How to configure LINUX to use with SeeReal 3D displays and Nvidia Quadro graphics boards

The following configuration option should be set in the X Config file:

Option "Stereo" "integer" (i.e. Option Stereo 5)

Enable offering of quad-buffered stereo visuals on Quadro. Integer indicates the type of stereo equipment being used:

Possible values:

0 Stereo is not enabled

1 DDC glasses. The sync signal is sent to the glasses via the DDC signal to the monitor. These usually involve a passthrough cable between the monitor and video card.

2 "Blueline" glasses. These usually involve a passthrough cable between the monitor and video card. The glasses know which eye to display based on the length of a blue line visible at the bottom of the screen. When in this mode, the root window dimensions are one pixel shorter in the Y dimension than requested. This mode does not work with virtual root window sizes larger than the visible root window size (desktop panning).

3 Onboard stereo support. This is usually only found on professional cards. The glasses connect via a DIN connector on the back of the video card.

4 TwinView clone mode stereo (aka "passive" stereo). On video cards that support TwinView, the left eye is displayed on the first display, and the right eye is displayed on the second display. This is normally used in conjunction with special projectors to produce 2 polarized images which are then viewed with polarized glasses. To use this stereo mode, you must also configure TwinView in clone mode with the same resolution, panning offset, and panning domains on each display.

5 Vertical interlaced stereo mode, for use with SeeReal Stereo Digital Flat Panels.

6 Color interleaved stereo mode, for use with Sharp3D Stereo Digital Flat Panels.

Default value: 0 (Stereo is not enabled). UBB must be enabled when stereo is enabled (this is the default behavior).

Comments

- Stereo is only available on Quadro cards. Stereo options 1, 2, and 3 (aka "active" stereo) may be used with TwinView if all modes within each metamode have identical timing values. Please see Appendix J, Programming Modes for suggestions on making sure the modes within your metamodes are identical. The identical modeline requirement is not necessary for Stereo option 4 ("passive" stereo). Currently, stereo operation may be "quirky" on the original Quadro (NV10) chip and left-right flipping may be erratic. Nvidia is trying to resolve this issue for a future release.
- Stereo options 1, 2, and 3 (aka "active" stereo) are not supported on digital flat panels.

Option "AllowDFPStereo" "boolean"

By default, the NVIDIA X driver performs a check which disables active stereo (stereo options 1, 2, and 3) if the X screen is driving a DFP. The "AllowDFPStereo" option bypasses this check.

Option "ForceStereoFlipping" "boolean"

Stereo flipping is the process by which left and right eyes are displayed on alternating vertical refreshes. Normally, stereo flipping is only performed when a stereo drawable is visible. This option forces stereo flipping even when no stereo drawables are visible.

This is to be used in conjunction with the "Stereo" option. If "Stereo" is 0, the "ForceStereoFlipping" option has no effect. If otherwise, the "ForceStereoFlipping" option will force the behavior indicated by the "Stereo" option, even if no stereo drawables are visible. This option is useful in a multiple-screen environment in which a stereo application is run on a different screen than the stereo master.

Possible values:

0 Stereo flipping is not forced. The default behavior as indicated by the "Stereo" option is used.

1 Stereo flipping is forced. Stereo is running even if no stereo drawables are visible. The stereo mode depends on the value of the "Stereo" option.

Default value: 0 (Stereo flipping is not forced). Note that active stereo is not supported on digital flat panels.