



Intel® USB 3.0 eXtensible Host Controller Driver

Release Notes (2.5.4.40)

*for Intel® 8 Series/C220 series Chipset Family and 4th
generation Intel® Core™ Processor Family Products*

April 2014

Revision 1.04

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Revision History

Revision Number	Description	Revision Date
0.7	Initial release.	August 2012
0.8	Updated release note for driver release 2.0.0.89	October 2012
0.9	Updated release note for driver release 2.5.0.6	December 2012
0.95	Updated release note for driver release 2.5.0.8	February 2013
1.0	Updated release note for unified driver release 2.5.0.19	April 2013
1.01	Updated release note for unified driver release 2.5.1.28	August 2013
1.03	Updated release note for unified driver release 2.5.3.34	December 2013
1.04	Updated release note for unified driver release 2.5.4.40	April 2014

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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® 8 Series/C220 series Chipset Family and 4th generation Intel® Core™ Processor Family based platform.

1.2 System Requirements

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

- Intel® 8 Series/C220 series Chipset Family
- 4th generation Intel® Core™ Processor Family

The following Operating Systems are supported:

Intel® 8 Series Chipset Family / 4th generation Intel® Core™ Processor Family:

- Windows* 7 Operating System (both 32-bit and 64-bit versions).

Intel® C220 series chipset family:

- Windows* 7 Operating System (both 32-bit and 64-bit versions).
- Windows* Server 2008 R2 Operating System.
- Windows* Small Business Server 2008 Operating System.

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® 8 Series/C220 Series Chipset Family, Haswell PCH-LP (previously known as Lynx Point-LP PCH), and Haswell-EP PCH (previously known as Wellsburg PCH) BIOS Specification document.

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

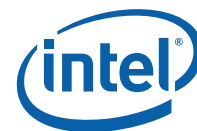
- Arabic (International)
- Chinese (Simplified)



- 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



Term	Description
PCH	Platform Control Hub
RMH	Rate Matching Hub
SS	Super-Speed
USB	Universal Serial Bus
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(R) USB 3.0 eXtensible Host Controller Driver

Version: 2.5.4.40

2.2 Kit Contents

The contents of this release kit include:

- Intel® USB 3.0 eXtensible Host Controller Driver Installer

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
- 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

Note: It's recommended that USB3.0 driver should only be installed using the setup.exe. Proper device functionality cannot be ensured if INF installation is used.

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3 *Important Notes*

3.1 **USB 3.0 Collaterals**

Please see the document "Intel(R) USB 3.0 eXtensible Host Controller Driver - Bring Up Guide" for information on driver installation and usage. This document can be found in the Intel(R) USB 3.0 eXtensible Host Controller Driver release kit.

Another useful document to reference is the "Intel(R) USB 3.0 eXtensible Host Controller Driver - Customer Validation and Debug Guide". This document is available on CDI. Please contact your Intel FAE for access.

3.2 **Platform Best Known Configuration**

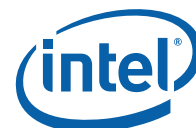
Please refer to "Client Base Platform Best Known Configuration for Shark Bay ULT Platform" from Intel Business Portal (IBP) for platform configuration setup that aligns to this milestone releases.

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4 Closed Issues

Issue #	Description	Resolution
4635443	xHCI driver incorrectly read the DeviceRemovable field from USB HUB descriptor causing internal device defined as non-removable to show up as removable device.	Resolved in Release Rev: 2.5.4.40
4635480	BSOD 0x7E may occurs during platform stress test	Resolved in Release Rev: 2.5.4.40
4635356	USB3.0 monitor application may crash when it's forced shutdown	Resolved in Release Rev: 2.5.4.40
4635513	BSOD 0x9F may occurs during S4 stress test	Resolved in Release Rev: 2.5.4.40
1024655	Added a new switch option (-s0) to allow a return code '0' instead of '14' when silent installation is used.	Resolved in Release Rev: 2.5.4.40 (installer build 1.5.6.0)
4635104	BSOD 0x9F may occurs during reboot stress test with WLAN/BT device connected to xHCI controller.	Resolved in Release Rev: 2.5.3.34
2164688	BSOD 0x9F may occurs during system Sleep & PnP on Win7 with WLAN/BT device connected to xHCI controller	Resolved in Release Rev: 2.5.3.34
3709786	Improved BSOD 0xE8086002 check in the release driver	Resolved in Release Rev: 2.5.3.34
3709917	Updated driver w/a for issue 3707101 - USB3.0 monitor fails (video hang) when connected to USB3.0 port	Resolved in Release Rev: 2.5.3.34
298089	System may auto wake from S3, S4 power state when a mouse is connected behind a Super Speed hub.	Resolved in Release Rev: 2.5.3.34
3709806	Self-powered device may not correctly enumerated if the device is swapped to a different port when the system is in S4 power state.	Resolved in Release Rev: 2.5.3.34
2164685	Bluetooth module (WiFi/BT combo) connected to the xHCI controller may show up with yellow bang after resuming from S4 stress test cycle.	Resolved in Release Rev: 2.5.3.34
4635074	Bluetooth module (WiFi/BT combo) connected to the xHCI controller may show up as unknown device in the device manager after resuming from S3 stress test cycle.	Resolved in Release Rev: 2.5.3.34
3709829	BSOD 0xE6 may occurs during S3 stress testing with driver verifier enabled and Bluetooth module (WiFi/BT combo) connected to the xHCI controller.	Resolved in Release Rev: 2.5.3.34



Issue #	Description	Resolution
3709981	BSOD 0x9F may occurs during warm reboot stress testing with Bluetooth module (WiFi/BT combo) connected to the xHCI controller.	Resolved in Release Rev: 2.5.3.34
3709824	BSOD 0xD1 may occurs during burn-in test	Resolved in Release Rev: 2.5.1.28
3709656	BSOD 0x9F may occurs during reboot stress test	Resolved in Release Rev: 2.5.1.28
3881957	xHCI driver may not correctly handle isochronous data packet length set to '0'	Resolved in Release Rev: 2.5.1.28
4043467	xHCI driver may incorrectly override USB 3.0 hub container IDs	Resolved in Release Rev: 2.5.1.28
2164335	BSOD 0x1A may occurs during S4 stress test with active isochronous data transfer.	Resolved in Release Rev: 2.5.1.28
2164493	Invalid setting on the USB Device BOS descriptor may cause the xHCI driver to hang	Resolved in Release Rev: 2.5.1.28
3708971	USB3.0 Camera may stop working if the camera application is started and closed repeatedly	Resolved in Release Rev: 2.5.1.28
2278974	Updated HCSwitch Driver _OSC ACPI call method to support new revision ID for Haswell PCH USB3.0 driver	Resolved in Release Rev: 2.5.0.19
2164288	BSOD 0xD1 may occurs during USB-IF Backwards Compatibility test	Resolved in Release Rev: 2.5.0.19
3708716	Added support for vendor-specific control TX with no data	Resolved in Release Rev: 2.5.0.19
3708858	USB3.0 devices behind a USB3.0 HUB may disappear after system reboot	Resolved in Release Rev: 2.5.0.19
2164099	BSOD 0x9F may occurs when system is entering S5 and a large tree of devices connected to the xHCI controller.	Resolved in Release Rev: 2.5.0.19
4043296	Added support PLD object from ACPI table with length 20 bytes	Resolved in Release Rev: 2.5.0.8
3708780	Driver doesn't handle ACPI port data configuration correctly	Resolved in Release Rev: 2.5.0.8
4043066	A BSOD 0x9F may occur when USB keyboard is connected behind external HS HUB during S4 and the system is resumed from S4.	Resolved in Release Rev: 2.5.0.6
3707897	Some USB2.0 devices connected behind USB3.0 port cannot enter to selective suspend correctly.	Resolved in Release Rev: 2.5.0.6



Issue #	Description	Resolution
3708300	BSOD may occur when a USB printer is connected to USB3.0 port and the printer application is installed	Resolved in Release Rev: 2.5.0.6
3708425	A BSOD 0x7E may occur when a USB3.0 Camera is connected to a USB3 port and the camera application is started and closed repeatedly.	Resolved in Release Rev: 2.5.0.6
2163640	A BSOD 0xE8086002 may occur when multiple devices tree is connected to the xHCI controller.	Resolved in Release Rev: 2.5.0.6
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.	Resolved in Release Rev: 2.5.0.6
3708434	USB Camera may stop working after resuming from S3.	Resolved in Release Rev: 2.5.0.6
4043041	Device may not enumerate correctly after xHCI controller is put to D3.	Resolved in Release Rev: 2.0.0.89
4043057	USB printer may not enumerate when connected behind a USB2.0 hub after resuming from S3.	Resolved in Release Rev: 2.0.0.89
4043014	USB2.0 pen drive may not enumerate after connecting behind a USB2.0 hub which it is in Selective Suspend and connected to HS Port 1	Resolved in Release Rev: 2.0.0.85
3708246	Power Management tab on HID-compliant mouse/keyboard under Device Manager is present even if USB Wake is disabled in BIOS	Resolved in Release Rev: 2.0.0.85
4042979	USB2.0 Device may be enumerated as Low Speed	Resolved in Release Rev: 2.0.0.85



5 Known Issues

Issue #	Description
	N/A

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