



User's Guide for CV and xHCl test in USB3.0 compliance workshop

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1.0 Introduction

This user's guide describes the procedure for installing and performing the CV and xHCI test.





2.0 Equipment



- 1. CV test program from USB-IF web side: USB30CV_0.9.8.2.msi
- 2. Driver for USB3.0 host controller driver (normal): NEC.host.driver.USB3-200-200A-DR-WIN-20100813
- Download "usb.if" file from webside (http://www.usb.org/developers/tools/comp_dump) and put it into "USBCV/lib" folder
- 4. Please see the Readme file for driver location (this driver should be used for CV & xHCI test):
- 5. xHCl test program from USB-IF org Diane Rose: USBCV_xHCl.msi





3.0 Installation Procedure

Step 1: First, install "USB30 CV_ 0.9.8.2" (CV test latest version)





🚭 USB 3.0 Command Verifier - 32-bit (0.9.8.2) Setup Welcome to the USB 3.0 Command Verifier - 32-bit (0.9.8.2) Installation Wizard It is strongly recommended that you exit all Windows programs before running this setup program. Click Cancel to quit the setup program, then close any programs you have running. Click Next to continue the installation. WARNING: This program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law. < Back Next> Cancel

Application_No

#302

Step2: install "USB30 CV_xhci" (version 0.9.7.16)



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| 🕞 xHCI Command Verifier (0 | .9.7.16) Setup |
|----------------------------|--|
| | Welcome to the xHCl Command Verifier (0.9.7.16) Installation Wizard |
| ALC MARKS | It is strongly recommended that you exit all Windows programs before running this setup program. |
| | Click Cancel to quit the setup program, then close any programs you have running. Click Next to continue the installation. |
| | WARNING: This program is protected by copyright law and international treaties. |
| TAL. | Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law. |
| | < Back Next > Cancel |





4.0 Measurement Procudure

Reminder:

- 1. In CV and xHCI test, the host controller driver should be changed to "xHCI Comliance Test Host Controller". Please see details below.
- In CV and xHCI test, there only can be "one" USB3.0 host controller on MB. If there is already another USB3.0 controller on MB, it should be disabled, and then you can perform the CV and xHCI test to the one on USB3.0 host card.

Step 1:

After installing the CV and xHCI test program, see the readme file in the "Documents File" folder. Download "usb.if" file from: <u>http://www.usb.org/developers/tools/comp_dump</u>, and then put the file in "USBCV/lib" folder.





| 💮 🕞 - 🚺 « USB30C | V ▶ Documents 🗸 🐓 Se | arch Documents | Q |
|-------------------|----------------------------------|-------------------|--------------|
| Organize 👻 🖉 Oper | n 🔻 Print New folder | • | |
| 🚖 Favorites | Name | Date modified | Туре |
| 📃 Desktop | 🖆 License | 9/3/2010 2:53 PM | Rich Text Do |
| 🚺 Downloads | MSC-compliance-1.0 | 9/3/2010 2:54 PM | Adobe Acrob |
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| \subset | 🖹 Readme | 9 8/2010 2:53 PM | Rich Text Do |
| 词 Libraries | E Release Notes - USBSUCV | 9/17/2010 3:11 PM | Rich Text Do |
| Documents | 🔁 USB_Video_Class_Compliance_11 | 9/3/2010 2:54 PM | Adobe Acrob |
| J Music | DSB30CVSpec_1_0 | 9/3/2010 2:54 PM | Adobe Acrob |
| Pictures | 🔁 USBCVSpec | 9/3/2010 2:54 PM | Adobe Acrob |

USB30CV - README

Please see ReleaseNotes.rtf for details of changes in this Release.

In order for you to operate the USB30CV properly, you must follow these steps:

- In order to use USB30CV, User Account Control (UAC) must be turned off. <u>After turning off</u> UAC, the system must be rebooted in order for the changes to take effect.
- 2.) On the 64-bit edition of Windows 7, you must disable Driver Signature Enforcement in order to use USB30CV. At system start-up, press F-8 for Advanced Boot Options screen, then select Disable Driver Signature Enforcement. Into USBCV/lib folder

3.) Download the file usb.if from the USB-IF Tools website: <u>http://www.usb.org/developers/tools/comp_dump</u> Place this file inside of the USB30CV/lib folder

4.) Before running USB30CV, Install the XHCI Compliance driver (xHCldrv.sys). This driver is located in the Program Files\USB-IF Test Suite\USB30CV\Driver\Host folder. For more information on how to install the driver, please refer to the PDK Technical guide located at the USB-IF SuperSpeed Tools website: http://www.usb.org/developers/ssusb/ssusbtools

Step 2: Change the host card driver for test only





| System devices | |
|---|---|
| Universal Serial Bus controllers | |
| Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Enhanced Host Controller - 3B3C |
| Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Enhanced Host Controller - 3B34 |
| Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Universal Host Controller - 3B37 |
| Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Universal Host Controller - 3B38 |
| Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Universal Host Controller - 3B39 |
| Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Universal Host Controller - 3B3B |
| 📕 🔓 Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Universal Host Controller - 3B3E |
| 🛄 🖣 Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Universal Host Controller - 3B3F |
| 📖 🏺 Intel(R) 5 Series/3400 Series Chipset Fan | mily USB Universal Host Controller - 3B36 |
| 📲 🙀 Renesas Electronics USB 3.0 Host Contr | roller |
| 🔤 🟺 Renesas Electronics USB 3.0 Root Hub | Update Driver Software |
| 🖶 USB Composite Device | Distore |
| USB Mass Storage Device | Uninstall |
| 🟺 USB Root Hub | |
| USB Root Hub | Scan for hardware changes |
| USB Root Hub | Properties |
| USB Root Hub | Toperues |
| USB Root Hub | |
| USB KOOT HUD | |





Step 3:

| S | earch automatically for updated driver software |
|-----|---|
| W | /indows will search your computer and the Internet for the latest driver software |
| fc | or your device, unless you've disabled this feature in your device installation |
| se | ettings. |
| ⇒ B | rowse my computer for driver software |
| La | ocate and install driver software manually. |
| | |

Step 4:

| Browse for driver software on your comput | er | | |
|--|----|--------|--|
| Search for driver software in this location: | | | |
| C:\Program Files\Realtek\NICDRV_8169\win7 | + | Browse | |
| | | | |

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Step 5:

| Select the | e device driver you want to install for this hardware. |
|-----------------|--|
| I d | elect the manufacturer and model of your hardware device and then click Next. If you ha sk that contains the driver you want to install, click Have Disk. |
| 🕼 Show co | mpatible hardware |
| Model | |
| Model USB-IF | xHCI USB Host Controller |
| Model USB-IF | xHCI USB Host Controller |

Step 6: The driver is located in: Program Files\USB-IF Test Suite\USB30CV\Driver\Host folder

| 📇 Locate File | | and and the second | | | × |
|---------------|----------------|---------------------------|---------------|---|------------|
| Look in: | \mu Host | | • | G 🜶 🖻 🛄 - | |
| A | Name | <u>^</u> | | Date modified | Туре |
| | 🖉 | | | 9/17/2010 2:37 PM | Setup Infc |
| Recent Places | XHCIdrv | | | 9/17/2010 2:37 PM | Setup Info |
| | XHCIPort | | Type Size: | 9/17/2010 2-37 PM Setup Information 3.73 KB | Setur Info |
| Desktop | | | Date | modified: 9/17/2010 2 | :37 PM |
| Libraries | | | | | |
| | | | | | |
| Computer | | | | | |
| | | | | | |
| Network | • | | | | 4 |
| | File name: | XHCldrv | | - | Open |
| | Files of type: | Setup Information (*.inf) | | - | Cancel |

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Step 7:

| Update Driver Software - Renesas Electronics USB 3.0 Host Controller | |
|---|--|
| Select the device driver you want to install for this hardware. Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk. | |
| Show compatible hardware Model USB-TE vHCLUSP. Hert Controller vHCL Compliance Test Host Controller | |
| ▲ This driver is not digitally signed! Have Disk Tell me why driver signing is important 2. Next Cancel | |

Step 8: Finish the driver update for test

| Update Driver Software - xHCI Compliance Test Host Controller | x |
|--|-------|
| Windows has successfully updated your driver software | |
| Windows has finished installing the driver software for this device: | |
| xHCI Compliance Test Host Controller | |
| | |
| | |
| | |
| | |
| | Close |

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Step 9: CV test





| 😴 USB 3.0 Command Verifier | |
|--|---|
| | |
| Select Test Mode Optional Test Description | |
| Compliance Test | Validating "Chapter 9 Tests [USB 3.0 devices].cvtests" with MSXML Version 6 |
| C Debug | validation succeeded! |
| Prompt for Test Parameters | |
| Select Test Suite | |
| Chapter 9 Tests [USB 2.0 devices] Chapter 9 Tests [USB 3.0 devices] Current Measurement Test [2.0 devices] | |
| Current Measurement Test [3.0 devices] Device Summary HID Tests | |
| Test Passed Action Run Test Failed Test Not Run Action Not Run | |
| Select Test | |
| Chapter 9 lets: Chapter 9 lets: Chapter 9 lets: Chapter 9 lets: Tot 0.1 Device Descriptor Test Tot 0.2 Config Descriptor Test Tot 0.3 Interface Association Descriptor Test Tot 0.4 Interface Descriptor Test Tot 0.5 Super Speed Endpoint Companion Descriptor Test Tot 0.1 Device Descriptor Test Tot 0.1 Device Descriptor Test Tot 0.1 Device Descriptor Test Tot 0.1 Superd/Resume Test Tot 0.1 Device Descriptor Test Tot 0.2 Config Descriptor Test Tot 0.3 Interface Association Descriptor Test Tot 0.4 Interface Descriptor Test Tot 0.4 Interface Descriptor Test Tot 0.4 Interface Descriptor Test Tot 0.5 Super Speed Endpoint Companion Descriptor Test Tot 0.9. TO 9.10 Bad Descriptor Test Tot 0.9. Tot 0.1 Bad Feature Test Tot 0.9. 10 Bad Descriptor Test Tot 0.9. 11 Bad Feature Test Tot 0.9. 19 Time Control Transfer Test Tot 0.9. 19 Supend/Resume Test Tot 0.9. 19 Superd/Resume Test Tot 0.9. 19 Device Descriptor Test Tot 0.9. 19 List Configuration Test Tot 0.9. 19 List Configuration Test Tot 0.9. 19 List Configuration Test Tot 0.9. 19 Superd/Resume Test Tot 0.9. 2 Config Descriptor Test Tot 0.9. 4 Interface Descriptor Test Tot 0.9. 4 Interface Descriptor Test Tot 0.9. 4 Interface Descriptor Test Tot 0.9. 4 Descriptor Test Tot 0.9. 5 Endpoint Descriptor Test Tot 0.9. 5 Bod Descriptor Test Tot 0.9. 4 Descriptor Test Tot 0.9. 4 Descriptor Test | |
| TD 9.15 Function Remote Wakeup Enabled Test | |
| | |
| Run Launch Report Viewer | Update Display Exit |
| | |



Step 10: xHCI test





| 🕷 xHCI Command Verifier | | - 0 | × |
|---|---|------|---|
| Select Test Mode Compliance Test Debug Prompt for Test Parameters Select Test Suite XHCI Loopback Tests XHCI Loopback Tests XHCI Loopback Tests XHCI Loopback Tests XHCI Tests | Validating "xHCI End Product Tests.cvtests" with MSXML Version 6 Validation succeeded! | | |
| Image: Select Test Action Not Run Select Test Action Not Run Image: Select Test Image: Select Test Image: Select Test | | | |
| Run Launch Report Viewer | Update Display | Exit | |