

4:s3virge

s3virge - S3 ViRGE video driver

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SYNOPSIS

```
Section "Device"
    Identifier "devname"
    Driver "s3virge"
    ...
    [ Option "optionname" ["optionvalue"]]
EndSection
```

DESCRIPTION

s3virge is an Xorg driver for S3 based video cards. The driver is fully accelerated, and provides support for the following framebuffer depths: 8, 15, 16, and 24. All visual types are supported for depth 8, and TrueColor visuals are supported for the other depths. XVideo hardware up scaling is supported in depth 16 and 24 on the DX, GX, GX2, MX, MX+, and Trio3D/2X. Doublescan modes are supported and tested in depth 8 and 16 on DX, but disable XVideo. Doublescan modes on other chipsets are untested.

SUPPORTED HARDWARE

The **s3virge** driver supports PCI and AGP video cards based on the following S3 chips:

ViRGE	86C325
ViRGE VX	86C988
ViRGE DX	86C375
ViRGE GX	86C385
ViRGE GX2	86C357

ViRGE MX 86C260

ViRGE MX+ 86C280

Trio 3D 86C365

Trio 3D/2X 86C362, 86C368

CONFIGURATION DETAILS

Please refer to [xorg.conf\(5x\)](#) for general configuration details. This section only covers configuration details

specific to this driver. All options names are case and white space insensitive when parsed by the server, for example, "virge vx" and "VIRGEvx" are equivalent.

The driver auto-detects the chipset type, but the following **ChipSet** names may optionally be specified in the config file **"Device"** section, and will override the auto-detection:

"virge", "86c325", "virge vx", "86c988", "virge dx", "86c375", "virge gx", "86c385", "virge gx2", "86c357",
"virge mx", "86c260", "virge mx+", "86c280", "trio 3d", "86c365",
"trio 3d/2x", "86c362", "86c368".

The following Cursor **Options** are supported:

Option "HWCursor" ["boolean"]

Enable or disable the HW cursor. Default: on.

Option "SWCursor" ["boolean"]

Inverse of "HWCursor". Default: off.

The following display **Options** are supported:

Option "ShadowFB" ["boolean"]

Use shadow framebuffer. Disables HW acceleration. Default: off.

Option "Rotate" "cw | ccw"

Rotate the screen CW - clockwise or CCW - counter clockwise.

Disables HW Acceleration and HW Cursor, uses ShadowFB. Default: no rotation.

Option "XVideo" ["boolean"]

Disable XVideo support by using the off option. This changes FIFO settings which prevent screen noise for high-res modes. Default: on

The following video memory **Options** are supported:

Option "slow_edodram"

Switch the standard ViRGE to 2-cycle edo mode. Try this if you encounter pixel corruption on the ViRGE.

Using this option will cause a large decrease in performance.

Default: off.

Option "fpm_vram"

Switch the ViRGE/VX to fast page mode vram mode. Default: off.

Option "slow_dram | fast_dram"

Change Trio 3D and 3D/2X memory options. Default: Use BIOS defaults.

Option "early_ras_precharge | late_ras_precharge"

adjust memory parameters. One of these will use the same settings as your video card defaults, and using neither in the config file does the same. Default: none.

Option "set_mclk" "integer"

sets the memory clock, where *integer* is in kHz, and *integer* <= 100000. Default: probe the memory clock value, and use it at server start.

Option "set_refclk" "integer"

sets the ref clock for ViRGE MX, where *integer* is in kHz. Default: probe the memory clock value, and use it at server start.