ΜΕΟΙΛΤΕΚ

Android USB Driver Installation on MT6573

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MingHsien Hsieh WCP2/OSS1/SS1

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Overview (1)

• All USB devices supported by MT6573

Scenario	Required INF	Available	VID/PID
BootROM VCOM	cdc-acm.inf + usbser.sys	Y	USB\VID_0E8D&PID_0003
Preloader VCOM	cdc-acm.inf + usbser.sys	Y	USB\VID_0E8D&PID_2000
ums	none	Y	USB\VID_0BB4&PID_0001
ums + adb	android_winusb.inf	Y	USB\VID_0BB4&PID_0C03 (USB composite device) USB\VID_0BB4&PID_0C03&MI_00 (USB mass storage)
			USB\VID_0BB4&PID_0C03&MI_01 (ADB Interface)
rndis	tetherxp.inf	Y	USB\VID_0BB4&PID_0003
ums + adb + acm	android_winusb.inf cdc-acm.inf + usbser.sys	Y	USB\VID_0BB4&PID_0005 (USB composite device) USB\VID_0BB4&PID_0005&MI_00 (USB mass storage) USB\VID_0BB4&PID_0005&MI_01 (ADB Interface) USB\VID_0BB4&PID_0005&MI_02 (COM port)

- BootROM VCOM
 - Used by USB one stage download process. The PID/VID is integrated into cdc-acm.inf
- Preloader VCOM
 - Used by general download process. The PID/VID is integrated into cdc-acm.inf
- No driver installation for ums
 - Windows support it and perform silent installation
- Driver installation is required for ums+adb
 - Since we use the same PID/VID used in HTC device, we can re-use the USB driver provided in SDK



Overview (2)

- Driver installation is required for rndis
 - The driver is not provided in SDK. MTK will provide it internally.
 - tetherxp.inf is used
- Driver installation is required for ums+adb+acm
 - The driver is not provided in SDK. MTK will provide it internally.
 - The android_winusb.inf must be patched for new PID/VID (support USB)
 - The cdc-acm.inf + usbser.sys will be provided for Gadget Serial

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- The driver is modified based on SDK-R7
- Tested Platform

Platform	ADB	RNDIS	VCOM	
WINXP 32bits	OKAY	OKAY	OKAY	
VISTA 32 bits	OKAY	OKAY	N/A	
VISTA 64 bits	OKAY	Testing	N/A	
WIN7 32 bits	OKAY	OKAY	N/A	
WIN7 64 bits	OKAY	Testing	N/A	



Update Your Driver

- Get Android SDK and install the last package
- Please find the attached drivers
 - Backup your <ANDROID_SDK>/usb_driver/android_winusb.inf
 - The step could be ignored
 - Extract it to <ANDROID_SDK>/usb_driver
 - Several files are extracted
 - android_winusb.inf (ADB interface)
 - This file is updated since we add support for ums+adb+acm combination
 - cdc-acm.inf, usbser.sys (CDC-ACM interface, VCOM)
 - tetherxp.inf, rndismp.sys, usb8023.sys (USB tethering)





How to install ums+adb+acm ? (1)

- After entering META mode, three devices will be found when inserting the USB cable
 - CDC Serial -> ACM
 - MT65xx Adroid Phone -> ADB/UMS



取消

How to install ums+adb+acm ? (1)

Gadget Serial



How to install ums+adb+acm ? (2)

Android Composite ADB Interface

歡迎使用尋找新增硬體精霊	諸選擇您的搜尋和安裝運項。
這個精靈協助您安装軟體於: Android Composite ADB Interface	 在這些位置中搜尋最好的驅動程式(S)
如果您的硬酸附有安装 CD 或磁片,現在將它 插入。	□ 搜尋可卸除式媒體 (軟碟 + CD-ROM)(M) ☑ 搜尋時包括這個位置 (0): <android_sdk>/usb_drivers □ 14 20 4 20 5 20 5 20 5 20 5 20 5 20 5 20</android_sdk>
您要稽靈執行什麼工作? ○ 自動安裝軟體(建議選項)(1) ● 從语單或特定位置安裝(進階)(S)	○不要搜尋,我將選擇要安裝的驅動程式(D) 選擇這個遵項來從清單中選取裝置驅動程式。Windows不保證您所選取的驅動程 式最符合您的硬體。
諸按 [下一步] 繼續。 < <u>、上一步(B)</u> 下一步(M) > 取消	< <u> 上一</u> 歩(B) 下一歩(N)> 取消
4	
送新增硬酸精量 精量安装軟 設時, 諸稍候…	2. 北新増硬酸精量 完成尋找



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How to install ums+adb+acm ? (3)

USB Mass storage

- Windows will install the driver sliently





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How to install ums+adb+acm ? (4)

File

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島 Device Manager

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Action View Help

Android Phone

Computer Disk drives

CodeViser USB Device

 In DeviceManager, the three devices are visible

	Display adapters DVD/CD-ROM drives	
	E Keyboards	
	⊕ [™]) Mice and other pointing devices	
	🖻 🖳 📴 Monitors	
	🖻 🕮 Network adapters	
	■■ Attansic L1 Gigabit Ethernet 10/100/1000Base-T Controller ■ Packet Scheduler Miniport #5	
	- 🕮 VirtNet Network Adapter	
	VMware Virtual Ethernet Adapter for VMnet1	
	WWware Virtual Ethernet Adapter for VMnet8	
	Ports (COM & LPT)	
	Communications Port (COM1)	
	USB Carial Dart (COM11) VID_0BB4&PID_0003&MI_02	
	USB Serial Port (COM12)	
	The Sound, video and name controllers	
	E Storage volumes	
	🕀 🖳 👷 System devices	
	🗄 🕰 Universal Serial Bus controllers	
	🕰 EHCI Controller	
	🚽 🕰 Generic USB Hub	
	ିଙ୍କୁ Generic USB Hub	
	😴 Intel(R) ICH9 Family USB Universal Host Controller - 2934	
	Tintel(R) ICH9 Family USB Universal Host Controller - 2935	
	Tintel(R) ICH9 Family USB Universal Host Controller - 2936	
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	IISB Composite Device	
served		
	VID_0BB4&PID_0005	
	USB Mass Storage Device VID_0BB4&PID_0005&MI_00	
	d'une o uni	

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Android Composite ADB Interface VID_0BB4&PID_0005&MI_01

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How to install RNDIS driver ? (1)

When user enable USB tethering..





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How to install RNDIS driver ? (2)



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Q. Can't install the driver correctly ? (1)

• Find the registry

– HEKY_LOCAL_MACHINE > SYSTEM > CurrentControlSet > E num > USB



🗄 🔂 Vid	0bb4&Pid	0005
🗄 🧰 Vid_	0bb4&Pid	_0005&MI_00
🗉 🧰 Vid_	0bb4&Pid_	_0005&MI_01
🗄 🧰 Vid	0bb4&Pid	0005&MI_02



/6 12

Q. Can't install the driver correctly ? (2)

- Remove the registry (1)
 - Modify the permission



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Q. Can't install the driver correctly ? (3)

Remove Registry (2)

Delete the registry



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Repeat the delete operarion for the following registry



Remove the cable and insert the cable again



Q. USB One-Stage Download in MT6573E1

- New Flash download tool is required
- Download flow
 - Power off device and remove cable
 - Press USB download key
 - Zte73v1: camera key
 - MT6573 EVB: SW611
 - Insert cable
 - A USB COM port will be automatically generated. Configure options > COM port as this COM port
 - You may need to install VCOM driver
 - Press Download from tool UI
 - Wait until all images are downloaded
 - Remove battery/cable
 - Insert battery
 - Power On device



Q. META connection using USB

- A new SP_META tool is required
- Procedue
 - Remove battery
 - Connect USB to PC
 - Port: choose 'USB'
 - Click reconnect
 - Insert battery
 - Wait until entering USB meta (make sure the driver is installed)
 - You may need to install ums/adb/acm driver



Install Hotfix before installing the driver

- VCOM (CDC-ACM)
 - <u>http://support.microsoft.com/kb/943198/</u> (WinXP SP2)
 - When you use a USB-to-Serial converter to connect a device to a Windows XP-based computer, the data transfer from the computer to the device is slower than expected
 - <u>http://support.microsoft.com/kb/918365/</u> (WinXP SP3)
 - The Usbser.sys driver may not load when a USB device uses an IAD to define a function that has multiple interfaces, and this function uses the Usbser.sys driver file in Windows XP
- RNDIS
 - <u>http://support.microsoft.com/kb/959765/</u>
 - Remote NDIS (RNDIS) devices may not work correctly after you perform a surprise removal on a Windows XP-based computer and then attach the RNDIS device to the computer again

