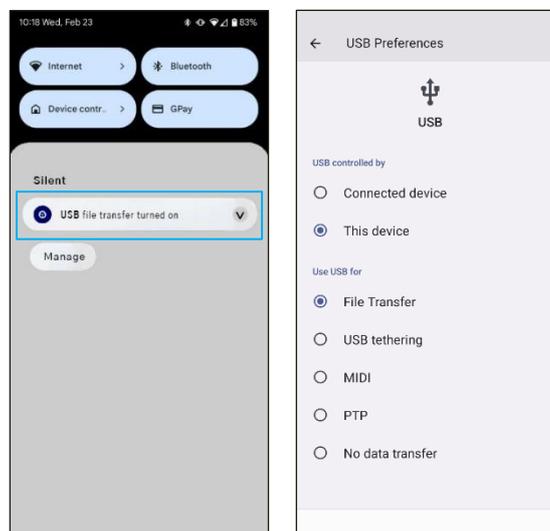
## 1. Notification menu and Quick setting panel

When a notification signal is sent from the device or app, touch the top of the screen and swipe down to activate the notification panel. When the notification panel is activated, touch the notification panel and swipe down again to activate the quick settings panel screen.



## 2. Install USB drivers and Synchronize data between PC

- 1) The AT909 automatically installs the driver and completes communication preparation after connecting to a Windows 7 or higher OS PC using a USB cable.
- 2) If the connection is successful, the user can view the contents of the device through the PC.
- 3) If the user check the notification menu while connecting the USB cable to the host device, the 'Android System · Charge this device via USB' notification menu will appear.
- 4) Clicking this menu will take you to the 'USB Settings' menu below, where the user can set actions related to device connection.



### 5) USB Setting Menu

- USB Control device : Select the setting target between 'Connected device' and 'This device'.
- File Transfer : Transfer files with the connected device.
- USB tethering : Share the internet connection with the connected device.
- MIDI : Play music with the connected device.
- PTP : Transfer photos to the connected device.
- No data transfer : Only charges without transferring data.

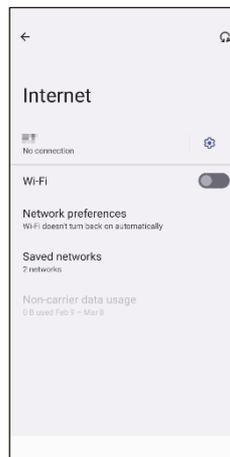
## 3. Network & internet

The user can change internet connection settings in the 'Network & Internet' menu in the setting menu.

Menu →  →  Network & Internet

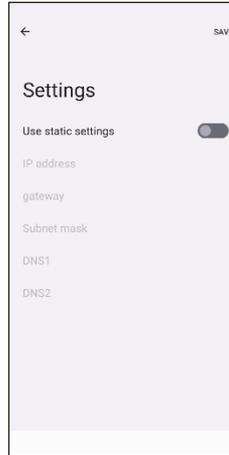
### 1) Internet

- The user can turn Wi-Fi on or off.
- When Wi-Fi is connected to a network, the icon changes from  to .



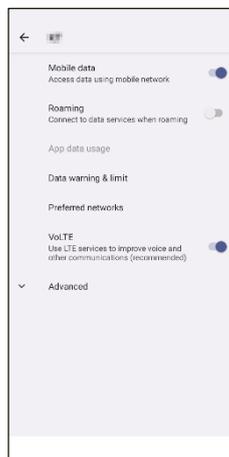
## 2) Ethernet

- The user can activate or configure the Ethernet function.
- If necessary, the user can configure static IP address, DNS settings in this setting menu.



## 3) Mobile network

- The user can check and change mobile network settings in this setting menu.
- The user can turn mobile data on or off.
- The user can set roaming settings.
- The user can check mobile data usage.

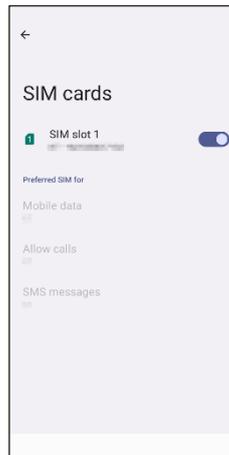


## 4) Airplane mode

The user can turn airplane mode on or off. When airplane mode is turned on, all wireless communication (cellular, Wi-Fi, Bluetooth) is disabled. This option can also be set in the Quick setting panel.

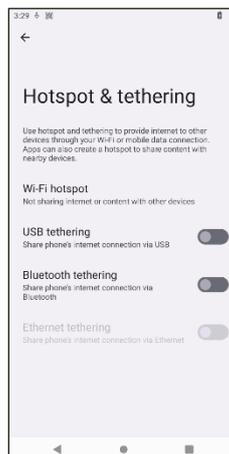
## 5) SIM cards

The user can check the information of the SIM card installed in the device in this setting menu.



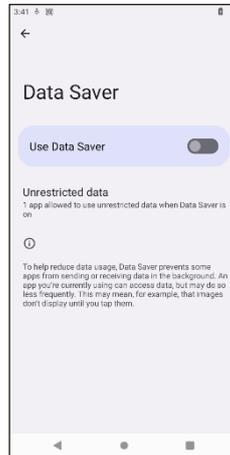
## 6) Hotspot & tethering

- The user can use the Hotspot and Tethering functions to provide Internet service to other devices connected to **AT909**.
- Activate Wi-Fi Hotspot : Set the hotspot name, password, security type, etc. as needed.
- Connect other devices : On the other device the user wants to connect, go to Wi-Fi settings, search for the hotspot name you set on **AT909** in the hotspot list, and enter the password to connect.



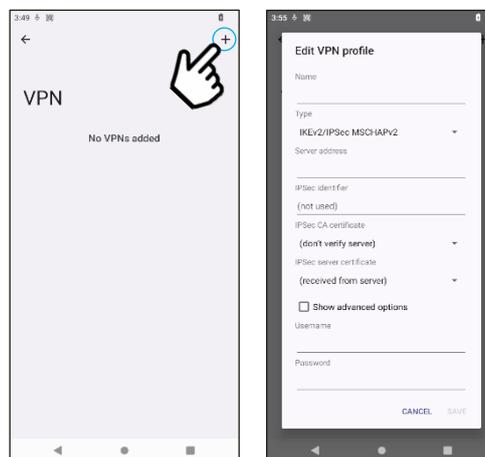
## 7) Data Saver

To help reduce data usage, Data Saver prevents some apps from sending or receiving data in the background. An app the user is currently using can access data, but may do so less frequently. This may mean, for example, that images don't display until the user tap them.



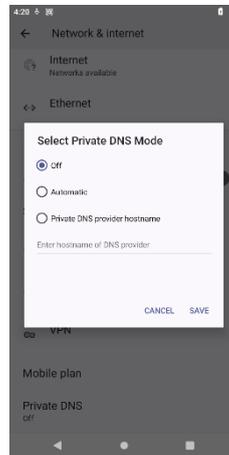
## 8) VPN

- The user can set up a Virtual Private Network (VPN) in this menu.
- To add a new VPN connection, press [+] button in the upper right corner and enter the required information.



## 9) Private DNS

Setting up Private DNS is a feature that enhances privacy. When using Private DNS, DNS queries are encrypted and transmitted, preventing your Internet usage history from being exposed to the outside.



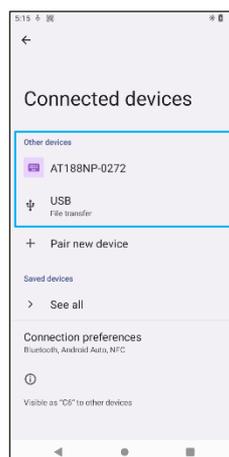
## 4. Connected devices

The user can connect external devices via Bluetooth or manage connected devices in the 'Connected devices' menu in Settings. In addition to Bluetooth, the user can also check the connection status via USB, Android Auto, NFC, etc.

Menu →  →  Connected devices

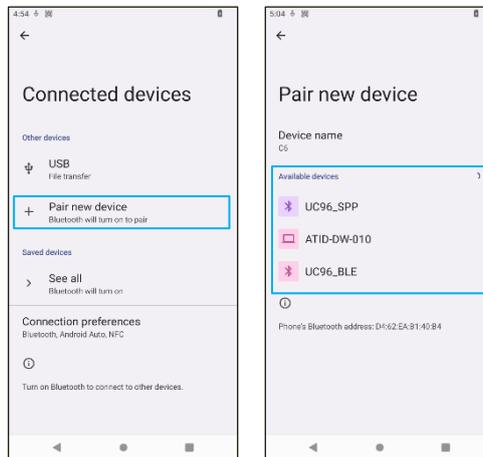
### 1) Other devices

The user can check the connection status of external devices currently connected to **AT909**.



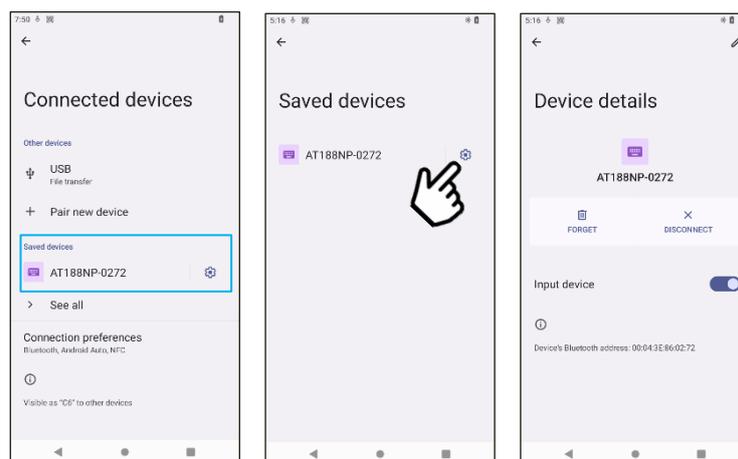
## 2) Pair new device

- If the user select 'Pair new device', the user can connect to the device via Bluetooth.
- The user can search for devices attempting to connect around the current device and select them to connect.



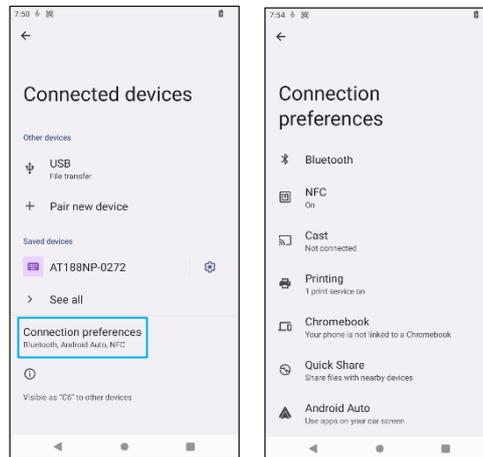
## 3) Saved devices

- In the 'Saved devices' menu, the user can check information about devices connected to **AT909** via Bluetooth.
- Click 'See all' to see a list of all registered devices.
- Click the  icon on the device name in the registered list to check 'Device details' information.
- The user can delete registration information in 'Device details'.



#### 4) Connection preferences

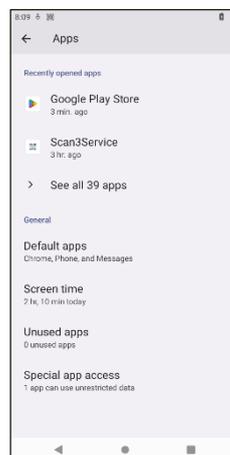
The user can set functions related to connecting external devices, such as Bluetooth, NFC, and Android Auto, etc.



### 5. Apps

The user can access information about applications on the device.

Menu →  →  Apps



#### 1) Recently opened apps

- The user can see a list of applications that are currently running.
- Click 'See all' to see a list of all running applications.
- Clicking an app will take you to the 'App info' screen, where the user can check or set detailed information about the application's operation.

#### 2) Default apps

The user can check and change the apps that are default linked to the Browser, Home widget app, Phone app, SMS app, etc... in this setting menu.

### 3) Screen time

The user can check the application usage time.

### 4) Unused apps

The user can view information about apps that are set to 'Unused'.

### 5) Special app access

This setting allows the app to access special system-level functions.

## 6. Notification

The user can manage your notification settings from this setting menu.

Menu →  →  Notifications

### 1) Manage

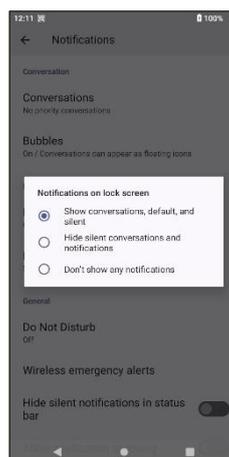
- App settings : The user can set alarm settings for each application.
- Notification history : The user can set notification history storage and check the history.

### 2) Conversation

- Conversations : The user can check recent call history.
- Bubbles : If set this option, the conversation icon will be displayed as a floating icon during a call.

### 3) Privacy

- Device & app notification : Control which apps and devices can read notification.
- Notifications on lock screen : Set how notifications are displayed on the lock screen.



## 4) General

- Do Not Disturb : Sets the 'Do Not Disturb' mode. In 'Do Not Disturb' mode, the user can block or allow notifications, calls, messages, etc., and set exceptions to allow you to receive notifications from specific contacts or apps.
- Hide silent notifications in status bar : The user can hide silent notifications that appear in the status bar. This setting prevents unnecessary silent notification icons from appearing in the status bar.
- Allow notification snoozing : The user can temporarily hide notifications for a certain period of time.
- Notification dot on app icon : When set, the badge number on the app icon increases by 1 each time a notification occurs.
- Enhanced notifications : The user can set notifications for each app, and allow or block notifications for specific apps.

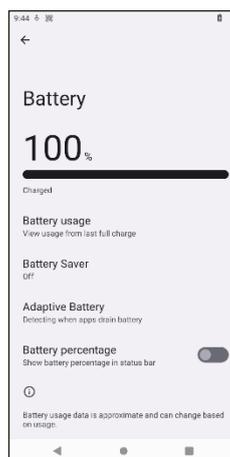
## 7. Battery

The user can check the charge status of the device's battery and configure battery charging settings.

Menu →  →  Battery

### 1) Battery Charged

Displays the current battery charge status.



### 2) Battery usage

The user can check battery usage from the last charge completion point.

### 3) Battery Saver

The user can optimize battery usage to reduce battery consumption.

### 4) Adaptive Battery

Reduces battery consumption by learning the user's device usage patterns.

### 5) Battery percentage

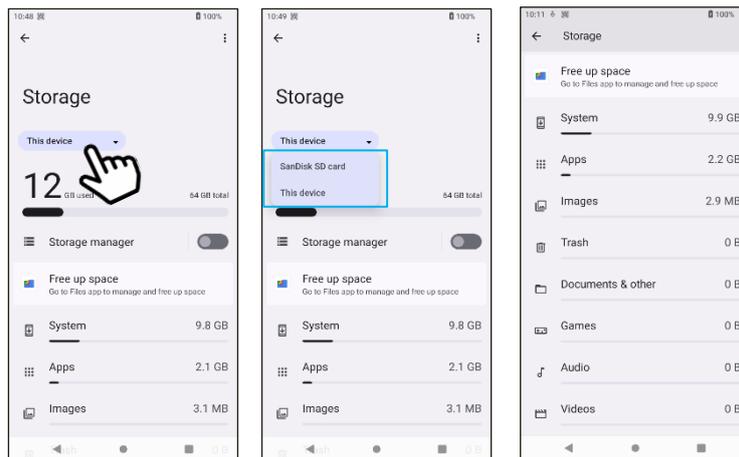
If set this option, it displays the charge percentage next to the battery icon in the status bar.



## 8. Storage

Storage is largely divided into internal storage and external storage, and the user can check the status of each storage in this menu.

Menu →  →  Storage

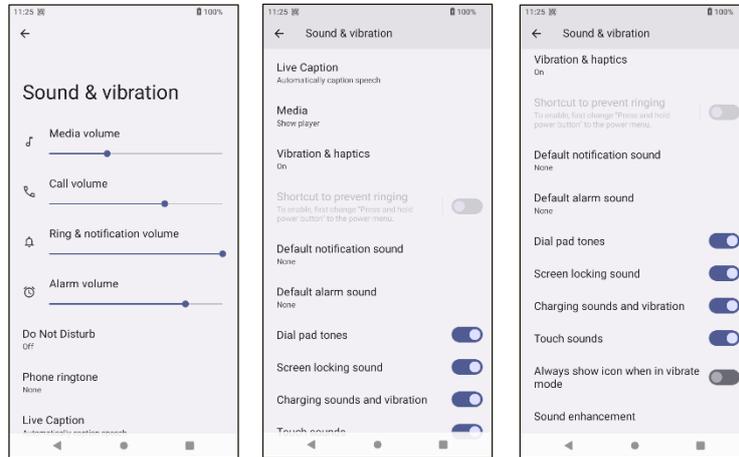


- 1) 'This device' is an option to select the device's internal memory, and 'SD card' is an option to select the external memory card if it is attached.
- 2) Depending on the selected option, the user can check the current memory usage status by category for each memory.

## 9. Sound & vibration

The user can check and change the settings related to the sound and vibration of **AT909**.

Menu →  →  **Sound & vibration**



### 1) Media volume

Adjust the media volume of the running app.

### 2) Call volume

Adjust phone call volume.

### 3) Ring & notification volume

Adjust the ringtone and notification volume.

### 4) Alarm volume

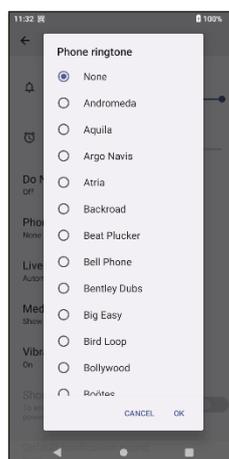
Adjust the alarm volume.

### 5) Do Not Disturb

Set 'do not disturb' mode.

### 6) Phone ringtone

Set the ringtone sound. The user can select at the ring tone list.



## **7) Live Caption**

When set to the 'Live Caption', the audio played on the device is automatically converted into subtitles.

## **8) Media**

Configure media player settings.

## **9) Vibration & haptics**

Set the vibration settings.

## **10) Default notification sound**

Set the default notification sound.

## **11) Default alarm sound**

Set the default alarm sound.

## **12) Dial pad tones**

Set the dial pad tones.

## **13) Screen locking sound**

Set a sound effect when locking the screen.

## **14) Charging sounds and vibration**

Set sound and vibration effects when charging.

## **15) Touch sounds**

Set a sound effect when the user touches the screen.

## **16) Always show icon when in vibrate mode**

Set the icon to always appear in the status bar when in vibrate mode.

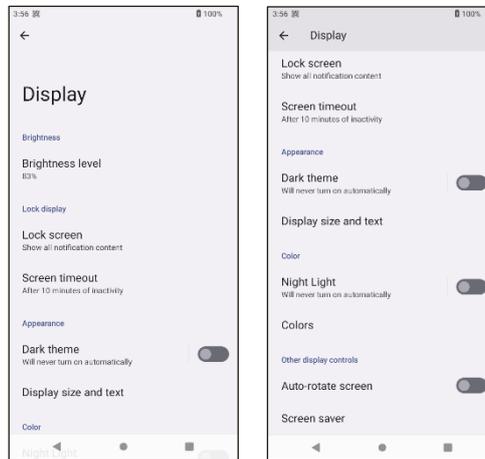
## **17) Sound enhancement**

The user can configure the volume booster settings.

## 10. Display

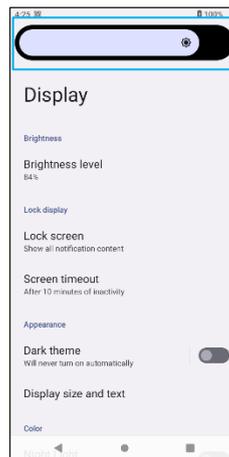
The user can check and change settings related to **AT909** screen.

Menu →  →  Display



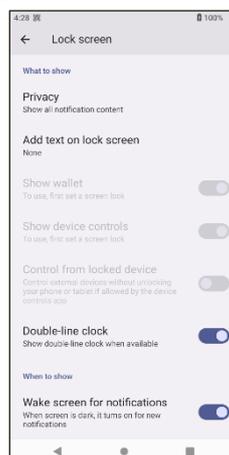
### 1) Brightness level

Adjust the screen brightness.



### 2) Lock screen

The user can configure the lock screen settings. The user can set whether to display lock screen notifications, whether to display a large clock, and whether to add text display.

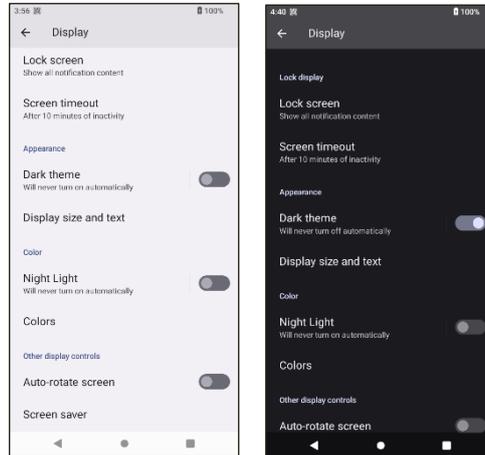


### 3) Screen timeout

Set the screen auto-off time.

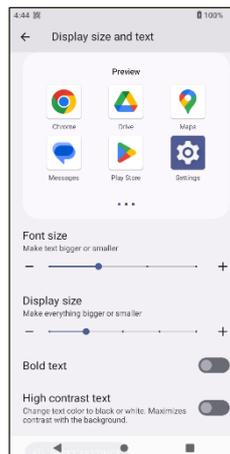
### 4) Dark theme

Set the dark theme.



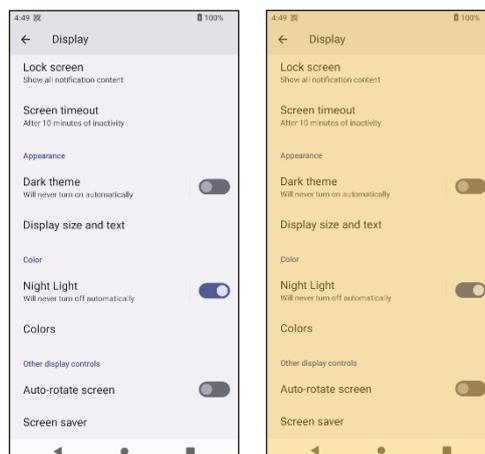
### 5) Display size and text

The user can set the size and font size of the icons displayed on the screen.



### 6) Night Light

The user can set the screen to the night light mode.



## 7) Colors

This is a dynamic color setting feature that automatically detects the color of the wallpaper when the user sets it and applies it to the theme color of the app.

## 8) Auto-rotate screen

Set the screen to automatically flip or rotate depending on the position of the device screen.

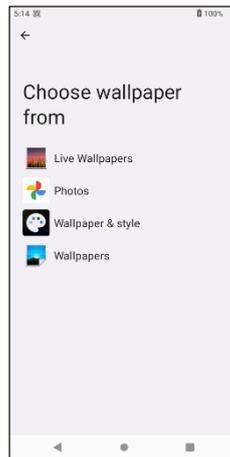
## 9) Screen saver

Set the screen saver.

# 11. Wallpaper

The user can check and change the wallpaper settings of the **AT909** screen.

Menu →  →  Wallpaper



# 12. Accessibility

Accessibility settings provide a variety of features to help people with visual, hearing, physical, or cognitive disabilities use their devices more easily.

Menu →  →  Accessibility

## 1) Screen reader

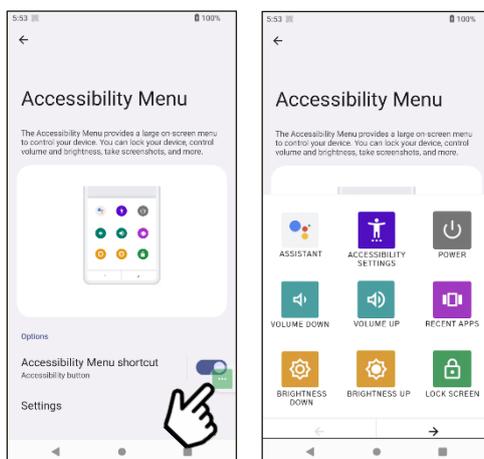
- Select to Speak : Set the feature to read selected text aloud.
- TalkBack : Set the voice feedback function. If the user enables this option, the user can operate the device without looking at the screen.

## 2) Display

- Display size and text : The user can set the size of the icons and text displayed on the screen.
- Color and motion : The user can set color and motion–related options to improve the user’s visual experience and the convenience of using the device.
- Extra dim : Set additional brightness control functions. When set, the user can set it to be darker than the basic screen brightness control level.
- Magnification : Set the screen magnification function.

## 3) Interaction controls

- Accessibility Menu : Display the ‘Accessibility menu’ as a large on–screen menu.



- Switch Access : When this option is set, the user can operate the device using one or more switches instead of the touchscreen.
- Timing controls : The user can adjust auto click time, delay time, etc.
- System controls : The user can set the system control method to either 3–button or gesture mode.
- Vibration & haptics : Set the vibration settings.

## 4) Captions

- Live Caption : Set the function to recognize voice and display it as subtitles.
- Caption preferences : Set subtitle size or format.

## 5) Audio

- Audio description : When enabled in apps that support audio description, the user can hear a voice description of video or audio content.
- Hearing aids : The user can connect hearing aid to the device through this menu.
- Audio adjustment : The user can enable ‘mono audio’ or adjust ‘audio balance’.

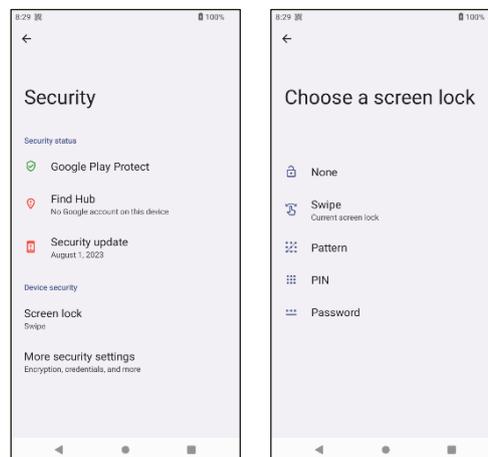
## 6) General

- Accessibility shortcuts : Display shortcut icons for quick access to Accessibility features or make them accessible from the lock screen.
- Text-to-speech output : Set up 'Text-to-speech' functionality.

## 13. Security

The user can check and change the security-related settings of **AT909**. The user can also set the unlock method for the screen from this menu.

Menu →  →  **Security**



## 14. Privacy

The user can configure settings for accessibility features related to privacy.

Menu →  →  **Privacy**

### 1) Privacy dashboard

The user can see which apps have used sensitive permissions, such as the camera, microphone, and location information, and when, and manage permissions individually.

### 2) Permission manager

The user can set access permissions for apps.

### 3) Camera access

The user can block access to the camera.

### 4) Microphone access

The user can block access to the microphone.

### 5) Show passwords

Set whether to display the character entered when entering a password.

## 6) Notification on lock screen

Set whether to display alarms on the lock screen.

## 7) Android system intelligence

A setting that supports intelligent features across Android while keeping data private on private compute cores.

## 8) App content

Allows the app to transfer content to the Android system.

## 9) Show clipboard access

Sets whether to display a message when the app accesses text, images, or content copied by the user.

## 10) Autofill service from Google

Set whether to save information such as password, credit card number, and address.

## 11) Activity controls

Choose the activities and info you allow Google to save.

## 12) Ads

The user can delete advertising ID or reset personalized advertising settings.

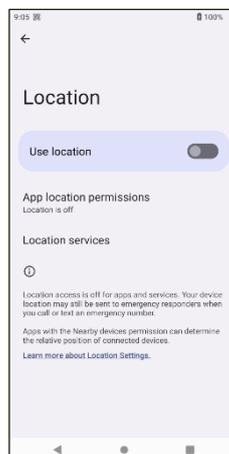
## 13) Usage & diagnostics

If enable this setting, information about device's performance and usage patterns will be sent to Google. The information sent will be used to improve products and services.

# 15. Location

Set whether to use the device's location information.

Menu →  →  Location



## 16. Safety & emergency

The user can check and change settings such as emergency rescue requests, emergency contacts, and disaster text notifications.

Menu →  →  Safety & emergency

### 1) Medical information

This is a menu where the user can enter your medical information, such as blood type or allergy information, etc.

### 2) Emergency contacts

This menu allows the user to register contact information that can be reached in case of an emergency.

### 3) Emergency SOS

This is a menu where the user can set how to request help in an emergency.

### 4) Crisis alerts

Set whether to receive disaster alerts.

### 5) Emergency Location Service

This is a menu where the user can set whether to share location information when requesting disaster relief.

### 6) Earthquake alerts

Set whether to receive earthquake warning alarms.

### 7) Unknown tracker alerts

When this feature is enabled, it will notify the user when a Bluetooth tracking device (e.g. AirTag) that is not paired with the user's device is detected nearby.

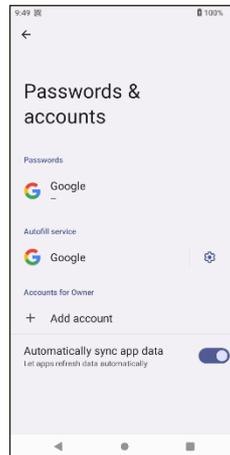
### 8) Silence notifications while driving

When the user sets the function, the user can reduce interruptions by limiting notifications such as phone calls or text messages while driving. This function is automatically activated when it detects whether the user is driving through the motion detection sensor of the phone and Bluetooth connection.

## 17. Passwords & accounts

Manage and set up the Google Accounts that are linked to your devices.

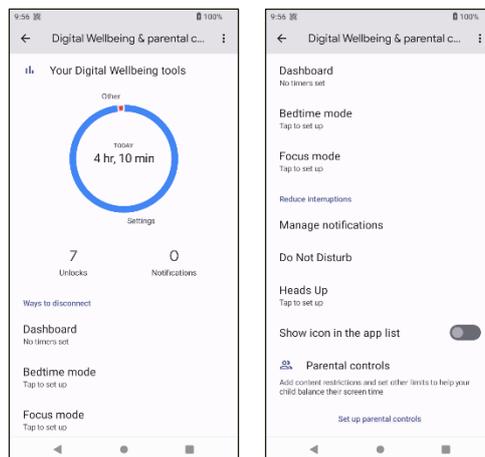
Menu →  →  Passwords & accounts



## 18. Digital Wellbeing & parental controls

Digital Wellbeing features help the user builds healthy digital habits by tracking app usage, notifications, device unlocks, and more, and setting goals. Parental controls let you manage your child's devices and limit access to content through the Family Link app.

Menu →  →  Digital Wellbeing & parental controls



## 19. Google

The user can check and change settings for services related to Google.

Menu →  →  Google

### 1) Setting for Google apps

- General : The user can set up auto-complete, video preview, etc.
- Notification : Set up update notifications from Google.
- Safesearch : Filtering or streamline provocative search results.
- Personalization : Reflect user preferences in search results.
- Google Assistant : Set up Google Assistant features.
- Voice : Set up voice or offline recording settings.
- Language & region : Set up language and region settings.
- Privacy & Security : Set up security settings for searching.
- Search Widget : Set up whether to use the search widget, and set up the widget size, background color, etc.
- About : The user can check the app version, terms, policies, etc.

### 2) Connected devices & sharing

- Cast options : Set whether to control Cast Media via notifications.
- Cross-device services : When set up, the user can use features such as Internet sharing and call transfer between devices logged in to the same Google Account.
- Devices : Showing connected devices.
- Quick Share : Search nearby shareable devices via Bluetooth and share data.
- Thread networks : This is the menu for setting up and managing thread devices..

### 3) Privacy & security

- Ads : The user can delete your advertising ID or reset your personalized advertising settings.
- Personalize using shared data : Personalization using shared data is the ability to control how app data is used for personalization.
- Usage & diagnostics : If the user enables this setting, information about your device's performance and usage patterns will be sent to Google. The information sent will be used to improve products and services.

#### **4) Autofill & passwords**

- Autofill with Google : Set whether to use Google Autofill.
- Passkeys and devices : Passkeys is a secure and easy way to log in that replaces passwords. The passkeys generated on the device are stored in Google Password Manager and synchronized with other Android and Chrome devices. This allows you to conveniently log in using the passkeys.
- Phone number sharing : Allows Google to display a screen where the user can select a phone number to share when a third-party app requests your phone number.
- SMS verification codes : This menu sets the verification codes to be automatically entered into apps or browsers when the verification codes are sent via SMS.

#### **5) Backup & restore**

- Backup : Back up your device data to Google One via your Google Account.
- Set up nearby device : Find and set up nearby devices via Bluetooth and Wi-Fi.

#### **6) Parental controls**

The Family Link app lets you manage your child's devices and limit access to content.

#### **7) Find Hub**

If you lose your device or an accessory connected to it, you can use this menu to find the device.

#### **8) Silence notification while driving**

When the user sets the function, the user can reduce interruptions by limiting notifications such as phone calls or text messages while driving. This function is automatically activated when it detects whether the user is driving through the motion detection sensor of the phone and Bluetooth connection.

#### **9) Set up your work profile**

Set up your work profile.

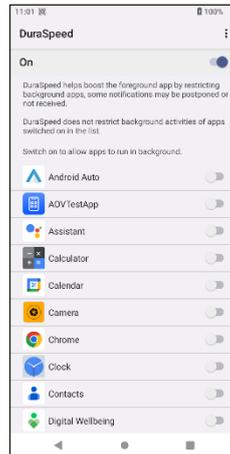
#### **10) Location Accuracy**

An option to improve location accuracy.

## 20. DuraSpeed

This feature allows the system to manage apps running in the background to extend battery life. The user can control the background activity of apps by turning this feature off or adjusting restrictions for specific apps.

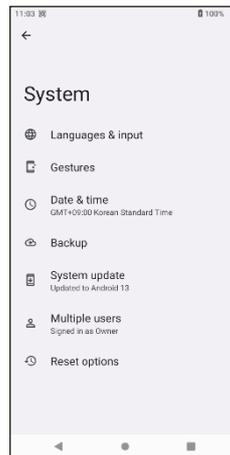
Menu →  →  DuraSpeed



## 21. System

This feature allows the system to manage apps running in the background to extend battery life. The user can control the background activity of apps by turning this feature off or adjusting restrictions for specific apps.

Menu →  →  System



### 1) Language & input

- Languages : Set the language to be used in the system.
- App Languages : Set the language to be used in each app.
- On-screen keyboard : Set whether to use Gboard and Google Voice Typing.
- Physical keyboard : Set the language and input settings for an externally connected keyboard.
- Text-to-speech output : Set the text-to-speech conversion function.

- Spell checker : The user can set whether to use the spell checker and change the settings.
- Personal dictionary : The user can add or delete words in your personal dictionary.

## 2) Gestures

The user can configure settings for quick execution of some device functions.

## 3) Date & time

Set the date and time on your device.

## 4) Backup

Back up data on your device to Google One via your Google Account.

## 5) System update

If there is a newer OS version than the OS on your device, the user can update it.

## 6) Multiple users

Share your device with others by registering additional user information.

## 7) Reset options

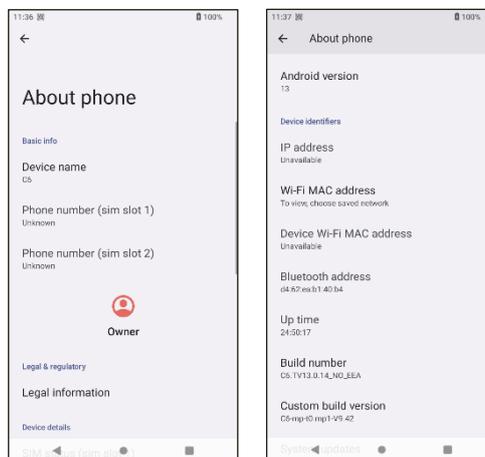
This menu provides three reset options.

- Reset Wi-Fi, mobile & Bluetooth
- Reset app preferences
- Erase all data (factory reset)

## 22. About phone

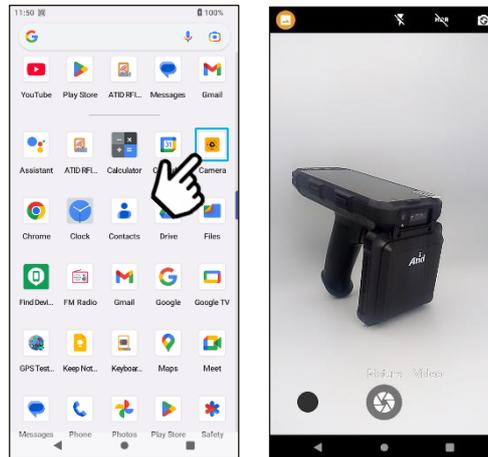
The user can check overall device information such as Android Version, SIM information installed in the device, MAC Address, Up Time, etc.

Menu →  →  About phone



## CAMERA features

**AT909** is equipped with a 13 million rear camera and a 5 million camera. You can take photos and videos using the camera app provided by default. You can set HDR options, and autofocus and flash functions are also supported.



## UHF RFID features

**AT909** is equipped with a UHF RFID module with powerful Impinj E710 chip and a 4.5dBi Circular Polarization Antenna. The user can collect UHF tag data using the demo application provided by default, or the user can develop their own application to collect UHF tag data.

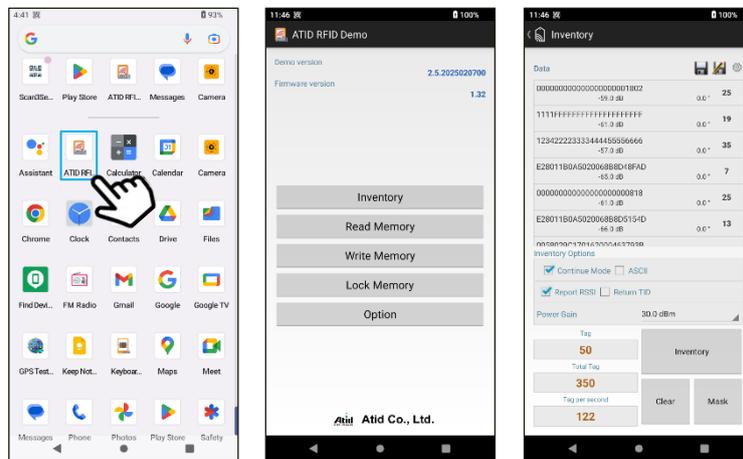


The UHF RFID function requires different hardware configurations and frequency settings depending on the frequency policy of the country you wish to use. The user must check that the device is set up correctly before using it.

### 1. UHF RFID Demo App

#### 1) Running the UHF RFID Demo App

The user can collect data from UHF tags with the UHF RFID demo program installed on the device.



If the ATID demo app is not installed on your device, you can install it through the Play Store or install it directly using the APK file included in the SDK.

- 2) For detailed instructions on how to use the demo app, please refer to the 'RFID Demo User Guide' included in the SDK.

## 2. Development of UHF RFID function application

- 1) The User can also develop their own applications to collect UHF RFID tag data.
- 2) To support application development, **ATID** provides SDK (Software Development Kit). The development environment and included items of the provided SDK are as follows.

| SDK IDE     | Details   |
|-------------|---|
| Tool        | Andorid Studio  |
| Language    | JAVA  |
| SDK Package | Details   |
| Bin         | Demo Application APK files  |
| Doc         | Development documentation such as user guides/manuals, programmer guides, demo guides, etc. |
| Lib         | Libraries for application development (.aar files)  |
| Sample      | Sample code   |



The SDK may be updated without notice for reasons such as adding features or fixing bugs.

# BARCODE features

**AT909** is equipped with a high-performance 2D barcode engine from Newland. The user can collect 1D or 2D barcode data using the barcode application installed on the device, or the user can develop their own application to collect barcode data.

## 1. Supported Barcode Symbologies

Aztec Code, Codabar, Codeblock, Code11, Code128, Code32, Grid Matrix, Code39, Code49, Code93, Composite, Coupon Code, Data Matrix, EAN8, EAN13, GS1 128, Hanxin, IATA25, INT25, ISBT, Matrix 2 or 5, Maxicode, MicroPDF, MSI, PDF417, QR, RSS, STRT25, Telepen, TLC Code39, Trioptic, UPC-A, UPC-E0, UPC-E1, Postal Symbologies, etc.

## 2. Barcode Aiming System

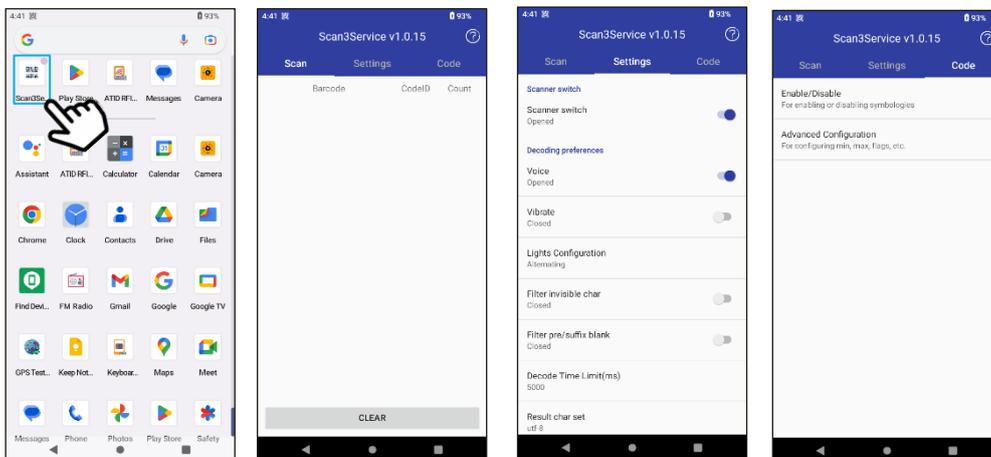
**AT909** outputs an LED beam and a clear laser reference spot to accurately aim and capture the barcode you want to read when reading a barcode.



## 3. Barcode Demo App

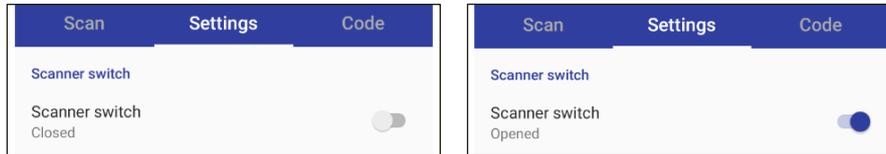
### 1) Running Barcode Demo App

Run the Scan3Service app installed on your device. When the user runs it, the user will see a menu screen with three options : 'Scan', 'Setting', and 'Code'.



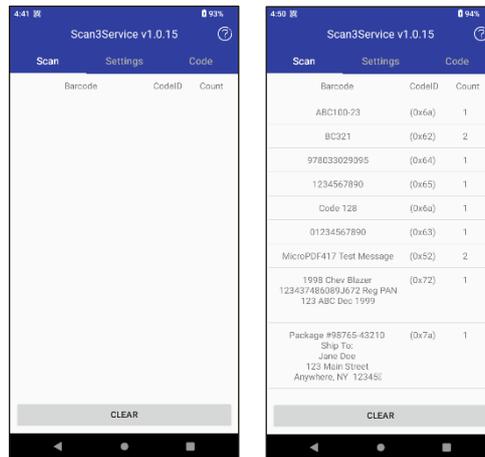
## 2) Activate the barcode function

If the Scanner switch in the 'Settings' menu is displayed as 'Closed', the barcode function is not activated. To use the barcode function, touch the switch on the right to activate the function. When the function is activated, 'Closed' changes to 'Opened' and the barcode function is activated.



## 3) SCAN Menu

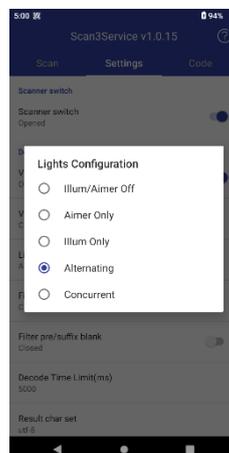
The user can check the collected data in this menu. Clicking the 'CLEAR' button will clear the collected data. The collected data is displayed with information such as 'Barcode Data', 'Code ID', and 'Count'.



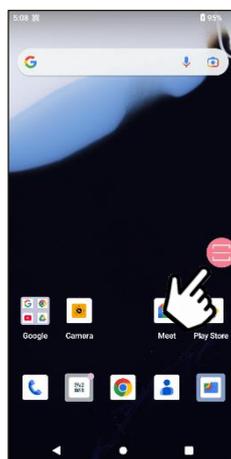
## 4) Settings

The user can change various settings related to barcode scanning operation.

- Voice : The user can set whether a beep sound occurs when reading a barcode.
- Vibrate : The user can set whether vibration occurs when reading a barcode.
- Lights Configuration : The user can set whether LED lights and laser aiming function operate when reading a barcode.

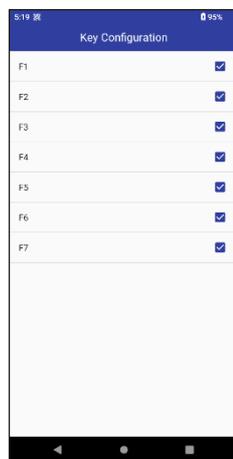


- Filter invisible char : The user can set whether to process invisible characters in the read data.
- Filter pre/suffix blank : The user can set whether to process blank spaces before and after the read data.
- Decode Time Limit (ms) : When the barcode function is activated, set the time to wait until the data is read. The setting value can be set in units of 'ms'. (e.g. 1 second = 1000ms)
- Result char set : The user can select the method of outputting the read data between 'UTF-8' and 'gbk'.
- Prefix : Enter a specific value to output the data by adding it in front of the read data.
- Suffix : Enter a specific value to output the data by adding it after the read data.
- Append ending char : Add a specific action after outputting the data. Each action is as follows.
  - ENTER : After outputting the data, change the line and output the next data.
  - TAB : After outputting the data, add a space equal to TAB and output the next data.
  - SPACE : After outputting data, add a space equal to SPACE and then output the next data.
  - NONE : After outputting data, output the data without doing anything.
- Replace previous barcode : The function to replace a barcode is generally provided by the item management or inventory management function of the system. Generally, the method of entering an existing barcode and then entering a new barcode to replace it is used.
- Float Button : Activates a virtual button that can operate the barcode scanner as shown below. When the virtual button is activated, its position can be freely changed and it will always be displayed even when operating another app.



- Stop scan on up : When this option is enabled, the barcode scanner will operate only when the trigger button is pressed.
- Continuous Scanning : When this option is enabled, the barcode scanner will operate continuously automatically even if the button is not pressed.
- Scanning Interval(ms) : This option can be set when the 'Continuous Scan' option is enabled. Set the operation interval for continuous operation. The setting value can be set in ms.

- Input Configuration : The user can set the output method of the read data.
  - Broadcast : Send the read data to all possible places.
  - Focus : Print the read data to the location where the cursor is located.
  - EmuKey : Send the read data to EmuKey.
  - Clipboard : Send the read data to the Clipboard.
- End char post on input : Enter the last character of the read data.
- Key Configuration : The user can assign the barcode reading function to the keypad of the device. Touching the checkbox to display  it means that the barcode reading function is assigned to the corresponding keypad. The keypads that can be set are as follows.



| Key | Function           |
|-----|--------------------|
| F1  | F1 Function Button |
| F2  | F2 Function Button |
| F3  | F3 Function Button |
| F4  | F4 Function Button |
| F5  | Side Button 1      |
| F6  | Side Button 2      |
| F7  | Trigger Button     |

#### 4. Development of UHF RFID function application

The user can also develop their own applications to collect barcode data. For more information, please refer to the 'Barcode Programming Guide' included in the SDK.

# KEYBOARD WEDGE Features

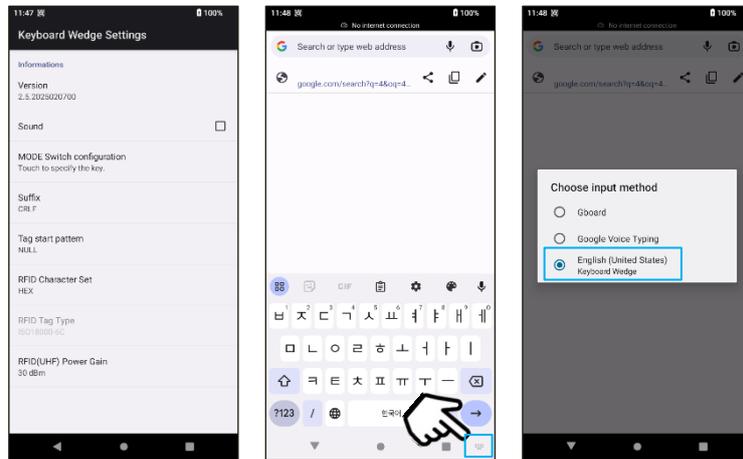
The KEYBOARD WEDGE application is an application that supports the function of outputting UHF and Barcode captured data to the location of the cursor. With the KEYBOARD WEDGE application, the user can manage captured data using commercial data management programs, etc., even if you do not develop an application.



Barcode demo app supports similar functionality with the 'FOCUS' feature.

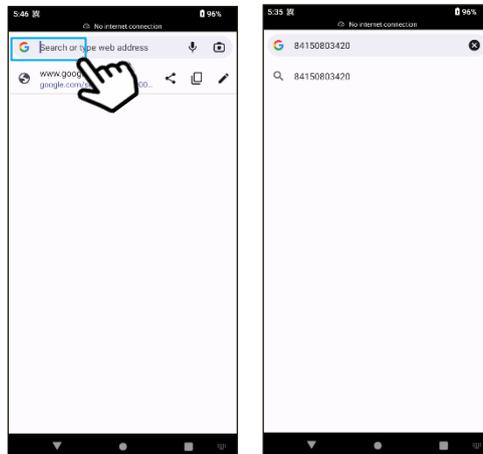
## 1. KEYBOARD WEDGE Application

Run the KEYBOARD WEDGE function and click the  icon at the bottom of the screen to select 'Keyboard Wedge', and the device's input method will be set to 'Keyboard Wedge'.



## 2. How to use KEYBOARD WEDGE features

Referring to the example below, when the Keyboard Wedge function is set, if the user place the cursor in the search window and capture UHF RFID tag or barcode data, the captured data will be output in the search window where the cursor is located. For more detailed instructions, please refer to the "User Guide for Keyboard Wedge" document included in the SDK.



## NFC features

**AT909** is equipped with an NFC antenna on the front of the device. When the NFC function is activated, various NFC tag data can be collected.



NFC function is an optional feature that must be selected upon purchase and is not included by default.



# Product Warranty

## 1. AT909 Product Details

You can find more detailed information about **AT909** by visiting **ATID** homepage.

ATID Homepage



<https://atid1.com/>

## 2. SDK Download

If you need the SDK for **AT909**, please download it from our website or contact your place of purchase or **ATID**.

## 3. Warranty and Technical Support

All **ATID** products are eligible for free repairs for one year from the date of manufacture. However, in the case of defects caused by customer negligence during use, repairs will be charged even during the free repair period. For warranty, technical support, and inquiries regarding this product, please contact the place of purchase or contact us.

## 4. Certification

### FCC Caution

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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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 device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction

Specific Absorption Rate (SAR) information:

This product meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health.

FCC RF Exposure Information and Statement The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Device type: AT909 (FCC ID: VUJ-AT909) was also tested against these values. The highest reported SAR values for head, body-worn, Hotspot accessory are 0.33 W/kg, 1.14 W/kg, 1.14 W/kg respectively. The device tested typical body wear operations with the back of the product 10mm from the body. To meet FCC RF exposure requirements, use accessories that maintain a separation distance of 10mm between the user's body and the back of the product. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

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

## CE Caution

**Manufacturer's Name:** ATID CO., LTD.

**Product name:** Portable reader

**Trade Mark:** N/A

**Model number:** AT909

**Operating Temperature:** 0° C to 35° C

This device in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. All essential radio test suites have been carried out.

The construction of the radio equipment of this product complies with the applicable European requirements for the use of the radio spectrum.

The RF frequencies can be used in Europe without restriction.

This product is intended for sale and application in a business environment.

| Function         | Operation Frequency  | Modulation                                     | Max RF Output |
|------------------|--|--|---------------|
| <b>2G</b>        | E-GSM900: Tx: 880–915MHz, Rx: 925–960MHz<br>DCS1800: Tx: 1710–1785MHz, Rx: 1805–1880MHz  | GPRS: GMSK<br>EGPRS : 8PSK                     | 31.85dBm      |
| <b>3G</b>        | WCDMA Band I: Tx: 1920–1980MHz, Rx: 2110–2170MHz<br>WCDMA Band VIII: Tx: 880–915 MHz, Rx: 925–960 MHz  | QPSK   | 23.30dBm      |
| <b>4G</b>        | LTE Band1: Tx:1920–1980 MHz, Rx: 2110–2170 MHz<br>LTE Band3: Tx: 1710–1785MHz, Rx: 1805–1880MHz<br>LTE Band7: Tx: 2500–2570MHz, Rx: 2620–2690MHz<br>LTE Band8: Tx: 880–915MHz, Rx: 925–960MHz<br>LTE Band20: Tx: 832–862MHz, Rx: 791–821MHz<br>LTE band38: Tx: 2570–2620MHz, Rx: 2570–2620MHz<br>LTE band40: Tx: 2300–2400MHz, Rx: 2300–2400MHz  | QPSK, 16QAM                                    | 24.12dBm      |
| <b>2.4G WIFI</b> | WIFI: IEEE 802.11b/g/n HT20: 2412–2472MHz<br>IEEE 802.11n HT40: 2422–2462MHz   | DSSS, OFDM                                     | 15.36dBm      |
| <b>5GWIFI</b>    | IEEE 802.11a/n/ac(20M): 5150MHz ~5250MHz/ 4 channel<br>IEEE 802.11n/ac(40M): 5150MHz ~5250MHz/ 2 channel<br>IEEE 802.11ac(80M): 5150MHz ~5250MHz/ 1 channel<br>IEEE 802.11a/n/ac(20M): 5250MHz ~5350 MHz/ 4 channel<br>IEEE 802.11n/ac(40M): 5250MHz ~5350 MHz/ 2 channel<br>IEEE 802.11ac(80M): 5250MHz ~5350 MHz/ 1 channel<br>IEEE 802.11a/n/ac(20M): 5725MHz ~5850MHz/ 5 channel<br>IEEE 802.11n/ac(40M): 5725MHz ~5850MHz/ 2 channel<br>IEEE 802.11ac(80M): 5725MHz ~5850MHz/ 1 channel | OFDM   | 14.62dBm      |
| <b>BT</b>        | EDR: 2402–2480MHz<br>BLE: 2402–2480MHz   | EDR: GFSK, $\pi/4$<br>DQPSK, 8DPSK<br>BLE:GFSK | 7.99dBm       |
| <b>RFID</b>      | 865.7–867.5MHz   | ASK  | 29.973dBm     |
| <b>NFC</b>       | 13.56MHz   | ASK  | 28.28         |

The use of the 5150 – 5350 MHz band is restricted to indoor use only. This restriction will be applied in all member states.

Restrictions in the 5 GHz band:

According to Article 10 (10) of Directive 2014/53/EU, the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in Belgium (BE), Bulgaria (BG), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE), Turkey (TR), Norway (NO), Switzerland (CH), Iceland (IS), and Liechtenstein (LI).

The host manufacturer has the responsibility that the host device should be compliance with all essential requirement of RED.

The simplified EU declaration of conformity referred to in Article 10(10) shall be provided as follows: Hereby, Advanced Technologies SRL declares that the radio equipment type Tablet PC is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: [www.nst-it.com](http://www.nst-it.com).

SAR

After laboratory measurement. The highest reported SAR values for head, body-worn accessory are 0.50 W/kg, 1.06 W/kg respectively.

The device complies with RF specifications when the device used at 5mm from your body.

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The contents of the user guide may be changed without notice for product specification changes or improvements.