RFID Demo Instruction

Version: 1.1 Date: 06/06/2019

1, Inventory tags

Open RFIDDemo inventory interface, as figure 1.0, Pop up prompt message 'connected' means connect to UHF RFID module successfully, then click icon START to start inventory tags' EPC area data information, as figure 2.0.
Count: The quantity of inventoried tags
Times: Inventory time

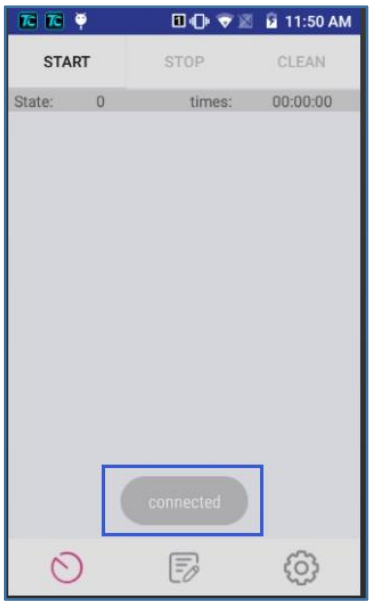

Figure 1.0

Figure 1.0

2, Single-tag Operation

This operation including: Read, Write and Lock.
Gen2 tags contains four bank(area)：Reserve(area), EPC(area),TID(area), USER(area). Usually we get data in hexadecimal character, one block contains four hexadecimal characters.
Reserve: Save password, block 0 and 1 to store destroy password, it used to kill tag permanently，block 2 and 3 to store access password.
EPC: Tag EPC area, usually it is 96bit(6 blocks), of course, some type of tag only has 64 bit, whereas, others could has 496 bits.The first two blocks is Verification and PC

block（the PC value for saving information about length of EPC), so we usually read EPC data start third block.
TID: It saves unique serial number for tags, and it couldn't be modified.
USER: The room of this area is different for different brand of tags, it is for storing user data.

2.1 Read

Read EPC area. Read two blocks, and the begin address is 2.
Don't select tag：

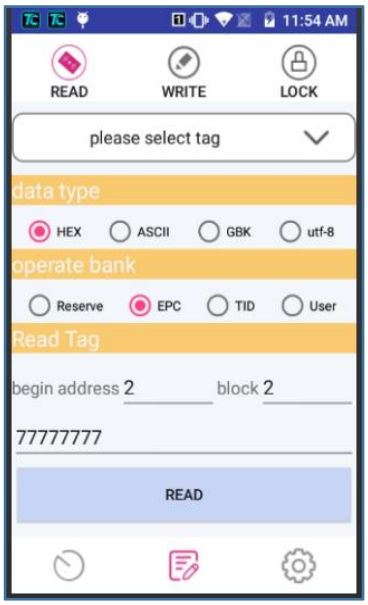

Figure 2.10

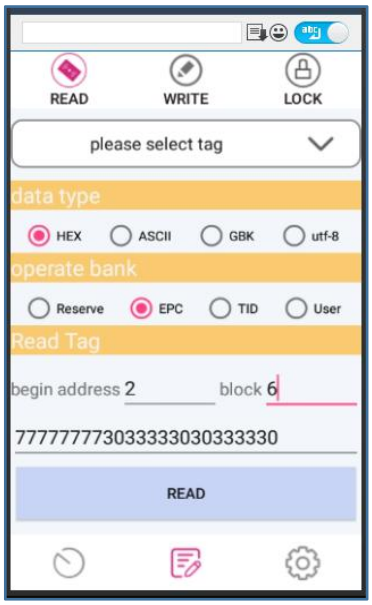

Figure 2.11

Read selected tag：

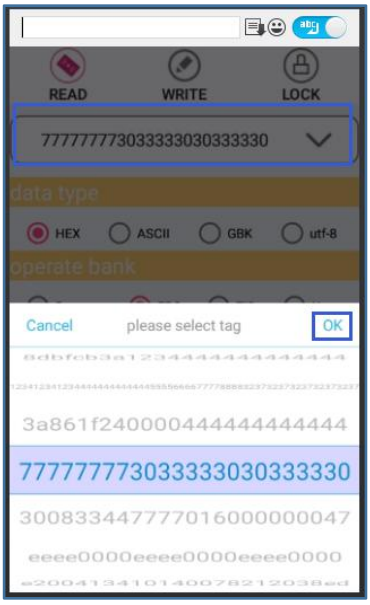

Figure 2.12

Figure 2.13

2.2 Write

Note: UHF RFID module U8 doesn't support write and read tag depend on tag's EPC area data.

Don't select tag：

Example: Write access password in reserve area, as figure 2.20.

Figure 2.20

Write selected tag:

Instance：

Figure 2.21

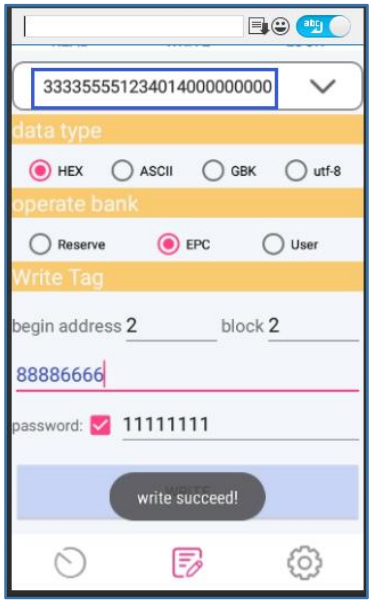

Figure 2.22

Figure 2.23

2.3 Lock

Lock: It has to input password, if you want to write EPC and USER area after the tag is locked, and also can't read and write reserve area.
Lock tag:

Figure 2.30

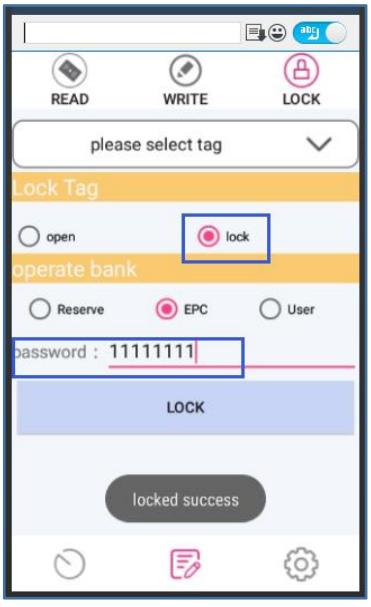

Figure 2.31

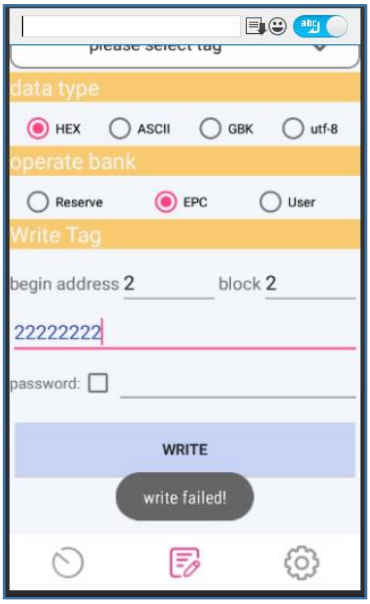

Figure 2.32

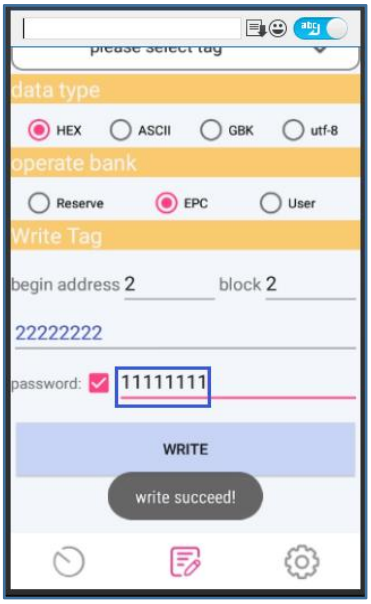

Figure 2.33

Lock selected tag：

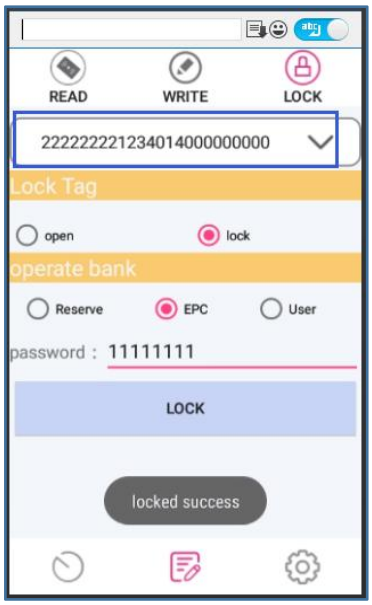

Figure 2.34

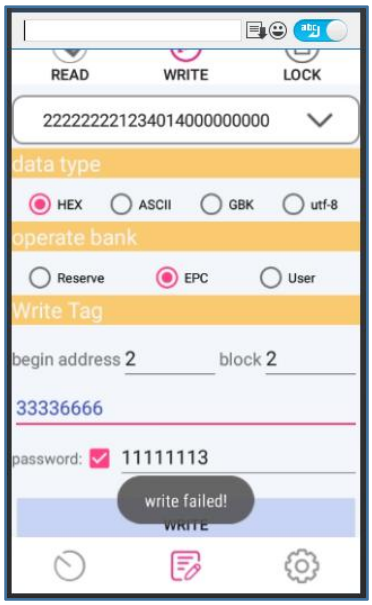

Figure 2.35

3, Settings

3.1 Radio Frequency Output Power, usually the range is 5-33dB.
Note: The power range of U6 is 5-30dB, U8 is 15-26dB, UB and U5 is 5-33dB.

3.2 Radio Frequency Spectrum, there are three common frequency ranges(FCC, ETSI and CHN).

3.3 Session, it is required the users have related knowledge about Gen2.
S0: The reading speed is fast， and it is suitable for inventory dozens of tags.
S1: For inventory large quantity of tags.
S2 and S3: It designed for special application scenario, please refer to related protocols of Gen2.

3.4 Setting and get Q value
Please set proper Q value, if you plan to inventory large quantity of tags, it could improve work efficiency.
Q Value Range：0 to 15.
The relation between Q value and tag quantity: The UHF RFID module has best performance, when the tag quantity equal with Qth power of 2.
（Note: Doesn't need set Q value for U5 and U6, since it adjust Q value automatically).

Figure 3.30

Figure 3.31

The End