

Phidget Installation/Distribution Information

For Windows Only

Overview

For most Phidget developers, the installation of `Phidget21.msi` will satisfy all API requirements with no additional action needed.

If an application has been written against the Phidget APIs with the intent to be distributed and you choose not to use `Phidget21.msi` because you want a unified installer, or do not want to rely on .NET 2.0, you may wish to directly distribute Phidget library files outside of our installer.

Phidget libraries are under active development. If you do not choose to use `Phidget21.msi` or some future Phidget library installer, please be sure to update all components at the same time.

Phidgets are supported in Windows 2000, Windows server 2003 (32-bit and 64-bit), Windows XP (32-bit and 64-bit), Windows Vista (32-bit and 64-bit), and Windows 7 (32-bit and 64-bit).

Phidget21.msi

`Phidget21.msi` is the default way to install support for Phidgets on Windows. This msi file installs and registers C, COM, .NET and Java libraries. It installs The PhidgetWebService as well as a Windows service for controlling the PhidgetWebService. The `Phidget21.msi` file also installs the `Phidget21Manager` application, which runs in the system tray by default at startup.

For developers using Phidgets, installing `phidget21.msi` is generally the best way to get a fully functional and useful environment for developing and using Phidgets.

However, there are times when the full `phidget21.msi` distribution is not warranted - ie when distributing a solution involving Phidgets to clients, when installation of the .NET Framework 2.0 is not desired, etc.

In these cases, distribution of individual library components is the best course.

Phidgets Components

The following is a brief explanation of every file that is distributed by the `Phidget21.msi` installation package, where it is installed and what it depends on.

- **phidget21.dll**

- C Runtime library, required by all other higher level libraries, as well as applications written directly against the C API (native C, native C++, Matlab, etc.).
- Installed into the System Folder (usually `c:\windows\system32`), and the Application folder (by default `c:\Program Files\Phidgets`).
- This library relies only on standard Windows components (as of the Nov. 7 2007 release - earlier releases depended on the Visual Studio 2005 C++ runtime),

- **phidget21.lib**

- Import library for `phidget21.dll`
- Installed into the Application folder (by default `c:\Program Files\Phidgets`).
- Used for load-time dynamic linking against the `phidget21.dll` library. This is the standard way to code against the `phidget21` C API.

- **phidget21.h**

- Header file for `phidget21.dll`
- Installed into the Application folder (by default `c:\Program Files\Phidgets`).
- This contains definitions for all of the `phidget21` C API functions, structures, etc. needed to code against the C API.

- **Phidget21COM.dll**

- COM (Component Object Model) library.
- Used by Visual Basic 6, VBA, VBScript, Labview, Delphi, etc.
- Installed into the Application Folder and registered for this location.
- This library relies only on standard Windows components, and `phidget21.dll`.

- **Phidget21.NET.dll**

- .NET 2.0 (CLR) library.
- Used by any .NET languages (C#, Visual Studio

.NET, ASP.NET, managed C++, etc.).

- Installed into the GAC (Global Assembly Cache) (usually c:\windows\assembly) and the Application Folder (by default c:\Program Files\Phidgets).
 - The library installed into the GAC is used by any compiled .NET applications that reference this library - they will find the version in the GAC before any other version (even if the library as exists in that application's folder).
 - The library installed into the Phidgets Application folder is for development. This library shows up the the 'Add Reference' dialog in Visual Studio - in the '.NET' tab.
 - This library relies on the .NET Framework 2.0. If this is not installed, the msi will direct you to install it before continuing. Installing the .NET Framework 2.0 is not optional.
 - This library requires Visual Studio 2005 for development. Visual Studio 2003 support is provided via a .NET 1.1 library. It also relies on phidget21.dll, from which it imports most of its functionality.
- **Policy.2.1.Phidget21.NET.dll**
 - Policy assembly for Phidget21.NET.dll
 - This is installed into the GAC and directs any programs compiled against version 2.1.0 or higher of Phidget21.NET.dll to use the most recent installed version - so that these programs will not have to be recompiled with each bug fix or feature update from Phidgets Inc.\
 - **Phidgte21.NET.XML**
 - XML Documentation file for Phidget21.NET.dll
 - Installed into the Application folder (by default c:\Program Files\Phidgets).
 - This provide the IntelliSense in-line documentation for the Phidget21.NET library in Visual Studio. This documentation is also visible in Object Browser.
 - **Phidget21.NET1.1.dll**
 - NET 1.1 (CLR) library
 - Included for backwards compatibility with the .NET Framework 1.1 (for development in Visual Studio 2003).
- This library is installed in the Application Folder (by default c:\Program Files\Phidgets). This library is not installed in the GAC, but could be installed there manually if desired.
 - This library relies on the .NET Framework 1.1 to be installed, as well as Visual Studio 2003 for development. It also relies on phidget21.dll, from which it imports most of its functionality.
- **Phidget21.jar**
 - Java ARchive containing the Phidgets Java Library class files.
 - Installed into the Application folder (by default c:\Program Files\Phidgets).
 - This file should be referenced when compiling / executing Java programs compiled against the Phidgets Java API
 - This library relies on the presence of phidget21.dll because it uses JNI for natively communicating with phidgets.
 - **PhidgetWebservice21.exe**
 - The Phidget WebService
 - This allows for remotely controlling Phidgets across the network, as well as advanced distributed dictionary capabilities. See the PhidgetWebservice documentation for more information.
 - Installed into the Application folder (by default c:\Program Files\Phidgets).
 - This relies only on phidget21.dll
 - **PhidgetWindowsService21.exe**
 - A windows service that controls PhidgetWebser-vice21
 - Installed into the Application folder (by default c:\Program Files\Phidgets), Registered as a Windows service. This will show up in the list of Windows services as "Phidget Webservice 21".
 - By default the service is set to "Manual" but it can be changed to "Automatic" to have the webservice start with Windows, or "Disabled" to diable it completely.
 - This relies on Phidget21.NET.dll and consequently phidget21.dll.

- **PhidgetWebservice21.xml**

- XML configuration file used by PhidgetWindowsService21.exe for setting the port, password and server id of the webservice when started by the Windows service.
- Installed into the Application folder (by default c:\Program Files\Phidgets),

- **Phidget21Manager.exe**

- A general purpose Manager application for Phidgets, that runs from the system tray (right side of the task bar). This shows up as the 'Ph' icon.
- This program is set to start up with Windows, but this behaviour can be changed.
- This shows a listing of all attached Phidgets, as well as library information and WebService / Dictionary control.
- This relies on Phidget21.NET.dll and consequently phidget21.dll.
- Examples folder
- These are .NET examples for each Phidget
- These can be run standalone, but are also used by Phidget21Manager for providing easy double-click access to examples.
- These rely on Phidget21.NET.dll

Redistributing Phidgets Components

When creating applications to be distributed to machines that may not be equipped with Phidget21.msi, be sure to consider the following:

Due to the continuous evolution of the Phidget Libraries, be sure you don't overwrite the libraries you are developing against.

Subsequent library releases try not to break binary compatibility. However, if you update any Phidget libraries, you may have to recompile an application.

Developing against the C API

- **Distribute phidget21.dll**

phidget21.dll can be placed either in the System Folder (usually c:\windows\system32), or the same folder as

your application.

Developing against the COM API

- **Distribute phidget21.dll and Phidget21COM.dll.**

phidget21.dll can be placed either in the System Folder (usually c:\windows\system32), or the same folder as your application.

Phidget21COM.dll can be placed anywhere on the system, but must be registered.

Registration can be done manually from the command line by running: 'regsvr32 Phidget21COM.dll'

If you are distributing using a Setup project (in Visual Studio), or some other installer (such as Wise), you can have it register the COM library by setting the register property to 'vsdrpCOM'

Note that since Phidget21COM.dll relies on phidget21.dll, phidget21.dll must be either in the System Folder, or in the same folder as Phidget21COM.dll, prior to registering, or registration will fail (probably with an 'Application Configuration is incorrect' message).

Developing against the .NET API

- **Distribute phidget21.dll and either Phidget21.NET.dll, or Phidget21.NET1.1.dll, depending on what version of the .NET framework you are developing against.**

phidget21.dll can be placed either in the System Folder (usually c:\windows\system32), or the same folder as your application.

Phidget21.NET.dll can be placed either into your application folder, or installed into the GAC

Installing into the GAC can be done manually from the command line using the 'gacutil' command.

Installing into the GAC can also be done from within the Visual Studio setup projects by installing into the 'Global Assembly Cache Folder' in the installer File System.

Note that if you install into the GAC, phidget21.dll should be installed into the System Folder (C:\windows\system32).

In order to make updating the Phidget21.NET library easier, you can also either specify 'any version' when referencing it in your application, or also distribute the policy.2.1.phidget21.net.dll file (found in the GAC). This

will ensure that your program uses the most recent Phidgets library without needing to be re-compiled.

Note that your users will need to have the .NET framework installed to use the Phidgets .NET library.

Developing against the Webservice

- **Distribute phidget21.dll and PhidgetWebservice21.exe, as well as any higher level libraries used.**

phidget21.dll can be placed either in the System Folder (usually c:\windows\system32), or the same folder as your application.

PhidgetWebservice21.exe can be placed anywhere.

You may like to distribute PhidgetWindowsService21.exe as a way of starting the webservice with Windows.

PhidgetWebservice21.exe relies on PhidgetWebservice21.xml existing in the same folder.

PhidgetWindowsService21.exe can be installed as a Windows service using a Setup Project, or using the 'installutil' command line program.