CipherLab
User Guide

IntelliWorker

For Android

WR30 Series

Version 1.0

CIPHER LAB

CIPHERLAB CO., LTD.
Website: http://www.CipherLab.com

RELEASE NOTES

Version	Date	Notes
1.0	Feb 29th, 2024	Initial release.

CONTENT

INTRODUCTION

IntelliWorker is an application designed to facilitate fast and flexible deployment and management of CipherLab Wearable Rings Scanners.

Seamingless file configuration and firmware updates are easily achieved through intergration CipherLab systems such as ScanMaster and ReMoCloud. Additionally, the app provides monitoring capabilities, allowing users to effortlessly track work activities, locate devices, and access scanner information, all presented through an intuitive interface design.

FEATURES

- Supports CipherLab Android mobile computers:
    - Android 9.0 (RK25 & RK95)
    - Android 10 (RS35)
    - Android 11 (RK25, RS35 & RS51)
    - Android 12 (RK26, RK95 & RS36)

- Supports CipherLab WR30 Wearable Ring Scanners:
    - WR30 Series

- Offers an easy way of resetting and reconnecting all active wireless connections, including Bluetooth, Wi-Fi, and 4G LTE/5G, for mobile computers.

Chapter 1

CHAPTER 1. GET STARTED WITH INTELLIWORKER

This chapter provides a comprehensive guide to get started with IntelliWorker. It includes a brief introduction to the main interfaces, outlines two wireless connection methods for pairing the scanner with your mobile computer, and covers the Scan Test function and Beeper & LED Indication.

IN THIS CHAPTER

1.1. INTERFACE OVERVIEW

This section guides you through the **IntelliWorker** overview interface, including **Device Page**, **Activity Page**, and **Proximity Page**.

1.1.1. DEVICE PAGE

The **Device Page** allows you to pair your WR30 Scanner with your mobile device, offering options to **configure the WR30 scanner** and **update its firmware**. It also shows information about the paired scanner's **battery level** and **ring scanner model**.

Tap to pair the scanner with your device.

1. **Displays the Ring Scanner Model.**
2. **Tap to choose Output Settings or select a Configuration File.**

1. **Lists the Firmware Version.**
2. **Tap to update the WR30 firmware.**

Shows the paired scanner's Battery Level.
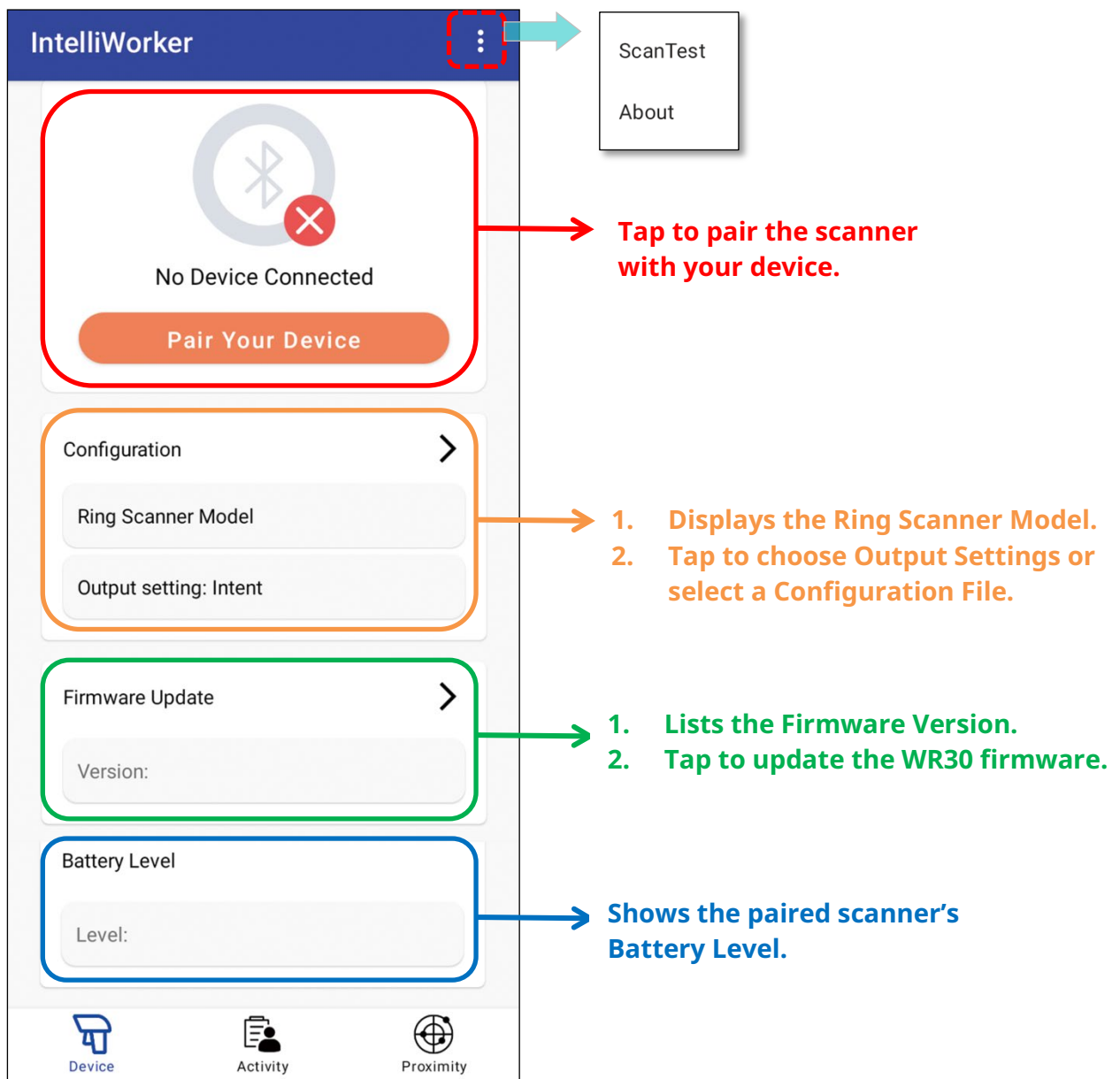
1.1.2.   ACTIVITY PAGE

The **Activity Page** is primarily used for documenting work activities, capturing **working time** and **scanning performance**. The documented activities are listed at the bottom of the page.

Tap to Start/Stop the timer for capturing work time.

Displays the number of successful scans completed during work hours.
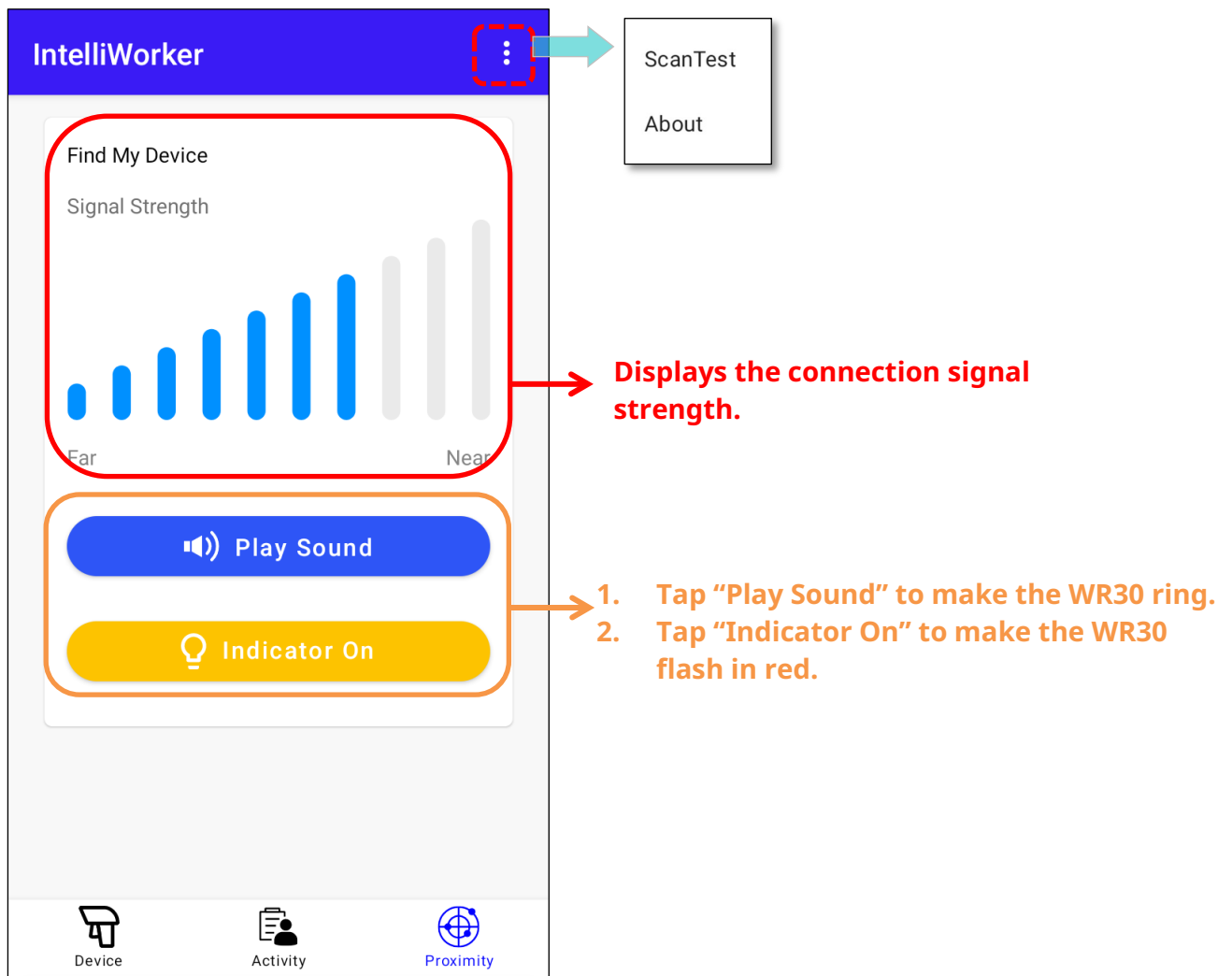
Lists the documented activities.
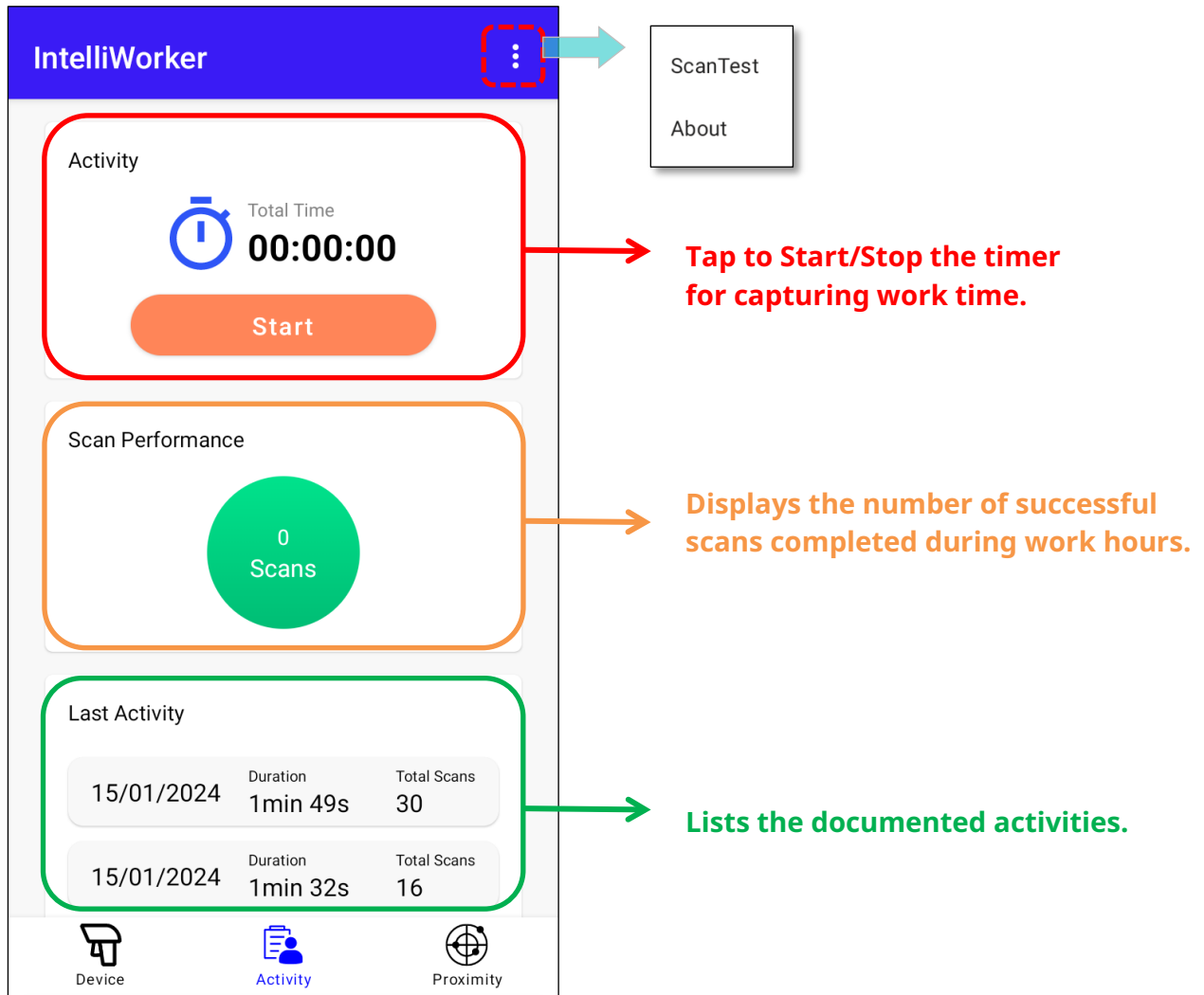
Note:

The recorded activities will be erased when the device is turned off or disconnected from the scanner. Save your documentation before the scanner disconnects or shuts down.

1.1.3. PROXIMITY PAGE

The **Proximity Page** is primarily used for locating the device. If the connected scanner cannot be found nearby, use "**Find My Device**" to assist in locating them.

Displays the connection signal strength.

1. **Tap "Play Sound" to make the WR30 ring.**
2. **Tap "Indicator On" to make the WR30 flash in red.**

ABOUT

Tap **more** ⋮ on the upper-right corner, then tap **About** to check **IntelliWorker** version.

For information about **ScanTest**, please refer to 1.3. ScanTest.

1.2.   PAIR YOUR DEVICE

This section guides you through pairing your WR30 Wearable Ring Scanner with your mobile computer, including setting the WR30 to enter the proper interface mode and connecting the scanner to your mobile computer through Bluetooth or NFC(Near Field Communication).

First, follow the instructions in 1.2.1.Setup Barcodes to enter BLE SPP Lite Mode. Then, proceed with either 1.2.2 Bluetooth (Scan to Pair) or 1.2.3 NFC (Tap to Pair) to complete the wireless connection.

Note: It is highly recommended to initially pair through 1.2.2 Bluetooth (Scan to Pair) for the **first wireless connection**, which enables you to seamlessly connect the device without scanning the 1.2.1.Setup Barcodes.

1.2.1.   SETUP BARCODES

Please use your WR30 scanner to scan through the following setup barcodes to establish seamless WPAN connections:

(1)   Install the battery on the WR30 scanner, then press and hold the trigger for 3 seconds to turn it on.

(2)   Enter the configuration mode by scanning the setup barcode labeled "**Enter Setup**".

Enter Setup

(3)   After entering configuration mode, proceed to scan the barcode below to activate "**BLE (Bluetooth Low Energy) SPP Lite Mode**" for efficient Blutooth Low Energy Communication.

100035

Activate BLE SPP Lite Mode

(4)   Then, scan the barcode labeled "**Update**" to finalize the configuration. The scanner will automatically restart, entering the mode you configured.


Update

With these steps completed, you are now ready to connect your scanner to your device using either Bluetooth or NFC.

For more information about WR30 Wearable Ring Scanner, please refer to Ring Scanner User Guide.

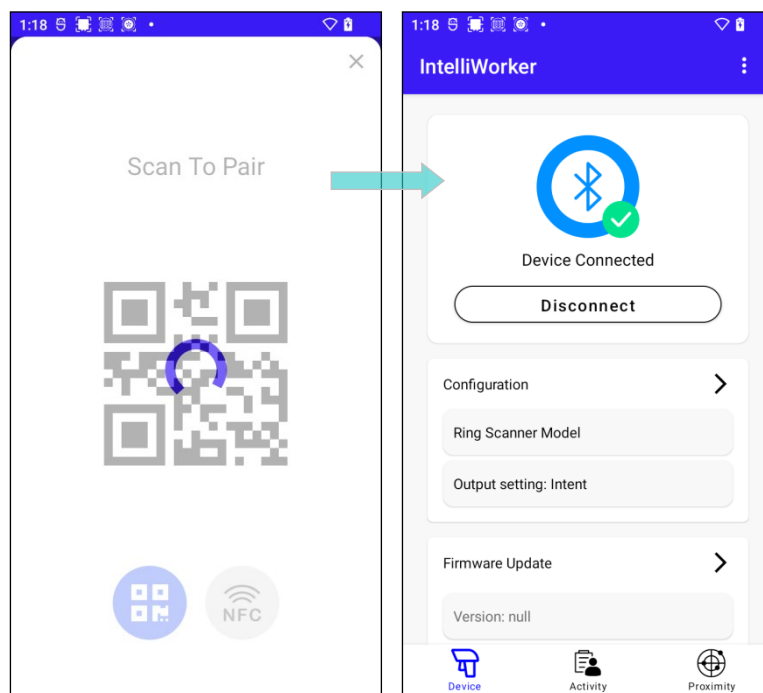## 1.2.2. BLUETOOTH (SCAN TO PAIR)

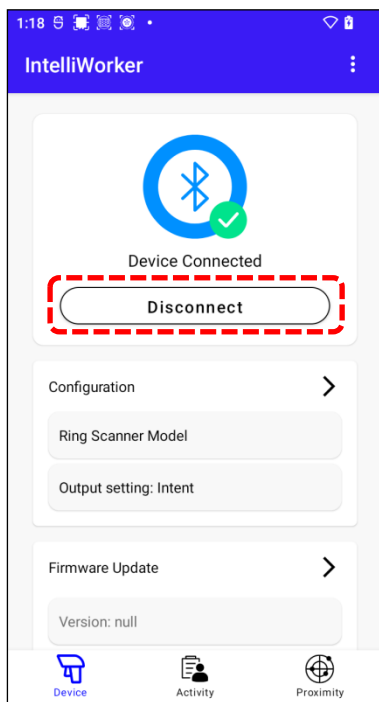To connect your scanner to IntelliWorker via **Bluetooth**:

(1) Use your scanner to scan the **Setup Barcodes** to enter "**BLE SPP Lite Mode**".

(2) Enable **Bluetooth** in your mobile computer.

(3) Open **IntelliWorker** on your mobile computer.

(4) Nevigate to the **Device Page** and tap on "**Pair Your Device**".
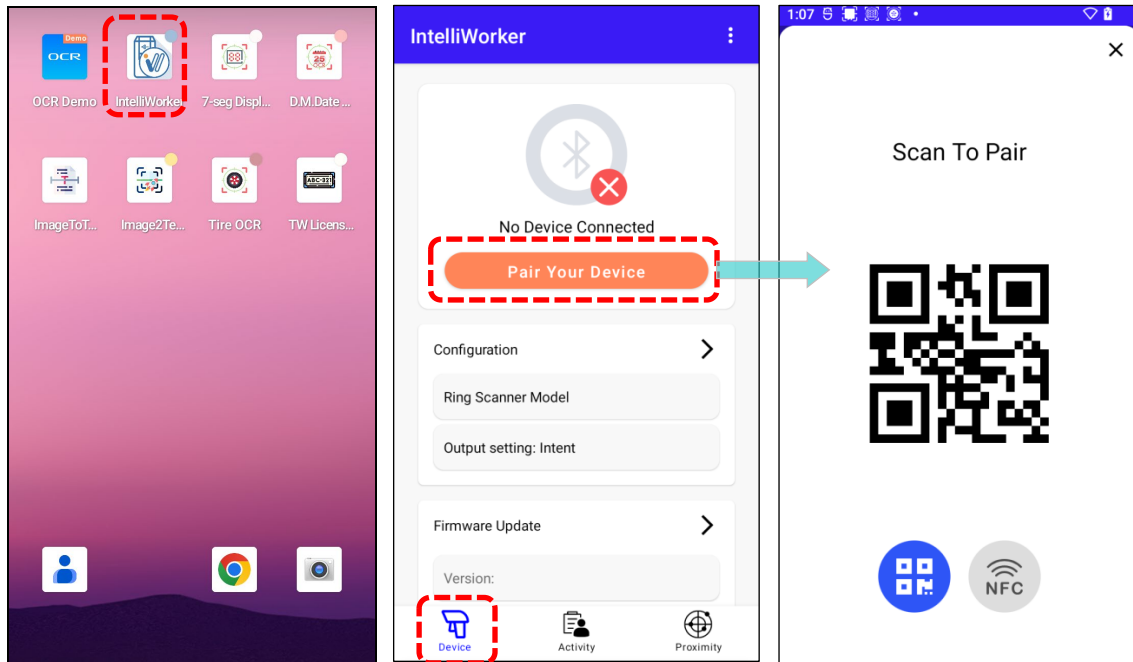
(5) Use the W30 scanner to scan the presented barcode and connect it to your device.

To disconnect the WR30 ring scanner from the mobile computer, tap "**Disconnect**".

Note:

(1)   If you turn off the WR30 while connected, the connection will automatically resume upon restarting the WR30.

(2)   Manually tapping "Disconnect" will require you to later pair the device again via Bluetooth QR code or using NFC to resume the connection.

### 1.2.3. NFC (TAP TO PAIR)

To connect your scanner to **IntelliWorker** via **NFC**, follow these steps:

(1) Use your scanner to scan the **Setup Barcodes** to enter "**BLE SPP Lite Mode**".

(2) Enable the **Bluetooth** and **NFC** functions on your mobile computer.

(3) Open **IntelliWorker** on your mobile computer.

(4) Nevigate to the **Device Page** and tap on "**Pair Your Device**".

(5) Tap on the **NFC** icon.
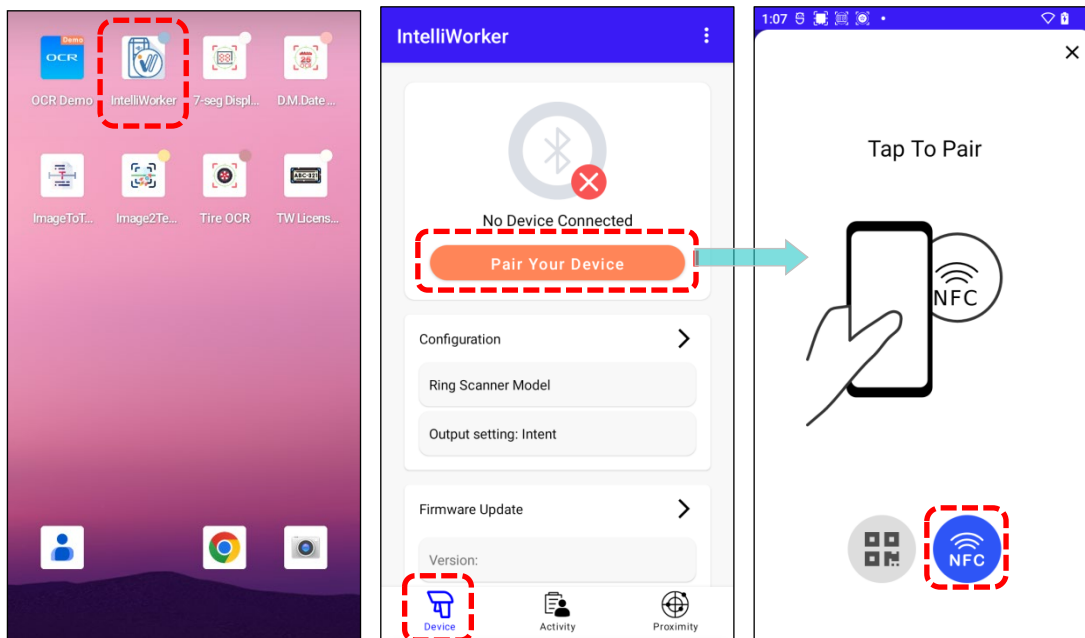
(6) Position the W30 scanner to the NFC area of the mobile computer within 1 cm to connect it with your mobile device.
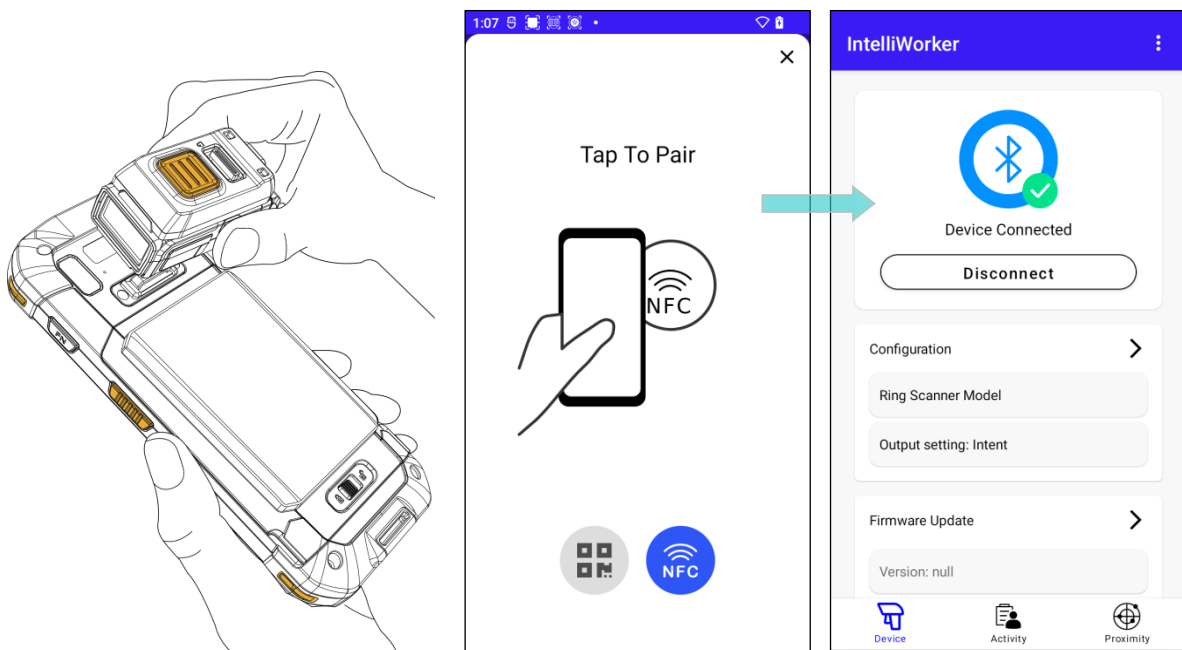
1.2.4. TROUBLESHOOTING

This section focuses on troubleshooting wireless connections, addressing potential failures that may occur due to **incorrect interface mode** or **failure to disconnect from previous Bluetooth pairings**.

Potential issues and their practical solutions are listed below.

INCORRECT INTERFACE MODE

Make sure to connect your scanners with the device in **BLE SPP Lite Mode**. Most failure connections arise from incorrect interface mode issuing from **pairing steps** or **project settings**.
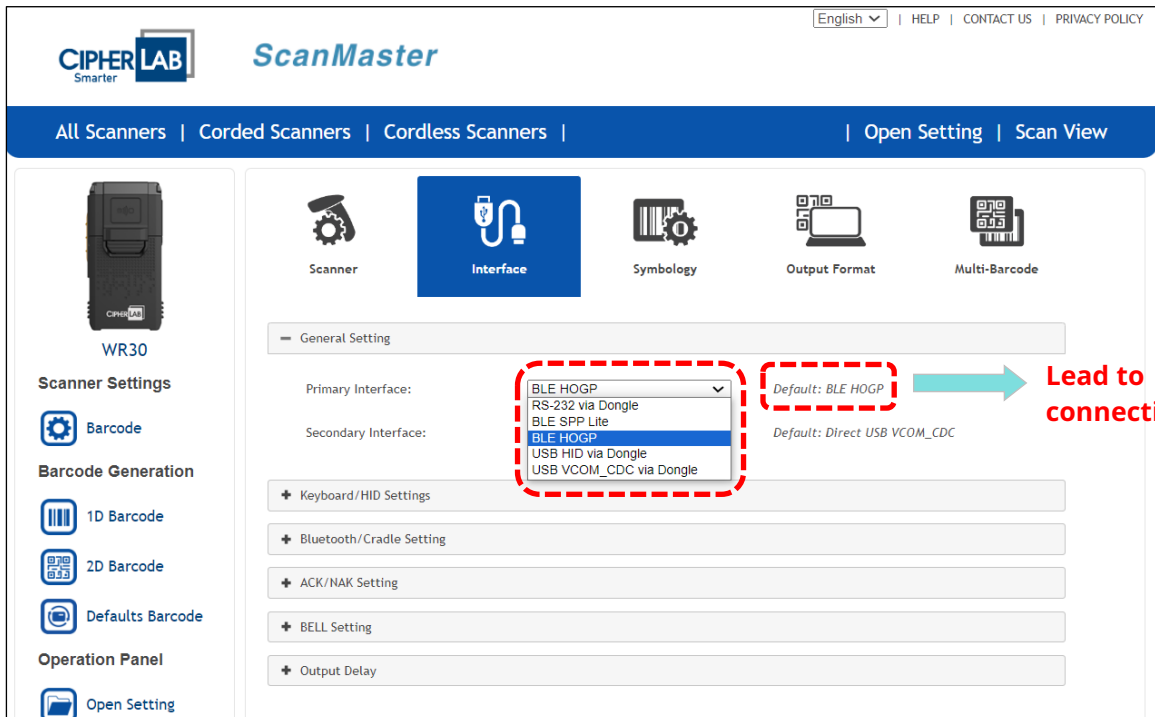
ISSUING FROM PAIRING STEPS

Incorrect pairing steps may lead to connection failures. Make sure to enter the BLE SPP LITE mode by scanning the setup barcodes provided in section **1.2.1. Setup Barcodes.**

ISSUING FROM PROJECT SETTINGS

If the project settings are configured with the primary interface set as "**BLE HOGP**" by default, the WR30 will encounter connection issues with the device. To ensure seamless connectivity after deployment or configuration file update, ensure that the project settings are configured with "**BLE SPP Lite**" mode.

For more detailed information, please refer to ScanMaster Web for Scanner Configuration.

If the project files are set to any mode other than "**BLE SPP Lite**", your screen may continue spinning after updating the configuration file.
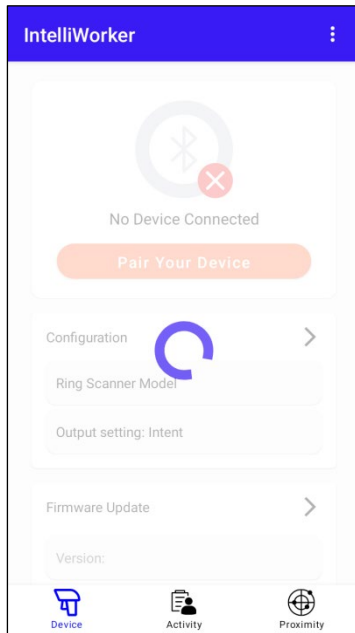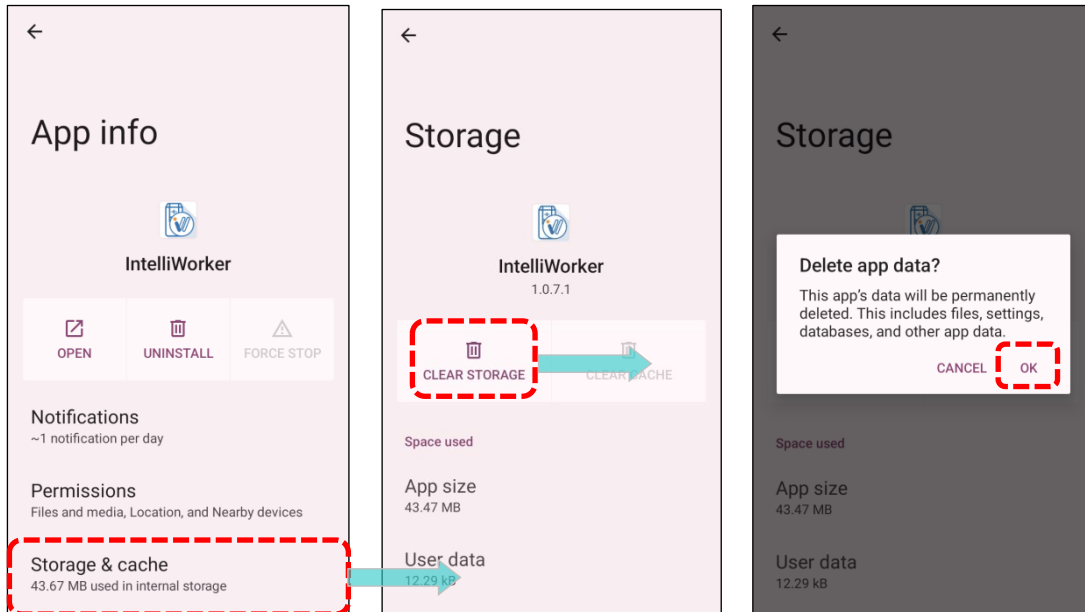

To successfully connect in this scenario, follow the instructions below for a solution:

(1) Navigate to the **Home screen**, and long press the App **IntelliWorker**.

(2) Tap "**App info**" to enter App info page.

(3) Tap on "**FORCE STOP**", then continue to tap on "**OK**".
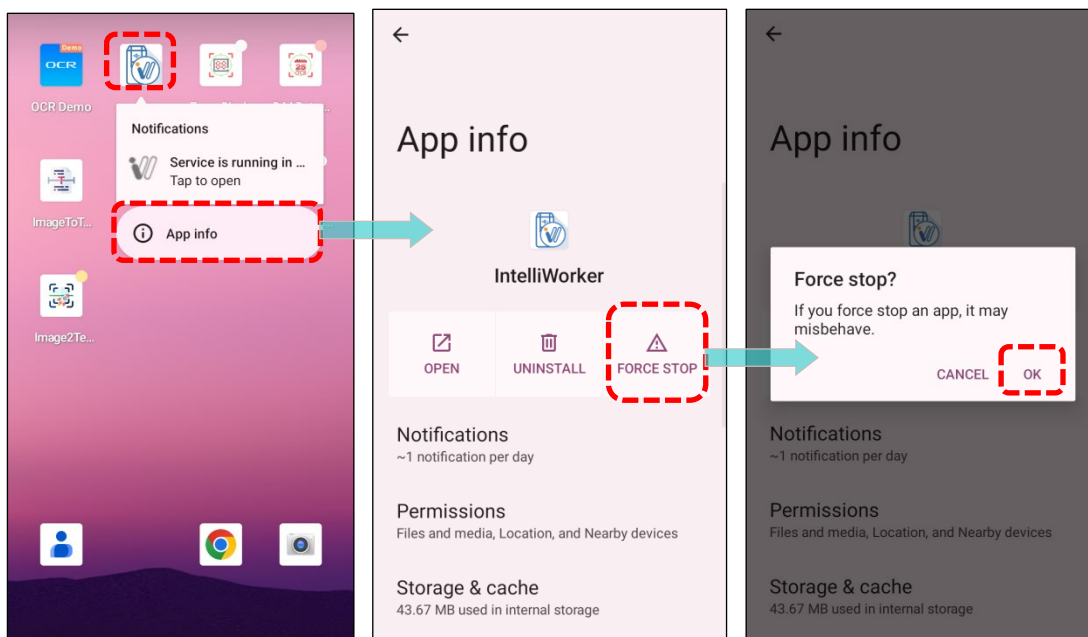
(4) Continue to tap "**Storage & cache"** and "**OK"** to delete app data.

(5) Restart your mobile computer.

(6) Use your WR30 scanner to scan the setup barcodes below to enter "**BLE SPP Lite Mode".** (**Enter Setup** > **Activate BLE SPP Lite** > **Update**)

Enter Setup

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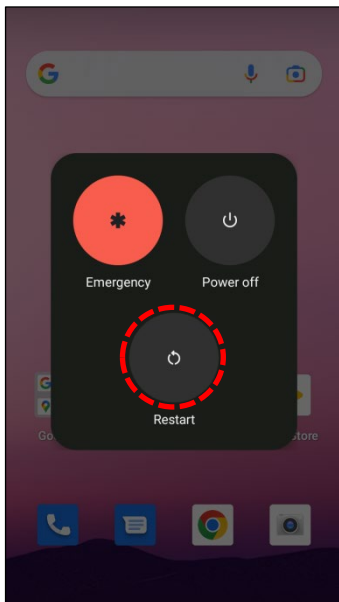
Activate BLE SPP Lite Mode

Update

(7) Access **IntelliWorker** and reconnect the scanner with the mobile computer.
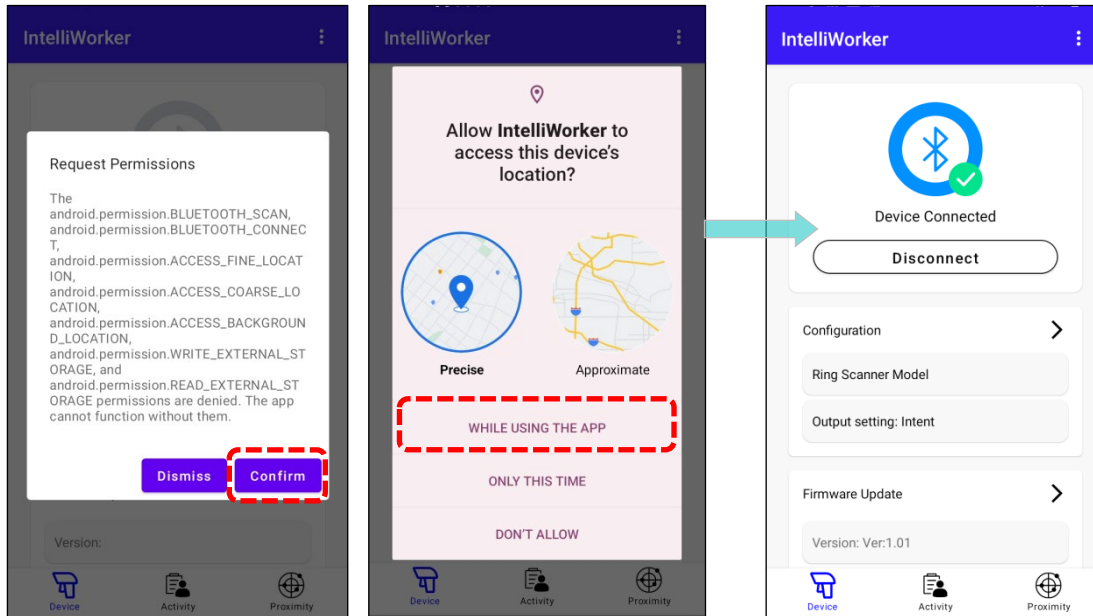
NOT DISCONNECTING FROM ANDROID PAIRING

If the scanner **is connected to the device via the Android system**, or if the scanner **has not been forgotten from the device beforehand**, attempting to switch the interface mode directly to **BLE SPP Lite Mode** will result in a failed connection to **IntelliWorker**.

- Android System
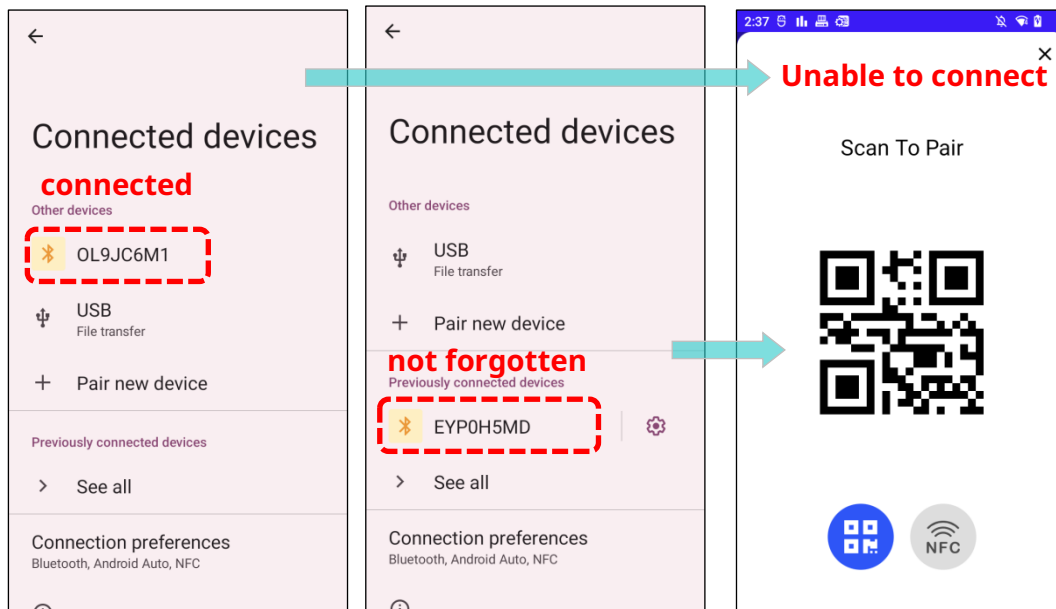
Please follow the instructions below for solution:

(1) Disable the Blutooth function of the device.
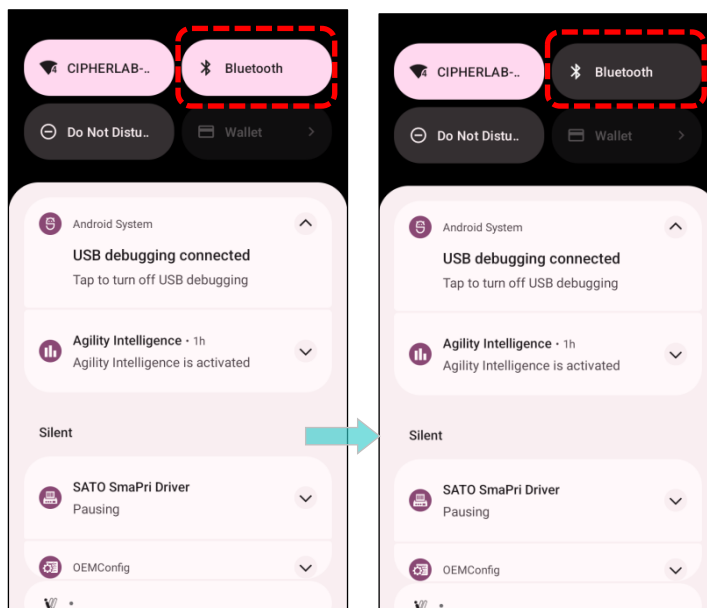
(2)   Scan through the following barcordes to switch the scanner to **BT HID (HOGP) Mode** and select a **Keyboard Type**. Subsequently, reconnect it to the Android system.

Enter Setup

100036

Activate BT HID (HOGP)

109901

Keyboard Type No:1 PCAT (US)

Update

(3)   Ensure proper disconnection from the Android system by tapping **"Disconnect"** and "**Forget device.**"
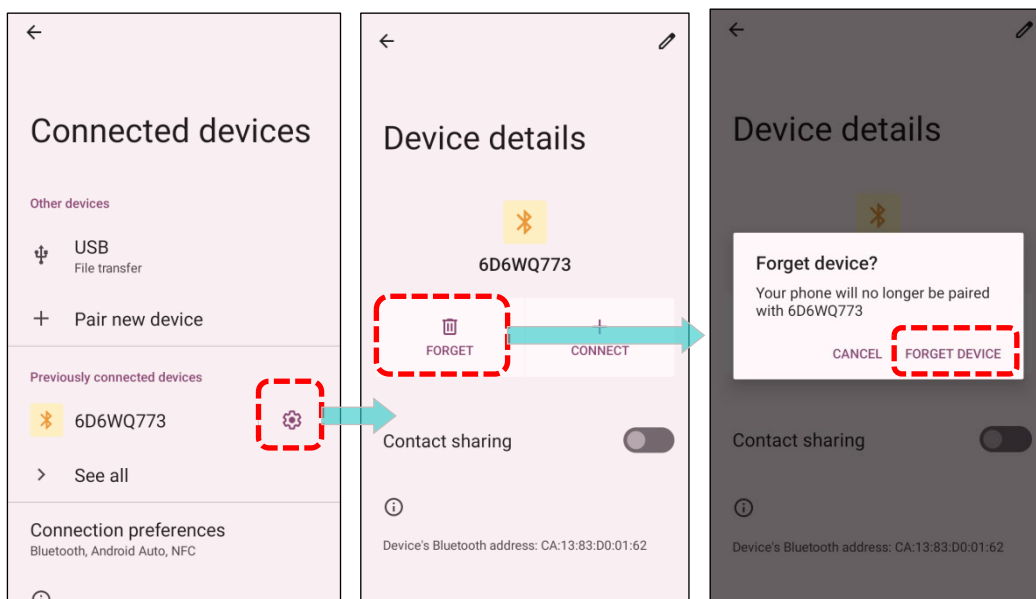
(4)   Use WR30 Ring Scanner to scan the **BLE SPP Lite setup Barcodes**.
       (Enter Setup > Activate BLE SPP Lite > Update)

(5)   Open **IntelliWorker** to reestablish the pairing with the device.
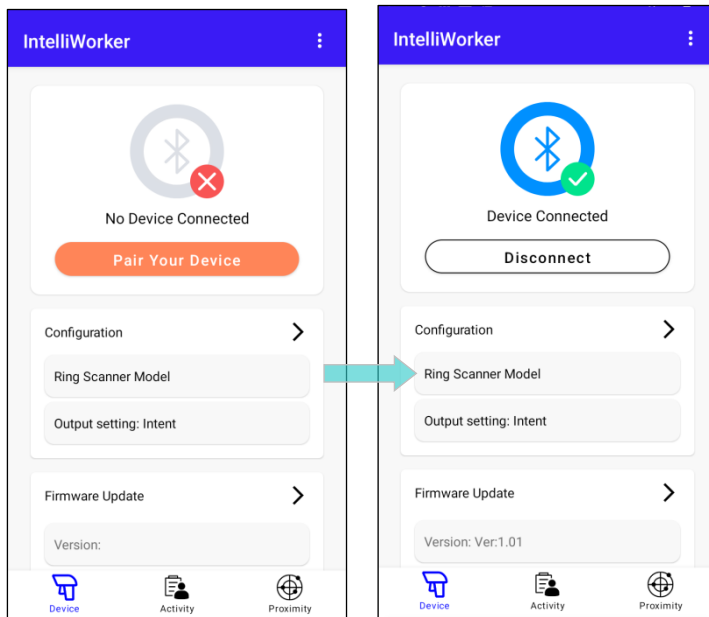
1.3. SCAN TEST

The "**ScanTest**" function enables users to assess and verify the scanner's capabilities by activating a test scenario. To perform the scan test:

(1) Connect the scanner to your mobile device through IntelliWorker.

(2) Ensure the output setting is set as "**intent**".
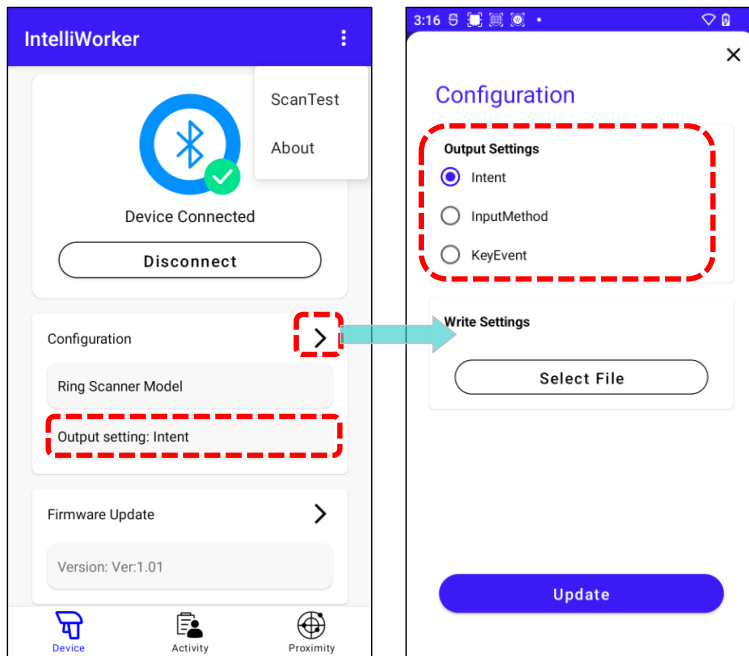
(3) Tap on **More** ⋮ in the upper right corner.

(4) Activate the test scenario by tapping "**ScanTest**".

21
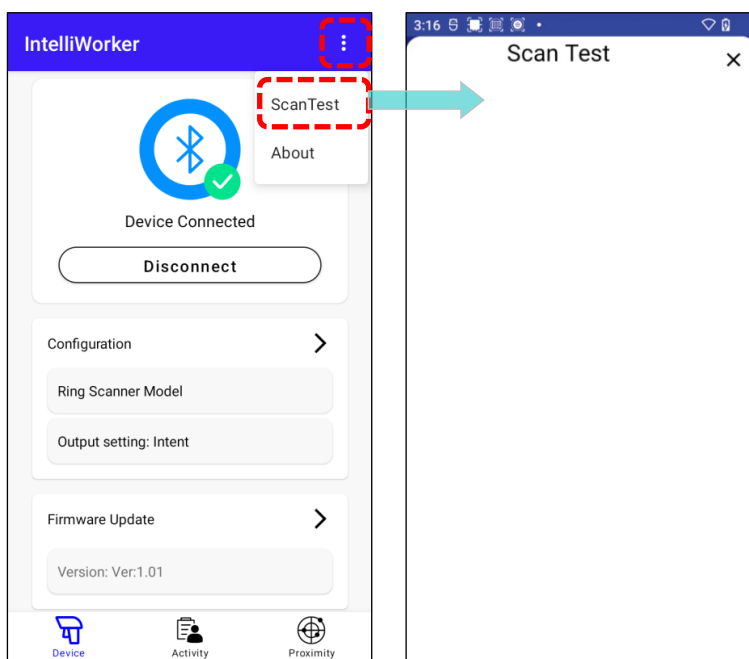
(5)　Start scanning barcodes with the scanner. The scanned data will appear promptly on the screen.
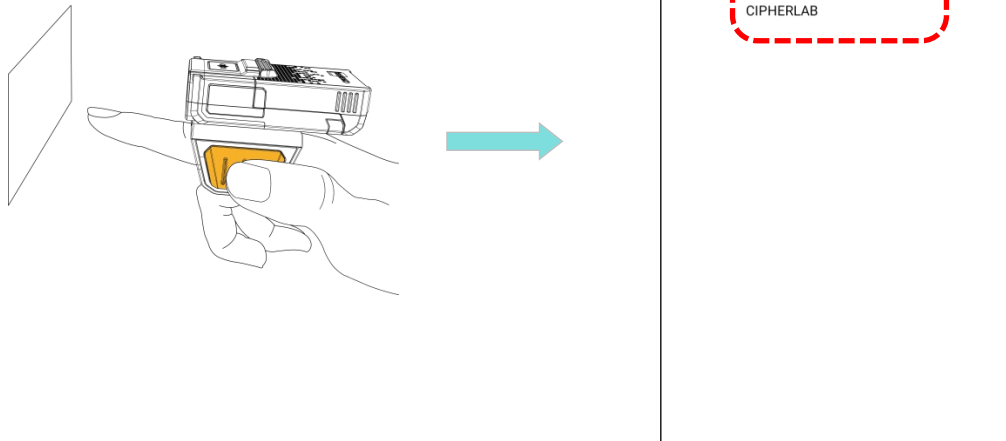
1.4. BEEPER & LED INDICATION

The table below provides an overview of the indications displayed by the beeper and LED when using **IntelliWorker**.

For a more detailed list of the beeper and LED performances specific to the WR30 Wearable Ring Scanner, please refer to Section 1.3 LED Indicator and 1.4 Beeper in the WR30 Ring Scanner User Guide.

Beeper Performance	LED Performance	Description
One long beep, high tone	Red, single flash	Power on
Two short beeps, low-high	Red, single flash	Power off
None	Blue, flashing	Waiting for connection
Six short beeps, low-high	Red, flashing	Enter Configuration Mode
Two short beeps, low-high	Red, flashing	Activate BLE SPP Lite Mode successfully
Six short beeps, low-high	Red, single flash	Update Setup Barcodes
Three short beeps, ascending low to high	Blue, flashing (quick flashes)	Connection is established
Three short beeps, descending high to low	None	Connection is out of range or suspended
One short beep, high tone, with vibration ▶ Programmable, default to 4 KHz	Green, single flash (quick flash)	Good Read
Two short beeps, low-high	Red, flashing	Firmware/Configuration file updating
Six short beeps, low-high	Red, single flash	Firmware/Configuration file update successfully

Note:

In some cases, LED colors may overlap due to the arrangement of LEDs, resulting in color blending (e.g., producing purple).

Chapter 2

CHAPTER 2. FUNDAMENTAL FEATURES

This chapter provides a simple guide to the basic features of IntelliWorker, including tracking daily activities, locating scanners, and accessing device information.

IN THIS CHAPTER

2.1. TRACK ACTIVITIES

The **"Track Activities"** feature provides scanning statistics, allowing you track your daily tasks such as working time and scanning performance. This offers valuable insights to enhance your workflow.

(1)   Open **IntelliWorker** on your mobile device and ensure the scanner is connected.

(2)   Nevigate to the **Activity Page** by tapping "**Activity**" at the bottom of the page.

(3)   Tap "**Start**" to initiate the timer and begin documenting your work activity.

(4)   Begin scanning, and observe the count of your successful scans increase during your work.
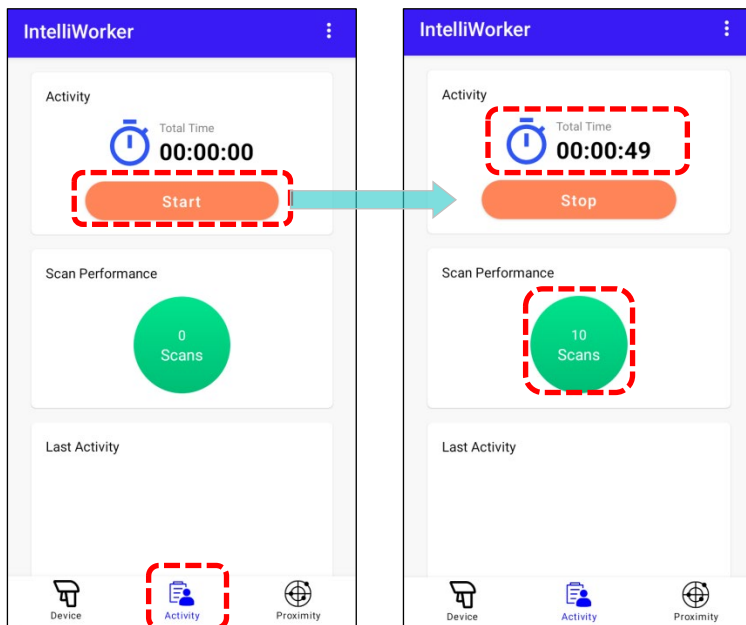
(5)   Tap "**Stop**" to conclude documenting your activity. Your recorded activity will be listed below for your reference.
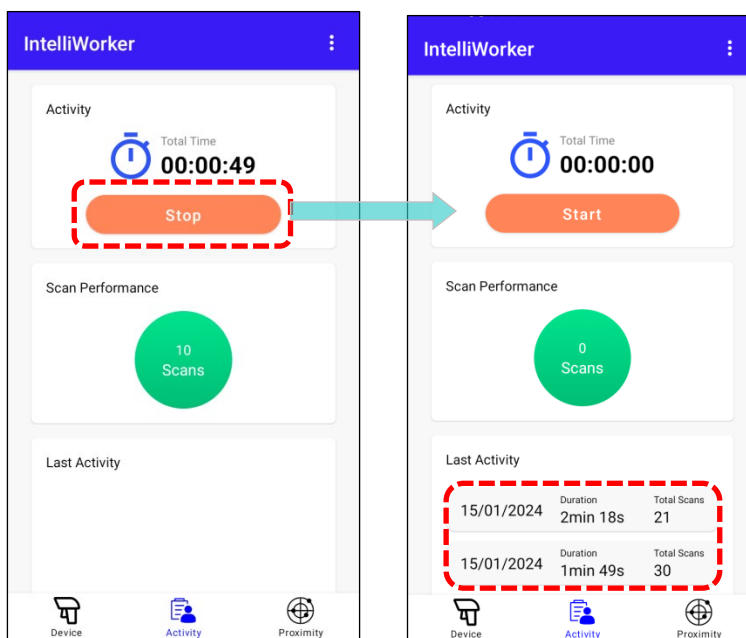
Note:

(1) View recorded activities by scrolling down to the "**Last Activities**" section at the bottom of the page.

(2) The recorded activities will be erased when the device is turned off or disconnected from the scanner. Save your documentation before disconnecting or shutting down.
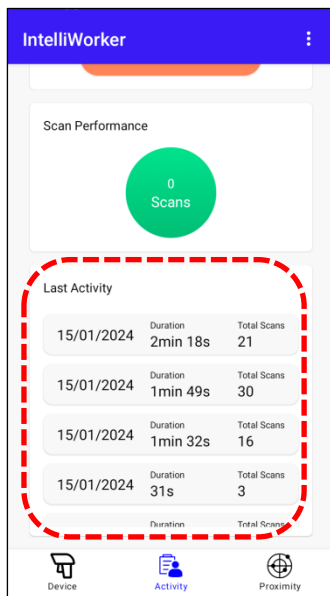
2.2.   FIND MY DEVICE

The **"Find My Device"** feature simplifies the process of locating scanners in warehouses or industrial settings by utilizing **signal strength**, **scanner sound** and **LED indicator**.

To access the feature, navigate to the "**Proximity Page**".

2.2.1.   SIGNAL STRENGTH

The connection signal strength between the mobile device and the WR30 varies based on distance. The signal is stronger when the scanner is closer and weaker when it is farther away.
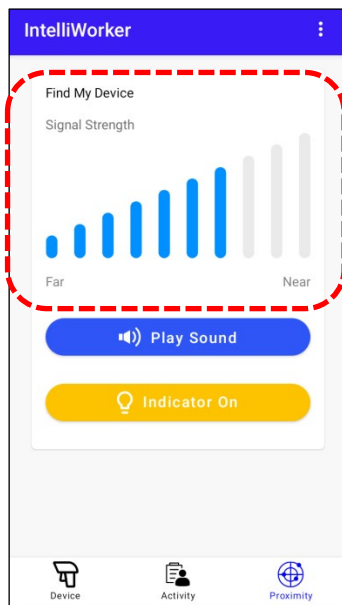
Note:

When communicating with a WR30 scanner, the device has a maximum signal reception distance of **100 meters in open environments** and **10 meters in obstructed environments**.

2.2.2.   SOUND AND LED INDICATOR
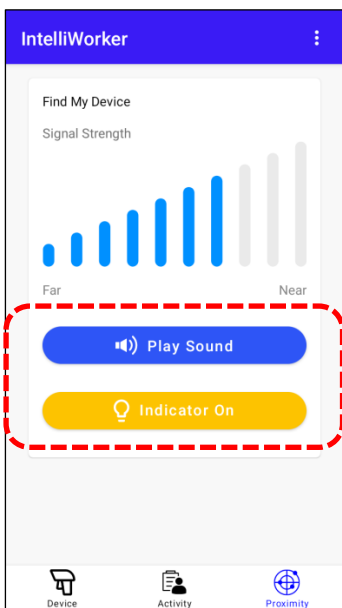
To locate the WR30 by sound, simply tap "**Play Sound**" button to make the device ring. The WR30 will emit **repetitive beeping sound** when the Play Sound option is activated.

Tap "**Stop Sound**" to stop the ringing.

To locate the WR30 by the indicator, simply tap "**Indicator On**" to make the WR30 quickly flash in red. Follow the flashing light to find the device.

Tap **"Indicator Off"** to stop the flashing.

2.3.   DEVICE INFORMATION

You can easily retrieve information of the connected WR30 scanner, including its **Firmware Version** and **Battery Level**.

To access device information, navigate to the "**Device Page**".

2.3.1.   FIRMWARE VERSION
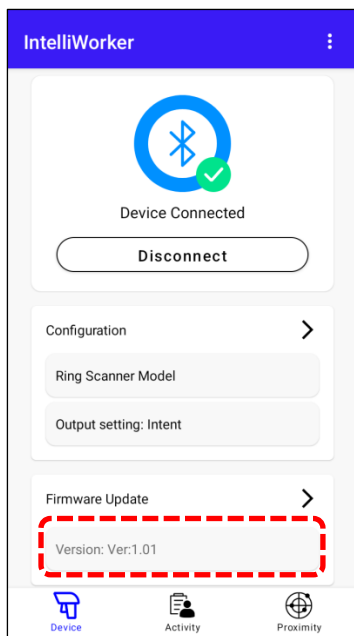
To check **Firmware Version**, nevigate to the "**Device Page**". The firmware version is listed under "**Firmware Update**."

To update the firmware for the WR30 scanner, please refer to **3.2.Firmware Update.**

2.3.2.   BATTERY LEVEL
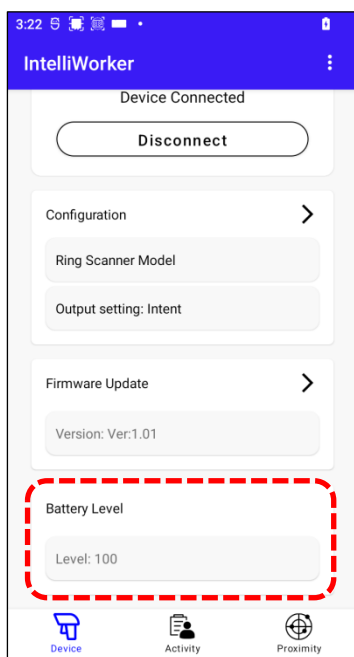
To check **Bettery Level**, nevigate to the "**Device Page**". It is listed at the bottom of the page.

Chapter 3

CHAPTER 3. CONFIGURATION & FIRMWARE MANAGEMENT

This chapter guides you through the process of configuring, updating the firmware, and mass deploying the WR30 Wearable Ring Scanners.

Follow the instructions to select and deploy a customized configuration file for your device. Ensure it runs the latest firmware to enhance its functionality and performance.

IN THIS CHAPTER

3.1. CONFIGURATION

IntelliWorker offers a fast integration for configuration capabilities. Begin by creating a configuration file on your personal computer, then deploy the file to your connected scanner using your mobile computer.

3.1.1. ON YOUR PERSONAL COMPUTER

To customize the settings for WR30, first create a configuration file on CipherLab Web ScanMaster.
(1)   Adjust the settings according to your needs and preferences.
(2)   Tap on "**Save Setting**" on the panel on the left-hand side, and a window will pop up, prompting you to name the file.
(3)   Name the file "**settings**", and tap "**OK**".
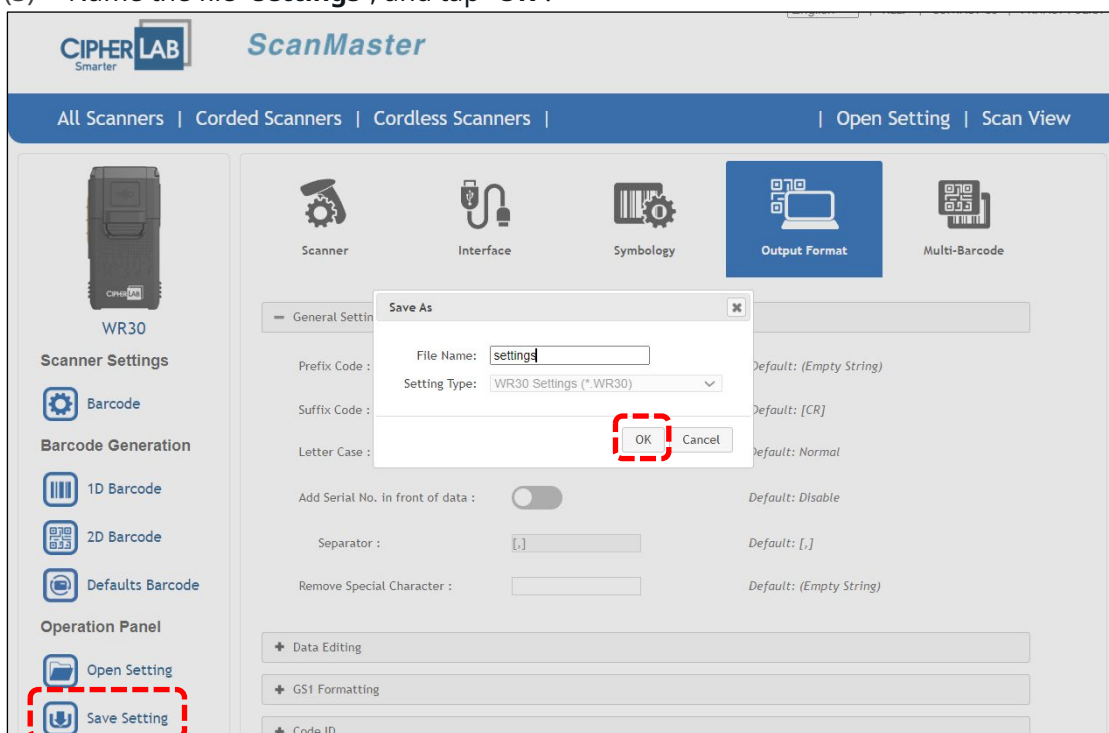
The file "**settings.WR30**" will automatically download to your PC.
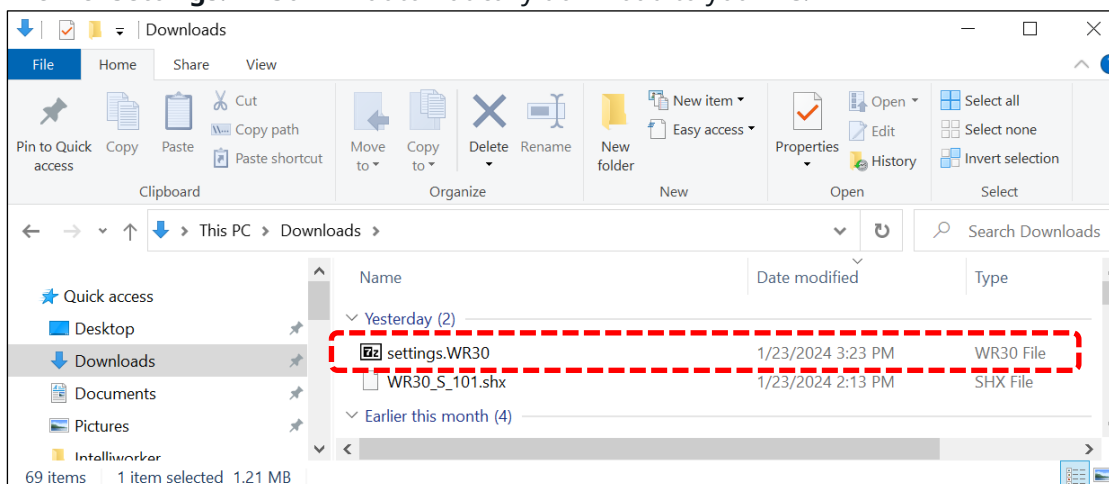
(4)   Connect your mobile computer to the PC with a cable.

(5)   Transfer the file from your PC to the designated path on your mobile device:
        Android\data\sw.programme.intelliworker\files\Download
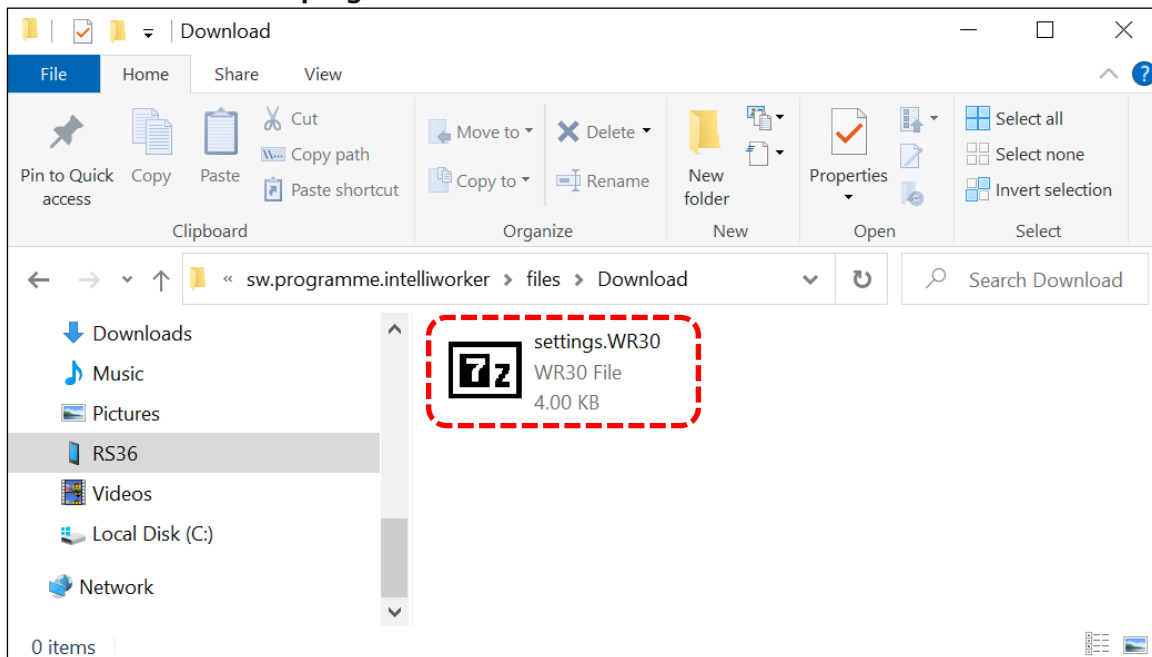
Alternatively, sign in to your Google Account to easily transfer using Drive.
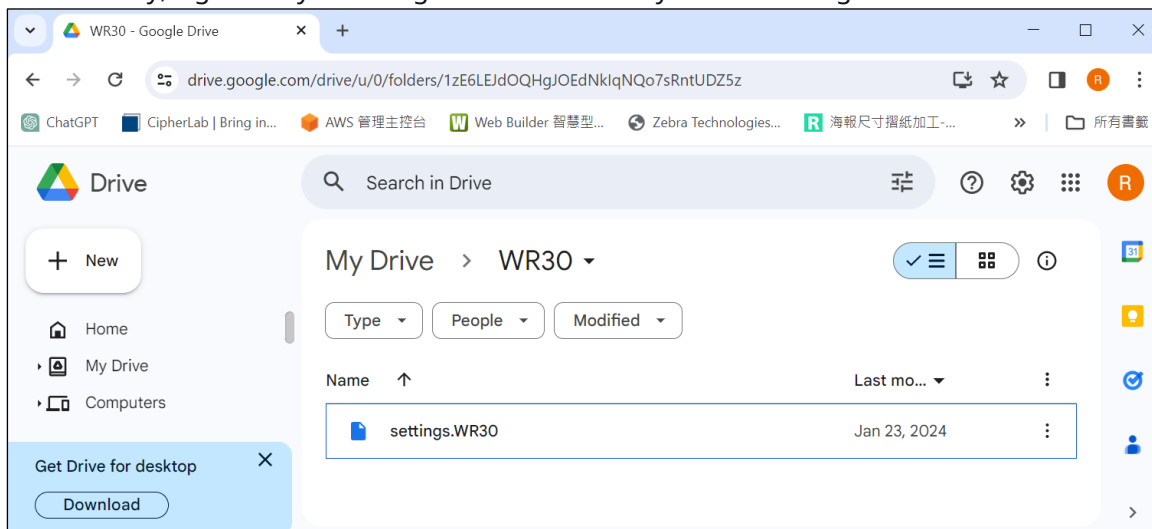
3.1.2.   ON YOUR MOBILE COMPUTER

After creating the configuration file through ScanMaster and transferring the file to a location accessible by your mobile computer, you are ready to deploy it to the scanner.

(1)   Connect your WR30 scanner to your device. Please refer to 1.2. Pair Your Device.
(2)   Navigate to the "**Device Page**" and tap "**Configuration**".
(3)   Tap "**Select File**" under **Write Settings** and locate the file.
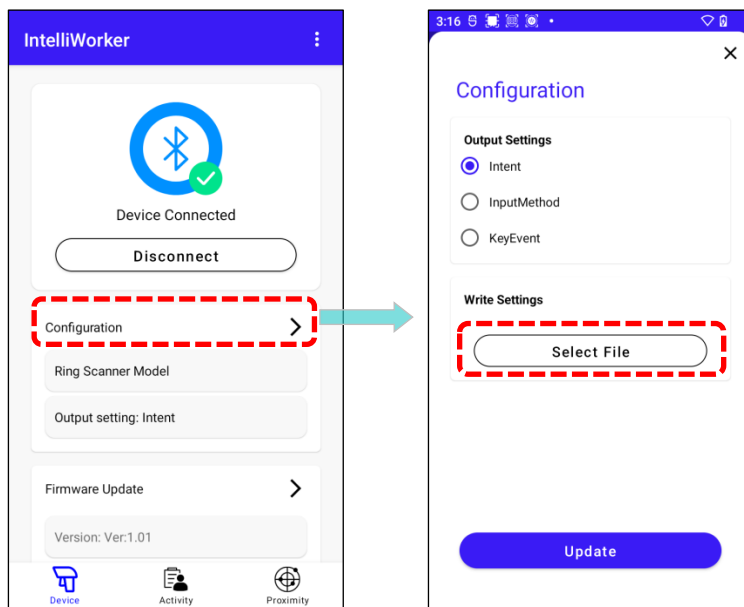
(4)   Tap on the file, and the configuration page will display your selection.
        If the file is uploaded to your Google Drive, sign in to your Google Account first, and then access the file.

Device Storage   **Google Drive**
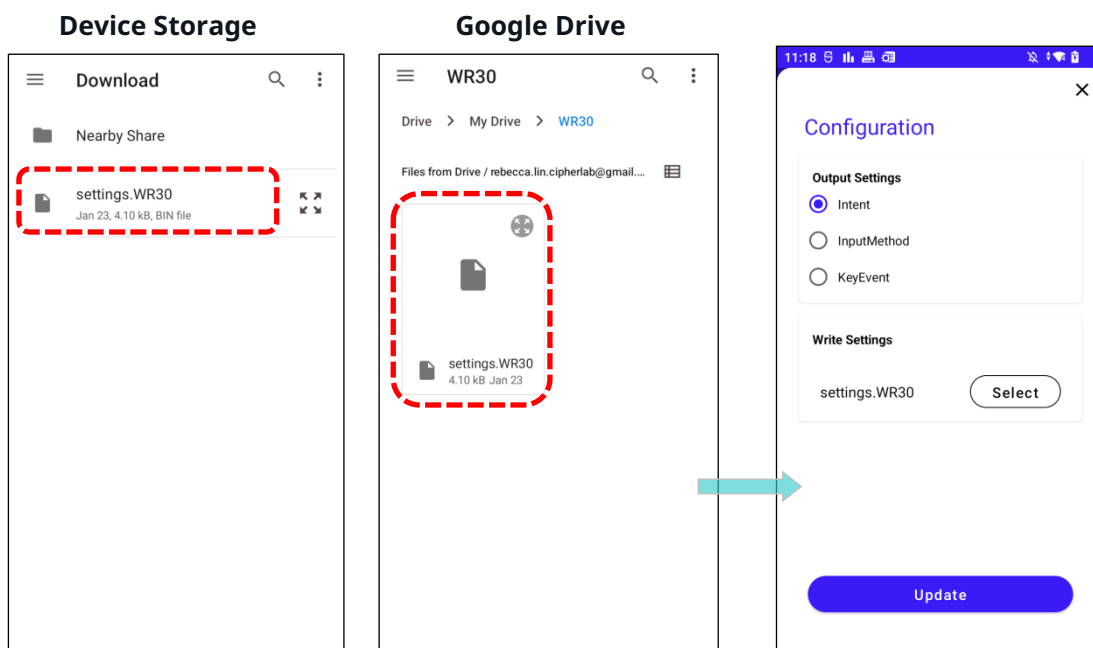
(5)　Select the **output settings** that you desire.

(6)　Tap "**Update**" to initiate the configuration process.

CipherLab Devices　　**Non-CipherLab Devices**

Note:

(1)　For non-CipherLab devices, the "**Output Settings**" will only display two options: **Intent** and **SoftKeyboard**.

(2)　Support is limited to devices running **Android 9 or above**. Please ensure your device meets this requirement before proceeding.

3.2. FIRMWARE UPDATE

Enhance your device's performance with the latest firmware update.
Follow the instructions below to update the firmware for the WR30 scanner:

(1) Download the latest WR30 firmware from the [CipherLab official website](#) on your PC.
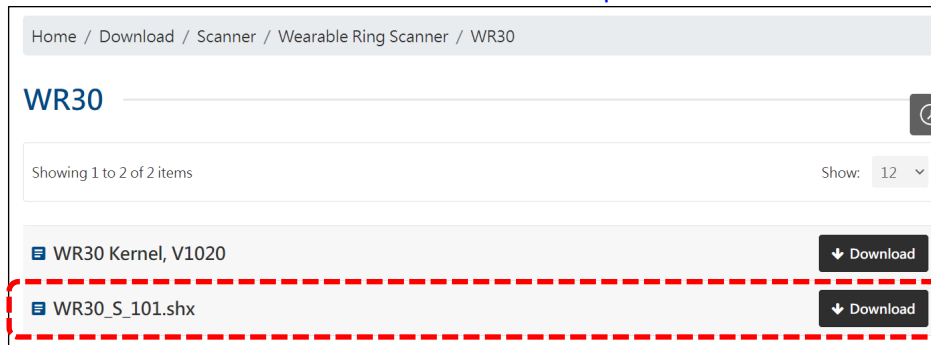
(2) Rename the firmware file to "**firmware.shx**" for future firmware updates, ensuring correct casing.

(3) Transfer the downloaded firmware file to the device storage using a USB connection.
Place it in the following path:
Android\data\sw.programme.intelliworker\files\Download
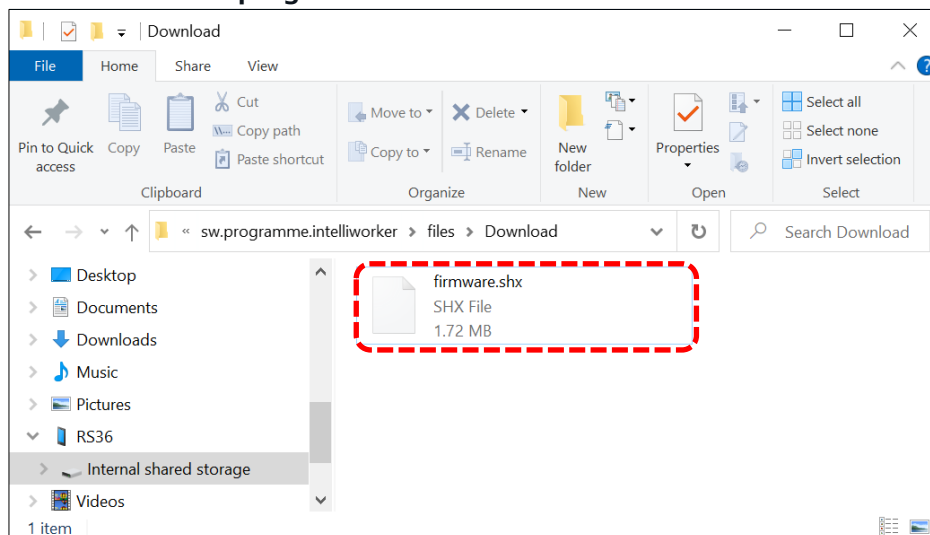
Alternatively, sign in to your Google Account to easily transfer using Drive.
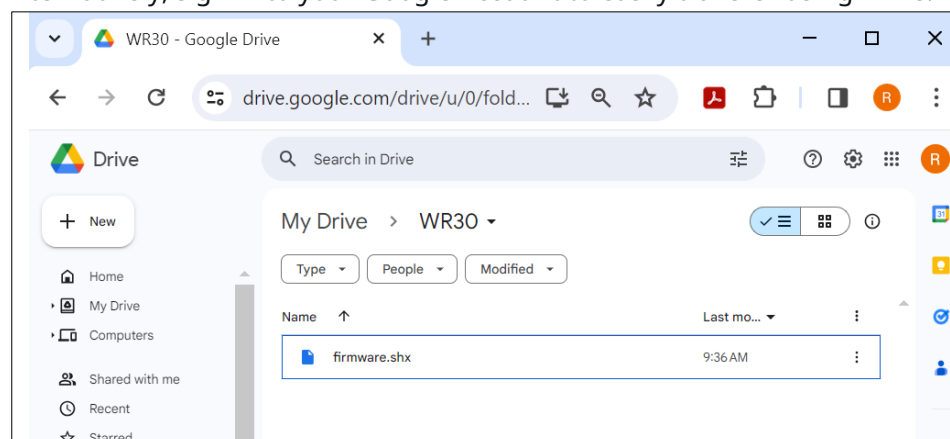
(4)   Open **IntelliWorker** on your mobile device and navigate to the "**Device Page**".

(5)   Tap on "**Firmeware Update**".

(6)   Continue to tap on "**Select File**" to locate and tap on the firmware file.
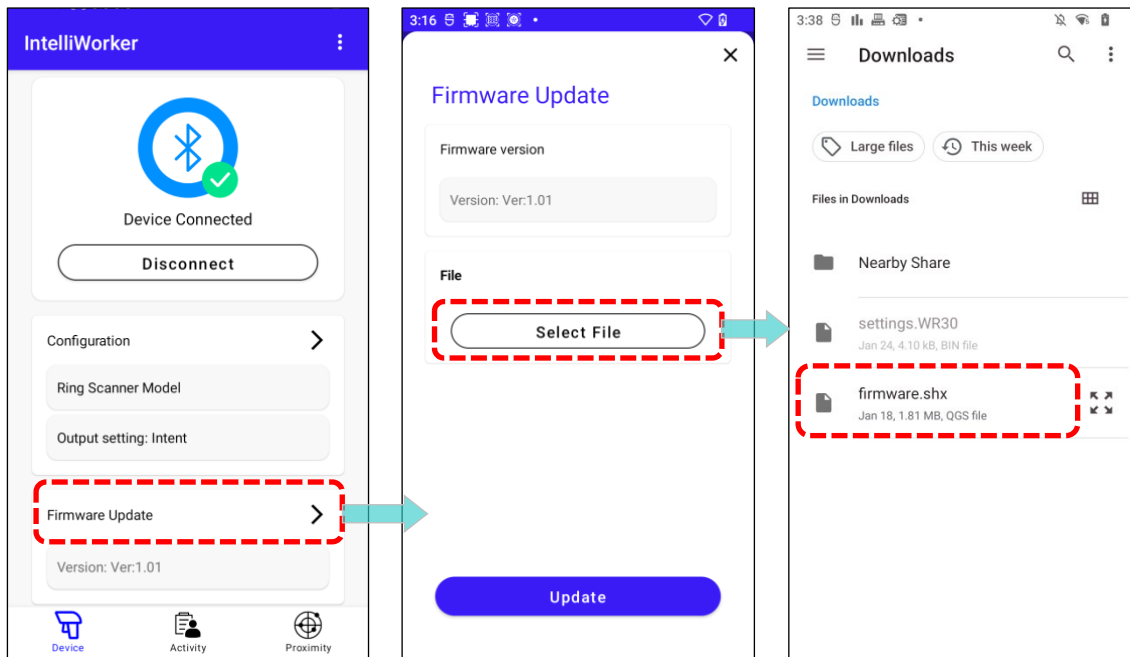
(7)   After selecting the file, simply tap "**Update**" to proceed with the process.
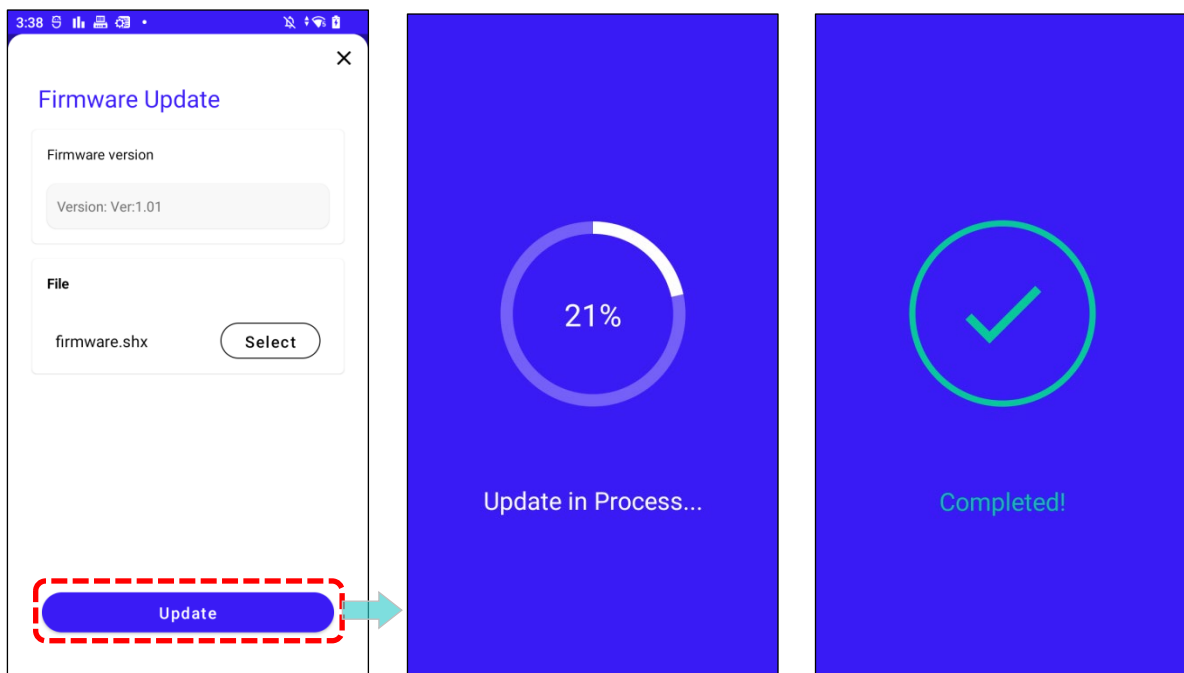
3.3.   MASS DEPLOYMENT

For a quick and uniform setup across multiple devices, follow the instructions below to execute **Mass Deployment** for configuration or firmware update.

Note:

The following instructions exemplify mass deployment for configuring devices. For firmware updates, start by downloading the firmware file from the CipherLab official website. Then, proceed to compress the file into a ZIP format (ADC).

The overall workflow and the tools involved are as follows:
ScanMaster → Android Deployment Configurator (ADC) → Cloud Storage → ReMoCloud

After creating a configuration file on **ScanMaster** for your devices, proceed to use **ADC** to package the file into a ZIP format. Next, upload the ZIP file to a **cloud storage service** to generate a URL. Finally, utilize **MDM (ReMoCloud)** to link the file via the URL and initiate the deployment process.

3.3.1.   ON YOUR PERSONAL COMPUTER

CREATE A CONFIGURATION FILE

To customize the settings for WR30, first create a configuration file on CipherLab Web ScanMaster.

(1)   Select your device model.
(2)   Adjust the settings according to your needs and preferences.
(3)   Tap on "**Save Setting**" on the panel on the left-hand side, and a window will pop up, prompting you to name the file.
(4)   Name the file "**settings**", and tap "**OK**".
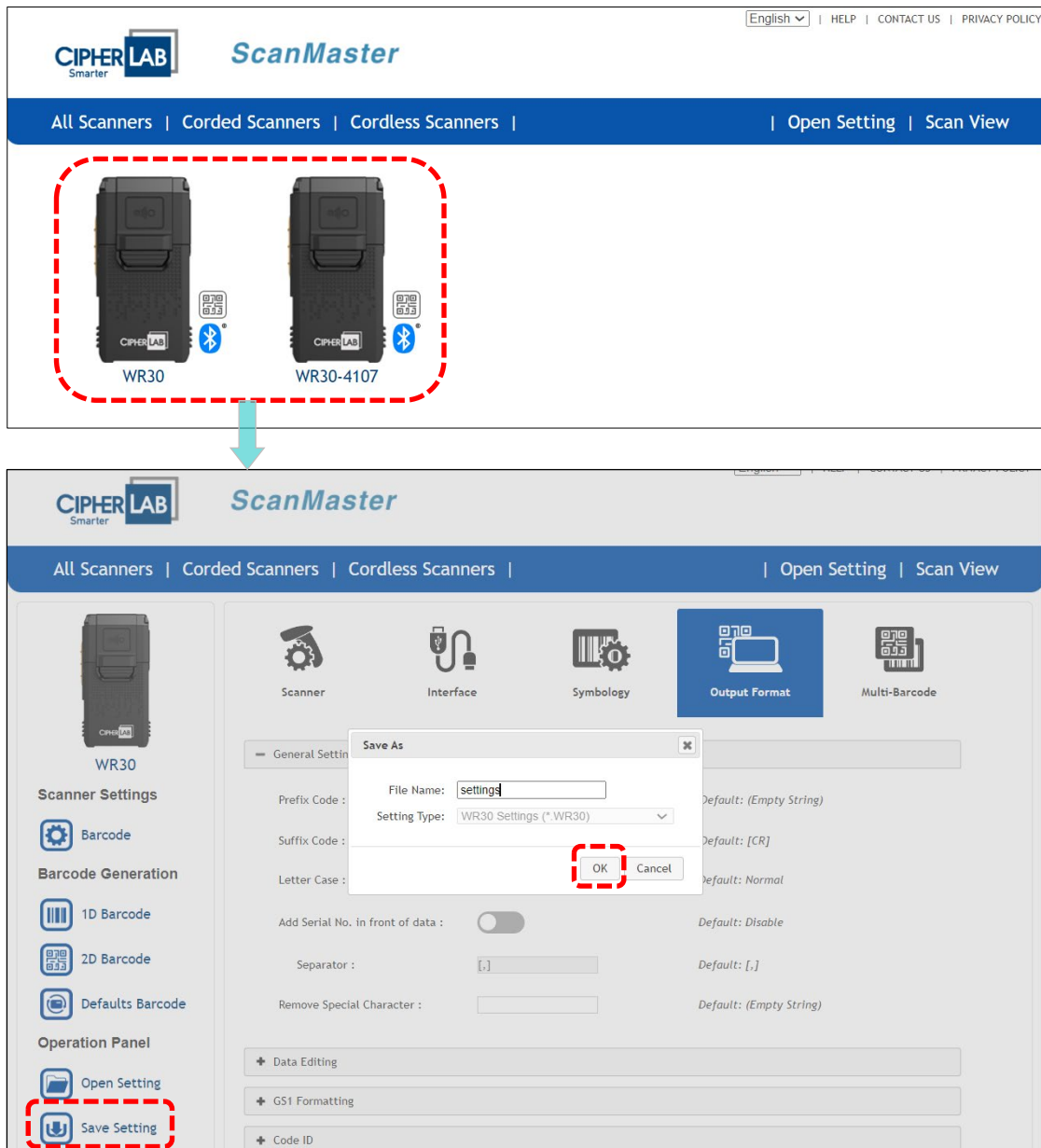
Note: Ensure the downloaded configuration file is named "**settings.WR30**", and please mind the casing.

The file "**settings.WR30**" will automatically download to your PC.
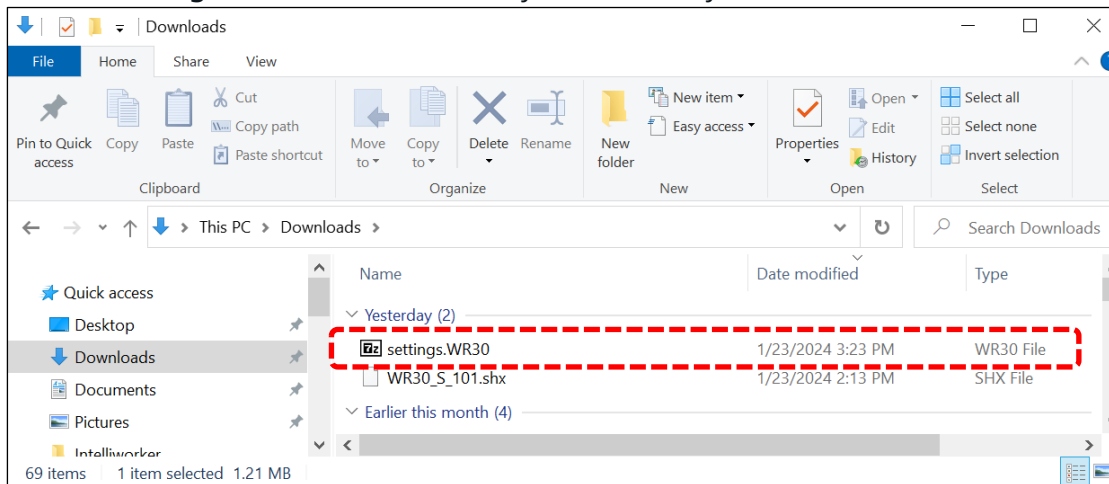
COMPRESS THE FILE INTO A ZIP FORMAT (ADC)

After creating a configuration file on **ScanMaster** for your devices, proceed to use **Android Deployment Configurator (ADC)** to package the file into a ZIP format.

(1)   Open ADC and tap on ![icon] to create a new project.

(2)   Fill in the project name and complete the selections in the window.

(3)   Tap on ![green check icon] to proceed.
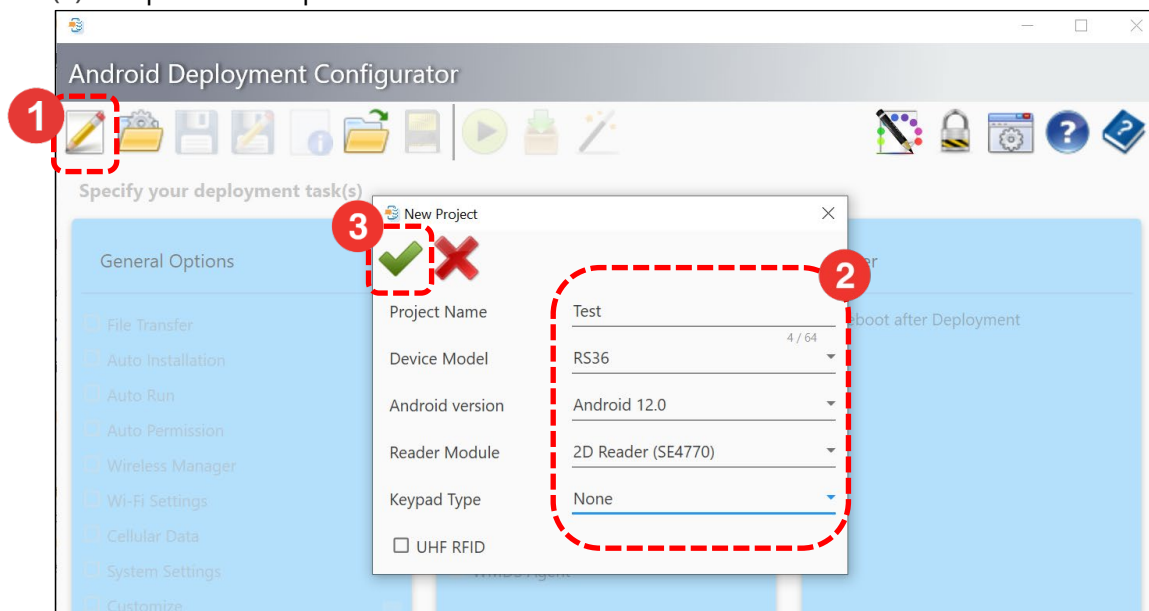
Note:

(1)   Ensure that the **enrolled devices** in the profile align with the **device mode**l specified in the ADC project for successful deployment.

(2)   For detailed information about ADC, please refer to ADC User Guide for Android.

(4)   Select "**File Transfer**" under **General Options** and tap ⊞ to further configure.
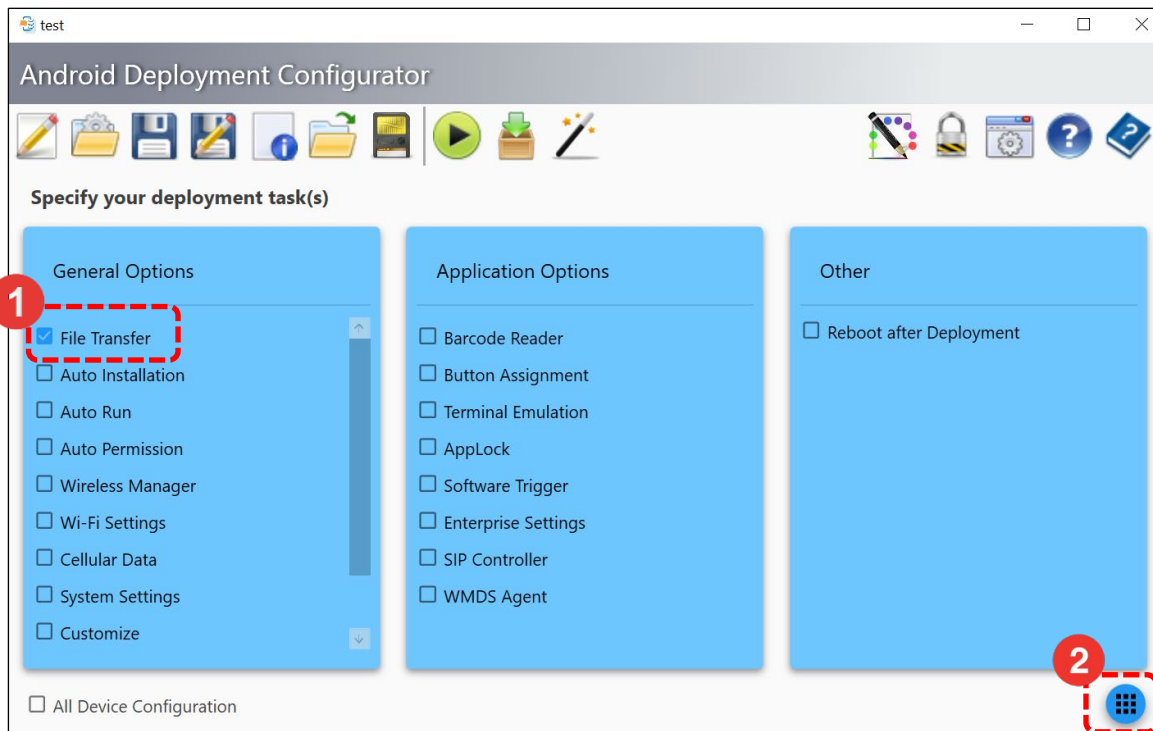
(5)   Tap on ⊕ to add the configuration file you created. A window will pop up, prompting you to locate the file.
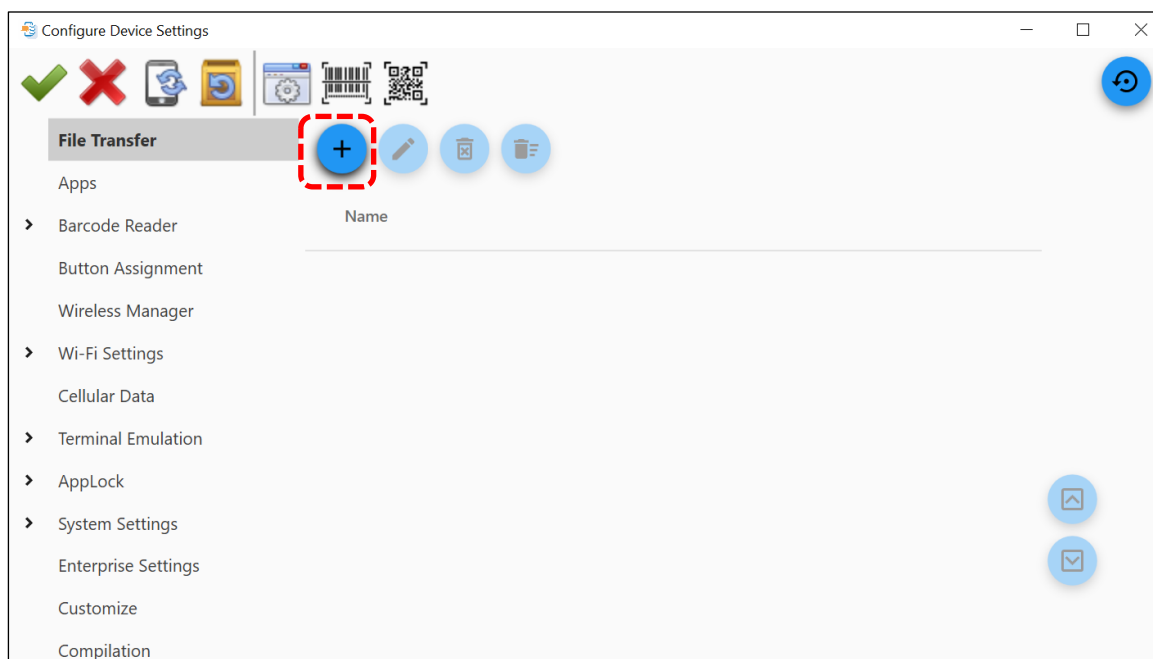
Note: To initiate mass deployment for firmware updates, select the firmware file you downloaded from the CipherLab official website.

(6) Tap to browse and select the created configuration file, then proceed by tapping "**Open**".
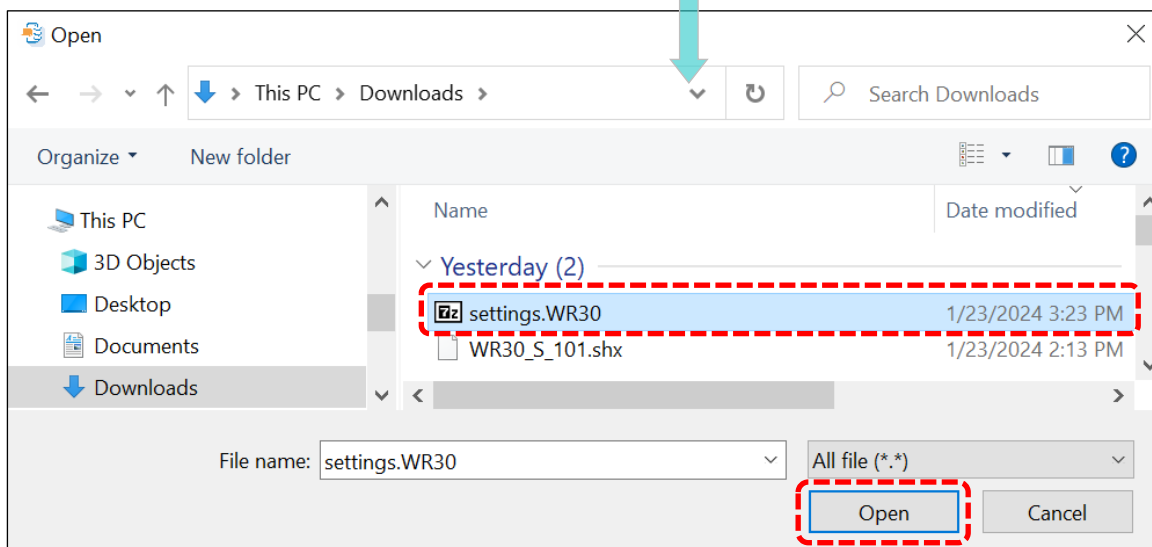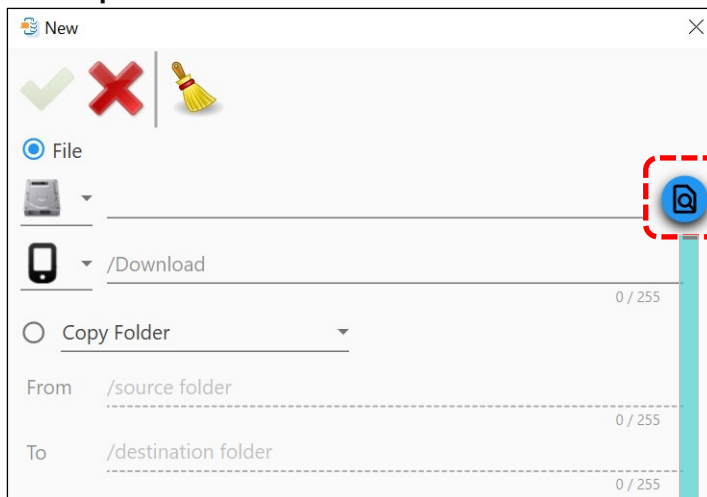
(7) Provide the following file path for the device and be mindful of the casing:
/Android/data/sw.programme.intelliworker/files/Download/.
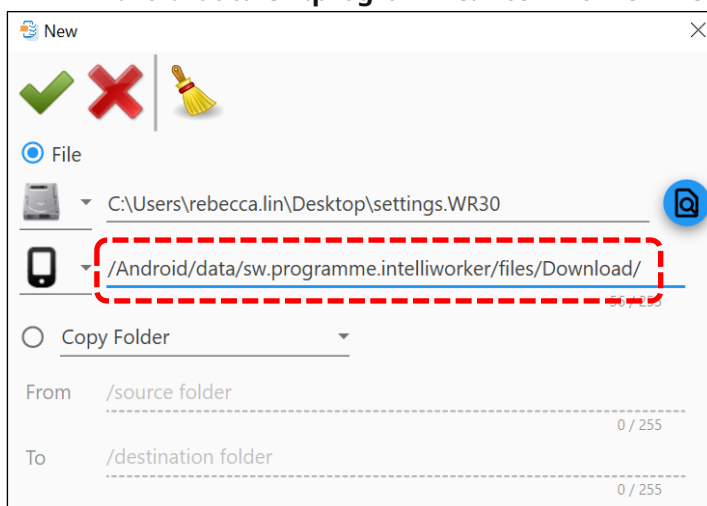
(8) Tap ✔ to close the window.

(9) After the configuration file is listed on the page, tap ✔ to save the settings.
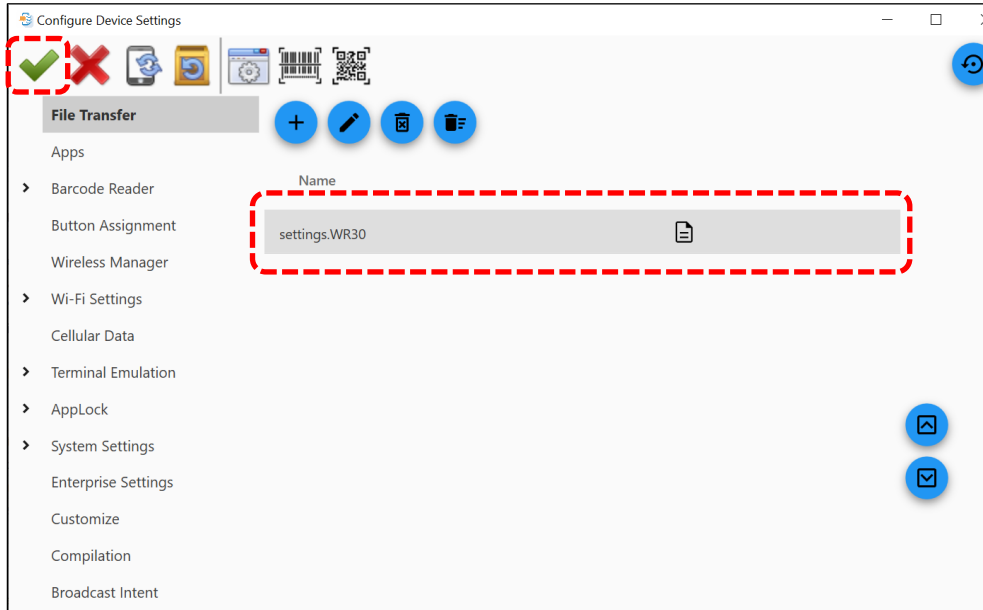
(10) Tap either "**Yes**" to close the window or "**No**" to keep the window.
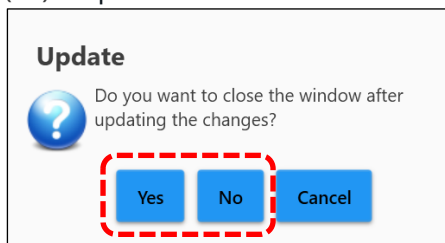
(11) Tap 📥 on the Home Page to compress the progect file to ZIP format. A window will pop up, prompting you to name the compressed file.
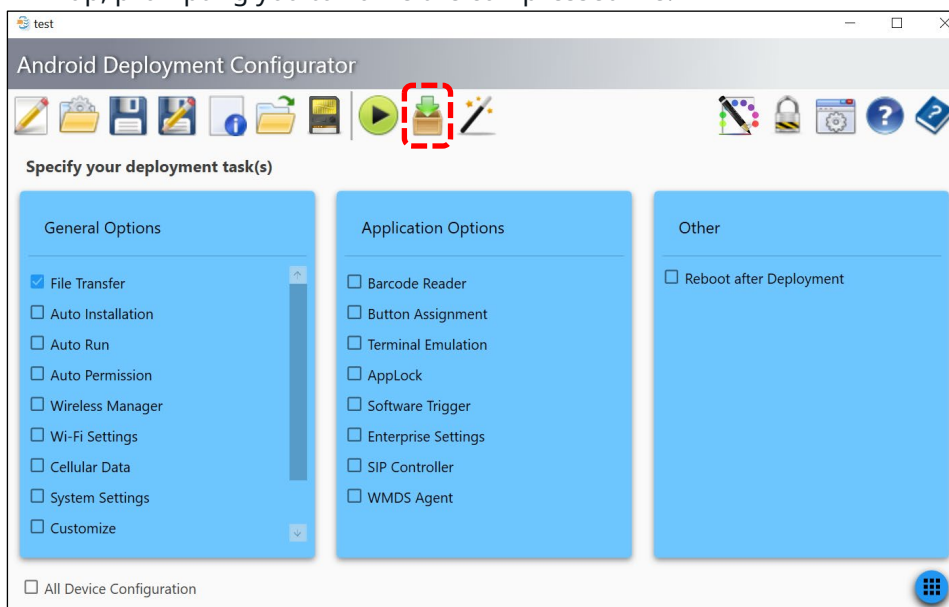
(12) Name the file and tap ✓. The notification "**Create ZIP file successfully**" will then pop up on the bottom of the page. Tap on "**OK**".
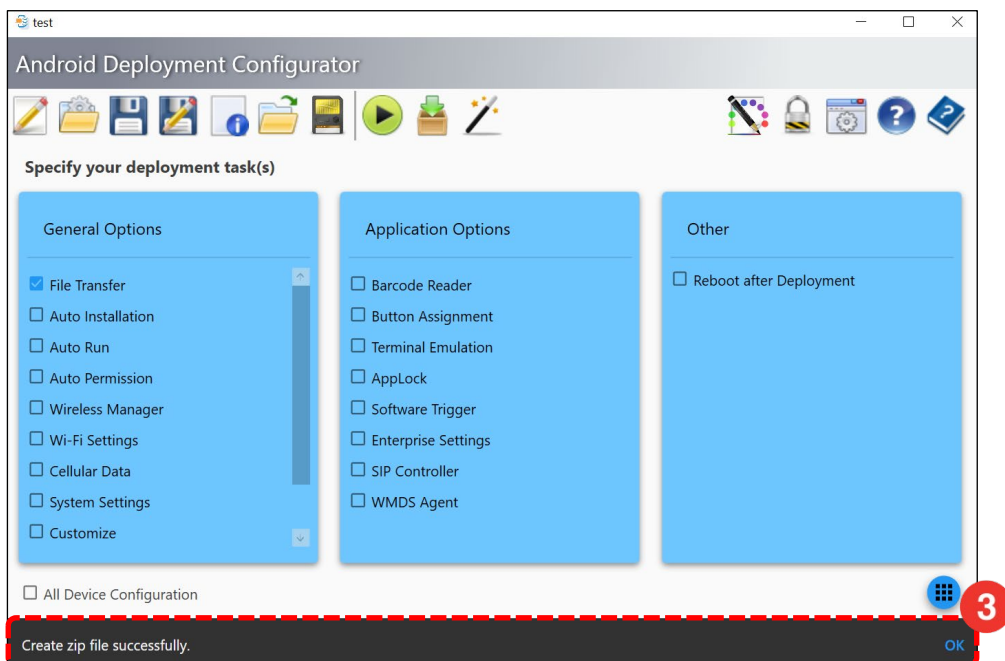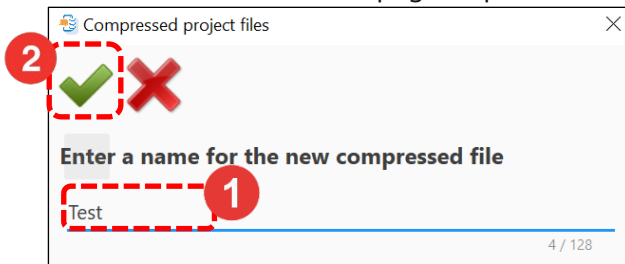
You can now locate your compressed file under your **Local Disk > Cipherlab > ADC > Project Name**.
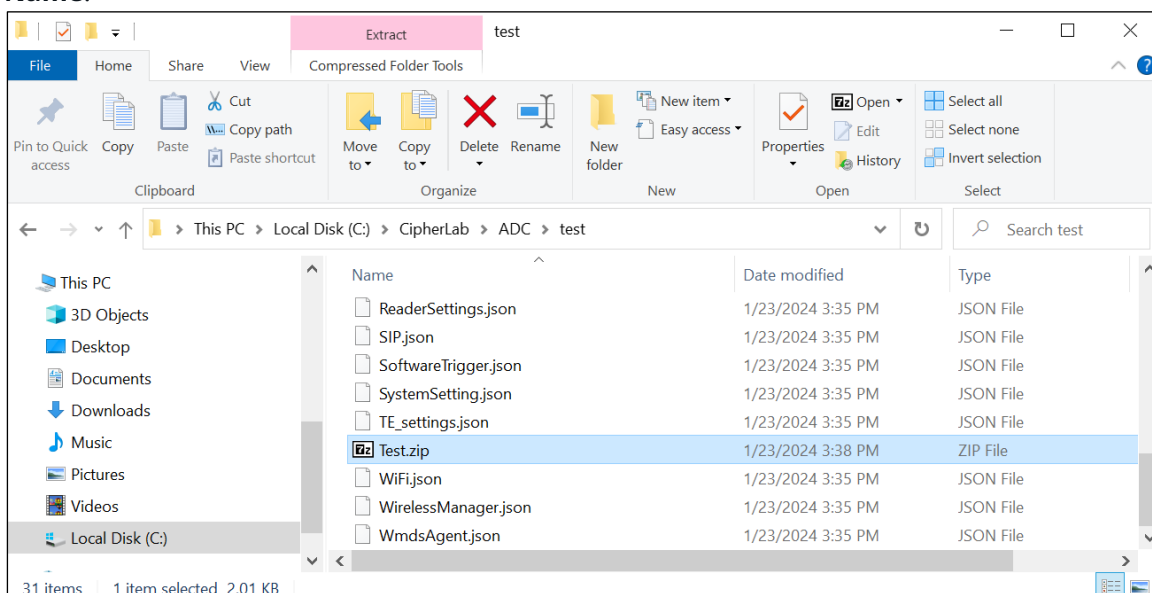
UPLOAD THE ZIP FILE TO CLOUD STORAGE TO GENERATE A URL

Uploading the ZIP file to a cloud storage service to generate a URL involves transferring the compressed ZIP file from your local device to an online storage platform.

The following section uses **Amazon S3** as an example.

Upload the zip file you created to Amazon S3.
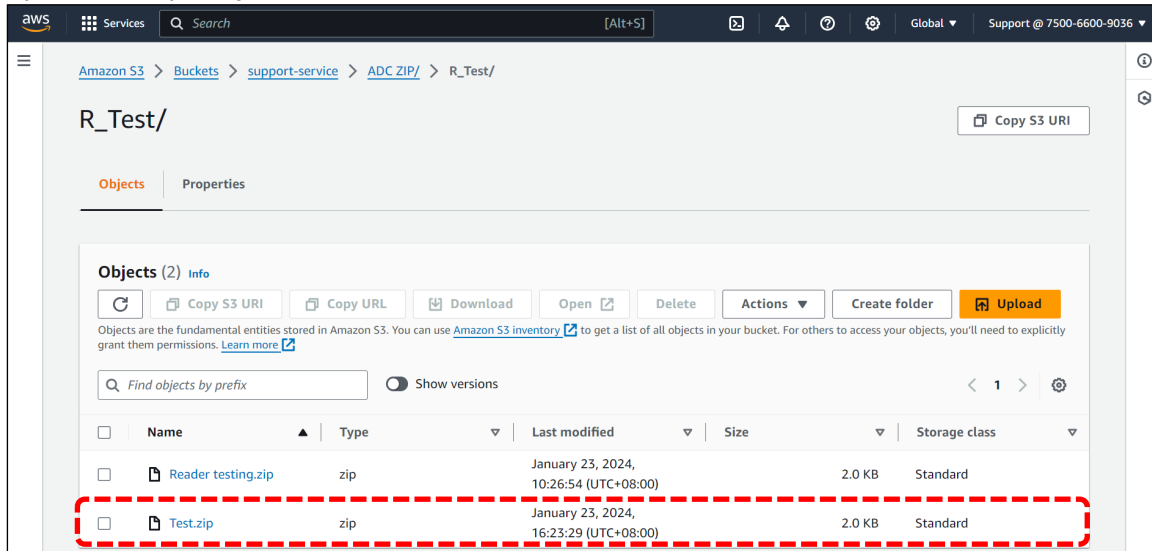
Ensure to **grant public-read access** so the MDM can access this file remotely to deploy configurations to devices.
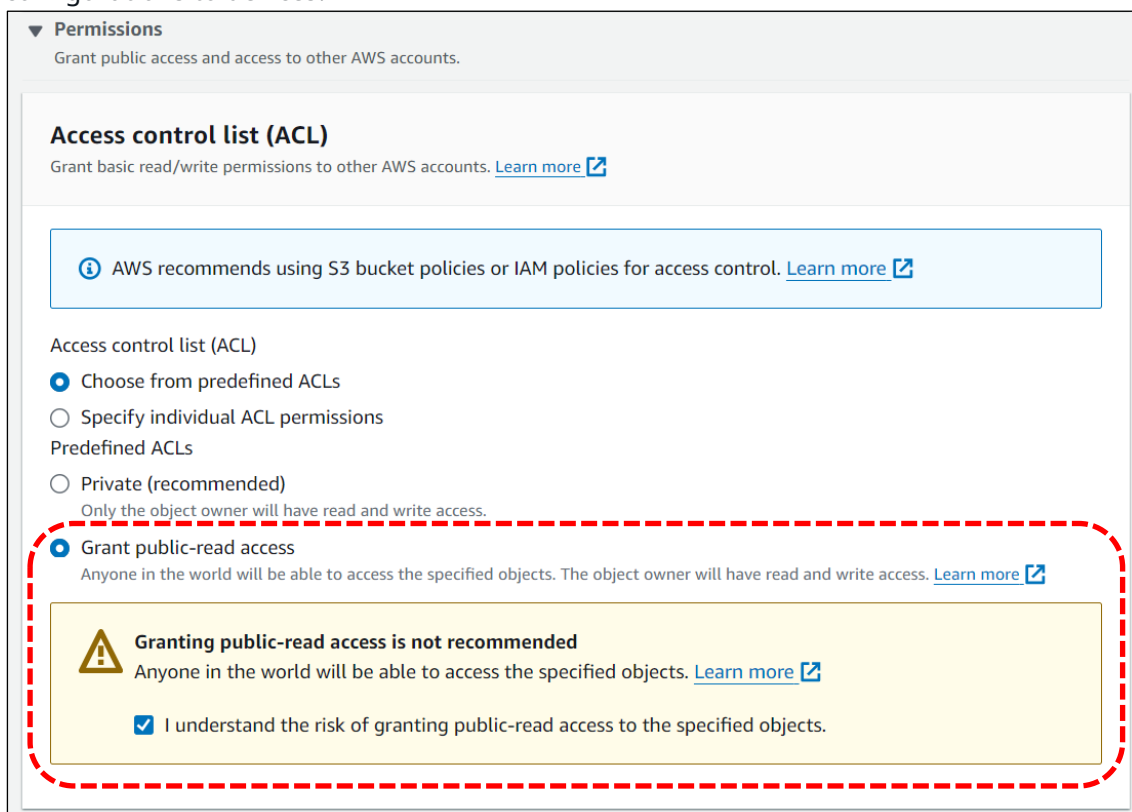
Select the zip file you uploaded and click "**Copy URL**" on the upper panel. Now, with the URL, you are ready to deploy the ADC project settings through MDM (ReMoCloud).
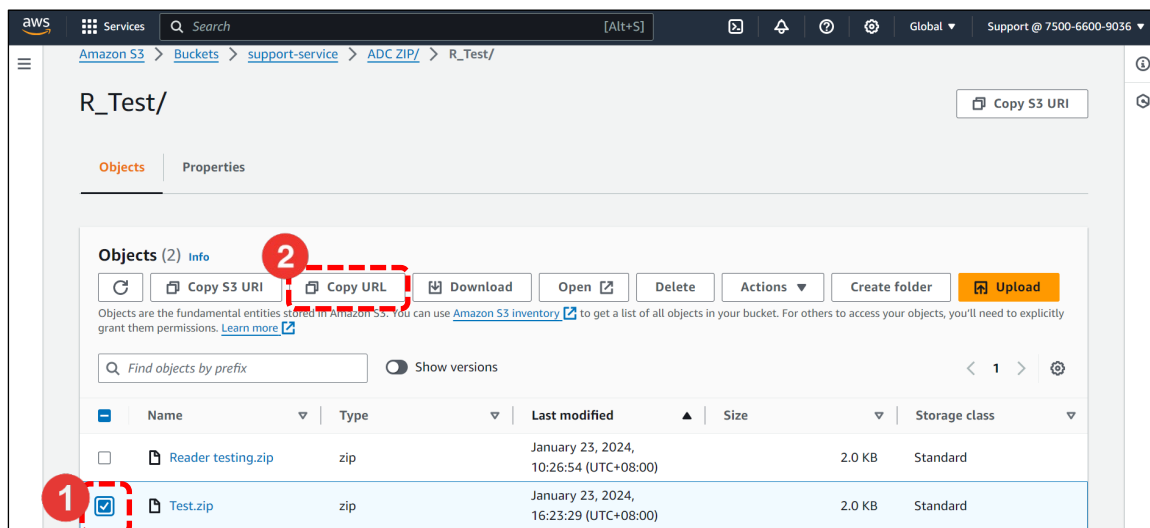
DEPLOY PROJECT SETTINGS THROUGH REMOCLOUD

Use the generated URL to execute mass deployment through CipherLab MDM, **ReMoCloud**.

Ensure devices are enrolled in the pre-created profile before deploying ADC project settings in ReMoCloud.

For details on ReMoCloud account registration, profile creation, and device enrollment, please refer to the ReMoCloud User Guide.
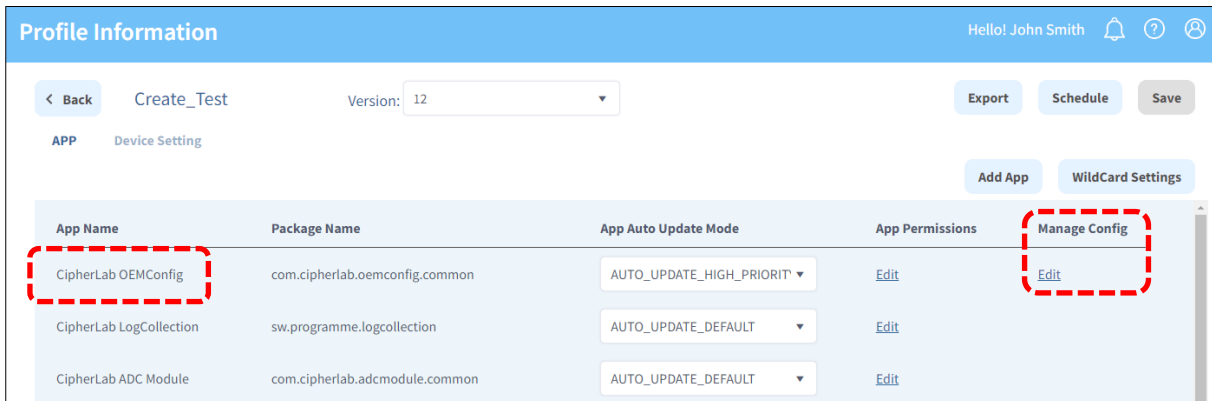
To deploy ADC project settings through ReMoCloud:

(1)   Access **Profile** > **Profile name** > **Profile Information** > **App**

(2)   Locate the default app "**CipherLab OEMConfig**" in the app list. Click the "**Edit**" button in the "**Manage Config**" column.
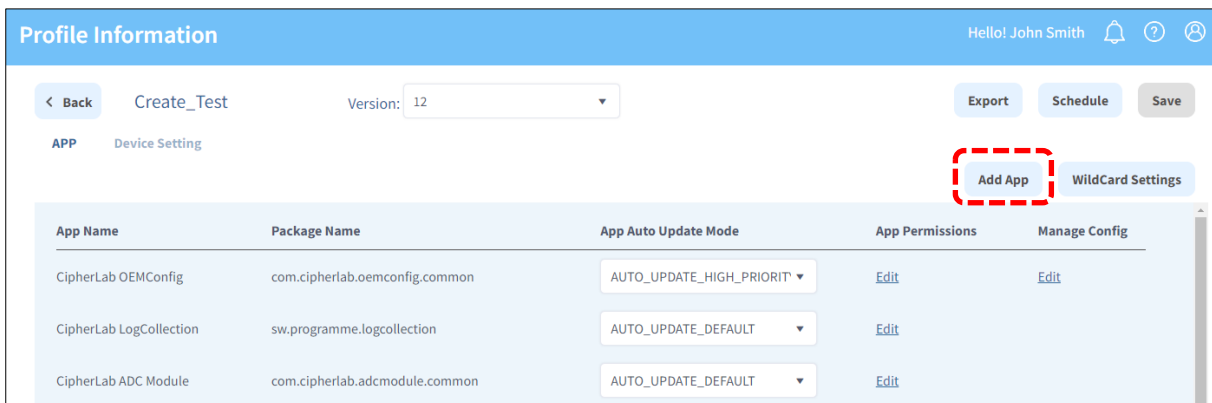
If "**CipherLab OEMConfig**" is not included in the profile, click "**Add App**" to add it from the "**App Management**" page.

(3)   On the "**Manage App Config**" page, click to unfold the settings of "**DeployFromZip**". Unfold other settings for more configuration if necessary.
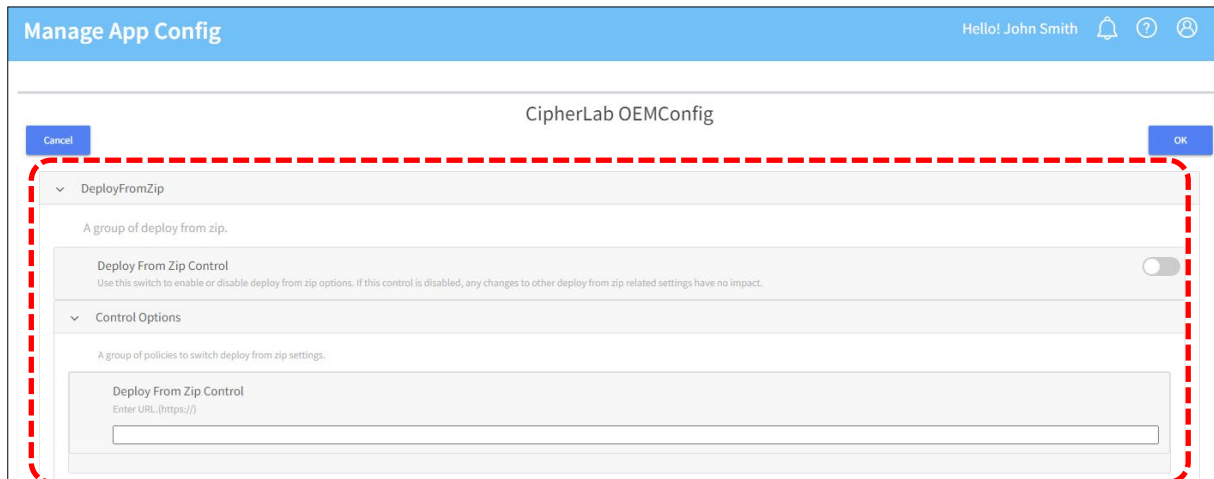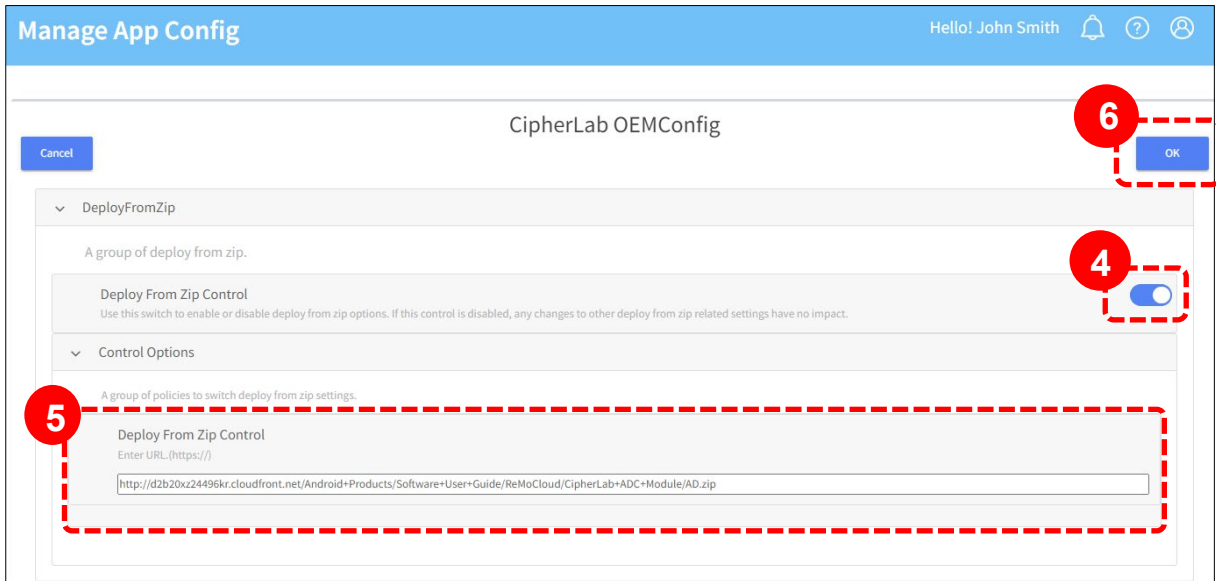

The settings on the "**Manage App Config**" page:

    (1)   DeployFromZip

    (2)   Wireless

    (3)   Wi-Fi Advanced

    (4)   Cellular Data

    (5)   System Setting

    (6)   System Update

    (7)   Log Collection

    (8)   Send Intent

    (9)   Button Assignment

    (10)   Reader Config

    (11)   Enterprise Settings

    (12)   Cold Chain

    (13)   SIP Controller

    (14)   Software Trigger

    (15)   Other Settings

Note that if there are duplicate parameters between "**DeployFromZip**" settings and other OEMConfig settings, the '"**DeployFromZip**" settings take priority.

(4) Switch on "**Deploy From Zip Control**".

(5) Enter the link created from the cloud storage into the "**Deploy From Zip Control**" field.

(6) Click on "**OK**" to save the changed settings before leaving this page. You will then be redirected to the "**Profile Information**" page.
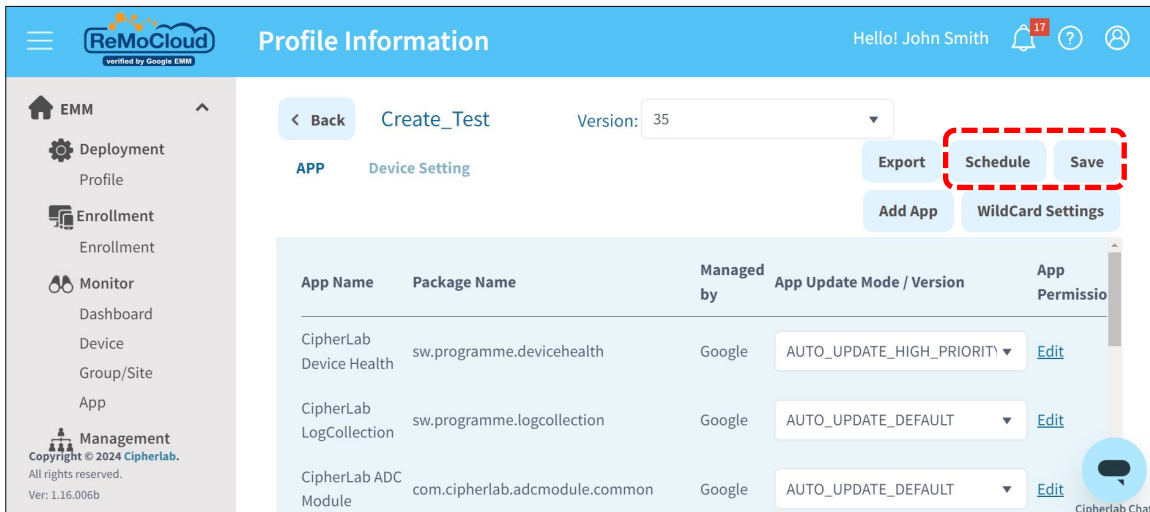
(7) Click "**Save**" or "**Schedule**" to apply the changes, then verify deployment on your mobile computer.

To access additional settings on **ReMoCloud**, please refer to ReMoCloud User Guide for details.

Note:

Ensure that the enrolled devices in the profile align with the device model specified in the ADC project for successful deployment.

3.3.2. ON YOUR MOBILE COMPUTER

If the deployment is successful, your enrolled and activated devices will automatically receive a notification for ADC Deploy.
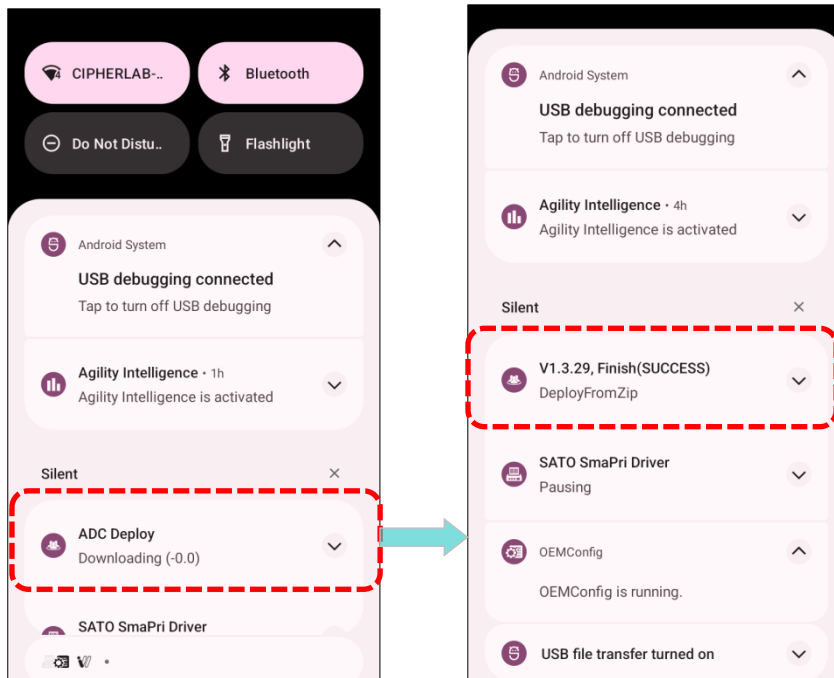
(1)   Launch IntelliWorker and connect the device to the scanner.

Once the device is connected to the scanner, a window pups up prumpting you to update the settings.

(2)   Tap "**Comfirm**" to start updating the configuration file.