

WORKAROUNDS FOR FAILURES OF USB 2 DEVICES ATTACHED TO USB 3 PORTS

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SUMMARY

USB 2 devices sometimes fail when attached to USB 3 ports in "Windows..", Mac "OS X", and Linux computers.

There are two workarounds for this problem:

Workaround 1: Use a USB 3 cable that is shorter than 5 feet in total length.

Workaround 2: Use a powered USB 3 hub at the equipment end of the USB cable.

TOPICS

- Examples of USB 2 Devices Failing When Attached to USB 3 Ports
- Two Workarounds
- Details of the Two Workarounds

EXAMPLES OF
USB 2 DEVICES
FAILING WHEN
ATTACHED TO
USB 3 PORTS

Examples of USB 2 Devices Failing..

- We have discovered that USB 2 devices fail when attached to USB 3 ports a lot more than advertisers and the USB.org proponents claim. Here are some problems that we have encountered with USB 3 ports in "Windows..", Mac OS X, and "Linux" computers:

Examples of USB 2 Devices Failing..

(continued)

- In a Windows computer:
You attach a USB 2 device to a USB 3 port and the device never shows up in "Devices and Printers" or "Windows Explorer" (= "File Explorer" in "Windows 8" and "Windows 8.1").

Examples of USB 2 Devices Failing..

(continued)

- In a Mac "OS X" computer:
You attach an external USB 2 hard drive to a USB 3 port with a 6-foot USB2 or USB 3 cable and the computer fails to recognize the external hard drive.

Examples of USB 2 Devices Failing.. (continued)

- See <http://help.elgato.com/customer/portal/articles/1020245-usb-2-0-devices-may-have-problems-connecting-to-mac-usb-3-0-ports>

Examples of USB 2 Devices Failing..

(continued)

- You attach a USB 2 device to a USB 3 port and the USB device works for a while and then it quits working. If you unplug the USB device and then plug it back it, it works for a while and then it quits working again.

Examples of USB 2 Devices Failing..

(continued)

- Definition:
"USB 2--USB 3"
shall mean
"a USB 2 device attached to a
USB 3 port".

WORKAROUNDS FOR USB2--USB 3 FAILURE

Workarounds for USB 2--USB 3 Failure

- Workaround 1:
Use a total cable length of 5 feet or less
- Workaround2:
Use a powered USB 3 hub at the equipment end if you have a total USB 3 cable length of greater than 5 feet

DETAILS OF WORKAROUND 1

Details of Workaround 1

- The official specification for USB 3 does not specify a specific maximum cable length. It is generally accepted that the maximum cable length for a USB 3 port is 3 meters (=9 and 8/10 feet).

Details of Workaround 1 (continued)

- In contrast, the USB 2 specification specifically states that the maximum cable length for a USB 2 port shall not exceed 5 meters (=16 and 4/10 feet).

Details of Workaround 1

- Some but not all USB 2--USB 3 failures can be attributed to exceeding the 9 and 8/10 foot maximum cable length for USB 3 ports.
- However, you can usually fix a USB 2--USB 3 failure by reducing the total cable length to 5 feet or shorter.

Details of Workaround 1

- However, we have experienced situations where the total cable length was between 6 feet and 9 feet and we still had a USB 2--USB 3 failure.

In most of these cases, we resolved the USB 2--USB 3 failure by reducing the total cable length to 5 feet or shorter.

Details of Workaround 1

- In some cases, we had to use a USB 3 cable of less than 1 foot in length before the USB 3 equipment would work.

DETAILS OF WORKAROUND 2

Details of Workaround 2

- When USB2--USB 3 fails, you can use a powered USB 3 hub at the equipment end to resolve the problem.
- Using a powered USB 3 hub will let you have a USB 3 cable distance of up to 10 feet.

Details of Workaround 2 (continued)

- However, this expensive "trick" usually will not work if your total cable length is longer than 10 feet.
- If you need to go farther than 10 feet, you need to use a second USB 3 hub or a USB 3 repeater.

Details of Workaround 2 (continued)

- Here are some powered USB 3 hubs that we have used successfully as workarounds for USB 2--USB 3 failure:

Details of Workaround 2 (continued)

- Tripp-Lite Model U360-004-R:

USB 3.0 Cable
Included!

Cable USB
3.0 incluido

Cable USB
3.0 inclusa

TRIPP-LITE

Noteables.
complementing your life

- Connect up to 4 USB devices from a single USB port
- 10 times faster than USB 2.0, with transfer rates up to 5 Gbps
- Backwards compatible with USB 2.0
- Plug-and-play; driver automatically installs
- Self-powered; external power supply provided for use with energy-consuming devices
- Lifetime limited warranty

Super Speed
USB 3.0 Hub—
4-Port

Hub USB 3.0 de Súper
Velocidad—4 Puertos

Bloc USB 3.0 haute vitesse
à 4 ports

USB
REVERSE SIDE OF

TRIPP-LITE

SUPER SPEED USB 3.0 HUB

Model: U380-004-R

To achieve maximum performance,
upgrade your hub using the latest
firmware from Tripp Lite's website.

Model/Modelo/Modelo : U380-004-R

USB 3.0 Cable
Included!

Cable USB
3.0 Incluido

Câble USB
3.0 inclus

TRIPP-LITE

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Super Speed USB 3.0 Hub— 4-Port

Hub USB 3.0 de Súper
Velocidad—4 Puertos

Bloc USB 3.0 haute vitesse
à 4 ports

USB
UNIVERSAL SERIAL BUS

USB 3.0 Devices



DV



USB Enclosure USB Enclosure



SuperSpeed (5 Gbps)
to transfer files



Notebook

**1-Year Limited
WARRANTY**

See website for details.

Garantía por 1 años.

Vea el sitio web para detalles.

Garantie de 1 ans.

Voir le site web pour les détails.



TRIPP-LITE

1111 West 35th Street, Chicago, IL 60609 USA
www.tripplite.com/support



Model/Modelo/Modèle : U360-004-R

Details of Workaround 2 (continued)

- See

http://www.amazon.com/Usb-3-0-Superspeed-Port-Hub/dp/B00DG5SF80/ref=sr_1_2_3?ie=UTF8&qid=1393718158&sr=8-23&keywords=tripp-lite+usb+3+hub

Details of Workaround 2 (continued)

- Sedna model SE-USB3-HUB-304A:



SE-USB3-HUB-304A

USB 3.0 4 port Hub, Orange & Black



4 8 9 5 1 3 5 7 0 2 9 7 6

Details of Workaround 2 (continued)

- See

<http://www.newegg.com/Product/Product.aspx?Item=9SIA1JM0R64755>

Details of Workaround 2 (continued)

- Koutech model IO-HU730:

7 **seven**
USB 3.0 Ports with power switch



480 Mbps
800 Mbps
5 Gbps ▶



KOUTECH

IO-HU730



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