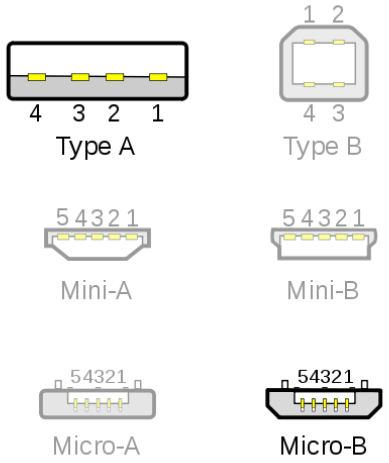
DUO Troubleshooting

As with any device, sometimes the DUO may not be recognized by your system. There are several reason why this may be which we outline below including common solutions. Please also consider posting a thread on our discussion forums if you are unable to resolve your issue.

USB Cable/Ports

It is very important that you use a proper USB cable with USB 2.0 powered USB port. We recommend first plugging in the cable to your device and then into host computer, being cautious as the USB ports are delicate. If the wrong cable or port is used the bus can be underpowered resulting in instability. The DUO uses a `Micro-B Type` connection with a standard `Type A` being used for the host device, these two types are highlighted below.

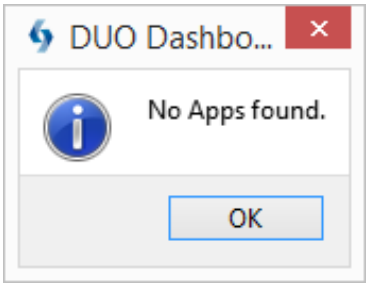


Windows

Specifics for troubleshooting on Windows Platforms

The DUO Platform Installer is signed and secured with common practices within the Windows environment. It is recommended that you have a valid installer file by comparing the checksums of the file with one from our website. After you have verified you files and installed check to see if your device is recognized by using one of the methods below.

No Applications Found



Problem: This Dashboard error is a result of no devices or their supported applications being accessible.
Solution: Resolve this by verifying your device is recognized by the system and the application has proper access.

No Devices Found

Problem: This Dashboard error is a result of no devices being registered with the host operating system.
Solution: Resolve this by verifying your device is recognized and try re-plugging each side of the USB connection.

Missing DLLs

"MSVCP100.DLL", "MSVCP110.DLL" or "MFC110U.DLL missing"

Problem: The Dashboard requires specific Microsoft runtimes to function properly, these should be automatically installed upon install.
Solution: To fix the issue you may install the latest Microsoft Visual C++ 2012 and 2013 redistributable packages. You can download these packages from Microsoft website or find them included in the DUO Platform Installer.

Device Not Recognized

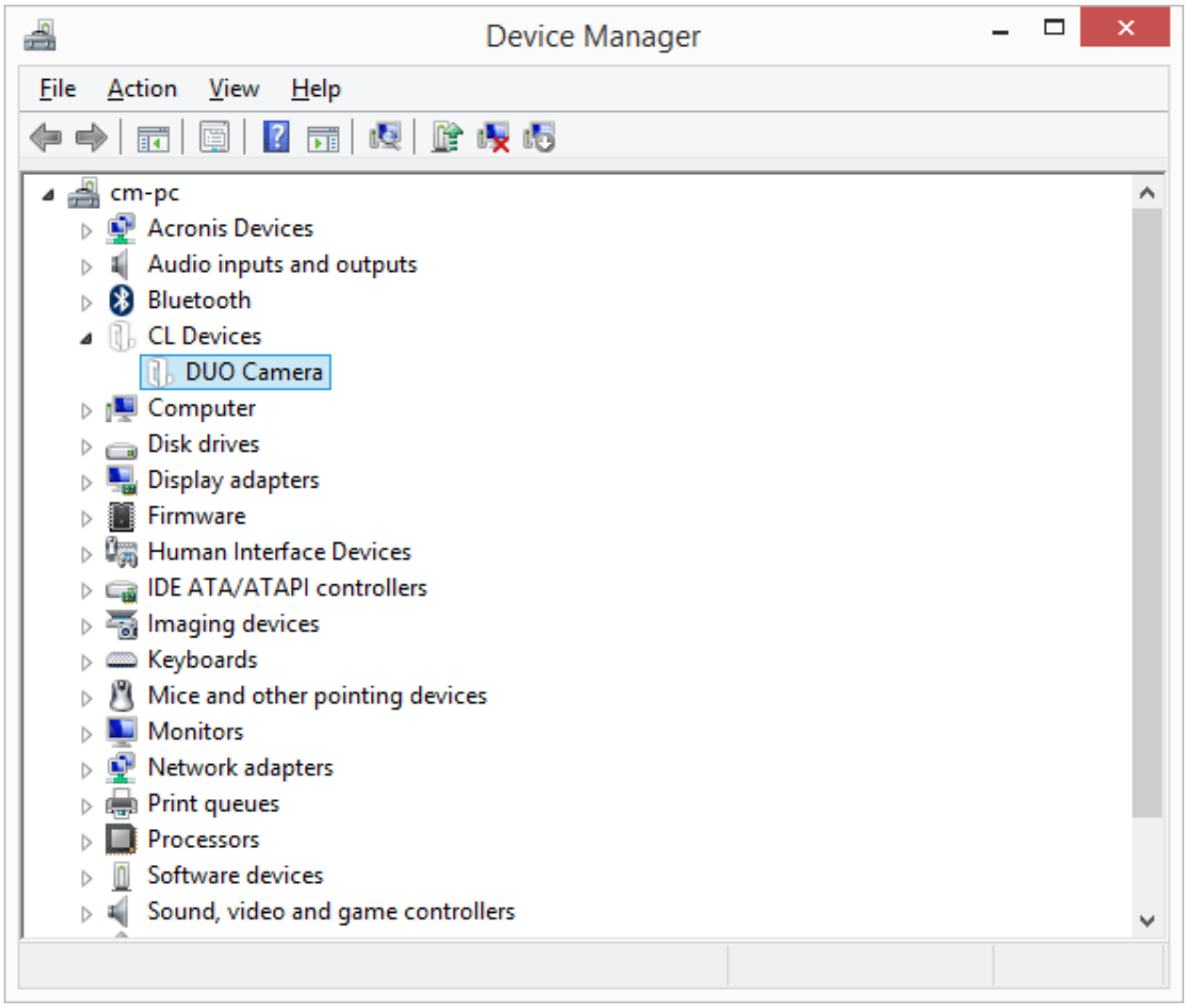
Problem: There are several reasons why this could happen, the most likely cause is that your device does not have a proper connection to the host device. This can be caused by several factors; using an improper cable (not validated for USB 2.0), using a hub between the device and the host computer or worst case your device could have a malfunctioning controller, either on the device or host.

Solutions - Here's a quick tips when troubleshooting:

- Remove any USB hubs or splitters.
- Test with alternative cables/ports.
- Try more than 1 device - use another host device.
- Disable the built-in USB and install a USB add-on card.
- Verify your USB interfaces are installed at BIOS and OS level.
- Edit your start-up configuration files and verify requirements.

Verifying Driver Installation

Verify with Windows Device Manager, After the device is plugged in, you can do this by going to `Start > Control Panel > Device Manager` After launching the Device Manager your device should show up something like is shown in the image below. Also you can right click on the `DUO Camera` to get more options and details.



Advanced Debugging

On Windows we recommend using the `devcon.exe` utility. It ships with Windows Driver Kit. Select just the Tools in the installation wizard if you do not need the rest of the kit. Refer to The DevCon command-line utility functions as an alternative to Device Manager for specific commands.

Get started by typing the following command:

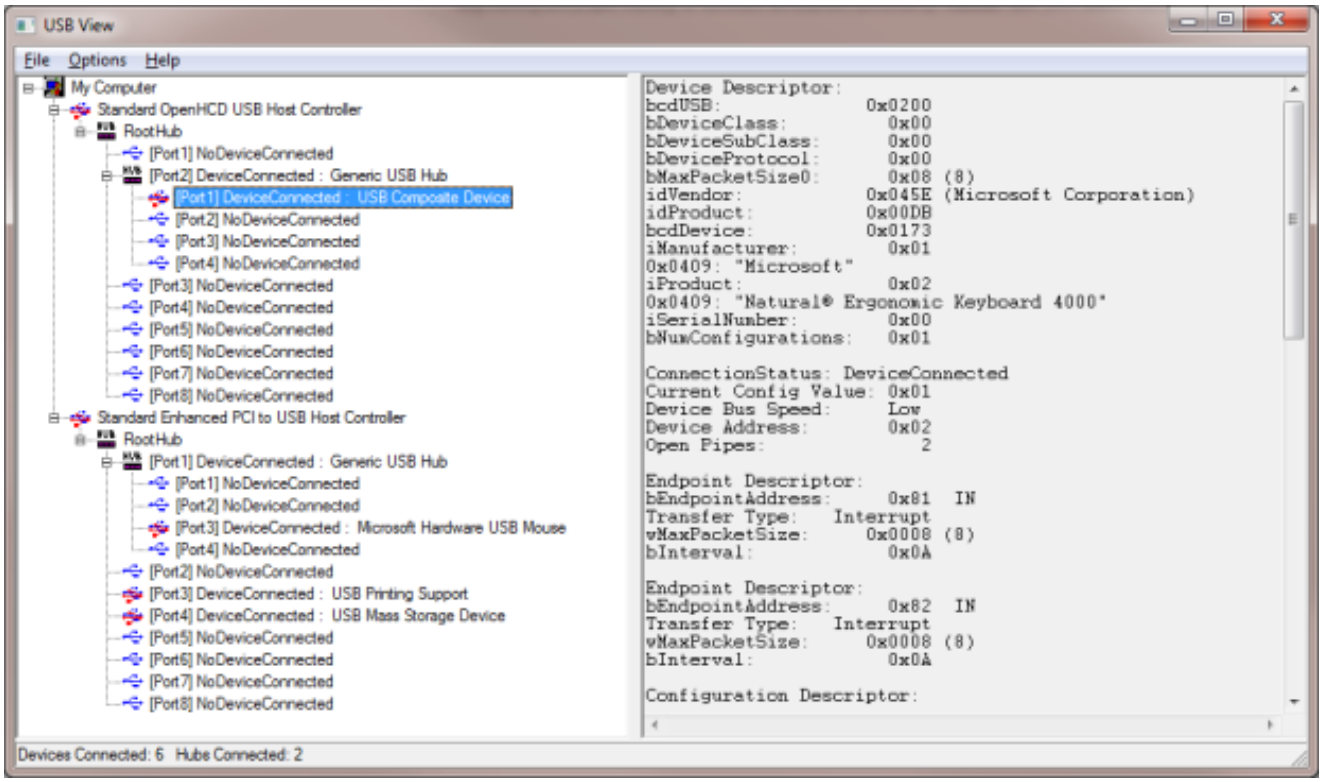
```
devcon hwids *duo*
```

This should output something like:

```
NUM\PORT\ID
    Name: CL DUO Device
    Hardware ID's:
        ...
1 matching device(s) found.
```

USB View

Alternatively you can use lightweight debugging tools such as USB View from Microsoft which allows for in depth analysis of USB interaction.



Resources

External Links

- Tips for Troubleshooting USB Devices on Windows
- Advanced troubleshooting tips...
- Using USB View for Windows

Linux

Specifics for troubleshooting on Linux Platforms

We provide a highly optimized kernel module driver for device access on Linux based systems. Linux has low level access to the interfaces and most distributions provide commands which are helpful when debugging USB devices. To make use of all the features of this program, you need to have a Linux kernel which supports the /proc/bus/usb interface (e.g., Linux kernel 2.3.15 or newer).

For more advanced troubleshooting and references review view the DKM article.

Linux Debugging

To get started type the following command:

```
lsusb
```

This will output similar to:

```
Bus 004 Device 002: ID 0930:6532 DUO Device
Bus 004 Device 001: ID 0000:0000
Bus 003 Device 001: ID 0000:0000
```

To get verbose output type the command:

```
lsusb -v
```

To get your versions of kernel use this command:

```
uname -r
```

Linux Common Issues

If you are having issues compiling or installing the module review the following problems:

Problem: Permission denied error or app does'nt run
Solution: Make sure the folder and files you are operating on exists and you are running the command with `sudo`

Problem: Module does not compile properly
Solution: Verify Makefile matches installed kernel headers, set KERNELDIR to a valid path such as `/usr/src/linux-headers-3.XX.0-XX-generic`

Problem: Error using insmod `Could not insert module duo.ko: File exists`
Solution: The module is already installed, try unloading it and reloading.

Problem: Error using insmod `Could not insert module duo_driver.ko: Invalid module format`
Solution: Verify you are compiling against the proper kernel headers.

Problem: Camera does not show (Could not allocate DMA memory for frame buffer)
Solution: Use `dmesg` to look for any logged errors and make sure system has enough memory available.

Problem: Dashboard Application does not run
Solution: Check that you have a valid `DashboardSettings.cfg` with valid license and settings. Verify that you have all requirements install properly.

Mac

Specifics for troubleshooting on Mac OS X Platforms

From the system menu `Apple > About This Mac > More Info > System Report > Hardware and USB` to list all USB devices connected. Unlike Windows, OS X does not require a driver but still should be recognized. For furthered troubleshooting here are some command-line diagnostics that can be run in the Terminal.

Get started by typing the following command:

```
system_profiler SPUSBDataType
```

Another potential command that could be helpful is:

```
sudo dmesg | more
```

Alternatively you can debug further by logging.

```
grep USB /var/log/system.log | more
```

Apple provides great further documentation for developers who need to gain insight on devices.

Related

- DUO Installation
- DUO Calibration
- DUO Developers
- DUO Devices
- DUO Downloads