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Thunderbolt™ 3 Dual-4K Docking Station for Laptops - Windows/Mac - Power Delivery - 6x USB 3.0 + SD

TB3DOCK2DPPD
TB3DOCK2DPPU

*actual product may vary from photos

FR: Guide de l'utilisateur - fr.startech.com
DE: Bedienungsanleitung - de.startech.com
ES: Guía del usuario - es.startech.com
NL: Gebruiksaanwijzing - nl.startech.com
PT: Guia do usuário - pt.startech.com
IT: Guida per l'uso - it.startech.com

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by StarTech.com could void the user's authority to operate the equipment.

Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

CAN ICES-3 (B)/NMB-3(B)

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Introduction

Package contents

- 1 x docking station
- 1 x Thunderbolt 3 cable
- 1 x USB-C to DisplayPort cable
- 1 x universal power adapter
- 2 x power cords (NA/JP and ANZ for TB3DOCK2DPPD or UK and EU for TB3DOCK2DPPU)
- 1 x instruction manual

Requirements

- A host laptop with an available Thunderbolt 3 port
- An available AC electrical outlet
- DisplayPort equipped display(s) with cable(s) as needed (for additional external display)
- Thunderbolt 3 equipped display(s) with cable(s) as needed (for additional external display)
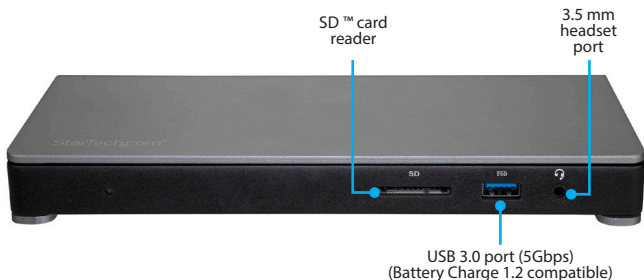
Note: To connect a second display, you must use one of the docking station's Thunderbolt 3 ports. A USB-C to DisplayPort cable is included to accommodate a second DisplayPort enabled display. To connect to a different display, such as HDMI, DVI or VGA, additional adapters (sold separately) are required. See the "Configure a display device" section for further details.

- A 4K-capable display is required to achieve 4096 x 2160p resolution (4K is also known as 4K x 2K)
- Any of the following operating systems:
    - Windows® 10 (32 or 64-bit)
    - Windows 8 / 8.1 (32 or 64-bit)
    - macOS 10.12 (Sierra)
    - macOS 10.13 (High Sierra)
- Video output capabilities are dependent on the video card and hardware specifications of your connected host laptop

Requirements are subject to change. For the latest requirements, please visit www.startech.com/TB3DOCK2DPPD or www.startech.com/TB3DOCK2DPPU.

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Product diagram

Front view

SD ™ card reader

3.5 mm headset port

SD   ESD   🎧

USB 3.0 port (5Gbps)
(Battery Charge 1.2 compatible)

Rear view

USB Type-C™ Port
(USB 3.0 - 5Gbps)

Thunderbolt 3
USB-C port

DisplayPort
port*

DC IN
20V 9A

USB Type-A ports
(USB 3.0 - 5Gbps)

Gigabit
RJ45 port

Thunderbolt
3 host laptop
port

DC input
port
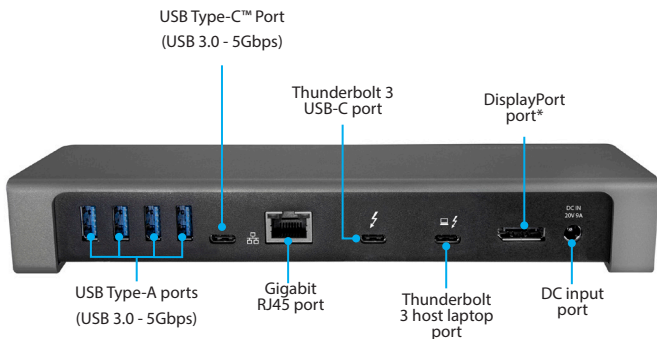
*DisplayPort does not support DP++ and an active video adapter is required to convert this video signal.

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About Thunderbolt 3

Thunderbolt 3 technology uses the USB-C connector, with a bandwidth of up to 40Gbps. It supports USB 3.1, DisplayPort 1.2, and PCI Express 3.0.

Thunderbolt technology supports both video and data throughput. However, it prioritizes video bandwidth to help ensure seamless display performance. The performance of the remaining dock functions depends on your display configuration.

Thunderbolt 3 products must be used with Thunderbolt 3 cables.

Your computer's Thunderbolt 3 ports might not function properly until you update one or more of the following on your computer:

- BIOS
- Thunderbolt firmware
- Thunderbolt 3 controller drivers
- Thunderbolt 3 software

The required updates will vary depending on your computer.

For an up-to-date list of affected computers and instructions, visit https://thunderbolttechnology.net/updates. If your manufacturer isn't listed on the Thunderbolt website, contact your manufacturer.

About DP Alt Mode (DisplayPort Alternate Mode)

DP Alt Mode is a specification that allows a DisplayPort video signal to transmit over USB-C. It enables the use of the USB-C interface for DisplayPort signals. Thunderbolt 3 supports the full USB-C standard, including support for DP Alt Mode. Because the docking station supports DP Alt Mode, you can connect Thunderbolt 3 or USB-C based video devices, cables, or adapters to the secondary Thunderbolt 3 port on the rear of the docking station.

Thunderbolt temperature

Due to the high performance of Thunderbolt technology, Thunderbolt products sometimes generate more heat than traditional hardware. Therefore, it's normal for the docking station to warm up when in use. As such, it's recommended that you don't place your laptop on the docking station's surface, as doing so will result in even higher temperatures.

These higher temperatures do not present a safety hazard to users or to hardware.

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About USB 3.0 and USB 3.1 Gen 1

USB 3.0 is also known as USB 3.1 Gen 1. This connectivity standard offers speeds up to 5Gbps. Any mention of USB 3.0 in this manual or on the StarTech.com website for TB3DOCK2DPPD or TB3DOCK2DPPU refers to the 5Gbps USB 3.1 Gen 1 standard. Any mention of USB 3.1 Gen 2 refers to the 10Gbps Gen 2 standard.

About the docking station USB-C ports

Not all USB-C ports support the full functionality of the USB Type-C standard. Some ports might only provide data transfer, and might not support video (DP Alt Mode).

This docking station includes a Thunderbolt 3 port with a USB Type-C connector and a USB 3.0 port with a USB Type-C connector.

The Thunderbolt 3 port can be used as a Thunderbolt 3 port or as a USB-C port. When used as a USB-C port, you connect peripherals using USB 3.1 Gen 2 (10Gbps) technology. These ports supports DP Alt Mode and 15W USB Power Delivery.

The USB Type-C Port (USB 3.0 - 5Gbps) is a standard USB 3.0 throughput port and can only be used for peripherals supporting USB 3.0 (5Gbps) technology.

About the docking station ports

The four USB Type-A (USB 3.0) ports and one USB Type-C port located on the back of the docking station are standard USB 3.0 throughput ports. When the dock is connected to a laptop, this port provides a standard USB 3.0 power output to power or charge your devices.

The front USB-A (USB 3.0) port is compliant with Battery Charging Specification Revision 1.2 (BC 1.2), which means that you can use the port to charge a device faster than you can using a standard USB 3.0 port. This front USB 3.0 port can fast-charge a connected device, even when the dock isn't connected to a laptop. When the docking station is connected to a laptop, the front USB 3.0 port functions as a Charging Downstream Port (CDP), which has simultaneous charge and sync capabilities.

The provided power adapter must always be connected to the dock in order to charge a device using the Battery Charge 1.2 compatible USB 3.0 Type-A port. It can only fast-charge devices that comply with USB Battery Charging Specification Revision 1.2.

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Install the docking station

The docking station is natively supported when connected to a computer running Windows 10, Windows 8 / 8.1 or macOS operating systems. In these operating systems, the docking station will automatically detect and install the required drivers once connected to a Thunderbolt 3 port on your host laptop.

Power the docking station and your laptop

When the docking station is plugged in and powered, you can use USB-C Power Delivery to power and charge your laptop through its USB-C port (up to 85 watts). The docking station cannot receive power from the host laptop, therefore the power adapter must always be connected to the docking station.

1. Select the appropriate power cord for your region and connect it to the power adapter.

2. Connect the power adapter to an AC electrical outlet and then to the docking station's **DC IN** (power input) port. Both the docking station and your connected laptop should now be receiving power.

Connect peripherals to the docking station

1. Connect your external display(s) to the docking station (example, DisplayPort or Thunderbolt 3 displays).

   Note: See the "Configure a display device" section for dual-display configuration requirements.

2. Connect your peripherals to the docking station (example, USB devices, RJ-45 network).

3. Connect the provided Thunderbolt 3 cable to the Thunderbolt 3 port on your host laptop and to the Thunderbolt 3 host laptop port on the docking station.

Install drivers

Once the docking station is powered and connected to your host laptop, the required drivers should automatically install.

In Windows 10 or 8/8.1 you might see a pop-up message requesting permission to allow the docking station to connect to your computer. If you see this pop-up message, do the following:

1. Click on the pop-up message.

2. Select **Always Connect** from the list.

3. Click **OK**. If required, follow any other on-screen instructions to complete the installation.

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Charge a device

If you're only using the front USB 3.0 port to charge a device, a connection to a host laptop isn't required.

• To charge a device, connect it to the USB 3.0 port located on the front of the docking station.

Note: This front USB 3.0 port can only fast-charge devices that comply with USB Battery Charging Specification Revision 1.2.

Configure a display device

Use your Windows operating system to adjust display settings for multiple monitors. Your laptop hardware must support dual external displays through its Thunderbolt 3 port.

Connect a display to the Thunderbolt 3 USB-C port

You can connect a second display (or a display adapter) to one of the docking station's extra **Thunderbolt 3 USB-C** port. The docking station's host Thunderbolt 3 ports must remain connected to your host laptop.

Type of Display	Adapter Needed (sold separately)
HDMI	USB-C to HDMI Adapter (CDP2HD4K60)
DVI	USB-C to DVI Adapter (CDP2DVI)
VGA	USB-C to VGA Adapter (CDP2VGA)

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Connect an active adapter to the DisplayPort port

You can also connect a display adapter to the docking station's DisplayPort port to connect a different type of monitor.

Note: This port does not support Multimode DisplayPort so an active adapter is required.

Type of Display	Adapter Needed (sold separately)
HDMI	DisplayPort to HDMI 4K Audio / Video Converter (DP2HD4KS)
DVI	DisplayPort to DVI Adapter (DP2DVIS)
VGA	DisplayPort to VGA Adapter (DP2VGA2)

Visit www.StarTech.com for a range of USB-C video adapters, active DisplayPort adapters and cables.

Notes:

- The docking station lets you connect two 4K displays.
- Video adapters sometimes limit the maximum available resolution. Check the documentation of the video adapter to determine its maximum supported resolution.

Connect multiple Thunderbolt 3 displays in a daisy chain

You can also set up dual displays using multiple Thunderbolt 3 displays in a daisy-chain configuration.

Example: You can connect a Thunderbolt 3 display to the Thunderbolt 3 USB-C port port on the docking station. You can then connect another Thunderbolt 3 device, such as a second Thunderbolt 3 display, through the first Thunderbolt 3 display.

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Supported video resolutions

Thunderbolt technology supports both video and data throughput. However, it prioritizes video bandwidth to help ensure seamless display performance. The performance of the remaining dock functions depends entirely on the display configuration you used.

The docking station supports the follow maximum resolutions:

Number of Displays	Ports	Maximum Resolution
1	DisplayPort port	4096 x 2160p (60Hz)
1	Thunderbolt 3 USB-C port	4096 x 2160p (60Hz)
2	DisplayPort port and Thunderbolt 3 USB-C port	4096 x 2160p (60Hz)

- 3840 x 2160p resolution, found on most standard 4K monitors, is also a fully supported resolution.

- Depending on the configuration and the supported resolutions of your connected monitor(s), the docking station can support video resolutions lower than specified above.

- In a multi-display configuration, set the refresh rates on each of your connected monitors to the same values, otherwise your monitors might not properly display.

- Video output capabilities are dependent on the video card and hardware specifications of your connected host laptop.

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Bandwidth allocation

Thunderbolt technology carries video and data bandwidth, and it prioritizes video bandwidth to help ensure seamless display performance. The performance of the remaining dock ports (for example, the USB 3.0 ports) depends entirely on the display and I/O (input and output) configuration that you have used.

When multiple high-resolution displays are connected, the docking station needs to allocate additional bandwidth to the displays, and the extra bandwidth is reallocated from the other I/O ports on the docking station. In this situation there is less bandwidth available for the remaining ports (for example, the USB 3.0 ports).

Approximate download bandwidth allocation values:

Video and I/O Configuration	DisplayPort Resolution	Thunderbolt 3 USB-C Resolution	I/O Bandwidth Remaining
Data only (No Displays)	N/A	N/A	Download: 22Gbps Upload: 22Gbps
DisplayPort (Single Display - 4K)	4096 x 2160p (4K)	N/A	Download: 22Gbps Upload: 22Gbps
Thunderbolt 3 USB-C (Single Display - 4K)	N/A	4096 x 2160p (4K - 60Hz)	Download: 22Gbps Upload: 22Gbps
DisplayPort and Thunderbolt 3 USB-C (Two Displays - Dual-4K)	4096 x 2160p (4K)	4096 x 2160p (4K)	Download: 8Gbps Upload: 22Gbps

- The bandwidth values are approximate and depend on several variables including the number, type, resolution, and refresh rate of your connected display(s).

- When connecting a display to one of the Thunderbolt 3 ports, a USB-C adapter may be required, depending on the input.

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Troubleshooting

If you are experiencing issues, there are some quick tests that you can complete to narrow down the source of the issue.

Update your computer to use Thunderbolt 3

Visit http://thunderbolttechnology.net/updates and look for your computer in the list of affected computers. If your computer is listed, then you must update your computer for its Thunderbolt 3 ports to function properly. To update your computer, follow the instructions on the website or contact your manufacturer.

Verify that your components are Thunderbolt 3 compliant

1. Make sure that you are using Thunderbolt compliant cables. Thunderbolt 3 uses the same connector type as USB-C. If you are using a USB-C cable that is not Thunderbolt compliant, replace the cable with one that is compliant.

2. Make sure that the port on your computer is Thunderbolt 3 compliant. Thunderbolt 3 uses the USB-C connector type, but not all USB-C connectors are compatible with Thunderbolt 3. If you are using a USB-C port that is not Thunderbolt 3 compliant, switch to a port that is Thunderbolt 3 compliant.

Replace the Thunderbolt cable

• Use the Thunderbolt peripheral with a different cable that is Thunderbolt compliant.

Test the Thunderbolt peripheral

1. Use a second Thunderbolt peripheral, and see if it works. Ideally, the second peripheral is one that you know works in other setups. If the second peripheral works in the current setup, then there is probably an issue with the first Thunderbolt peripheral.

2. Use the Thunderbolt peripheral with a second setup. If it works in the second setup, then there is probably an issue with the first setup.

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