NAME

tcx – 24-bit SBus color memory frame buffer

SYNOPSIS

/dev/fbs/tcx

DESCRIPTION

tcx is a 8/24-bit color frame buffer and graphics accelerator, with 8-bit colormap, and overlay/enable planes. It provides the standard frame buffer interface defined in **fbio**(7I).

tcx has two control planes which define how the underlying pixel is displayed. The display modes are 8-bit (8 bits taken from low-order 8 bits of pixel) through a colormap; 24-bit through a gamma-correction table; 24-bit through the colormap; or 24-bit direct. The colormap is shared by both 24-bit and 8-bit modes.

The tcx has registers and memory that may be mapped with **mmap**(2), using the offsets defined in **<sys/tcxreg.h>**.

There is an 8-bit only version of **tcx** which operates the same as the 24-bit version, except that the 24-bit-related mappings can not be made.

tcx accepts the following ioctls, defined in **<sys/fbio.h>** and **<sys/visual_io.h>**, and implemented as described in **fbio**(7I).

FBIOGATTR	**FBIOGCURSOR**
FBIOGTYPE	**FBIOSCURPOS**
FBIOPUTCMAP	**FBIOGCURPOS**
FBIOGETCMAP	**FBIOGCURMAX**
FBIOSATTR	**FBIOGXINFO**
FBIOSVIDEO	**FBIOMONINFO**
FBIOGVIDEO	**FBIOVRTOFFSET**
FBIOVERTICAL	**VIS_GETIDENTIFIER**
FBIOSCURSOR	

The value returned by **VIS_GETIDENTIFIER** is "SUNW,tcx".

Emulation mode (**FBIOGATTR**, **FBIOSATTR**) may be either none, **FBTYPE_SUN3COLOR**, or **FBTYPE_MEMCOLOR**.

FBIOPUTCMAP returns immediately, although the actual colormap update may be delayed until the next vertical retrace. If vertical retrace is currently in progress, the new colormap takes effect immediately.

FBIOGETCMAP returns immediately with the currently-loaded colormap, unless a colormap write is pending (see above), in which case it waits until the colormap is updated before returning. This may be used to synchronize software with colormap updates.

The size and linebytes values returned by **FBIOGATTR**, **FBIOGTYPE** and **FBIOGXINFO** are the sizes of the 8-bit framebuffer. The proper way to compute the size of a framebuffer mapping is

size=linebytes*height*bytes_per_pixel

FILES

/dev/fbs/tcx	device special file
/dev/fb	default frame buffer
/usr/include/sys/tcxreg.h	device-specific definitions

SEE ALSO

mmap(2), **fbio**(7I)