



SN Tool Introduce

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Outline

■ SN Tool UI

- SN Tool construction
 - SN Tool overview
 - SN Tool menu
 - SN Tool system config panel
 - SN Tool scan data dialog
- SN Tool special setting for different product
- SN Tool Engineer & Operator mode

■ SN Tool write S/N code introduce

- Barcode、IMEI、BT Address、Wi-Fi Mac Address、Hdcp & Drm key

■ SN Tool write operation procedure

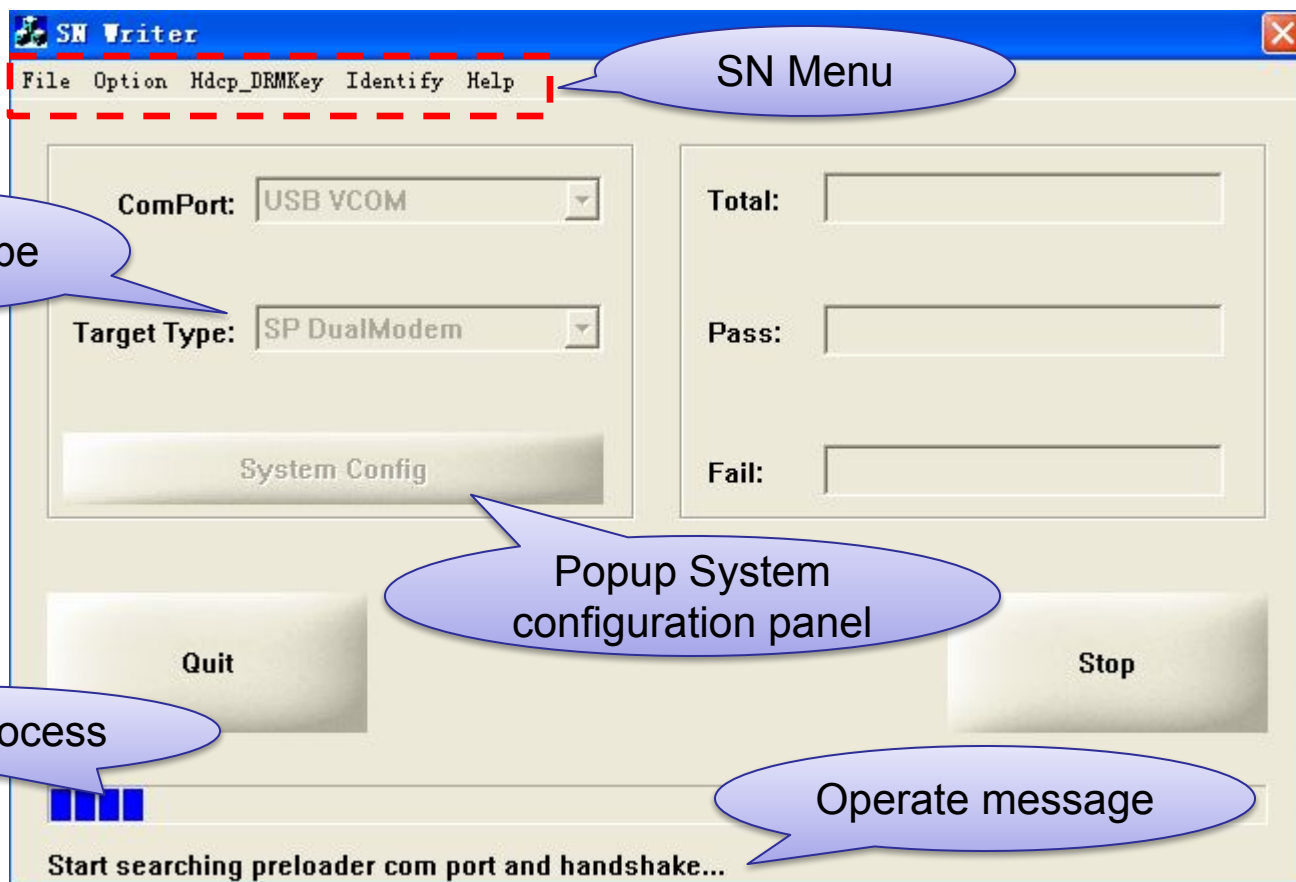
- Preparation
- SN tool setup
- Write examples
 - Feature phone write barcode & imei in meta mode via usb cable
 - Smart phone write barcode、imei、bt、wifi address in meta mode via uart cable
 - Tablet wifi only(without modem) write barcode、wifi address in meta mode via usb
 - Tablet wifi only(without modem) install Hdcp data in meta mode by usb
 - Rndis Dongle write barcode in meta mode via usb



SN write UI

SN Tool overview

- The mediatek SN Writer tool is used to write S/N code for a target in **META** mode, which list below:
 - Barcode、IMEI、BT Address、Wi-Fi Address、DRM Key、Hdcp Key

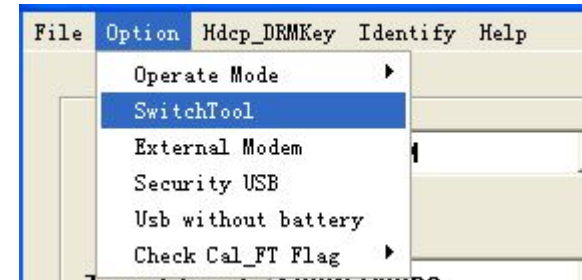


SN Tool menu

Internal Use

File

- FP Auth File:
 - feature phone security project auth file
- SP Auth File:
 - smart phone security project auth file



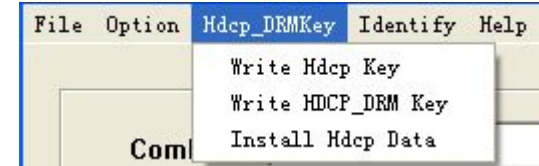
Option

- Operate Mode
 - Meta Mode: target enter meta mode set target S/N
 - AT Mode: send AT cmd to set target S/N in normal boot up, current not support yet
- SwitchTool
 - For dongle product, enable usb swithtool
- External Modem
 - For dual talk(external modem) project, enable preloader comport switch to single comport
- Security USB
 - For security project
- USB without battery
 - For feature phone product, enable without battery enter meta mode
- Check Cal_FT Flag
 - Check Calibration Flag: enable check calibration flag status
 - Check FinalTest Flag: enable check final test flag status

SN Tool menu

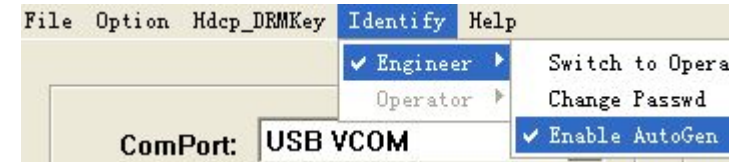
■ Hdcp_DRMKey

- Reference “SN Tool write S/N code introduce” section for detail



■ Identify

- Engineer
 - Switch to operator: switch to operator mode , disable UI configuration authority
 - Change Passwd: change engineer mode passwd
 - Enable AutoGen: enable S/N data auto gen feature



- Operator
 - Switch to engineer: switch to engineer mode, enable UI configuration authority

■ Help

- SN Writer tool version information

SN Tool system config panel

Internal Use

Write Option

✓ The option is about which type data will be write to target at one time. Ex, if select IMEI&BT, you can write IMEI and BT address to target at one time.

Header Option

✓ If want to check the scan data is valid or not, turn on the header check. Ex, if barcode previous 4bits must "1234", turn on check barcode header, and configuration the barcode header string is "1234".

IMEI Option

✓ IMEI special option

DataBase File

✓ Select ap & modem database files

System Config

Write Option

- Barcode
- IMEI
- Serial No.
- BT Address
- Wifi Address
- Wifi EPPCopy
- Ethernet Mac Address
- DRMkey MCID

Header Option

Barc Header: 1234 On/Off

BT Header: On/Off

Wifi Header: On/Off

IMEI_1 Header: 123 On/Off

IMEI_2 Header: On/Off

IMEI_3 Header: On/Off

IMEI_4 Header: On/Off

Serial Header: 123 On/Off

Ethernet Hder: 123 On/Off

MCID Header: 123 On/Off

IMEI Option

- IMEI CheckSum
- IMEI Lock
- Dual IMEI
 - DualIMEI Same
- Three IMEI
- Four IMEI
- CurTemperature: 20.3 °C

DataBase File

571_S00_WR8_W1328_MD_TG_MT6571_DEV_W13_47_P1_1_tg_n MD1_DB

D:\Bin\mt6589_phone_k89v2\BPLGUInfoCustomApp_MT6589_S00_V MD2_DB

D:\Bin\MT6280Dongle_Bin\rndis\APDB AP_DB

Save

SN Tool scan data dialog

- Scan Data
 - ✓ Enable the edit control option base on what do you select in the configuration panel. If **Header check is turn on**, the corresponding header string will show on edit control tail.
 - ✓ The current scan data will be highlight.
 - ✓ The edit control don't need scan again when **scan data finish and header check pass**.
 - ✓ When finish scan all data and click 'OK', tool will check all data is valid or not. **If the data is invalid, corresponding edit control will be empty**.
 - ✓ When finish one write flow, this panel will be show again.

Scan Data

	Data:	Header:
Barcode:	<input type="text" value="12346789ABC"/>	1234
BT Addr:	<input type="text" value="123456789a2e"/>	
Wifi Addr:	<input type="text" value="123456789230"/>	
IMEI_1:	<input type="text" value="123456789100234"/>	
IMEI_2:	<input type="text" value="123456789100244"/>	
IMEI_3:	<input type="text"/>	
IMEI_4:	<input type="text"/>	

Barcode = "12356789ABC" previous 4 bits not match "1234" header string!

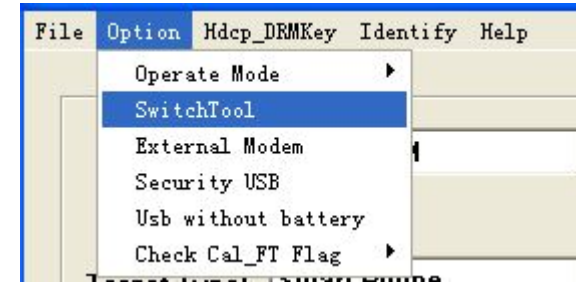
Cancel OK

Special setting for different product

Internal Use

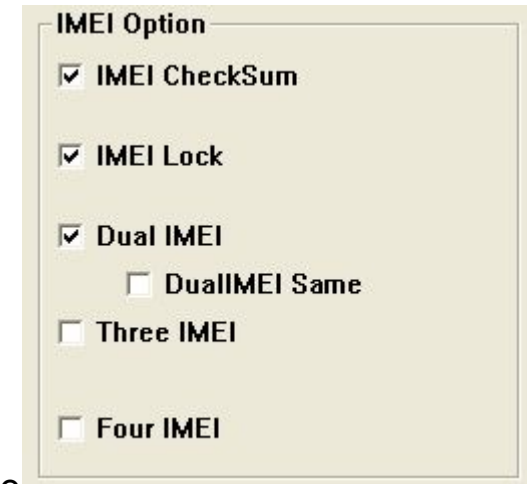
■ Menu – Option

- SwitchTool
 - For dongle product, enable usb switchtool
- External Modem
 - For dual talk(external modem) project, enable preloader comport switch to single comport
 - Ex, MT8135(AP) + MT6280(Modem) project
- Security USB
 - For security project
- Usb without battery
 - For feature phone, enable without battery enter meta mode



■ System Config – IMEI Option

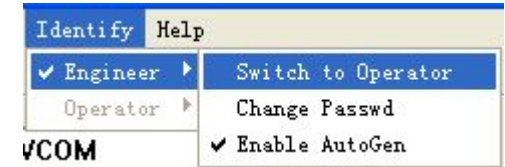
- IMEI CheckSum
 - Enable IMEI checksum mechanism, the last IMEI bit will be calculate and replace last bit get from UI
- IMEI Lock
 - Lock IMEI, mean the IMEI can **only write one time**
- DualIMEI Same
 - The second imei the same with first imei, don't need scan imei two times



SN Tool Engineer & Operator mode

■ Engineer

- Have authority to modify UI configuration
- Login in Engineer mode need verify password
- The password default is '0000', use 'Change Passwd' to modify engineer password.
- Switch to Operator mode don't need password



■ Operator

- Have no authority to modify UI configuration
- Switch to Engineer mode need to verify password



SN Tool write S/N code introduce

Barcode、IMEI、BT Address 、Wi-Fi Mac Address

Barcode

- Production Serial Number for a PCBA, is usually use to identify PCBA. Each PCBA should have a barcode number to keep the its test item in production line.
- Barcode should be write to PCBA after download and **before ATE calibration**, because in the calibration station, ATE Tool will write Calibration flag and NSFT flag to barcode.
- Support **max 64** characters, composed of letters and numbers.

IMEI

- International **M**obile **E**quipment **I**ntity, a unique number to distinguish each mobile phone.
- Must be **15 decimal digits**, 14 decimal digits + 1 checksum digit.



BT Address

- Must be **12** characters, composed of letters(a - f or A - F) and numbers.

Wi-Fi Mac Address

- Must be **12** characters, composed of letters(a - f or A - F) and numbers.

Hdcp & Drm key

- **8389+8193 Hdcp Key**
 - For MT8389+8193 project writing hdcp key only .
 - Since Writing to nvram , need ap database.
- **MTK HDCP_DRM Key**
 - For MTK solution to write hdcp or drm key
- **Install Hdcp Data**
 - For vendor to install hdcp data
 -  this file size must be 572Bytes
 -  this file size must be 16Bytes



SN write operation procedure

Preparation

- To use the mediatek SN Writer Tool, the following should be preparation:
 - a) Mediatek product that already download MAUI, Moly or APLS software
 - b) UART or USB cable
 - c) S/N code scanner
 - d) Corresponding ap & modem database files
 - e) Make sure the product be **power off** status

SN tool setup

1. Select comPort

- If use uart cable, you should be insert your uart cable before launch SN tool, otherwise SN tool can't show the corresponding comport number in the 'comPort' ComboBox

2. Select Target Type

- Feature Phone、Smart Phone、SP DualModem、Tablet Wifi Only(without modem)、Rndis Dongle
- MT6276M、MT6280 traditional dongle should be select feature phone
- Dual Talk(external modem, ex. MT8135+MT6280) project, write modem side barcode、imei should be select feature phone, write AP side bt、wifi address should be select Smart Phone

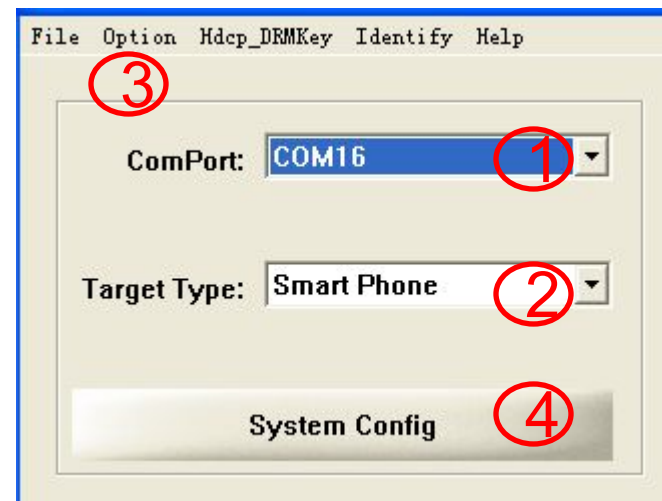
3. Select operation mode

- Menu->Option->Operate Mode->Meta mode

4. Click System Config to setup write operation

- Setup write option、select corresponding ap & modem database files

5. Click Start button to scan S/N code and write to target

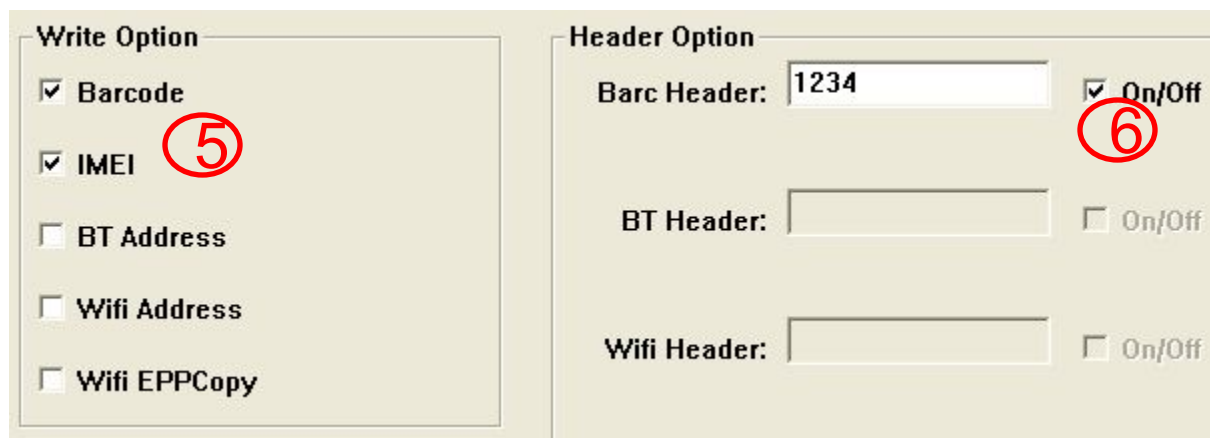
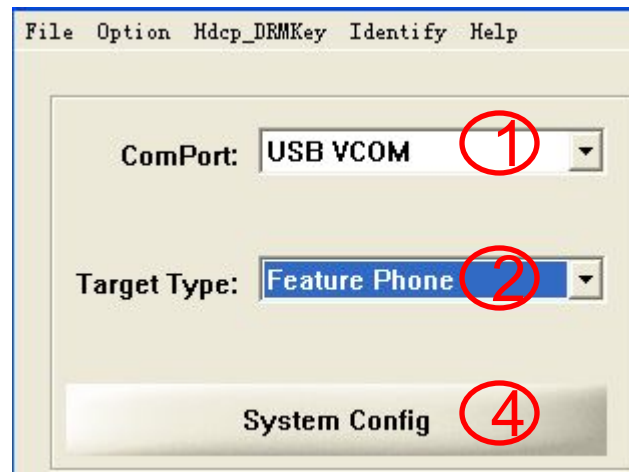


Feature phone write barcode & imei

- 1、 select **comPort** – USB VCOM
- 2、 select **target type** – Feature Phone
- 3、 select **write mode** – MEAT mode
- 4、 click ‘**System Config**’ button
- 5、 **Write Option** – choose Barcode & IMEI
- 6、 **Header Option** – if check data, turn it on
- 7、 select correct **modem database** files
- 8、 Click ‘**Start**’ to scan data
- 9、 Insert usb cable make target enter meta mode
- 10、 If **Write Result Indicator** turn

- Green mean write **success**

- Red mead write **fail**



10

9

8

PASS

Enter
Meta
mode

Start

DataBase File

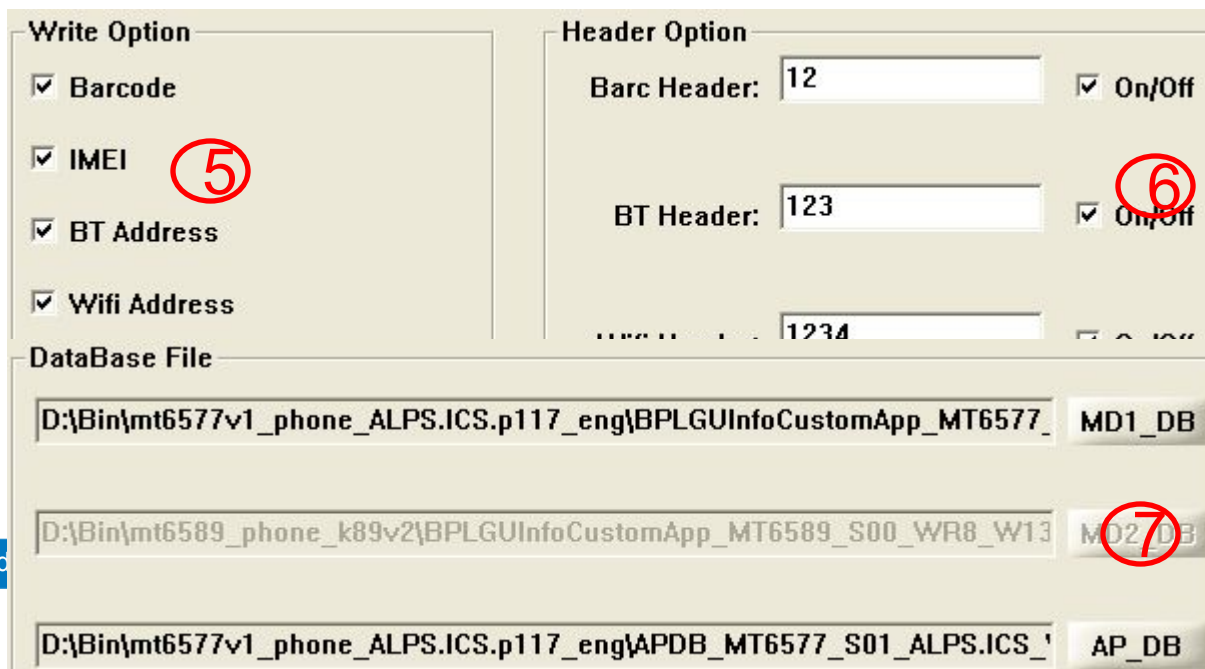
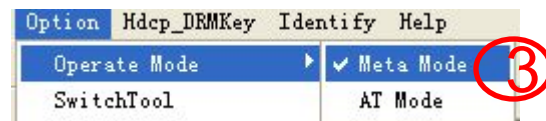
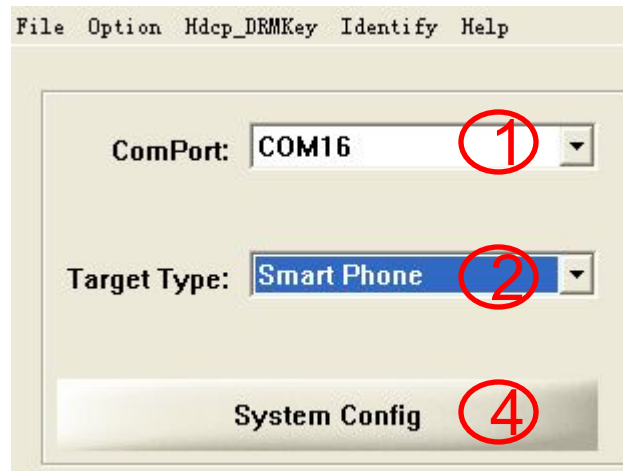
D:\Bin\KHAN50_V11_DEMO_GPRS_bin\BPLGUInfoCustomApp_MT6250_S00_I

MD1_DB

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Smart phone write barcode, imei, bt, wifi address

- 1、 select **comPort** – COM16(UART Cable)
- 2、 select **target type** – Smart Phone
- 3、 select **write mode** – MEAT mode
- 4、 click 'System Config' button
- 5、 **Write Option** – choose Barc/IMEI/BT/Wi-Fi
- 6、 **Header option** – if check data, turn it on
- 7、 select correct **ap & modem database** files
- 8、 Click 'Start' to scan data
- 9、 **Press power key** make target enter meta mode
- 10、 If **Write Result Indicator** turn
 - **Green** mean write **success**
 - **Red** mead write **fail**



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8

FAIL

Enter
Meta
mode

Start

Tablet wifi only(without modem) write barc、wifi address

- 1、选择 端口类型 – USB VCOM
- 2、选择 手机类型 – Tablet Wifi Only
- 3、选择 写号模式 – MEAT mode
- 4、点击‘系统配置’按钮
- 5、写号类型选项 – 选择写 Barcode & Wifi Address
- 6、头部检测功能选项 – 需要检测数据正确性, 勾选‘On/Off’按钮
- 7、选择正确的AP Database文件
- 8、点击‘开始’按钮输入或扫描正确的数据
- 9、插入USB数据线即可, 让平板进入META模式
- 10、如果写操作结果指示器变成

- 绿色表示写操作成功

- 红色表示写操作失败

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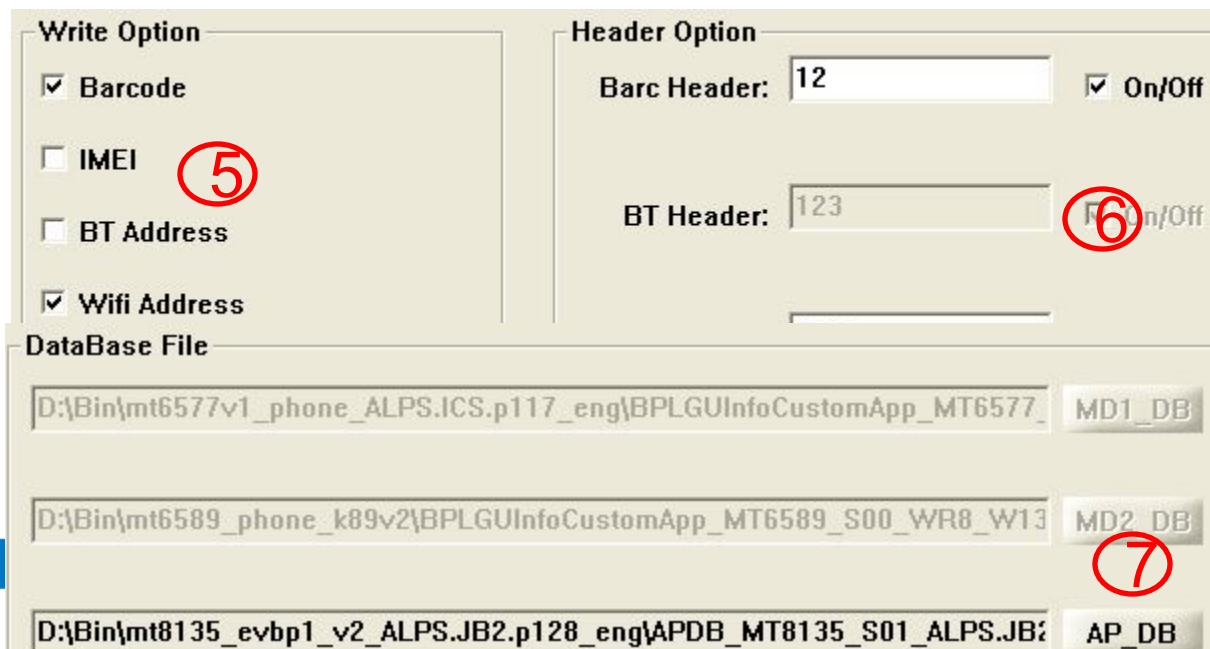
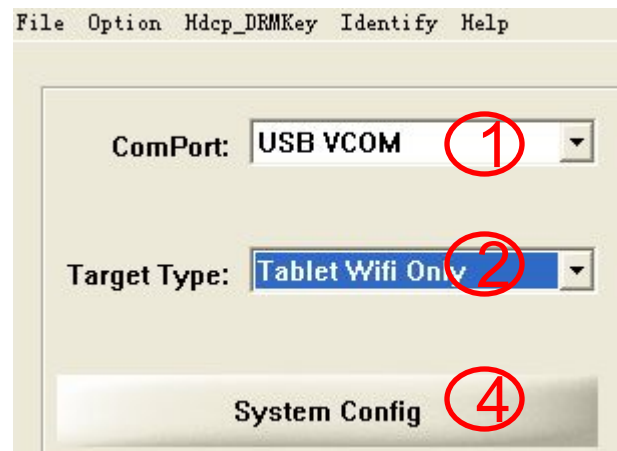
PASS

手机开机
进META
模式

9

Start

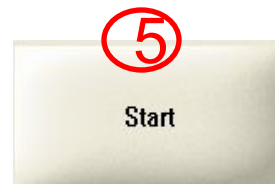
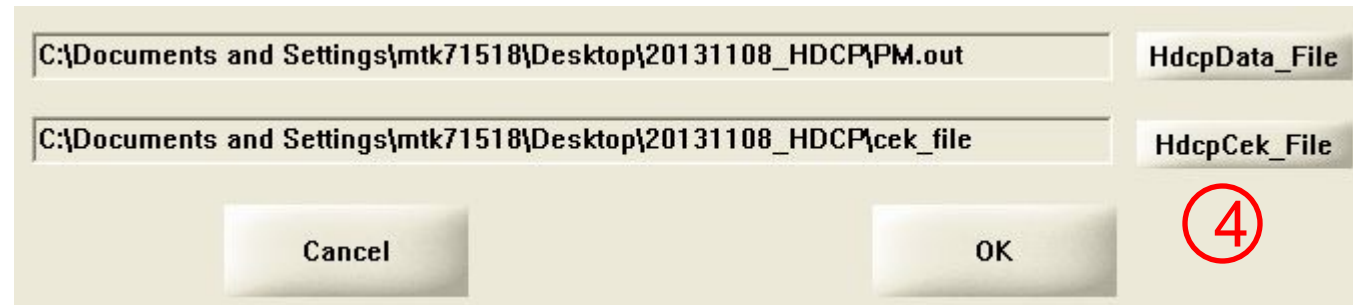
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Tablet wifi only(without modem) install Hdcp data

Internal Use

- 1、 select **comPort** – USB VCOM
- 2、 select **target type** – Tablet Wifi Only
- 3、 select **Install Hdcp Data**
- 4、 select **hdcp Data & Cek files**
- 5、 Click '**Start**' to write hdcp data
- 6、 Insert USB cable make tablet enter meta mode
- 7、 If **Write Result Indicator** turn
 - **Green** mean write **success**
 - **Red** mead write **fail**

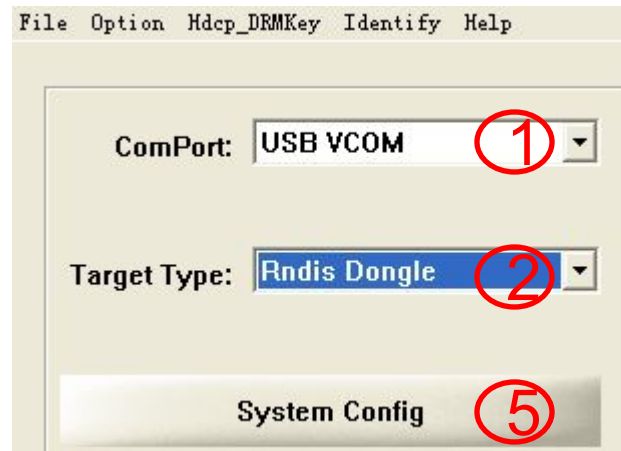


Target will enter
META mode



Rndis Dongle write barcode

- 1、 select **comPort** – USB VCOM
- 2、 select **target type** – Rndis Dongle
- 3、 select **write mode** – MEAT mode
- 4、 select **SwitchTool** to enable USBSwitchTool
- 5、 click ‘**System Config**’ button
- 6、 **Write Option** – choose Barcode
- 7、 **Header option** – if check data, turn it on
- 8、 select correct **ap & modem database** files
- 9、 Click ‘**Start**’ to scan data
- 10、 **Press power key** make target enter meta mode
- 11、 If **Write Result Indicator** turn
 - **Green** mean write **success**
 - **Red** mead write **fail**



11

10

9

FAIL

Enter
Meta
mode

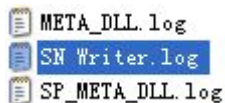
Start



How to debug when write fail

1、How to debug when the operator fail?

-- All operator log information record by C:\SN Writer.log



2、If you want to get help from MTK, what information should I provide?

-- As the No.1 refer , you can provide the UI Log and the BROM_DLL.log、META_DLL.log file, and the log files path default is “C:\”

-- If Smart Phone, BROM_DLL_V5.log & SP_META_DLL.log also need.