

# Access Grid Station

## Hardware Recommendations





## Hardware Recommendations

This document is intended to provide basic information on hardware requirements for personal Access Grid station. We have run AG software on many different configurations and have found most to be acceptable. Although you may have to purchase some items (webcam, headset, etc), we suggest you try your current setup 'as is' before upgrading – and upgrade if required. Having said that, as you increase the quality of your setup, you will also be increasing the quality of your collaborative experience.

### Computers

- **Processor** - P3 or greater, preferably P4 class
- **Memory** - Maximize memory for good capture/display performance. Minimum 512 MB.
- **Operating System** – Currently, the AG software is built for Microsoft Windows 2000/XP and Redhat 7.3 Linux operating systems specifically. There are known setups running on Redhat 8.0, Redhat 9.0, Redhat EL, Slackware, and Debian – however for these systems, a good working knowledge of the OS is useful and some configuration changes are required. Contact [ag-help@westgrid.ca](mailto:ag-help@westgrid.ca) for more information on AG on other distributions.
- **Audio & Video** - Slightly higher quality cards than generic or 'on-board' devices are generally useful. Best bets – nVidia or Ati for video, SoundBlaster for audio.

### Network

Due to the amount of data (video, audio, application data) that is distributed during a typical AG collaboration, the quality of the network connection is very important.

- **ADSL/Cable Modem** - may work but be severely limited (especially in upload)
- **10/100/GigE** - Obviously, the bigger the pipe, the better the flow; however most dedicated networks will provide basic connectivity.
- **Multicast** - AG works best using native multicast. If at all possible, speak to your network administrator about the multicast availability on your network.
- **Research Networks vs. Commodity Internet** – Generally, connections over the commodity Internet will encounter more bandwidth issues. The research networks should be used whenever possible (CA\*net, etc).

### Display

There are a few options for display.

- **Single Display** – Single monitor on a single machine. You may run into 'screen real-estate' issues when using a single monitor.
- **Dual Display** – Many standard video cards are now 'dual headed' and offer two (or more) displays per video card. See the ATI or nVidia line.
- **Quad Display** – Tri display or Quad display cards are also available for higher end stations – and offer 3 or 4 display configurations. Again, see the ATI or nVidia line for your options.



### **Video Cameras / Video Capture**

- **Webcam** - Any generic (Logitech, etc) webcam (usb, firewire, etc) will suffice for most desktop solutions. As usual, better quality comes with a higher price tag.
- **Capture Card** - For an even high quality experience, a video capture card (such as a Hauppauge WinTV card) can be purchased and used with a regular DV cam. This is a much more expensive solution, however, and only recommended for high end AG Stations.

### **Audio Capture / Microphone Headset**

**If a standard microphone and desktop speakers are used, the audio from the speakers will be picked up by the microphone and be sent back to the other sites as echo. You will not be able to hear this echo; however, it is very distracting for the other sites and can destroy the quality of the collaboration. Therefore, it is recommended that one of the following solutions is used:**

- **Microphone Headset** – The easiest way to enable audio collaboration is to invest in a good quality headphone/microphone headset. It is useful to have both a volume control and a mute button on the headset or the audio cable.
- **Personal Echo Cancellation** – At a greater expense, a personal echo cancellation device can be used; however, we have had mixed reviews on some of the 'echo canceling microphones'. See the Polycom or Clearone websites.

For more information, contact [ag-help@westgrid.ca](mailto:ag-help@westgrid.ca).