



Intel[®] USB 3.0 eXtensible Host Controller Driver

Release Notes (PV-HF6)

October 2012

Revision 1.06

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Revision History

Revision Number	Description	Revision Date
0.7	Initial release.	February 2011
0.71	Removed 64-bit driver only comments.	March 2011
0.72	Updated Release Notes for Driver Release 1.0.0.105; Removed duplicated sightings 3880659, 3880609, 3880656 in section 5 Known issues. They are documented in PPT Pre-ES1 Sightings Report Rev 0.3;	April 2011
0.8	Updated for Alpha Driver Release (1.0.0.121)	May 2011
0.85	Updated for Alpha2 Driver Release (1.0.0.134) <ul style="list-style-type: none">• Added note about driver not supporting Windows* XP and Vista• Section 4 and 5 updates to Closed and Known Issues list• Added section about 'Newer Versions' Question Pop-up Message shown during Driver Installation (section 3.1)	July 2011
0.9	Updated for Beta Driver Release (1.0.0.178) <ul style="list-style-type: none">• Section 4 and 5 updates to Closed and Known Issues list	Sept 2011
0.95	Updated for PC Driver Release (1.0.0.199) <ul style="list-style-type: none">• Updated Note in section 1.1 about Windows* XP and Vista support and BIOS settings• Updated Intel(R) 7 Series/C216 Chipset Family naming• Removed Section 3.1 about 'Newer Versions' Question pop-up message as it is no longer applicable for PC release• Added Windows* 7 Starter (32-bit edition) and Windows* 7 Enterprise (32-bit & 64-bit editions) to list of supported OS• Section 4 and 5 updates to Closed and Known Issues list	Dec 2011
1.0	Updated for PV Driver Release (1.0.0.199)	Dec 2011
1.01	Updated for PV-HF1 Driver Release (1.0.1.209)	Jan 2012
1.02	Updated for PV-HF3 Driver Release (1.0.3.214)	Feb 2012
1.03	Updated for PV-HF4 Driver Release (1.0.4.220)	Mar 2012
1.04	Updated for PV-MR1 Driver Release (1.0.4.225)	Mar 2012
1.05	Updated for PV-HF5 Driver Release (1.0.5.235)	May 2012
1.06	Updated for PV-HF6 Driver Release (1.0.6.245)	Oct 2012



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1 Introduction

1.1 Scope of Document

This document provides release information about the Intel® USB 3.0 eXtensible Host Controller Driver. It covers Release Kit Summary, Important Notes, Resolved Issues and Known Issues. This document is intended for OEMs and ODMs that are validating the Intel® USB 3.0 eXtensible Host Controller Driver on their Intel® 7 Series/C216 Chipset Family (Panther Point) based platform.

1.2 System Requirements

The Intel® USB 3.0 eXtensible Host Controller Driver contains support for the following Intel Chipsets:

- Intel® 7 Series/C216 Chipset Family (Panther Point)

The following Operating Systems are supported:

- Windows* 7 Starter (32-bit edition)
- Windows* 7 Home Basic (32-bit & 64-bit editions)
- Windows* 7 Home Premium (32-bit & 64-bit editions)
- Windows* 7 Professional (32-bit & 64-bit editions)
- Windows* 7 Enterprise (32-bit & 64-bit editions)
- Windows* 7 Ultimate (32-bit & 64-bit editions)

Note: The Intel® USB 3.0 eXtensible Host Controller Driver is not supported on Windows* XP and Windows Vista*. For these operating systems, ensure your BIOS settings have the xHCI Mode set to "Auto" or "Smart Auto". This will reconfigure the USB 3.0 ports to function as USB 2.0 ports using the native Windows* EHCI driver. For more information, see the Intel® 7 Series/C216 Chipset Family (Panther Point) Platform Controller Hub BIOS Specification document.

The Intel® USB 3.0 eXtensible Host Controller Driver Installer and Intel® USB 3.0 Monitor support the following languages:

- Arabic (International)
- Chinese (Simplified)
- Chinese (Traditional)
- Czech
- Danish



- German
- Greek
- English (United States)
- Spanish
- Finnish
- French (International)
- Hebrew
- Hungarian
- Italian
- Japanese
- Korean
- Dutch
- Norwegian
- Polish
- Portuguese (Brazil)
- Portuguese (Portugal)
- Russian
- Slovak
- Slovenian
- Swedish
- Thai
- Turkish

1.3 Acronyms and Terminology

Term	Description
BSOD	Blue Screen of Death (Stop Error)
CRB	Customer Reference Board
EHCI	Enhanced Host Controller Interface
FS	Full-Speed
HID	Human Interface Device (ex: keyboard or mouse)
HS	High-Speed
IBP	Intel Business Portal (https://businessportal.intel.com)
LS	Low-Speed
RMH	Rate Matching Hub
SS	Super-Speed
USB	Universal Serial Bus



Term	Description
xHCI	eXtensible Host Controller Interface
WPP	Windows* software trace Pre-Processor

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2 Release Kit Summary

2.1 Release Kit Details

Kit Name: Intel® USB 3.0 eXtensible Host Controller Driver

Version: 1.0.6.245 (PV-HF6 Release)

2.2 Kit Contents

The contents of this release kit include:

- Intel® USB 3.0 eXtensible Host Controller Driver Installer
(Note that driver CAT, INF, MAN and SYS files are located in the respective subfolders). The Intel® USB 3.0 eXtensible Host Controller Driver Installer "Setup.exe" will install the following drivers and application on the system:
 - Intel® USB 3.0 eXtensible Host Controller Driver
 - Intel® USB 3.0 Root Hub Driver
 - Intel® USB 3.0 Host Controller Switch Driver
 - Intel® USB 3.0 Monitor
- USB 3.0 Debug Scripts

The "Debug_Scripts" folder provides the scripts to capture USB 3.0 WPP logs for issue debug. For more information, see the readme.txt file located in the same folder.
- Intel® USB 3.0 eXtensible Host Controller Driver – Release Notes
- Intel® USB 3.0 eXtensible Host Controller Driver – Bring Up Guide
- Intel Software License Agreement

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3 Important Notes

3.1 USB 3.0 Collaterals

Please refer to following USB 3.0 Collaterals for USB 3.0 bring-up, validation and debug guidance.

Document	Doc Number & Location
Intel® USB 3.0 eXtensible Host Controller Driver Bring-Up Guide	Available in Intel® USB 3.0 eXtensible Host Controller Driver Kit Release Also available on IBP (Doc # 474002)
Intel® USB 3.0 eXtensible Host Controller Driver - Customer Validation and Debug Guide	IBP (Doc # 477627)
Intel® USB 3.0 eXtensible Host Controller Driver - Debug Tools Training Video	IBP (Doc # 470570)

3.2 Platform Best Known Configuration

Please refer to “Maho Bay and Chief River Platforms with Emerald Lake 2 / Los Lunas 2 (CRB) Best Known Configuration (BKC)” from Intel Business Portal (IBP) for platform configuration setup that aligns to PV milestone releases.

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4 Closed Issues

Issue #	Description	Resolution
3708246	Power Management tab for HID-compliant mouse/keyboard under Device Manager is present even if USB Wake is disabled in BIOS.	Resolved in Release Rev: 1.0.6.245 (PV-HF6)
3881926	Device connected behind an USB3.0 HUB may not be correctly enumerated when both device and USB3.0 HUB are connected during S3.	Resolved in Release Rev: 1.0.6.245 (PV-HF6)
3707897	Some USB2.0 device connected behind USB3.0 port cannot enter to selective suspend correctly.	Resolved in Release Rev: 1.0.6.245 (PV-HF6)
3708300	BSOD may occur when a USB printer is connected to USB3.0 port and the printer application is installed	Resolved in Release Rev: 1.0.6.245 (PV-HF6)
3881946	Windows 8* setup process blocks system with Windows* 7 and Intel® xHCI driver installed from being upgraded when "Keep Windows settings, personal files, and apps" option is selected	Resolved in Release Rev: 1.0.6.245 (PV-HF6)
3707657	"Format disk" window might pop up after a USB3.0 device is plugged in into the USB3.0 port	Resolved in Release Rev: 1.0.5.235 (PV-HF5)
3624576	USB3.0 Thumb drive might failed to enumerate after the device is plugged in into the USB3.0 port	Resolved in Release Rev: 1.0.5.235 (PV-HF5)
3707583	USB Modem failed to enumerate after the device is plugged in into the USB3.0 port	Resolved in Release Rev: 1.0.5.235 (PV-HF5)
3707386	BSOD (Inaccessible Boot Device) might be seen on system reboot after OS is upgraded from Windows* 7 to Windows* 8 and the Intel® xHCI driver is uninstalled from the system.	Resolved in Release Rev: 1.0.5.235 (PV-HF5)
3707663	BSOD 0x7E might be seen during reboot stress test with a USB camera plugged in into the USB3.0 port	Resolved in Release Rev: 1.0.5.235 (PV-HF5)
3707621	BSOD 0x9F might be seen when running S3 stress test.	Resolved in Release Rev: 1.0.5.235 (PV-HF5)
3707632	BSOD 0x9F might be seen when running S4 stress test.	Resolved in Release Rev: 1.0.5.235 (PV-HF5)



Issue #	Description	Resolution
3707769	BSOD 0x9F might be seen when running reboot stress test	Resolved in Release Rev: 1.0.5.235 (PV-HF5)
3881920	Updated Intel® xHCI driver INF files to support the latest Installer updates.	Resolved in Release Rev: 1.0.5.235 (PV-HF5)
4042321	USB 3.0 Devices connected to USB 3.0 hub is re-enumerated after resuming from S3/S4	Resolved in Release Rev: 1.0.4.225 (PV-MR1)
3707382	BSOD 0xB8 is seen during S3/S4 stress test	Resolved in Release Rev: 1.0.4.225 (PV-MR1)
3707375	USB 3.0 device issues when connected during Sx. Added fix for S3 power state	Resolved in Release Rev: 1.0.4.225 (PV-MR1)
3707342	Added support to switch USB3.0 ports routed to xHCI to EHCI controller when xHCI driver stack is uninstalled	Resolved in Release Rev: 1.0.4.225 (PV-MR1)
3707117	Composite Keyboard cannot wake-up system on hybrid Sleep transition	Resolved in Release Rev: 1.0.4.225 (PV-MR1)
3707101	USB3.0 monitor fails (video hang) when connected to USB3.0 port	Resolved in Release Rev: 1.0.4.225 (PV-MR1)
3624824	Error message pop-up when installing USB 3.0 driver on fresh OS.	Resolved in Release Rev: 1.0.4.220 (PV-HF4)
3707230	Image corruption seen on external monitor attached to USB Port Replicator when playback DVD title in full screen mode	Resolved in Release Rev: 1.0.4.220 (PV-HF4)
3624903	"USB Device Not Recognized " message might pop-up after USB2.0 device is plugged in into USB 3.0 port	Resolved in Release Rev: 1.0.4.220 (PV-HF4)
3707198	'This device can perform faster' pop-up message is not localized to traditional Chinese when OS language code is ZH (Hong Kong Chinese)	Resolved in Release Rev: 1.0.4.220 (PV-HF4)
3624910	When external Audio System USB2.0 device is plugged in into USB3.0 port, BSOD D1 might occur	Resolved in Release Rev: 1.0.4.220 (PV-HF4)
3707312	USB3.0 device might not be recognized during hot plug testing in USB3.0 ports	Resolved in Release Rev: 1.0.4.220 (PV-HF4)



Issue #	Description	Resolution
3624735	External monitor abnormal behavior seen on USB2.0 Docking station when attached to USB3.0 ports.	Resolved in Release Rev: 1.0.4.220 (PV-HF4)
3707124	Keyboard hotkeys do not work after pressing zoom-in or zoom-out hotkey once.	Resolved in Release Rev: 1.0.3.214 (PV-HF3)
3624986	USB 2.0 audio device sometimes fails to enumerate.	Resolved in Release Rev: 1.0.3.214 (PV-HF3)
3707117	USB 3.0 driver to support S3 wake-up on a hybrid Sleep transition.	Resolved in Release Rev: 1.0.3.214 (PV-HF3)
3625027	Changed HC Switch Driver to be same as PCI Bus "Boot Bus Extender" group to work with imaging tools and booting over network.	Resolved in Release Rev: 1.0.3.214 (PV-HF3)
3707094	USB 3.0 Driver installer allows new installation even if system is not rebooted after uninstalling USB 3.0 driver. This results in BSOD 0x7B.	Resolved in Release Rev: 1.0.1.209 (PV-HF1)
3624853	When AMD* SG driver is already installed on system, installing USB 3.0 driver after will see pop-up question window asking user to confirm install of older driver version for PCI bus.	Resolved in Release Rev: 1.0.1.209 (PV-HF1)
3707068	iusb3hcs.inf needs to be updated to fix supported operating systems list in mup.xml file.	Resolved in Release Rev: 1.0.1.209 (PV-HF1)
3624746	Conflict between AMD* Switchable Graphics PCI bus filter driver and Intel USB3 PCI bus filter driver (This causes the USB 3.0 ports to route to EHCI instead of xHCI).	Resolved in Release Rev: 1.0.0.199 (PV)
3881695	USB 2.0 Hub stops to work after S4 after unplugging webcam device in S4.	Resolved in Release Rev: 1.0.0.194
3881698	Keyboard enumerates as 'Unknown device' after connecting it in S4	Resolved in Release Rev: 1.0.0.194
3881714	USB3 external HDD is missing after S5	Resolved in Release Rev: 1.0.0.194
3881712	BSOD 0x0B after topology change of USB device connected to USB tree	Resolved in Release Rev: 1.0.0.194



Issue #	Description	Resolution
3881630	BSOD 0xCC after waking platform from S4 with multiple devices plugged in	Resolved in Release Rev: 1.0.0.194
3881691	USB 2.0 device is not enumerated in S0 after previously unplugging it in S3	Resolved in Release Rev: 1.0.0.186
3881641	BSOD 0x50 after unplugging big tree of devices in S0	Resolved in Release Rev: 1.0.0.186
3881629	BSOD 0xC4 after platform wake from S4 with multiple devices connected	Resolved in Release Rev: 1.0.0.186
3881616	Platform wakes-up by itself from Sx with TI* Hub and keyboard connected and S4 performed previously	Resolved in Release Rev: 1.0.0.186
3881608	BSOD 0xC4 after connecting USB game controller into xHCI port	Resolved in Release Rev: 1.0.0.186
3881584	Creative Live! Cam Socialize HD does not record video file after S4	Resolved in Release Rev: 1.0.0.186
3881533	FS device is enumerated as Unrecognized Device	Resolved in Release Rev: 1.0.0.186
3881500	BSOD 0xC9 when safely removing USB device and unplugging it	Resolved in Release Rev: 1.0.0.186
3881462	BSOD 0x7E may occur after disconnecting a USB tree (several hubs and devices) from xHCI port.	Resolved in Release Rev: 1.0.0.186
3881245	Bandwidth Exceeded pop-up message is not seen when FS device connected behind HS hub exceeds allowed bandwidth	Resolved in Release Rev: 1.0.0.186
3624752	USB3 device can perform faster pop-up message is not translated for Japanese	Resolved in Release Rev: 1.0.0.186
3624556	Cannot wake up from USB Mouse if keep clicking mouse button when system proceed to S3	Resolved in Release Rev: 1.0.0.186
3624280	xHCI driver can cause BSOD 0xCA when 3 Seagate Goflex USB 3.0 HDD adapters are connected	Resolved in Release Rev: 1.0.0.186



Issue #	Description	Resolution
3881324	During file transfer with a SS mass storage device, if system is put to S4 state and resumed, this may lead to transfer being stopped and Windows transfer error message.	Resolved in Release Rev: 1.0.0.178
3881201	For USB Bluetooth device connected to xHCI port, file transfers may fail.	Resolved in Release Rev: 1.0.0.178
3624254	USB 3.0 driver version 1.0.0.134 installer shows 'newer version' Question pop-up message when installing over USB 3.0 driver version 1.0.0.121.	Resolved in Release Rev: 1.0.0.178
3881353	Some USB devices may be detected by xHCI port but fail to enumerate and the system shows a message (USB Device not Recognized).	Resolved in Release Rev: 1.0.0.178
3881348	When multiple USB devices (mass storage, webcam and keyboard) are connected to a xHCI port, simultaneous transfers between all devices may cause BSOD 0xD5.	Resolved in Release Rev: 1.0.0.178
3881249	When disconnecting some USB (FS/LS/HS) devices while system is in S3, a BSOD 0x9F may occur upon resuming from S3.	Resolved in Release Rev: 1.0.0.178
3624296	Some USB 2.0 webcams may have the video freeze after first active S3 test case after cold reboot.	Resolved in Release Rev: 1.0.0.178
3881311	USB 3.0 HID device may not resume from U3 (S3) to U0 (S0) correctly if issued by device.	Resolved in Release Rev: 1.0.0.178



5 Known Issues

3708326	"Allow this device to wake the computer" option for HID-compliant mouse/keyboard under the Device Manager may be unchecked when the mouse/keyboard is connected behind the USB3.0 port and the Intel® xHCI driver is installed.
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