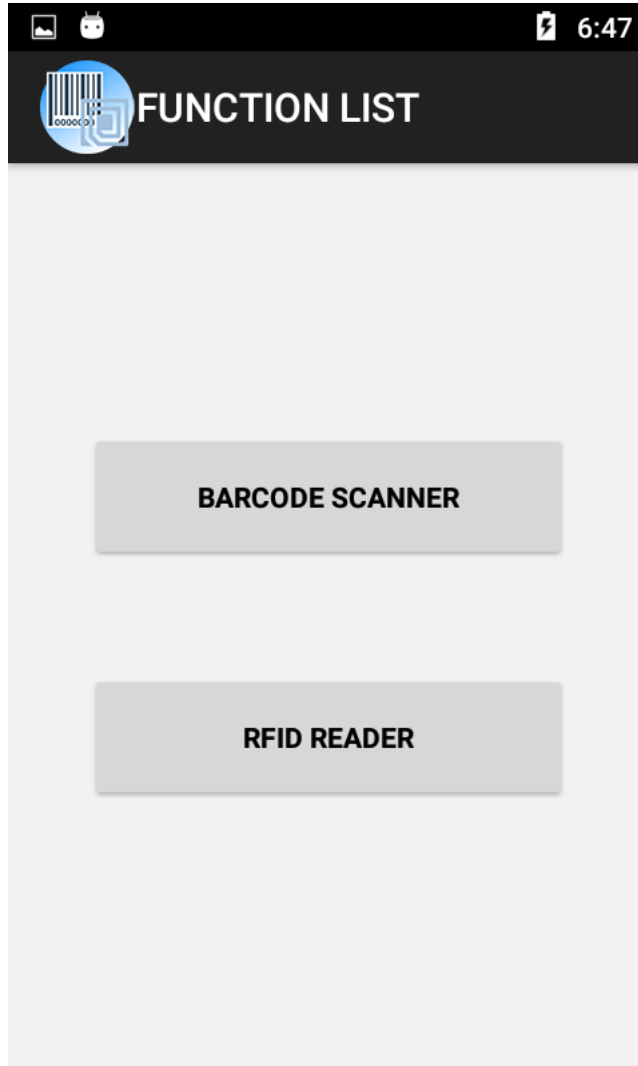


a611 UHF App Manual

✓ Main screen to select functions

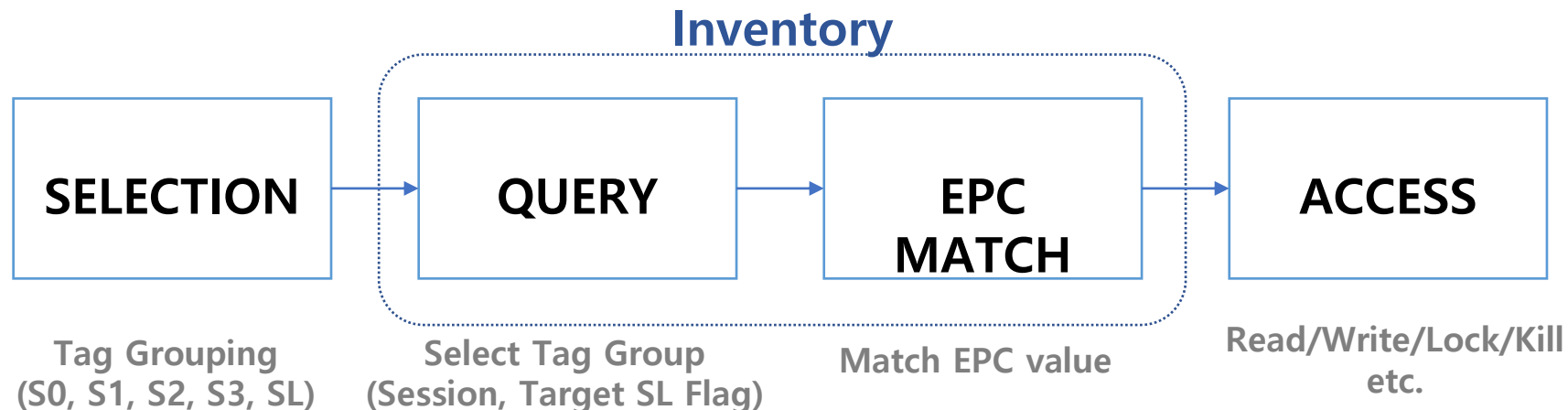


✓ Reference of technical terms in RFID

Technical terms

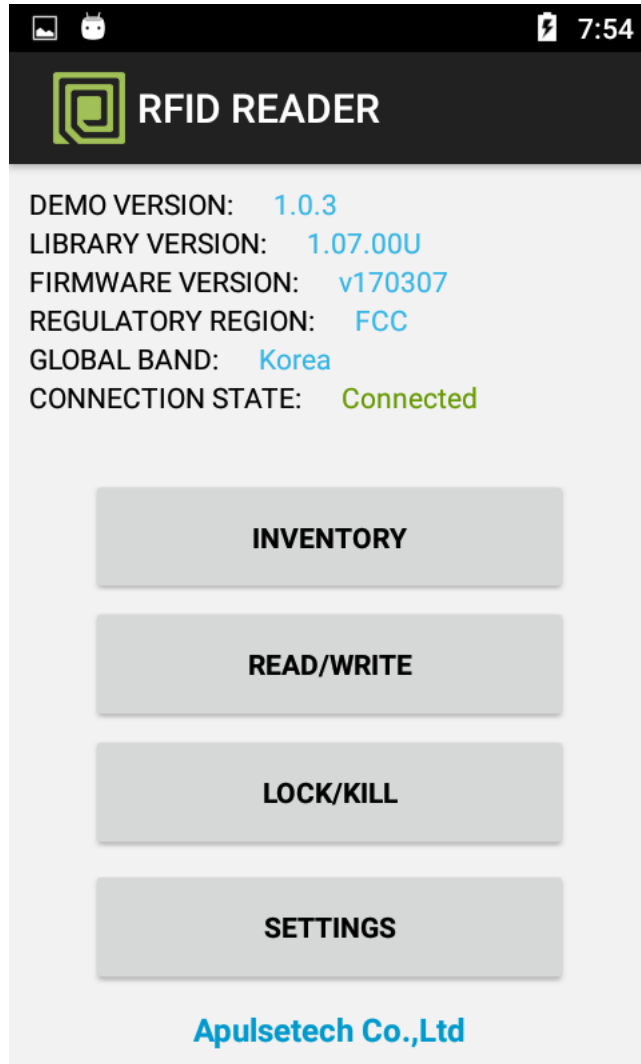
- Access Timeout: Time out when Read/Write on module or chip register.
Access Retry Interval: Retry interval value when fail to Read/Write in Access Timeout
- Tx On Time: Activation time for RF Tx . Affects to setting related to frequency or frequency hopping.
- Tx Off Time: Deactivation time for RF 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

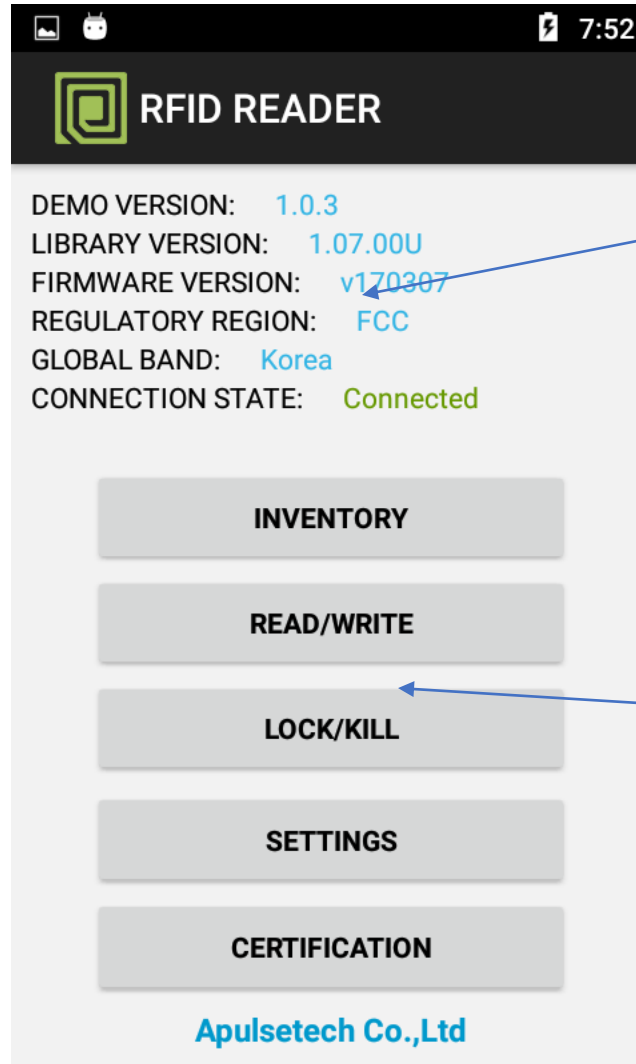


✓ Main screen of RFID READER App

Admin. Mode Locked



Admin. Mode Unlocked



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

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)

The screenshot shows the INVENTORY screen with a dark header bar containing a back arrow, the title 'INVENTORY', and a settings gear icon. Below the header, the status section displays 'Elapsed Time : 00:00:00.0', 'Speed : 0.0 cnt/s', and 'Avg. Speed : 0.0 cnt/s'. A large empty box represents the tag list. Below this, a status bar shows 'Mask: 0, Disabled, Session: S0, Target: A, SL: ALL'. The 'OPERATION SETTINGS' section includes checkboxes for 'Continuous Mode' (checked), 'Remove PC' (unchecked), 'Toggle' (checked), 'RSSI' (checked), 'Filter' (checked), and 'Sound' (checked). A 'Power Gain' slider is set to '30.0 dBm'. At the bottom, there is a large display showing '0' above another '0', and three buttons: 'INVENTORY', 'CLEAR', and 'SELECTION MASK'.

Settings

Go to Settings

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

✓ INVENTORY Screen – How to filter

No Filtering option

Elapsed Time : 00:00:04.5
Speed : 72.0 cnt/s Avg. Speed : 63.7 cnt/s

3000E20090097708002618505416	
RSSI : -60.9	
202222220D2CB4851B0C	
RSSI : -47.3	
3000E20090097708002617705CCE	
RSSI : -51.4	

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

OPERATION SETTINGS

☒ Continuous Mode ☐ Remove PC
☒ Toggle ☒ RSSI ☐ Filter ☒ Sound

Power Gain 30.0 dBm

287
287

INVENTORY
CLEAR SELECTION MASK

Select Filtering option

Elapsed Time : 00:00:08.0
Speed : 64.0 cnt/s Avg. Speed : 72.0 cnt/s

3000E2009009770800261700659B	85
RSSI : -70.0	
3000E20090097708002618505416	148
RSSI : -60.1	
3000E20090097708002617705CCE	170
RSSI : -53.3	

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

OPERATION SETTINGS

☒ Continuous Mode ☐ Remove PC
☒ Toggle ☒ RSSI ☒ Filter ☒ Sound

Power Gain 30.0 dBm

572
4

INVENTORY
CLEAR SELECTION MASK

✓ 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

SELECTION MASK Setting interface showing:

- SELECTION SETTINGS**
 - ☒ Use Selection Mask (1 Entry(s))
 - ☐ SL, Assert SL or inventoried → A
Deassert SL or inventoried → B, EPC (+)
- Buttons:** ADD, REMOVE, CLEAR
- INVENTORY SETTINGS**
 - Session: S0
 - Target: A
 - SL Flag: ALL
- Bottom Buttons:** 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

← SELECTION

SELECTION SETTINGS

☒ Use Selection Mask 1 Entry(s)

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

Bank: EPC

Target: SL

Action: Assert SL or inventoried → A
Deassert SL or inventoried → B, EPC

ADD REMOVE

Open

← SELECTION

SELECTION SETTINGS

☒ Use Selection Mask 1 Entry(s)

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

ADD REMOVE

Remove

← SELECTION

SELECTION SETTINGS

☒ Use Selection Mask 2

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

☐ S0, 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

SELECTION SETTINGS

☒ Use Selection Mask 0 Entry(s)

ADD REMOVE CLEAR

Remove all

INVENTORY SETTINGS

Session S0

Target A

SL Flag ALL

SAVE CANCEL

SELECTION

Selecion Mask

Bank EPC

Target SL

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

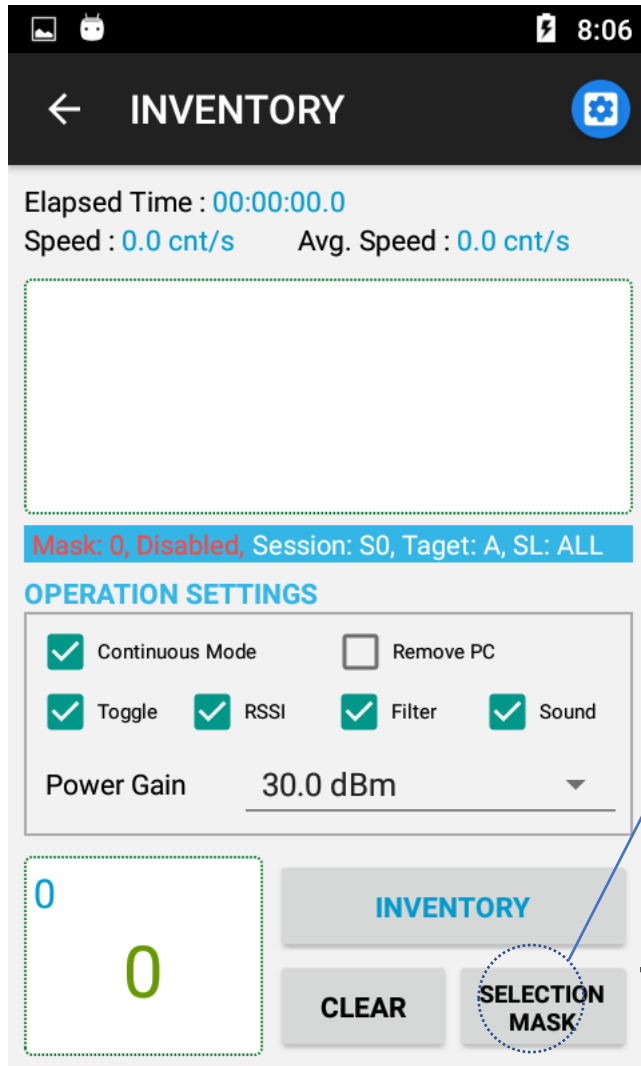
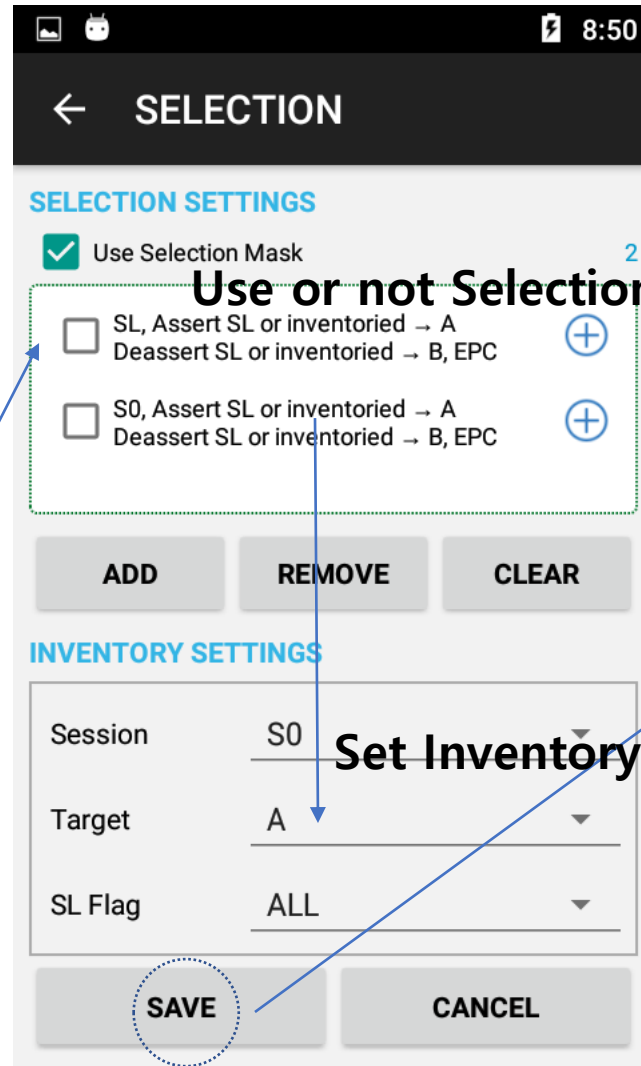
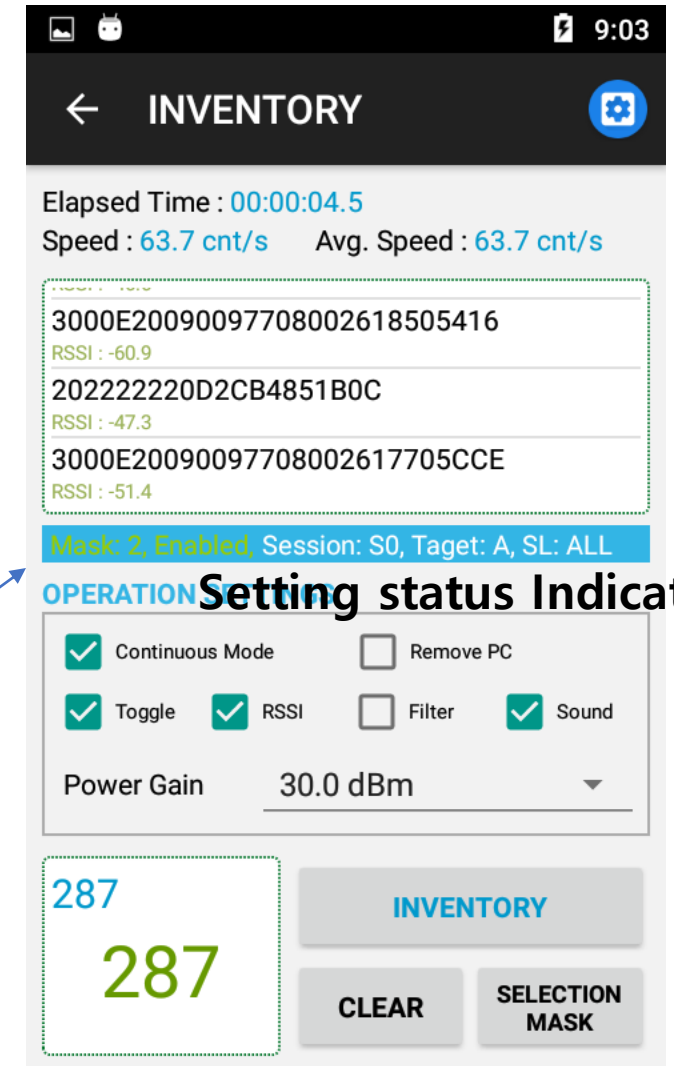
2 WORD(s)

16 BIT(s)

AAAA

CANCEL SAVE

✓ 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.

The image displays three screenshots of a mobile application interface, illustrating the EPC MATCH setting process across different screens. The screenshots are labeled with time stamps: 10:26, 10:27, and 10:28.

10:26 INVENTORY: The screen shows a list of items. The first item is highlighted with a green dashed box and contains the text "3000E20090097708002618505416". Below this, there are buttons for "Read/Write" and "Lock/Kill". The "Read/Write" button is circled in blue. The "Lock/Kill" button is also circled in blue. The text "Click and stay" is written over the "Read/Write" button. The text "Select" is written over the "Lock/Kill" button. The "OPERATION SETTINGS" section at the bottom shows various checkboxes and a "Power Gain" dropdown set to "30.0 dBm".

10:27 READ/WRITE: The screen shows the "READ MEMORY" and "WRITE MEMORY" sections. The "READ MEMORY" section has a table with columns 0 through 9. The "WRITE MEMORY" section has a table with columns 0 through 9. The "EPC MATCH" setting is highlighted in blue, showing "Mask: 2, Enabled, Session: S0, Target: A, SL: ALL" and "EPC: Match, 96, 0, E20090097708002618505416". The "OPERATION SETTINGS" section shows "Bank" set to "EPC", "Offset" set to "1 WORD(s)", and "Length" set to "7 WORD(s)". The "CLEAR" button is circled in blue.

10:28 LOCK/KILL: The screen shows the "LOCK/KILL" section. The "EPC MATCH" setting is highlighted in blue, showing "Mask: 2, Enabled, Session: S0, Target: A, SL: ALL" and "EPC: Match, 96, 0, E20090097708002618505416". The "OPERATION SETTINGS" section shows "Power Gain" set to "30.0 dBm". The "CLEAR" button is circled in blue.

Arrows indicate the flow of the process: from the "Read/Write" button in the INVENTORY screen to the "EPC MATCH" setting in the READ/WRITE screen, and from the "Lock/Kill" button in the INVENTORY screen to the "EPC MATCH" setting in the LOCK/KILL screen. Another arrow points from the "CLEAR" button in the READ/WRITE screen to the "CLEAR" button in the LOCK/KILL screen.

Enable to remove the setting by CLEAR button

✓ READ/WRITE Screen

READ/WRITE selection tap

← READ/WRITE

READ MEMORY WRITE MEMORY

0 1 2 3 4 5 6 7 8 9

Mask: 0, Disabled, Session: S0, Target: 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

← 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, Target: A, SL: ALL

OPERATION SETTINGS

Bank	EPC
Offset	1 WORD(s)
Power Gain	30.0 dBm

WRITE

CLEAR SELECTION MASK ACCESS PASSWORD

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

✓ READ/WRITE 화면

Byte

← READ/WRITE

READ MEMORY WRITE MEMORY

0	1	2	3	4	5	6	7	8	9
20	22	22	22	0D	2C	B4	85	1B	0C
30	C3	0C	30						

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

OPERATION SETTINGS

Bank EPC

Offset 1 WORD(s)

Length 7 WORD(s)

Power Gain 30.0 dBm

Success

READ

CLEAR SELECTION MASK ACCESS PASSWORD

← READ/WRITE

READ MEMORY WRITE MEMORY

0	1	2	3	4	5	6	7	8	9

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

OPERATION SETTINGS

Bank EPC

Offset 1 WORD(s)

Length 8 WORD(s)

Power Gain 30.0 dBm

Invalid memory

READ

CLEAR SELECTION MASK ACCESS PASSWORD

← READ/WRITE

READ MEMORY WRITE MEMORY

0	1	2	3	4	5	6	7	8	9
E2	00	90	09						

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

OPERATION SETTINGS

Bank EPC

Offset 2 WORD(s)

Power Gain 30.0 dBm

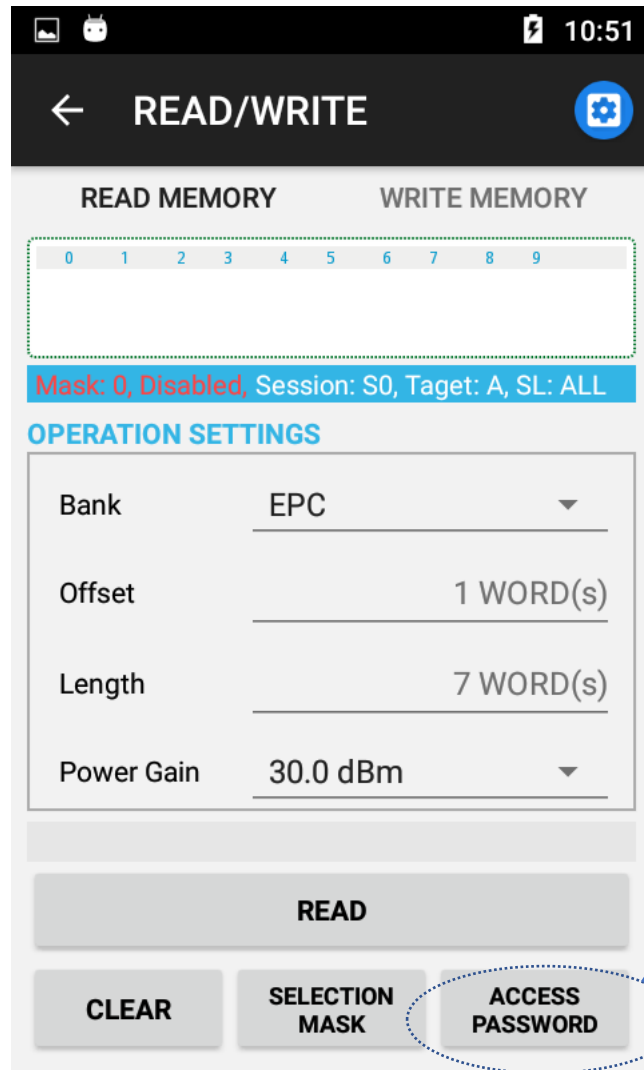
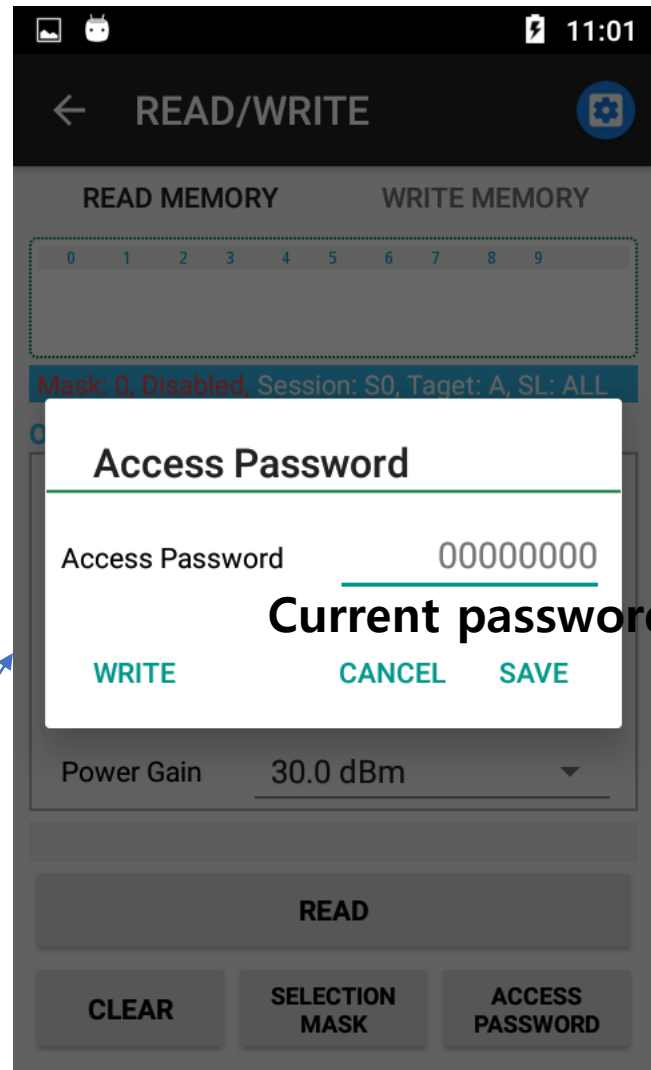
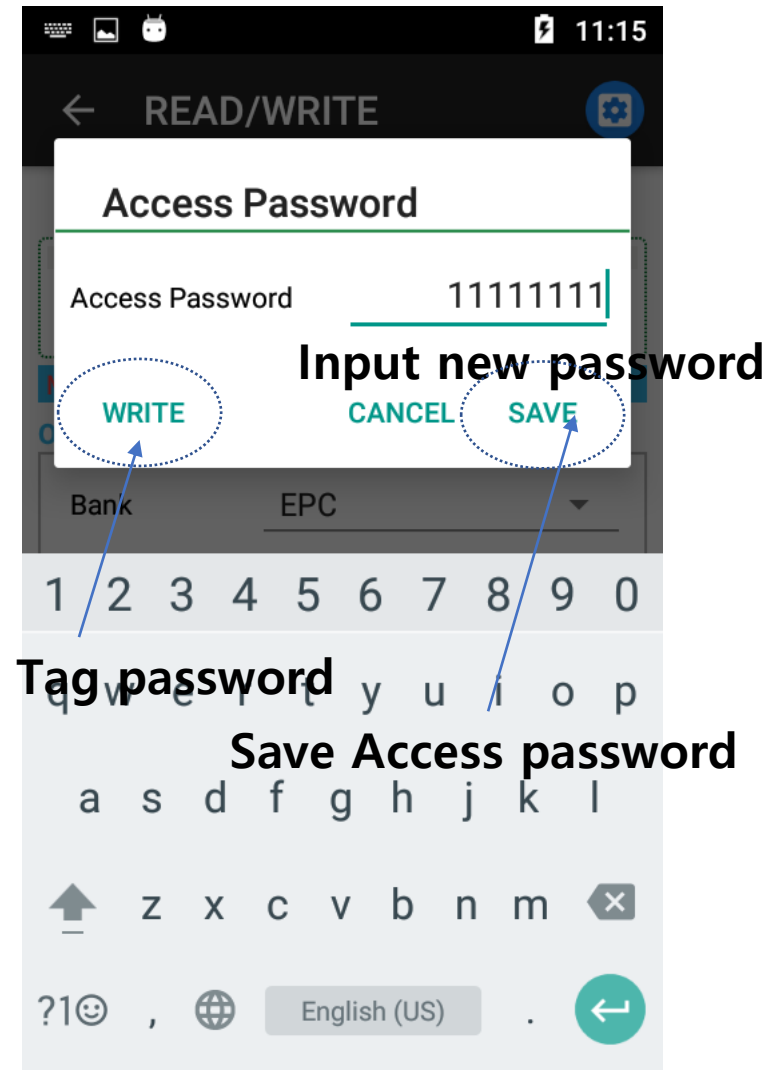
Success

WRITE

CLEAR SELECTION MASK ACCESS PASSWORD

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
Lock: Lock memory
3. Perma Unlock: Permanent unlock
Perma Lock: Permanent lock

Operation settings

1. Power Gain: RF power adjustment

The screenshot shows the LOCK/KILL screen with a status bar at the top displaying icons for signal, battery, and time (11:20). Below the title bar, a status line reads "Mask: 0, Disabled, Session: S0, Target: A, SL: ALL". The main content is divided into three sections: LOCK SETTINGS, OPERATION SETTINGS, and a grid of function buttons.

LOCK SETTINGS

Memory				
Kill Pwd	Access Pwd	EPC	TID	User
☐	☐	☐	☐	☐

Lock Operation

☐ Unlock	☐ Unlock	☐ Unlock	☐ Unlock	☐ Unlock
☐ Perma Unlock	☐ Perma Unlock	☐ Perma Unlock	☐ Perma Unlock	☐ Perma Unlock
☐ Lock	☐ Lock	☐ Lock	☐ Lock	☐ Lock
☐ Perma Lock	☐ Perma Lock	☐ Perma Lock	☐ Perma Lock	☐ Perma Lock

OPERATION SETTINGS

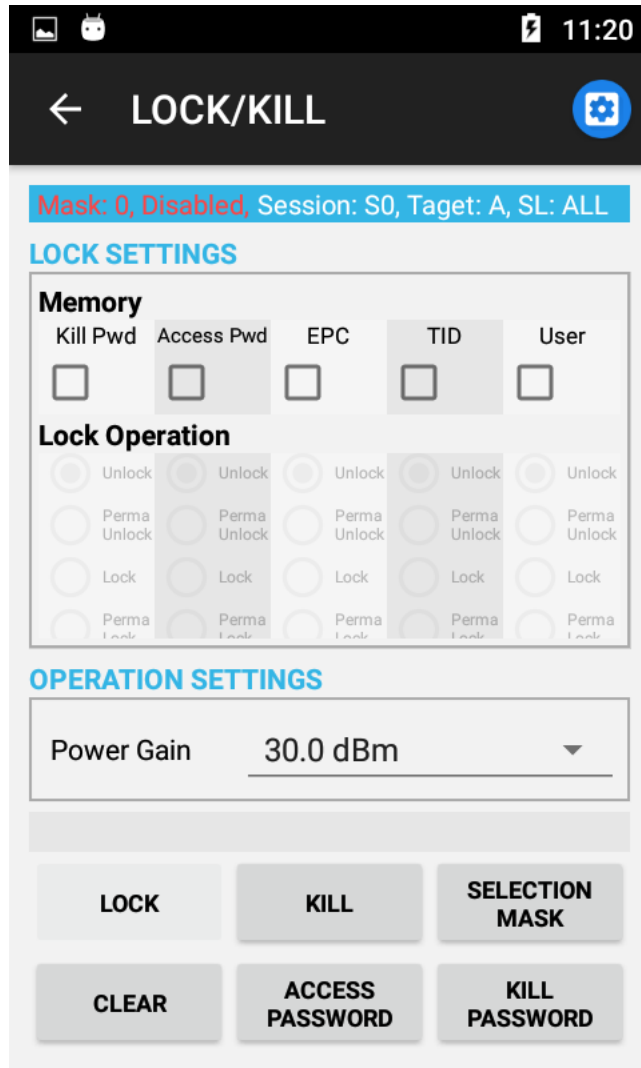
Power Gain: 30.0 dBm

Function buttons: LOCK, KILL, SELECTION MASK, CLEAR, ACCESS PASSWORD, KILL PASSWORD.

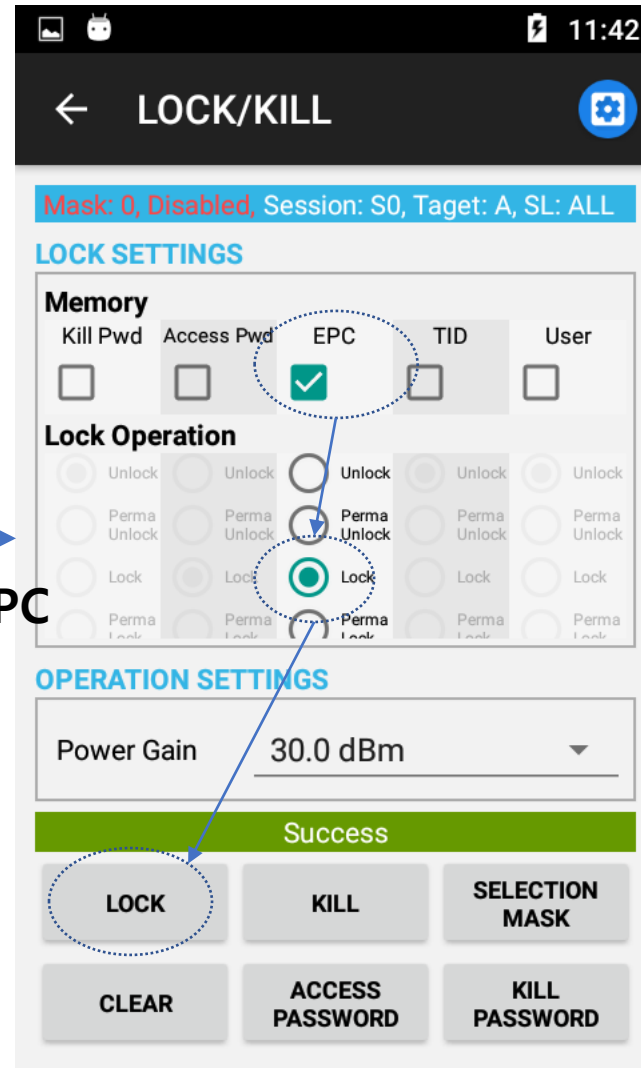
Function buttons

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

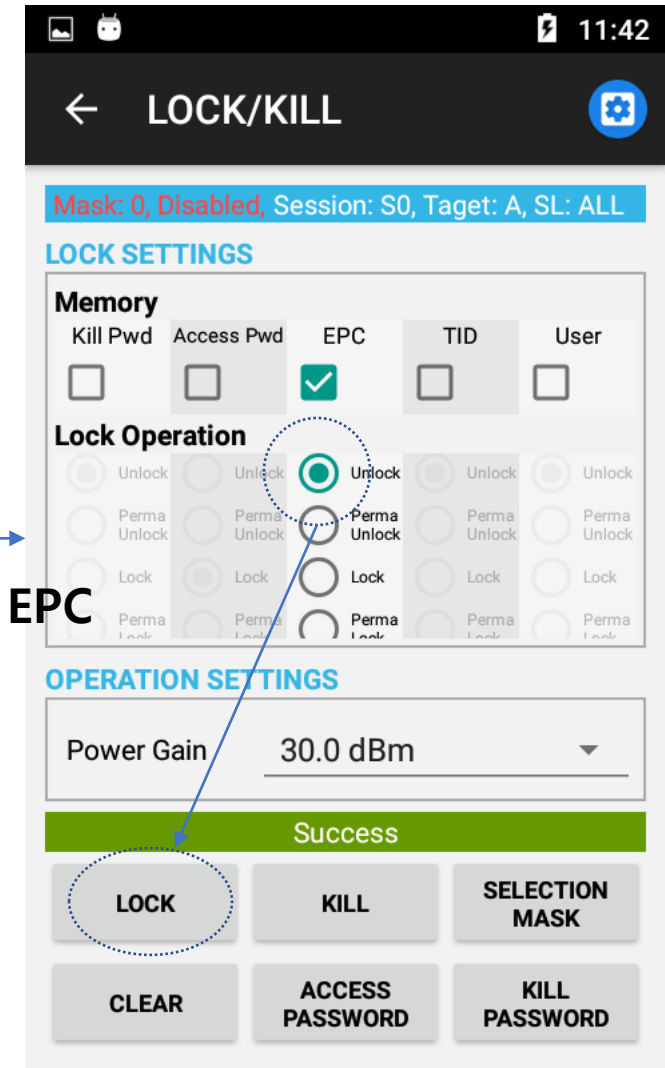
✓ LOCK/KILL screen-LOCK



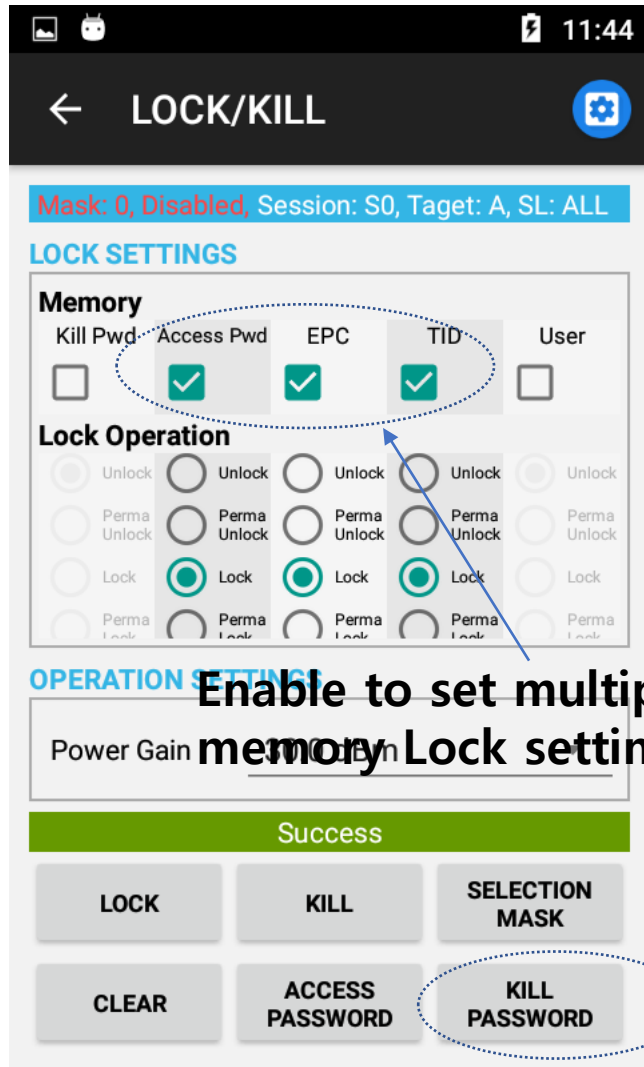
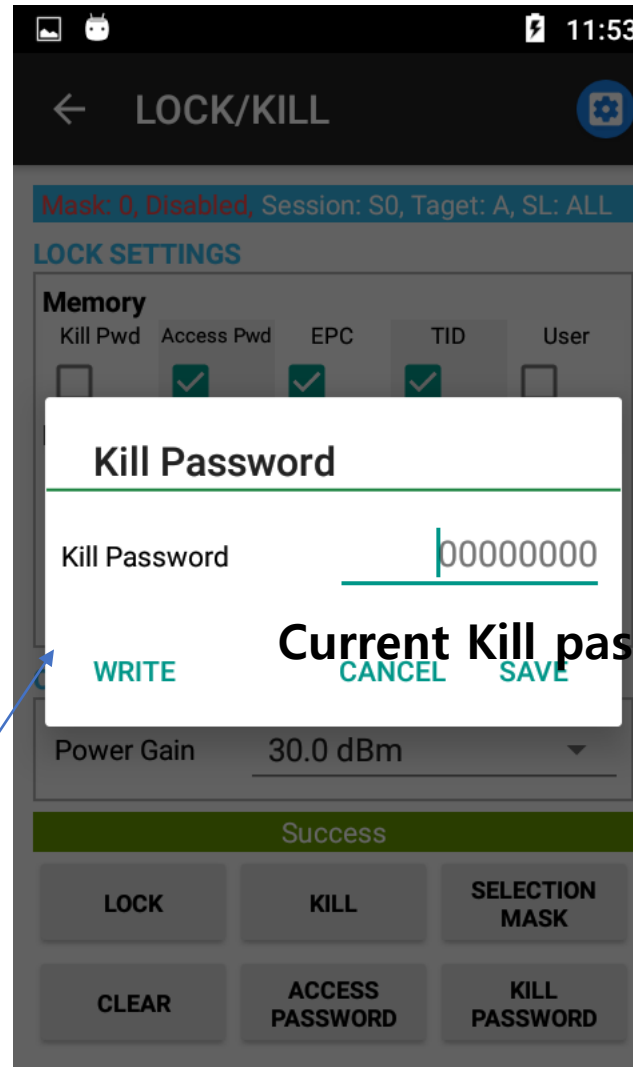
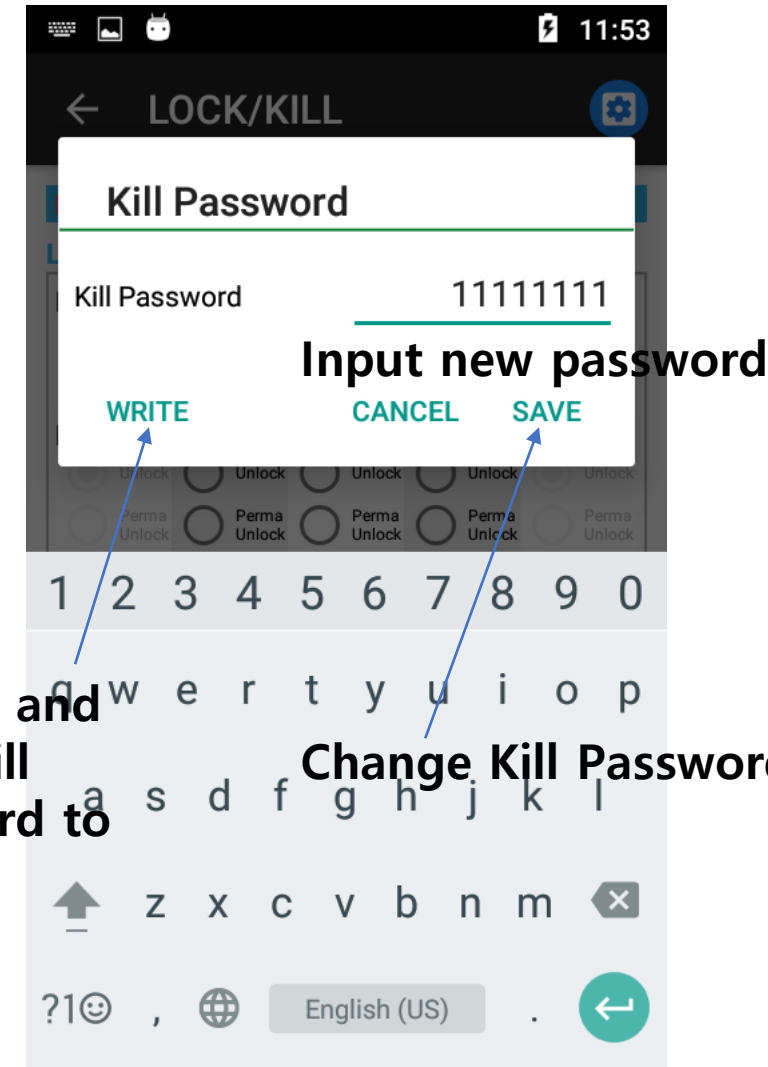
Lock EPC



Unlock EPC



✓ LOCK/KILL Screen-KILL PASSWORD setting



✓ LOCK/KILL Screen-KILL

11:20

←

LOCK/KILL

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

LOCK SETTINGS

Memory

Kill Pwd

Access Pwd

EPC

TID

User

☐

☐

☐

☐

☐

Lock Operation

☐ Unlock

☐ Perma Unlock

☐ Lock

☐ Perma Lock

☐ Unlock

☐ Perma Unlock

☐ Lock

☐ Perma Lock

☐ Unlock

☐ Perma Unlock

☐ Lock

☐ Perma Lock

☐ Unlock

☐ Perma Unlock

☐ Lock

☐ Perma Lock

☐ Unlock

☐ Perma Unlock

☐ Lock

☐ Perma Lock

OPERATION SETTINGS

Power Gain

30.0 dBm

LOCK

KILL

SELECTION MASK

CLEAR

ACCESS PASSWORD

KILL PASSWORD

✓ SETTINGS screen

The screenshot shows the main 'SETTINGS' screen with a back arrow and the title 'SETTINGS'. It is divided into four sections: 'ACCESS SETTINGS', 'RF SETTINGS', 'ADMIN. SETTINGS', and 'SAVE'/'CANCEL' buttons at the bottom. Callouts point to specific elements: 'ACCESS Settings' points to the 'Timeout' and 'Interval' fields; 'RF Settings' points to the 'Tx On Time', 'Tx Off Time', 'Power Gain', and 'RF Channel' fields; 'ADMIN Settings Admin function unlock' points to the 'ADMIN. SETTINGS' section header; and a 'SETTING' button in the 'RF Channel' field is circled and has an arrow pointing to the 'RF Channel Setting' dialog on the right.

← 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

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

The screenshot shows the 'RF Channel Setting' dialog box, which is a modal window with a title bar, a list of channels, and 'CANCEL' and 'OK' buttons at the bottom. The list contains six channels, each with a checked checkbox, a label (Ch.0 to Ch.5), and a frequency value (917.300 MHz to 920.300 MHz). The background shows the 'SETTINGS' screen with the 'RF Channel' field highlighted.

← 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

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

Admin Code Unlocked **SET**

ADVANCED **SAVE** **CANCEL**

Click

Input unlock code

← 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

← ADVANCED

Baudrate 115200

Region Korea

LBT Settings

Mode ☒ OFF ☐ NO SCAN ☐ SCAN

Chans ☒ 0 ☐ 1 ☐ 2

Gain ☐ LOW ☒ HIGH

RSSI(NB) Threshold 0

CANCEL OK

RESET TO DEFAULTS UPDATE FIRMWARE MODULE REBOOT

SAVE CANCEL

← 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

← ADVANCED

Baudrate 115200

Region Korea

Tx Timing Settings

TX On Time 400 ms

TX Off Time 0 ms

TX On Time Overhead 4 ms

TX Off Time Overhead 0 ms

CANCEL OK

RESET TO DEFAULTS UPDATE FIRMWARE MODULE REBOOT

SAVE CANCEL

✓ CERTIFICATION Screen

← CERTIFICATION

RF CHANNEL

☒ Channel Hopping

Channel # Ch.3 919.10..

(w/o channel hopping or carrier wave)

APPLY

Power Gain 30.0 dBm

START INVENTORY

START CARRIER WAVE

← CERTIFICATION

RF CHANNEL

☒ Channel Hopping

Channel # Ch.0 917.300 MHz

(w/o channel hopping or carrier wave)

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

Power Gain 30.0 dBm

START INVENTORY

START CARRIER WAVE

-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.