



Introduction to Catcher Logging



Catcher Logging

- Catcher provides UART and USB logging
 - For Smart Phone USB logging, users need another tool – ADBRelayer
 - See the following slides for more details
- Suggest to use USB logging because:
 - USB has higher data rate. Reduce the risk of log lose.
 - USB transmission is more reliable.
 - Users don't have to select baud rate by USB friendly logging.
- USB has some limitations thus you could choose to use UART logging.
 - See the appendix for USB logging limitations.

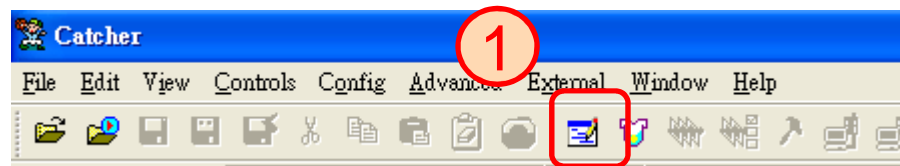
UART Logging (1/5)

- Engineer Mode setting
 - Press *#3646633#: Device->Set UART->UART Setting
 - Select “UART *” in “TST-PS Config” and “TST-L1 Config”
 - Select the highest baud rate (e.g., 921600.)

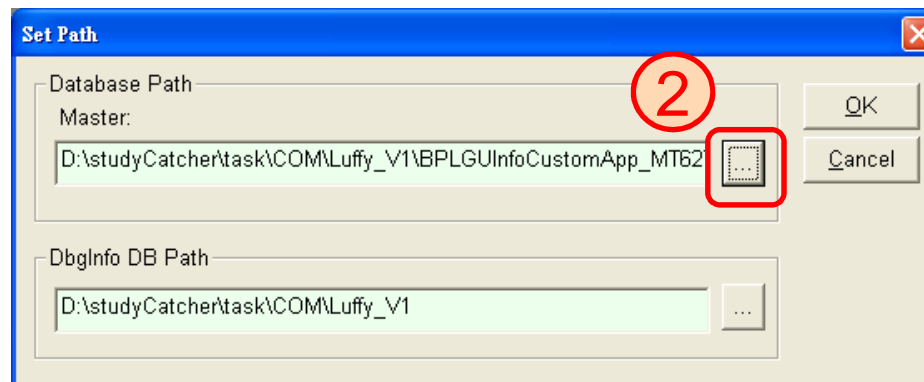


UART Logging (2/5)

- Step1: Click “Logging Mode” button

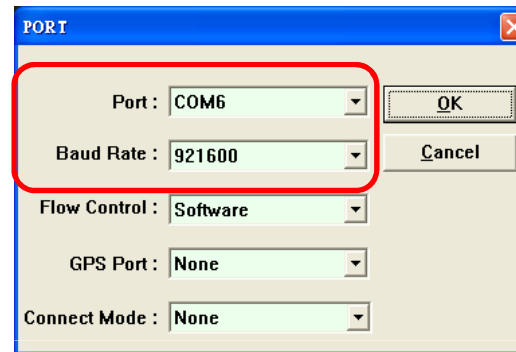


- Setp2: Select the DataBase file

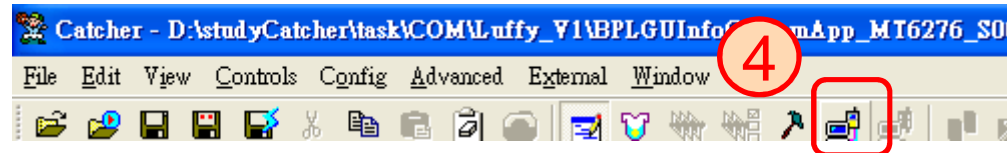


UART Logging (3/5)

- Step 3: Select port and baud rate

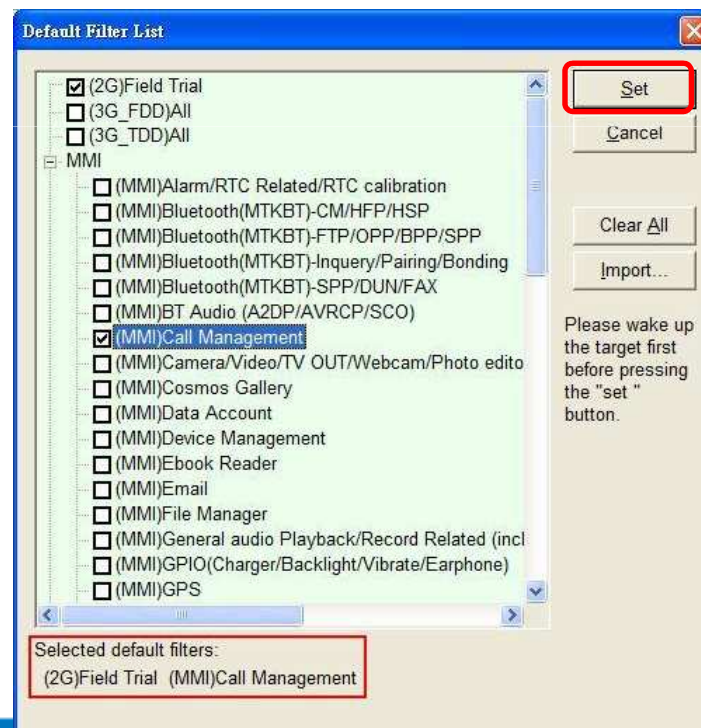


- Step 4: Click “Connect” button

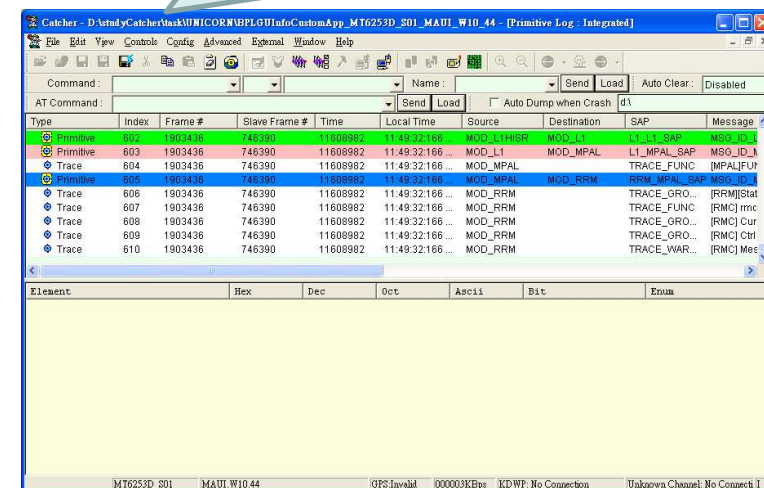


UART Logging (4/5)

- Step 5: Click “Default Filter” button, and then select the appropriate filter in the “Default Filter List” dialog.

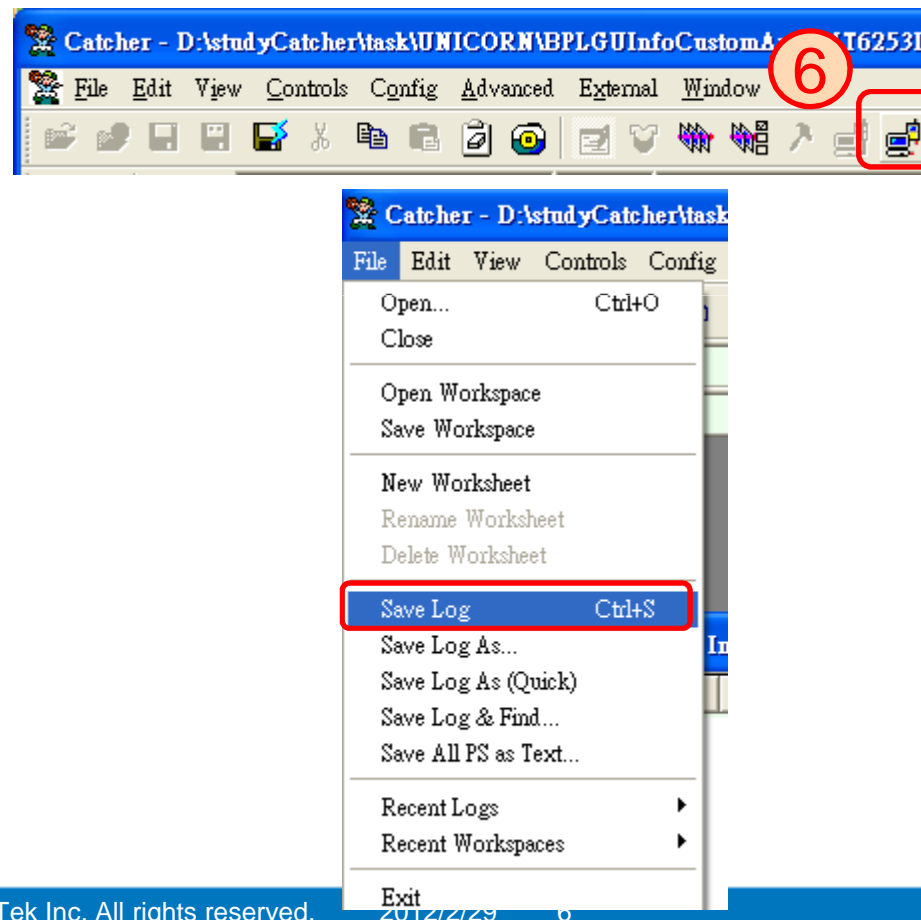


You should be able to start logging.



UART Logging (5/5)

- Step 6: Click “Disconnect” button, and then choose “Save Log” to save the log file.



USB Logging (1/2)

- Enter EM mode (Press *#3646633#: Device->Set UART->UART Setting)
 - Select “USB Port *” in “TST-PS Config” and “TST-L1 Config”
 - Choose the USB port with the biggest port number.
 - E.g., If composite USB device is used, choose “USB Port 2”. Otherwise, choose “USB Port”.

Composite USB device



Not composite USB device



USB Logging (2/2)

- Steps of using USB logging is the same as UART logging except:
 - You can skip step 3:
 - Catcher would use the default option “USB Auto Connect”.
 - Catcher would connect the USB port with the biggest port number automatically.



Smart Phone Logging (1/6)

- For Smart Phone MD logging, Catcher supports
 - UART logging
 - Modem logs are sent to PC via UART on MD side. However, the throughput is not enough for logging both L1 and PS.
 - SD logging
 - Modem logs are sent to AP side and recorded in SD card files
 - USB logging
 - Modem logs are sent to AP side and AP side will relay logs to PC via USB connection
 - Supported from Catcher v3.1120.00

Smart Phone Logging (2/6)

- For SD and USB logging, enable MDLogger on AP side first
 - Press `*##3646633#*##`: SystemLog-> Modem

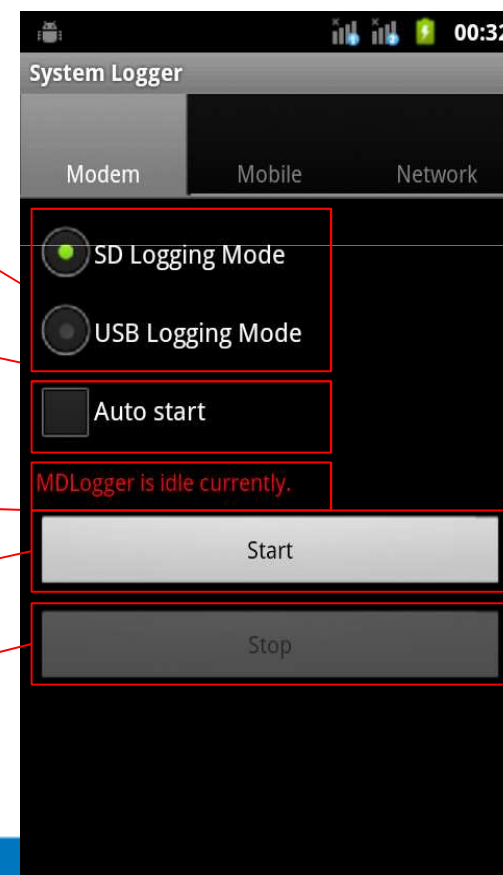
These radio buttons are used to select the logging mode for ModemLog to start with

Check/Uncheck this to make/cancel ModemLog auto start with the selected logging mode above when next time we boot up phone.

This line of text tells the current state of ModemLog. Idle means ModemLog is not working.

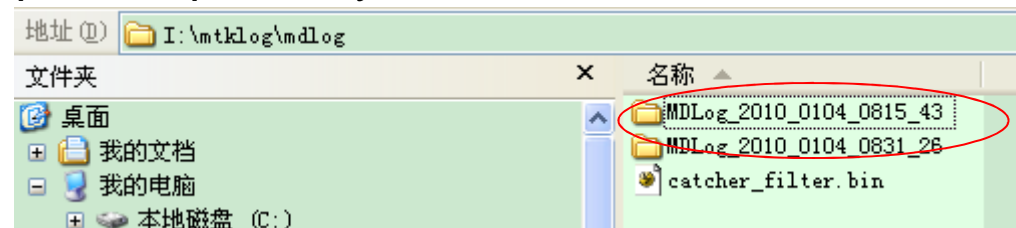
Click it to start logging

Click it to stop logging



Smart Phone Logging (3/6)

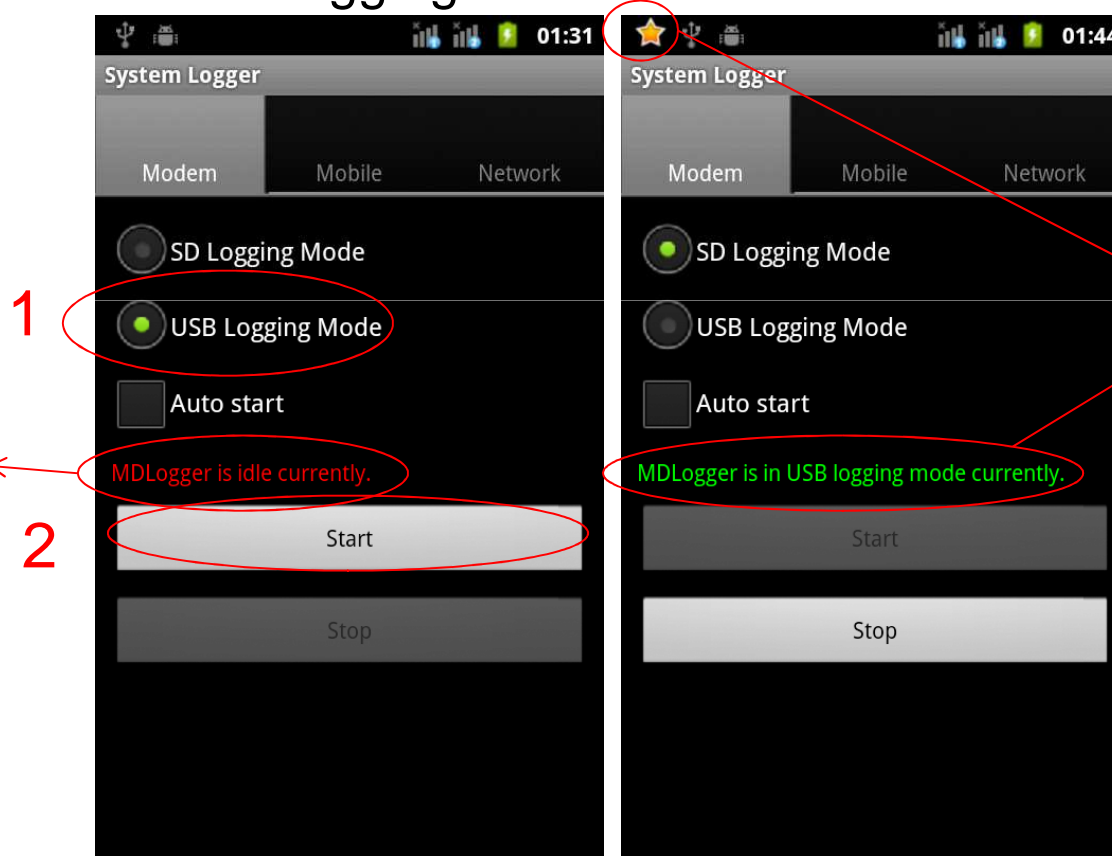
- SD logging:
 - Since Filter Setting will be retrieved from SD card, please make sure “catcher_filter.bin” is placed under sdcard/mtklog/mdlog/
 - catcher_filter.bin is under the database folder
 - Select “SD Logging Mode” and then click “Start” in Engineer Mode
 - Click “Stop” to pause logging
 - Modem logs will be stored under sdcard/mtklog/mdlog
 - MDLog_0_2011_xxxx_xxxx_xx.dmp is PS log file
 - MDLog_1_2011_xxxx_xxxx_xx.dmp is L1 log file.
 - Users can open .dmp files by Catcher



Smart Phone Logging (4/6)

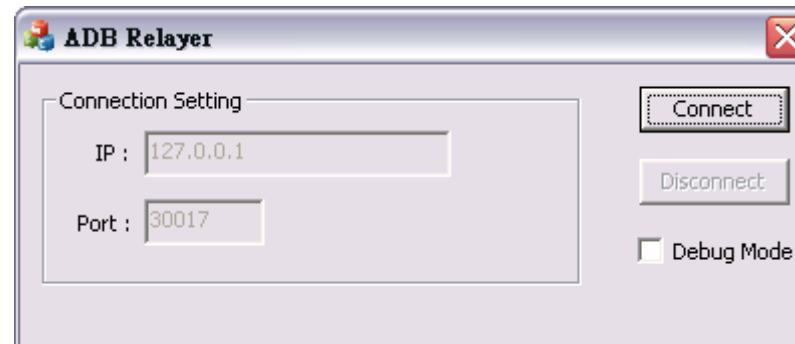
- USB logging:
 - Select “USB Logging Mode” and then click “Start”:

Make sure ModemLog is in idle state. You cannot switch ModemLog from SD logging mode to USB logging mode.



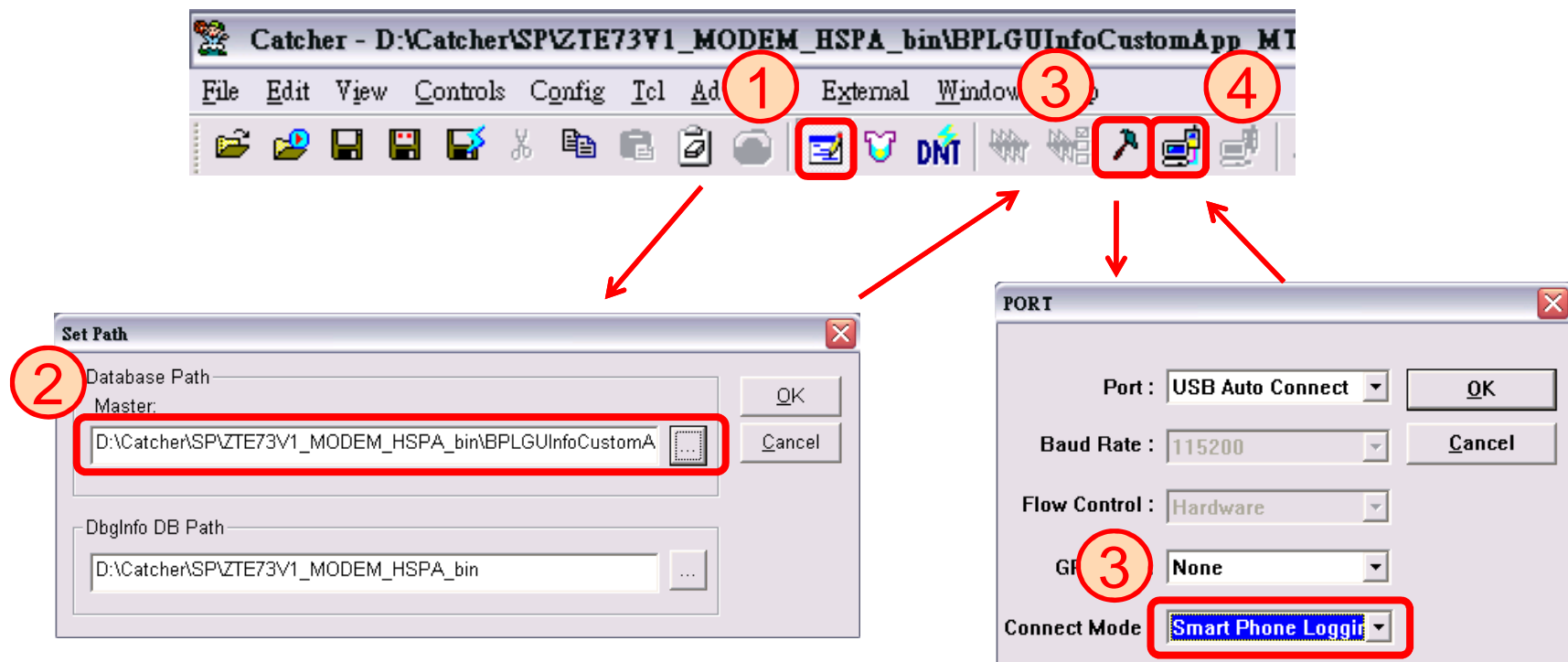
Smart Phone Logging (5/6)

- Open ADB Relayer
 - When connecting, Catcher will check if ADB Relayer exists, and open ADB Relayer automatically if necessary
 - Catcher will trigger ADB Relayer to connect/disconnect, so users don't have to press buttons



Smart Phone Logging (6/6)

- Cather: Enter Logging Mode
 - Steps are the same as UART logging except:
 - Select Smart Phone Logging in Step 3





Appendix



Limitation of USB logging

Limitation	Note
Can't use features related to sleep mode	USB cable would disable sleep mode . If you want to enable sleep mode, please use UART logging.
Can't use USB Web Camera / Mass Storage	These features can't coexist with USB COM port.
Can't use OTG, MTP, picture bridge	These features can't coexist with USB COM port. Please use UART logging.
Can't get the log if target asserts before MMI	USB port may not be initialized successfully. Please use UART logging.
Can't dump memory if TST port is not set in the target	Target uses UART1 to do memory dump by default. Please use UART to dump.



How to Modify VID/PID Setting of Catcher (1/3)

- Catcher needs to identify the correct VID / PID to reconnect the target.
- For feature phone:
 - If you modify the VID or PID of the device, you should modify the “config.ini” file in the Catcher folder.
 - Step1: Open the <CatcherFolder>\config.ini. Find [Catcher_USB_AUTO_CONNECT] section.
 - Step2: Add an addition value to the “VIDPID” property.
Separate each value by a space
 - Add a suffix “##” if your device is a composite one.
 - E.g. Vid_0e8d&Pid_0023##

(config.ini)

[CATCHER_USB_AUTO_CONNECT]

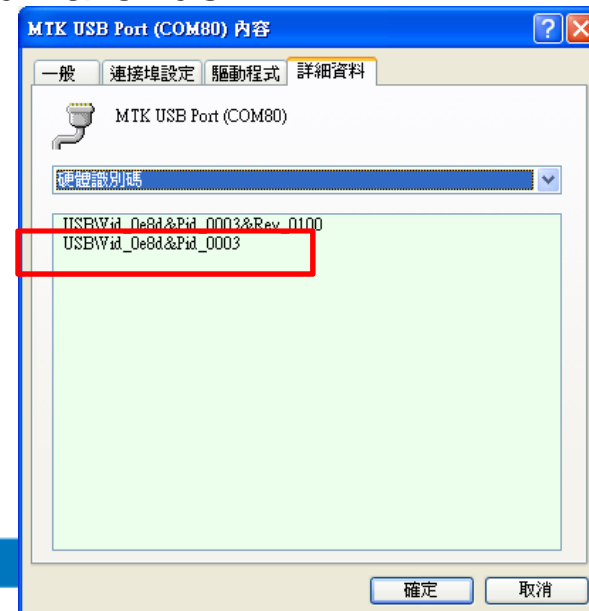
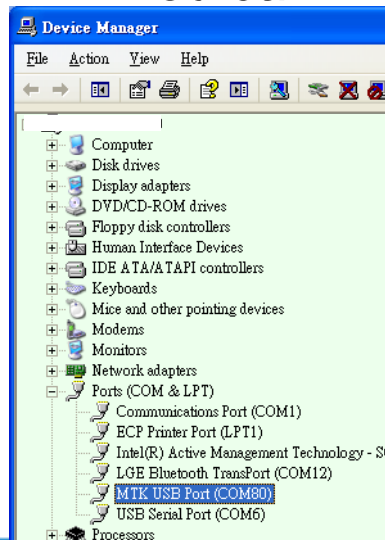
VIDPID=Vid_0e8d&Pid_0003 Vid_0e8d&Pid_0023## VID_1004&PID_6000_DIAGInterface

How to Modify VID/PID Setting of Catcher (2/3)

- For smart phone:
 - Since the VID and PID varies in different devices, please add the VID / PID of your Android device.
 - Step1: Open the <CatcherFolder>\config.ini.
 - Step2: Add [ADB_USB_AUTO_CONNECT] section. Append your “VID_<vid>&PID_<pid>” value. Separate each value by a space.
 - E.g. `[ADB_USB_AUTO_CONNECT]`
`VIDPID=VID_0BB4&PID_0C03 VID_0BB4&PID_0004`
- Note that if you haven't modified config.ini properly, Catcher will stop logging when:
 - Enable/Disable WiFi tethering
 - USB cable is plugged out/in
 - Target reboots

How to Modify VID/PID Setting of Catcher (3/3)

- How to get the VID and PID value?
 - Open device manager. (My computer -> Property -> Hardware -> Device Manager)
 - Right click on you device and choose “Property”.
 - For feature phone, please find your device under “Port”.
 - For smart phone, please find you device under “Android Phone”
 - You can find the VID and PID in “Hardware Ids”.



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