

UP Board 64-Bit Support Package for Windows® 10 and Windows® 10 IoT Enterprise (40 Pin HAT header not supported)

By Sean D. Liming

December, 2017

This support package contains the Windows 10 x64 drivers for the UP Board running Windows 10 or Windows 10 IoT Enterprise. The package is not for use with Windows 10 IoT Core. Please go to windowsondevices.com for more information on Windows 10 IoT Core support. The package is intended for use with Windows System Image Manager (SIM). The steps below provide the basic steps to integrate the drivers into a custom OS installer using SIM. For more information on the full SIM development process, please see the book [Starter Guide for Windows® System Image Manager](#). The support package contains the following drivers:

- Intel-Video
- Intel-DisplayAudio
- Intel-iaCamera
- Intel Trusted Execution Engine Interface
- Intel Chipset
- Intel I2C
- Intel UART
- Intel GPIO
- Intel SPI
- Intel Battery Management
- Intel Dynamic Platform and Thermal Framework
- RealTek Ethernet
- RealTek I2C Audio
- Imping RFID

Note: The package is an example only, and the drivers supplied might not be the latest drivers available. Please see the manufacturer for any updates. The package serves as guide for integration with the OS using SIM.

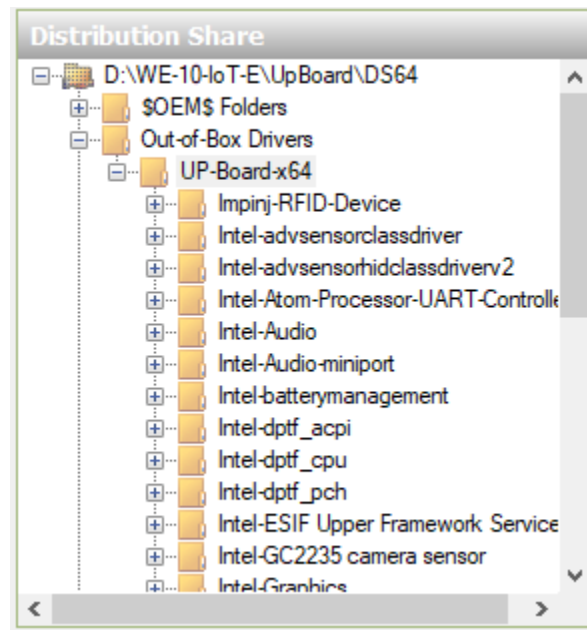
Note: The 40-Pin HAT connector is not supported. A CPLD provides the signals for the 40-pin HAT connector and requires a custom device driver for Windows applications. Support for Resource Hub Proxy (RHProxy MSFT8000) needs to be added to the firmware for UWP applications to access GPIO, SPI, I2C.

1. Make sure that the UP Board has the latest 64-bit firmware installed.
2. Open SIM.
3. From the SIM menu, open the Windows 10 64-bit catalog file.
4. From the SIM menu, create a new answer file.
5. From the SIM menu, create a new distribution share.
6. In File Explorer, copy the UP-Board-x64 folder to the new distribution share's Out-of-Box Drivers folder.

		Name	Date modified	Type
▼	DS64			
	SOEMS Folders			
▼	Out-of-Box Drivers			
▼	UP-Board-x64			
	Impinj-RFID-Device	Impinj-RFID-Device	12/14/2017 10:10 ...	File folder
	Intel-advensorclassdriver	Intel-advensorclassdriver	12/14/2017 10:10 ...	File folder
	Intel-advensorhidclassdriver2	Intel-advensorhidclassdriver2	12/14/2017 10:10 ...	File folder
	Intel-Atom-Processor-UART-Controller	Intel-Atom-Processor-UART-Controller	12/14/2017 10:10 ...	File folder
	Intel-Audio	Intel-Audio	12/14/2017 10:10 ...	File folder
	Intel-Audio-miniport	Intel-Audio-miniport	12/14/2017 10:10 ...	File folder
	Intel-batterymangement	Intel-batterymangement	12/14/2017 10:10 ...	File folder
	Intel-dptf_acpi	Intel-dptf_acpi	12/14/2017 10:10 ...	File folder
	Intel-dptf_cpu	Intel-dptf_cpu	12/14/2017 10:10 ...	File folder
	Intel-dptf_pch	Intel-dptf_pch	12/14/2017 10:10 ...	File folder
	Intel-ESIF Upper Framework Service	Intel-ESIF Upper Framework Service	12/14/2017 10:10 ...	File folder
	Intel-GC2235 camera sensor	Intel-GC2235 camera sensor	12/14/2017 10:10 ...	File folder
>	Intel-Graphics	Intel-Graphics	12/14/2017 10:10 ...	File folder
	Intel-HID-Event-Filter	Intel-HID-Event-Filter	12/14/2017 10:10 ...	File folder
	Intel-HID-ISS	Intel-HID-ISS	12/14/2017 10:10 ...	File folder
	Intel-iacamera	Intel-iacamera	12/14/2017 10:10 ...	File folder
	Intel-ISP-HWRResource-Manager	Intel-ISP-HWRResource-Manager	12/14/2017 10:10 ...	File folder
	Intel-ISS Dynamic Bus Enumerator	Intel-ISS Dynamic Bus Enumerator	12/14/2017 10:10 ...	File folder
	Intel-ISS-Driver	Intel-ISS-Driver	12/14/2017 10:10 ...	File folder
	Intel-PMIC	Intel-PMIC	12/14/2017 10:10 ...	File folder
	Intel-Serial-IO-I2C-Host-Controller	Intel-Serial-IO-I2C-Host-Controller	12/14/2017 10:10 ...	File folder
	Intel-Serial-IO-SPI-Controller	Intel-Serial-IO-SPI-Controller	12/14/2017 10:10 ...	File folder
	Intel-Sideband-Fabric-Device	Intel-Sideband-Fabric-Device	12/14/2017 10:10 ...	File folder
	Intel-SoC-GPIO-Controller	Intel-SoC-GPIO-Controller	12/14/2017 10:10 ...	File folder
	Intel-TXEI	Intel-TXEI	12/14/2017 10:10 ...	File folder
	Realtek-Ethernet	Realtek-Ethernet	12/14/2017 10:10 ...	File folder
	Realtek-I2S-audio-codec-device	Realtek-I2S-audio-codec-device	12/14/2017 10:10 ...	File folder
>	SMSC WinUSB	SMSC WinUSB	12/14/2017 11:26 ...	File folder

Support Package Usage

7. In SIM, under Out-of-Box Drivers, right-click on **UP-Board-x64** and select **Insert Driver Path to Pass 2 offlineServicing**.



Distribution Share

8. Finish the answer file by filling in any settings that your configuration needs, such as language selection, user accounts, time zones, etc.
9. Create the configuration set.
10. Use diskpart.exe to format a USB flash disk with FAT32.
11. Copy the configuration set and the contents of the Windows 10 IoT Enterprise (aka Windows 10 Enterprise LTSB) ISO/DVD to the USB flash disk.
12. Plug the USB drive into the UP-Board, and boot the system.
13. Go into the BIOS and set up the boot order to boot the USB flash disk first and the hard drive second.
14. Save the changes, boot the system to the USB flash drive, and install the OS.

There will be 4 missing drivers. There is no known resolution for these drivers at the time of this writing. Missing support drivers for the on board CPLD might be the reason for a couple of these missing drivers.