

i-tec TB4DUALDOCKPD Thunderbolt 4 USB-C Dual Display **Docking Station User Guide**

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i-tec TB4DUALDOCKPD Thunderbolt 4 USB-C Dual Display Docking Station



Please read the entire instruction manual carefully. Detailed manual is available on our website www.i-tec.pro/en in the tab "Manuals, drivers". In case of any issues, please contact our technical support at: support@itecproduct.com



www.i-tec.pro/en

Important note about 8K resolution: The docking station supports the resolution up to 8K (7680×4320/30Hz), but this resolution can only be set if supported by your laptop – Thunderbolt™ 3 must support DisplayPort 1.4. In case Thunderbolt™ 3 of your laptop only supports DisplayPort 1.2, the maximum resolution is just 5K 5120×2880/60Hz.

*Important notice about the USB-C port connection: The docking station is built on the Titan Ridge chipset and supports also the USB-C port connection, but it also must be supported by the laptop. USB-C is an open standard, which means that laptop manufacturers can freely customize the USB-C protocol. Unfortunately, this means that docking stations built on the Intel Titan Ridge chipset may not work properly on all devices with the USB-C port.

GLOSSARY

- Interface / port / connector / input / slot a place where two devices are physically connected.
- Chipset a semiconductor device in a laptop, tablet or PC controlling the function of a port.
- USB-C / USB Type-C / ThunderboltTM 3 is a new symmetric connector and standard, introduced by USBIF

in their specification USB 3.1. Windows 10 (Microsoft), macOS X (Apple) and Chrome OS and Android (Google) have introduced native support for this connector. It allows faster charging, energizing, doublefunction (a host but also a guest), support for alternative modes (DisplayPort, MHL, Thunderbolt) and error messaging using Billboard equipment.

- USB 3.1 / 3.0 / 2.0 a standard for USB interface / port for connection of various USB devices. Various USB devices can be connected to the docking station or adapter using the USB interface type A. USB type B is used for connecting the docking station or adapter to a laptop or tablet.
- HDMI / Display Port a standard for digital graphical interface / port for connection of monitors and other graphical display devices.
- LAN (Local Area Network) the local computer network is now the most popular Ethernet that achieves a theoretical transfer rate of up to 1 Gbit/s at the docking station GLAN / RJ-45.
- Audio designation for audio input (microphone) or output (earphones / loudspeakers).

SPECIFICATION

- 1x Thunderbolt™ 4 port for connection to a laptop
- Power Delivery: 96 W
- 2x Thunderbolt[™]4 port

Data

Video Port

- Video Ports: 1x HDMI
- Resolution: Thunderbolt[™] 4 with DisplayPort 1.4 support

1 monitor 1x HDMI/TB4 up to 8K/30Hz

2 monitors HDMI+TB4 or 2x TB4 up to 2x4K/60Hz

- Thunderbolt™ 3 with DisplayPort 1.4 support
 - 1 monitor 1x HDMI/TB4 up to 8K/30Hz
 - 2 monitors HDMI+TB4 or 2x TB4 up to 2x4K/60Hz
- Thunderbolt™ 3 with DisplayPort 1.2 support

1 monitor 1x HDMI/TB4 up to 5K/60Hz

2 monitors HDMI+TB4 or 2x TB4 up to 2x4K/60Hz

- USB-C with DisplayPort 1.4 support
 - 1 monitor 1x HDMI/TB4 up to 4K/60Hz
- USB-C with DisplayPort 1.2 support

1 monitor 1x HDMI/TB4 up to 4K/30Hz

- ThunderboltTM 4 / USB-C Dual Display Docking Station + Power Delivery 96W
 - 1x USB 3.1 port gen. 2 with fast charging support (BC 1.2)
 - 3x USB 3.1 port gen. 2
 - 1x Ethernet 2.5GLAN RJ45 port (Realtek RTL8156)
 - 1x SD slot
 - 1x 3.5mm Audio combo jack
 - 1x power input (20V/6.75A)
 - LED indication
 - Support for Kensington lock

- Thunderbolt™ 3 cable (70cm)
- OS: Windows 10/11, macOS and Linux with latest updates
- Product dimensions: 200 x 75 x 30 mm
- Product weight: 446 g

SPECIFICATION AND DESCRIPTION

Front panel:

- 1. SD Card Reader
- 2. USB 3.1 port gen. 2 with fast charging support (BC 1.2)
- 3. 3.5mm Audio combo jack
- 4. Thunderbolt[™] 4 data port / Power Delivery for connecting the dock to a laptop's Thunderbolt[™] 3/4 port or for connecting a Thunderbolt[™] 3/4 / USB-C device to the dock.
- 5. LED indication
- 6. ON/OFF switch to turn the docking station on and off



Rear panel:

- 7. Power input (20V/6.75A)

 External power supply exclusively for use with the TB4DUALDOCKPD.
- 8. HDMI 2.1
- 9. 2x Thunderbolt™ 4 data port
- 10. Ethernet 2.5GLAN RJ45 port (Realtek RTL8156)
- 11. 3x USB 3.1 port gen. 2



SYSTEM REQUIREMENTS

Hardware requirements: Device with a free Thunderbolt, USB4 or USB-C port

Power Delivery requirements: Device with a free Thunderbolt, USB4 or USB-C port with "Power Delivery" support

Video Output Requirements: Device with a free Thunderbolt, USB4 or USB-C port with "DisplayPort Alternate Mode" support

Operating System: Windows 10/11, macOS and Linux with latest updates

To play Ultra HD 4K/5K/8K video, the computer must be able to decode the video with its GPU. Especially for less powerful laptops, it is true that they can handle 4K/5K/8K video playback, but the result is not ideal (interruptions, video tearing).

INSTALLING THE DRIVERS

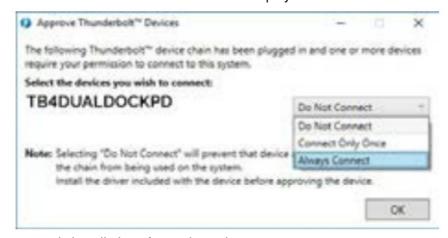
The docking station can be connected directly, the drivers are included in the operating system. For Windows 10, please make sure that you have the latest Thunderbolt™ 3 drivers from your laptop manufacturer installed in your computer.

HARDWARE INSTALLATION (CONNECTING THE DOCKING STATION TO LAPTOP / TABLET)

- 1. Turn on your laptop/tablet and connect the power adapter to the docking station.
- 2. Plug the power adapter of the docking station into a 110V/230V AC power supply.
- 3. Plug the Thunderbolt™ 4 cable into the Thunderbolt™ 4 port on the rear panel of the docking station.
- 4. Plug the other end into an available Thunderbolt™ 3/4, USB4 or USB-C* port on your laptop/tablet.
- 5. In Windows OS, enable a new Thunderbolt™ 4 device see image



6. In Linux, enable the new Thunderbolt™ 3 device. Must be displayed as Enabled



- 7. Subsequently, the automatic installation of ports in each system starts.
- 8. After finishing installation, we recommend that you restart the laptop / tablet.

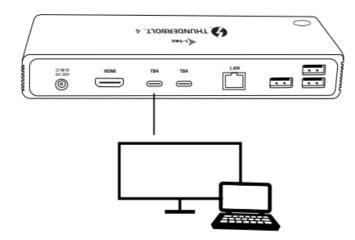
ThunderboltTM 4 / USB-C Dual Display Docking Station + Power Delivery 96W

In Windows, the LAN port appears in Start → Control Panel (View Small Icons) → Device Manager → Network Adapters as "Realtek RTL8153". Audio ports can be found in Start → Control Panel (View Small Icons) → Device Manager → Audio, Video and Game Controllers as "USB Advanced Audio Device" and/or according to the connected monitor (e.g. in Fig. "LG Ultra HD (Intel® Display Audio)").

The installed ports are shown in macOS X as "TB4DUALDOCKPD" in "About This Mac" \rightarrow "System Profiler" \rightarrow "Hardware" \rightarrow "Thunderbolt".

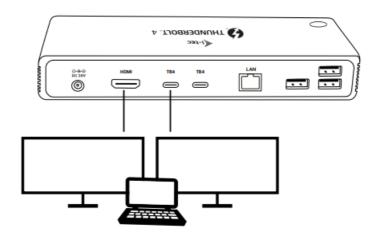
CONNECTING THE DISPLAYPORT MONITOR

Use an HDMI cable or Thunderbolt[™] cable to connect the monitor to the docking station. The monitor may flicker on the laptop/tablet during installation of the additional monitor, which is a standard condition. The dock supports a maximum of two monitors. Graphics interface: 1x HDMI and 2x Thunderbolt[™] 4



1 monitor connected via 1 DisplayPort cable – resolution up to 8K 7680×4320/30Hz 8K resolution is only supported if your laptop's Thunderbolt™ 3 connector supports DisplayPort 1.4.

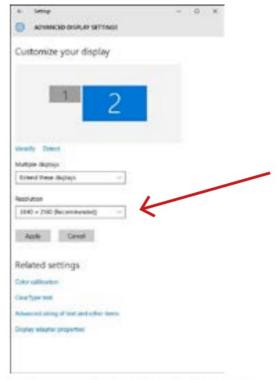
If the Thunderbolt™ 3 only supports DisplayPort 1.2, the maximum resolution is 5K 5120×2880/60Hz If Thunderbolt™ 3 only supports DisplayPort 1.2, the maximum resolution is 5K 5120×2880/60Hz



2 monitors connected simultaneously 2x DisplayPort, resolution up to 4K 4096×2160@60Hz The resolution, the frame rate and the maximum number of connected external monitors depends on the capabilities of the host PC/laptop.

USING THE DOCKING STATION IN WINDOWS

- 1. Right-click anywhere on the free screen and select View Settings
- 2. You will then see the settings for Display Resolution from Windows.



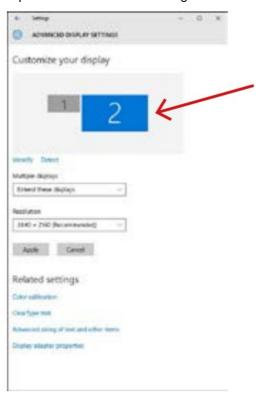
Display resolution in Windows 10

You can now make the Extend and Mirror/Duplicate settings:

- Extend mode: on the screen, select for Multiple monitors → Extend this view → OK.
- Mirror mode: on the screen, select Multiple monitors → Duplicate this view → OK.

Check the "Set this monitor as main" box to select the additional monitor as the main monitor.

Click and drag the second monitor to position it relative to the original monitor of your laptop/tablet as required.



Placement of one additional monitor in relation to the original laptop/tablet monitor

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Standby / **Hibernate mode and Video port** – when you activate the laptop/tablet from Standby / Hibernate mode, the primary (original) monitor is displayed, so we recommend using the one integrated with the laptop/tablet as the primary monitor so you can log back into the system.

Mirror mode – the additional monitor follows the parameters of the original monitor in the system, i.e. if you set Mirror mode and the original monitor has a resolution of 1920×1080, then the screen is transferred to the additional monitor at a maximum resolution of 1920×1080, even if you set it to a higher resolution. You can also easily control the monitors using the "Windows" + P keyboard option.



Control the monitor in Windows 10

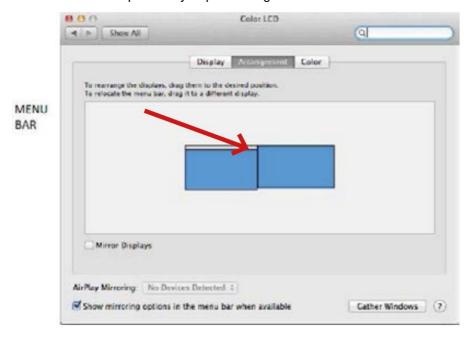
USING THE DOCKING STATION IN MAC OS

When you plug in your monitor, your Mac's screen will flicker, which is a standard condition. Once it has stabilized, you can make settings here: System Preferences-Monitors:



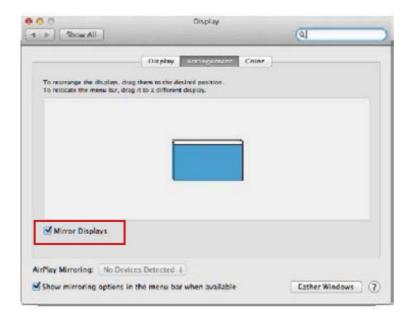
Under the Arrangement tab and in the default mode (Expand), click on the new monitor and drag it as needed relative to the Mac monitor. When you select Mirror Monitors, the mode changes to Mirror (the resolution of the monitors is automatically adjusted to their parameters and the highest possible resolution is set on both monitors). Deselect Mirror Monitors to restore the Expand mode.

Expand mode: The arrow indicates the possibility of positioning the connected monitor relative to the Mac monitor.



Extend Mode: In this mode, you can select the Main Monitor by dragging the Menu Bar.

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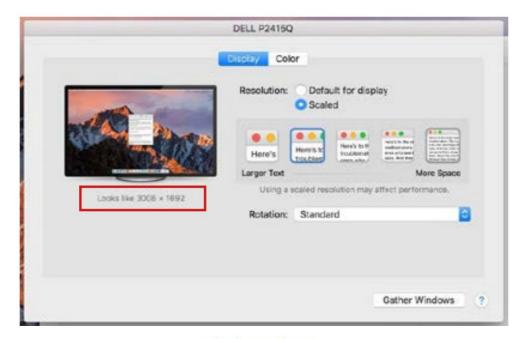


Mirror Mode: Can only be used if it is offered by a Mac.

You can choose the settings for the corresponding monitor Customized Resolution (offers usable resolutions), Rotation (Standard, 90°, 180°, and 270°), and Refresh Rate (if offered) by selecting Gather Windows. Depending on the monitor you are using, these settings are:



Display Option 1



Display Option 2

In Customized mode, click on the icon of your choice, the resolution will be described below the screen (here $3008 \times 1692 = 4 \text{K} \otimes 30 \text{Hz}$)

Closed display mode working on a connected external monitor when the Mac monitor is tilted is only possible when the Mac is powered and the mouse and keyboard are connected.

Most of the problems with screen refresh on the connected monitor after putting the Mac to sleep, after using the screensaver, after restarting the Mac, after turning the Mac off/on can be solved by disconnecting the Thunderbolt™ 3 dock cable from the Thunderbolt™ 3 port of the Mac and reconnecting it after about 10s. After that, please wait for all peripherals to finish connecting.

OTHER DOCKING STATION FEATURES

LAN Connection – GLAN RJ-45 port connects to your router/switch/hub and the internet, supports 10/100/1000 Mbps speeds

USB device connection – after connecting USB devices to the USB 3.0 port of the docking station (USB external HDD, USB keyboard, USB mouse, USB Hub, USB graphics adapter), these devices are used in a standard way. USBC devices e.g. external HDD, flash drive, graphics adapter can be connected via Thunderbolt™ 3 port.

Charging – The docking station supports charging of connected USB mobile devices such as smartphones, e-book readers, media players, navigation devices and tablets. Simply connect the device to be charged with the original cable to the USB port of the docking station.

Power Delivery Charging The dock has the ability to charge hosts up to 85W via the Thunderbolt™ 3 port. **Audio in Windows**

By default, the audio output automatically switches to the connected dock. You can check or adjust the default audio output in Control Panel-Sound

ThunderboltTM 4 / USB-C Dual Display Docking Station + Power Delivery 96W

Audio in macOS

The audio output device for listening via graphic output needs to be set/verified here: System Preferences-Sound Output-Set USB Advanced Audio Device.

The audio output device for simultaneous headphones and monitor can be selected in Open-Applications-Utilities-Setup Audio MIDI.app – click on the "+" at the bottom left-Create Multi Output Device and select the desired outputs from the options offered on the Multi Output Device.

Note: Most problems with the dock and connected peripherals can be resolved by disconnecting the dock's Thunderbolt™ 3 cable from the Thunderbolt™ 3 port of your laptop/tablet/Mac and reconnecting it after about 10s.

SAFETY INSTRUCTIONS

- Do not expose to extreme temperatures and air humidity.
- Use the device on flat surfaces this will prevent it from slipping and potentially causing damage to the product.
- Keep the user manual for future reference.

In co-operation with the service department:

- Check the functionality if the product receives any damage.
- Send the device back if it does not work in accordance with the user manual.

FREQUENTLY ASKED QUESTIONS

Available on our website www.i-tec.pro/en/ on the "FAQ" tab of this product.

EUROPEAN UNION ONLY

NOTE: MARKING IS IN COMPLIANCE WITH EU WEEE DIRECTIVE

This equipment is marked with the above recycling symbol. It means that at the end of the life of the equipment you must dispose of it separately at an appropriate collection point and not place it in the normal domestic unsorted waste stream. This will benefit the environment for all. (European Union only).

EU DECLARATION OF CONFORMITY

Manufacturer, Der Hersteller, Le fabricant, Fabricante, Produttore, Výrobce, Výrobca, Producent, Gamintojas, De fabrikant:

itec Technologies s.r.o., Kalvodova 2,

709 00 Ostrava – Mariánské Hory, Czech Republic

Určenie, Opcje, Ustatymas, Doel:

Product is determined for using in PC as equipment. uitrusting voor apparaten en als computeracces EC Directive 2014/30/EU, 2014/35/EU, 2009/125/ES, and 2011/65/EU

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply within the limits of 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. www.i-tec.pro/en

Documents / Resources



i-tec TB4DUALDOCKPD Thunderbolt 4 USB-C Dual Display Docking Station [pdf] User Gui de

TB4DUALDOCKPD Thunderbolt 4 USB-C Dual Display Docking Station, TB4DUALDOCKPD, T hunderbolt 4 USB-C Dual Display Docking Station

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