

# NEXTSTEP for Intel Processors Release 3.3

## Display Driver Overview

**Driver:** ELSA WINNER Multiple Display  
**Current Availability:** Released  
**Driver Location (if not on CDROM):** NeXTanswer #1934  
**Driver Overview:** NeXTanswer #1935  
**Last Update:** May 24 1995

**Driver Name / Installer .pkg:** ELSAWINNERMultipleDisplayDriver.pkg  
**Driver Type:** Display  
**Driver Scope:** Product Family  
**Component Supported:** 864, 964, Vision868, Vision968  
**Component Manufacturer:** S3  
**PC Bus / Interface Supported by Driver\*:** PCI

**General Overview notes:** This graphics driver is designed to support the *WINNER 2000PRO/X* and *WINNER 1000AVI* Graphics adapters from ELSA GmbH, Aachen, Germany for use in multiple headed systems with NEXTSTEP software Release 3.3. The *WINNER 2000PRO/X* are based on the S3 Vision968 Graphics controller chipset and support 2, 4 or 8 MB of VRAM. The *WINNER 1000AVI* are based on the S3 Vision868 Graphics controller chipset and support 1MB or 2MB of DRAM. The *WINNER 2000PRO/X* is described in NeXTanswer #1658, the *WINNER 1000AVI* is described in NeXTanswer #1656. This driver supports all configurations including a broad variety of high-resolution and high-color (32bit) modes. The high performance RAMDACs on these adapters allow support of very high resolutions including 1600x1280 with 32-bit color at a refresh rate of 78 Hz (250MHz RAMDAC on the 8MB version).

**Supported Products / Add-on Adapters:**  
ELSA WINNER 2000PRO/X-PCI-8 (PCI, 8MB VRAM, 250MHz RAMDAC)  
ELSA WINNER 2000PRO/X-PCI-4 (PCI, 4MB VRAM, 220MHz RAMDAC)  
ELSA WINNER 2000PRO/X-PCI-2 (PCI, 2MB VRAM, 220MHz RAMDAC)  
ELSA WINNER 1000AVI-PCI-2 (PCI, 2MB DRAM, 135MHz RAMDAC)

ELSA WINNER 1000AVI-PCI-1	(PCI, 1MB DRAM, 100MHz RAMDAC)
ELSA WINNER 2000PRO-PCI-H	(PCI, 4MB VRAM, 200MHz RAMDAC)
ELSA WINNER 2000PRO-PCI-4	(PCI, 4MB VRAM, 175MHz RAMDAC)
ELSA WINNER 2000PRO-PCI-2	(PCI, 2MB VRAM, 135MHz RAMDAC)
ELSA WINNER 1000PRO-PCI-2	(PCI, 2MB DRAM, 135MHz RAMDAC)
ELSA WINNER 1000PRO-PCI-1	(PCI, 1MB DRAM, 100MHz RAMDAC)

**Supported Products / Systems (ie integrated into PC System):**

**Special Features of Driver / Driver Notes:**

This driver allows the installation of multiple graphics cards / screens on PCI bus based systems with Release 3.3 of the NEXTSTEP software.

## Display Driver Details

**Frame Buffer Sizes Supported\*:** 2MB VRAM, 4MB VRAM, 8MB VRAM

**Display Modes (Number in () after resolution indicates frame buffer size required)**

**32 Bit Color Modes\*:**

1600x1280 (8MB), 1600x1200 (8MB), 1536x1152 (8MB), 1408x1024 (8MB),  
1280x1024 (8MB), 1152x 864 (4MB+), 1120x 832 (4MB+),1024x 768 (4MB+),  
800x 600 (2MB+), 640x 480 (2MB+),

**16 Bit Color Modes\*:**

1600x1280 (4MB+), 1600x1200 (4MB+), 1536x1152 (4MB+), 1408x1024 (4MB+),  
1280x1024 (4MB+), 1152x 864 (2MB+), 1120x 832 (2MB+),1024x 768 (2MB+),  
800x 600 (1MB+), 640x 480 (1MB+),

**8 Bit Color / Greyscale Modes\*:**

1600x1280 (2MB+), 1600x1200 (2MB+), 1536x1152 (2MB+), 1408x1024 (2MB+),  
1280x1024 (2MB+), 1152x 864 (1MB+), 1120x 832 (1MB+),1024x 768 (1MB+),

800x 600 (1MB+), 640x 480 (1MB+),

**Supported RAMDAC's\*:**

RGB 528, TVP 3026, TVP 3020, S3 SDAC

**Additional Display Driver Notes:**

Multiple headed system configurations must be based on identical boards, i.e. combinations of boards of different type or ram size are not supported.

On VL-bus based systems and systems that use Release 3.2 of the NEXTSTEP software, the standard ELSA WINNER Display Driver must be used. The standard driver is NeXTanswer #1662, the corresponding ReadMe is NeXTanswer #1661.

## Known Problems

## Future Planning

**Future / Update Planning:**

**Reason for New Driver / Update:**

**New Driver / Update Timeframe:**

**New Driver / Update Description:**

**Note:** Information contained in the "Future Planning" section of this document does not constitute a commitment on the part of NeXT to complete the planned development work.

\* - Indicates information that is inclusive of the entire capability of this driver. Not all devices supported by this driver may include all features listed. Check any available NeXTanswers and the hardware manual for the device for additional information.

## Product Vendor