

Thunderbolt(TM) Software Release Notes

This document is the release notes for the Thunderbolt software version 17.2.71.250

Supported Operating Systems

Windows* 10 64-bit

Supported Thunderbolt Controllers

DSL6540/6340 Series - "Alpine Ridge"

JHL6540/6340 Series - "Alpine Ridge"

JHL6240 Series - "Alpine Ridge LP"

Changes:

Version 17.2.71.250

- Added support for Windows* 10 RS3 Native PCIe Enumeration ("Native Express" mode) and Selective Suspend (RTD3) state.
- Added support to enable Firmware Update on host controller in USB only mode (Device ID 0x15DC, 0x15DD and 0x15DE).
- Added support for firmware update on device based on TR-DD (JHL 7440) controller - Including SDK and sample update.
- System Tray application reports software & firmware component versions in a separate menu option that does not require Admin permission.
- Added UEFI capsule update reference code for Host controller Firmware Update in SDK sample folder.
- Optimized Installer Package for Thunderbolt Software, reducing its size significantly (less than 10Mb).
- Toast notification improvement, now based on the Action Center instead of persistent notification in the right bottom corner of the screen.
- This package does not support the PRE-BOOT ACL feature introduced in previous software package 17.1.x.
- Thunderbolt Networking is now working properly with Microsoft Windows bridge functionality (Windows* 10 RS3 required).

Version 17.1.64.250

- Initial support for Windows* 10 RS2 Native Enumeration (FWU SDK and samples updated accordingly as well).
- Added support for PRE-BOOT ACL feature:
 - Devices that can be used for boot or during pre-boot need to be pre-approved.
 - Pre-Boot ACL solution enables device pre boot approval by maintaining an access control list in the BIOS.
 - ACL is maintained by both the SW and the BIOS.
 - Main "use case" flow:

- User adds one or some entries to the ACL through the TBT SW
 - TBT SW downloads the ACL into BIOS.
 - On boot, BIOS communicates the ACL to TBT FW.
 - FW can identify connected devices and authorize them in Pre-boot stage.
 - At OS up, TBT SW gets indication on presence of pre-boot authorized device.
- Added support for Apple* Boot Camp in Secure Connect mode (SL1)
 - Firmware Policy settings window has been removed
 - No more support for older Thunderbolt 1 and 2 host controllers
 - No support for Windows* 7 and 8.1

Version 16.3.61.275

- Added support for Windows* 10 RS2 64-bit.
- Added check-box to each notification not to show it again. This could be reset through the Settings panel.
- Added support for Titan Ridge (JHL7xxx series) devices (dock) firmware update through Alpine Ridge (DSL6xxx/JHL6xxx series) host controllers.

WARNING:

- This is the last software package supporting Thunderbolt 1 and 2 host controllers
- This is the last software package supporting Windows* 7 and 8.1

Version 16.3.59.250

- PD information dependencies removed from SW UI, and replaced by additional support via SDK & Samples. Refer to Thunderbolt_SDK_Guide.pdf for more information about new methods: I2CRead, I2CWrite and GetTIPdInfo.
- Added new method GetControllerInfo in SDK CMD sample to provide more information on a given Thunderbolt host controller.
- Added user notification when update needed for the Thunderbolt™3 port to function properly. This notification is triggered when NVM version is less than 16, and applicable to Alpine Ridge DSL6540/6340 controllers only.
- Added support for NonAdmin mode through INF install mode. This option is not enabled by default and need customized INF/CAT files. Please contact your Thunderbolt support team for more information.
- Disabled QoS notifications to user by default - this can still be enabled through the manual registry setting edit:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ThunderboltService\EnableQoSNotifications

Version 16.2.55.275

- Added support for NonAdmin mode through installer switch. Run setup.msi NONADMIN=1 when installing the Thunderbolt SW package in order to allow user without administrator privileges to approve devices.
- Changes in MUP to support white space in executable name. Also removed SubVendorId attribute.
- Change in Installer to set AutoConnect mode by default for Thunderbolt Networking connections.
- Fix for QoS misleading popup, including fixed bandwidth calculation and relaxed conditions.
- Fix for WMI registration issue leading to display empty UI (and eventually PCIe enumeration
- drop in SL1).

Version 16.2.52.250

- Added support for Windows* 10 Anniversary Update (RS1) 64-bit.
- Added QoS Bandwidth computation and user notification.
- Added QoS Multi-function PCIe device handling.
- System Tray application reports NVM minor version in the Details form.
- Updated SDK API, Samples and SDK documentation to support the NVM minor version reporting.
- Added conditional application starter to improve boot time when no device connected.
- Added support for TI TPS65983 PD Controller in SW, SDK API and samples.
- Networking driver is unloaded on cable disconnect instead of reporting link down.
- General improvements and bug fixes (see "Fixed Issues" section below for more details).

Version 16.1.45.275

- Hotfix: Application GUI does not pop up on device hotplug after initial package installation.
- HVCI compliance per Microsoft Device Guard recommendations.

Version 16.1.45.250

- Added support for Alpine Ridge LP and Alpine Ridge C-step (including FW Update SDK).
- Added Firmware Update progress indication in FW Update SDK and samples.
- Added SDK sample to update Firmware on device only.
- Added support for devices made of multiple controllers.
- Added support for external GPU user notifications.
- Added RSS support to Thunderbolt Networking to improve performance capabilities.
- General improvements and bug fixes.

Version 15.3.40.275

- Hotfix: added user notification when update needed for the Thunderbolt™3 port to function properly. For more information go to: <https://thunderbolttechnology.net/updates>.

Version 15.3.39.250

- Optimization in Firmware update flow to speed-up the NVM flashing process.
- System Tray application reports software & firmware component versions in the Details form.
- Updated SDK sample to add support for Power Delivery firmware version.
- General improvements and bug fixes.

Version 15.2.35.250

- Added Firmware Update SDK for devices based on L6000 controller series.

Version 15.2.32.250

- Added support for Windows* 10 64-bit.
- Added support for L6000 controller series.
- Added support for L4000 controller series on Windows* 10 64-bit only.
- Added support INF based installation.
 - All drivers must be installed separately to have the complete functionality.
 - Installing Thunderbolt Controller driver (tbtxxx) triggers the full SW package installation.
 - Installing Thunderbolt Networking driver (tp2pxxx) installs the Thunderbolt Networking. Support.
- Added Auto-connect mode for Thunderbolt Networking connections without user approval need.
- Added a desktop icon for fast access to an adjacent PC over a Thunderbolt Networking connection.
- Added End-to-End mode support for L6000 controller series to enhance Thunderbolt networking performance.
- Added support for safe mode notification for L6000 controller series.
- Enhanced Firmware Update SDK for L6000 controller series support.
- Added support for Apple* Boot Camp.

Version 15.1.26.250

- General improvements and bug fixes.

Version 3.0.19

- SW supports hosts with multiple Thunderbolt controllers.
- This SW package no longer supports the L4000 controller series. For support of L4000 controllers please use SW package 2.5.7.

Version 2.5.7

- SW will now create a Thunderbolt network when connecting two hosts via Thunderbolt controllers: Windows-to-Windows and Windows-to-MacOS, on L5000 and L5110 controllers.
- For better usability, the SysTray application can be activated through its binary shortcut from the Windows Start menu as well.

Version 2.0.4

- Added support for L5110 controllers.
- Added a service component to the SW stack.
- The SW components (driver, service and System Tray application) will start automatically when a new Thunderbolt device is connected and will go down when no devices are connected (except if user has one of these screens open: Settings, Manage Approved Devices).
- When Policy settings are changed via the system tray application the settings are applied to connected devices without the need to disconnect them.
- System Tray application displays error messages when in No Security mode (Legacy mode).
- System Tray application supports moving devices from "connect once" to "always connect" via the Approve Devices dialog.
- When a non-admin connects a new device there will be a persistent dialog indicating the new device (instead of a balloon that disappears).
- Removed support from Windows 8 32b & 64b and from Windows 8.1 32b.

Version 1.5

- Added toast notifications to notify users on need to approve newly connected devices (Win8, Win 8.1) .

Version 1.4

- Added support for Win 8.1 32b & 64b.

Fixed Issues

Version 17.1.64.250

- In this version the SW stack goes down when the last device is disconnected. However, the system tray application will stay up if the last device is disconnected

within a few seconds of the user changing the settings. This issue is not relevant anymore since the FW Policy settings form is no more accessible.

Version 16.3.59.250

- Thunderbolt Application crashes when clicking quickly multiple times on the Thunderbolt systray Application.
- Uninstalling Thunderbolt Software immediately after PC restarts is prevented by the "Thunderbolt(TM) Conditional Application starter"
- Service crash after entering Sx while device is being authorized.

Version 16.2.55.275

- QoS warning appears on Alpine Ridge device when DP consumes all the link bandwidth.
- QoS warning incorrectly reported when connecting two 4K monitors.
- GUI tree is reported as empty after cold boot to OS while devices are connected.

Version 16.2.52.250

- When security level is "Secure Connect", after disconnecting and reconnecting devices while the PC is in sleep mode, the authorization window will not automatically open but the devices still need to be re-authorized.
- Application GUI does not pop up on device hot-plug after initial package installation.
- Thunderbolt.exe is managed code and will have impact on boot time even if the Systray application should not be running (e.g. no Thunderbolt device is connected).
- Once a Thunderbolt networking session is established, restarting one peer may leave the connection Status of the remote peer to be reported incorrectly as well as the Thunderbolt networking menu being greyed out, even if the networking functionality is still working.
- Once a Thunderbolt networking session is established, the GUI tree may be not showing the remote peer after this one is restarted.
- In some timing race conditions the Systray Application icon does not appear, and should be launched manually.
- Unable to access remote peer using the "Desktop Icon"/"My computer icon" when the name of the remote PC was changed.
- Unable to access remote peer using the "Desktop Icon"/"My computer icon" when the Thunderbolt Service was restarted.
- A device white listed in Security Level 1 (i.e. "User Authorization") will not be authorized when moving to Security Level 2 (i.e. "Secure Connect") until it is removed from the white list and reinserted.

- When no Thunderbolt Controller is present, running manually the Thunderbolt Software may report incorrectly a need for Firmware Update.
- No authorization window appear for device approval after Sx resume when "Wake on Thunderbolt" is disabled in BIOS.
- In some languages (ENU, JPN, PTB) the eGPU toast notification is truncated.
- Systray application does not start after restarting the PC with Thunderbolt Device connected.
- After performing INF upgrade, the Thunderbolt SW is indeed not installed.
- Upon Thunderbolt networking connection, it is possible to delete the peer icon located on the desktop, however it will be restored on desktop refresh (pressing F5).

Known Issues

- Concurrent install/upgrade can lead the Thunderbolt Software to be partially installed if it is run unattended while another MSI process is already running. In such a case the Thunderbolt software should be removed and re-installed.
- Connecting a Thunderbolt device in the middle of the Thunderbolt Software installation process may lead the software to miss the automatic launch when installation is done.
- Disconnecting the device for at least 10sec and reconnecting it will trigger the software again.

Limitations

The Thunderbolt Networking implementation does not support Link aggregation (a.k.a. NIC teaming) via the OS.

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