Filmworkz

Create Incredible

DVO
ZOOM
USER GUIDE

WHAT DOES IT DO?

DVO Zoom is a specialized upscaling tool renowned for its exceptional accuracy. It proves particularly valuable when performing conversions from High Definition (HD) to Ultra High Definition (UHD) resolutions.

By maintaining the integrity of the original content while enhancing its resolution, DVO Zoom contributes to an improved viewing experience on UHD displays, delivering the desired level of visual fidelity and clarity.

To upscale from SD to HD we recommend using **DVO Upscale**.

HOW DO YOU USE IT?

DVO Zoom works on the following platforms:

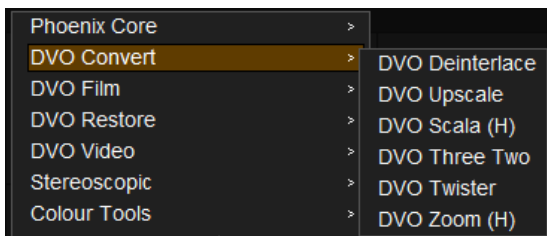**PHOENIX**   **NUCODA**

It's also coming soon to:

LOKI

If you're already a Filmworkz veteran, you can jump right in and use **DVO Zoom**, however if you need a hand getting going, check out these QuickStart Guides:
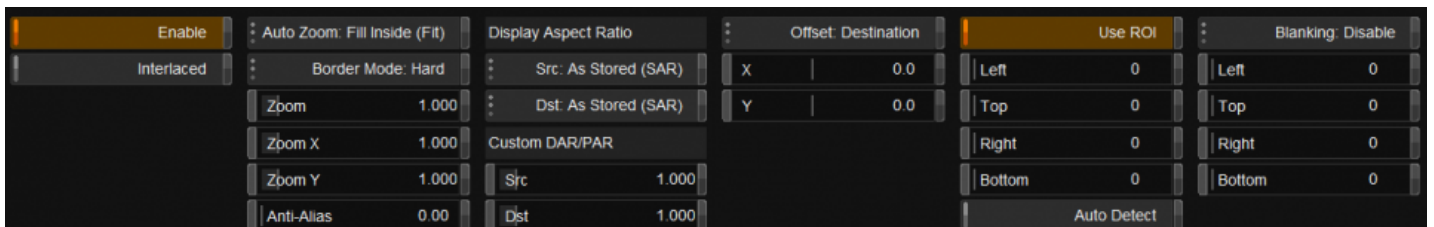
PHOENIX QUICKSTART GUIDE   **NUCODA QUICKSTART GUIDE**

GETTING STARTED

1. Launch your platform on your workstation.

2. Locate the toolbar, (positioned on the left-hand side of the interface)

Phoenix Core	>
DVO Convert	>
DVO Film	>
DVO Restore	>
DVO Video	>
Stereoscopic	>
Colour Tools	>

| DVO Deinterlace |
| DVO Upscale |
| DVO Scala (H) |
| DVO Three Two |
| DVO Twister |
| DVO Zoom (H) |

3. Scan the toolbar options until you find the **DVO Zoom** tool.

DVO Zoom (H)

Input FX
  DVO Zoom
Base (CC Layer)
Master

4. Click on it and the control panel under appears:

Enable	Auto Zoom: Fill Inside (Fit)	Display Aspect Ratio	Offset: Destination	Use ROI	Blanking: Disable
Interlaced	Border Mode: Hard	Src: As Stored (SAR)	X	0.0	Left	0	Left	0
	Zoom	1.000	Dst: As Stored (SAR)	Y	0.0	Top	0	Top	0
	Zoom X	1.000	Custom DAR/PAR		Right	0	Right	0
	Zoom Y	1.000	Src	1.000	Bottom	0	Bottom	0
	Anti-Alias	0.00	Dst	1.000	Auto Detect	

# CONTROL PANEL EXPLAINED

INTERLACED SOURCES

Interlaced

If your source material is *interlaced*, enable *Interlaced* mode so the processing is done in field mode.

TERMINOLOGY

This Guide uses some acronyms to describe various terms:

- **AR (Aspect ratio)**
- **SAR (Storage Aspect Ratio) -** The pixel dimension ratio of media e.g., 1920x1080 has a SAR of 16/9 (dividing gives 1.77).
- **PAR (Pixel Aspect Ratio) -** Usually 1:1 (square pixels)
- **DAR (Display Aspect Ratio) -** Aspect of picture as displayed (SAR x DAR)

AUTO ZOOM

Auto Zoom: Fill Inside (Fit)
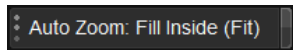
Auto Zoom will properly scale the image based upon the SAR, PAR and DAR (see *terminology*) and *Zoom* selection.

- **Disable:** No auto zoom
- **Stretch:** Stretch the edges of sources to edges of target. No AR preservation.
- **AR Adjust:** No zoom, Adjusts the AR
- **Fill Inside (default):** Zoom image to fit picture in output frame. AR aware.
- **Fill Crop:** Zoom image to fill output frame. AR aware.

BORDER MODE
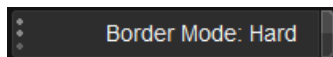
Border Mode: Hard

Border Mode defines the edge processing of the image. The available options are:

- **Soft:** Smooth scaling throughout the image but it will create a soft edge.
- **Hard (default):** Sharper edge with a less smooth scaling.
- **Soft outside:** Smooth scaling but forces the soft edge to be outside of the intended scaling size.

ZOOM

Zoom	1.000
Zoom X	1.000
Zoom Y	1.000
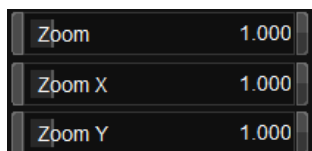
Set specific zoom parameters.

- If *Auto Zoom* is **disabled**, set zoom freely
- If *Auto Zoom* is enabled, **append** to current zoom settings

Range: 0.1 – 8.0   **Default:** 1.0

You can choose to zoom in any direction:

- Zoom - Scale X and Y
- Zoom X - Scale in X (horizontally) only
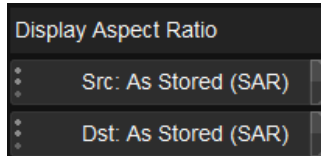- Zoom Y - Scale in Y (vertically) only

ANTI - ALIAS

Anti-Alias	0.00

Anti-Alias will smooth alias artifacts on result.

Range: 0.0 – 1.0   **Default:** 0.0

DISPLAY ASPECT RATIO

Display Aspect Ratio
Src: As Stored (SAR)
Dst: As Stored (SAR)

Display Aspect Ratio sets the scaling used when *Auto Zoom* is set to **AR**. We can set both *Src* (input) and *Dst* (output).

- **Custom:** Sets DAR using custom slider
- **From Custom PAR:** Sets PAR using custom slider (DAR = SAR x PAR)
- **As Stored (SAR):** Sets DAR = SAR (PAR is square pixels 1:1). **DEFAULT**
- **4x3:** DAR set as 4x3
- **16x9:** DAR set as 16x9
- **2:1:** DAR set as 2:1
- **2.35:1:** DAR set as 2.35:1

If the PAR is *square* you can always use default setting *As Stored (SAR)*.
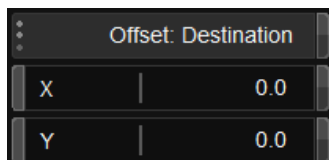
CUSTOM DAR/PAR

Custom DAR/PAR	
Src	1.000
Dst	1.000
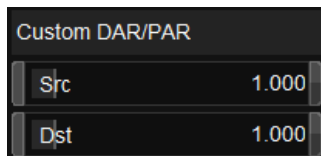
Set a custom value for *Src* and/or *Dst* DAR and PAR.

Range: 0.1 – 8.0   **Default: 1**.0

OFFSET

Offset: Destination	
X	0.0
Y	0.0

Shift the result horizontally (X) and/or vertically (Y):

- Source - before scaling
- Destination - after scaling
- Final Frame - place offset as very last process including the blanking

Values: Source, Destination, Final Frame   **Default:** Destination/ 0.0/ 0.0

ROI

If enabled, add a *Region of Interest* on the source media if it's in a letterbox or pillarbox format. This is used to avoid *edge ringing* between the actual image and the blanking data.

Edge ringing, also known as haloing or overshoot, refers to a visual artifact characterized by a noticeable bright or dark halo around edges in an image. It can occur when there is a sharp transition or abrupt change in intensity or color between adjacent areas. In the case of video signals, this artifact can be introduced when there is a discrepancy between the actual image content and the blanking data that surrounds it.

Any data outside the ROI will be blanking data.

AUTO DETECT

If the blanking data is **digital,** then *Auto Detect* can be used to automatically find the source ROI in letterbox/pillar media.

BLANKING

Add blanking to target image with either a sharp or soft edge.

Values: Disable, Enable (Sharp), Enable (Soft)   **Default:** Disable

WANNA KNOW
MORE?

FORUM

WEBSITE

SALES