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EN WOLFVISION

VZ-C3D Visualizer

Bringing reality closer in 3D

3D

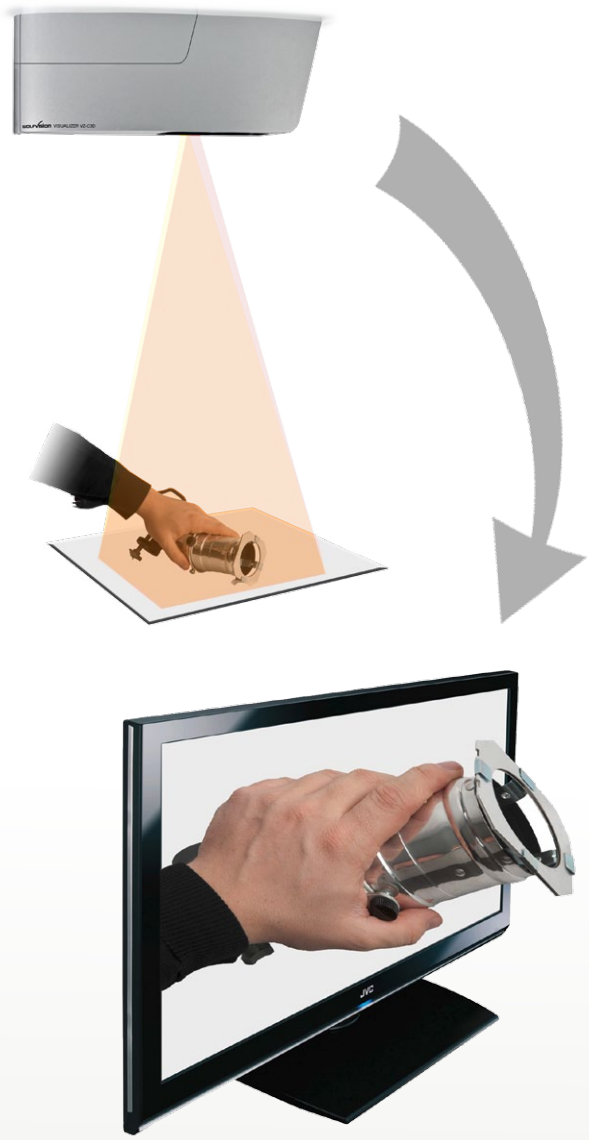
Introducing the world's first 3D Visualizer

VZ-C3D Ceiling Visualizer

WolfVision is a globally successful family owned company based in Austria/Europe. As 'technology leader' in the Visualizer market, WolfVision is the company that sets the worldwide standards of product quality, innovation, reliability and ease of use.

WolfVision's VZ-C3D is the world's first 3D Visualizer, a stereoscopic 3D 'live' presentation solution. The ceiling mounted VZ-C3D features two high precision lenses and an onboard stereoscopic mixer which enables 'live' high definition 3D images to be viewed in realtime via a suitable projector or 3D-enabled display screen.

It can be used for a constantly increasing number of 3D applications such as videoconferencing, telepresence, medical, product design, engineering, science, education, and many more. All benefit from the new and exciting imaging possibilities created by the introduction of the WolfVision VZ-C3D Visualizer.



Naturally Green
www.wolfvision.com/green

More detailed feature descriptions, photos and 3D animation at

www.wolfvision.com

Outstanding Mechanical Stability

Excellent mechanical quality, durability and reliability are fundamental requirements for all WolfVision products. They are of solid construction, and built to last.

3D Imaging Excellence

WolfVision Visualizers have always been famous for their outstanding picture quality, which is due to a perfect mix of high end components and remarkable know-how. Perfect picture quality means high resolution throughout the entire picture (including the edges). It means lifelike colors, a high frame rate, fast and precise autofocus, smooth zooming, an overall distortion-free picture, even lighting without reflections or hot spots and much more. The following five elements are responsible for WolfVision's perfect 3D image quality.

Image Sensors
Twin high resolution 1/3" CMOS image sensors ensure the capture of high quality stereo left and right image data.

Electronic Hardware
High quality components deliver optimum performance, stability and reliability throughout the imaging process.

High End Camera Lenses
Two high precision wide-angle zoom lenses mounted in parallel create crystal clear images with superb accuracy.

Software (Firmware)
WolfVision's advanced image processing engine uses complex algorithms to convert the left and right stereo signals to 3D format in realtime.

Lighting System
A high-brightness light projector with low power consumption plus an additional LED light provide smooth and consistent lighting necessary for accurate color reproduction.

Main Features

2x HDMI Ports
The VZ-C3D has two HDMI outputs, ensuring that images are output in perfect digital quality.

Adjustable 3D Depth Control
Presenters can control the extent of the 3D effect using the adjustable depth control (vergence) feature - selecting exactly how far the 3D image appears to be ‘in front‘ of or ‘behind‘ the surface of the display screen.

High Depth of Focus
The VZ-C3D Visualizer provides a very high depth of focus. This is of great benefit when working with larger 3-dimensional objects.

Switchable 3D / 2D Modes
The VZ-C3D is switchable between 3D and 2D modes providing maximum flexibility in the range of materials that can be displayed.

Large Zoom Range
A large optical zoom range is one of the most important features of a Visualizer, because only an optical zoom can pick up objects in full resolution. The VZ-C3D features two high precision wide-angle camera lenses with 15x optical / 4x digital zoom factor, and one additional zoom lens for the light source.

High Definition Cameras
The VZ-C3D Visualizer is equipped with two state-of-the-art CMOS cameras with native 1080p HD resolution and 30 frames per second in both 3D and 2D modes. 980 lines resolution are visible in every part of the picture including the edges.

100% Reflection-Free
With the special LED light system of the VZ-C3D, it is impossible that the Visualizer‘s light is reflected back into the camera. The entire working surface is always 100% reflection-free.

Synchronized Lightfield

...developed by WolfVision!

A light projector inside the unit projects a lightfield the same size as the pick-up area of the built-in cameras onto the working surface. The image is recorded by the cameras using the same light path.The lens of the light projector and the cameras are synchronized so that when zooming in and out, the size of this lightfield changes accordingly. The illuminated part of the working surface is always identical to the pick-up area of the cameras. So a user always knows exactly where to place objects or documents.

Illumination of Hollow Objects / No Light Adjustments

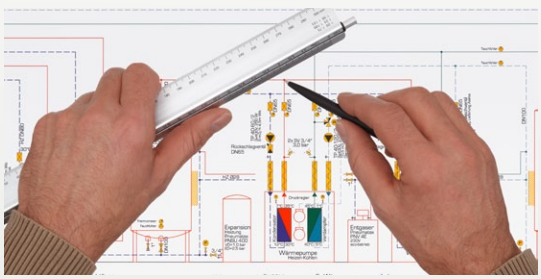
Due to the special light system of the VZ-C3D, every part of the recorded picture is always perfectly illuminated. Hollow objects or complex 3D materials are always completely illuminated - even on the inside. As a result, there is never any need to adjust the light.

Illuminated on the inside

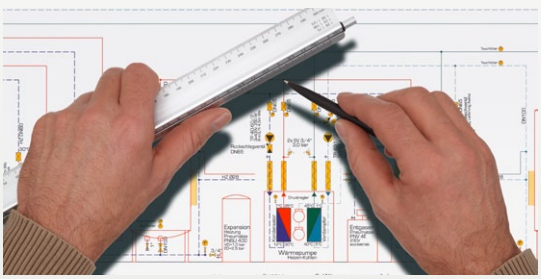
Not illuminated on the inside

Shadow Free Illumination

As the cameras and the light projector are situated in parallel inside the Visualizer, shadows are almost completely eliminated. During a presentation, it is often necessary to write on a document on the working surface or to point out details on a 3D object with a finger or a pencil. The VZ-C3D Visualizer is perfectly suited for this, as there are practically no shadows created, that might otherwise cover up important details.



Shadow-free



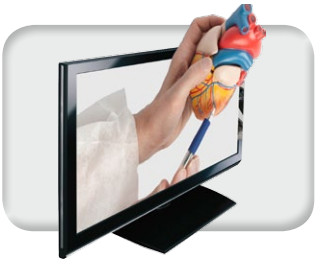
With shadows

Additional Information

Display Screen Compatibility

The VZ-C3D Visualizer is compatible with all current 3D projectors and displays, and provides exceptional picture quality when using either glasses or glasses-free models. All HDMI 3D standard formats are supported to ensure compatibility:

- Frame packing
- Top and bottom
- Side by side
- Page flip
- Line alternative
- Left/right
- Right/left



Installation Height Requirements

For optimum 3D viewing, the distance between the bottom of the Visualizer and the working surface should be between 100cm and 220cm (39“ and 87“). This explains why the VZ-C3D Visualizer is ceiling mounted, because placing a greater distance between camera and working surface than is found with Desktop Visualizers is essential for producing perfectly proportioned 3D realistic images.

External Controlling

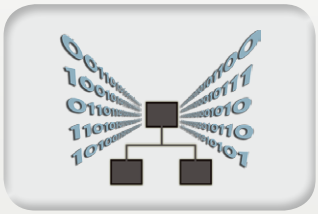
LAN and infrared connections can be used to control the VZ-C3D from external devices such as a room control system, a videoconferencing system or a computer. When connected to a WLAN router, the VZ-C3D can also be controlled using WolfVision‘s smartphone apps for iOS, Android and Windows 8. The big advantage of this is the Live Image Preview display function.

Connectivity Software

The VZ-C3D Visualizer can be connected to a computer using the LAN port together with the WolfVision Connectivity Software. The supplied Connectivity 2 Software allows for saving, printing and emailing of Visualizer images, recording videos, adding annotations and video streaming including audio. It can also be used for controlling the VZ-C3D with a live preview image in full screen mode.

LAN Port / Additional Network Features

The VZ-C3D is equipped with a LAN port and it‘s easy to integrate it into a WLAN network by simply connecting a standard WLAN router or access point. Besides administration purposes, firmware updates and saving of images, the VZ-C3D can stream live images in Motion JPEG format in either Multicast or Unicast modes.



Technical Data

	VZ-C3D
Camera	2 x CMOS 1/3"
2-dimensional / 3-dimensional	2D and 3D
Pictures per second (as picked up by the camera)	30 frames per second in 2D and 3D mode
Native (effective Pixels of camera sensor)	2 x 1920x1080 (=2 x 2,073,600)
Native pixels of image processing	2 x 1920x1080 (=2 x 2,073,600)
Pixels processed per second (=effective pixels x frames per second)	124,416,000
Color reproduction / precision	very good colors (sRGB color precision)
Native signal output	1080p HD (1920x1080) in 2D/3D mode, with 3D modes: frame packing, top and bottom, side by side, page flip, line alternative, left/right and right/left
Resolution (measured)	980 lines
Iris	automatic and manual
White balance adjustment	automatic and manual
Autofocus / speed	yes, (continuously working, high speed)
Manual focus	yes
Synchronized lightfield (for easy positioning of objects)	yes
On screen menu with Help	yes
Firmware Updates via	LAN
Zoom / Lens	2 camera wide-angle zoom lenses and 1 light zoom lens. 60x zoom (15x optical + 4x digital)
Max. object height on working surface	depending on installation height (maximum limit 1.7m / 66.9")
Max. width of pick-up area on working surface	depending on installation height (861mm - 1886mm / 33.8" - 74.2")
Min. width of pick-up area on working surface	depending on installation height (78mm - 174mm / 3.1"- 6.9")
Depth of focus on small object (42x33mm /1.6"x1.3")	larger than 20mm (0.8")
Depth of focus on large object (360x270mm/14.2"x10.6")	larger than 250mm (9.7")
Shadow free illumination	yes
Illumination of hollow objects	yes
Reflection free area on working surface	whole working surface
Blinding of audience or speaker	none
Light source	Maintenance free high-brightness LED light system (high light output, low power consumption), lamp lifetime: 30,000 hours
Connectivity Software (LAN, for controlling, image and video capturing and firmware updates)	included for 32- and 64-bit Windows
User programmable presets	3
Slide pick-up	with optional lightbox
Bottom light	optional external lightboxes (large models like WolfVision's LB-38 can be used)
Advanced WolfVision image processing engine	yes
DVI output	- (via optional HDMI-DVI cable or adaptor)
HDMI output	yes, 2x
Ethernet/LAN port	yes
LAN web interface	yes
LAN streaming modes (multicast and unicast)	yes (Motion JPEG)
RS232 port	- (if required external LAN to RS232 adaptors can be used)
Advanced controlling with professional protocol via LAN	yes
Weight	5.2kg (11.5lbs)
Infrared remote control	yes (with laserpointer). Optional: external receiver (with 10m cable and status LED)
Ceiling mount	included
Power	Internal power supply, multi range 100-240 V, 65W, power consumption: 39W
Warranty	5 years

All units made in the European Union (Austria)

Design and specifications subject to change!

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More information:

WOLFVISION®

www.wolfvision.com