

## **HARDiNFO Pro - DirectDraw Info Help**

Click the right mouse button on any item to get help.



The overlay can be automatically flipped to the next surface in the flip chain each time a video port VSYNC occurs, allowing the video port and the overlay to double buffer the video without CPU overhead.

The overlay hardware can display each field individually of an interlaced video stream while it is **interleaved** in memory without causing any artifacts that might normally occur without special hardware support.

The overlay hardware can display each field individually of an interlaced video stream while it is **not interleaved** in memory without causing any artifacts that might normally occur without special hardware support.

Sixteen-bit RGBZ values can be converted into sixteen-bit RGB values. (The system does not support eight-bit conversions.)

The Driver Is Capable Of Performing Odd And Even Flip Operations.

Indicates That Display Hardware Is Certified.



The primary surface contains color controls (gamma, etc.)

The overlay surface contains color controls (brightness, sharpness, etc.)

Indicates that 2-D operations such as Blt and Lock cannot be performed on any surfaces that Direct3D® is using between calls to the IDirect3DDevice2::BeginScene and IDirect3DDevice2::EndScene methods.

Indicates That The Display Driver Supports Surfaces In Non-Local Video Memory.

Indicates That Blit Capabilities For Non-Local Video Memory Surfaces Differ From Local Video Memory Surfaces.

DMA Blit Operations Are Supported On System Memory Surfaces That Are Not Page Locked.

Indicates That Display Hardware Supports Live Video.

Indicates That The Display Surfaces Supports Surfaces Wider Than The Primary Surface.





Indicates that the display hardware has 3-D acceleration.

Indicates that DirectDraw will support only those overlay destination rectangles with the x-axis aligned to the AlignBoundaryDest boundaries of the surface.

Indicates that DirectDraw will support only those source rectangles with the x-axis aligned to the AlignBoundarySrc boundaries of the surface.

Indicates that DirectDraw will support only those overlay destination rectangles whose x-axis sizes, in pixels, are AlignSizeDest multiples.

Indicates that DirectDraw will support only those overlay source rectangles whose x-axis sizes, in pixels, are AlignSizeSrc multiples.

Indicates that DirectDraw will create display memory surfaces that have a stride alignment equal to the AlignStrideAlign value.

Indicates that the display hardware supports an **alpha** channel during blit operations.



Indicates that the display hardware is bank-switched and is potentially very slow at random access to display memory.

Indicates that display hardware is capable of blit operations.

Indicates that display hardware is capable of color filling with a blitter.

Indicates that display hardware is capable of depth filling z-buffers with a blitter.

Indicates that display hardware is capable of **color-space** conversions during blit operations.

Indicates that display hardware is capable of asynchronous blit operations.

Indicates that display hardware is capable of **stretching** during blit operations.

Indicates that display hardware is capable of blitting to or from system memory.



Indicates that display hardware is capable of clipping with blitting.

Indicates that display hardware is capable of clipping while stretch blitting.

Supports some form of color key in either overlay or blit operations.

Indicates that the color key is partially hardware assisted. This means that other resources (CPU and/or video memory) might be used. If this bit is not set, full hardware support is in place.

Indicates that display hardware is shared with GDI.

Indicates that there is no hardware support.

Indicates that display hardware supports overlays.

Indicates that display hardware supports overlays but cannot clip them.



Indicates that overlay hardware is capable of **color-space** conversions during overlay operations.

Indicates that overlay hardware is capable of stretching.

Indicates that DirectDraw is capable of creating and supporting DirectDrawPalette objects for more surfaces than only the primary surface.

Indicates that DirectDraw is capable of updating a palette synchronized with the vertical refresh.

Indicates that display hardware is capable of returning the current scan line.

Indicates that display hardware has stereo vision capabilities.

Indicates that display hardware is capable of generating a vertical-blank interrupt.

Supports the use of z-buffers with blit operations.



Supports Z ordered Overlays.



Supports transparent blitting with a **color key** that identifies the replaceable bits of the destination surface for RGB colors.

Supports transparent blitting with a color space that identifies the replaceable bits of the destination surface for **RGB** colors.

Supports transparent blitting with a color space that identifies the replaceable bits of the destination surface for **YUV** colors.

Supports transparent blitting with a color key that identifies the replaceable bits of the destination surface for **YUV** colors.

Supports overlaying with color keying of the replaceable bits of the destination surface being overlaid for **RGB** colors.

Supports a color space as the **color key** for the destination of **RGB** colors.



Supports a color space as the **color key** for the destination of **YUV** colors.

Supports only one active destination **color key** value for visible overlay surfaces .

Supports overlaying using color keying of the replaceable bits of the destination surface being overlaid for **YUV** colors.

Indicates there are no bandwidth trade-offs for using the color key with an overlay.

Supports transparent blitting using the **color key** for the source with this surface for **RGB** colors.

Supports transparent blitting using a color space for the source with this surface for **RGB** colors.

Supports transparent blitting using a color space for the source with this surface for **YUV** colors.

Supports transparent blitting using the color key for the source with this surface for **YUV** colors.



Supports overlaying using the color key for the source with this overlay surface for **RGB** colors.

Supports overlaying using a color space as the source color key for the overlay surface for **RGB** colors.

Supports overlaying using a color space as the source color key for the overlay surface for **YUV** colors.

Supports only one active source color key value for visible overlay surfaces.

Supports overlaying using the color key for the source with this overlay surface for **YUV** colors.



Uses arithmetic operations, rather than pixel-doubling techniques, to stretch and shrink surfaces during a blit operation.

Uses arithmetic operations, rather than pixel-doubling techniques, to stretch and shrink surfaces during a blit operation.



Supports Mirroring Left To Right In A Blit Operation.

Supports Mirroring Top To Bottom In A Blit Operation.

Supports Arbitrary Rotation In A Blit Operation.

\$#Supports 90-Degree Rotations In A Blit Operation.

\$#Supports Arbitrary Shrinking Of A Surface Along The X-Axis (Horizontally).

\$#Supports Integer Shrinking (´1, ´2, And So On) Of A Surface Along The X-Axis (Horizontally).

Supports Arbitrary Shrinking Of A Surface Along The Y-Axis (Vertically).

\$#Supports Integer Shrinking (´1, ´2, And So On) Of A Surface Along The Y-Axis (Vertically).



Supports Arbitrary Stretching Of A Surface Along The X-Axis (Horizontally).

\$#Supports Integer Stretching (´1, ´2, And So On) Of A Surface Along The X-Axis (Horizontally).

\$#Supports Arbitrary Stretching Of A Surface Along The Y-Axis (Vertically).

\$#Supports Integer Stretching (´1, ´2, And So On) Of A Surface Along The Y-Axis (Vertically).

\$#Uses Arithmetic Operations, Rather Than Pixel-Doubling Techniques, To Stretch And Shrink Surfaces During An Overlay Operation.

Uses Arithmetic Operations, Rather Than Pixel-Doubling Techniques, To Stretch And Shrink Surfaces During An Overlay Operation.

\$#Supports Mirroring Of Overlays Around The Vertical Axis.

\$#Supports Mirroring Of Overlays Across The Horizontal Axis.



Supports Arbitrary Shrinking Of A Surface Along The X-Axis (Horizontally).

Supports Arbitrary Shrinking Of A Surface Along The Y-Axis (Vertically).

\$#Supports Integer Shrinking (´1, ´2, And So On) Of A Surface Along The X-Axis (Horizontally).

\$#Supports Integer Shrinking (´1, ´2, And So On) Of A Surface Along The Y-Axis (Vertically).

Supports Arbitrary Stretching Of A Surface Along The X-Axis (Horizontally).

\$#Supports Integer Stretching (´1, ´2, And So On) Of A Surface Along The X-Axis (Horizontally).

\$#Supports Arbitrary Stretching Of A Surface Along The Y-Axis (Vertically).

\$#Supports Integer Stretching (´1, ´2, And So On) Of A Surface Along The Y-Axis (Vertically).



Supports Alpha Blending Around The Edge Of A Source Color-Keyed Surface. Used For Blit Operations.

\$#Supports Alpha Information In Pixel Format. Used For Blit Operations.

`$$Supports Alpha Information In Pixel Format. Used For Blit Operations.`

`Supports Alpha-Only Surfaces. Used For Blit Operations.`

\$#Indicates That The Alpha Channel Becomes More Transparent As The Alpha Value Increases. Used For Blit Operations.

\$#Supports Alpha Blending Around The Edge Of A Source Color-Keyed Surface. Used For Overlays.

\$#Supports Alpha Information In Pixel Format. Used For Overlays.

\$#Supports Alpha Information In Pixel Format. Used For Overlays.



Supports Alpha-Only Surfaces. Used For Overlays.

\$#Indicates That The Alpha Channel Becomes More Transparent As The Alpha Value Increases. Used For Overlays.

\$#Indicates That The Index Is 1 Bit. There Are Two Entries In The Color Table.

\$#Indicates That The Index Is 2 Bits. There Are Four Entries In The Color Table.

\$#Indicates That The Index Is 4 Bits. There Are 16 Entries In The Color Table.

\$#Indicates That The Index Is 8 Bits. There Are 256 Entries In The Color Table.

\$#Specifies An Index To An 8-Bit Color Index. Each Color Entry Is 1 Byte Long And Is An Index To An 8-Bpp Palette On The Destination Surface.

\$#Indicates That This Palette Can Have All 256 Entries Defined.



\$#Indicates That The Palette Is Attached To The Primary Surface.

\$#Indicates That The Palette Is Attached To The Primary Surface On The Left.

\$#Indicates That The Palette Can Be Modified Synchronously With The Monitor's Refresh Rate.

\$#Indicates That The Stereo View Is Accomplished Using Enigma Encoding.

\$#Indicates That The Stereo View Is Accomplished Using High-Frequency Flickering.

\$#Indicates That The Stereo View Is Accomplished When The Viewer Looks At The Image Through Red And Blue Filters Placed Over The Left And Right Eyes. All Images Must Adapt Their Color Spaces For This Process.

\$#Indicates That The Stereo View Is Accomplished With Split-Screen Technology.





