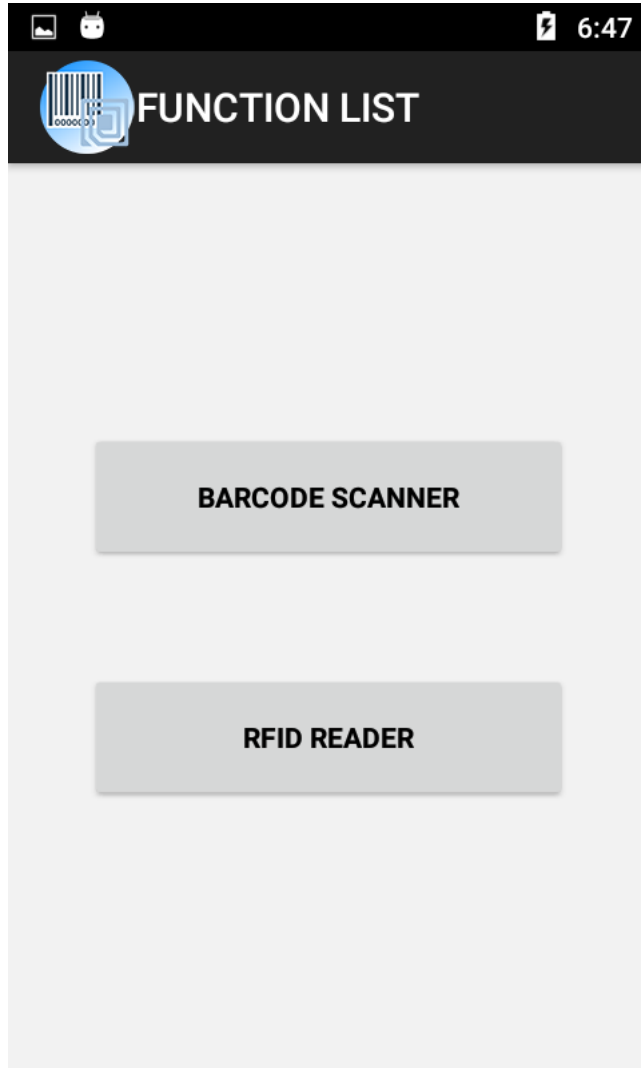# a611 UHF App Manual

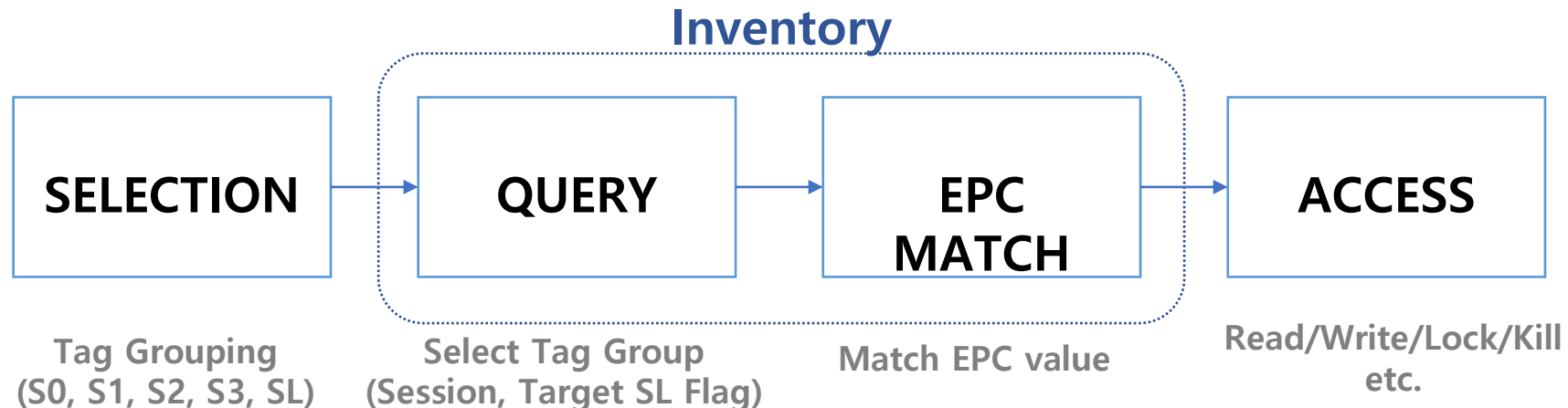# ✔ Main screen to select functions

✔ Reference of technical terms in RFID
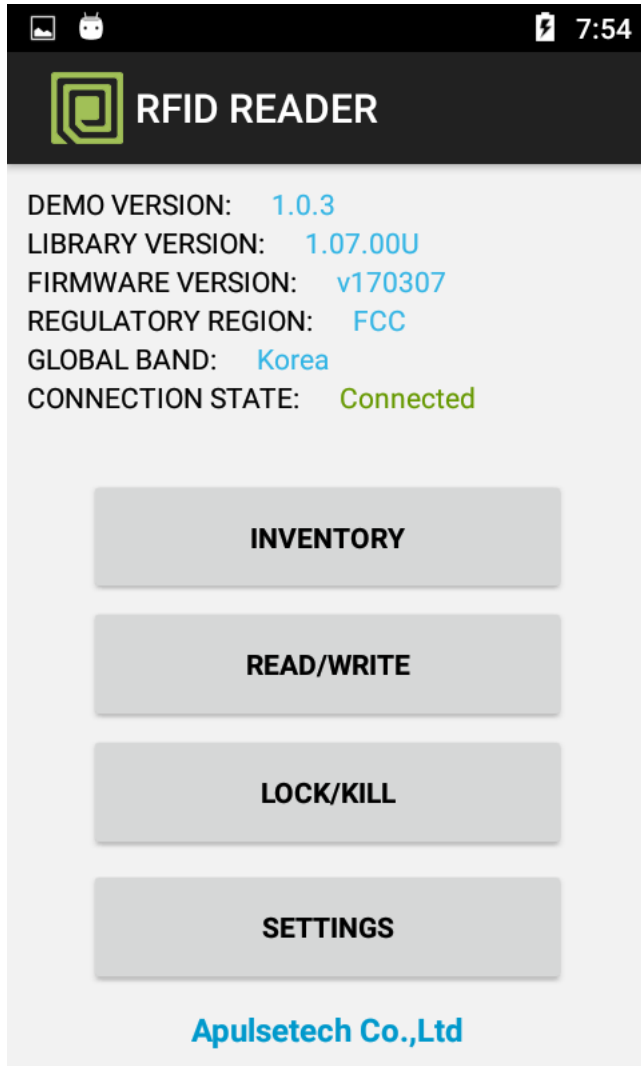
Technical terms

- Access Timeout: Time out when Read/Write on module or chip register.
  Access Retry Interval: Retry interval value when fail to Read/Write in Access Timeout
- Tx On Time: Activation time for RF Tx . Affects to setting related to frequency or frequency hopping.
- Tx Off Time:Deactivation time for RF Tx. Affects to setting related to frequency or frequency hopping.
- Dwell Time: Dwelling time for Logical Antenna
- Singulation: Algorithm for inventory of Tag data (specific).
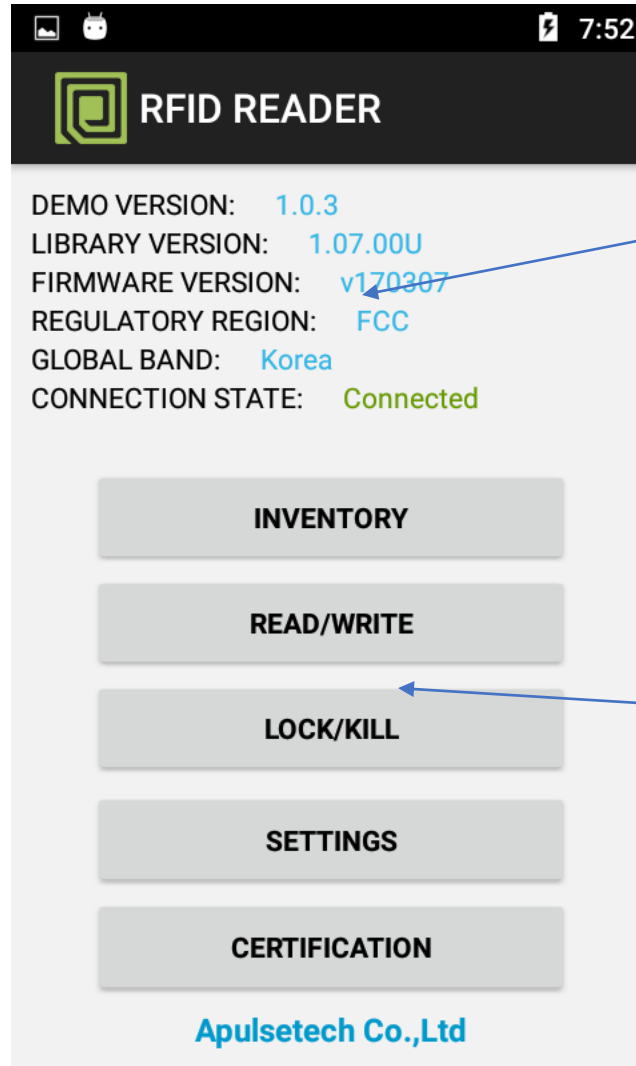
RFID Commend Sequence

Inventory

| SELECTION | → | QUERY | → | EPC MATCH | → | ACCESS |

Tag Grouping (S0, S1, S2, S3, SL)

Select Tag Group (Session, Target SL Flag)

Match EPC value

Read/Write/Lock/Kill etc.

✔ Main screen of RFID READER App

Admin. Mode Locked

📷 🤖   🔋 7:54

RFID READER

DEMO VERSION: 1.0.3
LIBRARY VERSION: 1.07.00U
FIRMWARE VERSION: v170307
REGULATORY REGION: FCC
GLOBAL BAND: Korea
CONNECTION STATE: Connected

INVENTORY

READ/WRITE

LOCK/KILL

SETTINGS

Apulsetech Co.,Ltd

Admin. Mode Unlocked

📷 🤖   🔋 7:52

RFID READER

DEMO VERSION: 1.0.3
LIBRARY VERSION: 1.07.00U
FIRMWARE VERSION: v170307
REGULATORY REGION: FCC
GLOBAL BAND: Korea
CONNECTION STATE: Connected

INVENTORY

READ/WRITE

LOCK/KILL

SETTINGS

CERTIFICATION

Apulsetech Co.,Ltd

Information

1. DEMO VERSION
2. LIBRARY VERSION
3. FIRMWARE VERSION
4. REGULATORY REGION
5. GLOBAL BAND
6. CONNECTION STATE

Function Menu

1. INVENTORY
2. READ/WRITE
3. LOCK/KILL
4. SETTINGS
5. CERTIFICATION

✔ INVENTORY Screen

Settings

Go to Settings

Previous Page
Go back to previous page

Time/ Speed status

1. Elapsed Time : Time passed once reading
2. Speed : Instant reading speed
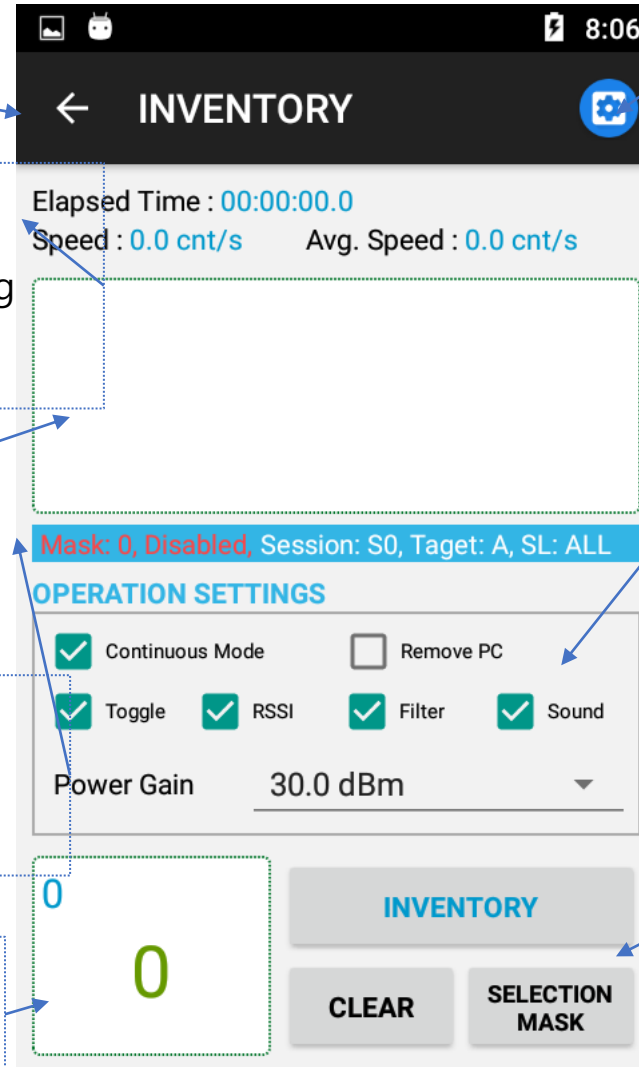3. Avg. Speed: Average reading speed

Tag list window

List of read tags

SELECTION MASK Status

Indication of SELECTION and Inventory
setting status

Tag number
Above 0: Total read tag number
Center 0: Tag number(By Filtered or not)

Setting values

1. Continuous Mode: Continuous reading
2. Remove PC: Remove PC information
3. Toggle: Toggles Inventory target A/B
4. RSSI: Indication of signal strength information
5. Filter: Filter of duplicated tag
6. Sound: Sound on/off when read
7. Power Gain: RF power adjustment

Function button

1. INVENTORY: Start/ Stop to inventory of tag
2. CLEAR: Clear all read tag list on the screen
3. SELECTION MASK: Set tag selection and query

Screen

← **INVENTORY**

Elapsed Time : 00:00:00.0
Speed : 0.0 cnt/s   Avg. Speed : 0.0 cnt/s

Mask: 0, Disabled, Session: S0, Taget: A, SL: ALL

OPERATION SETTINGS

☑ Continuous Mode   ☐ Remove PC

☑ Toggle   ☑ RSSI   ☑ Filter   ☑ Sound

Power Gain   30.0 dBm

0

0

INVENTORY

CLEAR   **SELECTION MASK**

8:06

✔INVENTORY Screen – How to filter

No Filtering option

Select Filtering option

✔SELECTION MASK Setting

SELECTION Mask Use or not

Check to use Selection Mask Setting before inventory

SELECTION Mask Setting List

List of setting list applies during inventory.

Inventory Setting Buttons

1. SAVE: Save changed settings
2. CANCEL: cancel or back to setting

8:23

← **SELECTION**

SELECTION SETTINGS

☑ Use Selection Mask   1 Entry(s)

☐ SL, Assert SL or inventoried → A   ⊕
   Deassert SL or inventoried → B, EPC

| ADD | REMOVE | CLEAR |

INVENTORY SETTINGS

Session	S0 ▼
Target	A ▼
SL Flag	ALL ▼

| SAVE | CANCEL |

SELECTION Setting Buttons

1. ADD: Add new SELECTION setting
2. REMOVE: Remove selected setting
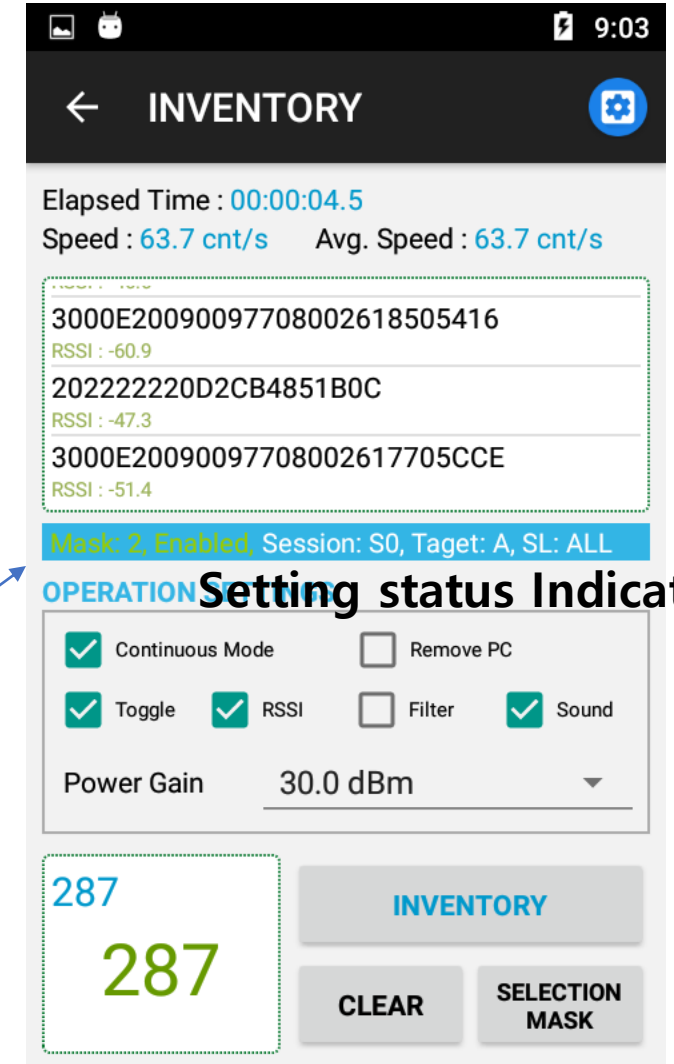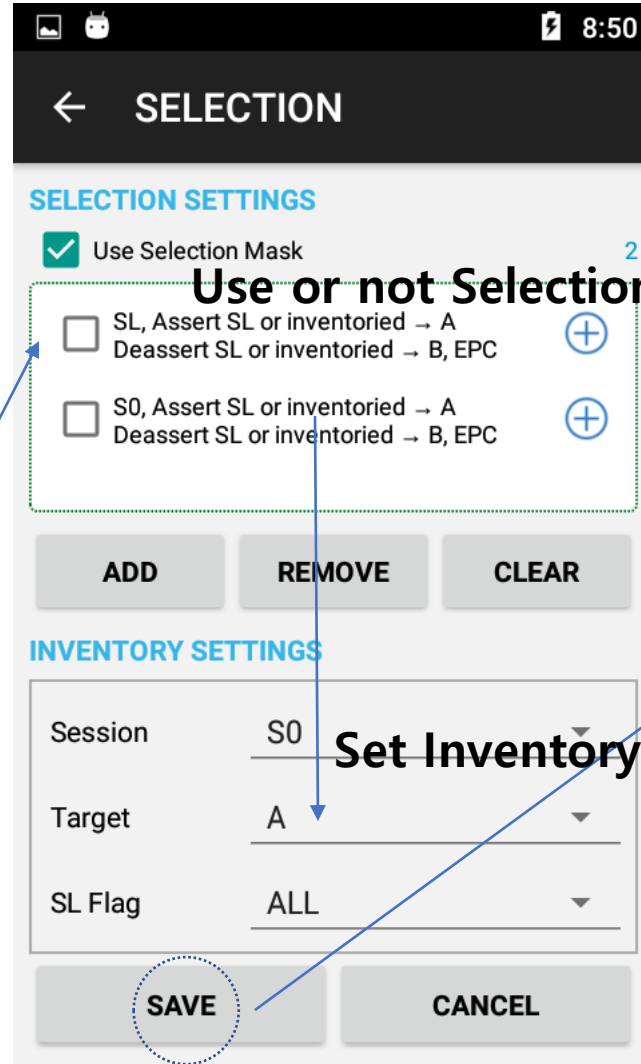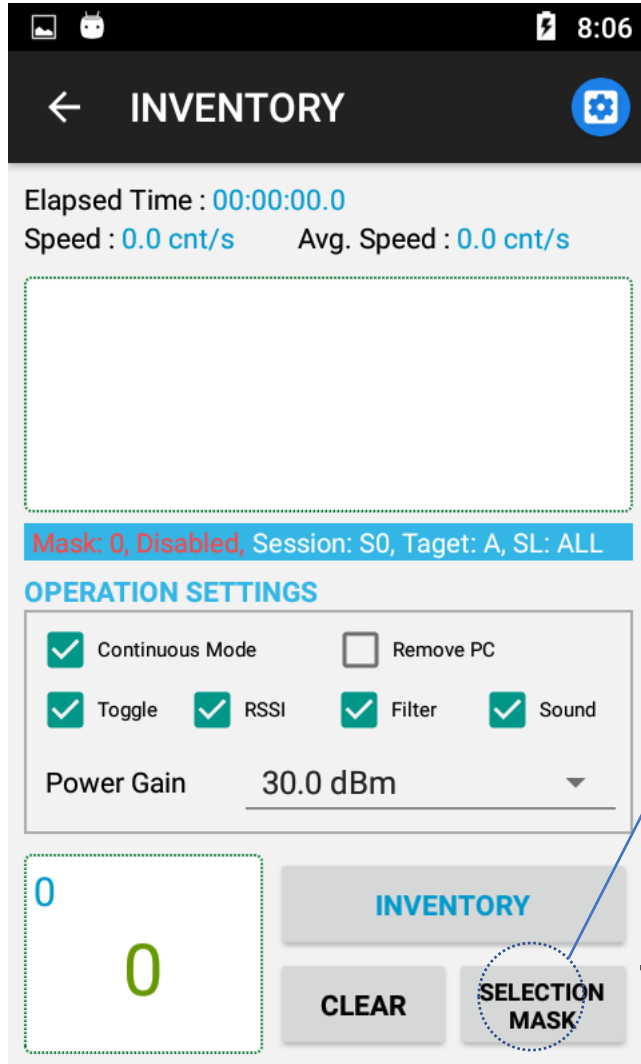3. CLEAR: Remove All SELECTION setting

INVENTORY Settings

1. Session: Inventory session
2. Target: Inventory target
3. SL Flag: Inventory SL flag

✔ SELECTION MASK Setting

Add or change setting

Open

Remove

Remove all
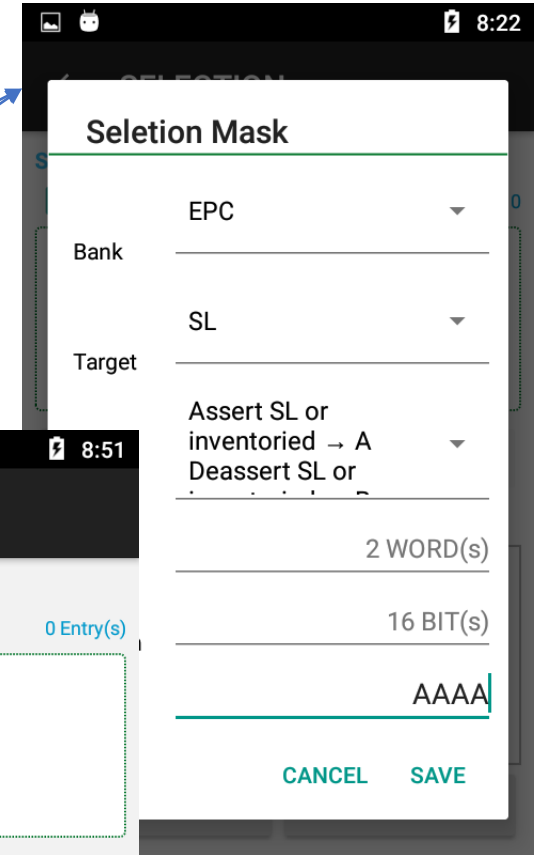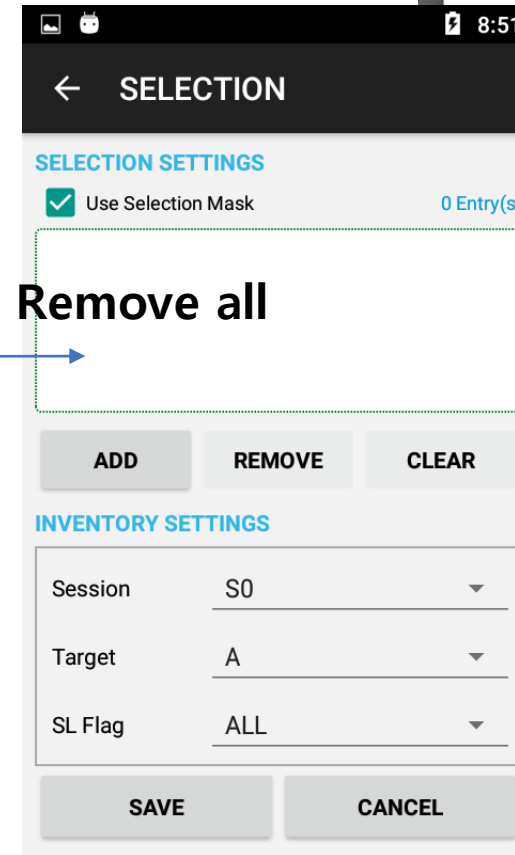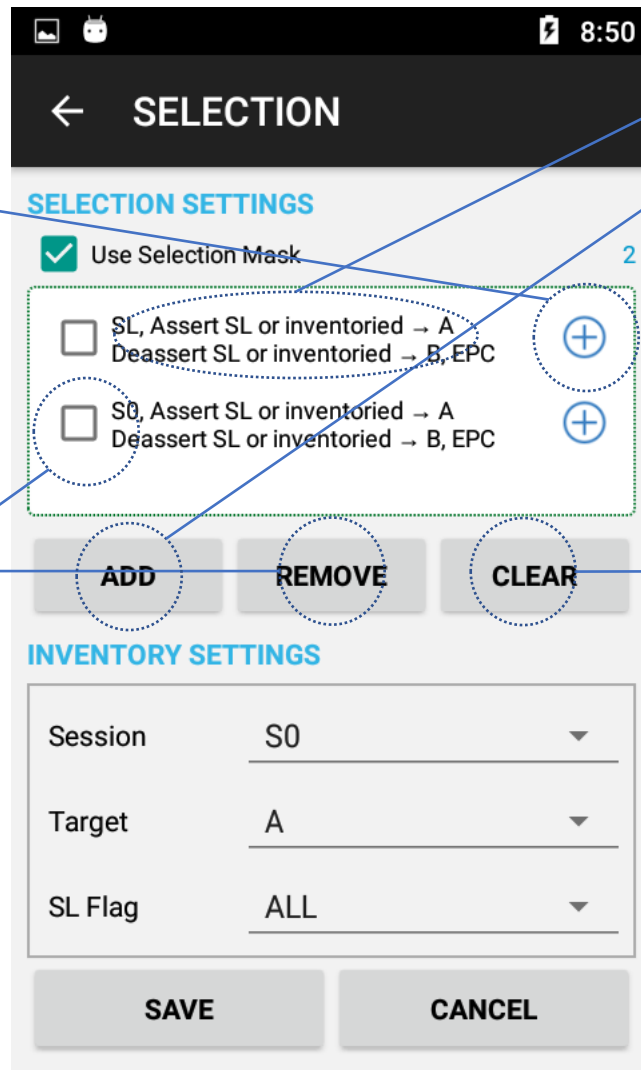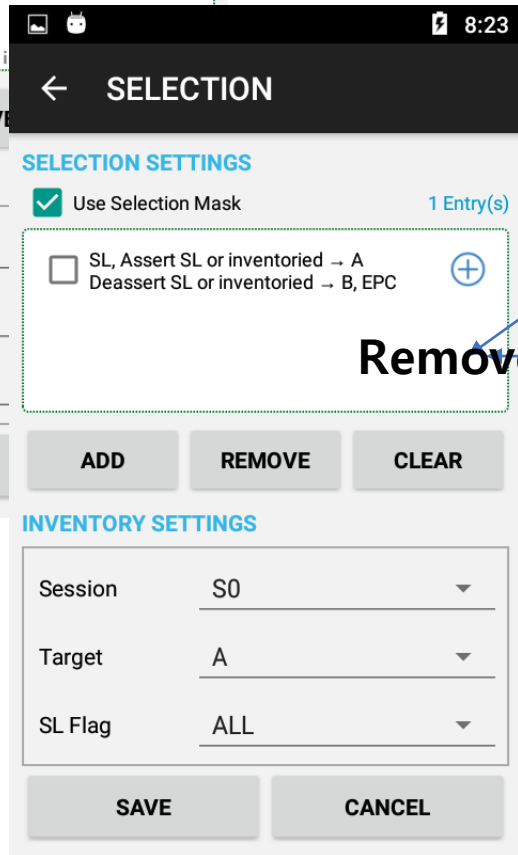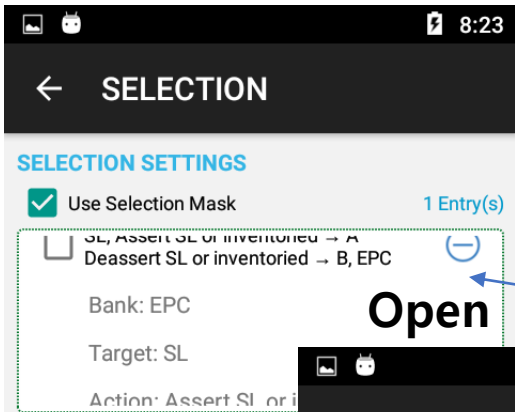
✔ SELECTION MASK Setting

Use or not Selection Mast

Set Inventory

Setting status Indication

클릭

✔ EPC MATCH Setting

✱EPC Match setting value will be removed when out of Read/Write, Lock/Kill screen.

Click and stay

Select

EPC MATCH setting

Enable to remove the setting by CLEAR botton

✔READ/WRITE Screen

READ/WRITE selection tap
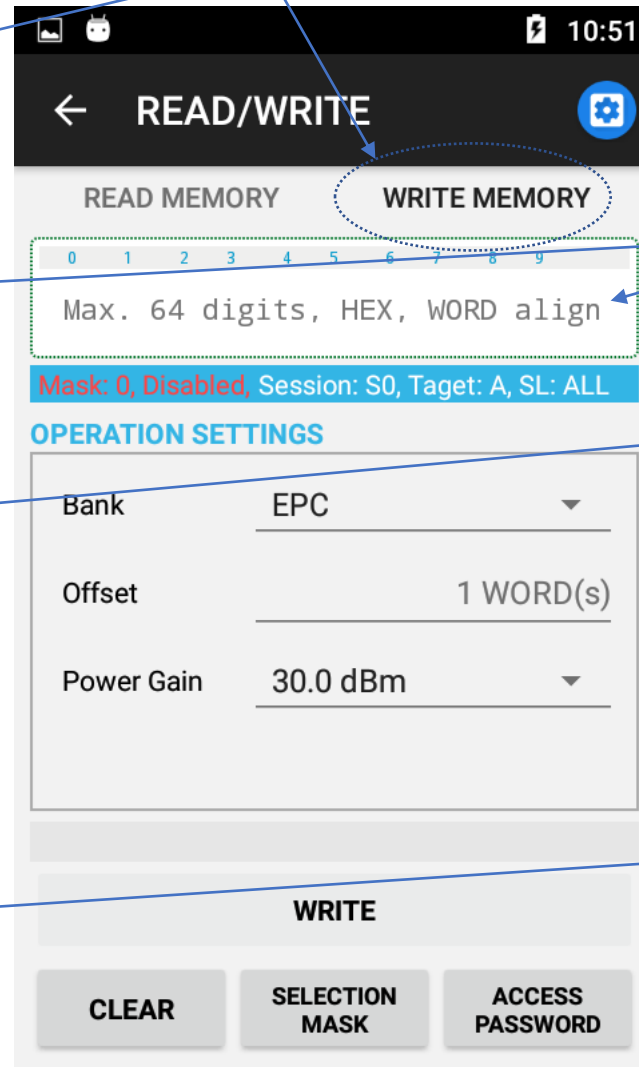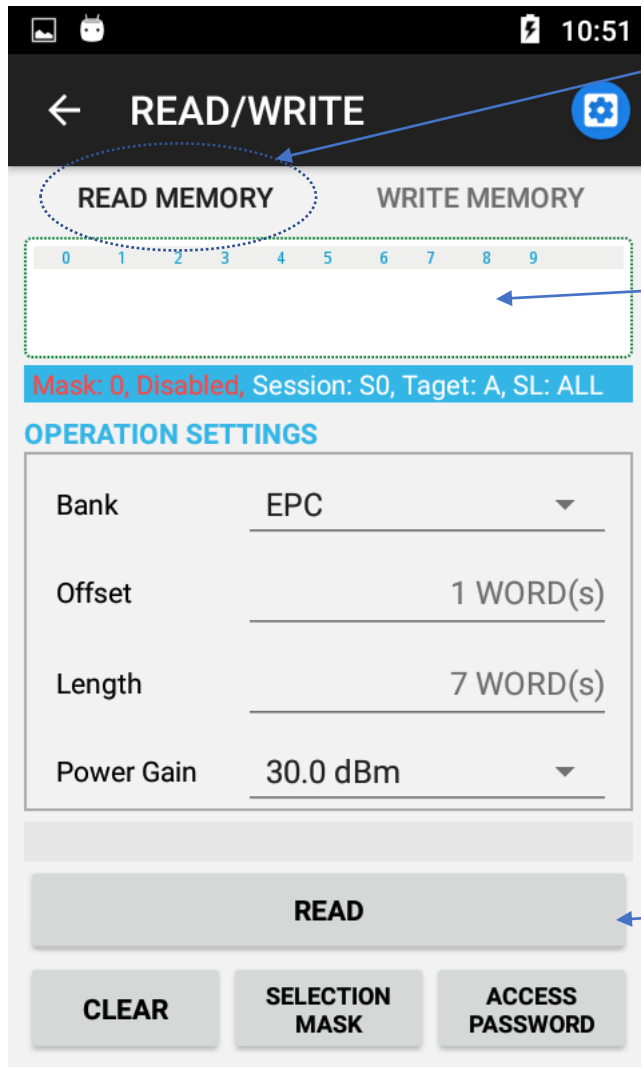
Output screen of Memory

Setting

1. Bank: Memory bank to select
2. Offset: Start position to read/write
3. Length: Memory length to read/write
4. Power Gain: RF Power adjustment

Function buttons

1. READ/WRITE: read/write memory
2. CLEAR: clear read/write value on the screen
3. SELECTION MASK: Set tag selection Mask and query
4. ACCESS PASSWORD: Set access password

Screen 1 (READ MEMORY):

10:51

← READ/WRITE ⚙

READ MEMORY   WRITE MEMORY

0 1 2 3 4 5 6 7 8 9

Mask: 0, Disabled, Session: S0, Taget: A, SL: ALL

OPERATION SETTINGS

Bank   EPC   ▼

Offset   1 WORD(s)

Length   7 WORD(s)

Power Gain   30.0 dBm   ▼

READ

CLEAR | SELECTION MASK | ACCESS PASSWORD

Screen 2 (WRITE MEMORY):

10:51

← READ/WRITE ⚙

READ MEMORY   WRITE MEMORY

0 1 2 3 4 5 6 7 8 9

Max. 64 digits, HEX, WORD align

Mask: 0, Disabled, Session: S0, Taget: A, SL: ALL

OPERATION SETTINGS

Bank   EPC   ▼

Offset   1 WORD(s)

Power Gain   30.0 dBm   ▼

WRITE

CLEAR | SELECTION MASK | ACCESS PASSWORD

✔ READ/WRITE 화면

Byte

Result indication of read/ write

✔READ/WRITE 화면-ACCESS PASSWORD Setting
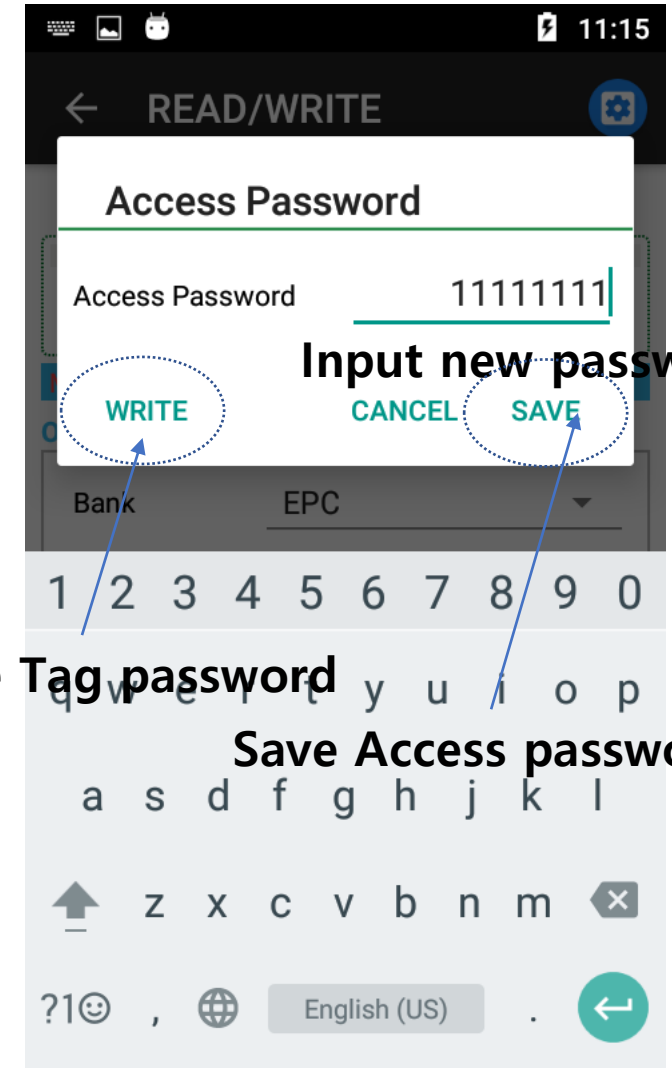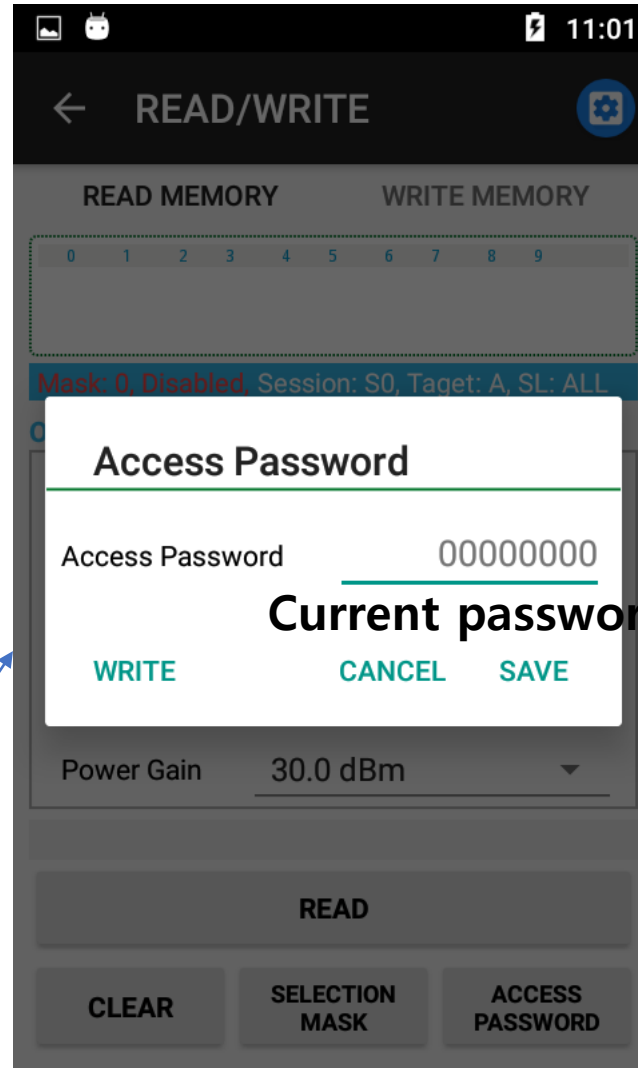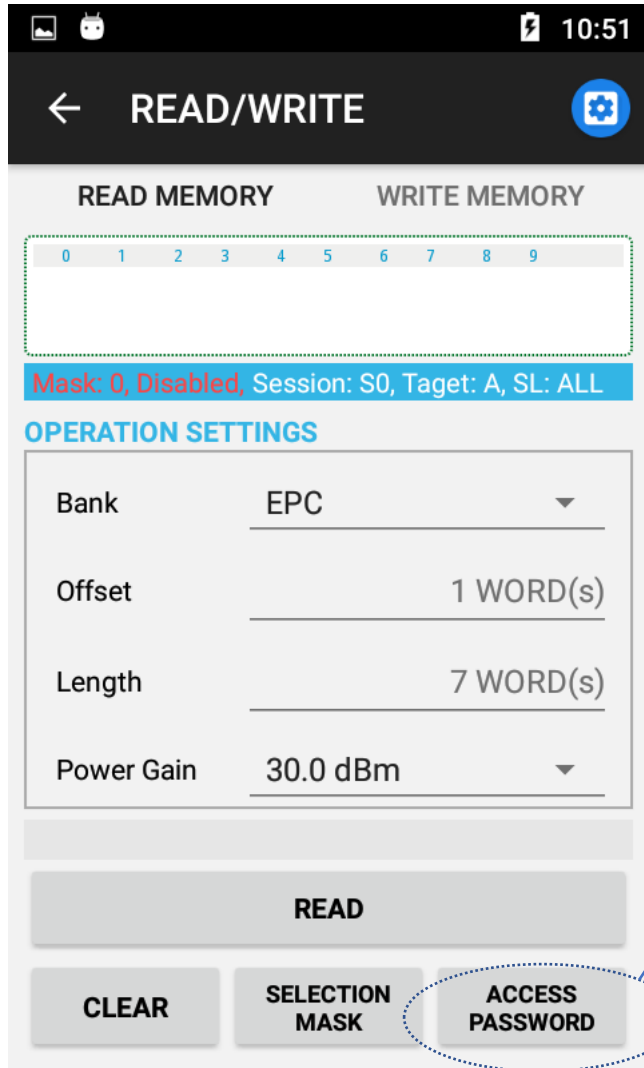
✔ LOCK/KILL Screen

Lock setting

1. Memory: Select memory to lock/unlock
2. Lock Operation: list of lock/unlock options
   Unlock: Unlock memory
3. Perma Unlock: Permanent unlock
   Lock: Lock memory
   Perma Lock: Permanent lock

Operation settings

1. Power Gain: RF power adjustment

Function bottons

1. LOCK: Lock memory
2. KILL: Make a tag invalid
3. SELECTION MASK: Set selection Mask and query
4. CLEAR: Clear EPC Match and result
5. ACCESS PASSWORD: Set access password
6. KILL PASSWORD: Set Kill password

✔ LOCK/KILL screen-LOCK
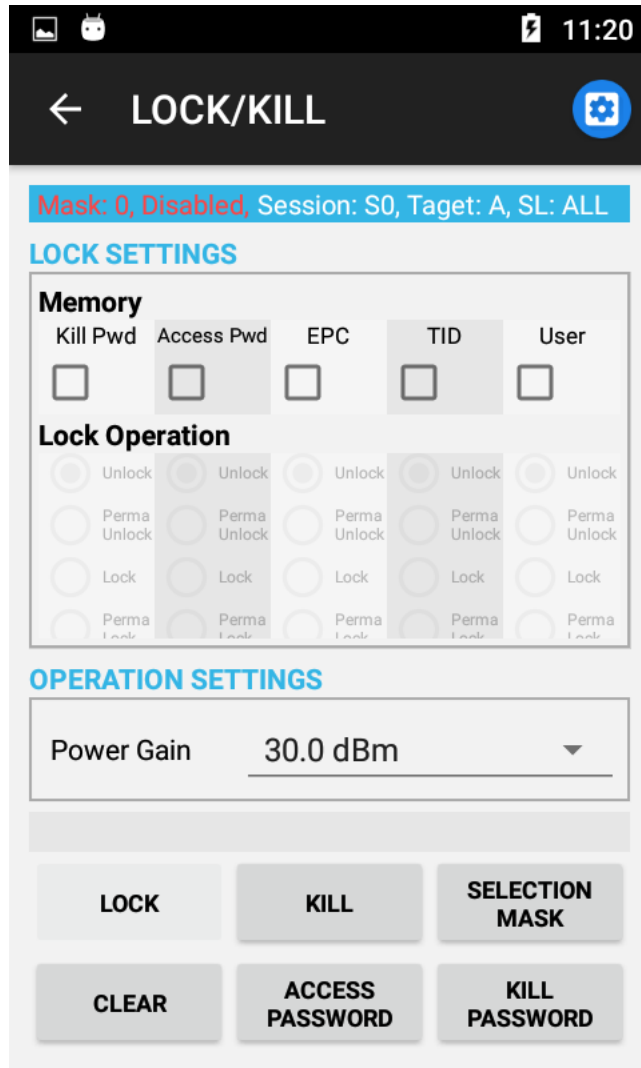
Lock EPC
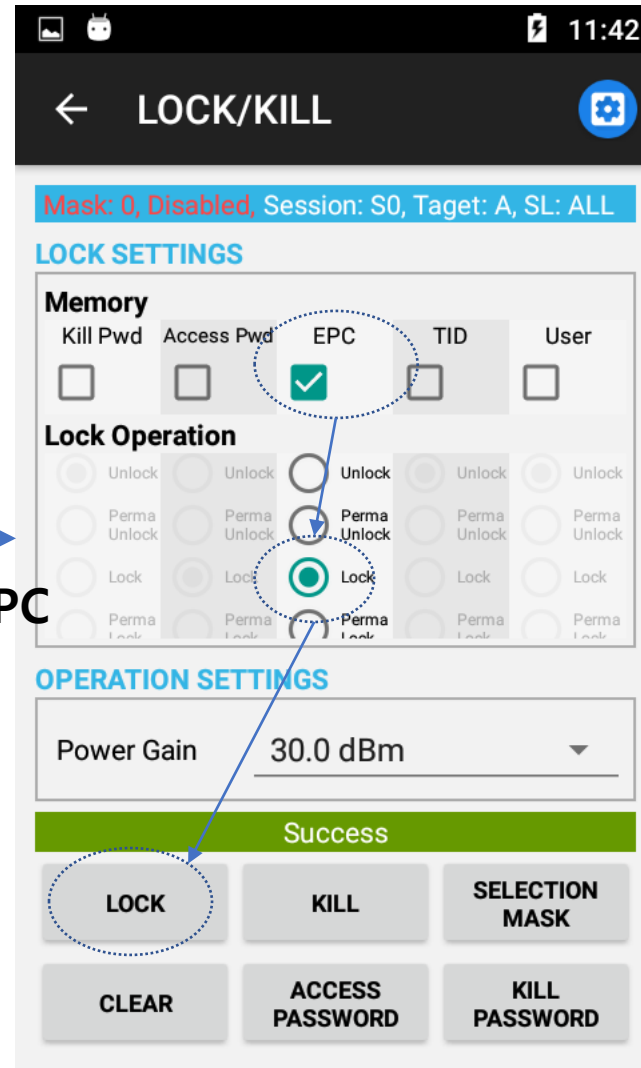
Unlock EPC
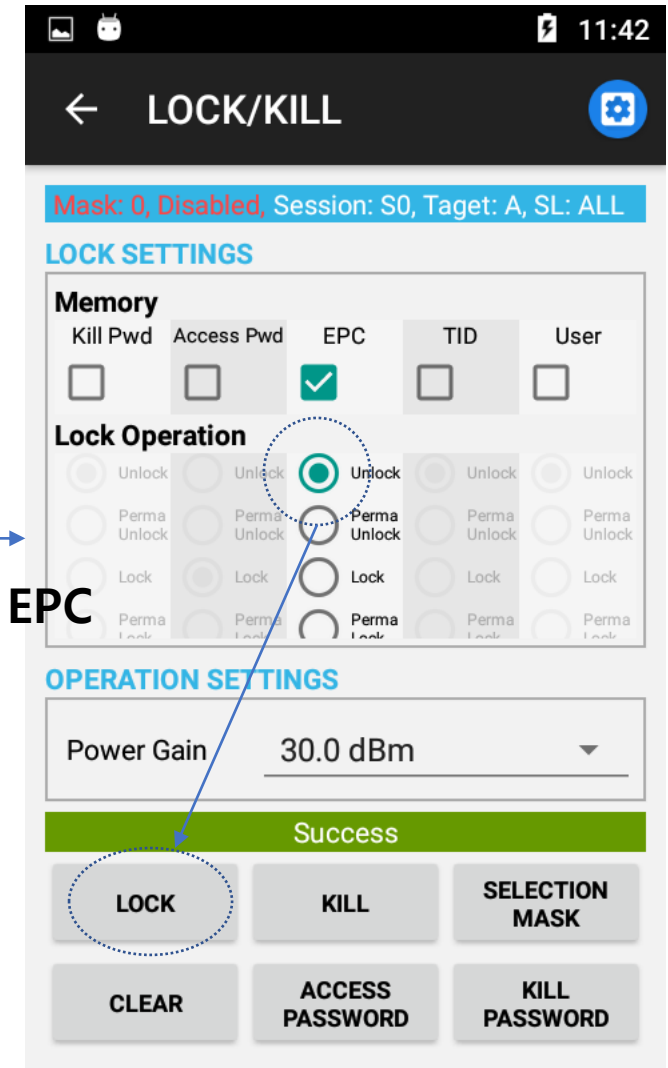
✔ LOCK/KILL Screen-KILL PASSWORD setting
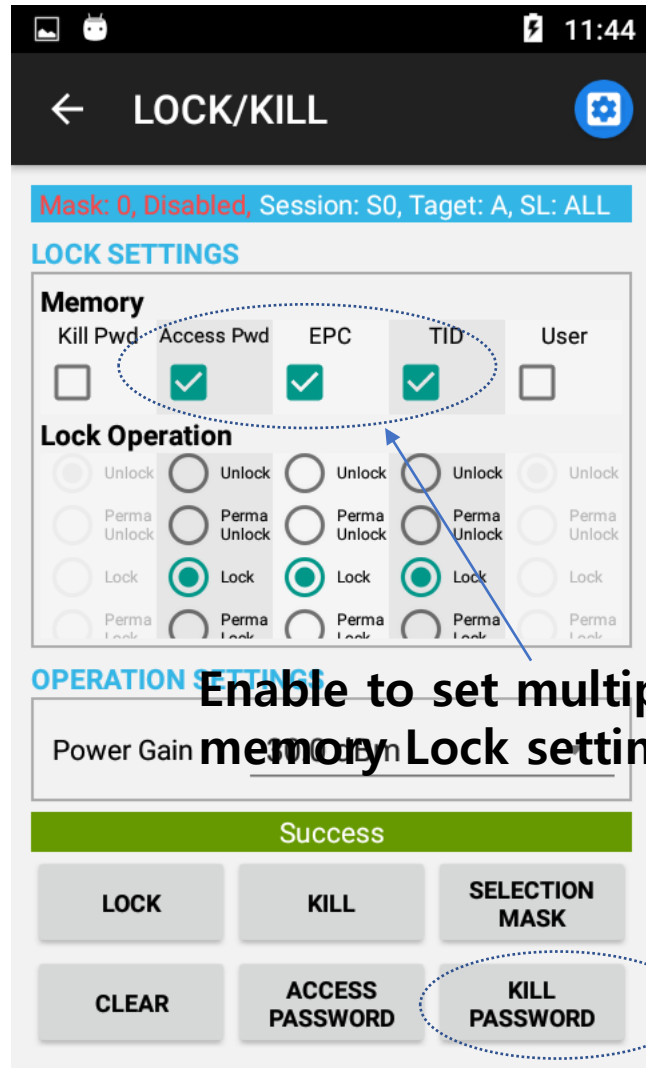
Enable to set multiple memory Lock setting.

click
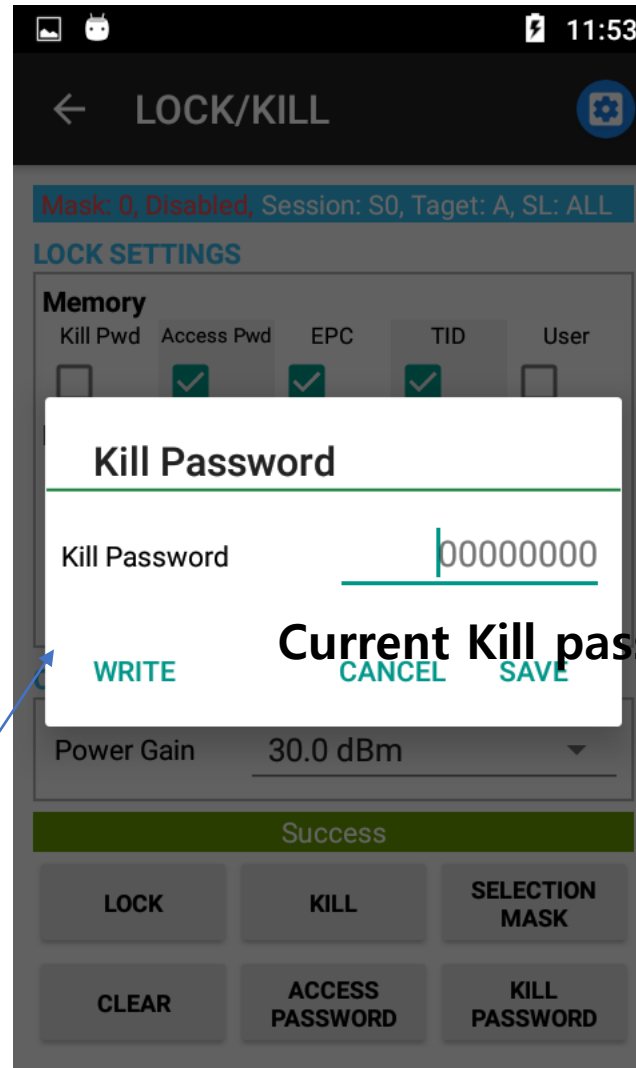
Current Kill password

Change and write Kill password to tag
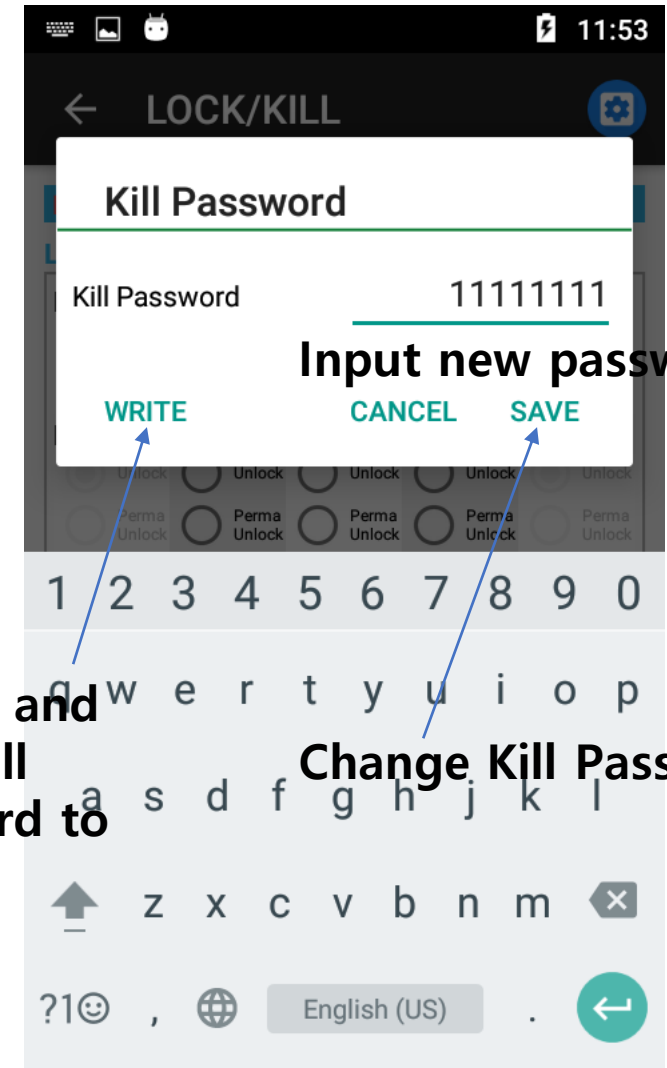
Input new password

Change Kill Password

✔ LOCK/KILL Screen-KILL

✔ SETTINGS screen

ACCESS Settings
1. Timeout: Read/Write timeout
2. Interval: retry interval value to Read/Write

RF Settings

1. Tx On Time: Activation time of RF Tx
2. Power Gain: RF Power adjustment
3. RF Channel: Set RF channel

ADMIN Settings
Admin function unlock

Left screen

11:22
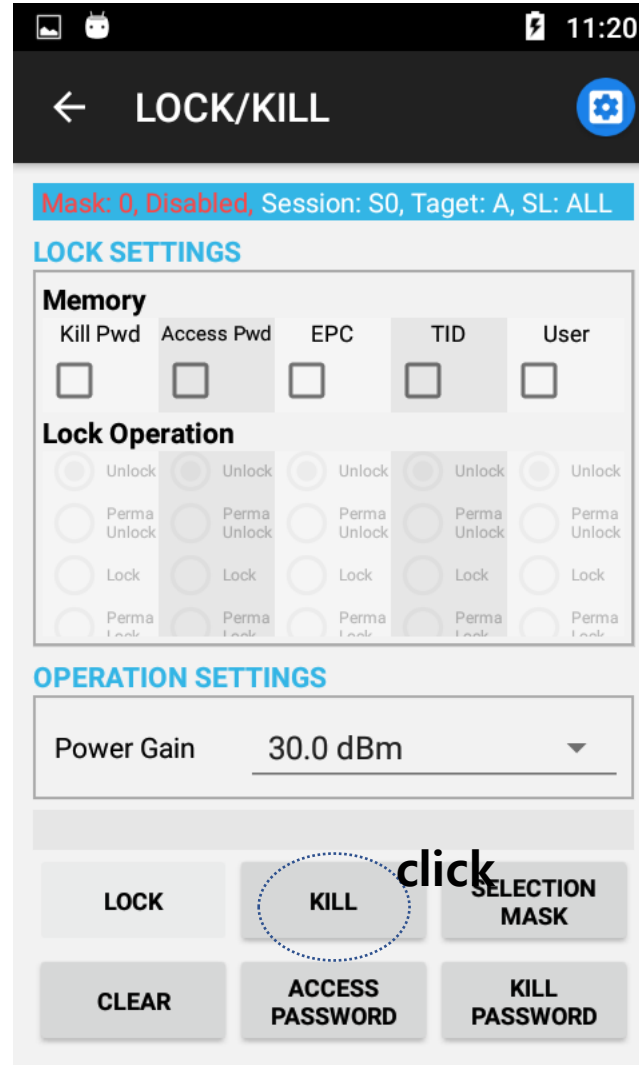
← SETTINGS

ACCESS SETTINGS

Timeout	3000 ms
Interval	100 ms

RF SETTINGS

Tx On Time	400 ms
Tx Off Time	0 ms
Power Gain	30.0 dBm ▼
RF Channel	6 / 6 SETTING

ADMIN. SETTINGS

SAVE   CANCEL

Right screen

11:23

← SETTINGS

RF Channel Setting

- ☑ Ch.0 917.300 MHz
- ☑ Ch.1 917.900 MHz
- ☑ Ch.2 918.500 MHz
- ☑ Ch.3 919.100 MHz
- ☑ Ch.4 919.700 MHz
- ☑ Ch.5 920.300 MHz

CANCEL   OK

SAVE   CANCEL

✔ ADVANCED Screen

SETTINGS

Timeout .... 5000 ms

Interval .... 100 ms

RF SETTINGS

Tx On Time .... 400 ms

Tx Off Time .... 0 ms

Power Gain .... 30.0 dBm

RF Channel .... 6 / 6 .... **SETTING**

ADMIN. SETTINGS

Input unlock code

Admin Code .... Unlocked .... **SET**

ADVANCED **SAVE** **CANCEL**

Click

ADVANCED

PERSISTENT (Persisted after reset)

Baudrate 115200

Region .... Korea

RF Mode .... DSB-ASK, FM0, 40K..

NON PERSISTENT (Not persisted after reset)

LBT .... OFF, 0, HIGH, 0 .... **SETTING**

Tx Timing .... 400, 0, 0, 0 .... **SETTING**

Dwell Time .... 200 ms

RESET TO DEFAULTS | **UPDATE FIRMWARE** | **MODULE REBOOT**

SAVE | **CANCEL**

Singulation 4

RESET TO DEFAULTS | **UPDATE FIRMWARE** | **MODULE REBOOT**

SAVE | **CANCEL**

PERSISTENT Setting

1. Baudrate: UART Speed
2. Region: Country setting
3. RF Mode: RF link profile setting

NONPERSISTENT Setting

1. LBT: RF frequency hopping mode setting
2. Tx Timing: Set Tx On/Off Timing
3. Dwell Time: Antenna dwelling time setting
4. Singulation: Inventory algorithm setting

Function buttons

1. RESET TO DEFAULTS: Reset as default value
2. UPDATE FIRMWARE: Firmware update
3. MODULE REBOOT: Reboot Module
4. SAVE: Save changed setting value
5. CANCEL: Cancel and back to set

✔ ADVANCED Screen
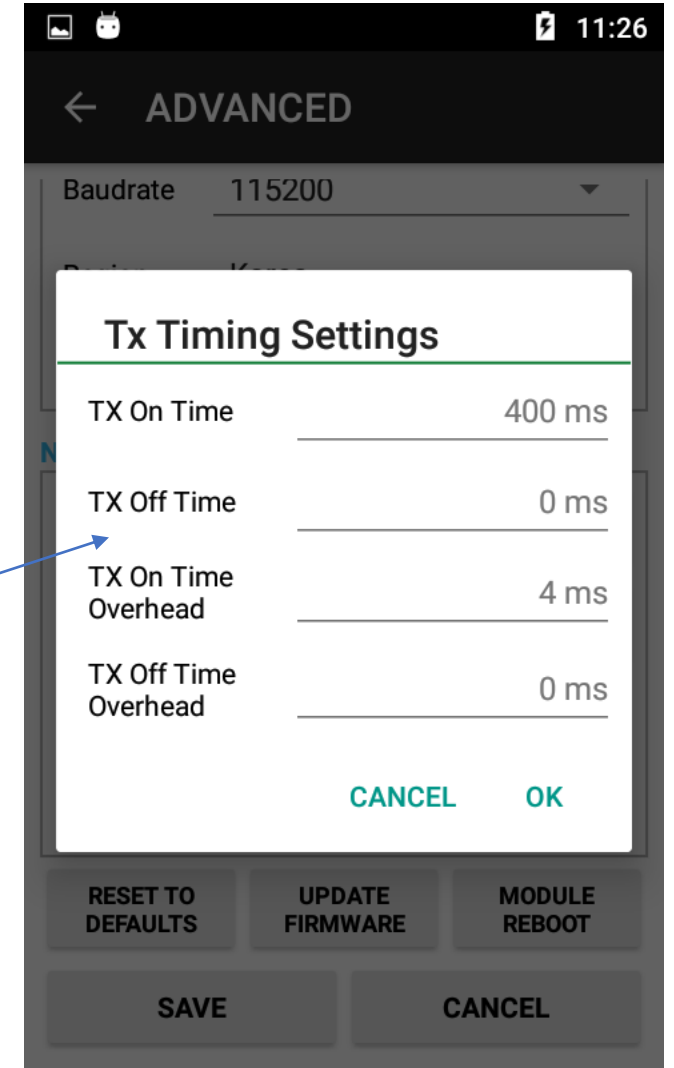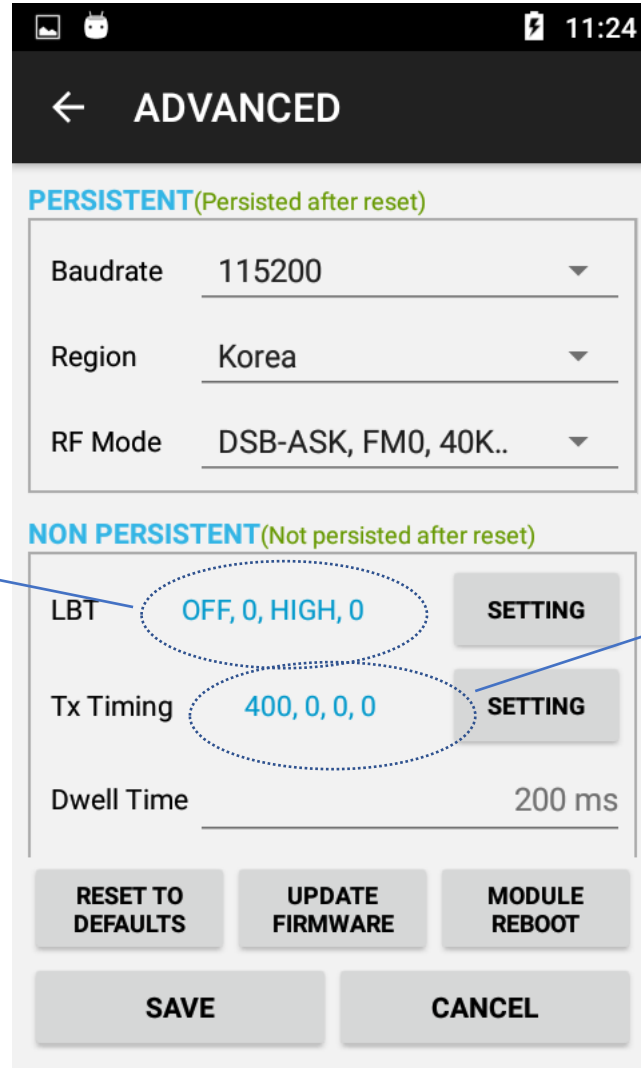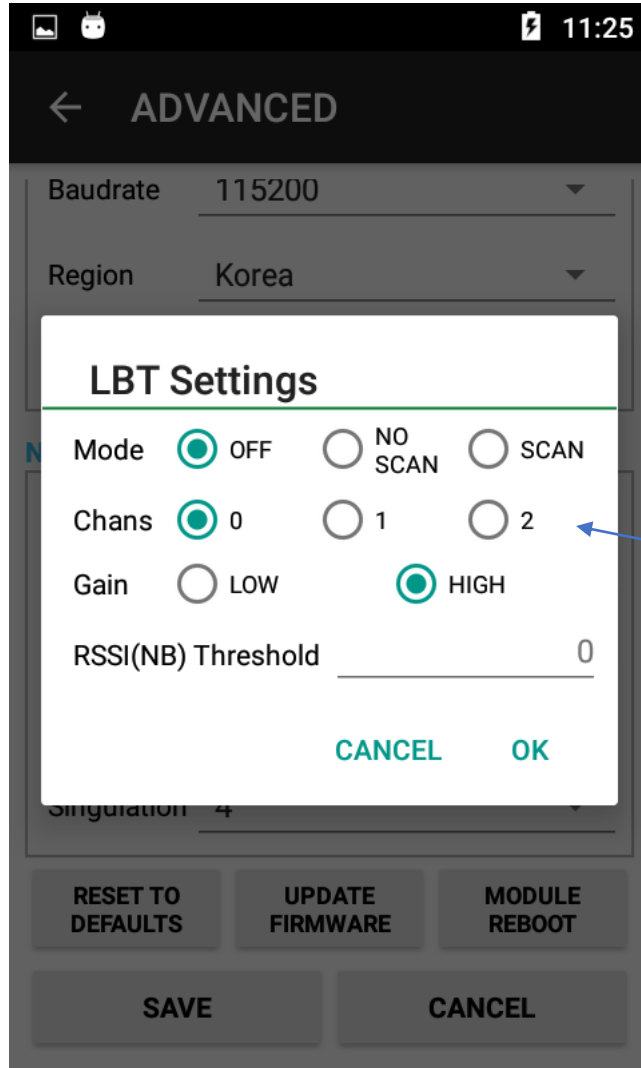
✔CERTIFICATION Screen
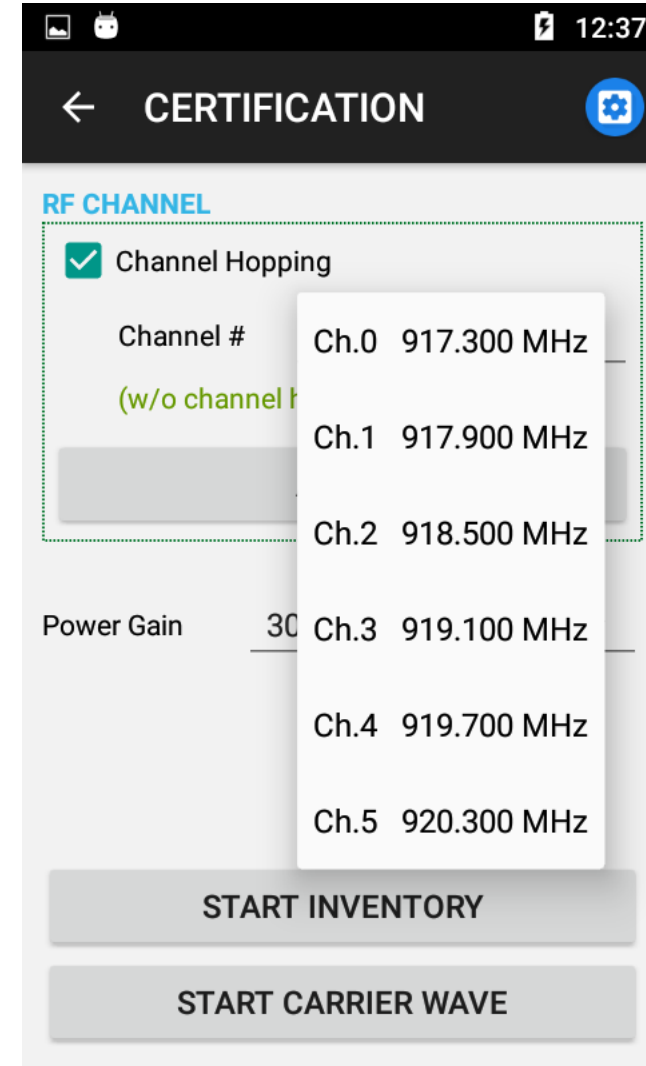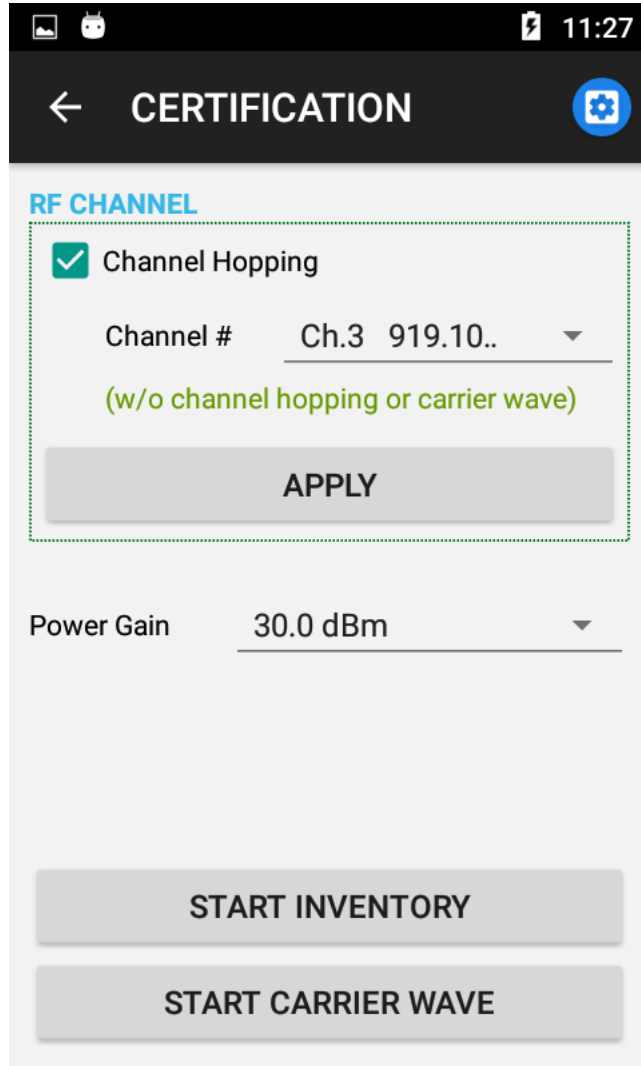
-Applied model：*: a611 (UHF PDA Reader)*

-Application :

Shopping Experience.

-Solution:

With real-time inventory and product information at your employees' fingertips and the ability to process payments on a mobile device, customers will enjoy personalized service and less wait time.

-Applied model : a611 (UHF PDA Reader)

-Application :

Automate storage and

Retrieval system

-Solution:

Monitoring of the entire distribution system.

RFID allows for real-time tracking and batch automation through every process of

The istribution channel.

-Applied model : a611 (UHF PDA Reader)

-Application :

Automate storage and

Retrieval system

-Solution:

Monitoring of the entire distribution system. RFID allows for real-time tracking and batch automation through every process of the distribution channel.

-Applied model : a611 (UHF PDA Reader)

-Application:

Record history of Inventory

-Solution:

Detailed records for individual identification, breed, sex, place of birth, grade. Inspection date, processing date, and other significant data is monitored through RFID tags to ensure the accurate history and safety of all products.

FCC Warning Statement

FCC Part 15.19

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Part 15.21

Any changes or modifications (including the antennas) to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF Radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications, However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
Modifications not expressly approved by the manufacturer could void your authority to operate the equipment under FCC rules.