



QUADRO WORKSTATION APPLICATION

ELSA POWERdraft
Release Notes

Based on Version 15.05.10

NVIDIA Corporation
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CHAPTER

1

THE ELSA POWERDRAFT DRIVER

This chapter contains the following topics:

- “Overview” on page 1
- “Key Features” on page 2
- “Release History” on page 3
- “Supported Languages” on page 4
- “System Requirements” on page 4
- “Overview of Resolved Issues by Version” on page 6
- “Known Issues” on page 10

Overview

ELSA POWERdraft™ is a Quadro workstation application utility.

The ELSA POWERdraft driver (software) is seamlessly integrated into the AutoCAD environment and contains significant improvements over existing driver technology. ELSA POWERdraft driver provides an extremely fast and reliable platform for AutoCAD. 32-bit display list technology and knowledge of the NVIDIA® graphics adapter are combined to provide an optimal solution for Windows AutoCAD users.

ELSA POWERdraft includes the **MagniView**, **MultiView**, and **Cockpit** utilities, which are designed to enhance the AutoCAD drafting environment without interfering with its functionality. Fully dynamic and integrated through the NVIDIA **SmartFocus** technology, each utility is transparent to AutoCAD and available during any AutoCAD command.

The AutoCAD display driver, *WHIP!*, is part of the AutoCAD plotting engine, which is a new feature in AutoCAD 2000. ELSA POWERdraft replaces the *WHIP!* display pipeline but does not replace the plotting pipeline or affect the AutoCAD plotting functionality.

Note: For details on using the features of POWERdraft, refer to the *ELSA POWERdraft User's Guide*.

Key Features

ELSA POWERdraft 3D Hardware Renderer

To support AutoCAD 3D functionality, ELSA POWERdraft includes the 3D Hardware Renderer, which accelerates AutoCAD 3D viewing modes such as 3D Orbit or Gouraud Shaded.

ELSA POWERdraft Cockpit

Cockpit lets you use your pointing device to dynamically pan and zoom your current AutoCAD view. Fully integrated into the AutoCAD **MDI (multiple document interface)** environment through the NVIDIA SmartFocus technology, Cockpit has an easy-to-use graphical navigation interface, which allows you to take full advantage of the enhanced ELSA POWERdraft performance.

ELSA POWERdraft MultiView

Also fully integrated into the AutoCAD MDI environment, the MultiView utility provides a visual History of previous views, where each view is represented on a button face. Instant access to previous views allows you to record and playback selected views in a consistent manner. Using MultiView, you can also efficiently manage AutoCAD Named Views.

ELSA POWERdraft MagniView

The MagniView utility functions as a graphical magnifying glass giving your drawing a more detailed appearance.

ELSA POWERdraft Toolbar

The ELSA POWERdraft toolbar provides convenient access to several ELSA POWERdraft commands.

ELSA POWERdraft Hot Keys

For common actions such as **Pan**, **Zoom**, and **Redraw All**, ELSA POWERdraft provides configurable key combinations called **Hot Keys**. Hot Keys work transparently and are always accessible within AutoCAD.

ELSA POWERdraft Drawing Optimization

ELSA POWERdraft provides a configurable **Display Update** cache to accelerate the execution of Lisp scripts.

Online Help

When you have any ELSA POWERdraft window open, press **F1** to display online Help, which provides detailed user information about the application. You can view Help outside the application if needed.

For additional information about online Help installation and access, see [“Software Components” on page 6](#) and [“Installing and Configuring ELSA POWERdraft” on page 13](#).

Release History

[Table 1.1](#) contains a summary of ELSA POWERdraft releases and the versions associated with them. Some versions listed may not have been released outside of NVIDIA.

Table 1.1 ELSA POWERdraft Release History

Release	Version	Comments
Release 15.05	15.05.00 – 15.05.xx	Releases ongoing
Release 15.04	15.04.00 – 15.04.02	
Release 15.03	15.03.00 – 15.03.02	
Release 15.02	15.02.00 – 15.02.02	

Supported Languages

User Interface

The ELSA POWERdraft user interface support the following languages:

Chinese (traditional)	German	Norwegian
Chinese (simplified)	Hungarian	Polish
Czech	Italian	Russian
English	Japanese	Spanish
French	Korean	

Online Help

The ELSA POWERdraft online Help supports the following languages:

Arabic	Finnish	Norwegian
Chinese (simplified)	French	Portuguese (Brazil)
Chinese (traditional)	German	Russian
Danish	Italian	Spanish
Dutch	Japanese	Swedish
English	Korean	Thai

System Requirements

Before you install and use ELSA POWERdraft, make sure you have the following prerequisites as explained in these sections:

- [“Operating System & Disk Space” on page 5](#)
- [“Hardware: Supported NVIDIA Products” on page 5](#)
- [“NVIDIA Driver Software” on page 5](#)
- [“Software Components” on page 6](#)
- [“AutoCAD Application” on page 6](#)

Operating System & Disk Space

This release requires 3 MB of disk space and includes drivers for each of the following operating systems:

- Microsoft® Windows XP (Home and Professional Editions)
- Microsoft Windows 2000
- Microsoft Windows NT® 4.0 (*at least*, Service Pack 4)

Hardware: Supported NVIDIA Products

You need a workstation graphics card based on one of the NVIDIA products *or* an equivalent ELSA graphics card as listed in [Table 1.2](#).

Table 1.2 Supported NVIDIA Products

NVIDIA Workstation Product	Equivalent ELSA Graphics Card (distributed by ELSA)
Quadro™ 4 500 GoGL	
Quadro4 900 XGL	
Quadro4 750 XGL	
Quadro4 700 XGL	
Quadro4 550 XGL	
Quadro™ DCC	ELSA GLoria DCC
Quadro™ 2 Pro	ELSA GLoria III
Quadro2 MXR	ELSA Synergy III
Quadro2 Go	
Quadro2 EX	ELSA Synergy 2000
Quadro™	ELSA GLoria II

Note: ELSA POWERdraft 15.02.00 and later versions will not run with the ELSA Synergy II graphics card. Older versions (*earlier than 15.02.00*) of ELSA POWERdraft can run with ELSA Synergy II using the ELSA driver software.

NVIDIA Driver Software

You need one of the following NVIDIA Drivers:

- NVIDIA Windows NT 4.0 Display Driver (*at least* Version 6.46) *or*
- NVIDIA Windows 2000 Display Driver (*at least* Version 6.46)

Software Components

The ELSA POWERdraft Setup directory contains the following files:

- `Readme.txt` file
- `Setup.exe` installation program for Windows
- Other files required by the Setup program

Note: The ELSA POWERdraft online Help file (**Lang15*.hlp**) is installed in the AutoCAD directory that is specified during installation.

AutoCAD Application

You must have AutoCAD installed *before* you install ELSA POWERdraft. ELSA POWERdraft will work with any one of the following applications:

- AutoCAD 2002
- AutoCAD 2000
- AutoCAD 2000i
- AutoCAD Architectural Desktop Release 3.3
- AutoCAD Architectural Desktop Release 2
- AutoCAD Architectural Desktop Release 2i
- Mechanical Desktop Release 6
- Mechanical Desktop Release 5
- Mechanical Desktop Release 4

Note: You need to install AutoCAD to run Mechanical Desktop or Architectural Desktop applications.

Overview of Resolved Issues by Version

This sections contains lists of resolved issues categorized by POWERdraft version number.

- [“Issues Resolved in Version 15.05.10” on page 7](#)
- [“Issues Resolved in Version 15.05.09” on page 7](#)
- [“Issues Resolved in Version 15.05.04” on page 7](#)
- [“Issues Resolved in Version 15.05.02” on page 7](#)
- [“Issues Resolved in Version 15.05.01” on page 7](#)

- [“Issues Resolved in Version 15.04.01” on page 8](#)
- [“Issues Resolved in Version 15.04” on page 8](#)
- [“Issues Resolved in Version 15.03.02” on page 8](#)
- [“Issues Resolved in Version 15.03” on page 8](#)
- [“Issues Resolved in Version 15.02.00 - 15.02.02” on page 8](#)
- [“Issues Resolved in Version 15.01.06” on page 9](#)
- [“Issues Resolved in Version 15.01.04” on page 9](#)
- [“Issues Resolved in Version 15.00.07” on page 9](#)

Issues Resolved in Version 15.05.10

Under Windows 2000 and Quadro4 500 GoGL, fixed problem with having to render model twice in AutoCAD with POWERdraft open.

Issues Resolved in Version 15.05.09

- Fixed problem with mouse trail in POWERdraft.
- Under Synergy2000/Quadro2 EX, fixed problem with corrupted display of paper space in Architectural Desktop 3.3 running with POWERdraft 15.05.06.
- Fixed problems with Cockpit Pan and Zoom in Layout View.

Issues Resolved in Version 15.05.04

- Fixed problem where there was a system hang during plotting when attempting to print.
- Under Windows XP, fixed problem with pauses between drawing lines.

Issues Resolved in Version 15.05.02

- Fixed problem with AutoCAD freezing during POWERdraft startup.
- Fixed issue where POWERdraft did not restore Named Views with saved User Coordinate System (UCS).

Issues Resolved in Version 15.05.01

- Added AutoCAD 2002 support.

- Fixed problem where the AutoCAD Grid did not refresh correctly in POWERdraft 15.04.xx and 15.05.
- Updated POWERdraft `readme.txt` and Help content; i.e., generalized the file name references for application to all releases of POWERdraft.
- Fixed problem with inaccessible foreign language content after POWERdraft installation.
- Fixed corrupted true color raster images in MagniView and AerialView.

Issues Resolved in Version 15.04.01

- Fixed Win NT 4.0 with Quadro2 Pro/EX access violation.
- Updated POWERdraft Help.

Issues Resolved in Version 15.04

Added enhanced support for dual-processor systems.

Issues Resolved in Version 15.03.02

Fixed issue where AutoCAD 2000i ended with fatal error when using True Type Fonts.

Issues Resolved in Version 15.03

- Added support for AutoCAD 2000i and 2000i-based applications.
- Fixed wrong `.hdi` renderer file configuration in POWERdraft Setup.

Issues Resolved in Version 15.02.00 - 15.02.02

- Fixed: When running the ELSA POWERdraft Setup program, an unknown component named “lang_int” is selectable.
- Fixed: Under Windows 2000 with Quadro2 Pro or Quadro2 EX, minor cosmetic defects appeared during installation of ELSA POWERdraft.
- Fixed: Under Windows 2000 with Quadro2 Pro or Quadro2 EX, the ELSA POWERdraft logo was incorrect.
- Fixed: ELSA POWERdraft had display problems under Windows 2000 with Quadro2 Pro or Quadro2 EX.

- Fixed: Under Windows NT 4.0 with Quadro, the uninstallation program did not remove all of the ELSA POWERdraft files.
- Fixed: Under Windows 2000 with Quadro2 MXR and AutoCAD 2000, truck model in the Sample folder was corrupted using the `nvidia6.hdi` driver.

Issues Resolved in Version 15.01.06

- Fixed the Render command.
- Fixed exclusive installation of 3D Hardware Renderer.
- Implemented the new hot key “Wireframe now”.
- Accelerated the performance of AutoCAD AerialView. The AerialView dynamic update mode feature is very useful, even with large drawings.
- Added new Cockpit feature, which allowed crosshairs and other construction elements to be displayed during remote pan and zoom.
- Added another new Cockpit feature, which restored the old view when you abort dynamic pan & zoom by pressing the ESC key before releasing the mouse button.
- For Cockpit dynamic pan and zoom, improved the drawing order for most cases, which is especially useful for very large drawings.
- Significantly accelerated the dragging list, which is used in commands such as Copy, Move, and Rotate.

Issues Resolved in Version 15.01.04

- Included enhancements for Cockpit, which offered rapid and flicker-free dynamic zoom and pan, a feature that is also available through the Cockpit Remote Control.
- Offered a faster drawing speed compared to the AutoCAD application without ELSA POWERdraft.

Issues Resolved in Version 15.00.07

Version 15.00.07 was the first version of ELSA POWERdraft and included:

- 3D Hardware Renderer to accelerate AutoCAD 3D viewing modes
- MultiView (a new feature)
- Configurable Hot Key for convenient navigation
- Configurable Drawing Optimization to accelerate execution of Lisp scripts

- Settings (integrated in the AutoCAD Options) option to configure ELSA POWERdraft
- New commands

Known Issues

The following software limitations are known to exist in the current version of ELSA POWERdraft:

- [MagniView: Rendering of 2D Images](#)
- [Export Formats](#)
- [Model Space and Layout Mode](#)
- [Cockpit and Plot Preview/3D Orbit](#)
- [Entity Selection in a 3D View](#)
- [“Redraw All” Hot Key](#)
- [OLE Objects](#)

Note: Some of these issues may be fixed in future releases.

MagniView: Rendering of 2D Images

The MagniView utility in POWERdraft is designed to show 2D graphics of the current viewport only. A 2D sample image such as city map opens in paperspace with the default paperspace viewport (viewport 1) active. The default paperspace viewport mainly contains the floating viewport borders and may also contain text. Consequently, MagniView can only show viewport borders and text when starting with this setting.

Note: To view the complete image, click one of the floating viewports to make it active. MagniView will then switch to show all the 2D graphics contained in that viewport.

Export Formats

The following export formats are not supported; i.e., the files generated are valid but do not contain any entity:

- **Windows Meta Files (*.wmf)** (The command is `_EXPORT Metafile.`)
- **Slide Files (*.slid)** (The command is `_MSLIDE.`) Slide files are supported with ELSA POWERdraft version 15.02.00 or higher.

Model Space and Layout Mode

The following limitations only apply to Model Space and Layout Mode (paper space) but do not apply to Plot Preview:

- When using non-rectangular viewports in layout mode, the entities inside those viewports are not clipped properly to the viewport border.
- End caps and join styles are not displayed.
- Line types may appear different from AutoCAD line types.
- The drawing order of TrueTypeText and elliptical arcs is different from the original AutoCAD.

Cockpit and Plot Preview/3D Orbit

Cockpit does not work in Plot Preview or in 3D Orbit.

Entity Selection in a 3D View

When selecting an entity in a 3D view, the corresponding highlighted entity may be off by one pixel to the side. When using the ELSA POWERdraft 3D Hardware Renderer, fewer of these display errors occur than with `wopengl6.hdi`.

“Redraw All” Hot Key

In a 3D viewport, the **RedrawAll** hot key does not repair pixel errors with drawing entities, but non-drawing entities such as highlights, grips, or the crosshairs are redrawn.

OLE Objects

OLE Objects are not supported in POWERdraft.

CHAPTER

2

INSTALLATION AND UNINSTALLATION

This chapter contains the following sections:

- “Confirming the Version Number” on page 12
- “Installing and Configuring ELSA POWERdraft” on page 13
- “Starting ELSA POWERdraft” on page 13
- “Setting Directory Access Rights” on page 14
- “Uninstalling ELSA POWERdraft” on page 14

Confirming the Version Number

You can use *one* of the following methods to determine the version number of the ELSA POWERdraft driver you are about to install.

- Use the Windows Explorer to open the properties of the file named `nvd115.dll` in your driver directory.
- While AutoCAD is running with ELSA POWERdraft configured, type the command `PdVer` in the AutoCAD command line.
- Open the **AutoCAD Tools > Options** dialog box. The “ELSA POWERdraft” tab contains the current driver version.

Installing and Configuring ELSA POWERdraft

- 1 Make sure that AutoCAD is installed but *not* running.
- 2 Start Setup.exe from the installation directory. The driver is installed in a separate driver directory. Setup creates a program group containing the following icons:
 - **POWERdraft Help** opens the online Help file.
 - **Configure POWERdraft** configures ELSA POWERdraft as the AutoCAD display driver.
 - **Configure Original Driver** configures the AutoCAD original display driver (Whip).

Note: The two **Configure..** icons only work when AutoCAD is not running.

- 3 Use these icons to configure either ELSA POWERdraft or the original driver shipped with AutoCAD (Whip) as the actual display driver for AutoCAD. After Setup has completed successfully, POWERdraft is already configured.
 - To re-configure the original driver, click the **Configure Original Driver** icon while the target application is not running.
 - To configure the driver for ELSA POWERdraft, click the **Configure POWERdraft** icon.
- 4 Use these icons to configure either ELSA POWERdraft or the original driver shipped with AutoCAD (Whip) as the actual display driver for AutoCAD. After Setup has completed successfully, POWERdraft is already configured.
 - To re-configure the original driver, click the **Configure Original Driver** icon while the target application is not running.
 - To configure the driver for ELSA POWERdraft, click the **Configure POWERdraft** icon.

Starting ELSA POWERdraft

When ELSA POWERdraft configuration is complete, the ELSA POWERdraft logo will appear when you start the AutoCAD application.

Note: If AutoCAD does not start after ELSA POWERdraft installation, re-install ELSA POWERdraft.

Setting Directory Access Rights

The Setup program requires Write access to the following directories:

- **AutoCAD directory:** Setup generates the file `pd15path.ini`, which holds the driver path in this directory.
- **AutoCAD “DRV” directory:** Setup copies the ELSA POWERdraft Hardware Renderer (`*.hdi` file) to this directory.
- **Driver directory:** Setup copies most of the ELSA POWERdraft files to the driver directory.
- **Windows System directory:** Setup may replace the system `.dll` files `msvcet.dll` and/or `mfc42.dll` with actual versions in this directory.
- **Windows directory:** SETUP generates the file `nvds15.ini`, which holds the POWERdraft settings in this directory.

During **configuration**, the configuration utility requires Write access to the following directory:

- **AutoCAD directory:** During configuration, the original AutoCAD display driver (POWERdraft) configuration is modified.

During **execution**, ELSA POWERdraft requires Write access to the following directories:

- **Driver directory**
- **Windows directory:** ELSA POWERdraft updates its settings in the file `nvds15.ini` when it finishes execution.

Uninstalling ELSA POWERdraft

To uninstall ELSA POWERdraft from your computer:

- 1 From your Windows desktop, click **Start > Settings > Control Panel**.
- 2 Click the **Add/Remove Programs** icon.
- 3 Click **ELSA POWERdraft** from the list.
- 4 Click the **Change/Remove** button.
- 5 Follow the prompts from the InstallShield program to complete uninstallation.