

NAME

vga - generic video card interface

SYNOPSIS

```
options VESA
options VESA_DEBUG=N
options VGA_ALT_SEQACCESS
options VGA_NO_FONT_LOADING
options VGA_NO_MODE_CHANGE
options VGA_SLOW_IOACCESS
options VGA_WIDTH90
device vga
```

In */boot/device.hints*:

```
hint.vga.0.at="isa"
```

DESCRIPTION

The **vga** driver is a generic video card driver which provides access to video cards. This driver is required for the console driver `syscons(4)`. The console driver will call the **vga** driver to manipulate video hardware (changing video modes, loading font, etc).

The **vga** driver supports the standard video cards: MDA, CGA, EGA and VGA. In addition, the driver can utilize VESA BIOS extensions if the video card supports them. VESA support can either be statically included in the kernel or can be loaded as a separate module.

In order to statically link the VESA support to the kernel, the VESA option (see below) must be defined in the kernel configuration file.

The **vesa** module can be dynamically loaded into the kernel using `kldload(8)`.

DRIVER CONFIGURATION**Kernel Configuration Options**

The following kernel configuration options (see `config(8)`) can be used to control the **vga** driver. These options provide compatibility with certain VGA cards.

VGA_ALT_SEQACCESS

You may want to try this option if the mouse pointer is not drawn correctly or the font does not seem to be loaded properly on the VGA card. However, it may cause flicker on some systems.

VGA_SLOW_IOACCESS

Older VGA cards may require this option for proper operation. It makes the driver perform byte-wide I/O to VGA registers and slow down a little.

VGA_WIDTH90

This option enables 90 column modes: 90x25, 90x30, 90x43, 90x50, 90x60. These modes are not always supported by the video card and the display. It is highly likely that LCD display cannot work with these modes.

The following options add optional features to the driver.

VESA Add VESA BIOS support to the driver. If the VGA card has the VESA BIOS extension 1.2 or later, this option will utilize the VESA BIOS service to switch to high resolution modes.

VESA_DEBUG=N

Set the VESA support debug level to *N*. The default value is zero, which suppresses all debugging output.

The following options will remove some features from the **vga** driver and save kernel memory.

VGA_NO_FONT_LOADING

The **vga** driver can load software font to EGA and VGA cards. This option removes this feature. Note that if you use this option and still wish to use the mouse on the console then you must also use the **SC_ALT_MOUSE_IMAGE** option. See **syscons(4)**.

VGA_NO_MODE_CHANGE

This option prevents the driver from changing video modes.

EXAMPLES

Your kernel configuration should normally have:

```
device vga
```

And you need the following line in */boot/device.hints*.

```
hint.vga.0.at="isa"
```

The following lines should be included in the kernel configuration file in order to enable the VESA BIOS Extension support.

```
options VESA
device vga
```

If you do not want VESA support included in the kernel, but want to use occasionally, do not add the VESA option. And load the **vesa** module as desired:

```
kldload vesa
```

SEE ALSO

vgl(3), syscons(4), config(8), kldload(8), kldunload(8)

STANDARDS

Video Electronics Standards Association, *VESA BIOS Extension (VBE)*.

HISTORY

The **vga** driver first appeared in FreeBSD 3.1.

AUTHORS

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