

Docking Stations Troubleshooting Guide

By The Targus DockTtor, November 2021

This document was written to provide Targus Customer Support with basic steps to complete when helping end user customers experiencing issues while using Targus connectivity devices, mainly Targus Docking Stations commonly called “docks”. End-Users and IT Departments may find it useful for diagnosing the inevitable issues discovered as platforms update and change (i.e. via OS updates).

This guide is not meant to be or supersede an installation or deployment guide, nor is it a how-to guide for the operation of Windows PC or other applicable platforms. However, it may contain instructions applicable to using these platforms.

It is highly recommended that anyone installing, diagnosing, troubleshooting, etc. Targus, whether in Customer Support or just interested in docking subscribe to or follow Targus Tech Talk <https://us.targus.com/blogs/discover-targus/tagged/tech-talk> to know when updates are available or to gather tips and tricks for using devices with popular Windows, Apple, Chrome, Android and Linux platforms.

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Basic Troubleshooting

The following are general troubleshooting steps often utilized for any electronics device and for all Targus connectivity devices with any OS or platform. They are reiterated here as too often they are overlooked.

- 1) Make sure all cable and port connections are good and that none are loose.
- 2) Be sure to use only the cables that came with the Targus device.
 - a. Many users will use adapters, that may have even worked in other configurations, that do not work reliably with Targus devices. In general, Targus does not recommend using adaptors, especially DisplayPort to VGA as these can often be intermittent.
 - b. Make sure USB cables, especially USB Type-C cables are compliant for the intended applications. Use only good quality USB 3.0 cables with Targus DisplayLink based USB 3.0/3.1 Gen 1/2 devices. Not all Type-C cables are compliant, especially for Power Delivery.
 - c. Connect using at least USB 3.0 as applicable. USB 2.0 Type-A connections, and cables, will function but may not fully perform as expected.
- 3) Use only the power supply that came with the dock/device.
 - a. Make sure that it is plugged-in to a known good power source.
 - b. Also, do not use an adaptor to bypass ground plug connections.
 - c. Check power, neutral and ground connections as power strips or adapters may be at issue. Also, tall building or UPS supplied can have floating power rails.
- 4) Use only the cables that came with the monitor(s) and peripherals being connected or are approved for use by their manufacturer.
 - a. Many cables may appear to function but not meet the requirements needed for best performance. Any many cables “fit” or “connect” and may even look alike but are not made for using in the application. This is especially true when using high speed monitors cables. For instance, many HDMI cables look alike but an HDMI 2.0 cable may be needed for high resolution speed applications. There are many HDMI 1.4 cables deployed and used with DVD, Set-Top Boxes, etc. that will not work for 4K graphics applications.
- 5) Be sure Windows is not updating, that all updates are applied, and the PC has been completely restarted. Targus is now recommending, and it is good security practice to restart daily. For instance, Windows Update may cause screens to disconnect and go black during an update.
 - a. After an update and associated reboot be sure the monitors are still connected, Extended or Mirrored, in the Display monitor properties.
 - b. Be sure the PC storage (HDD/SDD) is not nearly at 100% full. Just about anything over 90% will significantly affect performance if the dock/device functions with it at all.
 - c. Be sure memory or computer resources are not overly taxed. Close extra browser sessions and application not in use.

Targus DisplayLink Based USB Devices with Windows PC

Many users are under the impression that the USB connection can supply power, and it can for device charging i.e. phones, but not for the host, except in some USB Type-C applications. This section applies to the following dock models, including the ones with host power as indicated:

- ACP71 USB 3.0 with 19.5VDC PC host power cable/tip
- ACP77 USB 3.0 with 19.5VDC PC host power cable/tip
- DOCK171 USB 3.0 with 19.5VDC PC host power cable/tip
- DOCK177 USB 3.0 with 19.5VDC PC host power cable/tip
- DOCK120
- DOCK130
- DOCK150
- DOCK160
- DOCK180, Type-C USB 3.1 Gen 1 with host Power Delivery
- DOCK182, Type-C USB 3.2 Gen 1 with host Power Delivery
- DOCK190, Type-C and Type-A USB 3.1 Gen 1 with host PD and Legacy Power
- DOCK191, Type-C and Type-A USB 3.2 Gen 2 with host PD and Legacy Power
- DOCK192, Type-C and Type-A USB 3.2 Gen 2 with host PD and Legacy Power
- DOCK310, Type-C USB 3.2 Gen 1 with Host Power Delivery
- DOCK315, Type-C USB 3.2 Gen 1 with Host Power Delivery
- DOCK520, Type-C USB 3.1 Gen 1
- DOCK570, Type-C and Type-A USB 3.1 Gen 1 with host PD and Legacy Power

Most of the issues observed when using docks on Windows platforms can be solved with proper PC maintenance. This is not a complete guide to maintaining a PC, but the following are often applicable:

- 1) Be sure the latest graphics monitor adapter and USB host controller drivers are up to date per the manufacturer.
 - a. Windows Update does not necessarily provide these updates, especially Windows 7. These can be checked with most manufactures at support.OEM.com where OEM is the manufacturer of the PC i.e. support.dell.com. Many manufacturers also supply a utility, sometimes online, to assist with this.
 - b. Manufacturers often may also require a “Chipset Update”, “Thermal and Dynamic Platform” or even BIOS update for these functions to work correctly. If your DEVICES is not working as expected try updating all of the drivers and the BIOS per the manufacturer’s support site.
- 2) Install/Update the DisplayLink software.
 - a. This can be done using the validated version at www.targus.com and in some cases using the latest from www.displaylink.com or Windows Update. See Targusblog.com for the latest recommended version.

- 3) The ACP71, ACP77, DOCK171, DOCK177, DOCK190, DOCK192, and DOCK570 can supply host power if the power supply is connected correctly to the POWER IN connection and that the DC POWER out connection is connected to the PC.
 - a. Make sure the power switch is on and all connections are made and not loose.
 - b. For legacy tip power, make sure that the correct power tip is being used for the PC. Many tips look alike and may even “fit” in the PC, but the proper tip is required. A power tip compatibility tool is available under Support at <http://www.targus.com/us/tip-configurator> .
- 4) The DOCK180, DOCK182, DOCK190, DOCK191, DOCK192, DOCK310, DOCK315, and DOCK570 can supply Power Delivery on their Type-C connection but not all hosts with contract for Power Delivery (PDC). Be sure the host Type-C receptacle is Power Delivery Compliant. Note, Power Delivery on Type-C while associated is not to be confused with the USB-C port function.
- 5) These docks should always provide at least USB docking functionality for graphics, USB, Ethernet, etc. if the host has the DisplayLink software installed and is otherwise well maintained as mentioned above.
- 6) If none of the steps above resolve the issue(s), please download, extract, install, run, and then send me the resulting .ZIP file, or a link to it, from the DisplayLink Windows Support Tool (v.1.0.1.33) - October 2020 under “Support” at any of the dock's product pages i.e. https://cdn.targus.com/web/us/downloads/DisplayLink_Support_Tool_for_Windows.zip to your Targus representative.

Targus DisplayLink Based USB Devices with Other OS

This section applies to the following dock models, including the ones with host power as indicated:

- ACP71 USB 3.0 with 19.5VDC PC host power cable/tip
- ACP77 USB 3.0 with 19.5VDC PC host power cable/tip
- DOCK171 USB 3.0 with 19.5VDC PC host power cable/tip
- DOCK177 USB 3.0 with 19.5VDC PC host power cable/tip
- DOCK120
- DOCK130
- DOCK150
- DOCK160
- DOCK180, Type-C USB 3.1 Gen 1 with host Power Delivery
- DOCK182, Type-C USB 3.2 Gen 1 with host Power Delivery
- DOCK190, Type-C and Type-A USB 3.1 Gen 1 with host PD and Legacy Power
- DOCK191, Type-C and Type-A USB 3.2 Gen 2 with host PD and Legacy Power
- DOCK192, Type-C and Type-A USB 3.2 Gen 2 with host PD and Legacy Power
- DOCK310, Type-C USB 3.2 Gen 1 with Host Power Delivery
- DOCK315, Type-C USB 3.2 Gen 1 with Host Power Delivery
- DOCK520, Type-C USB 3.1 Gen 1
- DOCK570, Type-C and Type-A USB 3.1 Gen 1 with host PD and Legacy Power

MacOS X MacBooks

- 1) Install/Update the DisplayLink Manager software.
 - a. This can be done using the validated version at www.targus.com and in some cases using the latest from www.displaylink.com. See <https://us.targus.com/blogs/discover-targus/tagged/tech-talk> for the latest recommended version.
- 2) Make sure all updates recommend by Apple are completed and the MacBook is restarted.
 - a. There is no power tip for the MacBooks with the MagTip for power so the DOCK177, DOCK171, ACP71, and ACP77 will not power a MacBook host.
- 3) **macOS functionality often varies greatly by MacBook model** and is different from Windows, See <https://us.targus.com/blogs/discover-targus/tagged/tech-talk> for known issues and tips for using Targus devices with MacBooks.
- 4) If none of the steps above resolve the issue(s), please download, extract, install, run, and then send me the resulting .ZIP file, or a link to it, from the DisplayLink macOS X Support Tool (v.5.5.4095) - August 2020 under "Support" at any of the dock's product pages i.e. https://cdn.targus.com/web/us/downloads/DisplayLink_Support_Tool_for_Windows.zip to your Targus representative.

Chrome OS Chromebooks

- 1) **Make sure Chrome is up to date and is restarted.**
- 2) There is no special software needed for Chrome OS version 51 and above, but Chromebook functionality varies on vendor implementation and internet connection speed.
- 3) The ACP71, ACP77, DOCK171, and DOCK177 can supply host power if the power supply is connected correctly to the POWER IN connection and that the DC POWER out connection is connected to the PC.
 - a. Make sure the power switch is on and all connections are made and not loose.
 - b. Make sure that the correct power tip is being used for the Chromebook. Many tips look alike and may even “fit” in the Chromebook, but the proper tip is required. A power tip compatibility tool is available under Support at <http://www.targus.com/us/tip-configurator>.
- 4) The Targus docks with Power Delivery will supply host power in accordance with USB Type-C Power Delivery at several voltage levels if the host is USB Type-C PD compliant.

Android OS Tablets and Phones

- 1) The DisplayLink Presenter application available from the Google PlayStore must be installed.
- 2) Targus docks will establish a PD contract with USB Type-C PD compliant tablets and phones.
- 3) If none of the steps above resolve the issue(s), please contact Targus to RMA the dock under warranty.

Ubuntu and Linux PC

- 1) Ubuntu is the only Linux build validated by Targus.
- 2) Other Linux builds are supported as shown in web forums but Targus cannot guarantee DEVICES usage with them.
- 3) The ACP71, ACP77, DOCK171, and DOCK177 can supply host power if the power supply is connected correctly to the POWER IN connection and that the DC POWER out connection is connected to the PC.
 - a. Make sure the power switch is on and all connections are made and not loose.
 - b. Make sure that the correct power tip is being used for the PC. Many tips look alike and may even “fit” in the PC, but the proper tip is required. A power tip compatibility tool is available under Support at <http://www.targus.com/us/tip-configurator>.
- 4) The Targus docks with Power Delivery will supply host power in accordance with USB Type-C Power Delivery at several voltage levels if the host is USB Type-C PD compliant.
- 5) If experiencing issues with Ubuntu Linux and Targus devices, please download, extract, install, run, and then send me the resulting .ZIP file, or a link to it, from the DisplayLink Linux Support Tool (v.5.2.1230) – March 2019 under “Support” at any of the dock's product pages i.e. https://cdn.targus.com/web/us/downloads/DisplayLink_Support_Tool_for_Windows.zip to your Targus representative.

Targus USB-C Alt. Mode Devices

The Targus DOCK410, DOCK411 DOCK412, DOCK430, and DOCK435 are USB Type-C DisplayPort Alternate Multi-Function Mode docking stations.

- 1) **Make sure all updates recommend by the host's manufacturer are installed and the host is restarted.**
 - a. There is no (DisplayLink) software needed with USB-C Alt. Mode devices i.e. DOCK4XX.
- 2) The Targus docks with Power Delivery and Power Delivery Pass-Thru will supply host power in accordance with USB Type-C Power Delivery at several voltage levels if the host is USB Type-C PD compliant.
 - a. The DOCK410 supports USB Type-C Power Delivery to 60W at several voltage levels if the host is USB Type-C PD compliant. The DOCK412 support Type-C Power Delivery Pass-Through up to 60W. The DOCK411 does not support PD or PD Pass-Through. The DOCK430 and DOCK435 support up to 85WDC PD.
- 3) The DOCK4XX is compatible with USB Type-C DisplayPort Alternate Mode and other USB Type-C MHL/HDMI and other graphics Alternate Modes including Thunderbolt host ports. Refer to the manufacturer to determine what the host USB Type-C port(s) support.
 - a. It is not compatible with USB 3.1 Gen 1 or Gen 2 USB hosts, only Alternate Mode USB-C.
 - b. It will not work with USB 3.0 or USB 2.0 Type-A ports and cannot be converted to them.
 - c. MacBooks do not support DisplayPort Multi-Streaming Transport (MST) and therefore do not support dual Extended display monitors like many Windows PC do, see <https://targusblog.com/2016/11/16/macbook-doesnt-support-multi-stream-transport/>. Note the DOCK1XX/3XX (recommended) and others above do support a single connection to MacBooks and will support dual extended monitor displays.
- 4) The DOCK410 can supply host power in accordance with USB Type-C Power Delivery to 60W at several voltage levels if the host is USB Type-C PD compliant.
 - a. It may establish a PD contract with host that require higher than 60W but this varies widely and must be validated by the users.
 - b. It will establish a 60 PD contract with the 87W MacBook
- 5) If none of the steps above resolve the issue(s), please contact your Targus Representative.

Targus Thunderbolt Devices

At the time of this writing many inconsistencies with the various Thunderbolt versions and implementations exist.

- 1) **It is extremely important to make sure all updates recommend by the host's manufacturer are installed and the host is restarted.** With Thunderbolt these often-including Thunderbolt Firmware and PC BIOS updates that affect other connectivity technologies. Be sure to update anything the manufacturer recommends and restart both the client and dock often.
- 2) There is no DisplayLink software needed for Thunderbolt operation.
- 3) If none of the steps above resolve the issue(s), please contact your Targus Representative.
- 4) The DOCK220 and DOCK221 are 85WDC PD, the DOCK222 is 100WDC PD2 compliant (compatible with PD3).