

Known Issues and Workarounds

Issue: The system encounters stability problems when simultaneously attaching a large number of Phidgets.

Affected Operating Systems: Linux

Unsupported third party Phidget drivers are included in most current Linux distributions. These drivers can cause the kernel to hang if a large number of certain Phidgets (such as the PhidgetInterfaceKit) are plugged in.

Solution: The third party drivers can be safely uninstalled. You can remove them with the following command:

- `find /lib/modules/ | grep phidget | xargs sudo rm`

Issue: A limit to the number of attached Phidget USB devices on a single computer.

Affected Operating Systems: Linux

Under the Linux operating system, there is a limit to how many Phidgets that can be reliably connected to a single USB controller. The problem usually arises when many Phidgets and USB devices share a hub and are all plugged in at once. This is due to a limit on the number of USB interrupt transfers that can be handled by the USB driver during a given time frame. Typically, eight Phidget USB devices can reliably share a single controller, although this number will be reduced if other devices such as keyboards and mice share the bus. This problem does not occur on Windows.

Workaround: Additional devices can be plugged into the computer as long as they do not share the same controller. Typically, splitting the load across different controllers (such as between the front and back USB ports found on some computers) will alleviate the problem. Also, reducing the polling rate of other non-Phidget devices sharing the hub can help free interrupt transfer bandwidth for Phidgets to use. Beginning with version 2.1.6 of the Phidget21 library, it is handled by scaling back the read rate (which should still be fine for most users).

This issue only affects older low-speed USB Phidgets. Most current Phidgets use full-speed USB.

Issue: Installing .NET 2.0 on Windows 2000.

Affected Operating Systems: Windows 2000

To install the Phidget Framework on Windows 2000 systems, the .NET 2.0 framework is required. Also, although not explicitly required to use Phidgets on a Windows system, Phidgets under the .NET languages can use .NET 2.0.

Solution: The Microsoft .NET Framework Version 2.0 Redistributable Package for (x86) and (x64) systems is freely available from www.microsoft.com. You will need to upgrade to at least Windows 2000 Service Pack 3 for the (x86) version.

Issue: A corrupt installation fails on removal or repair.

Affected Operating Systems: Windows

Solution: In Windows, if the normal uninstall fails then the Phidget Framework can be manually uninstalled by following these steps:

1. Delete C:\Program Files\Phidgets\
2. Remove the Phidgets key from the Registry [-HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\PhidgetWebservice21].

In most cases this is enough to get the installer working again. If you need to remove all traces of the Phidgets libraries manually without using the uninstaller:

1. Shut down any programs using the Phidget libraries, including the webservice and the Phidget Control Panel.
2. Unregister the COM library: `regsvr32 /u "C:\Program Files\Phidgets\Phidget21COM.dll"`
3. Remove Phidget21.NET and Policy.2.1.Phidget21.NET from C:\Windows\Assembly\
4. Delete 'C:\Documents and Settings\All Users\Application Data\Phidgets' (WindowsXP) or 'C:\Users\All Users\Phidgets' (Vista).
5. Delete C:\Windows\system32\phidget21.dll
6. Delete Phidgets from the start menu
7. Delete C:\Program Files\Phidgets
8. Search for and remove keys mentioning Phidgets from the registry in the following locations:
 - [HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\]
 - [HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Installer\Products\]
 - [HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NETFramework\AssemblyFolders\Phidgets Inc]
 - [HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Run\Phidget21Manager]
 - [HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Installer\Assemblies\Global\]
9. Reboot

NOTE: You can go through the registry and purge any other keys mentioning Phidgets if you still have problems, but at this point you should be able to reinstall under most cases. There will also be keys relating to the installer, the .NET library and the COM library, but they should not interfere with anything.

Issue: Some Logitech software prevents communication with Phidgets

Affected Operating Systems: Windows

Old Logitech drivers or software will sometimes mistakenly claim Phidget devices when waiting on some hardware to be connected. When this happens, the device shows up in the Phidget Control Panel at start up but examples and programs are unable to make a connection to the Phidget. This is known to occur with Logitech QuickCam and Force Feedback Mouse software.

Solution: Try shutting the offending Logitech application down or kill its process in the task manager when using Phidgets.

Issue: Event data is sporadic/slow/clumped over the webservice

Affected Operating Systems: Windows

Windows implements 200ms delayed ACKs for network traffic. When traffic is one-way only - as it is with event data, the data will all arrive in clumps every 200ms because of delayed ACKs. This can be a great drawback for application which rely on low latency event data over the network. (source: <http://support.microsoft.com/kb/214397>)

This delayed ACK behavior can be disabled in windows to decrease event latency as documented here: <http://support.microsoft.com/kb/328890>

In the future, the Phidgets library may implement this differently, but so far we have been unable to match the performance achieved by disabling delayed ACK.