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AsReader ASR-P3xU Android Demo App User Manual

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Preface

This document describes the correct operation method of the "ASR-P3xU Demo App" for Android, which can be found on the Google Play Store. Be sure to read this carefully before using the app.
If you have any comments or questions about this manual, please don't hesitate to get in touch with us at:

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About the Demo App for ASR-P3xU

The "ASR-P3xU Demo App" (hereinafter referred to as "Demo App") is an application that customers can use together with our company's ASR-P3xU device (hereinafter referred to as "AsReader").
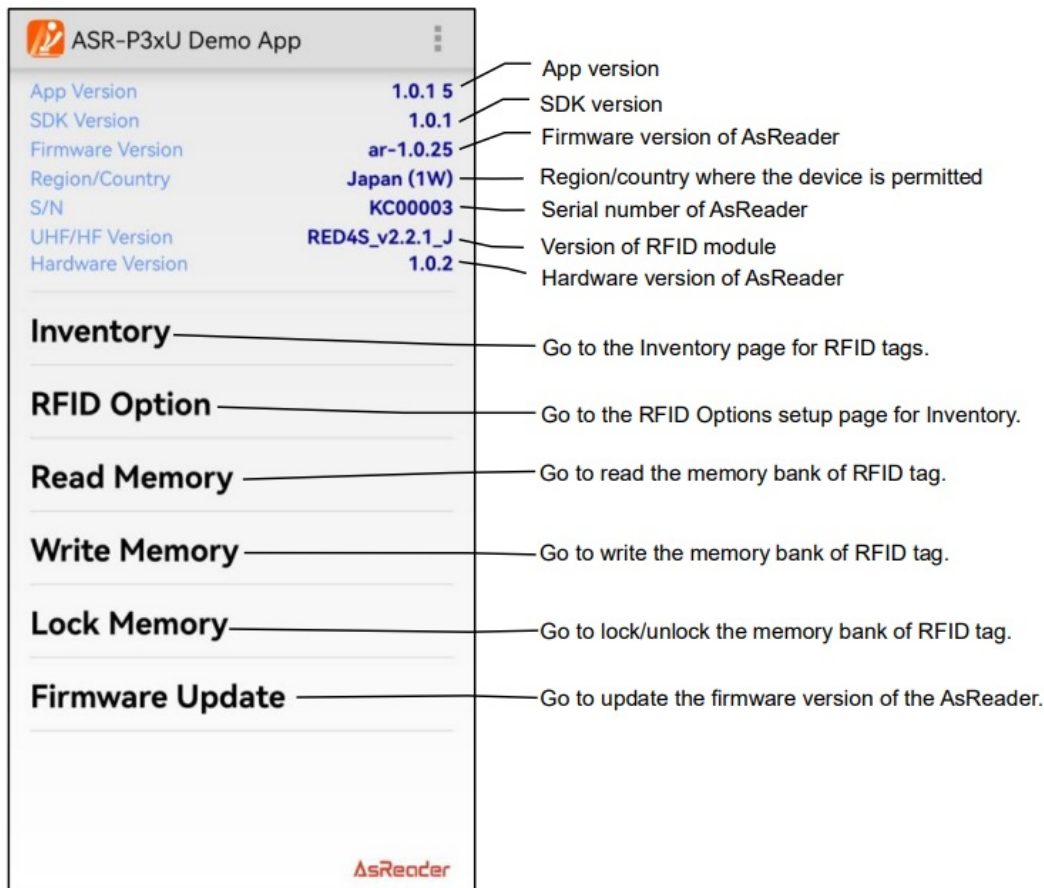Please download this application from the Google Play Store, by searching for "ASR-P3xU Demo App".

Note: The ASR-P3xU Demo App is a dedicated Demo App for ASR-P3xU devices.

Page Description

How to Connect

Once the phone is successfully connected to the AsReader, the LED indicator of the AsReader will change from flashing to steadily on.
Start the app, then the following message will appear. Tap "OK" to complete the connection.
If "Use by default for this USB device" is selected, the app will automatically start and connect each time the AsReader is physically connected to the phone.
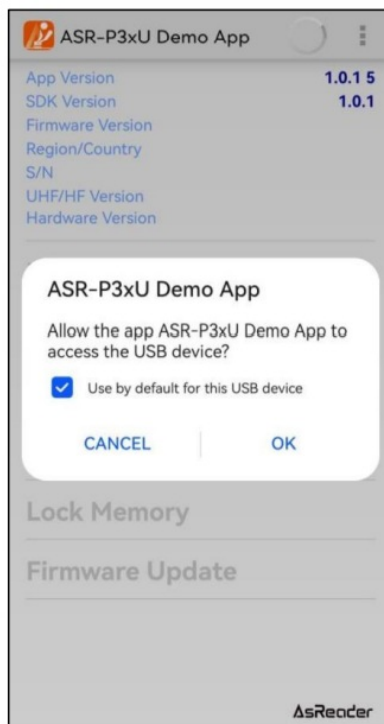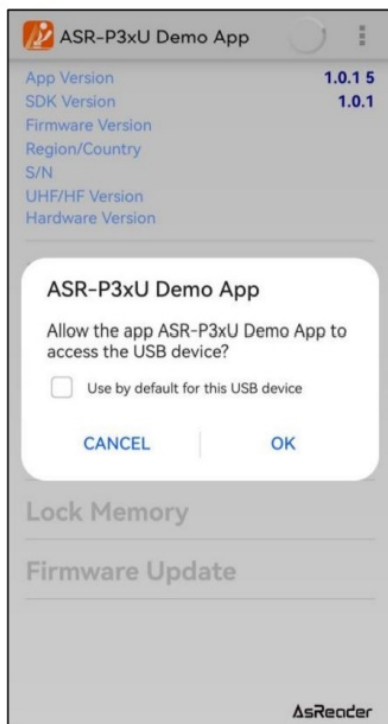
Once the connection is complete, the application will display the following.
***Note:** The application cannot be operated without being connected to the AsReader
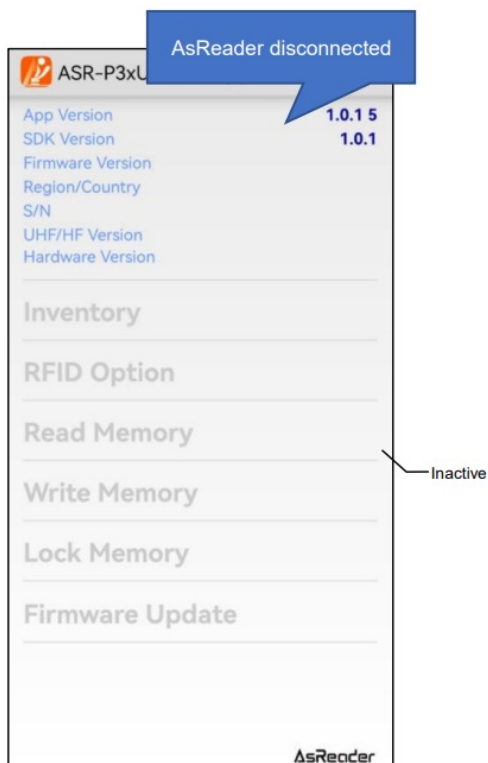
How to Operate

Inventory RFID Tags

1. Tap on "Inventory" in the left figure, and then tap on the "Inventory" button in the right figure to begin inventorying RFID tags. Pressing and releasing the physical "SCAN" button of the AsReader itself can also start and stop this same inventory process.
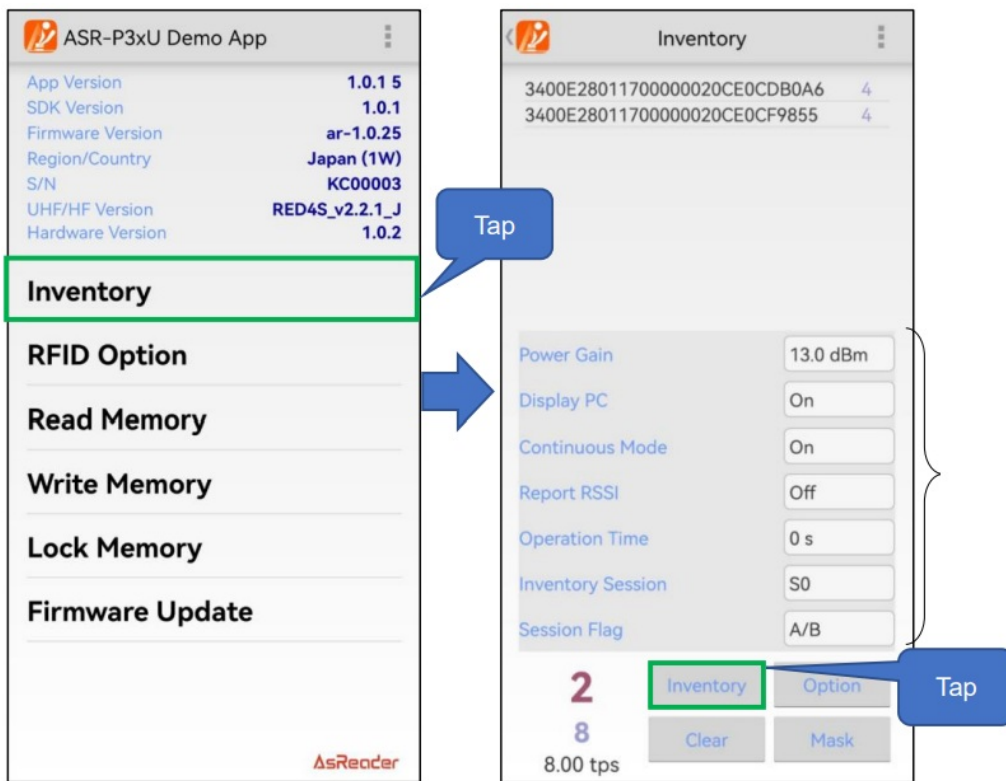
Items that need to be set up to inventory RFID tags. Please refer to "3-2 Operations to RFID Tags" for details.

2. AsReader will continue to inventory until the set inventory stop condition is reached or the "Stop" button is tapped. (Or press and release the SCAN button again to stop the inventory.)

   * During inventory, the "Inventory" button on the app's page changes to "Stop".

3. When taking inventory of RFID tags, the data of the RFID tags being inventoried will be displayed on the list at the top of the inventory page. In addition, the inventoried RFID tag data can be exported as CSV files.

   * Please refer to "3-3 Data Export" for information about exporting data.
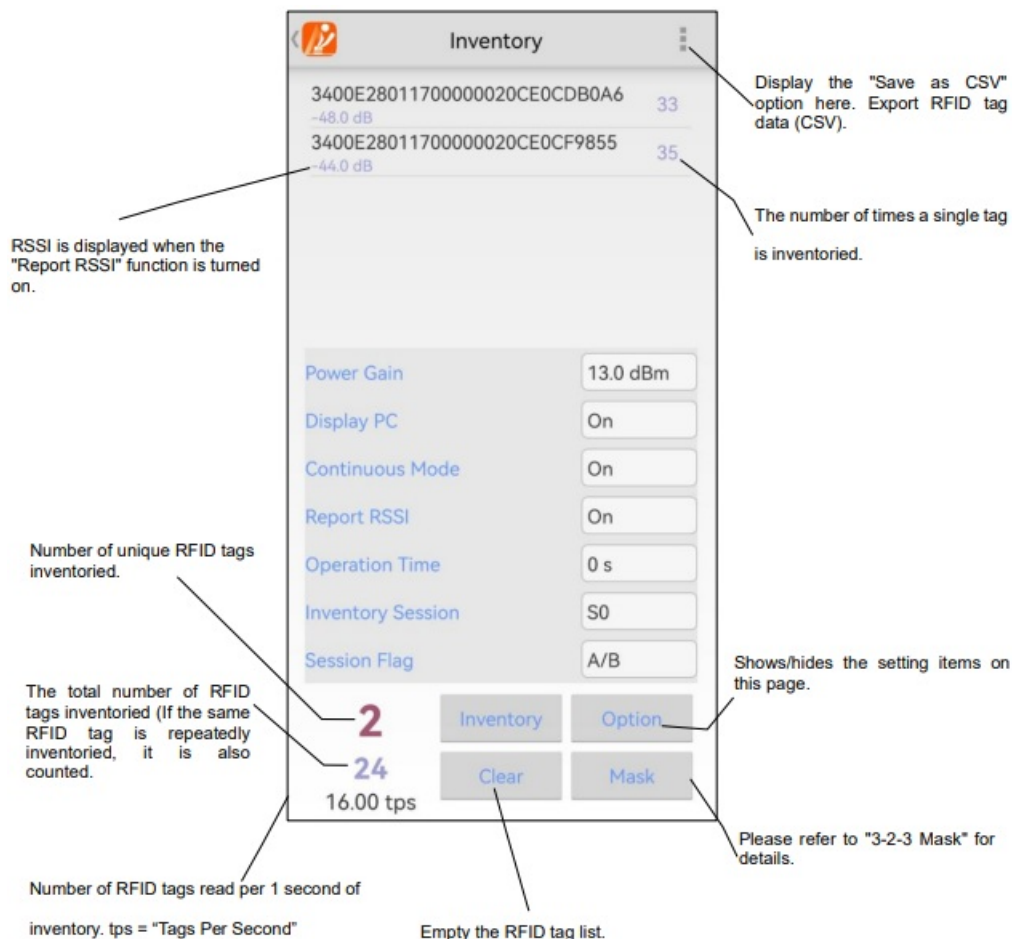
4. Long tap on a specific RFID tag in the list to do operations on the RFID tag like read/write/lock. Please refer to "3-4 Operations to RFID Tags" for details.

See "3-4-1 Read Memory"

See "3-4-2 Write Memory"

See "3-4-3 Lock Memory"
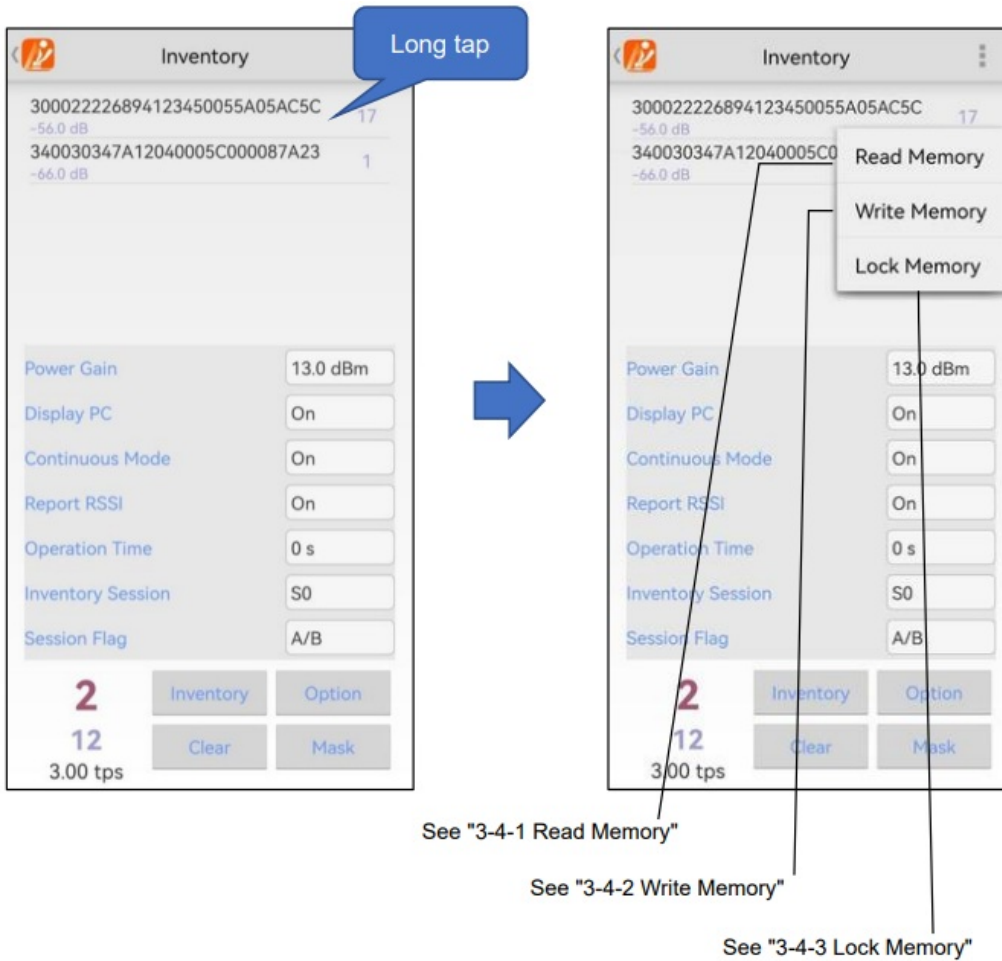
Operations to RFID Tags

Inventory

Tap the "Inventory" on the left figure to enter the Inventory page. Here, you can set the RFID tag inventory conditions and inventory RFID tags.
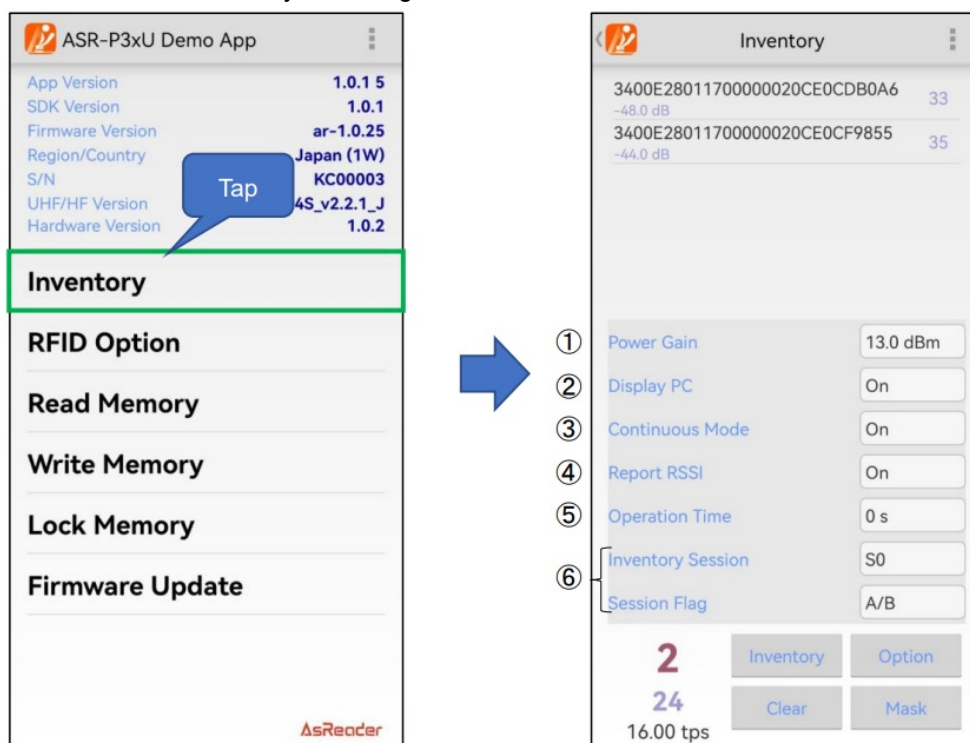
1. **Power Gain**

   Set the power of the AsReader which refers to the RF signal strength output by the antenna port. Unit: dBm. In general, the larger the value of power is set, the farther the reading distance will be. This setting is saved to the AsReader.

   The permissible range of power settings varies by region or country.

   Japan: 13~23dBm.

   Most other regions/countries: 13~27dBm.

2. **Display PC**

   If this function is enabled, the PC (Protocol Control) value of the inventoried RFID tags will be displayed. This setting is saved to the app.

3. **Continuous Mode**

   Enable or disable continuous inventory RFID tag mode.

   Once enabled, the AsReader will continue to inventory multiple RFID tags once the "Inventory" button is tapped or AsReader's SCAN button is pressed and released, until the "Stop" button is tapped or the SCAN button is pressed and released again.

   This setting is saved to the AsReader.

4. **Report RSSI**

   If this function is enabled, the received signal strength indication for the RFID tags are displayed when taking inventory. This setting is saved to the AsReader.

5. **Operation Time**

   Set the inventory time. AsReader stops the inventory as soon as the set time is reached.

   This setting is saved to the AsReader.

   * Only works if Continuous Mode is on.

6. **Inventory Session and Session Flag**

   "Inventory Session" and "Session Flag" can be set to adjust the response time of RFID tags. (Response time varies with RFID tag specifications.) These two settings are saved to the AsReader.

   Please set parameters according to the number of RFID tags to be inventoried. Refer to the following table.

SessionFlag	S0	S1	S2/S3
A only	The RFID tags that have been inventoried will immediately become ready to be inventoried again after receiving theradio waves.	The RFID tags that have been inventoried cannot be inventoried again within 0.5~5 seconds after being counted.	The RFID tags that have been inventoried cannot be inventoried again within 2~60 seconds after beingcounted.
B only	RFID tags in the initial state cannot beinventoried.	The same as S0.	The same as S0.
A/B	The RFID tags that have been inventoried will immediately become ready to be inventoried again after receiving theradio waves.	The same as S0.	The same as S0.

RFID Option

Tap the "RFID Option" in the left figure to set the inventory conditions of RFID tags
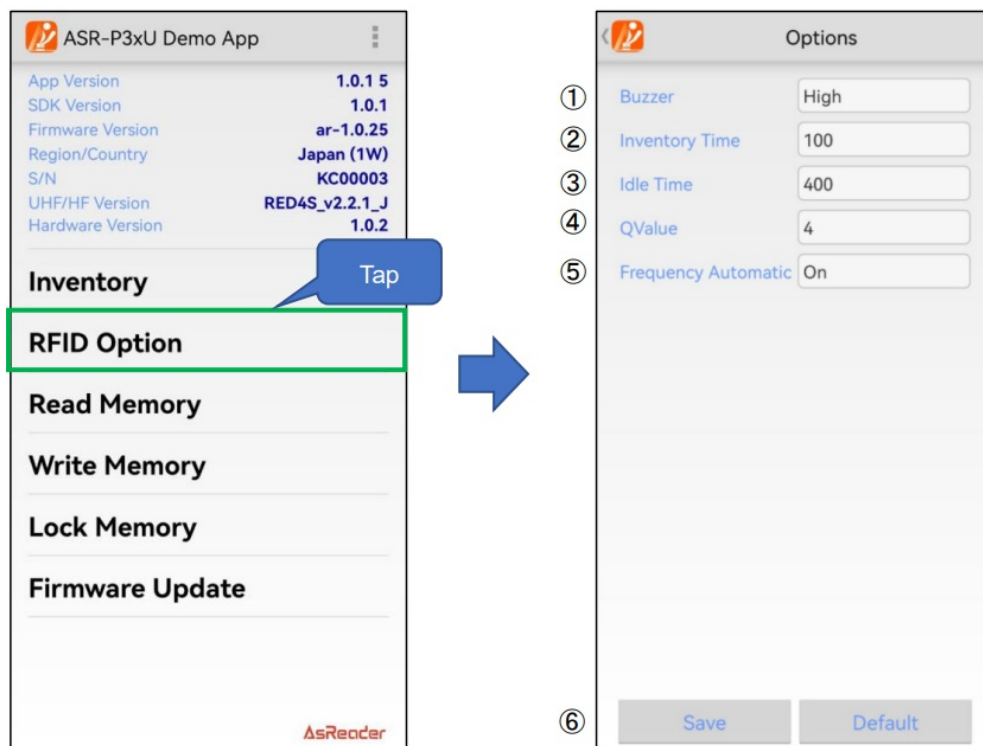
1. **Buzzer**

   Sets the buzzer on/off and volume.

   When it is turned on, AsReader will beep at the set volume in the following cases:

   a) When the AsReader is turned on,

   b) When the AsReader inventories RFID tags,

   c) When an RFID tag is read, written, locked, or killed.

2. **Inventory Time**

   Sets the duration of the radio waves emitted when the RFID tags are being inventoried. The longer the Inventory Time, the faster the inventory.

3. **Idle Time**

   Sets the duration of the radio waves non-emitted when the RFID tags are being inventoried. It needs to be used in conjunction with the Inventory Time function.

   For example, one could set Inventory Time to 3000ms and Idle Time to 2000ms

   The operation of inventorying for 3000ms and stopping for 2000ms will be repeated.

   * According to the laws of various countries on the use of radio waves, the Idle Time should be set according to the following table

Regulations	Inventory Time	Idle Time
Radio law (JP)	Not greater than 4000ms	Not less than 50ms
FCC (US)	Not greater than 400ms	Not less than 20ms
CE (EU)	Not greater than 4000ms	Not less than 100ms

4. **QValue**

   Specify a fixed Q value. The number of slots used by the anti-collision algorithm is equal to 2Q. Range: 0 to 8.

5. **Frequency Automatic**

   Set frequency hopping or fixed frequency.

   Fixed frequency: Use the specified frequency for the inventory.

   Frequency hopping: Randomly select frequencies from the frequency list corresponding to the current

   frequency band for inventory.

   * This parameter is displayed only when the Region/Country is Japan.

6. **Save button**

   Tap the "Save" button to save your settings. IMPORTANT: After changing settings, please be sure to tap this

   button to save your changes.

   * The settings from ① ~ ⑤ are saved to the AsReader and the application.

7. **Default button**

   Tap this button to restore all settings to factory defaults.


Mask
"Mask" is the filtering function used to inventory RFID tags. It can be set separately in the "Mask" on the
"Inventory", "Read Memory", "Write Memory", "Lock Memory" pages.
Setting steps (take the Inventory page as an example):

1. Tap the "Mask" button on the Inventory page, select the starting position bit number of the mask in the "Offset"

   field on the next page.

2. Fill in the desired mask value in the "Mask" text box.

3. Select the length bit number of the mask in "Length".

4. Tap the "Save" button (or, to Clear Mask information, tap the "Clear" button)
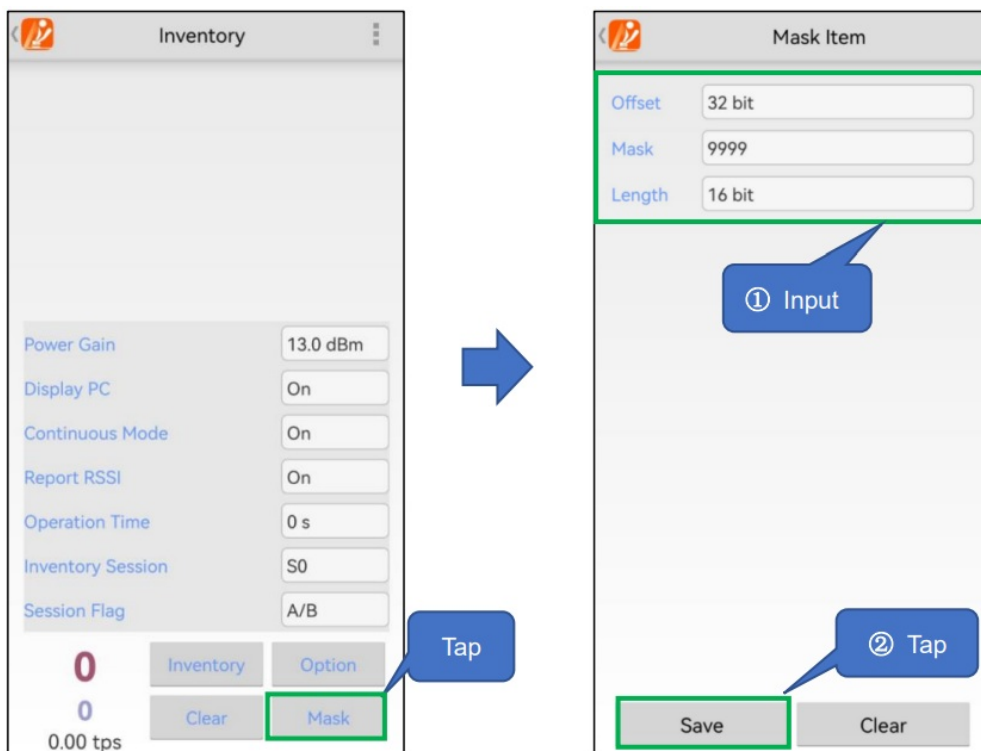
5. Return to the Inventory page to begin an inventory. Now, only RFID tags that meet the Mask setting conditions

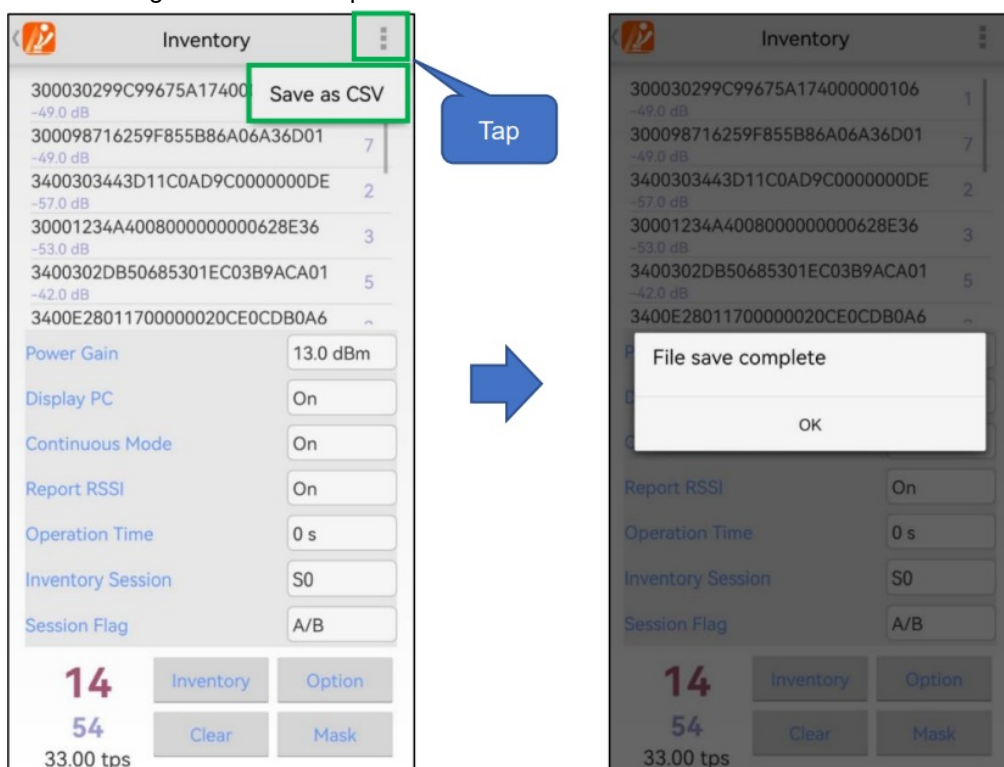   will be inventoried. This setting is saved to the application.
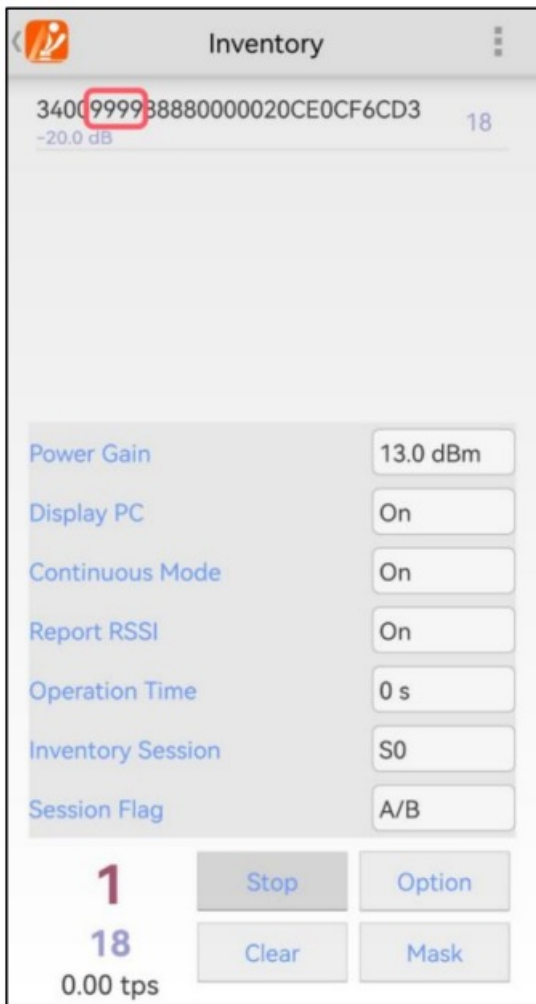
* The 16bit part of the CRC is also included, so the Offset is initially set to 16bit. Even if it is set to 0bit, it is automatically saved to 16bit.

* If Offset is set to 16bit, the tag is filtered according to the value of its PC part.

Data Export
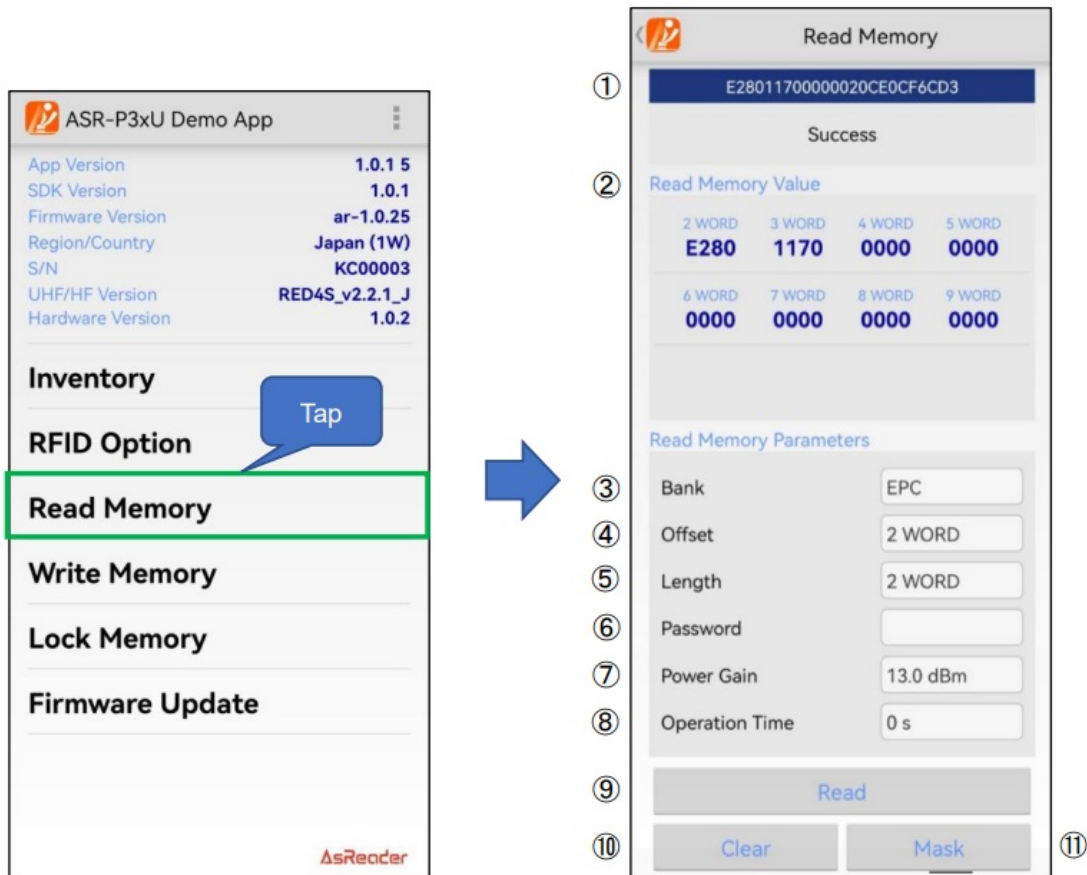The RFID tag data can be exported as a CSV file.

Operating steps:

1. Tap the "⋮" at the top right of the Inventory page.
2. Tap "Save as CSV" to export the data as a CSV file and save it on your phone.

Operations to RFID Tags

Read Memory
Tap the "Read Memory" in the page shown in the left figure to set the RFID tag reading conditions and to read it.

1. **Result**

   The reading results of an RFID tag will be displayed in the "Result" area.

2. **Read Memory Value**

   The data of each WORD of the RFID tag read will be displayed in the "Read Memory Parameters" area.

   Read RFID tags according to the items in "Read Memory Parameters" (Refer to ③~⑧ below).

3. **Bank**

   You can select the memory bank to read. After the RFID tag is read, the data of each WORD will be displayed to the "Read Memory Value".

   - Reserved Bank: kill password and access password.
   - EPC Bank: individual identification number.
   - TID Bank: inherent information that represents the type of RFID tag.
   - User Bank: User-defined data.

4. **Offset**

   Specifies the read start location for the memory bank of the read object. Range: 0~15 WORD. The RFID tag data will be displayed from the Offset position on the "Read Memory Value".

5. **Length**

   Specifies the length of the data to be read. Range: 0~15 WORD. Once the RFID tag is read, the specified length RFID tag data will be displayed on the "Read Memory Value".

6. **Password**

   Enter the access password. The access password is required for reading the locked Reserved bank. No password is needed to read the other banks.

7. **Power Gain**

   Changes the radio output value of AsReader. This setting is saved to the AsReader.

8. **Operation Time**

   Sets the execution time of the "Read" processing. This setting is saved to the AsReader.

9. **Read button**

   Tap it to begin reading an RFID tag. If the read processing is successful, "Success" appears below "Result".

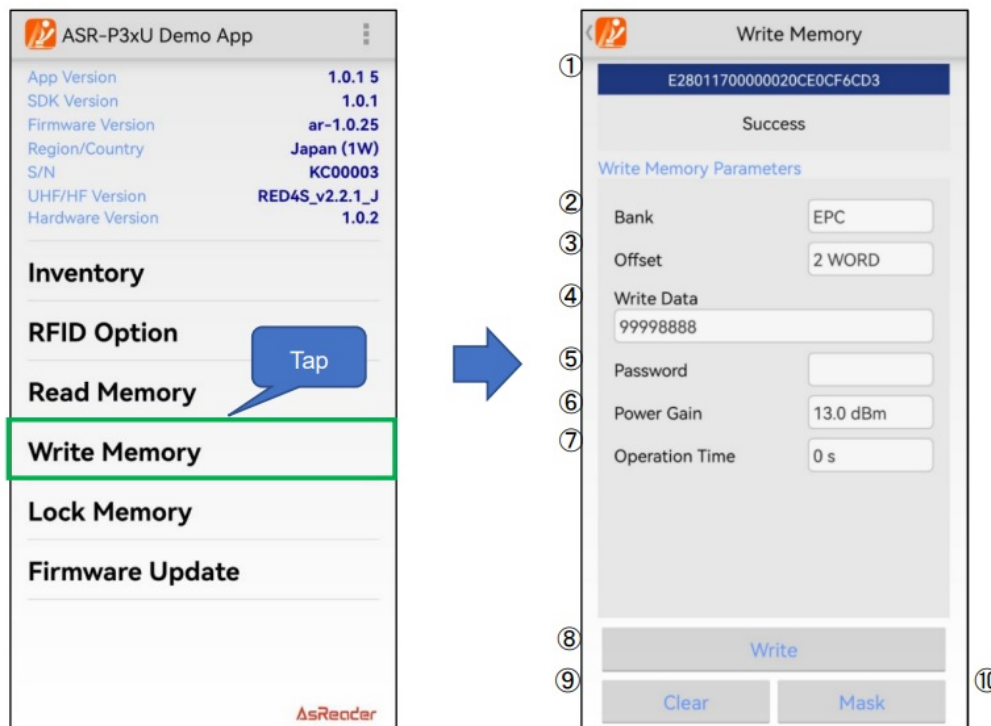10. **Clear button**

    Tap it to clear all the data displayed in the "Result" area and "Read Memory Value" area.

11. **Mask button**

    Tap the "Mask" button to set the mask. See "3-2-3 Mask" for the setting method. This setting is saved to the AsReader.

Write Memory

Tap the "Write Memory" in the left figure to write to the RFID tag

1. **Result**

   The writing results of an RFID tag will be displayed in the "Result" area.

2. **Bank**

   Memory bank can be selected from the following four banks.

   - Reserved Bank: kill password and access password.
   - EPC Bank: individual identification number.
   - TID Bank: inherent information that represents the type of RFID tag. (unable to implement write)

- User Bank: User-defined data.

3. **Offset**

   Specifies the write start location for the memory bank of the written object. Range: 0~15 WORD.

4. **Write Data**

   Enter the data to be written. The number of bits written must be a multiple of 4 bits, 8 bits, 12 bits, etc.

5. **Password**

   Enter the access password. If the RFID tag memory bank is locked, an access password must be entered to write to it.

6. **Power Gain**

   Change the radio output value of AsReader. This setting is saved to the AsReader.

7. **Operation Time**

   Sets the execution time of the "Write" processing. This setting is saved to the AsReader.

8. **Write button**

   Tap it to begin writing to an RFID tag. If the writing is successful, "Success" appears below "Result".
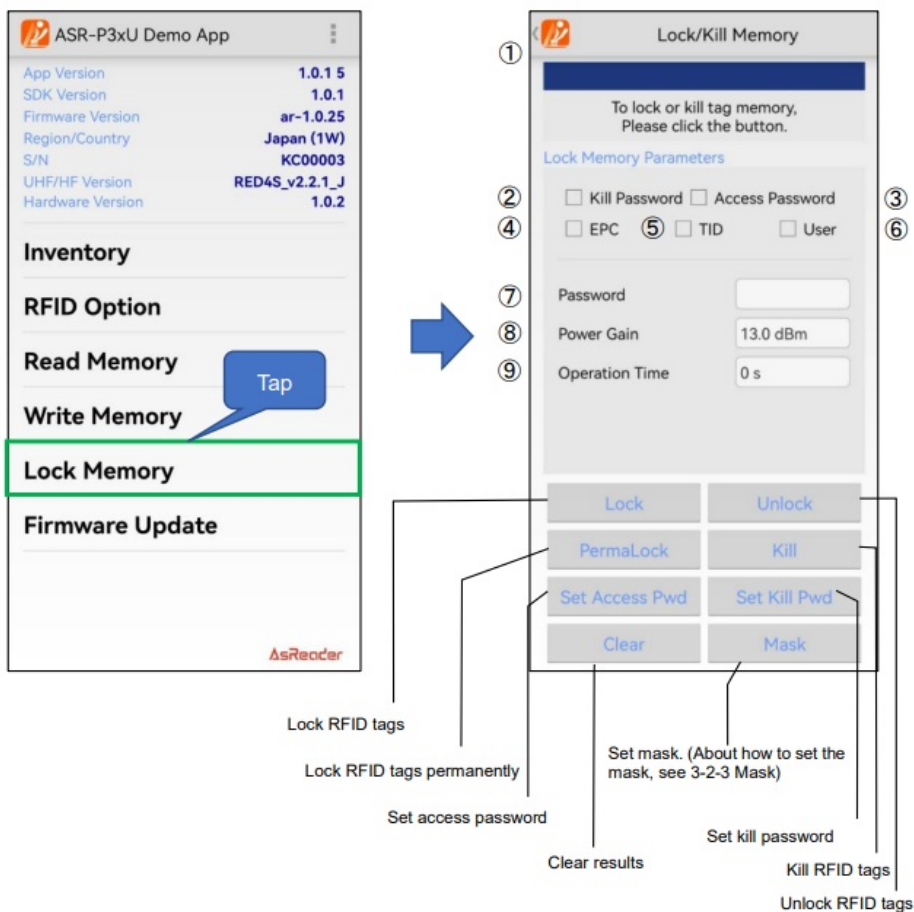
9. **Clear button**

   Tap it to clear the data displayed in the "Result" area.

10. **Mask button**

    Tap the "Mask" button to set the mask. See "3-2-3 Mask" for the setting method. This setting is saved to the AsReader

Lock Memory

Tap the "Lock Memory" in the left page to perform the Lock series or Kill processing on the RFID tag.

1. **Result**

The Lock or Kill results of an RFID tag are displayed in the "Result" area.

2. **Kill Password**

   To "Lock", "Unlock", or "Permalock" the Kill password, this item must be enabled.

   * If you want to set a Kill password, tap "Set Kill Pwd" to display the Kill password input box.

3. **Access Password**

   To "Lock", "Unlock", or "Permalock" the Access password, this item must be enabled.

4. **EPC**

   When enabled, this area becomes an action object for Lock, Unlock, or Permalock.

5. **TID**

   When enabled, this area becomes an action object for Lock, Unlock, or Permalock.

   * This Memory Bank is usually locked permanently as soon as the RFID tag leaves the factory.

6. **User**

   When enabled, this area becomes an action object for Lock, Unlock, or Permalock.

7. **Password**

   To Lock, Unlock, or Permalock an RFID tag, you must enter an access password here.
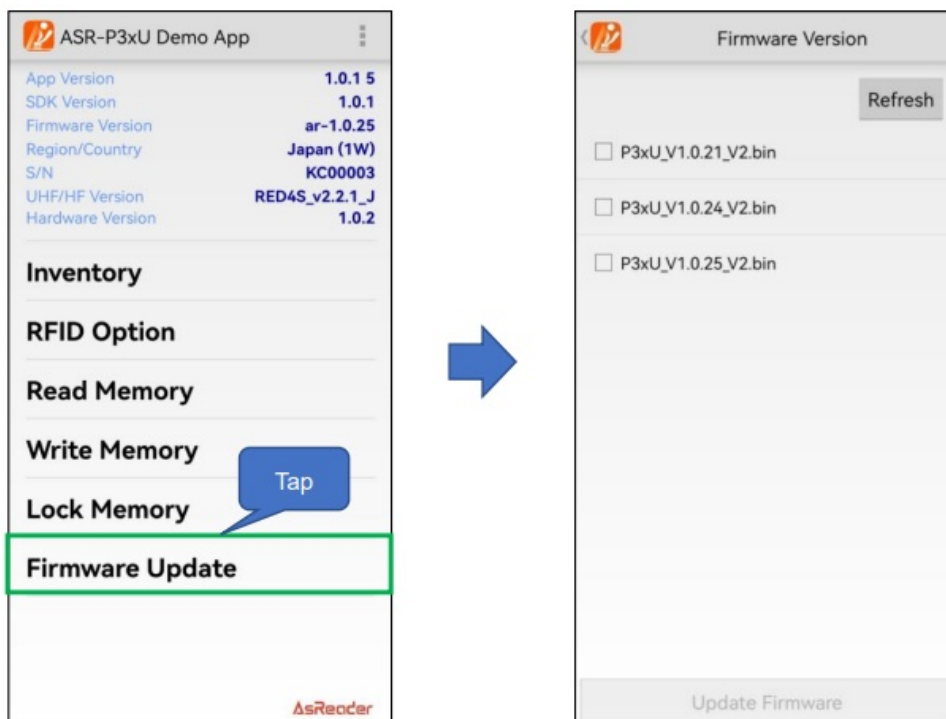
8. **Power Gain**

   Change the radio output value of AsReader. This setting is saved to the AsReader.

9. **Operation Time**

   Sets the execution time for the processing of the "Lock" series. This setting is saved to the AsReader.

Firmware Update
To update the P3xU firmware, tap Firmware Update on the left figure. This function requires a WAN connection to the Internet

Operating steps:

1. The Firmware Version page displays the updatable firmware list.
2. Select a target firmware version.
3. Tap the Update Firmware button.

4. The firmware update starts, and the update progress is displayed.

5. When the update is complete, the message "Update success" is displayed, and the P3xU restarts automatically.

6. If the LED indicator of the P3xU is steady on and beeps twice, the P3XU has successfully restarted.

7. The App and P3xU are automatically reconnected.

ASR-P3xU Android Demo

User Manual

Aug. 2023 1st Edition

Documents / Resources

	AsReader ASR-P3xU Android Demo App [pdf] User Manual ASR-P35U, ASR-P37U, ASR-P3xU Android Demo App, Android Demo App, Demo App, App

References

- Δ **AsReader Product Site specializing in RFID and Barcode AutoID to improve business**
- Δ **AsReader |**