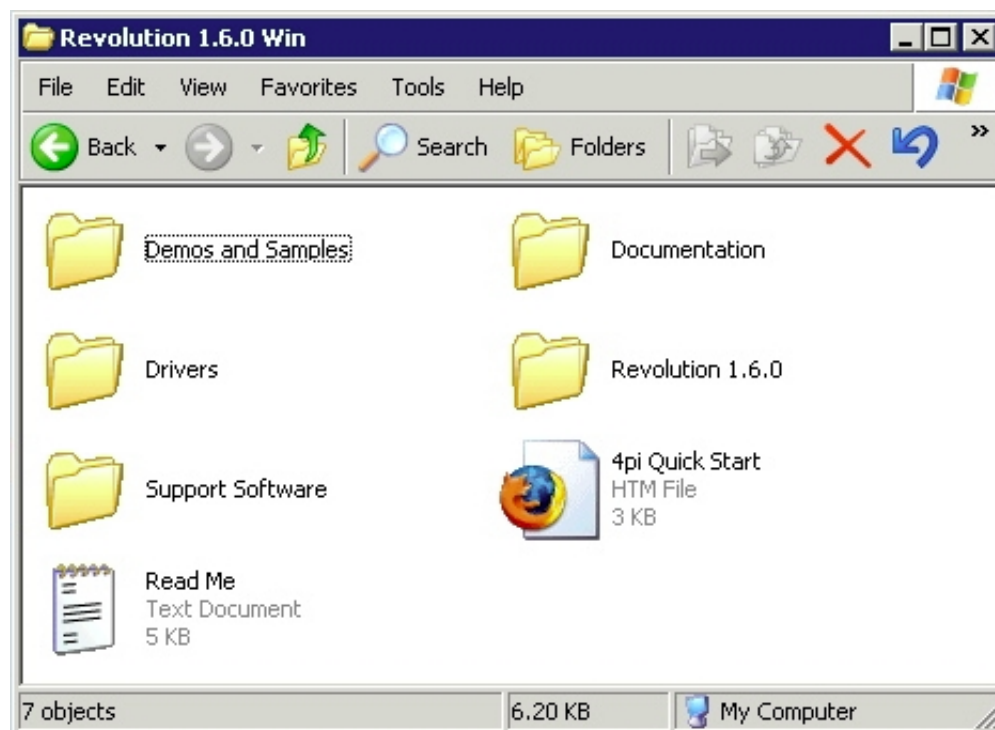


Installing Windows Software

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The 4pi software package ships on a single CD-ROM, or can be downloaded. Opening either presents the following window or similar:



Each item is described below:

Read Me: describes the contents of this software distribution, and simple installation procedures; it is terse but typically all one needs to get started. In large measure, the **Read Me** file can substitute for this install guide.

4pi Quick Start is a browser-based link to the User Guide. The icon shown will depend on your default browser.

Documentation: contains Release Notes and this browser-based User Guide. The Release Notes are highly-recommended reading, and contain important information about bug fixes, new and/or undocumented features, known issues, and future versions. To access the User Guide with your browser, double-click the "manual toc" link inside the Documentation folder.

Support Software: varies according to operating system. It may contain older drivers, software, DLLs, or debugging aids. As a general rule, do not install any of the components unless instructed to by 4pi technical support.

Demos and Samples: includes S(T)EM images, CCD images, x-ray maps, and x-ray spectra that were acquired in Revolution, and that can be opened in Revolution and manipulated. The only limitation is that spectra files cannot be reanalyzed without a hasp installed (see hasp discussion below). None of the images, maps, or spectra can be used outside of Revolution without the consent of 4pi Analysis.

Revolution: contains the Revolution program, specially designed to use the 4pi Spectral Engine hardware to control and acquire data from an electron microscope, an x-ray pulse processor, or a CCD camera. The

folder name includes the version number to help identify the program. To install, simply drag this entire folder to any convenient location on any hard drive, or to the desktop. No reboot of the computer is required. To run Revolution, open the folder you just copied and double-click on the Revolution program icon (do not try to run it from the CD-ROM). If Revolution is launched without the drivers installed (below), it will operate in demo mode. The Windows version contains a file called **libfli.dll**. This file **must** remain in the same directory as Revolution.

Drivers: contains driver files that are specific to the platform in use. There are 2 variants: Windows NT4 and Windows 2000. Windows 98 and Windows XP users fall under Windows 2000. Inside each of the platform-specific folders, the following subfolders can be found:

Drivers/Hasp: contains the installer required to install the hasp software. The hasp is required to unlock the acquisition and analytical routines in Revolution. Revolution will run in demo mode if the hasp software is not installed (or if the hasp itself is missing). The "hasp" is a physical key that plugs into a parallel (printer) or USB port; it can only be purchased through 4pi Analysis. To install, open the Hasp folder, and launch the installer. No reboot is necessary. Note that this step may be skipped for Windows NT, as the FPXDriver installer (below) will automatically install the hasp as well.

Drivers/FPXDriver: contains the driver [installer] required for Revolution to talk to the 4pi Spectral Engine hardware. You must run the correct version of the driver and the Revolution application together. Failure to do so may result in unpredictable behavior or a system crash (if you experience a system crash, simply reboot your machine; the 4pi software cannot damage your computer). To guarantee that your driver is matched to the program, retrieve them only together from the same CD-ROM. Correct matches for version numbers and 4pi Spectral Engine hardware are:

Revolution v1.4.6 and FPXDriver v5.8	PCI SEII v2.3, v2.2, v2.1; NuBus SEII v2.1, v1.0
Revolution v1.5.0 - v1.5.3 and FPXDriver v6.0	PCI SEII v2.3, v2.3b, v2.2, v2.1; NuBus SEII v2.1, v1.0
Revolution v1.5.5 - v1.5.6 and FPXDriver v6.1 or v6.2	PCI SEII v2.3, v2.3b, v2.2, v2.1; NuBus SEII v2.1, v1.0
Revolution v1.5.7 - v1.5.9 and FPXDriver v6.x	PCI SEII v2.3, v2.3b, v2.2, v2.1; NuBus SEII v2.1, v1.0
Revolution v1.6.x and FPXDriver v7.x	PCI SEII v2.3, v2.3b, v2.2, v2.1, Universal Spectral Engine

Depending on your current installation, there are several possibilities for installing or updating the driver. Below is a description of the possibilities for installation or upgrade, depending on your operating system. The subsequent links describe the various procedures you will need. Before any installation should proceed, in the Windows view options, set the **show all files** radio button to true and uncheck the **hide file extension for known file types** checkbox.

- [Win2k or WinXP Install](#): use this procedure if you are running Windows 2000 or XP and the 4pi driver has never been installed on your computer. [[read this page as pdf](#)]

- [Win2k or WinXP Update](#): use this procedure if you are running Windows 2000 or XP and the 4pi driver has been previously installed on your computer. [[read this page as pdf](#)]
- [WinNT Batch Install](#): use this procedure if you are running Windows NT SP6 (4pi does not officially support service packs below 6), regardless of whether the 4pi driver has been previously installed on your computer. Please review the WinRT note below! [[read this page as pdf](#)]
- [Windows 98SE](#): if you are using Windows 98SE and the 4pi driver has **never** been installed, use the [Win2k/XP Install procedure](#). If a 4pi driver has been previously installed, there are more considerations to be made. First is a check for WinRT (see WinRT note below). The second is a check for 4pi driver type. The original 4pi driver for Win98SE was of type **vxd**, which has since been superseded by a driver of type **wmd**. If you are using Win98SE, and after you check for WinRT (below), you must determine the type of driver (vxd or wmd). If the driver is vxd, it must be removed before the new 4pi driver is installed. [[read this page as pdf](#)]
- [Removing WinRT](#): WinRT (a product of Blue Water Systems) is an older driver implementation that 4pi used for FLAME and some OEM installations. The current 4pi drivers have long since superseded the WinRT drivers. If the computer has ever had FLAME installed with a 4pi system and is running Windows NT or earlier, it is possible that WinRT remains. It must be removed before any other 4pi driver is installed! There is no way to know if WinRT is installed on your computer except to look for it. If a 4pi system has never been installed, or has only been installed on a Win2k system or above, the WinRT removal procedure is irrelevant and may be skipped. [[read this page as pdf](#)]

Drivers/CCD: contains the driver (or installer) required for Revolution to talk to the CCD camera hardware. Note that Windows NT does not support USB, so no CCD camera operation is possible; in addition, 4pi does not support the USB interface under Windows 98SE; Windows 2000 or XP are required for CCD camera image acquisition. Open the Drivers/CCD folder, and run the **FLIUpdate** installer. No reboot is necessary.