
What is Volocity for Windows x64?

Volocity for Windows x64 is a version of Volocity developed to run on Windows XP Professional x64 Edition and Windows Vista x64 Edition (also referred to in this document as 64-bit Windows). This version of Volocity will not run on 32-bit Windows. 32-bit Volocity will run on 64-bit Windows but may not offer users significant benefit and will be limited by driver availability as described below.

Two separate installers are provided for Volocity, one for the 64-bit version and one for the 32-bit version. The different installers are clearly identified on the "Downloads" page of the Improvision website.

What is 64-bit Windows?

Windows XP Professional x64 Edition and Windows Vista x64 Edition are versions of Microsoft Windows designed for running memory and calculation intensive applications and processes more efficiently.

An x64 processor is required, i.e. AMD64 or Intel-EM64T.

Read more about Windows XP Professional x64 Edition at

<http://www.microsoft.com/windowsxp/64bit/default.mspx>

Currently, Windows XP Professional x64 Edition is the recommended 64-bit operating system for Volocity.

What are the benefits of using 64-bit Windows and Volocity?

64-bit Windows supports up to 128 GB RAM and 16 TB of virtual memory, 8 TB of which are available to applications. 32-bit Windows is limited to a maximum of 3 GB of virtual memory per application. For Volocity users this dramatically raises the maximum data size that may be handled by the application and this will be the main advantage for such users.

Increased virtual memory will benefit users of the Volocity products as follows:

Acquisition – the largest single timepoint that may be acquired is increased in size.

Visualization – the size and complexity of data sets that may be rendered by the 3D renderers is increased. Greater numbers of timepoints may be rendered without exceeding the virtual memory limitations of the operating system. Speed and interactivity of rendering remains limited by graphics card performance.

Quantitation – the complexity of measurement protocols applied and the size of data set which may be measured is increased.

Restoration – the size of data sets which may be deconvolved is increased.

Comparisons of frame rates achieved when using Volocity Acquisition have shown no difference between Volocity running in the 64-bit environment and Volocity running in the 32-bit environment on the same hardware with the same camera. Comparisons of many memory and calculation intensive operations performed by

Volocity have shown Volocity running in the 64-bit environment to be more than 30% faster than Volocity running in the 32-bit environment on the same hardware.

Volocity running on 64-bit Windows looks and feels exactly the same as Volocity on 32-bit Windows so there is no new software to learn.

A license to run Volocity on 64-bit Windows costs the same as a license for Volocity for 32-bit Windows and they are interchangeable. If users wish they can set up their computers to run both versions of the operating system and therefore both versions of Volocity.

Users with a valid SMA are eligible to download and run either version at no charge.

Are there issues with using 64-bit Windows and Volocity?

Although Volocity Acquisition, Quantitation, Restoration and Visualization all function with 64-bit Windows, availability of 64-bit drivers may limit the number of devices that may be used with Volocity Acquisition. Please check the Volocity Supported Hardware list for devices that are supported on 64-bit Windows.

If you are upgrading a Volocity Acquisition system, including an UltraVIEW VoX, from 32-bit Windows to 64-bit Windows you may need to purchase additional, 64-bit compatible hardware to replace items such as frame grabber cards and serial port adapters that are not supported in 64-bit Windows.

Volocity versions 3.5.1 and higher are required to use Volocity on 64-bit Windows as a stand-alone system with a dongle. Volocity versions 5.1 and higher are required to use Volocity Acquisition on 64-bit Windows.

Driver availability may also affect other peripherals you wish to use with your 64-bit computer. Please check 64-bit support with the device manufacturers before installing Windows x64.

At the time of writing there is no QuickTime specifically for 64-bit Windows. QuickTime for 32-bit Windows may be installed on 64-bit machines, and Volocity has been written to use QuickTime in this way, however the 32-bit version of QuickTime cannot play movies on the 64-bit version of Windows. QuickTime is required by Volocity for exporting files in QuickTime formats.

If you do not already have a 64-bit processor, moving to Volocity 64 will require additional investment in computer hardware. Windows XP Professional x64 Edition or Windows Vista x64 Edition will also need to be correctly licensed from Microsoft.

If you are running Volocity on a 32-bit system and are satisfied with the performance you will find it less disruptive to continue with the 32-bit version.

What about a 64-bit version of Volocity for Mac OS X?

Although the G5 and many Intel processors used in Apple Macs are 64-bit processors, Carbon applications (like Volocity) in Mac OS X are limited at present to 32-bit address spaces.