



A recommended computer configuration:

- Any name brand computer, with an Intel (2.0Ghz or better) CPU, 2Gb -4Gb system Ram and a high-end nVidia graphics card with 256Mb VRam would be ok.
- A preferred configuration would be: An Intel Core 2 Duo (or Quad) 2.9Ghz+ CPU, 4mb+ L2 Cache, 1066MHz Front-Side Bus, 4gb Dual Channel 800Mhz system Ram, 160gb Hard Drive and an nVidia GeForce 8800 Series Ultra (or GTX) with 768mb VRam.

Informational Notes:

It is recommend that whatever computer configuration is decided upon that the computer be from a reputable well known Manufacturer. These Manufacturer's do a great deal of testing and tweaking of their products to make sure that all components work in unison which is critical to obtaining acceptable results. The same cannot be said of other computer providers.

General information as of October 2007: For a desktop: It looks like the preferred choices are: Intel Core 2 Extreme CPU 3.2GHz (or 2.93GHz also 3.33GHz) with 8mb L2 Cache uses a 1066MHz Front-Side Bus (FSB). These are factory overclocked Quads. The Core 2 Quad 2.40GHz with 8mb L2 uses a 1066MHz FSB. The Core 2 Duo 3.0GHz with 4mb L2 uses a 1333MHz FSB.

Two of these have a large L2 Cache but a slower Front-Side Bus and one has a smaller L2 Cache but a faster FSB. There is no clear choice. The speed rating of the Duo and Quad CPUs is a bit deceptive. From experience: a Core 2 Duo 1.73GHz machine is multiple times faster than a P4 2.0GHz. The Quad CPU may be twice as fast as the Duo. Our programmers advise that: "Running [AutoSPRINK] under the Windows XP Professional x64 Edition O/S with a single Intel Core 2 Duo, 64bit processor, 3.0GHz with 4MB L2 cache and a 1333MHz FSB seems at least twice as fast as our non-Duo systems".

2.0gb to 4.0gb Dual Channel 800MHz system Ram. One Manufacturer (Dell) has something called "Corsair Dominator" DDR2 that is 800MHz overclocked to 1066MHz. Dell's XPS line looks good and the Precision Workstations have been good but definitely stay away from the OptiPlex line.

The newest 160gb WD Raptor 10000rpm SATA Hard Drive with 16mb Cache could improve drive access for opening and saves.

It looks like about the fastest Xeon CPU is 3.5GHz with 8mb L2 + 16mb L3 Cache but the FSB maxs out at 667MHz. The 3.4GHz with 2x1mb L2 + 16mb L3 Cache uses an 800MHz FSB and the 2.93GHz with 8mb L2 Cache uses a 1066MHz FSB. The program doesn't make much use of multithreading to multiple CPUs so dual processors wouldn't do much good.

The size of L2 Cache and speed of the FSB (and speed of the system Ram) are every bit as important to overall performance as the speed of the CPU. If the FBS or the system Ram are slow it creates a bottleneck and reduces the CPU output to that speed. The L2 Cache "spools" data for the CPU.

VR5 and VR7 use about 125mb of system Ram when AutoSPRINK starts up. Opening a 2mb drawing might use another 200mb. Previewing a drawing might use an additional 50mb. Printing can hit the Ram pretty hard (the larger the drawing and the higher the dpi setting, the higher the Ram usage). Once a drawing is opened, the Ram usage stay about the same until printing (or previewing) a drawing. System Ram usage will increase somewhat as the drawing gets larger. The speed of program functions (such as auto-fitting, hydraulics, etc.) do a massive amount of number crunching and the speed at which these things are processed are directly dependant on the speed of the CPU. Obviously, the faster the CPU the faster the function performs (i.e.: a 3.0GHz CPU is twice as fast at number crunching as a 1.5GHz CPU).

Zooming and panning the drawing is strictly a function of the video card (unless system Ram is being shared to increase the VRam) so the better the video card performs the faster the display changes. This isn't tied to the amount of VRam as much as to the actual video through-put (band-width, etc.), VRam speed and FSB speed. The amount of VRam will come into affect when opening (and zoom-all) a larger, more complex, drawings.

The only video card/chipset that we recommend is **nVidia**. In the nVidia **GeForce 8800** series the **Ultra** is the fastest, followed by the GTX, both with 768mb VRam. The nForce 680i SLI looks like is was redesigned for the Core 2 CPUs and supports a max 1333MHz FSB. How its speed compares with the 8800, is yet to be seen.

It would seem that staying with Windows XP Pro might be advisable. AutoSPRINK doesn't necessarily have a problem with Vista (and, in some respects, it is faster) but Vista is not very stable. (Many people are waiting for Vista SP1 before upgrading.) If Windows XP Professional x64 Edition is available, it would be worth using. The program runs faster in a 64bit environment and in a few months we will probably make a 64bit compiled version of AutoSPRINK available to download. This should be a major speed increase for the program. The machine, however, must be rated for 64bit use. If Manufacturer has this as an option on their new machines, it should be ok (you may have to call them and ask for the x64 Edition). If Vista is desired, the Business or Ultimate version is recommended (our Tech Support will assist in getting AutoSPRINK to run properly in Vista).