TMK Deliver System Usage

20210129	Add version control	FSP

1. Introduction

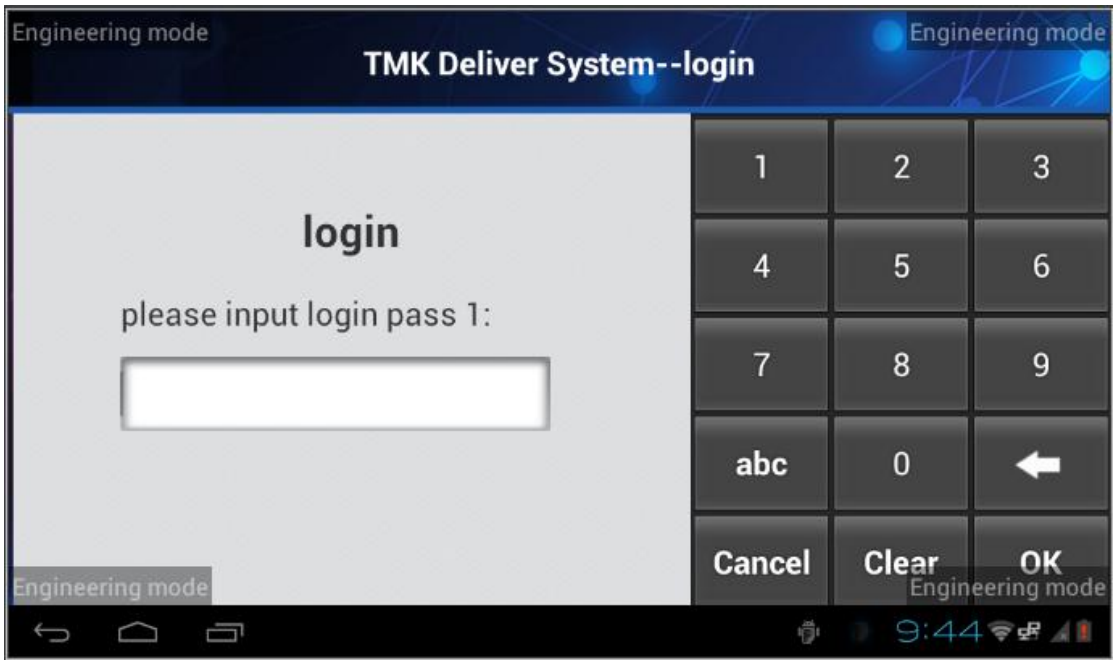
TMK Deliver System is a pre-installed application in Key POS(a special device to inject key), payment managers can use this terminal to inject keys to normal terminals, the key POS can store Keys from PC side or manual inputting, it also can inject keys to normal terminals from PC side or from local storage.

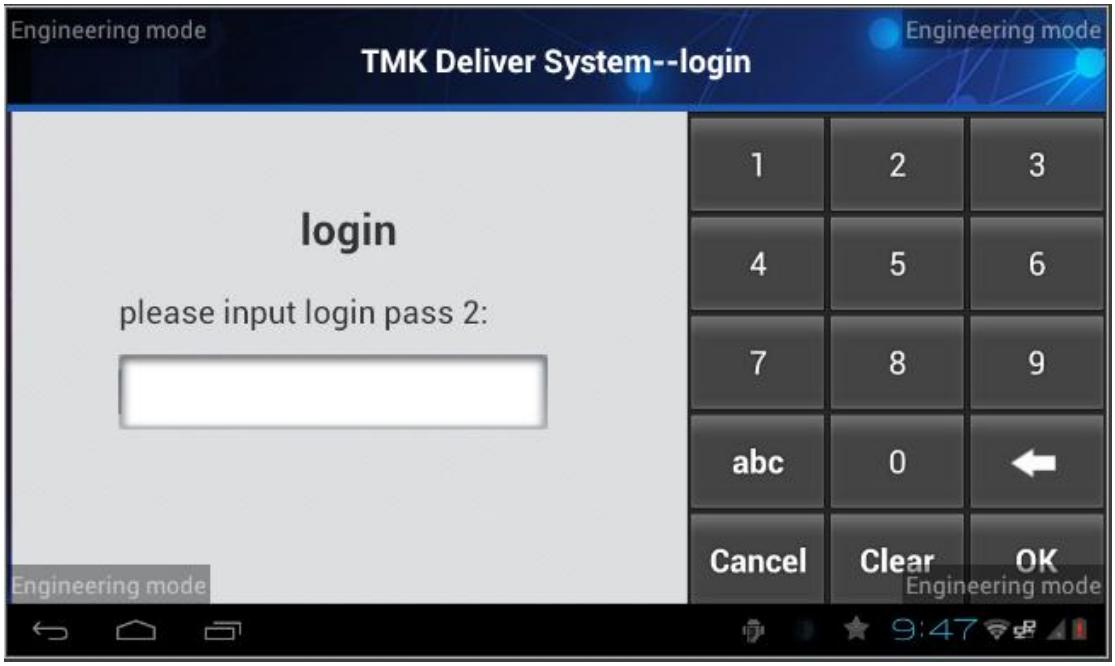
2. Functions

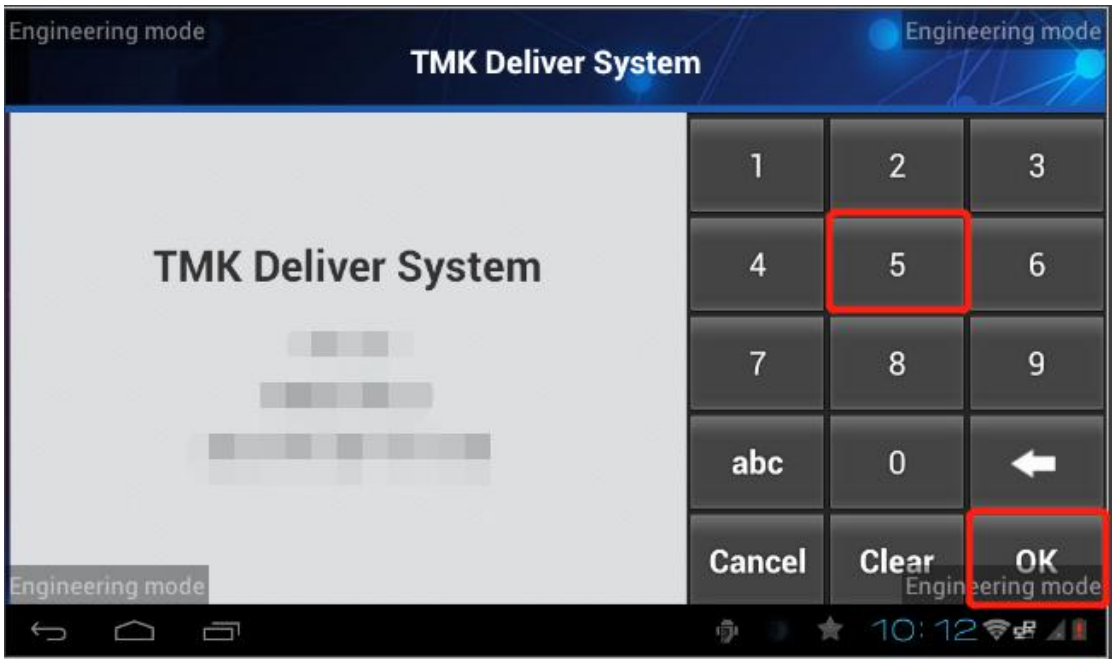
2.1. Login & Idle

Two login passwords required when you start app.
Default login password1: 11111111
Default login password2: 22222222

After verifying password successfully, TMK Deliver System will enter IDLE page which displays version info.
User can go to 'system manage' menu (press button '5') or 'deliver' menu (press button 'OK') from IDLE page.


Engineering mode
TMK Deliver System--login
Engineering mode
login
please input login pass 1:
1
2
3
4
5
6
7
8
9
abc
0
Cancel
Clear
OK
Engineering mode
Engineering mode
9:44

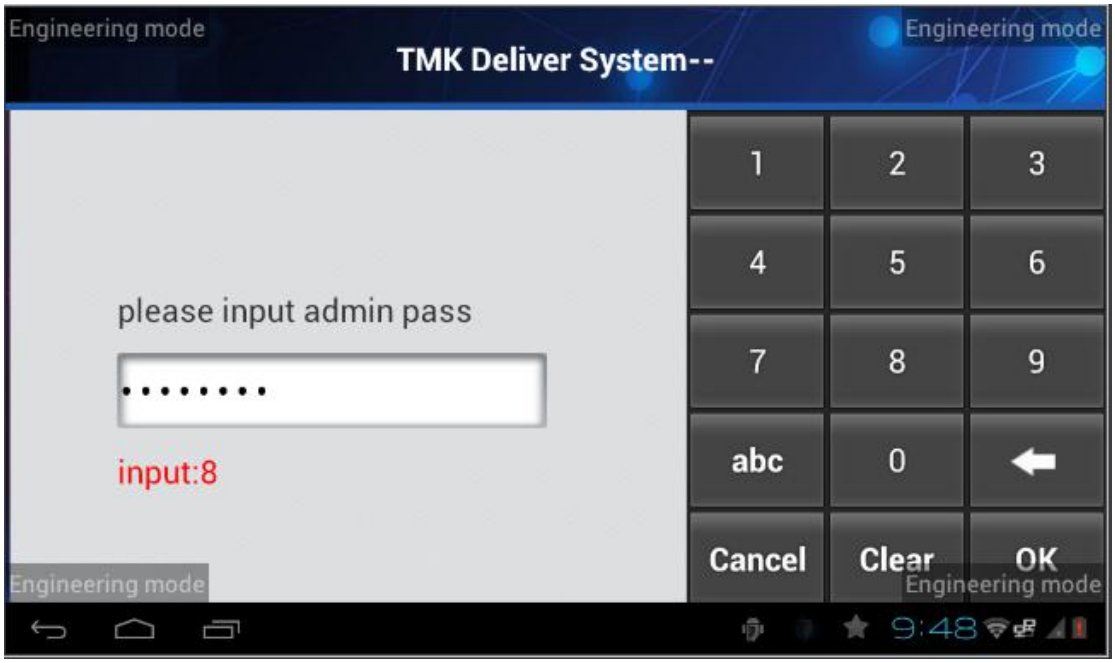

Engineering mode
TMK Deliver System--login
Engineering mode
login
please input login pass 2:
1
2
3
4
5
6
7
8
9
abc
0
Cancel
Clear
OK
Engineering mode
Engineering mode
9:47

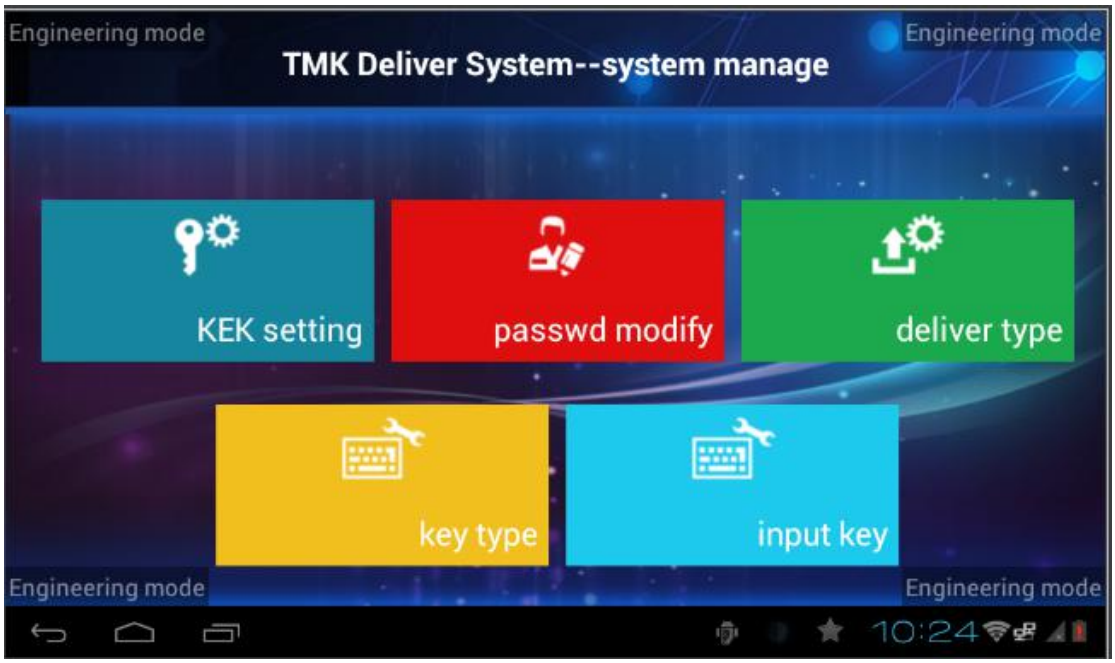


(IDLE page)

2.2. System Manage Menu

Press keyboard button ‘5’ in IDLE page to manage the key injection parameter.
Default admin password: 87654321





2.2.1. KEK setting

KEK full name is Key Encryption Key, used to encrypt master keys, it will be used when you want to inject keys from PC side or load keys from PC side, so KEK needn't to be set when user want to inject keys which were inputted on Key POS manually.

KEK Setting should be completed in these two situations:

- Loading key from PC
- Online delivery.

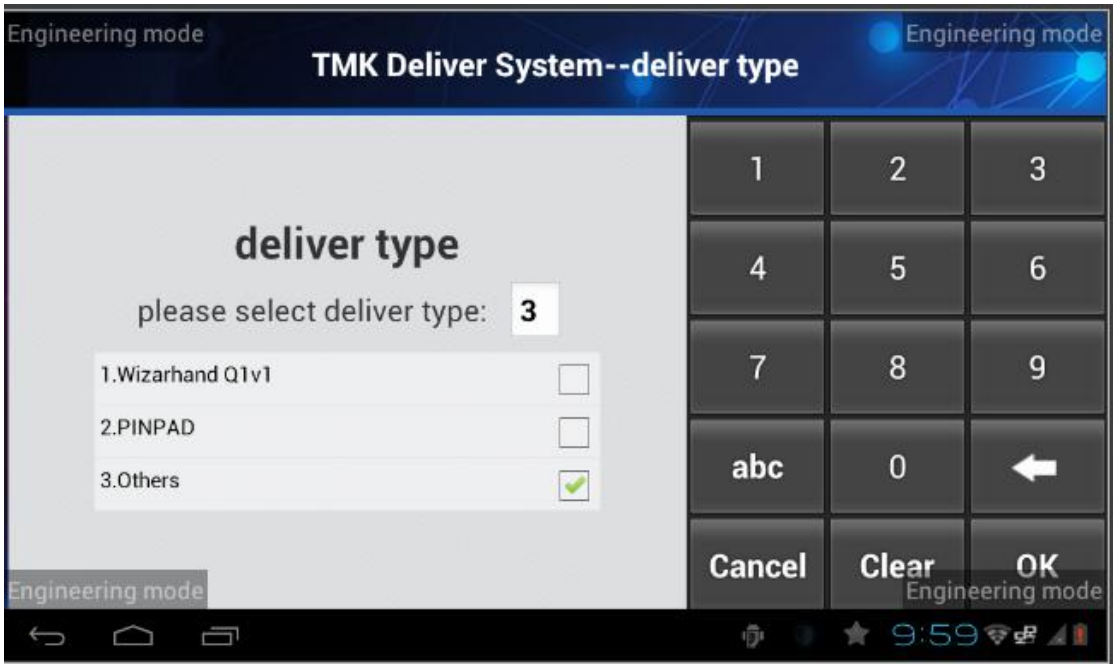
KEK Setting contains two components setting, every component setting will request password.
Default component password:
Component 1 password: 88888888
Component 2 password: 99999999

2.2.2. Deliver type

Deliver type setting indicate the target terminal type you want to inject;
Deliver type should be set correctly before injecting keys.
It contains 3 choices:

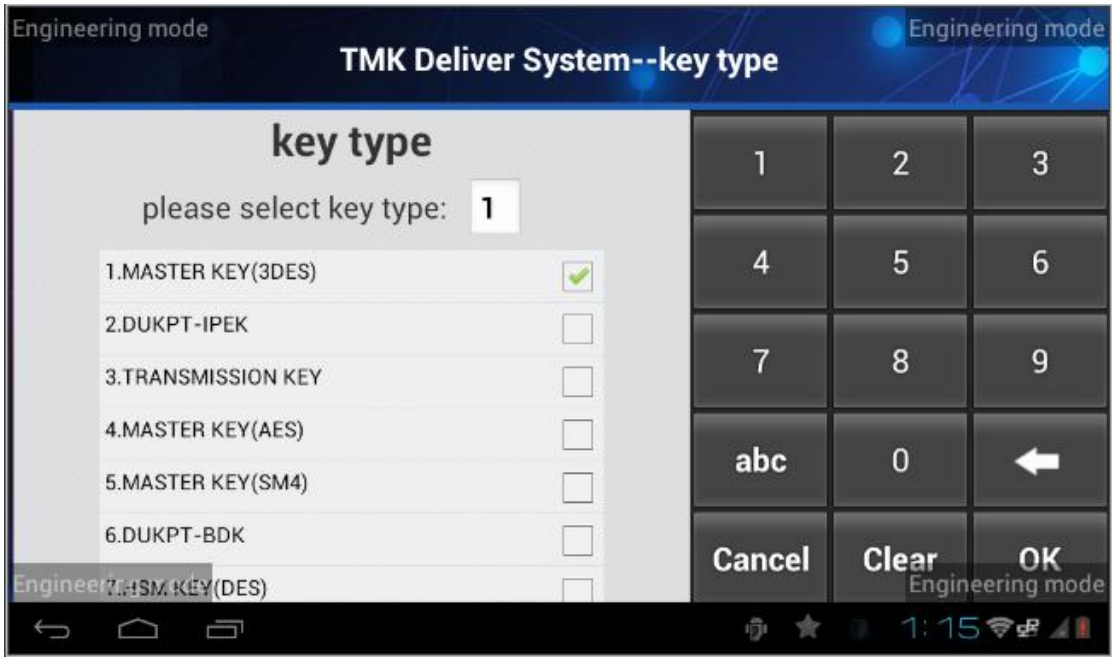
1. 'Wizarhand Q1v1' Target POS is old product model of Q1.
2. 'PINPAD' Target is external PINPAD

3. ‘Others’ Target POS is Q2, Q3 or other new products.



2.2.3. Key type

TMK Deliver System support different key types to inject.
Key type should be set correctly before injecting keys.



2.2.4. Input key

During inputting key, it will request inputting MID, TID, KSI, or KID up to key type.
Notice 'key type' should be set before 'input key'.

MID and TID is merchant id and terminal id to index different keys, the value can be any if you don't have MID or TID, but they should be remembered to when you input.
Key POS Request MID, TID when key type is:

- MASTER KEY(3DES)
- DUKPT-IPEK
- TRANSMISSION KEY
- MASTER KEY(AES)
- MASTER KEY(SM4)

KSI is used to index different BDKs, it is first 10 digits of KSN.
Key POS Request KSI when key type is:

- DUKPT-BDK

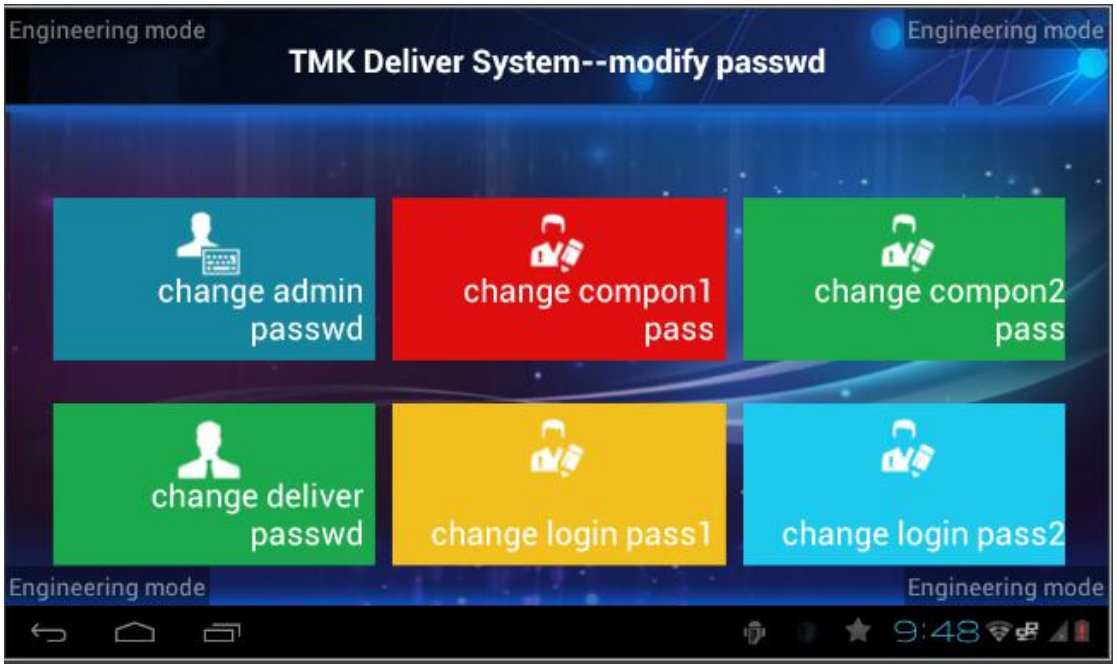
KID is used when you want to inject HSM KEYs, KID is 4 digits.
Input KID when key type is:

- HSM KEY(DES)
- HSM KEY(3DES)
- HSM KEY(AES)
- HSM KEY(SM4)

Then Key POS will request inputting Key Components and display check value to verify if the input is correct.

After that, user can use 'offline deliver' to inject the keys.

2.2.5. Passwd modify



Support change 'administrator password', 'deliver password', 'login password' and 'component password'.

2.3. Key injection Menu

Press 'OK' or 'Cancel ' in IDLE page to enter key injection menu.

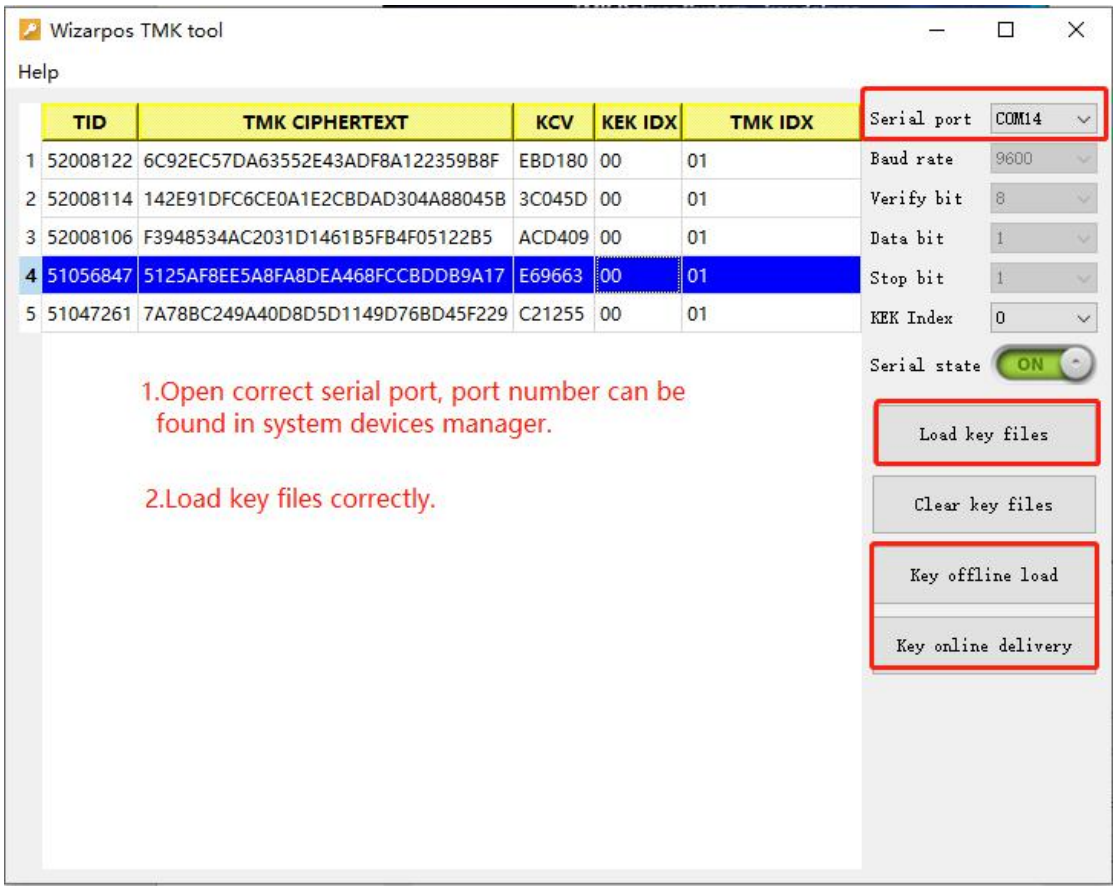
key injection menu

2.3.1. Key load

KEK should be set before use 'Key Load'.
Key Load function is used to get keys from PC side, then save them in Key POS.
Refer to following steps:

1. Key POS should be connected to PC through DB9 Serial Cable or USB-To-DB9 Serial cable.
2. Key Tool on PC should open correct serial port.
3. Press 'key load' button to enter serial receiving stage on Key POS;

4. Key Tool on PC should load KEY files correctly.
5. Click 'Key Offline Load' on PC to send keys to Key POS.



After loading keys, you can check the keys in 'Key Query' page.
Then user can use 'offline deliver' to select keys and inject it to target POS.

2.3.2. Offline deliver

Offline deliver is to inject the keys which be inputted or loaded before.
Offline deliver will request inputting deliver password, and other information (which

was inputted during ‘Input Key’) to locate key.
Default deliver password: 00000000

Refer to section 4.2 Inject keys from KeyPOS.

2.3.3. Online deliver

KEK should be set before use ‘Online deliver’.
Online deliver is to inject keys from PC to target POS directly, it needs PC, Key POS and target POS all connected through serial cable.
Default deliver password: 00000000
See section 4.1 Inject keys from PC

2.3.4. Key query

All keys input before an be displayed here.

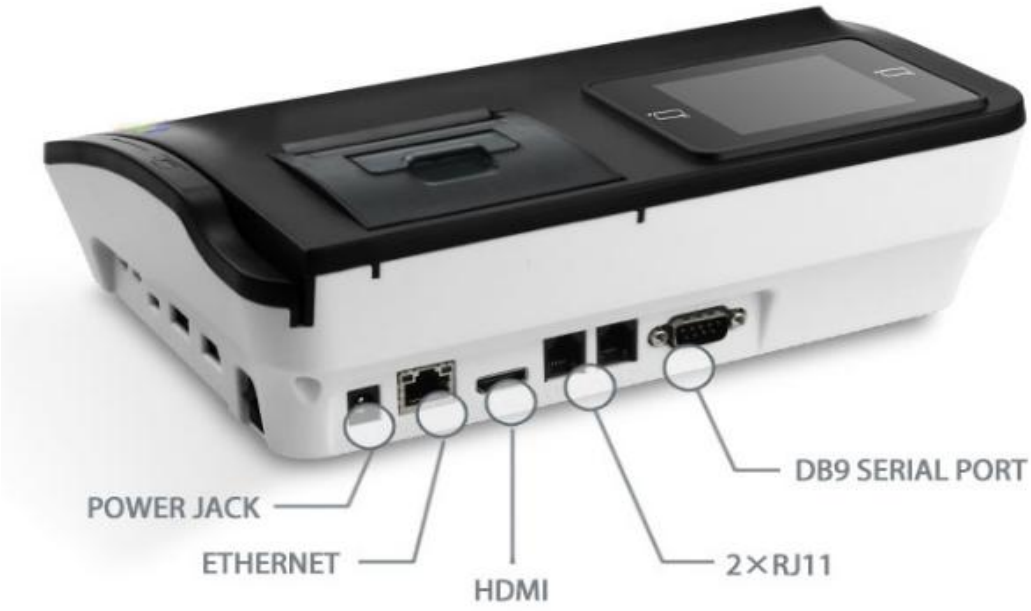
2.3.5. Key clear

This function will clear all keys has been input or loaded before.

3. Device connection

If the deliver type is ‘PINPAD’, PINPAD cable should be inserted into ‘RJ11 LINE2’.
Other deliver types need connect target POS to USB TYPE A port.

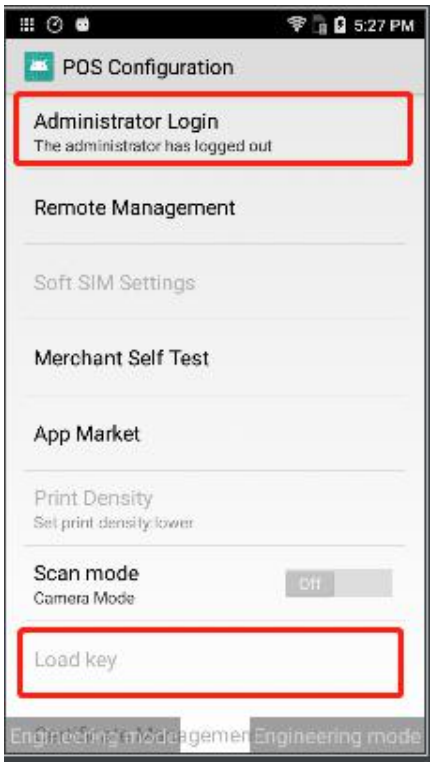
DB9 SERIAL PORT is used to connect to PC when use ‘key load’ or ‘online deliver’.

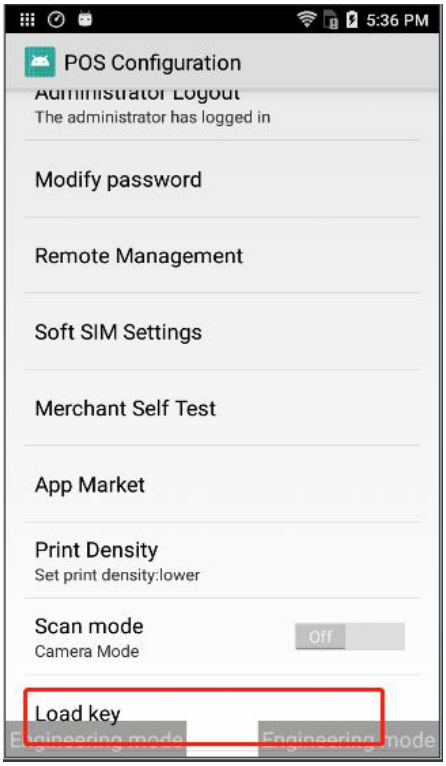


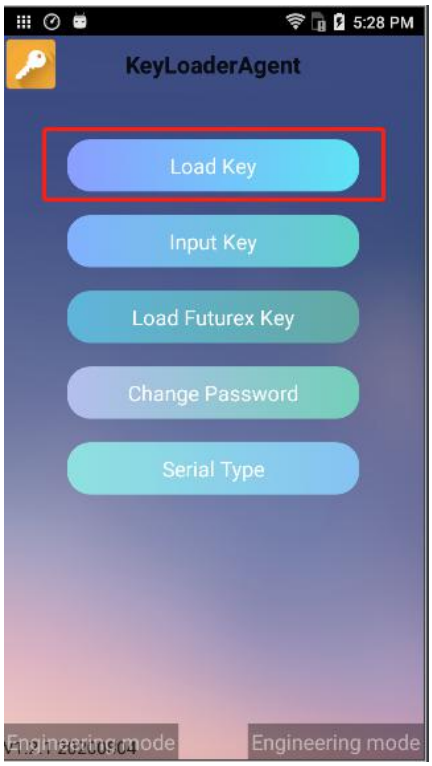
4. Key injection steps

4.1. Inject keys from PC

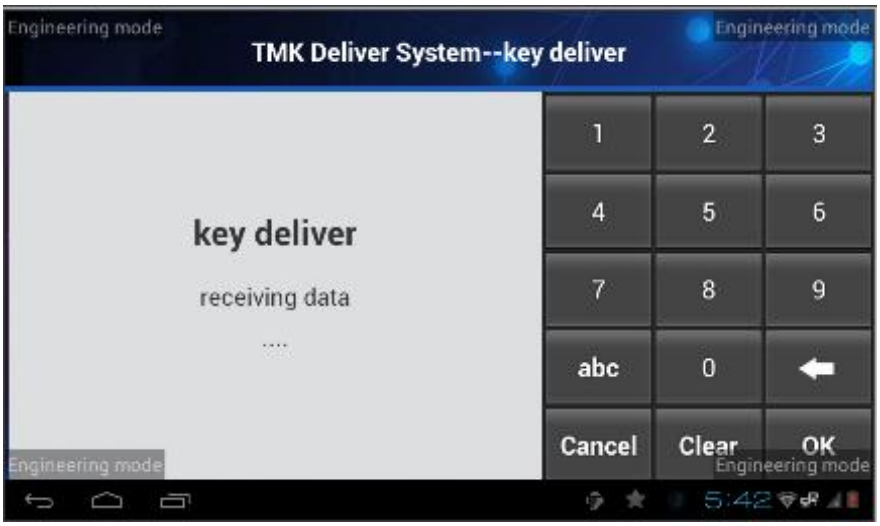
1. Connect Key POS to PC through DB9 cable or USB-To-DB9 Serial cable.
2. Connect target POS to Key POS through USB cable.
3. Make sure KEK was set correctly on Key POS. See KEK setting
4. Open 'Key Loader Agent' on target POS and start waiting keys.
   Key Loader Agent is an application embed in target POS,
   Key Loader Agent path: **System Setting -> About POS -> POS Configuration**
   Make sure Administrator state is 'Login', password: 99999999, then open application and press 'Load Key'.



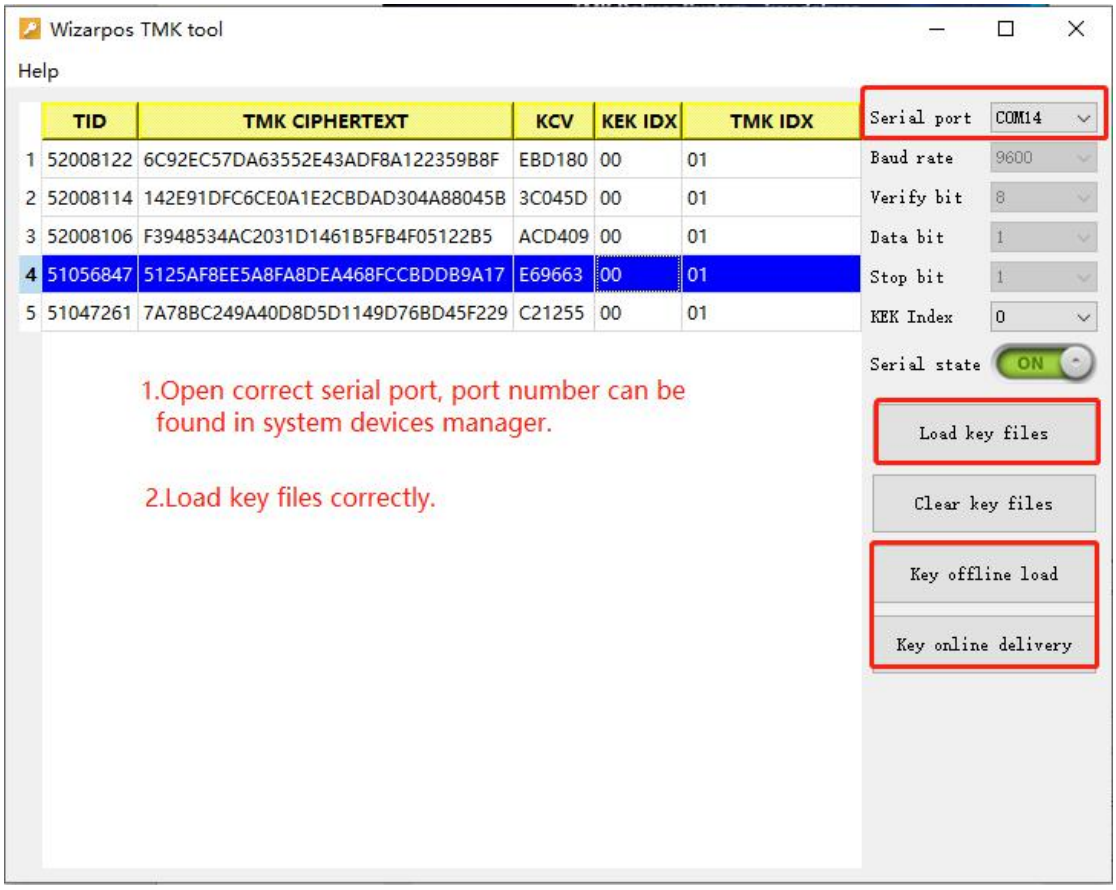




5. Start ‘online deliver’ function on Key POS and enter waiting page.
   Default deliver password: **00000000**



6. On PC TMK Tool, load key files then use 'Key online delivery' to inject one key.



7. After injecting key success, Key POS will print receipt and display success message. Key Loader Agent also will display success message.

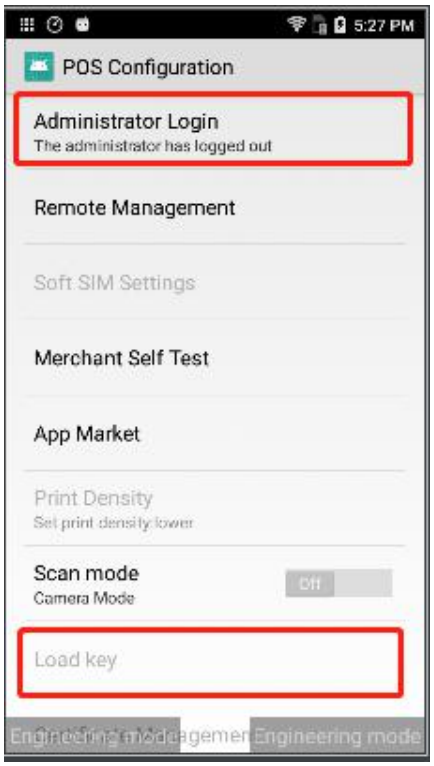
4.2. Inject keys from KeyPOS

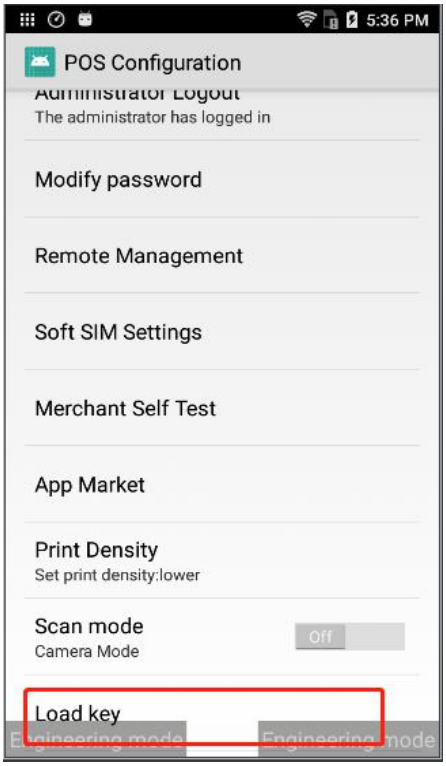
Make sure the keys already exist in Key POS if you want to use 'offline deliver' to inject keys.
There two ways to save keys into Key POS:

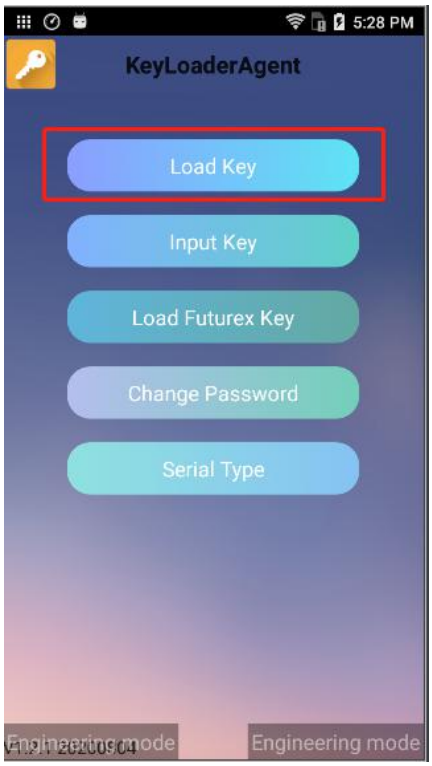
1. **Input key manually, See section 2.2.4 Input key**
2. **Load keys from PC side, See section 2.3.1 Key load**

Then follow below steps to inject key:

1. Connect target POS to Key POS through USB cable.
2. Open 'Key Loader Agent' on target POS and start waiting keys.
   Key Loader Agent is an application embed in target POS,
   Key Loader Agent path: **System Setting -> About POS -> POS Configuration**
   Make sure Administrator state is 'Login', password: 99999999, then open application and press 'Load Key'.

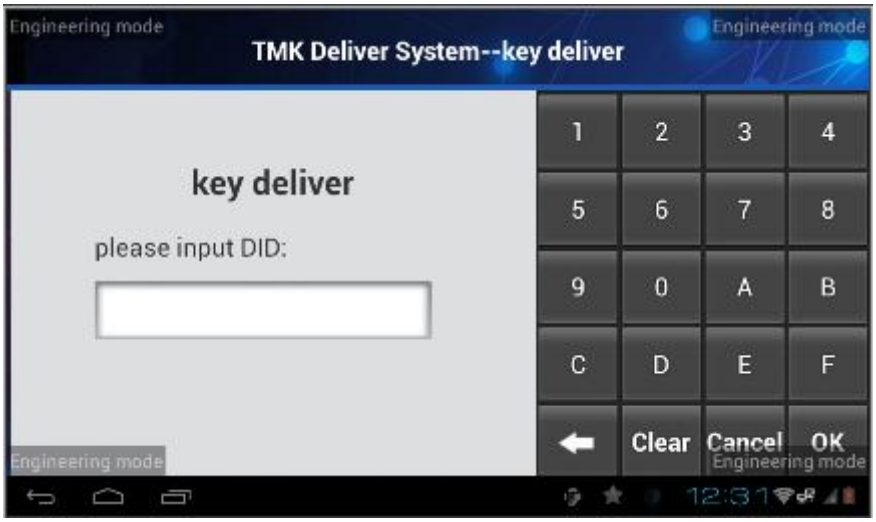






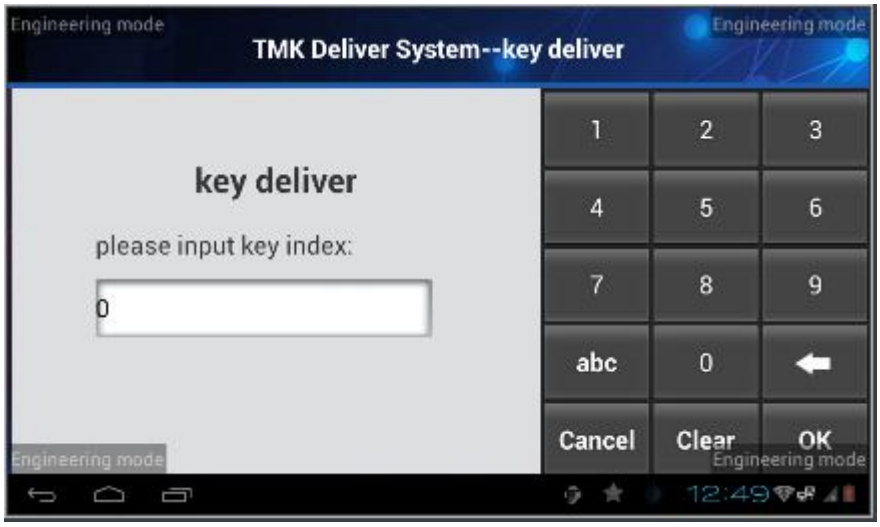
3. Press 'offline deliver' on Key POS, deliver password: 00000000
4. Input key message to find the key on Key POS, it maybe MID & TID, KSI or KIN according to different key type.
5. Input another key message of the key according to different key type.

If the key type is **DUKPT-BDK**, it will request inputting DID, it's part of KSN.



It will also request selecting key usage when the key type is **DUKPT-IPEK or DUKPT-BDK**, you can specify the key as PIN-Key, MAC-Key or Data-Key, or you can unspecify it to select 'Reserved', HSM of target POS will generate different keys comply with DUKPT2009 specification if you select 'Reserved'.

6. Input key index on Key POS, the key index indicates key slot of HSM on target POS, range from 0-49.



7. Continue to confirm the key info and inject the key, after injecting key success, Key POS will print receipt and display success message. Key Loader Agent also will display success message.