123RFID MOBILE APPLICATION

User Guide

ZEBRA

MN-003765-01

Terms of Use

Proprietary Statement

This manual contains proprietary information of Zebra Technologies Corporation and its subsidiaries (“Zebra Technologies”). It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the express, written permission of Zebra Technologies.

Product Improvements

Continuous improvement of products is a policy of Zebra Technologies. All specifications and designs are subject to change without notice.

Liability Disclaimer

Zebra Technologies takes steps to ensure that its published Engineering specifications and manuals are correct; however, errors do occur. Zebra Technologies reserves the right to correct any such errors and disclaims liability resulting therefrom.

Limitation of Liability

In no event shall Zebra Technologies or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, consequential damages including loss of business profits, business interruption, or loss of business information) arising out of the use of, the results of use of, or inability to use such product, even if Zebra Technologies has been advised of the possibility of such damages. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Revision History

Changes to the original guide are listed below:

Change	Date	Description
-01 Rev A	11/2019	Initial release

Contents

About This Document

Introduction

This guide provides detailed information about the 123RFID Mobile Application for Android.

IMPORTANT: If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: zebra.com/support.

Related Documents

The following documents provide more information about RFID products that support 123RFID Mobile Application for Android.

- MC3300R RFID Mobile Computer Integrator Guide Supplement, p/n MN-003180-xx
- RFD2000 RFID Sled User Guide, p/n MN-003128-xx
- RFD8500 User Guide, p/n MN002065Axx

Notational Conventions

The following conventions are used in this document:

- **Bold** text is used to highlight the following:
  - Dialog box, window and screen names
  - Drop-down list and list box names
  - Check box and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen.
- Bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential.
  - Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

Service Information

If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: zebra.com/support.

When contacting support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software type and version number.

Zebra responds to calls by email, telephone or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Zebra Customer Support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your Zebra business product from a Zebra business partner, contact that business partner for support.

123RFID Mobile Application

Introduction

This chapter describes the enhanced version of the 123RFID Mobile Application for Android which demonstrates the device's capability and tag operation functionality.

This application is also available as part of Google Play store at: play.google.com/store/apps/details?id=com.zebra.rfidreaderAPI.demo&hl=en.

Requirements

Requirements for the 123RFID Mobile Application for Android are as follows:

- The recommended Android version on the mobile computer is KitKat version 4.4 and above.
- Zebra Enterprise RFID mobile computer and Android devices compatible with RFD8500.
- Zebra RFID Manager APK.

NOTE: The Zebra RFID Manager APK is only required when using RFD2000 and MC33XX products. Refer to the appropriate guide for more information.

- 123RFID Mobile Application APK.

Installing the 123RFID Mobile Application for Android

Install the 123RFID Mobile Application for Android (or partner application) on the mobile computer from www.zebra.com/support. The procedure to install the software in an Android device depends on the Android version.

To install the software:

1. Connect the Android device to your computer. It should be connected as MTP Device and show as a drive on your computer. For information on transferring files using Media Transfer Protocol, refer to the Mobile Computer Integrator Guide at: www.zebra.com/support.
2. Go to Device Settings > Security and check Unknown Sources to allow installation of applications from unknown sources.
3. Copy the 123RFID_Mobile_1.0.x.x.apk file to the mobile device.
4. Go to Settings > Security and select Unknown sources.
5. Use File Manager to locate the 123RFID_Mobile_1.0.x.x.apk file in the folder to which it is copied in Step 3 and select it.
6. In the pop-up window, select the Android App installer to begin installation.

123RFID Mobile Application for Android

This application runs on Android mobile devices and demonstrates capability and tag operation functionality.

The application allows for navigating to all screens at any time, however, some actions are not permitted while the device is charging. These actions include any operation that involves Tag reading or writing (for example: Rapid Read, Inventory, Locate Tag, etc.).

Navigate to all screens when the inventory/locate operation is in progress. When the operation is in progress, the device displays **Operation in Progress** if additional operations are initiated.

Using the 123RFID Mobile Application for Android

To use this application for RFID operations:

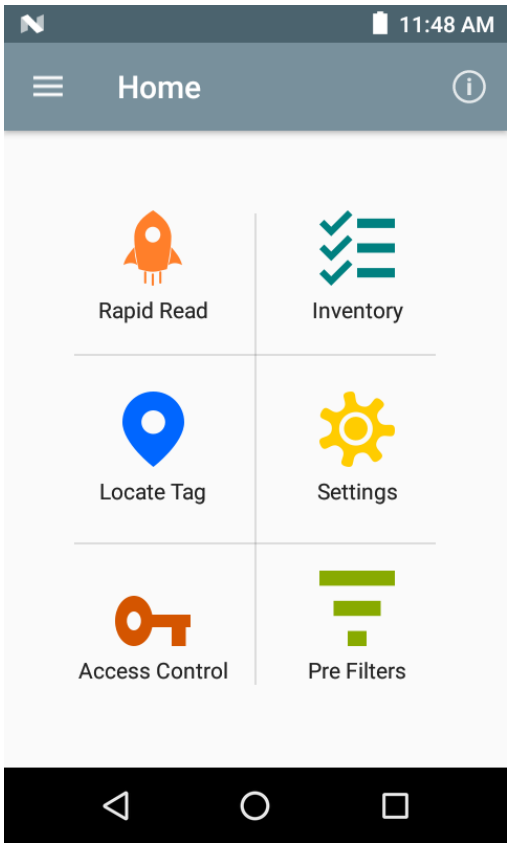
1. Launch the 123RFID Mobile Application for Android on the mobile device.
2. Select **Settings > Advanced Reader Options > Antenna**. Power Level is set to 27.0 dBm by default. However, it is shown as 270 dbm because the value used is in units of tens of dBm. Japan units are set to a different default power level depending on the SKU type.
3. Before using the device and if the region is not set, set the region in which the device is operating. To set the region, open the application and select **Settings > Regulatory** (see Power Management on page 39).

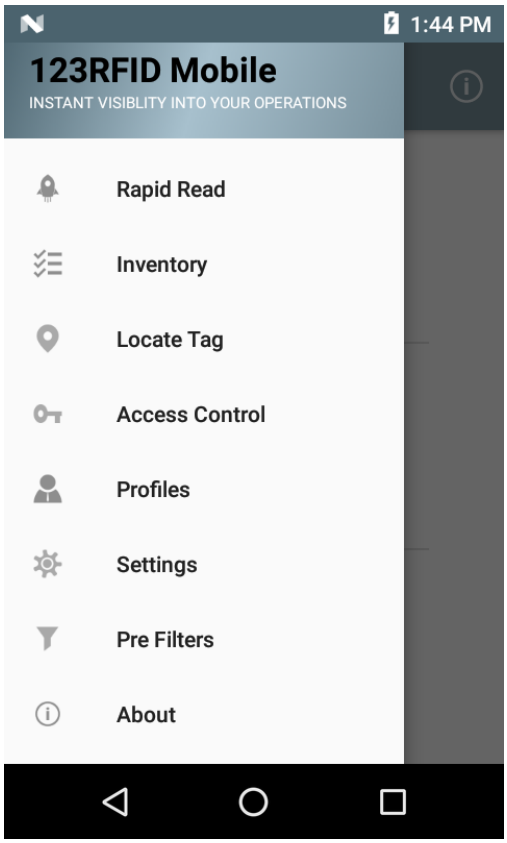
Demo Application Screens

Home Screen

To access the 123RFID Mobile Application for Android, touch the **Zebra RFID Reader** icon on the mobile device to display the Home screen. Swipe right from the left side of the screen to display the **RFID Reade**r Menu. Tap any menu item to access its screen.

Figure 1 Home and Menu Screens

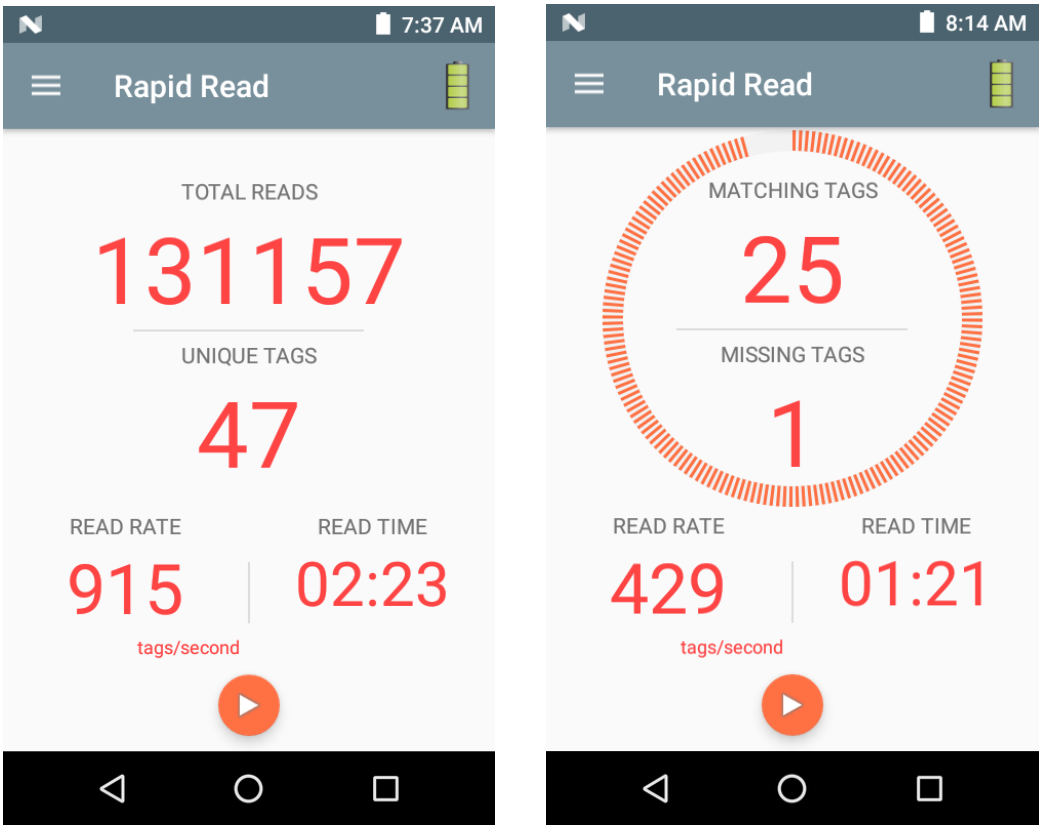




Rapid Read

Tap **Rapid Read** from the **Home** or **Menu** screen.

Figure 2 Rapid Read Screen



The Rapid Read and Inventory screens display the following data (see Inventory on page 12).

- Total tag count
- Unique tag count
- Read time (mm:ss)
- Tag read rate (tags/sec).

Rapid Read and Inventory screens are two different views of the inventory operation on the reader. The **Start/Stop** functionality can be used interchangeably on both screens. For example, when operation starts on the **Rapid Read** screen and you navigate to the **Inventory** screen, the button available on the **Inventory** screen is **Stop**. The same is true when the operation starts on the **Inventory** screen. During the rapid read process, you can navigate to the **Inventory** screen to view tag details along with tag counts for each tag. The statistics displayed are maintained on the **Rapid Read** and **Inventory** screens regardless of the screen used to start the process.

Select **Start** to start the rapid read inventory operation. Select **Stop** to stop inventory operation.

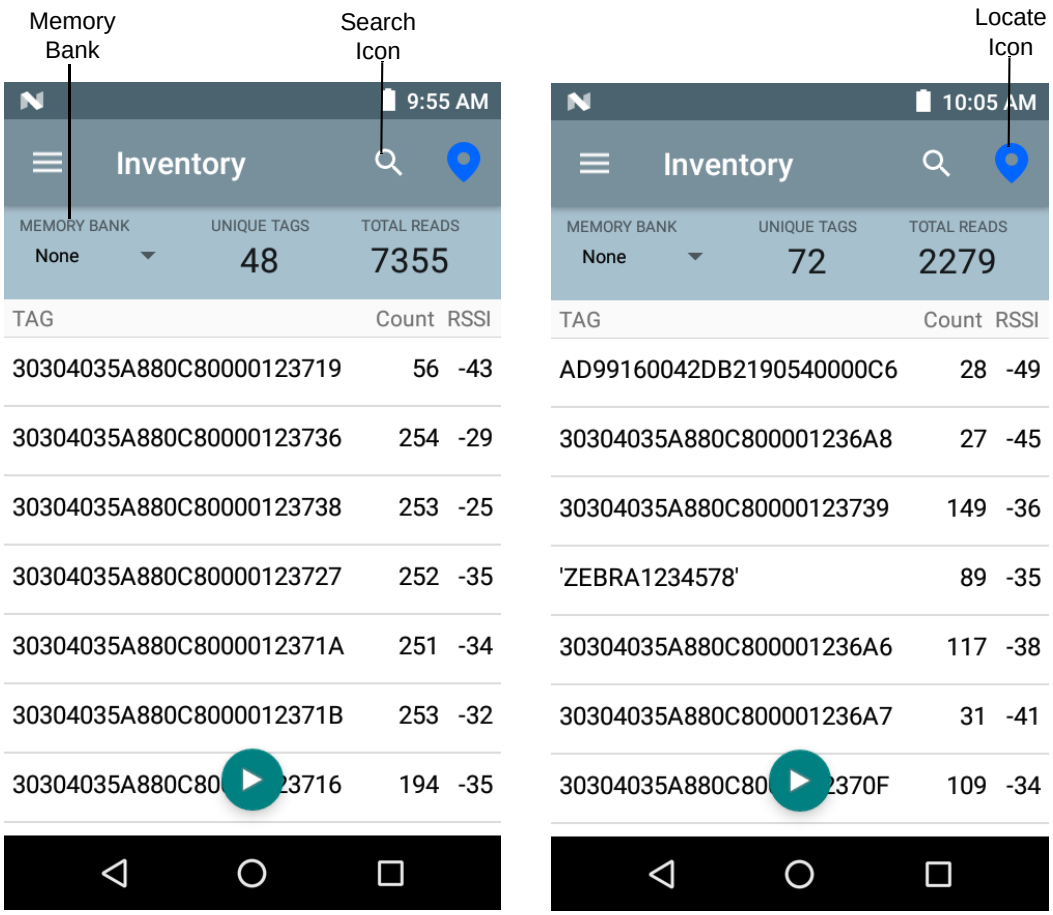
NOTE: The scan trigger on the device can also start and stop the inventory operation. Press the trigger to start, continue to hold and release to stop.

Moving to another screen does not halt the operation. However, attempting to make changes or perform another operation while rapid read is in process results in an error.

Inventory

Select **Inventory** from the **Home** or **Menu** screen.

Figure 3 Inventory Screen



Tag reading is started and stopped on this screen as well as on the **Rapid Read** screen (see Rapid Read on page 11). When the process starts, tag information displays on the screen.

Select **Start** to start the rapid read inventory operation. The **Start** button changes to **Stop**. Tap **Stop** to stop the read inventory operation.

NOTE: The scan trigger on the device can also start and stop the inventory operation. Press the trigger to start, continue to hold and release to stop.

The tag ID selected displays on the **Access, Locate Tag,** and **Pre Filters** screen when navigating to that screen. After selecting tag, tap on the action bar **Locate** icon to go to the Locate screen. The second screen displays the tag which is fully convertible to ASCII format. ASCII mode may be enabled by selecting **Settings** > **Application**.

Inventory Screen Features

Table 1 Inventory Screen Features

Item	Description
Action Bar	
Tags	Tap **Memory Bank** to select one of the following memory bank options from the drop-down menu: • **None** - Defaults to EPC. • **User** - Allows reading user memory bank data when the tag is inventoried. • **Reserved** - Allows reading reserved memory bank data when the tag is inventoried. • **TID** - Allows reading TID memory bank data when the tag is inventoried. • **EPC** - Allows reading EPC memory bank data when the tag is inventoried. When the next inventory operation starts, the details from the selected memory bank displays. This menu is inactive if there is an ongoing operation on the connected reader. • **Default Display** - None.
Search	Tap the **Search** icon and enter a tag ID. Tags that match the entry display in the content area.

Table 1 Inventory Screen Features (Continued)

Item	Description
Power Management	Icon indicates if Dynamic Power is on. See Power Management on page 39. Tap the **Power Management** icon to open the Battery Status screen.
Content Area (select a tag)	Tapping a **Tag ID** highlights the tag. The highlighted Tag ID is populated on the Tag Location text area as well as the Tag Pattern area in the Access Control screen. Tap **Start** to start searching for the tag. See Tag List Match Mode Operation on page 14 for more details. From this screen, return to the **Menu** or go to the **Home** screen and select **Locate Tag**.
Content Area (select a tag)	The tags displayed in this area are based on the option selected from the memory bank. Tap the tag ID to expand details about the tag. Tap the tag ID again to collapse details. Example Default Tag Display: Tag IDTag Count AD99 15404190725965400404 Example Expanded Tag Display: **Note**: Expanded tag detail can only display when the inventory operation is stopped. Memory bank data is shown only when inventory is complete. Tag IDTag Count AD99 15404190725965400404 EPC MEMORY3000 RSSI -50 Phase 1800 USER 1122334455667788AABBCCDDEEFF 1122334455667788AABBCCDDEEFF 1122334455667788AABBCCDDEEFF

Tag List Match Mode Operation

When **Tag List Match Mode** is checked on the **Application** screen (Application on page 26), the application identifies tags from a given set of tags in csv tag list format (comma separated values file). The contents of the csv file displays on the **Inventory** screen. By default, the application shows friendly names from csv files.

Before the inventory starts, the count is zero. Figure 4 displays drop-down menu choices. Select an option to display the type of tags to show when the inventory starts.

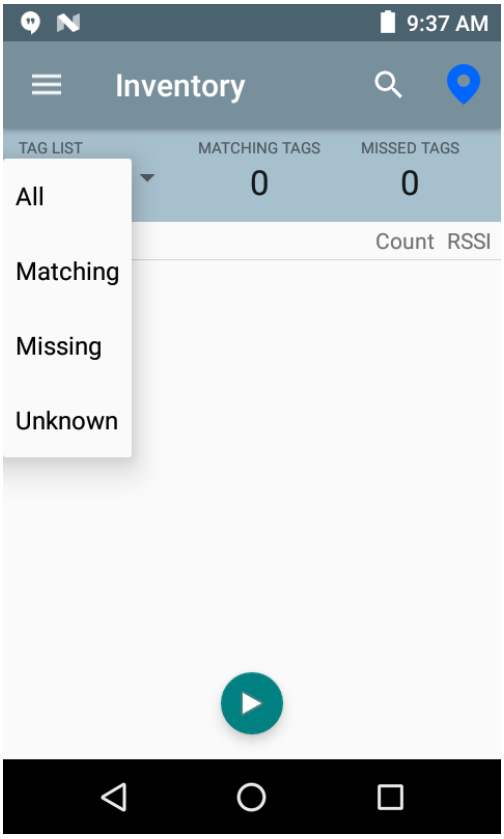
All: Sample 4 Inventory List: Tag List Enabled; All Tag Option Selected on page 19

Matching: See Sample 1 Inventory List: Tag List Enabled; Matching Tag Option Selected on page 16.

Missing: See Sample 2 Inventory List: Tag List Enabled; Missed Tag Option Selected on page 17.

Unknown: Sample 3 Inventory List: Tag List Enabled; Unknown Tag Option Selected on page 18

Figure 4 Tag List Menu



Sample Contents of Taglist.csv File

The csv file should contain only alphanumeric characters in the tag column. If there are any special characters, the row is discarded.

The Taglist.csv file must be located inside the rfid folder which must be manually created at the Android device root directory.

NOTE: The folder name must be all lower case (for example, rfid and not RFID).

Figure 5 Taglist.csv File Contents

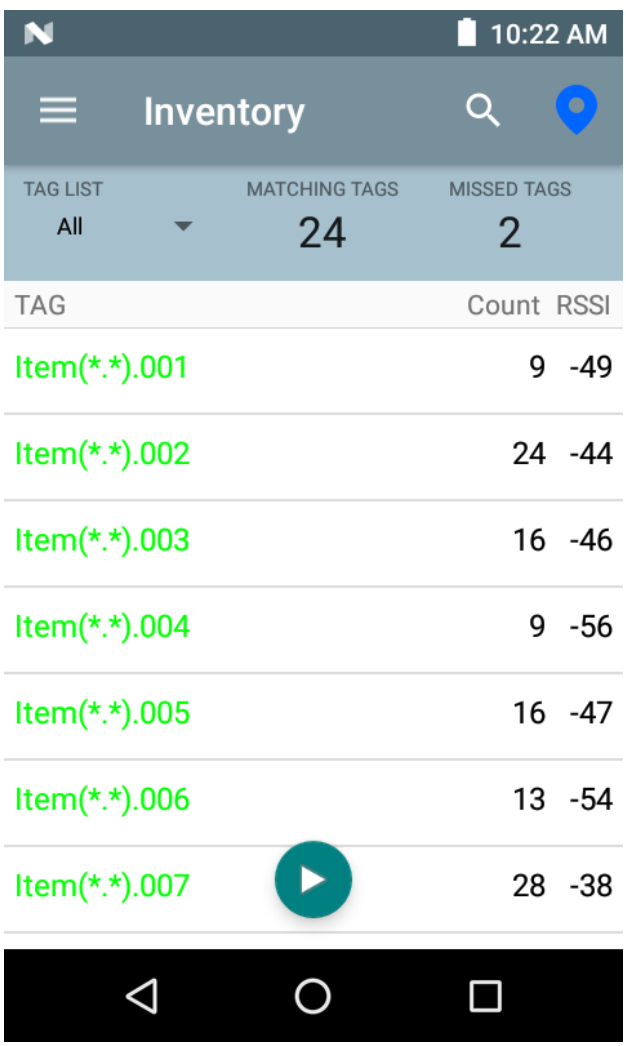
A1 | 30304035A880C80000123658

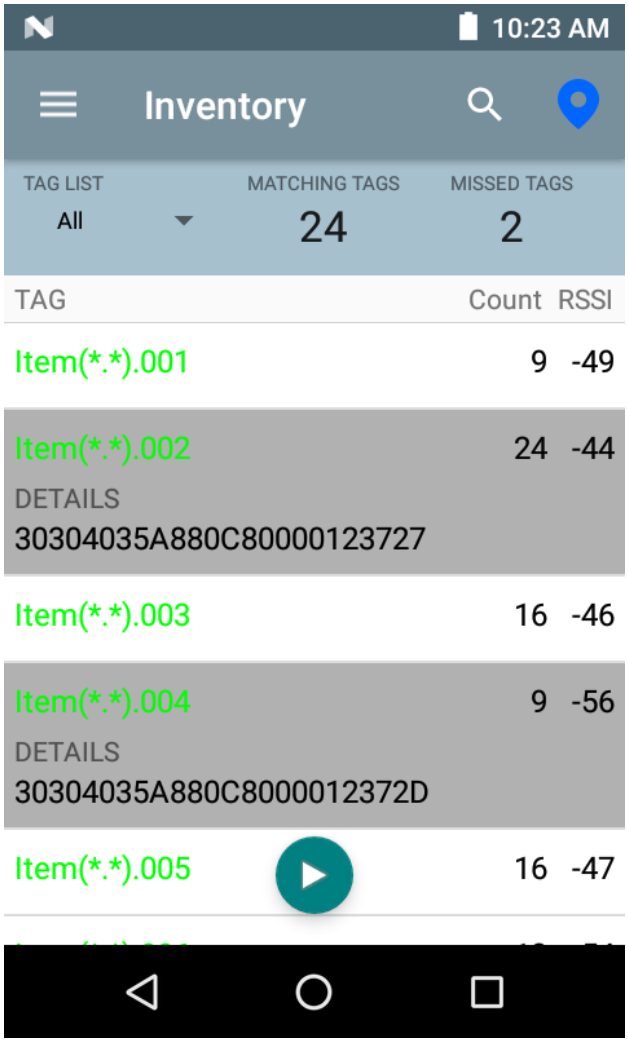
	A	B	C	D
1	30304035A880C80000123658	Item (*-*).001		
2	3035200EDC27074000123663	Item (*-*).002		
3	8DF000000000000000081291D	Item (*-*).003		
4	30304035A880C8000012364F	Item (*-*).004		
5	30304035A880C80000123644	Item (*-*).005		
6	30304035A880C8000012365C	Item (*-*).006		
7	30304035A880C80000123654	Item (*-*).007		
8	30304035A880C80000123710	Item (*-*).008		
9	30304035A880C80000123645	Item (*-*).009		

Sample 1 Inventory List: Tag List Enabled; Matching Tag Option Selected

When inventory starts, the application only displays the tag reads that match the tags in the taglist.csv file. Matching tags display in green. Select any tag read to show the matching tag details in the csv file.

Figure 6 Matching Taglist.csv File Contents

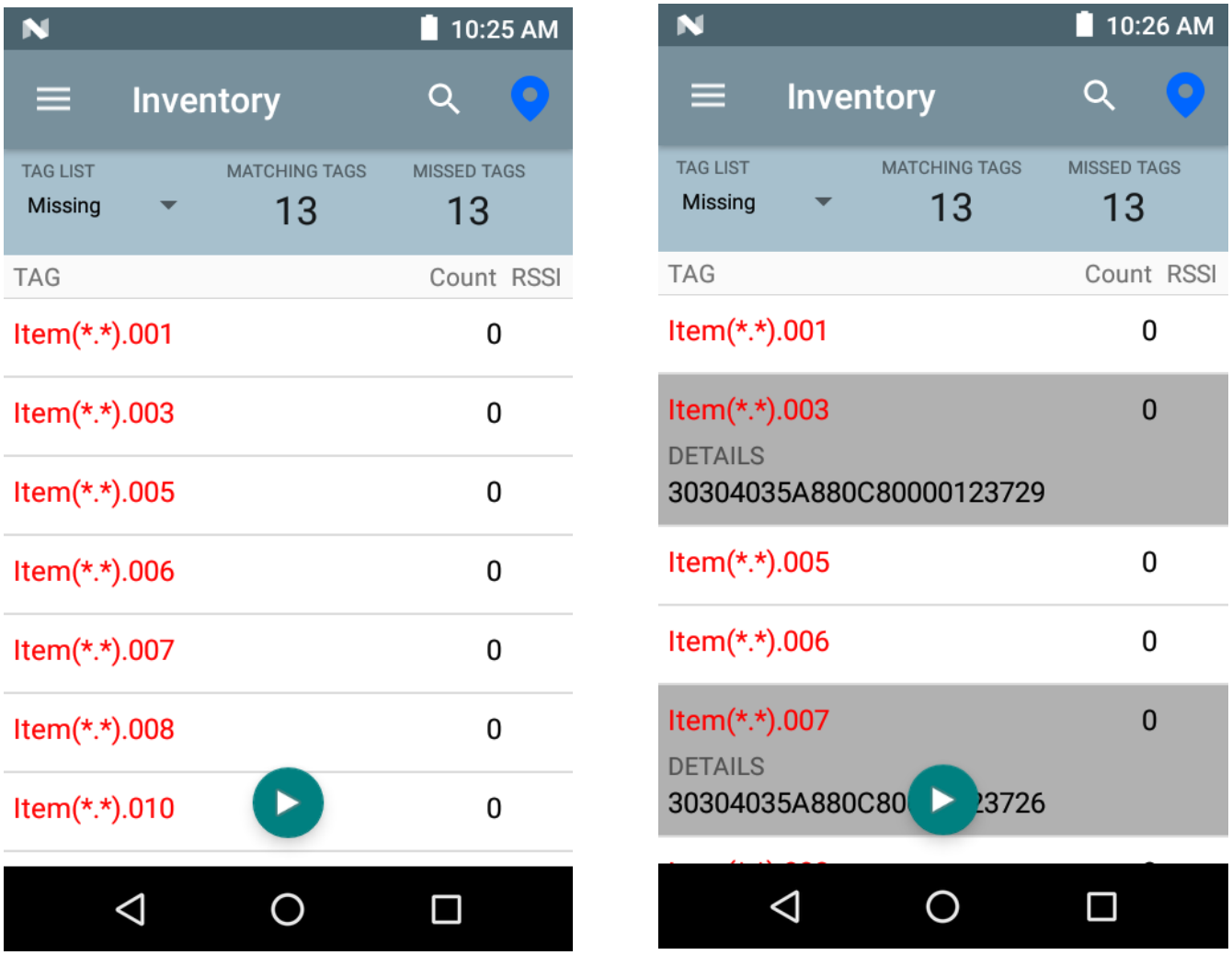




Sample 2 Inventory List: Tag List Enabled; Missed Tag Option Selected

When inventory starts, the application only displays the tag reads that are missed and included in the taglist.csv file. Missed tags display in red. Select any tag to show the missed tag details in the csv file.

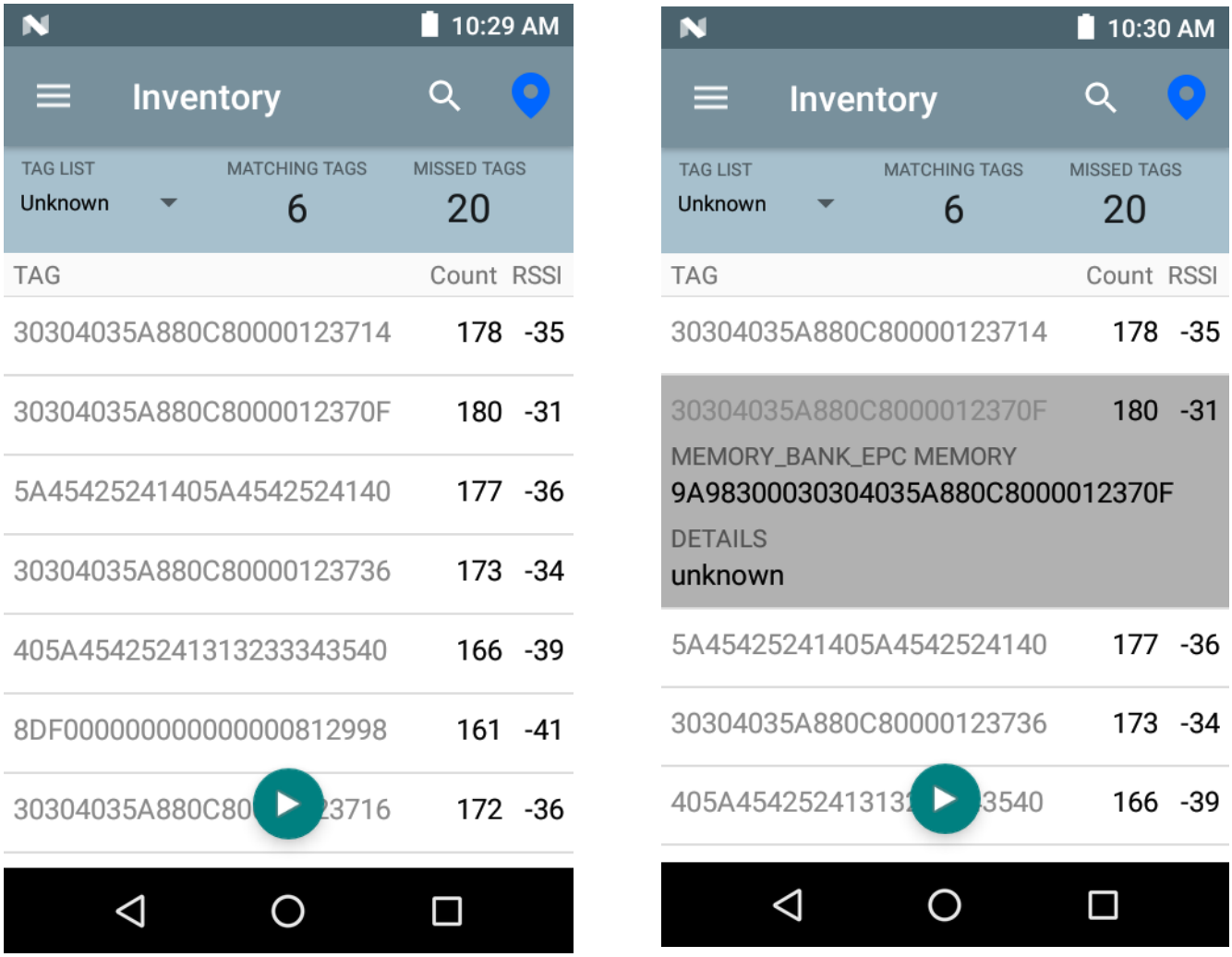
Figure 7 Missed Taglist.csv File Contents



Sample 3 Inventory List: Tag List Enabled; Unknown Tag Option Selected

When inventory starts, the application only displays tags that were read but not included in the taglist.csv file. Unknown tags display in gray. Select any tag to show the unknown tag details.

Figure 8 Unknown Tags

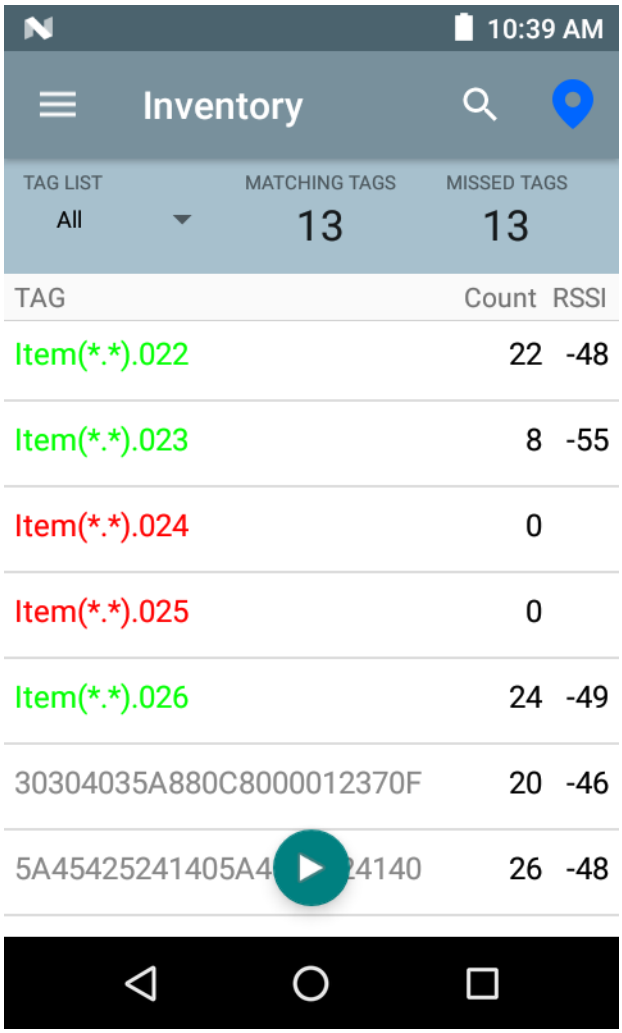


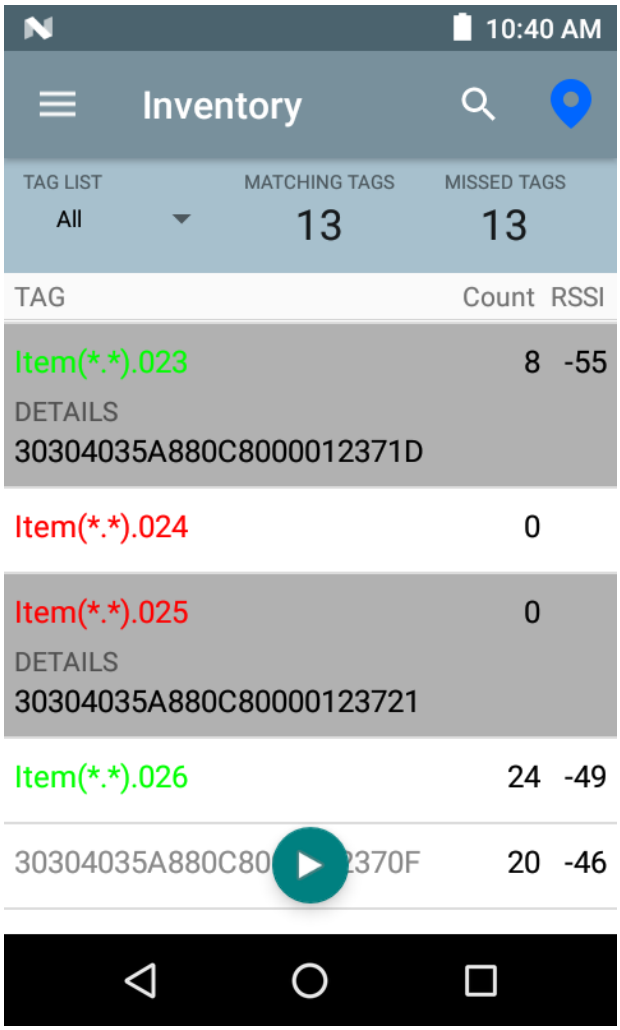
Sample 4 Inventory List: Tag List Enabled; All Tag Option Selected

When inventory starts, the application displays the tags for all of the options:

- Tag reads that match the tags in the taglist.csv file. Matching tags display in green. Select any tag read to show the matching tag details in the csv file.
- Tag reads that are missed and included in the taglist.csv file. Missed tags display in red. Select any tag to show the missed tag details in the csv file.
- Tags that were read but not included in the taglist.csv file. Unknown tags display in gray. Select any tag to show the unknown tag details.

Figure 9 All Tags

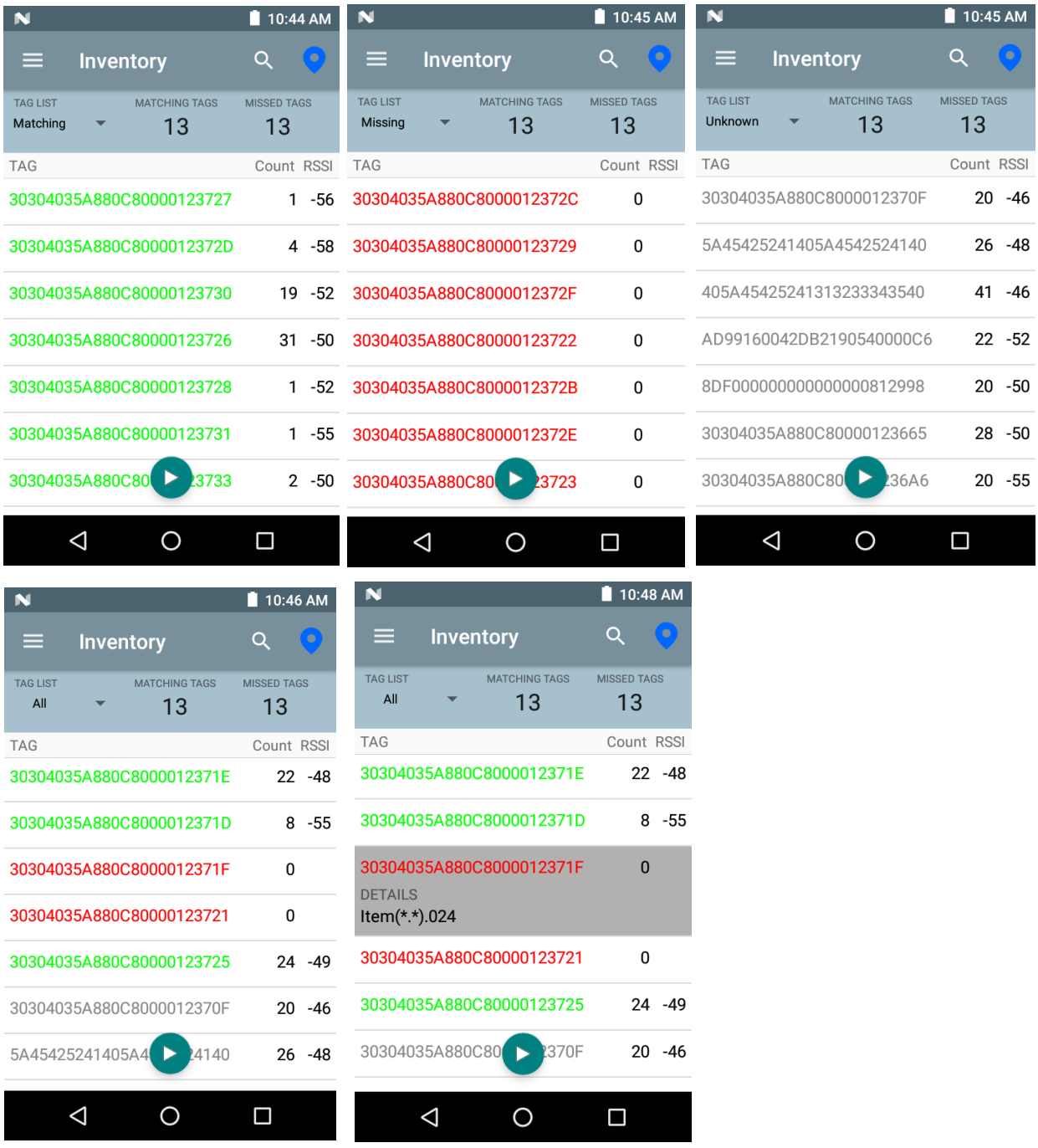




Sample 5 Tag List Matching Selected; Show Friendly Not Names Selected

When inventory starts, the application displays the tags for selected options from All, Matching, Missing, or Unknown. Application shows friendly names (i.e., Tag details instead of EPC) on screen.

Figure 10 Show Friendly Names Enabled



Sample 6 Exporting Data - Tag List Matching Selected

The Application screen on*page 5-26* has the option to Export Data. If the option is checked, data is exported when the inventory stops. The tag content area is exportable to a file. For example, when **Matching** is selected from the menu to display only matching tags in the tag content area, the matching data can be exported to a file. The exported csv file includes the matching, missing, and unknown tag count shown in Figure 11.

Figure 11 Exported File Content

A1 | INVENTORY SUMMARY

	A	B	C
1	INVENTORY SUMMARY		
2	MATCH COUNT:	36	
3	MISS COUNT:	36	
4	UNKNOWN COUNT:	36	
5	READ TIME:	0:00:11	
6			
7	TAG ID	COUNT	
8	30304035A880C80000123658	0	null
9	3035200EDC27074000123663	13	MATCH
10	8DF00000000000000081291D	0	MISS
11	30304035A880C80000123644	18	MATCH
12	30304035A880C8000012365C	82	MATCH
13	30304035A880C80000123654	0	null
14	30304035A880C80000123710	7	MATCH
15	30304035A880C80000123645	1	MATCH
16	30304035A880C80000123656	0	null
17	303425485C27074000123662	476	MATCH
18	30304035A880C8000012364D	0	MISS
19	30304035A880C80000123650	0	MISS
20	8DF0000000000000007CCCC7	0	MISS
21	30304035A880C80000123705	0	MISS
22	30304035A880C80000123737	3	MATCH
23	30304035A880C8000012370F	28	MATCH
24	30304035A880C8000012371D	27	MATCH
25	30304035A880C80000123721	8	MATCH
26	30304035A880C80000123736	0	null
27	AD99160042DB2190540000C6	0	MISS
28	8DF00000000000000812998	0	MISS
29	30304035A880C8000012364C	0	MISS
30	30304035A880C80000123652	0	null
31	30304035A880C80000123664	532	MATCH
32	30304035A880C8000012364E	0	MISS
33	30304035A880C8000012364A	0	MISS
34	30304035A880C80000123657	0	null

Unique Tag Reporting

When **Unique Tag Reporting** is enabled on the Tag Reporting screen on*page 5-37*, the reader reports only unique tags based on the options below.

- When the **Matching** option is selected (see Sample 1 Inventory List: Tag List Enabled; Matching Tag Option Selected on page 16) the tag count cannot be greater than one because the unique tags are only reported one time.
- When the **Matching** option is not selected, the list displays unique and total reads. The tag count cannot be greater than one because the unique tags are only reported one time.

Figure 12 Tag List Mode Enabled

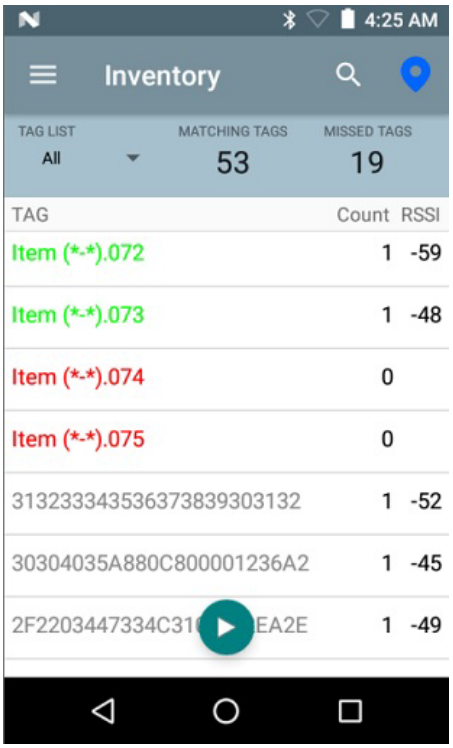
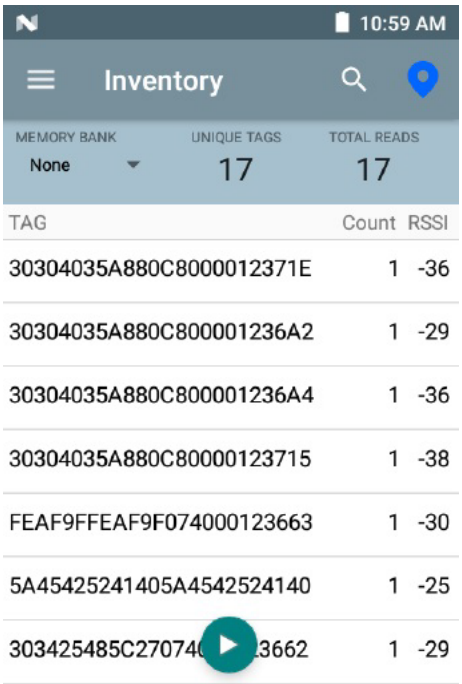


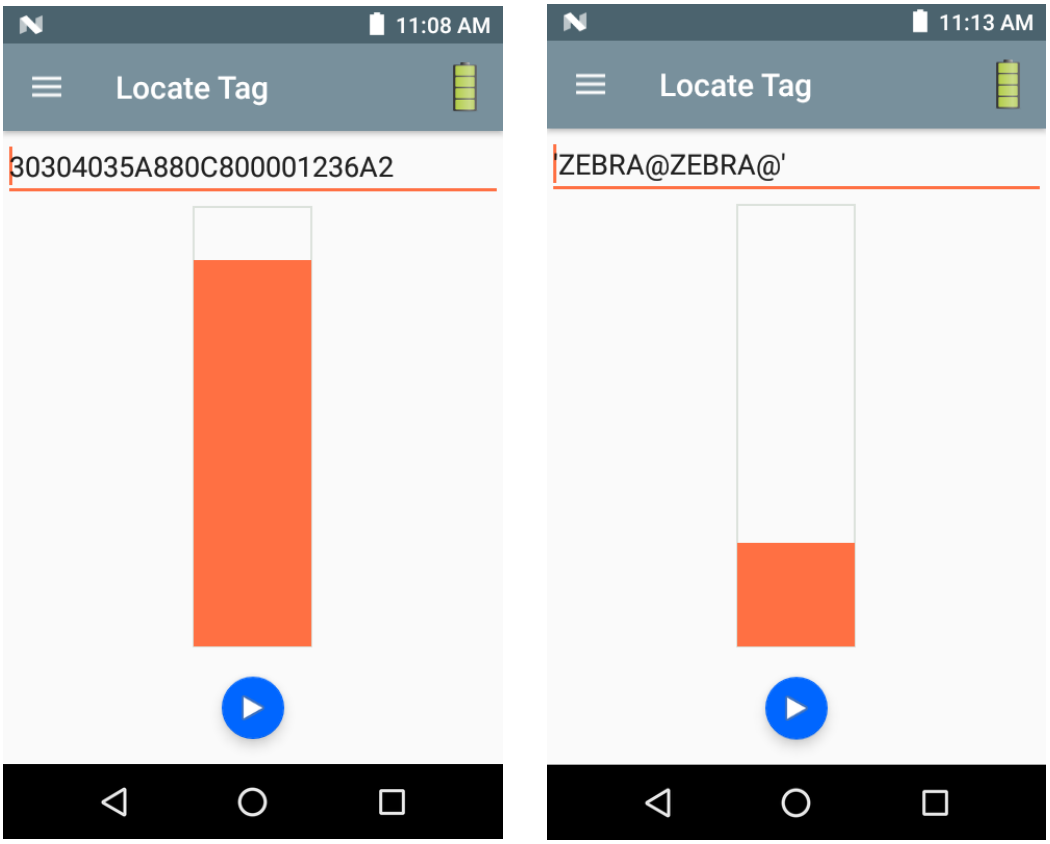
Figure 13 Tag List Mode - Disabled



Locate Tag

Tap **Locate Tag** from the **Home** or **Menu** screen.

Figure 14 Locate Tag Screen



On this screen, enter the Tag ID in the text area or select a tag from the Inventory screen to pre-populate the Tag ID to search.

Tap **Start** to start the locate tag operation. Tap **STOP** to stop. The device trigger can also be used to start and stop the operation.

NOTE: The scan trigger on the device can also start and stop the inventory operation. Press the trigger to start, continue to hold and release to stop.

The color bar on the display shows the relative distance of the tag.

When the locate tag operation starts, moving to another screen does not stop the operation until **Stop** is selected.

Settings

Figure 15 Settings Screen

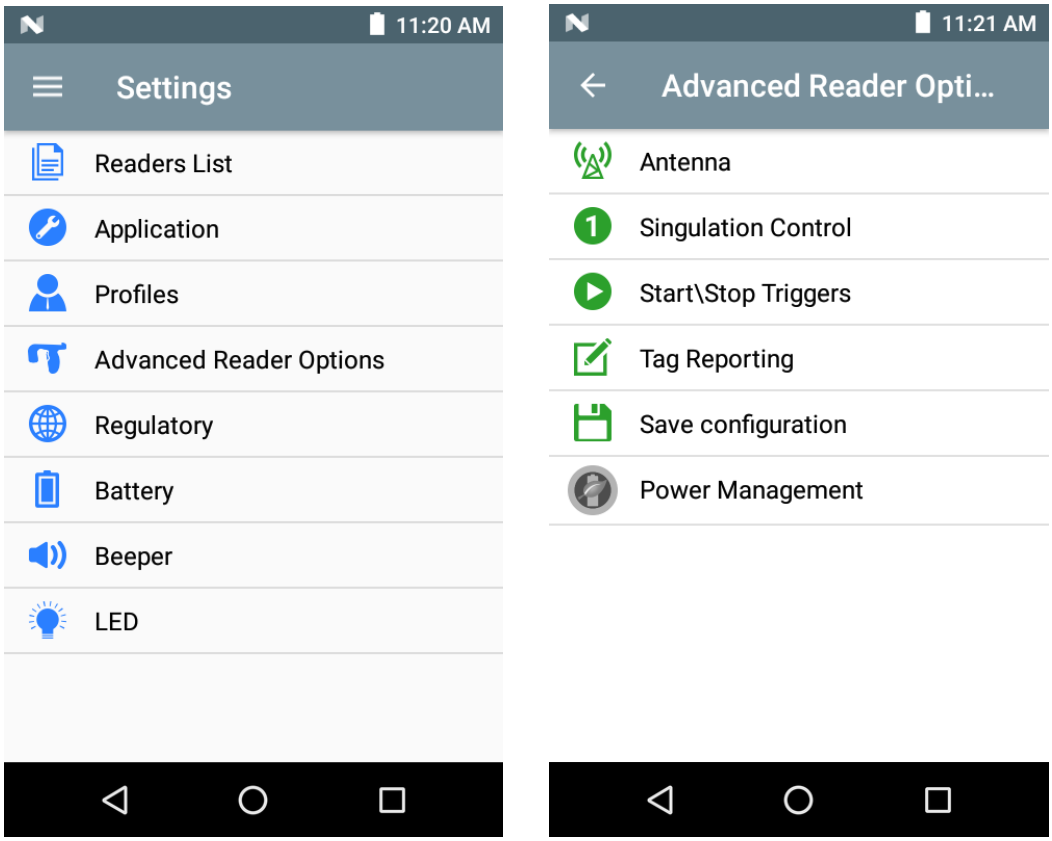


Table 2 Settings Screen Options

Settings Option	Description	Page
Readers List	Displays connected devices.	*5-26*
Application	Displays reader connection, notification, and data export settings.	*5-26*
Profiles	Displays **Fastest Read, Cycle Count, Dense Readers, Optimal Battery, Balanced Performance, User Defined** and **Reader Defined** profiles.	*5-28*
Regulatory	Allows region and channel selections.	*5-30*
Battery	Displays the device battery status.	*5-31*
Beeper	Use to turn the beeper on/off, and set volume.	*5-32*
LED	Enables/Disables the device tag read LED indicator.	*5-33*
Advanced Reader Options		
Antenna	Displays antenna power lever and link profile.	*5-34*
Singulation Control	Displays Session, Tag Population, Inventory State and SL Flag.	*5-35*
Start\Stop Triggers	Allows **Start** and **Stop** button control.	*5-36*

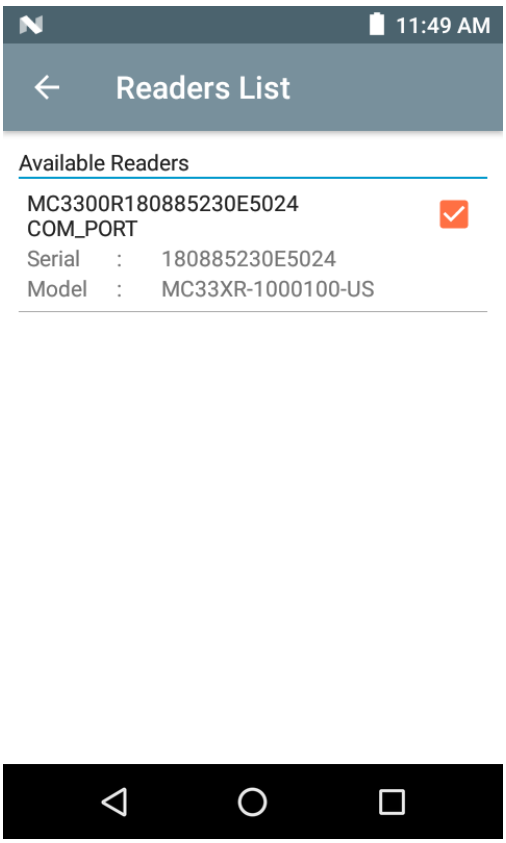
Table 2 Settings Screen Options (Continued)

Settings Option	Description	Page
Tag Reporting	Support for reporting unique tags as part of tag reporting options.	*5-37*
Power Management	Turns Dynamic Power Optimization on and off.	*5-39*
Save Configuration	Ability to save all settings: Antenna, Singulation, Tag Reporting, Start/Stop trigger, Beeper Volume, and Regulatory. **Note:** The settings are also automatically saved when changes are made.	*5-39*

Readers List

From the **Settings** screen, select **Readers List**.

Figure 16 Settings - Readers List Screen

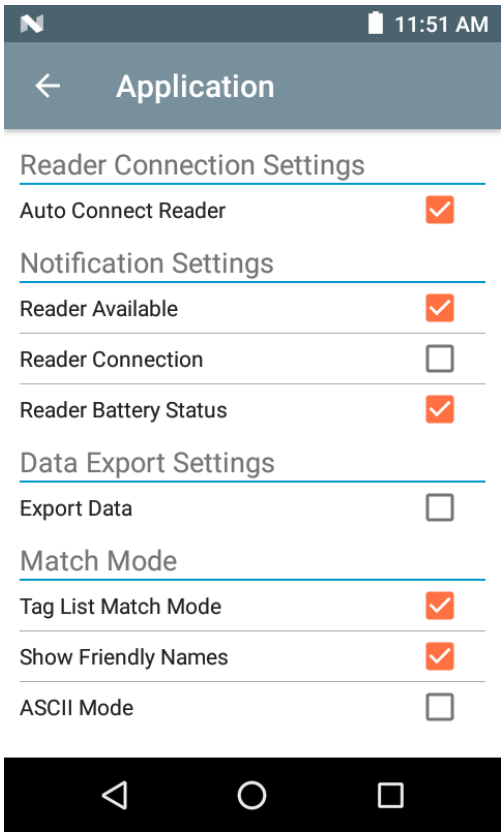


Tap a reader name from the **Readers List** to establish a session with the selected reader. Tap again to terminate the session.

Application

From the **Settings** screen, select **Application**.

Figure 17 Settings - Application Screen



The application always detects the device.

- **Auto Reconnect Reader** - When checked, the device connects to the RFID service which manages the connection to the reader.
- **Export Data** - When checked, the application writes the inventoried RFID data to a file when the inventory operation stops. On Android platforms the file is saved in a fixed directory. Check the files in file browsing in the Inventory directory (Sdcard/inventory/<files>). The files may be copied to a PC.
- **Tag List Match Mode** - Check to enable matching mode.
- **Show friendly names** - Check to show the tag's friendly names instead of EPC ID. **Show friendly names** is only available when **Tag List Match Mode** is enabled.
- **ASCII Mode** - Displays tag ID in ASCII format. If the full tag ID or memory bank data is convertible to ASCII format, then the application only shows the same. Inventory, Locate, Access, and Pre Filters show ASCII mode represented data in respective sections.

Profiles

To display the list of profiles, tap on **Settings** > **Profile**.

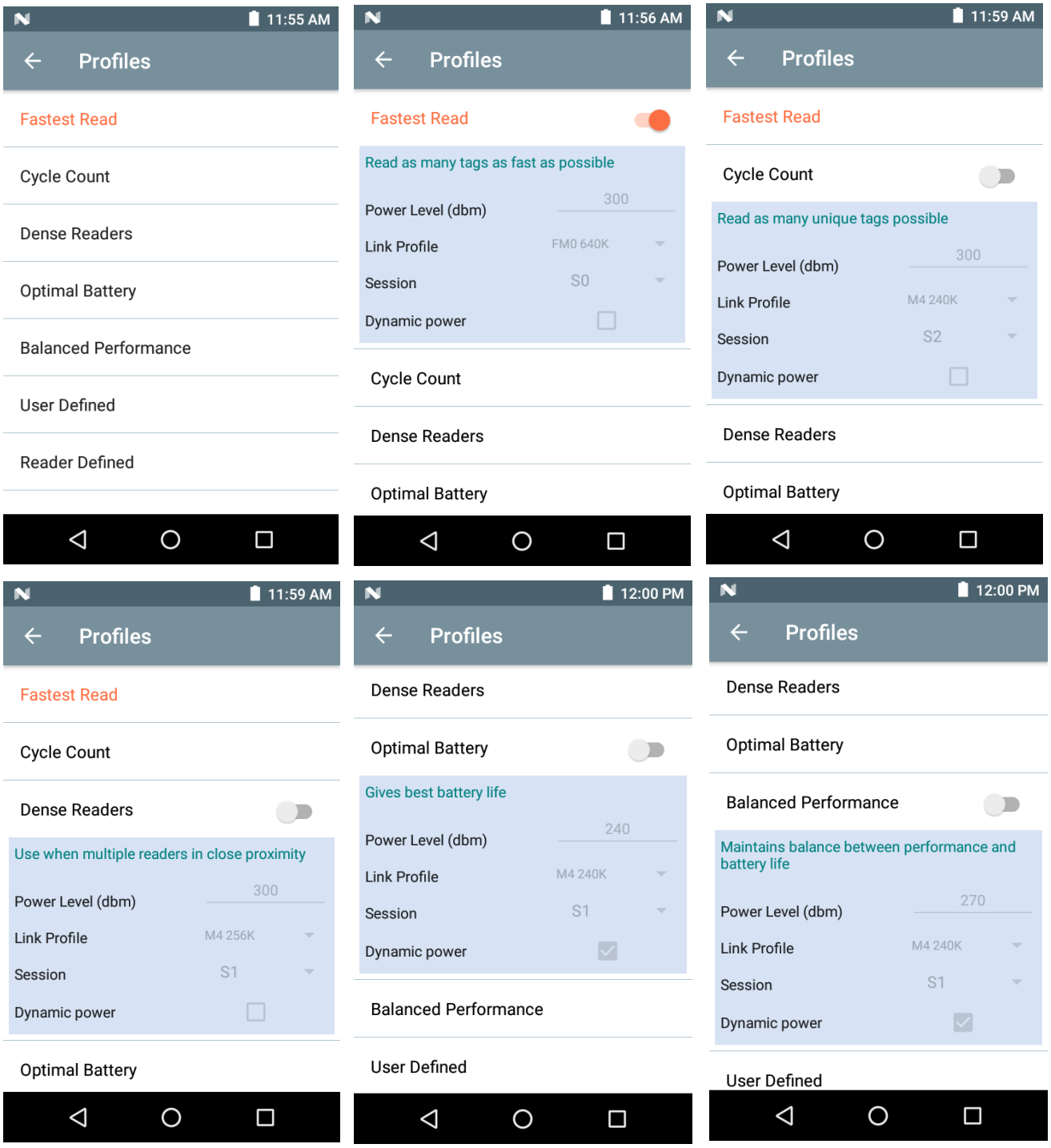
- The currently selected profile is highlighted in orange.
- Tap profile item to expand the profile and view applicable configurations.
- Profiles can be selected or disabled by using the slider switch to the right of the profile name.

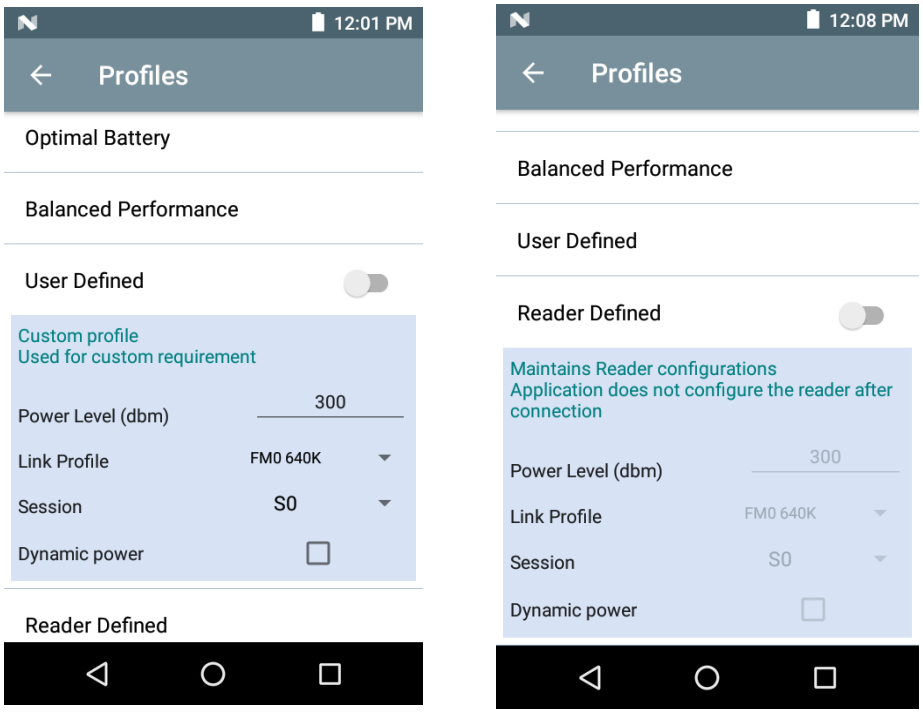
NOTE: If Power Level, Link Profile, Session, or Dynamic Power are modified from each respective screen, then the currently selected profile changes to User Defined profile and profile item values are modified with same values.

Profile setting options are as follows:

- Fastest Read - Read as many tags as fast as possible.
- Cycle Count - Read as many unique tags as possible.
- Dense Readers - Use when there are multiple readers within close proximity.
- Optimal Battery - Provides best battery life.
- Balanced Performance - Maintains balance between performance and battery life.
- User Defined - Custom profile used for custom requirements.
- Reader Defined - Maintains reader configurations.

Figure 18 Profiles Settings





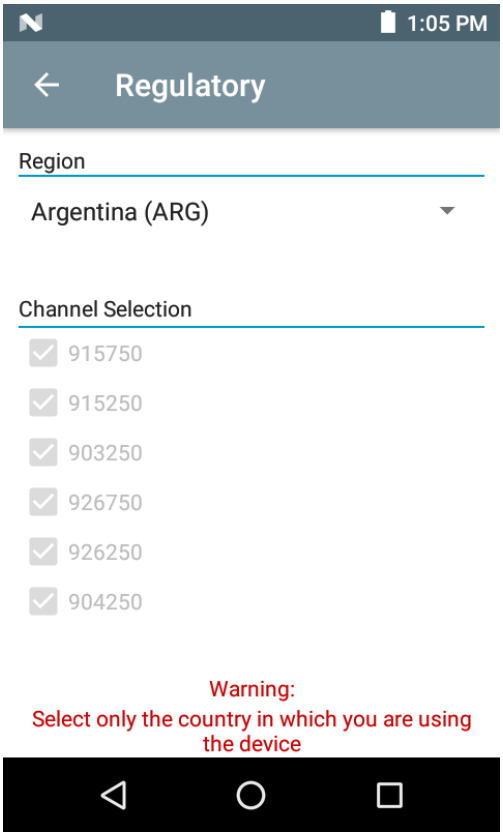
Regulatory

The region drop-down displays the current region to which the device is set. Choose the correct region before using the device.

- **Channel Selection** is allowed only for the regions that allow channel setting.
- Supported regions are reported by the device.
- If the region is not configured on the device, the **Regulatory** screen is the first screen displayed after connecting to the device.

NOTE: Select only the country in which the device is used.

Figure 19 Settings - Regulatory



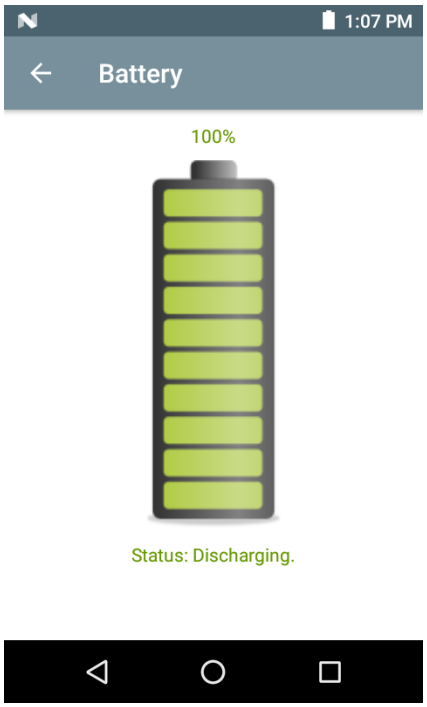
Battery

This screen displays the status of the battery. The battery levels are as follows:

- Level is high (green) Status - Battery is mostly charged
- Critical (red) Status - Battery Level is Critical
- Low (orange) Status - Battery Level Low
- Reader is not connected (grey) - No Active Connection.

The battery percentage is provided as text above the battery indicator and the status field below the battery indicator provides charging/discharging information.

Figure 20 Settings - Battery

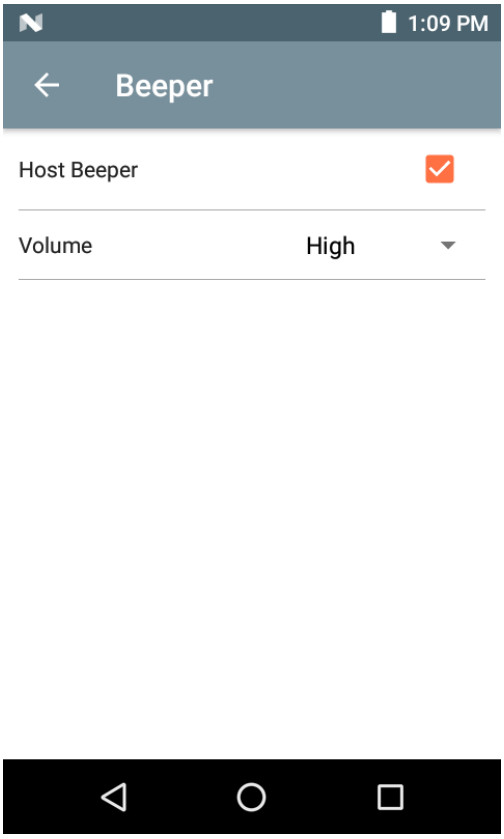


Beeper

The Beeper screen displays the current beeper settings. To turn the beeper Off, un-check the **Host Beeper** check box. To set the beeper volume, select the **Volume** drop-down menu and select **High**, **Medium** or **Low**.

The mobile computer provides a beep indication for inventory and access operations.

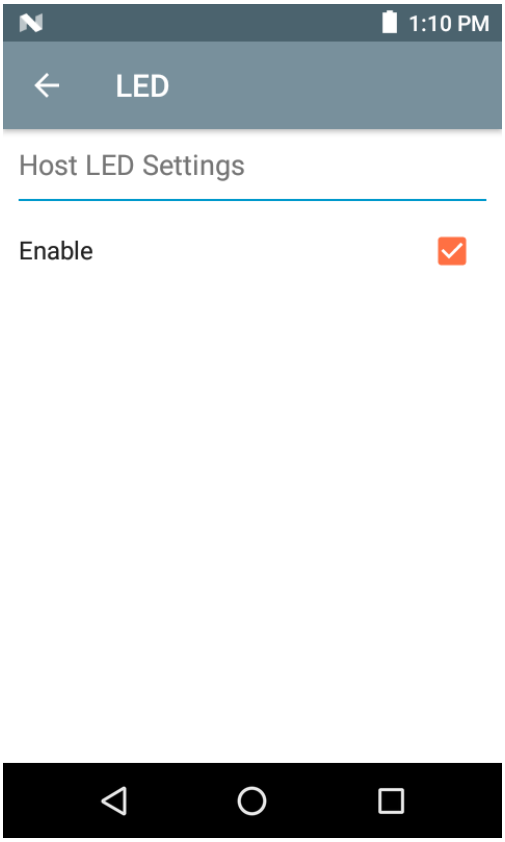
Figure 21 Settings - Host Beeper



LED

The **LED** screen displays the current host LED settings. To enable the mobile computer LED, select the **Enable** check box. During inventory and access related operations, the LED blinks green for a successful read.

Figure 22 Settings - Host LED



Antenna

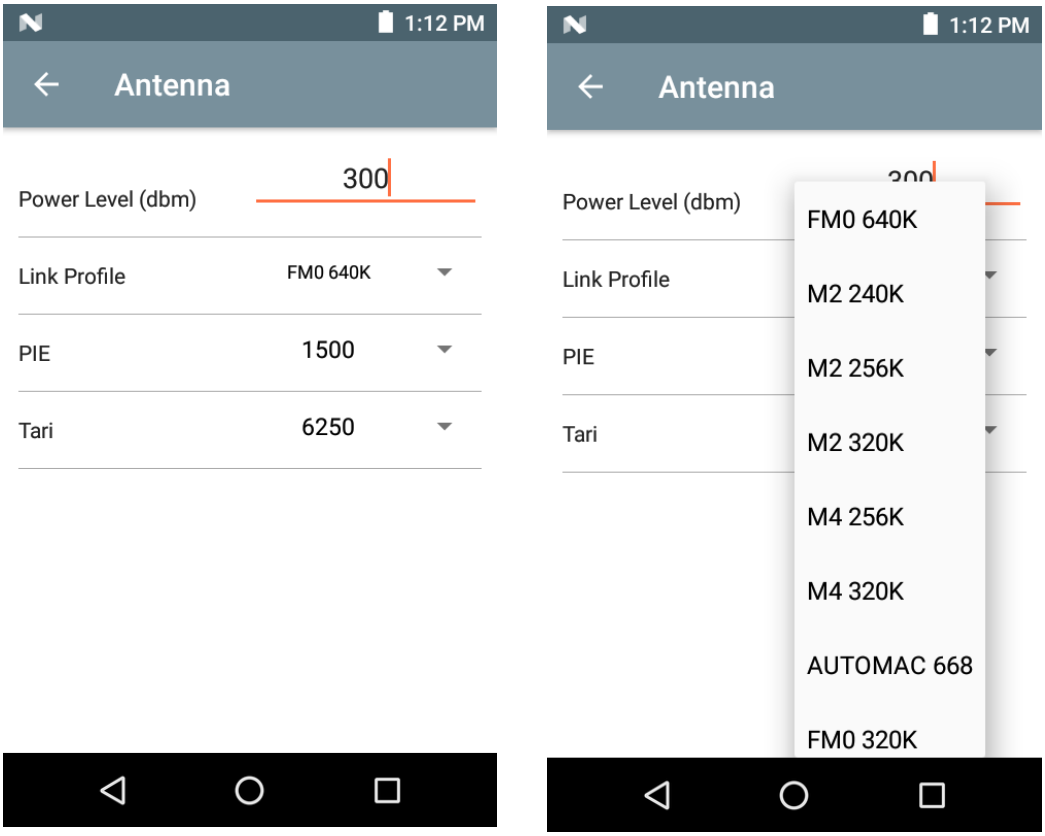
To access the Antenna screen, go to: **Settings > Advanced Reader Options > Antenna**. The Antenna screen displays the following:

- **Power Level** - Displays the current selection and a text box for available power levels (as reported by the device). The default setting is 27.0 dBm (shown as 270; the value displayed is in units of tens of dBm). Japan units are set to a different default power level depending on the SKU type.

  The minimum power level when DPO is enabled is 3.1 dBm. When DPO is disabled, the minimum power level is 0 dBm.
- **Link Profile** - Displays the current selection and includes a drop-down list of available link profiles (reported by the device).

  Link Profile display format is as follows: Return link bit data rate in bis per second (e.g., 60000 -> 60 Kbs); Miller Value (e.g., MV_4 -> Miller 4); thus profile name M4 240K (240K becomes BLF) modulation type (PR ASK is the only one supported).
- **PIE** value has no units and is either 1500 and 2000 minimum.
- **Tari** applicable Tari value in thousands of micro seconds (e.g., 6250 -> 6.25 microseconds).
- The **Power Level** and **Link Profile** are blank when there is no connection to the reader.

Figure 23 Antenna Screen



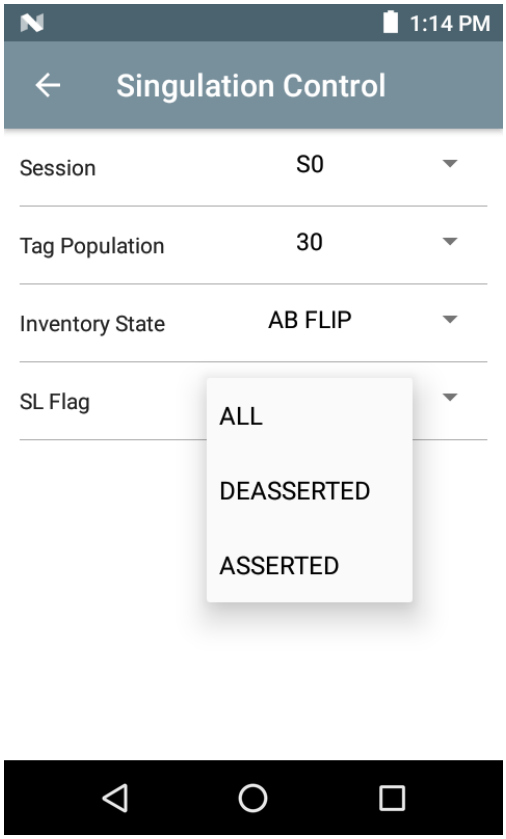
NOTE: The Power Level and Link Profile are blank when there is no connection to the reader.

Singulation Control

To access Singulation Control, go to: **Settings > Advanced Reader Options > Singulation Control**. View or configure the singulation control settings for each antenna.

- **Session** - The drop-down list includes the available session options (S0, S1, S2, S3).
- **Tag Population** - A numeric value of the estimated number of tags in the Field of View (FOV). Values shown are 30, 100, 200, 300, 400, 500, 600.
- **Inventory State** - State A, State B, AB Flip.
- **SL flag** - ALL, DEASSERTED, ASSERTED.

Figure 24 Singulation Control Screen



Start\Stop Triggers

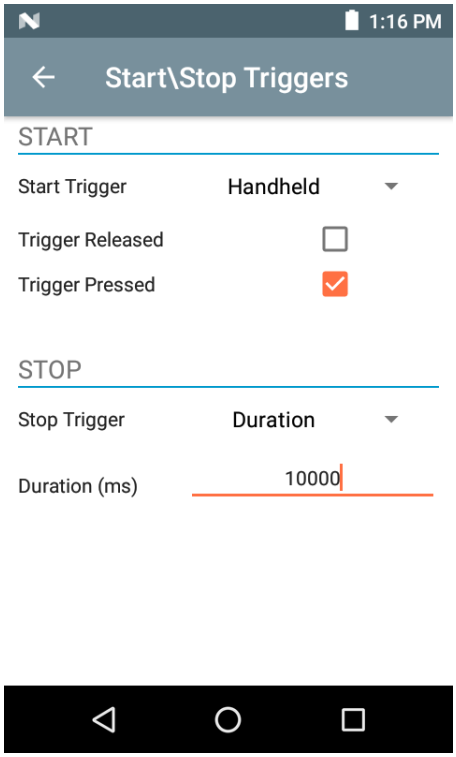
To access the Start\Stop Triggers screen, go to: **Settings** > **Advanced Reader Options** > **Start\Stop Triggers**.

The **Start Trigger** Periodic displays the Period input box (in milliseconds).

The **Stop Trigger Duration**, **Tag Observation** and **N attempts** display numeric value input boxes. All time entries are in milliseconds.

All the required details for saving triggers to the reader must be entered or the application does not save the trigger settings to the reader.

Figure 25 Start/Stop Triggers Screen



Required input for Start/Stop Trigger settings are as follows:

- Start Trigger
  - **Immediate** (default)
  - **Hand-held** - Select either the **Trigger Pressed** or **Trigger Released** check box.
  - **Periodic** - Enter the period of time in milliseconds.
- Stop Trigger
  - **Immediate** (default)
  - **Hand-held** - Select either the **Trigger Pressed** or **Trigger Released** check box along with **Timeout** in milliseconds.
  - **Duration** - Enter duration in milliseconds.
  - **Tag Observation** - Enter the tag count along with timeout in milliseconds.
  - **N Attempts** - Enter the number of attempts along with timeout in milliseconds.

If the start trigger type is Hand-held trigger (pressed or released), the application sets the repeat for the operation to ensure the use case if repeated operations can be demonstrated.

if any trigger is defined as Hand-held, then the application does not act on immediate trigger type for a Hand-held trigger action.

Tag Reporting

To access Tag Reporting, go to: **Settings** > **Advanced Reader Options** > **Tag Reporting**.

Figure 26 Tag Reporting Screen

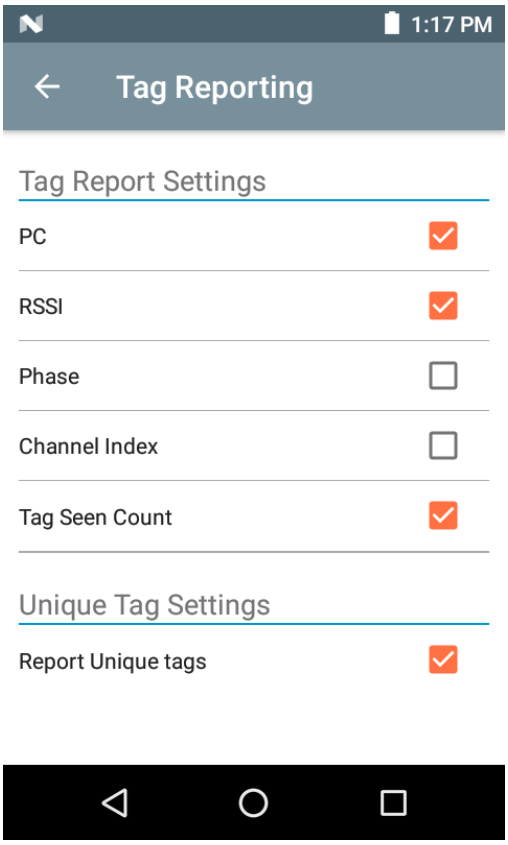


Table 3 Tag Reporting Screen Options

Option	Description
PC	Select to allow reporting the PC as part of the Tag Data.
RSSI	Selection indicates whether or not the RSSI (Received Signal Strength Indication) is reported as part of the Tag Data.
Phase	Select to indicate whether or not the Phase is reported as part of the Tag Data.
Channel Index	Select to indicate whether or not the Regulatory Channel Index is reported as part of the Tag Data.
Tag Seen Count	Select to indicate whether or not the Tag Seen Count is reported as part of the Tag Data.
Report Unique Tags	When this option is enabled, the reader reports only unique tag reads.The Unique Tag reporting feature can be enabled when using Tag List Match mode.

Power Management

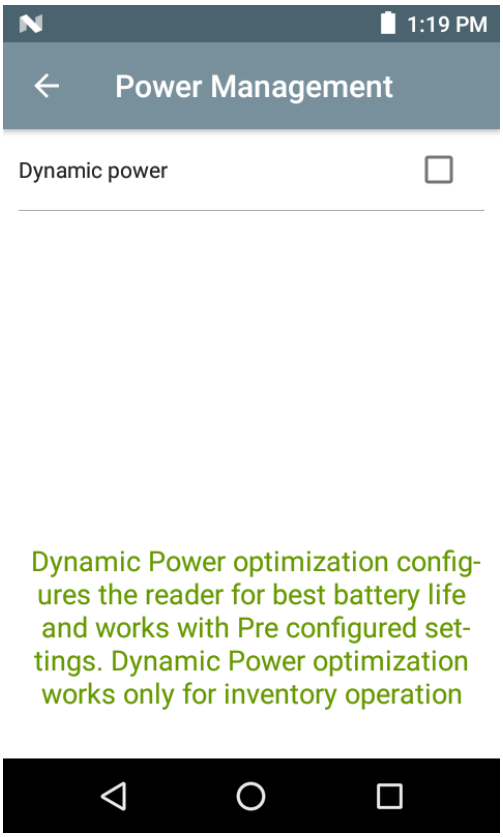
This screen provides an option to enable **Dynamic Power Optimization (DPO)** in the reader. Enabling DPO enhances battery life during inventory operations.

NOTE: **DPO** is enabled by default. It is not necessary to disable DPO when executing access operations or using filters because DPO is automatically disabled and when the operation is complete, it is automatically enabled.

If **Dynamic Power** is On, a green battery icon appears in the title bar of the application. Tapping on this opens the **Battery Status** screen.

To access Power Management, go to: **Settings > Advanced Reader Options > Power Management**.

Figure 27 Power Management Screen



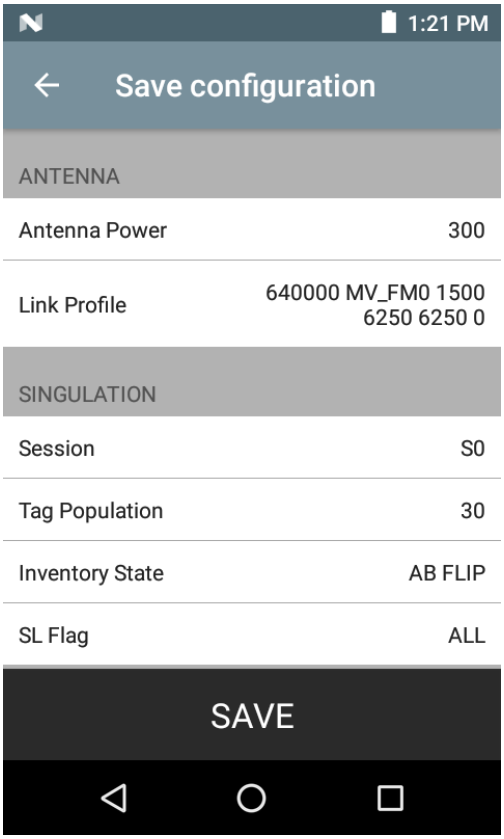
Save Configuration

To access Save Configuration, go to: **Settings > Advanced Reader Options > Save Configuration**. This screen is used to save the settings and displays the current settings on the device.

The settings are saved on the device until a reset to factory defaults is performed on the unit (see Settings on page 25).

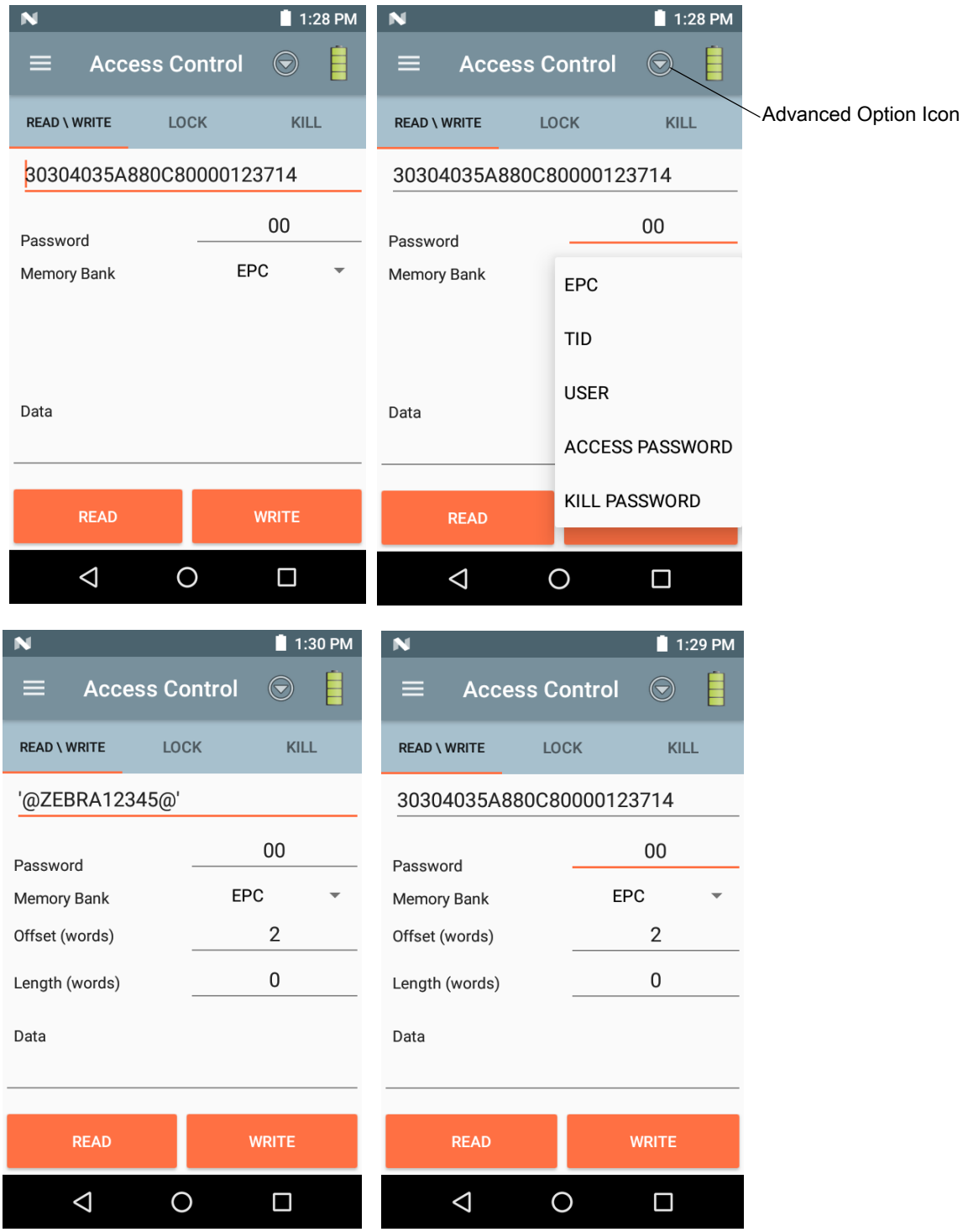
The Tag Pattern area is automatically filled in when a tag is selected in the Inventory screen.

Figure 28 Save Configuration Screen



Access Control

Figure 29 Access Control Screens - Read/Write, Lock, Kill



The Tag Pattern area is automatically filled in when a tag is selected in the Inventory screen.

Read/Write

The Read/Write access operation is simplified with offset and length fields are hidden, the user can tap the more/advanced options icon to see offset and length fields. Tap the icon again to hide the advanced options.

Memory Bank options now have extended menu options to choose directly interested area of memory bank. This avoids typing of offset and length etc.

Read/Write options are:

- Tag ID & **Password** values are in hex. Tag ID is edited
- **Memory Bank options** - EPC, TID, USER, PC and CRC, Access Password, Kill Password
- **Offset** and **Length** values are in 16-bit words. This is only available after tapping the **Advance Options** icon. To toggle visibility, tap **Advanced Options** again.
- **Access operation** screen maintains edited tag ID.

Lock

Lock privilege options are as follows:

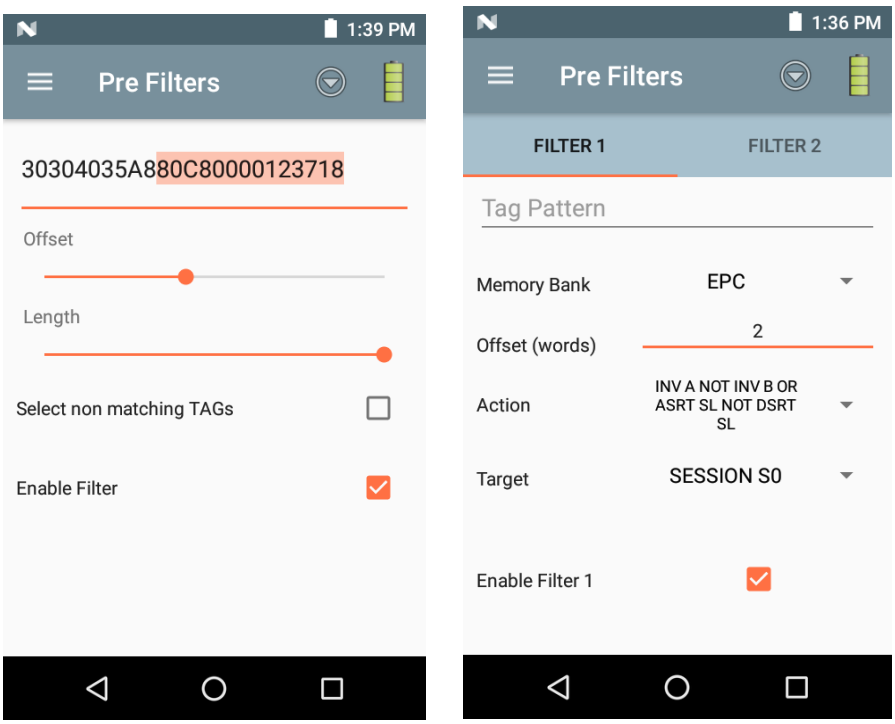
- Read and Write
- Permanent Lock
- Permanent Unlock
- **Unlock**.

Kill

Permanently renders the tag unusable. A **Kill Password** must be provided.

Pre Filters

Figure 30 Pre Filters Screen



The **Pre Filters** screen is simplified with Tag pattern (EPC ID) and enable filter option. Tap the more/advanced icon to get full control of various fields related to pre filters. Tap the icon again to hide the advanced options.

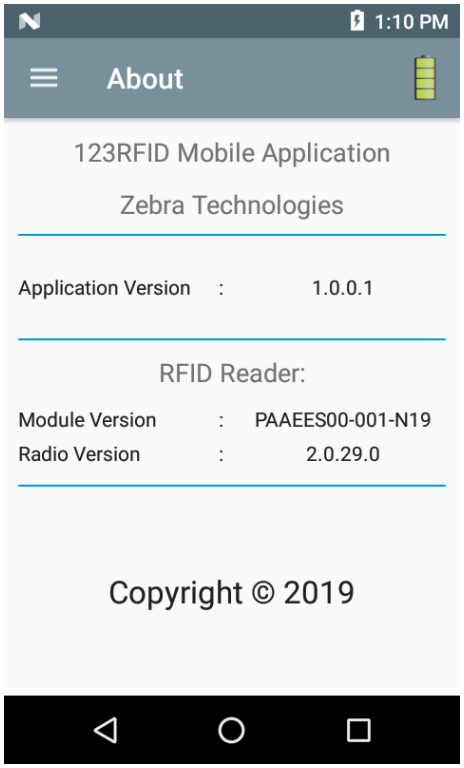
Up to two of the following Pre Filters may be enabled.

- **Memory Bank** - EPC, TID and USER.
- **Offset** - The offset in the memory bank is specified in words.
- **Select non matching TAGs** - Inventory shows tags which are not matching with Tag pattern entered.
- **Action**:
    - INV A NOT INV B or ASRT_SL_NOT_DSRT_SL
    - INV A or ASRT SL
    - NOT INV B or NOT DSRT SL
    - INV A2BB2A NOT INV A or NEG SL NOT ASRT SL
    - INV B NOT INV A or DSRT SL NOT ASRT SL
    - INV B or DSRT SL
    - NOT INV A or NOT ASRT SL
    - NOT INV A2BB2A or NOT NEG SL
- **Target** - SESSION S0, SESSION S1, SESSION S2, SESSION S3 & SL FLAG.

About

This screen displays version information as reported by the device.

Figure 31 About Screen



Index