

EasyBlend™ & ScalablePlayer™ Computer Requirements

This document describes the requirements for the computer(s) that will run EasyBlend and the ScalablePlayer.

1. EasyBlend

EasyBlend software automatically creates seamless high-intensity, high-resolution edge-blended displays. EasyBlend uses a patented camera-generated feedback system to calculate pixel perfect instructions, or warp meshes. The calibration process takes approximately 30 seconds per projector during which time EasyBlend requires significant CPU resources. However, after the calibration is complete EasyBlend requires virtually no CPU cycles as the computational work is shifted to either the GPU or an external warping device.

The following setup is recommended and supported for EasyBlend.

Recommended
<ul style="list-style-type: none">• 1 or More Computers• At least 1 Gigabyte of RAM• At least 1 Gigabyte of hard disk space available• Windows XP Professional, Service Pack 2 with .Net 1.1.4322 installed• A graphics card that can be placed in span mode if using multiple projectors connected directly to one PC.

The EasyBlend can work under the following minimum configuration, but it is not recommended and it is not supported:

Minimum Requirements
<ul style="list-style-type: none">• 1 or more computers• 512 Megabytes of RAM• 100 Megabytes of hard disk space available• Windows XP with .Net 1.1.4322 installed.• If using multiple projectors per PC: a graphics card that can be placed in span mode.

EasyBlend requires some software to be installed, which is found in the *EasyBlend Software Installation Instructions*. Also, we recommend having no software installed that can popup windows during calibration.

1.1. EasyBlend on one computer

A single computer installation is typical for these two types of installations:

1. two projectors are directly connected to a dual output graphics card
2. Three projectors are connected to a TripleHead2Go
3. A show

or projects where a that has the camera and license key plugged into it is referred to as the controlling computer. That computer must have windows XP installed.

1.2. EasyBlend with Multiple Computers

But, if you are using multiple computers, the other machines may have Linux installed. We support Fedora, Redhat and Debian.

Note that it is not strictly necessary to have all computers be identical. However, in practice, computers may have slight problems. And, using many different types of computers can make it very difficult to maintain the cluster.

2. ScalablePlayer

ScalablePlayer is a software product which is complementary to EasyBlend. ScalablePlayer is compatible with Microsoft .WMV, TIFF & PNG file formats. Scalable has found that most GPUs work well playing back video files up 2.5megabits/frame/GPU.

ScalablePlayer can be implemented on a single computer or used in a distributed configuration where content is spread across several computers.

Single computer configuration: On a single computer ScalablePlayer is an ideal match with the Matrox TripleHead2Go™. Simply connect a single TripleHead2Go to one output of the graphics card and drive three perfectly synchronized projected displays of up to a maximum resolution of up to 3840x1024 less the overlap region or a net resolution of approximately 3,440X1024.

Multiple computer configuration: ScalablePlayer can be installed on multiple computers which are networked over TCP/IP to operate in unison. A typical example: two computers each with dual DVI output graphics cards can drive a total of four projectors. Simply place your .WMV content on each computer and ScalablePlayer will manage the edge-blend and playback a pixel perfect, frame synchronized video.

ScalablePlayer allows customers to increase the resolution of their .WMV video content beyond the 2.5 megabit limit of the graphics card. In a dual computer installation for example, high resolution content can be carefully split by the artist and one half installed on each computer. ScalablePlayer will synchronize the playback of these two independent files as if they were one high resolution file. Please contact us for exact instructions on creating content for use in this way.

Tiled and Stacked Displays – Scalable Player can be used with tiled or stacked configurations. Some applications use both tiling and stacking.

In addition to the requirements for EasyBlend, if you are trying to play the highest resolution video you possibly can, we recommend the following:

2.1. Scalable Player: Single Computer Play-back

Recommended Setup
<ul style="list-style-type: none">• CPU<ul style="list-style-type: none">○ Intel Core Duo (dual core), 2.4 GHz or faster○ AMD Dual Core 5000+ or higher• Hard Drive: SATA (or faster equivalent)• Software<ul style="list-style-type: none">○ Windows Media Player 11 installed.○ Clean install of Window XP• Graphics card:<ul style="list-style-type: none">○ On-board graphics chips are not acceptable.○ 16x PCI express slot, and graphics card○ 256 Megabytes of memory.

If you will drive 1920 x 1080 content on each PC you use, the following setup is acceptable:

Minimum requirements for 1920x1080 Content on one PC
<ul style="list-style-type: none">• CPU<ul style="list-style-type: none">○ Intel Core Duo (dual core), 1.83 GHz or faster○ Intel Pentium D 3.4 Gigahertz○ AMD Dual Core 3800+ or higher• Hard Drive: SATA (or faster equivalent)• Software<ul style="list-style-type: none">○ Windows Media Player 11 installed.○ Clean install of Window XP• Graphics Card<ul style="list-style-type: none">○ On-board graphics chips are not acceptable.○ 16x PCI express slot or 8x AGP slot, with graphics card○ 128 Megabytes of memory.

If you are building a system, please choose a motherboard that is SLI/Crossfire compatible. And, make sure you have a power supply that provides enough power to both the graphics card and the motherboard/CPU.

Note that the Scalable Player uses a lot of system resources. It is very importantly to have a clean Windows XP install. Installing programs like google desktop, instant messagers, etc will eventually use enough system resources that the Scalable Player will begin to lose frames. Also, it is important to set //Control Panel//System Settings//Advanced//Performance to “adjust for best performance”.

The great majority of graphics cards work fine. When we have problems, we usually find it is a problem with the driver, and the problem is fixed by using a slightly older driver. That being said, we do find that some particularly high-resolution content seems to have difficulties on ATI cards. Also, Nvidia cards and drivers provide greater control over custom timings and resolutions which can be important for some projectors.

Recently, we have been using the Nvidia 8600GS. Here are some cards on which we regularly test:

- Nvidia Quadro 7600 GS, and 8600 GS
- Nvidia Quadro FX Series
- ATI Radeon X600
- ATI All In Wonder X1900

2.2. Scalable Player: Multiple Computer Play-back

Networking Requirements for Multiple PCs
<ul style="list-style-type: none">• 100 Megabit/second connections are fine.• All computers must be on the same switch• All computers must be on the same networked subnet.• Make sure there is minimal external traffic on the network.

It is recommended that the computer network be isolated from the internet because floods of packet from the internet can interrupt the synchronization of the PCs.