

# Thunderbolt SW and FW Install How To Guide

## Setup Steps overview

Refer to the readme for each package for installation instructions

- 1) Install Thunderbolt SW (If silently installing, issue a reboot cmd after install).
- 2) Install Thunderbolt FW (If silently installing, check charging status or plug in AC manually).

## Silent Install Options

Refer to this site for cmd line install options for silent installs of Lenovo software and drivers.

[https://download.lenovo.com/cdr/tools/drivermatrix/dm\\_2.html](https://download.lenovo.com/cdr/tools/drivermatrix/dm_2.html)

- For Intel Thunderbolt Software use the following to extract the package and install silently

Extract SW Package	Silent Install SW
<code>n22ta12w.exe /VERYSILENT /DIR=%PACKAGEPATH% /EXTRACT="YES"</code>	<code>%PACKAGEPATH%\setup.msi /qn</code>

- For Intel Thunderbolt FW use the following to extract the package and install silently

Extract SW Package	Silent Install SW
<code>n24th08w.exe /VERYSILENT /DIR=%PACKAGEPATH% /EXTRACT="YES"</code>	<code>%PACKAGEPATH%\FWUpdateTool19xx.exe 1 -s xx - varies per system.</code>

### Prerequisites:

- Latest Intel Thunderbolt Software must be installed prior to FW update.
- Must be executed with Admin privileges.
- AC Power must be plugged into the system prior to update.

IT teams can use a script to query wmi to get battery status prior to install.

*WMIC Path Win32\_Battery Get BatteryStatus*

A return of 2 is charging. WMI will return 2 values if 2 batteries are present.

```
C:\>WMIC Path Win32_Battery Get BatteryStatus
BatteryStatus
2
2
```

## Thunderbolt Firmware Error and Return Codes

Value	Description
0x202	No command supplied; used by CLI sample when it runs without any command argument
0x203	Command not found; used by CLI sample
0x204	Argument count mismatch; used by CLI sample
0x205	Invalid host controller ID supplied
0x206	Invalid device controller UUID supplied
0x207	No file found in the supplied path for firmware image file
0x208	Service not found
0x209	Load host controllers failed
0x20A	Load devices failed
0x20B	No host controller found in system
0x20C	No device found in system
0x20D	Operation isn't available when the host controller is in safe-mode
0x20E	Reserved for backward compatibility; not used
0x20F	This device controller doesn't support device firmware update
0x210	Reserved for backward compatibility; not used
0x211	Host/device controller presents an unknown chip
0x212	The supplied firmware image file is invalid (damaged file)
0x213	The supplied firmware image file failed validation (incompatible with the host/device controller)
0x214	The supplied firmware image file is for another hardware generation(incompatible with the host/device controller)
0x215	The supplied firmware image file is for different port count(incompatible with the host/device controller)
0x216	The supplied firmware image file can't fit into chip size (incompatible with the host/device controller)
0x217	Trying to update device controller with a firmware image file intended for host controller
0x218	Trying to update host controller with a firmware image file intended for device controller
0x219	Mismatch between the supplied firmware image file and the host/device controller with regarding to PD firmware existence (one has it and one doesn't)
0x21A	No DROM section found in the supplied firmware image file
0x21B	Reserved for backward compatibility; not used
0x21C	The supplied firmware image file is for products of a different vendor than the host/device controller's vendor
0x21D	The supplied firmware image file is for a different product model than the host/device controller
0x21E	No matching devices found for the supplied image (used by DeviceFWUTool)
0x21F	Multiple firmware image files found (used by DeviceFWUTool)
0x220	The supplied command is not supported on a device
0x221	Deprecated method
0x222	The supplied argument is invalid
0x223	No DROM section found
0x224	Native mode mismatch

<b>0x225</b>	<b>Driver communication error</b>
<b>0x226</b>	<b>Error during image update</b>
<b>0x227</b>	<b>Universal driver is missing</b>
<b>0x228</b>	<b>The image provided is not signed. Therefore rejected.</b>
<b>0x229</b>	<b>A timeout has expired while FW update was performed.</b>
<b>0x22A</b>	<b>More than one handle open during FW update.</b>
<b>0x22B</b>	<b>Driver API unknown.</b>
<b>-----</b>	<b>Return Codes</b>
<b>5</b>	<b>No administrator privilege</b>
<b>20</b>	<b>Tool cancelled by manually interrupt</b>
<b>50</b>	<b>No image file</b>
<b>100</b>	<b>AC not detected or battery is lower than 10%</b>
<b>3000</b>	<b>PM driver not installed</b>
<b>4000</b>	<b>Thunderbolt driver not installed</b>