

NAME

r128 – ATI Rage 128 video driver

SYNOPSIS

Section "Device"

Identifier "*devname*"

Driver "**r128**"

...

EndSection

DESCRIPTION

r128 is an Xorg driver for ATI Rage 128 based video cards. It contains full support for 8, 15, 16 and 24 bit pixel depths, hardware acceleration of drawing primitives, hardware cursor, video modes up to 1800x1440 @ 70Hz, doublescan modes (e.g., 320x200 and 320x240), gamma correction at all pixel depths, a fully programming dot clock and robust text mode restoration for VT switching. Dualhead is supported on M3/M4 mobile chips.

SUPPORTED HARDWARE

The **r128** driver supports all ATI Rage 128 based video cards including the Rage Fury AGP 32MB, the XPERT 128 AGP 16MB and the XPERT 99 AGP 8MB.

CONFIGURATION DETAILS

Please refer to xorg.conf(5) for general configuration details. This section only covers configuration details specific to this driver.

The driver auto-detects all device information necessary to initialize the card. However, if you have problems with auto-detection, you can specify:

VideoRam - in kilobytes

MemBase - physical address of the linear framebuffer

IOBase - physical address of the MMIO registers

ChipID - PCI DEVICE ID

In addition, the following driver **Options** are supported:

Option "SWcursor" "boolean"

Selects software cursor. The default is **off**.

Option "NoAccel" "boolean"

Enables or disables all hardware acceleration. The default is to **enable** hardware acceleration.

Option "EnablePageFlip" "boolean"

Enable page flipping for 3D acceleration. This will increase performance but not work correctly in some rare cases, hence the default is **off**.

Option "RenderAccel" "boolean"

Enables or disables hardware Render acceleration. It is only supported when using EXA acceleration and DRI. The default is to **enable** Render acceleration.

Option "AccelMethod" "string"

Chooses between available acceleration architectures. Valid options are **XAA** and **EXA**. XAA is the traditional acceleration architecture and support for it is very stable. EXA is a newer acceleration architecture with better performance for the Render and Composite extensions. The default is **XAA**.

Option "Dac6Bit" "boolean"

Enables or disables the use of 6 bits per color component when in 8 bpp mode (emulates VGA mode). By default, all 8 bits per color component are used. The default is **off**.

Option "VideoKey" "integer"

This overrides the default pixel value for the YUV video overlay key. The default value is **undefined**.

Option "Display" "string"

Select display mode for devices which support flat panels. Supported modes are:

"FP" - use flat panel;

"CRT" - use cathode ray tube;

"Mirror" - use both FP and CRT;

"BIOS" - use mode as configured in the BIOS.

The default is **FP**.

The following **Options** are mostly important for non-x86 architectures:

Option "ProgramFPRegs" "boolean"

Enable or disable programming of the flat panel registers. Beware that this may damage your panel, so use this **at your own risk**. The default depends on the device.

Option "PanelWidth" "integer"**Option "PanelHeight" "integer"**

Override the flat panel dimensions in pixels. They are used to program the flat panel registers and normally determined using the video card BIOS. If the wrong dimensions are used, the system may hang.

Option "UseFBDev" "boolean"

Enable or disable use of an OS-specific framebuffer device interface (which is not supported on all OSs). See fbdevhw(4) for further information. Default: **on** for PowerPC, **off** for other architectures.

Option "DMAForXv" "boolean"

Try or don't try to use DMA for Xv image transfers. This will reduce CPU usage when playing big videos like DVDs, but may cause instabilities. Default: off.

The following additional **Options** are supported:

Option "ShowCache" "boolean"

Enable or disable viewing offscreen cache memory. A development debug option. Default: off.

Option "VGAAccess" "boolean"

Tell the driver if it can do legacy VGA IOs to the card. This is necessary for properly resuming consoles when in VGA text mode, but shouldn't be if the console is using radeonfb or some other graphic mode driver. Some platforms like PowerPC have issues with those, and they aren't necessary unless you have a real text mode in console. The default is **off** on PowerPC and SPARC and **on** on other architectures.

Dualhead Note: The video BIOS on some laptops interacts strangely with dualhead. This can result in flickering and problems changing modes on crtc2. If you experience these problems try toggling your laptop's video output switch (e.g., fn-f7, etc.) prior to starting X or switch to another VT and back.

SEE ALSO

Xorg(1), xorg.conf(5), Xserver(1), X(7)

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