

United Screens GmbH future display technology

USER **MANUAL**

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INTRODUCTION

Thank you for using ZLink - the universal Simulated/Spatial Reality bridge for CAD and other professional OpenGL based 3D applications.

ZLink bridges your app directly 1:1 onto your eye-tracked auto-stereoscopic 3D display.

True SCALE 3D representation of your models and projects

The ZLink technology has the ability to depict your 3D work true to scale and undistorted in the Z-axis on a connected ZVIEW Display.

Look around effect

Move naturally in front of the display and watch your design from different angles.

Work, Present, Collaborate

ZLink clones the viewport of your 3D application onto a connected ZVIEW display into fullscreen with independent camera control, while maintaining a LINK to your 3D application so that any changes you do to your 3D model are instantaneous updated on the ZVIEW display. This works locally on one PC but also through your local area network (LAN) to multiple client PCs running the ZLink client, thus enabling you to collaborate on a project with one project leader (host application PC) and multiple viewers (client PCs).

SYSTEM REQUIREMENTS

ZLink has the same system requirements as the original application that's to be bridged onto a connected ZVIEW display. ZLink works by copying the graphic commands of the actual application (e.g. Plant Simulation, Catia, NX,...).

Our basic recommendation:

Component	Recommended Specs	Minimum Specs
Processor	Intel® Core™ i7-10700 (eight-core 2.90 GHz,	Intel® Core i5-7300HQ (quad-core 2.5 GHz,
	up to 4.8 GHz)	up to 3.5 GHz)
GPU	NVIDIA Quadro P4000 / RTX 2070 / Radeon	NVIDIA GTX 1070 / AMD Radeon RX 580 or
	pro WX 7100 or greater	greater
Memory	32GB RAM or more	16GB RAM or more
Video Output	DisplayPort 1.2 or newer	DVI-D / HDMI 1.4b
USB Port	3x USB 3.0 ports, plus 1x USB 2.0	2x USB 3.0 ports
Operating System	Windows 10	Windows 10

NVIDIA QUADRO CONFIG

This page shows the configuration for Nvidia Quadro Cards. Failure to follow the Guide will result in:

- * No Tracking
- * Distorted Image
- * No Direct-Data Link between your app and the 3D Display

Basically, the 3D image will stand still if the configuration is not applied.

1) Right click on your desktop and select Nvidia Control Panel



2) In the left hand list select Manage 3D Settings



3) In the Global Settings Tab select the Global presets dropdown and set it to Workstation App - Dynamic Streaming.



4) Click Apply and restart your computer.

INITIAL SETUP

ZLink Launcher

After installation you will find the ZLink Launcher Icon on your desktop:



Double click to start the ZLink Launcher. Upon first start you will be presented with two setup questions. Select whether or not you are using a Quadro Card:



Select which ZVIEW Display and controller device you are using:



NOTE: you must have one of the controller devices connected to your PC, otherwise you won't be able to effectively use ZLINK. 🏹 ZLink ⑦ **Ö** − × CONNECT 🕲 Core 0 Client Ċ External Menu Tool ሪ **Ф** () VRPN Translator Ċ ZView 28" ሆ ሆ Gamepad Application Enabler v1.0.0

You are now presented with the ZLINK Launcher interface:

NOTE: By clicking on the big settings wheel at the top you can always bring back the display and controller device setup screen.

Client Settings

Next, open the Client Settings window by clicking on the setup wheel.

	Client Settings	
	Monitor Identify 3 🕶]
	Resolution 3840x216	0
	AntiAliasing 1x 🔻]
Core	Offset X 0 Y 0]
Client	Sub Width & Height]
External Menu Tool	Data Port Base (1-5) 8700	
	VRPN Port 8800	
	Save Clos	e

INITIAL SETUP

Press the Identify Button to check which of your connected displays is your ZVIEW monitor. A number is displayed in the upper left corner in each of your displays. Click on the drop down and select the Monitor number of the ZVIEW display. Leave all other settings as they are for now. Hit Save and then Close.



NOTE: The ZVIEW 28" resolution must be set to 3840x2160, for the ZVIEW 65" it must be 3840x1080.

VRPN Translator

Now start the ZVIEW display (here the ZView 28") and the controller device (here the Spacemouse) by clicking on the power buttons, then start the VRPN Translator:



The VRPN Translator "captures" the eye-tracking coordinates and the controller device input data and sends them to the Client (3D viewport):

racker Configuration — ddress		Analog Configuration	Button Configuration
	s@localhost:3883	Address SpaceMouse	e0@loc Address SpaceMouse0@loc
ad Tracker Index	0 ~	Yaw Channel	.s Forwards (Menu)
nd Tracker Index	×		
ght	+X ~	Pitch Channel A	3 Backwards (Menu)
	-Y -Y -Y	Z Roll Channel	4 Left (Menu)
		0% Rotation Speed	100% Right (Menu)
ront	-z ~		Up
ew Origin (X/Y/Z)	0.319 -0.114 0.445	Forwards/Backwards (Menu)	-1 Down
ax X (Screen Edge)	0.31	Left/Right (Menu)	
			0 Menu 8
aw Input Values	0.021 -0.028 -0.737	Up/Down	-2 Trigger 2
Jutput Values	-0.961 0.457 0.943	Trigger	Grab World
	Save Origin	Raw Channel Data	Raw Button Data
lovement Threshold	0.05		Button:8 State:0
top Threshold	0.001		

The VRPN Translator: Once launched it automatically connects to the eye-tracking and the device controller.

Now check if eye-tracking and input device are being recognized by the VRPN Translator:

In the left part of the window under the x-y-z pivot is a square with a red triangle. This triangle must change its position when you look at the connected ZVIEW display and move your head in front of it (pay attention to the required viewing distances, which are different for each display). This is your head position in front of the display.

In the right part you'll find the analog and button configuration of the connected controller device. Move or rotate the knob of the space mouse or the stick of the XBOX controller and check the Raw Channel Data box. You should see some numbers changing. Do the same with some buttons on your controller device and you should see the Button number and its state changing in the **Raw Button Data** box.

If you are not seeing any changes for tracking or the controller, please check the following:

- are the display and the controller buttons green/running in the ZLink Launcher?
- is the controller properly connected to the PC, e.g. can you control other applications with it?
- is the space mouse connected via cable? The space mouse only works when connected via cable.
- is the eye-tracking software running on the PC and working properly?
- if the eye-tracking is running on a separate PC, make sure it is connected to the same LAN or WiFi as the PC running ZLink.

Close the VRPN Translator plus the Display (ZVIEW 28" or ZVIEW 65") and Controller (Spacemouse or Gamepad) for now.

INITIAL SETUP

Application Enabler

Next, press the Application Enabler power button in the ZLink Launcher window. This will bring up the Application Enabler window.

Depending on your user account settings you will see a User Account Control pop-up asking you if you want to allow the Application Enabler to make changes to your device/computer. Click Yes.

United Screens Application E Add Application	Validate Installs Locate Known App	15		_	
pplication Name	Working Directory	Application Version	Graphic Library	Enabled	Remov from Li
ррисацоп мате	working Directory	Version	Library	Enabled	from

Click on Add Application. This will bring up an explorer window, in which you can navigate to your host application.

→ ~ ↑ <mark> </mark> «	Program Files > SAP > SAP 3D Visual Ent	erprise Viewer > 🗸 🗸 🗸	ک Search S/	AP 3D Visual Enterpri	م
ganize 🔻 New fo	lder			II - 🔳	?
OneDrive	Name	Date modified	Туре	Size	
	Data	7/8/2020 5:32 PM	File folder		
This PC	DomainGroupPolicies	7/8/2020 5:32 PM	File folder		
💼 3D Objects	java	7/8/2020 5:32 PM	File folder		
📃 Desktop	MUI	7/8/2020 5:32 PM	File folder		
Documents	Plugins	7/8/2020 5:32 PM	File folder		
Lownloads	Schemas	7/8/2020 5:32 PM	File folder		
Music	Shaders	7/8/2020 5:32 PM	File folder		
	x32	7/8/2020 5:32 PM	File folder		
Pictures	InternalVevHost_64.exe	5/15/2020 4:28 AM	Application	153 KB	
Videos	Sandbox.exe	5/15/2020 4:29 AM	Application	1,739 KB	
🏪 System (C:)	VEViewer.exe	5/15/2020 4:29 AM	Application	508 KB	
File	name: VEViewer.exe		Applicat	ions (*.exe)	~

Locate the executable of your host application (in our case the VEViewer.exe), select it and click **Open**. You can find a list of supported applications <u>here</u>.

Please also see the guide for your respective application at the end of this manual, section ZLink Setup Guide. Not following these individual guides will result in ZLink not being able to bridge the geometry.

You have now added your first host application to ZLink. Click on the Enabled checkbox to activate/connect the application with ZLink. Now Save and Close the Application Enabler in the lower right.

			Application		Graphic			Remove
Application Name	Working Directory		Version	_	Library		Enabled	from List
/EViewer.exe	C:\Program Files\SAP\SAP 3D Visual Enter	Browse	Win64	~	OpenGL	~		Remove

Continue with the next section: ZLink Startup Sequence

ZLINK STARTUP SEQUENCE

After the initial setup configuration you are now ready to use ZLink on your computer. If not already open, start the ZLink Launcher.



1) Click on the big CONNECT power button. This will start all ZLink software components at once (except the Application Enabler, which isn't needed for running ZLink).



You are now seeing the VRPN Translator window - which you can minimize, the External Menu Tool window and the Client window on the ZVIEW display, which is still an empty grey pane with a thin red border.

ZLink Menu Tool				-	×
✓ show timestam ✓ 2020-11-05 11:59:38: Channel 0 ✓	Base Scale	Auto		1	-
💠 : Origin	Scale	Auto 0			-
I : Clip Plane [0, 0, 0]	View	Default			-
	Move Speed	0			- 5
	World Position	0	0	0	- 5
	Roll/Pitch/Yaw	0	0	0	5
	ZLink Ext		Import		

ZLink Client Window (S3D Viewport)

- 2) Now start one of your 3D applications, which you have added to the Application Enabler earlier. It is essential to start the host application AFTER the ZLink components. Position the host application on your 2D Display.
- Load your 3D scene or model 3)

Once the geometry is loaded, it gets instantly duplicated into the ZLink Client window, which now looses its red frame and displays your host app geometry in stereoscopic 3D.

The next steps are important to achieve a convenient 3D effect on the ZVIEW displays:

- 01. Try to check where your 3D geometry is positioned in the Z-axis on the screen, e.g. is it far inside the display?
- 02. Fly towards the object until it is close to the displays surface.
- 03. Now use the ZLink Menu Tool or the Client Menu to adjust the scene scale to your liking, e.g. to fit the object into the screen, by changing the Base Scale and the Scale. Press Send to send the values to the Client (3D Viewport).

You might need to change the window focus back to either your host app or the Client window to trigger an OpenGL drawing update.

Changing the scene scale will move your geometry further into or out of the screen depending on whether you scaled up or down. Fly towards or away from the object until it reaches the display surface again.

04. Repeat step 03 until your object/geometry fits the screens while being at the screen surface.

ZLINK COMPONENTS: CORE

The ZLink Core holds the Network and Client Configuration.

"ZLink can be configured to use multiple Clients (3D Viewports) on other PCs in your LAN, so that one host application (e.g. Catia or Siemens NX) can stream its 3D scene to multiple PCs running ZLink. This feature can be used for review and collaboration of 3D data in stereoscopic 3D."

After launching the ZLink Core it is present in the system tray bar, right next to the system time.

-	
	Properties
	ZLink Application Enabler
	Info
	Close
🦻 🔻	፲ �)》ENG 6:05 PM 📑
	The ZLink System Tray

The ZLink Core has the following functions:

- 01. License management for the local system
- 02. Choosing and configuring the data connection (e.g. TCP/IP, ShareMem, UDP)
- Choosing and configuring hotkeys for the Host App Control Panel 03.
- 04. Displaying system info

01. License Management

Running the ZLink Core is essential, as it provides the licensing to all connected components. The active license is to be set the in the ZLink activation tool, yet the technical use is done by the Core.

02. Data connection Type

The connection type is to be set on the ZLink Properties ZLink tab. It is accessed by right clicking the tray icon and selecting "Properties...". The connection type defines how the graphic data from your host app is transported to the ZLink Client.

	tion type	TCP/IP (Auto		LAN only		-
PC 1	192 .	168 . 0) . 1	Port 1	8700	Find
PC 2				Port 2		Clear
PC 3		•		Port 3		
PC 4		1		Port 4		
PC 5				Port 5		
PC 6				Port 6		

The available options are:

- TCP/IP (Auto): Using TCP/IP connections on the LAN with automatic IP and Port configuration.
- TCP/IP: Using TCP/IP connections on the LAN with manual IP and Port configuration.
- UDP (Broadcast): Data is transmitted in the LAN's broadcast address.
- Shared Memory: Does not access the network, but uses system RAM to transport the data. The fastest way of bringing data into the client, recommended for local-only single-client setups.

Connection type	TCP/IP	~
PC 1 172	TCP/IP (Auto)	
PC 2	UDP (Broadcast) Shared Memory	

ZLINK COMPONENTS: CORE

03. Defining Host-App Control Panel Hotkeys

To define the hotkeys, switch to the *Hotkeys* tab of the ZLink Properties. To change any hotkey binding, simply click into the desired filed and press a new hotkey to assign.

ZLink Properties					?	×
ZLink Hotkeys	Start Up	Info				
General hotkey: Show/Hide co		4	Num *			
Focus next field	ld		Down			
Focus previou	S		Up			
Increase field	value		Right			
Decrease field	Decrease field value		Left			
			NOTE: The hetheur will	ОК	Cano	

NOTE: The holkeys will be unavailable system wide for as long as a ZLink session is running.

Host-App Control Panel

The Host-App Control Panel is a menu displayed in the host app, showing debug information but also letting the user choose which 3D viewport of the host app to bridge into the ZLink Client.



To bring up the Host-App Control Panel press the * key on the num-pad while moving or rotating your model with the mouse. This action is required to refresh the OpenGL buffer, because the Host-App Control Panel is directly drawn into all of your host application's viewports. Check the current viewport number of <u>each</u> viewport (marked in red below):



Now press the Up key on your keyboard to move the selection into the selected window (SEL. WINDOW) field. Don't forget to move or rotate your model to refresh the viewport. Now use the *Left* and *Right* key to change the SEL. WINDOW number to the viewport number you would like to see in the ZLink Client.

04. Displaying System Info

To get a quick overview about your system and the ZLink software, switch to the Info Tab of the ZLink Properties. Alternatively, right click the ZLink Core tray icon and select "Info".

ZLINK COMPONENTS: CLIENT

The ZLink client is then rendering front end of the ZLink software. It receives the 3D data from the host app. Further, it receives tracking data from the VRPN translator.

After startup the client will show a grey window on the ZVIEW Display.

The ZLink Client Window

In the lower right corner of the client the status information is displayed:

ZLink IP: Data Port:8700 VRPN Port:8800

- The local computer's IP.
- The data port that the client is listening on.
- The VRPN port that the client is listening on.

Right clicking into the client shows the context menu. The individual options in the context menu are:

- Full screen: put the client into fullscreen mode on selected display
- **Restore**: put client into windowed mode
- General Settings: configure the output device and Anti-Aliasing settings

Full Screen Restore **General Settings** Exit

General Settings	×	
Output Settings		
Output type	SBS half	
Screen type	ZView 28"	
Anti-aliasing	1x 💌	
		NOTE:
ОК	Cancel	Be careful with the Anti-aliasing setting as it can slow down the display performance.

The ZLink Client Menu provides control over scene Scale and 3D camera Speed and provides the ability to place camera position Flags for "highlighting" certain points of interest of the scene geometry.



To open the ZLink Client Menu press this SpaceMouse Button 🖵 or the XBOX Controller Menu Button 🗐 . Use the Knob/Stick to move through the menu and change values with the SpaceMouse Trigger Button I or the XBOX Controller Trigger Button RB.



INFO

- The ZLink Menu can only be opened when the ZLink Client window is <u>selected</u> and a host application is bridging geometry into the Client!
- Depending on the host application it can happen that the Client window is not being refreshed, which can lead to a static image including the impression that the ZLink menu is not closing or reacting. When this happens click back into the viewport of the host application to force an OpenGL drawing update!
- To change the button mappings of the SpaceMouse or the XBOX controller use the VRPN Translator.
- Alternatively to the ZLink Client Menu, the scene Scale, Camera Speed and Camera Position values can be set using the External Menu Tool from the ZLink Launcher.

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ZLINK COMPONENTS: EXTERNAL MENU TOOL

The External Menu Tool gives the user the possibility to control the ZLink Client functions without having a controller device connected. These settings are essentially the same as in the Client Menu. Additionally the External Menu Tool lets the user Export and Import the settings, so that the user does not need to redo respectively re-find the correct settings for a particular model again and again.

🏹 ZLink Menu Tool					×
Show timestamps		VE	Viewer		
▲ 🗹 2020-11-06 12:17:12: Channel 0 [VEViewer]	Base Scale	m			•
💠 : Origin	Scale	1			5
Clip Plane [0, 0, 0]	View	App V		•	
	Move Speed	1			5
	World Position	0	0	0	5
	Roll/Pitch/Yaw	0	0	-0	5
<	-1.1/		Import	Export	Send

The External Menu Tool

Usage:

Change Base Scale, Scale and Move Speed as needed, then click the Send button to send the values to the Client window. Should the geometry disappear from the Client window, press the World Position and Roll/Pitch/Yaw reset arrows and hit Send. If you don't see any changes in the Client window after having send the changes, force on OpenGL drawing update by moving/rotating the model in the host app viewport.



ZLINK COMPONENTS: VRPN TRANSLATOR

The VRPN Translator translates your Input device's control data and the ZVIEW display's Eye-Tracking data for use in the ZLink client. The VRPN Translator is split into three sections. Tracker, Analog and Button configuration:

😻 VRPN Translator				9	– 🗆 🗙
Tracker Configuration Address	s@localhost:3883		Analog Configuration Address SpaceMouse0.it/loc.	Button Configuration Address	[construction of the l
Head Tracker Index Hand Tracker Index Right Up	0 ~ ~ +X ~ -Y ~	•·Y	Yaw Channel .5 Pitch Channel 3	Forwards (Menu) Badavards (Menu) Left (Menu) Right (Menu)	SpaceMouseO@loc.
Front View Origin (X/Y/Z) Max X (Screen Edge) Raw Input Values	-Z ∽ 0.319 -0.114 0.445 0.31 0.021 -0.028 -0.737		Forwards/Backwards (Menu) -1 Left/Right (Menu) 0 Up/Down -2	Up Down Menu Trigger	
Output Values	-0.961 0.457 0.943 Save Origin		Trigger Raw Channel Data	Grab World Raw Button Data	
Movement Threshold Stop Threshold	0.05			Button:8 State:0	
	Connect Disconnect	Load Settings	Save Settings Save As ZLink J	¹ 5	

The ZLink VRPN Translator interface with SpaceMouse Tracking configured

NOTE: Always click the Save Settings button in order to confirm and send changes to the Client. Should there be connection/update problems, Disconnect and Connect again.

The Tracker section configures the tracking indexes, adjusts tracking axes and configures the Eye-Tracking origin and scaling.

The Analog section configures the analog axes of flysticks, gamepads and (space-) mouses. Basically any input that can be pressed partially, resulting in e.g. a value of 0.67 - unlike buttons which have a state of either 0 or 1. Analog inputs are very useful for inputs requiring sensitivity, such as movement and yaw, pitch and roll.

The Button section configures your input device's buttons, which are typically designed differently from analog inputs and are best used for menu operations. The pre-configured controller devices for ZLink are the 3Dconnexion SpaceMouse Pro and the XBOX One Controller.

If you like to use a different controller you can write your own VRPN Server for your device and connect it to the VRPN Translator via the Address fields in the Analog and Button section. The address is composed of the device, e.g. "SpaceMouse", the descriptor of where the server is running, e.g. @localhost or @192.168.0.10, and optionally the port, e.g. :5001. A full address looks like the following examples: SpaceMouse0@localhost

XInput0@192.168.0.15:5002

There is no modification to the Tracker Configuration required as both ZVIEW-28" and ZVIEW-65" Eye-Tracking are pre-configured for ZLink. If you want to use your own head tracking you can do so by starting the appropriate head track VRPN server and connect it to the VRPN Translator. There are pre configured server files (e.g. for dTrack) and reference examples in the ZLink installation folder under Tracking/VRPN_Server.

Configuring the Eye-Tracking data: Tracker Configuration

The Eye-Tracking data from the connected ZVIEW displays can be "filtered" before it's used as position data for the virtual camera in the ZLink Client. This is particularly handy if you encounter a jittery movement of the virtual camera and want to stabilize it.

- Movement Threshold: the distance your eyes need to move in front of the screen to trigger a position change of the virtual camera
- Stop Threshold: the distance your eyes can move in front of the screen below which no position change of the camera is happening

Configuring the controller device analog data: Analog Configuration

Pushing a Analog Axis of one of your controller's analog sticks/knob will make one or more data channels in the **Raw Channel Data** field roll. The read data is shown in brackets [0.00]. The number in front of the brackets 0 to 5 indicates the currently pressed axis index. In order to change the current Analog Configuration, simply enter the axis channel number of your choice into one of the camera axis channels:

- Yaw/Pitch/Roll: Camera Y/X/Z rotation
- Forward/Backward (Menu): forward/backward camera movement & ZLink Menu item switching
- Left/Right (Menu): Left/Right camera movement & ZLink Menu item switching
- Up/Down: Up/Down camera movement

The Rotation Speed slider lets the user set the camera rotation speed.

Configuring the controller device button data: Button Configuration

Pushing a Button on your controller will show the button index and state in the Raw Button Data field. In order to change the current Button Configuration, simply enter the button number of your choice into one of the button channels:

- Forward (Menu) & Backward (Menu): forward/backward camera movement & ZLink Menu item switching
- Left (Menu) & Right (Menu): Left/Right camera movement & ZLink Menu item switching
- Up & Down: Up/Down camera movement
- Menu: opens the ZLink Client Menu
- **Trigger**: changes ZLink Client Menu value
- If you need help with your device please contact us at support@united-screens.tv

ZLINK COMPONENTS: VRPN TRANSLATOR

There is an additional settings window for the VRPN Translator, which can be accessed from the ZLink Launcher:



These Translator Configuration settings are the non-expert settings so to say. Here you can fine tune the on-screen 3D effect, define geometry clipping and the position and size of the Client Menu.

- Interpupillary Distance: the eye-distance of the user
- Camera Near Clip (cm): the distance from which the geometry is cut off, measured along camera z-axis
- Menu offset (m): Client Menu offset from the Client world origin in meters in XYZ
- Menu Scale: Client Menu Scale

With the Interpupillary Distance slider the user's eye-distance (normally measured from pupil to pupil) should be entered. As an average value for most people 63mm has proven good. Smaller values will lead to less impressive 3D that is accepted by a wider range of users.

Camera Near Clip (cm) adjusts how close geometry can come visually to the users head before it gets clipped out.

With the Menu offset (m) the user can move the Client Menu into or out of the screen (Z value) as well as left/right (X value) and up/down (Y value).

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ZLINK COMPONENTS: APPLICATION ENABLER

The United Screens Application Enabler enables the host applications to be used with ZLink.

Applications need to be added to the Application Enabler and the **Enabled** check-box must be checked to enable the bridging functions.

Add Application	Validate Installs Locate Known Apps							
Application Name	Working Directory		Application Version		Graphic Library		Enabled	Remove from List
/EViewer	C:\Program Files\SAP\SAP 3D Visual Enter	Browse	Win64	~	OpenGL	~	\checkmark	Remov
dsmax.exe	C:\Program Files\Autodesk\3ds Max 2019	Browse	Win64	~	OpenGL	~	\checkmark	Remov
iketchUp.exe	C:\Program Files\SketchUp\SketchUp 2020	Browse	Win64	~	OpenGL	\sim	\checkmark	Remo
neshlab.exe	C:\Program Files\VCG\MeshLab	Browse	Win64	~	OpenGL	~	\checkmark	Remo

Application Enabler Window

To add any application, click the Add Application Button. Select the target application's main executable file. This is sufficient for most applications, yet some apps require additional configuration. It is recommended to read about the individual per-app configuration in the corresponding part of the manual.

Clicking the Validate Installs button will check all enabled application's function file status and update them.

Clicking the Locate Known Apps will check for all known applications in their default installation paths. All applications found will automatically be added to the list.

The Browse button in each application's row opens an additional folder selection dialogue. This is only required for a few apps which have non-standard working directories. It is recommended to read about the individual per-app configuration in the corresponding part of the manual.

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The Application Version drop-down allows to choose between a 32-bit and a 64-bit version of the host application. This is usually auto-detected and should only be changed when absolutely sure.

The **Graphic Library** allows to inject different function libraries. Using the Debug option is only recommended for advanced users for diagnosis.

In order to Remove app entries from the list the Enabled check-box needs to be unchecked!

LICENSING

The ZLink Activation tool is designed to activate and deactivate ZLink software licenses.

Activation Tool	ZLINK	×
Installed Products		
Deactivate Update	valid from 11-11-2020 to 01-01-2021 Product Code: 9RUZM-CPN6L-EK633-DRGPM-VCYVU-5 Product Key: NDURA-K9NRX-KHZLX-BNW6H-MEUKM-6 Bound to: 10-7B-44-A5-6D-04	
License Details		
Product Key Activation		
Please enter enter your product l	key below. To lookup your product key please visit our webshop.	
Product Key: NDU	RA K9NRX KHZLX BNW6H MEUKN 6	
A	ctivate Clear Input	
Offline Activation		
Please load the activation file yo	u received from our Website or by email from United Screens support.	
Activation File:	Brows	e
Computer Information		
MAC Address : 10-7B	-44-A5-6D-04 (Intel(R) Ethernet Connection (2) 1219 Selec	t
V 2.0.9	Close Wind	ow

To activate ZLink, a product key is to be entered in the product key activation box. Once the key is entered, clicking the Activate button will contact the United Screens licensing webserver to check the key out.

For offline computers an error message will be displayed and a request file will be generated. The request file is then to be send to license@united-screens.tv. Emails are checked daily in the German Time Zone between 10:00 and 17:00. Once the Activation file is received it can be opened in the activation tool to activate the license. Attention: Offline-Deactivation is not possible.

To transfer/deactivate a license the computer must be connected to the internet and the activation tool must pass through any firewall. To deactivate the license, the *Deactivate* button for the product in the Installed Products list is clicked. The activation tool will contact the United Screens license webserver and hand the activation back to the system. The product key can then be used to activate the software on any other computer.

Clicking a license entry from the Installed Products list displays the license features, e.g. available output devices and additionally unlocked features.

Under Computer Information the computer's available MAC addresses are shown and available for selection. We recommend to select a physical network card with a static MAC address. Virtual adapters tend to change their MAC addresses and USB devices with MAC addresses have a tendency to vanish.

FAQ

Prior to checking the following solutions please make sure your PC has the .NET Framework installed. Under normal conditions the .NET Framework is pre-installed with Windows. If it's not, you can download it from here:

https://dotnet.microsoft.com/download/dotnet-framework/net48

- 1) The ZLink Client is grey after loading 3D models in my CAD application.
 - Check for correct usage of the Application Enabler for your CAD application. Check if the opengl32.dll is present in the CAD application's directory.
 - Check for your CAD application using the correct Rendering API (OpenGL). Check application profile.
 - Check the ZLink Core configuration (PC1-PC6). Try setting to **Connection Type** to TCP/IP with IP/Port: 127.0.0.1/8700.
 - Check the Host-App Control Panel's Curr. / Sel. Window No. (see Page 11 of this manual)
- The ZLink Client shows distorted graphic data and does not react to tracking. 2)
 - Make sure to have followed the Nvidia Quadro configuration guide
 - Check that your CAD application runs in perspective projection mode. Check the host application configuration as per this manual Setup Guide, pages 19-45.
 - Confirm that the VRPN Translator settings are as per default. Exit the Translator and start it again to revert to default settings.
 - Make sure to position the user in at the optimal viewing distance (see ZVIEW Spec Sheets) in front of the screen. Extreme viewing angles and distances cause loss of tracking and graphics distortions.
 - Try spinning the 3D Model in the CAD application. Very seldom ZLink captures a broken OpenGL frame. By spinning the 3D data new frames are forced to be generated.
 - Try restarting the ZLink Client and THEN the host application.
- The Software gives a license error on start 3)
 - · Check the Activation Tool for additional information, get in touch with us at support@united-screens.tv



SETUP GUIDE: SIEMENS NX

1) Open the ZLink Application Enabler via the ZLink Launcher.

😺 United Screens Application E	nabler			_		×
Add Application	Validate Installs Locate Known Apps					
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from Lis	
Click for additional information on ru	Inning your applications			Sav	e and Clo	ose

- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known NX installation locations and add them to the list.
- 3) If your NX is installed to a non standard directory, please click Add Application, locate your "ugraf.exe" file. It is usually located in: "\Program Files\Siemens\NX 10.0\UGII" "\Program Files\Siemens\NX 11.0\NXBIN" "\Program Files\Siemens\NX 12.0\NXBIN"
- 4) Place the checkmark in the Enabled column.
- 5) Click Save and Close.
- 6) NX is now properly configured for use with ZLink.

SETUP GUIDE: PLANT SIMULATION

- **1)** Launch Plant Simulation
- 2) Click on "File" and "Preferences"

atei	
Neu	Zuletzt geöffnete Dateien
	1 CarbodyProduction.spp
Öffnen	2 i40_rev18_V13.0.spp
onnen	<u>3</u> Battery_Simulation_12.1.spp
5 Schließen	<pre>4 coffee_standalong_cleaned.spp</pre>
	5 coffee_standalong.spp
Speichern	6 SmA.world.KR.Phase.1a.20170102.spp
	7 pointcloud_loaded.spp
Speichern unter	<u>8</u> SimPlan_Hanging.spp
Teamcenter 🔹 🕨	
Modelle vergleichen	
Teilen	
Optionen +	
Modelleinstellungen	
Voreinstellungen	
Hilfe	Voreinstellungen Den Dialog öffnen, in dem Sie
Beenden	allgemeine Einstellungen und Einstellungen für neue Modelle auswählen können.

3) Switch to the "3D" Tab and set the "OpenGL Version" to 1.5

Visualisierung	,								
Schwellenw	ert Bildschirr	mabdeckur	ng:	1	Pixel]				
Zuständ	e farbig anz	eigen, wer	nn keine	Zustands	grafiken ex	istiere	n		
Modellieren				Ansich	ntseinstellu	ngen			ì
Kurvengen	auigkeit:	0.05	m	\checkmark	Raster anz	eigen			
Mausradverh	alten								2
⊖ Kamera	verschieben								
Szene v	erschieben								
OpenGL									ĥ
Version:	1	L.5 (Vertex	x buffer	objects)		•			
									2

- **4)** Exit Plant Simulation
- **5)** Open the ZLink Application Enabler via the ZLink Launcher.
- 6) Click Locate Known Apps. The Launcher will search the standard program files folders for known Plant Simulation installation locations and add them to the list.

United Screens Application Add Application	Enabler Validate Installs Locate Known Apps			-	
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List
lication Name	Working Directory			Enabled	

- 7) If your Plant Simulation is installed to a non standard directory, please click Add Application, locate your "Plant Simulation.exe" file. It is usually located in: "\Program Files\Siemens\Tecnomatix Plant Simulation"
- 8) Place the checkmark in the **Enabled** column.
- 9) Click Save and Close.
- **10)** Plant Simulation is now properly configured for use with ZLink.

SETUP GUIDE: PROCESS SIMULATE

- Launch Process Simulate 1)
- 2) Click on File and Options



3) Switch to the Performance Tab and set the **OpenGL Acceleration Level** to **V1.5**, drag the Level of Details Slider all to the left for best Quality.

Notion	Simulation	PLC	Disconnected
General	Units	Appearance	Collision
/eld	Continuous	Graphic Viewer	Performance
evel of Deta	aile		
	1		
ality		Speed	
Decrease	e Level of Details	while changing View F	oint
- .	ALC: 1	0.015	
Cull parts	with less than:	0,015 %	
Cull parts	with less than:	0,015 %	
		0,015 %	
)irect Model		0,015 %	
irect Model penGL acc	Settings eleration level:	0,015 %	
irect Model)penGL acc	Settings	0,015 %	
)irect Model)penGL acc V1.5 (Vertex	Settings eleration level: buffer objects)	0,015 %	
)irect Model)penGL acc V1.5 (Vertex	Settings eleration level:	0,015 %	
)irect Model)penGL acc V1.5 (Vertex	Settings eleration level: buffer objects) kground loading	0,015 % ▼	

- 4) Exit Process Simulate.
- Open the ZLink Application Enabler via the ZLink Launcher. 5)
- 6) Click Locate Known Apps. The Launcher will search the standard program files folders for known Process Simulate installation locations and add them to the list.

United Screens Applicatio	n Enabler								
Add Application	Validate Installs	Locate Known Apps							
Application Name	Working Di	rectory		Application Version		Graphic Library		Enabled	Remove from List
VEViewer.exe	C:\Program	Files\SAP\SAP 3D Visual Enter	Browse	Win64	~	OpenGL	~		Remov

- If your Process Simulate is installed to a non standard directory, please click 7) Add Application, locate your Tune.exe file. It is usually located in \Program Files\TecnomatixShared\TecnomatixCurrent\eMPower or \Program Files\ Tecnomatix_13.1\eMPower
- After adding your non-standard-directory 8) version of Process Simulate, click the Browse button. Navigate to the New World subdirectory and click OK. It is usually located either in \Program Files\ TecnomatixShared\TecnomatixCurrent\ eMPower\NewWorld or in \Program Files\ Tecnomatix_13.1\eMPower\New World.
- 9) Place the checkmark in the **Enabled** column.
- **10)** Click Save and Close.
- **11)** Process Simulate is now properly configured for use with ZLink.
- 12) NOTE: make sure Process Simulate is running in perspective view mode.





SETUP GUIDE: JT2GO

- 1) Launch JT2Go and load a model.
- 2) Right-click into the viewport and select **Performance** -> Edit

Fit All	- 11	
Selected Only	- 11	
Fly to Selected	- 11	
All On (Ctrl-Break to cancel)	- 11	
All Off		
Selected On		
Selected Off	- 11	
Visited On		
Invert Visited		
Select All		
Deselect All		
Preferences		
Performance	•	Edit
Find		(1) Part Investigation
	_	(2) Assembly Investigation
z x		(3) Model Exploration

3) Switch to the Troubleshoot Tab and set the Effective OpenGL Version" to "1.5" and click OK.

Performance						
Rendering	Size Culling	Distance Culling	Toolbar	Global	Troubleshoo	t
Vendor Card:	GeForce G	TX 1080 Ti/PCle/	/SSE2			
OpenGL Effectiv	L: 4.6.0 NVIE	sion: 1.5				
Ver			ended vers		4.5	
			ОК		Abbrechen	0 <u>b</u> emehmen

- Exit Jt2Go. 4)
- Open the ZLink Application Enabler via the ZLink Launcher. 5)
- Click Locate Known Apps. The Launcher will search the standard program files 6) folders for known JT2Go installation locations and add them to the list.

Inited Screens Applicati	ion Enabler				_	
Add Application	Validate Insta	alls Locate Known Apps				
plication Name	w	Vorking Directory	Application Version	Graphic Library	Enabled	Remove from List

- 7) If your JT2Go is installed to a non standard directory, please click Add Application, locate your VisView_NG.exe file. It is usually located in \Program Files\Siemens\ JT2Go\Products\JT2Go.
- 8) After adding your non-standard-directory version of JT2Go, please click the Browse button. Navigate to the Program subdirectory and click OK. It is usually located in \Program Files\ Siemens\JT2Go\Program.

Ordner suchen	×
Reference Assemblies	
Remo Recover 4.0	
Revive	
D 🚹 SAP	
ShareMouse	
A]] Siemens	
⊿ 🍌 JT2Go	
D 🍌 etc	=
\mu Examples	
🖻 퉲 Help	
Products	
4 퉲 Program	
\mu c	
	-
ок	Abbrechen

- 9) Place the checkmark in the **Enabled** column.
- **10)** Click Save and Close.
- **11)** JT2Go is now properly configured for use with ZLink.

SETUP GUIDE: TEAMCENTER VISUALIZATION / TCVIS / CONNECT

- Launch TcVis and load a model. 1)
- Right-click into the viewport and select Performance -> Edit 2)

Fit All		
Selected Only		
Fly to Selected		
All On (Ctrl-Break to cancel)		
All Off		
Selected On		
Selected Off		
Visited On		
Invert Visited		
Select All		
Deselect All		
Preferences		
Performance	•	Edit
Export Attribute List		 ✓ (1) Part Investigation (2) Assembly Investigation
Display Devices	•	(2) Assembly Investigation(3) Model Exploration
Find		
Clear Degrees of Freedom		
Standard Views		

3) Switch to the **Troubleshoot** Tab and set the **Effective OpenGL** Version" to "1.5" and click OK.

endering	Size Culling	Distance Culling	Toolbar	Global	Troubleshoot	
Graphics	Acceleration					
Vendor	: NVIDIA Co	rporation				
Card:	GeForce G	TX 1080 Ti/PCle/	SSE2			
OpenG	L: 4.6.0 NVIE	0IA 391.35				
OpenGL						
	e OpenGL ver	sion: 1.5				
	ex buffer object					
		0	1 1990 (9)	1 1 1		
	1.1	Recomme	ended vers	ion	4.5	
			ОК		Abbrechen Übem	ehmen

4) Exit TcVis.

- 5) Open the ZLink Application Enabler via the ZLink Launcher.
- 6) Click Locate Known Apps. The Launcher will search the standard program files folders for known TcVis installation locations and add them to the list.

Add Application	Validate Installs	Locate Known Apps				
oplication Name	Work	ing Directory	Application Version	Graphic Library	Enabled	Remove from List

- 7) If your TcVis is installed to a non standard directory, please click Add Application, locate your VisView_NG.exe file. It is usually located in \Program Files\Siemens\ Teamcenter11.3\Visualization\Products\Mockup.
- 8) After adding your non-standarddirectory version of TcVis, please click the **Browse** button. Navigate to the **Program** subdirectory and click OK. It is usually located in \Program Files\Siemens\ Teamcenter11.3\Visualization\ Program.
- 9) Place the checkmark in the **Enabled** column.
- **10)** Click Save and Close.
- **11)** TcVis is now properly configured for use with ZLink.
- **12)** NOTE: we recommend to set the Performance of TcVis to Part

on
or



SETUP GUIDE: SAP VISUAL ENTERPRISE VIEWER / AUTHOR

- 1) Launch SAP Visual Enterprise Viewer/Author and load a model.
- 2) Right click into the viewport, select Preferences -> Display Renderer -> OpenGL



3) Exit SAP Visual Enterprise Viewer / Author.

- 4) Open the ZLink Application Enabler via the ZLink Launcher.
- 5) Click Locate Known Apps. The Launcher will search the standard program files folders for known SAP Visual Enterprise installation locations and add them to the list.

💈 United Screens Application E	nabler			_		×
Add Application	Validate Installs Locate Known Apps					
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List	

- 6) If your SAP Visual Enterprise is installed to a non standard directory, please click Add Application, locate your VEViewer.exe or VEAuthor.exe file.
- Place the checkmark in the **Enabled** column. 7)
- Click Save and Close. 8)
- SAP Visual Enterprise is now properly configured for use with ZLink. 9)

SETUP GUIDE: CATIA / DELMIA

- 1) Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known Catia / Delmia installation locations and add them to the list.

😻 United Screens Applicatio	n Enabler			_		×
Add Application	Validate Installs Locate Known	n Apps				
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List	

- If your Catia/Delmia is installed to a non standard directory, please click Add 3) Application, locate your CNext.exe. The standard path is \Program Files\Dassault Systemes\Bxx\win_b64\code\bin (xx = version number).
- Place the checkmark in the Enabled column. 4)
- 5) Click Save and Close.
- 6) Catia/Delmia is now properly configured for use with ZLink.
- 7) NOTE: Please make sure to set the Visualization mode in Catia to **Perspective**, you can find it in View -> Render Style



SETUP GUIDE: CATIA COMPOSER (PLAYER)

- **1)** Launch Catia Composer (Player)
- 2) Click Help and Application Preferences



3) Switch to the Hardware Support Tab and set the OpenGL Acceleration Level to Standard. Uncheck the Enable P-Buffers checkbox.

Application Preferences	
Application Preferen	nces Profile ≋ Customized ▼
😟 General	Hardware Support
Viewport	GRAPHICS Enable 3D OpenGL hardware acceleration
Camera	Advanced
- Selection	Standard
Navigation	Enable p-buffer Check to solve screen capture problems, printing and some refresh problems.
Hardware Support	Static p-buffer
Papplication Paths	Enable direct swapping to refresh Modify if highlighting stays on screen.
Data Paths	Enable aux. buffers Disable if previous options don't solve graphics problems.
Advanced Settings	Enable OpenGL display lists Uncheck to solve major problems, but text won't appear and perfomance will be affected.
	Enable text reset Check if text is not correctly displayed.
	For the hardware settings to take effect, please restart SOLIDWORKS Composer Player.
Load Save	OK Cancel Apply Help

4) Exit Catia Composer (Player).

- 5) Open the ZLink Application Enabler via the ZLink Launcher.
- 6) Click Locate Known Apps. The Launcher will search the standard program files folders for known Catia Composer (Player) installation locations and add them to the list.

Add Application	Validate]			
pplication Name		Application Version	Graphic Library	Enabled	Remove from List
Validate	•				Enabled

- 8) Place the checkmark in the **Enabled** column.
- 9) Click Save and Close.
- **10)** Catia Composer (Player) is now properly configured for use with ZLink.
- 11) NOTE: Please make sure Catia Composer (Player) is running in perspective view mode.



SETUP GUIDE: SOLID WORKS 2019

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- **2)** Click Locate Known Apps. The Launcher will search the standard program files folders for known SolidWorks installation locations and add them to the list.

💞 United Screens Application	Enabler			_1		×
Add Application	Validate Installs Locate Known Apps					
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from Lis	e t
Click for additional information on	running your applications			Sav	ve and Clo	ose

- 3) If SolidWorks is installed to a non standard directory, please click Add Application, locate your SLDWORKS.exe. The standard path is \Program Files\SOLIDWORKS Corp\SOLIDWORKS\
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) SolidWorks is now properly configured for use with ZLink.
- 7) NOTE: Please make sure to set the visualization mode in SolidWorks to "Perspective":



SETUP GUIDE: AUTODESK ALIAS DESIGN

- 1) Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known Alias Design installation locations and add them to the list.

United Screens Application I	Enabler					×
Add Application	Validate Installs Locate Known Apps					
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List	

- 3) If your Alias Design is installed to a non standard directory, please click Add Application, locate your Alias.exe. The standard path is \Program Files\Autodesk\ AliasDesign2019\bin. Depending on your Alias Version the pathname might be different, yet the **bin** subfolder in the Alias "Version" "Year" (e.g. AliasDesign2019) level is where we find the targeted Alias.exe.
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Alias Design is now properly configured for use with ZLink.

SETUP GUIDE: ICEM SURF

- 1) Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known ICEM Surf installation locations and add them to the list.

dd Application	Validate Installs	Locate Known Apps				
ation Name	Worki	ing Directory	Application Version	Graphic Library	Enabled	Remov from Li

- 3) If your ICEM Surf is installed to a non standard directory, please click Add Application, locate your ICEMSurf.exe. The standard path is \Program Files\ICEM\ win_b64\code\bin.
- Place the checkmark in the **Enabled** column. 4)
- 5) Click Save and Close.
- ICEM Surf is now properly configured for use with ZLink. 6)
- 7) Start the ZLink client and then launch ICEM Surf. Load a ICEM Surf project file. In ICEM Surf, click on View (eye symbol with three arrows in lower button bar).



8) Then choose the **Perspective** option **Central** instead of **Parallel**.



SETUP GUIDE: IPS

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- **2)** Click Locate Known Apps. The Launcher will search the standard program files folders for known IPS installation locations and add them to the list.

💔 United Screens Application Enabler				_		×
Add Application Validat	Locate Known Apps					
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List	
Click for additional information on running you	r applications			Sav	e and Clo	ose
						_

- 3) If your IPS is installed to a non standard directory, please click Add Application, locate the IPS.exe file. It's usually located in C:\IPS x.x (xx =version, e.g. IPS 3.5).
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) ICEM Surf is now properly configured for use with ZLink.

SETUP GUIDE: ANSYS MECHANICAL

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known Ansys Mechanical installation locations and add them to the list.

7	United Screens Application Enabler				_		×
	Add Application Validate	Locate Known Apps					
)	Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List	

- If your Ansys is installed to a non standard directory, please click Add Application, 3) locate your Ansys.exe. The standard path is \Program Files\ANSYS Inc\v195\ ansys\bin\winx64.
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Start the Ansys Launcher and switch to the **Customization/Preferences** tab. Set the Graphics Device Name to 3D, then run.

2019 R3: ANSYS M	echanical APDL Product Launcher [Profile: *** Last ANSYS Run ***] Hostname: Demo-05	-	х
File Profiles Opti	ons Tools Links Help		
LNC	Simulation Environment: ANSYS License: ANSYS Mechanical Pro		
File Management	Customization/ High Performance Preferences Computing Selup		
	Memory Use custom memory settings I otal Workspace (MB) Database (MB) Custom ANSYS Executable (absolute path required) Additional Parameters: (-par1 val1 -par2 val2) MSYS Language: en us Graphics Device Name: 3D Read START ANS file at start-up		
	Run Cancel Run Product Help		

7) Start the ZLink client and then launch Ansys. Load an Ansys project file. In Ansys, click on **PlotCtrls** and then **View Settings** -> **Perspective View**.

ANSYS Mechanical Pro Utility	/ Menu	
<u>File</u> <u>Select</u> <u>List</u> <u>Plot</u>	Plot <u>C</u> trls WorkPlane Pa	rameters <u>M</u> acro Me <u>n</u> uCtrls <u>H</u> elp
	Pan Zoom Rotate	
Toolbar	View Settings	Viewing Direction
SAVE_DB RESUM_D	Symbols	Angle of Rotation Magnification Focus Point
Main Menu	Style	Detational Contar
 Preferences Preprocessor 	Font Controls Window Controls	Rotational Center Perspective View
 	Erase Options	Automatic Fit Mode
TimeHist Postpro	Animate	YPE NUM

8) Select 45, 30 or 15 degrees or a specified angle. Do not choose no perspective. Then click **OK**.

A Perspective View	×
[/VCONE] Perspective View WN Window number	Window 1 👻
PHI Perspective angle	,
	45 degrees
	C 30 degrees
	C 15 degrees
	O No perspective
	O Specified angle
Specified angle	
[/REPLOT] Replot upon OK/Apply?	Replot 💌
OK Apply	Cancel Help

9) Ansys is now properly configured for use with ZLink.

SETUP GUIDE: ANSYS ENSIGHT

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- **2)** Click Locate Known Apps. The Launcher will search the standard program files folders for known Ansys Ensight installation locations and add them to the list.

United Screens Application					
Add Application	Validate Installs Locate Known Apps				
pplication Name	Working Directory	Application Version	Graphic Library	Enabled	Remov from Li
		version	Library		from L

- 3) If your Ansys is installed to a non standard directory, please click Add Application, locate your ens195cl.exe. The standard path is \Program Files\ANSYS Inc\v195\ CEI\ensight195\machines\win64\ ("v195" in the path might differ, based on the ansys/ensight version).
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Ansys Ensight is now properly configured for use with ZLink.

SETUP GUIDE: PARAVIEW 5.7

- 1) Download and use exactly this version of Paraview: ParaView-5.7.0-Windows-Python3.7-msvc2015-64bit <u>https://www.paraview.org/download/</u>
- 2) Open the ZLink Application Enabler via the ZLink Launcher.
- **3)** Click Locate Known Apps. The Launcher will search the standard program files folders for known Paraview installation locations and add them to the list.

💈 United Screens Applicatio	n Enabler		-	
Add Application	Validate Installs Locate Known Apps			
Application Name	Working Directory	Application Graphi Version Library	c Enabled	Remove from List
Click for additional information o	n running your applications		Sa	ve and Close

- 4) If your Paraview is installed to a non standard directory, please click Add Application, locate your paraview.exe. The standard path is \Program Files\ ParaView-5.7.0-Windows-Python3.7-msvc2015-64bit\bin.
- 5) Place the checkmark in the **Enabled** column.
- 6) Click Save and Close.
- 7) Paraview is now properly configured for use with ZLink.

SETUP GUIDE: TECPLOT 360

- 1) Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known TecPlot installation locations and add them to the list.

😺 United Screens Application Enabler	– 🗆 X	🔰 tritorus.lpk - Tecplot 360 EX 2017 R1	3D View Details
Add Application Validate Installs Locate Known Apps Application Name Working Directory Application Version	Graphic Library Enabled Remove from List	File Edit View Plot Insert Animate Data Frame Op Image: Second structure Fit Everything Ctrl+E Image: Second structure Ctrl+F Plot Data Fit Surfaces Ctrl+F Image: Second structure Ctrl+A 3D Cartesian Fit All Frames to Workspace Ctrl+Shift+A Snap to orier Center Last Ctrl+L	 Use perspective Field of view (deg): 7.24 Maintain object size during field of view changes View width: 28.4134
Click for additional information on running your applications	Save and Close	Show zone la Image: Show zone la Image:	

- 3) If your TecPlot is installed to a non standard directory, please click Add Application, 7) TecPlot is now properly configured for use with ZLink. locate your tec360.exe. The standard path is \Program Files\Tecplot\Tecplot 360 EX 2017 R1\bin.
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.

6) Start the ZLink Client and then launch TecPlot. Load a TecPlot project file. In TecPlot, click on View -> 3D View Details and place the checkmark at Use Perspective.

SETUP GUIDE: SIMPACK

- 1) Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known SimPack installation locations and add them to the list.

😺 United Screens Application Enabler				-		×
Add Application Validate	Installs Locate Known Apps					
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List	
Click for additional information on running your a	pplications			Sav	e and Clos	se

- **3)** If your SimPack is installed to a non standard directory, please click Add Application, locate your simpack-gui.exe. The standard path is \Program Files\ Simpack-20xx\run\bin\win64 (xx= year release number, e.g. 18).
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.

6) Start the ZLink Client and then launch SimPack. Load a SimPack project file. In SimPack, click on View and select Properties. Set the Projection Type to Perspective.

View	
General Advanced S	Stereo
Views: X Y	Z (Y against X) 🔹
Projection Type	
Perspective	Orthographic
• Perspective	O or anographic
Position	or a rographic
The second se	
Position	
Position Screen Coordinates (Isys Coordinates

7) SimPack is now properly configured for use with ZLink.

SETUP GUIDE: AUTODESK MOLDFLOW COMMUNICATOR

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known Moldflow installation locations and add them to the list.

United Screens Applicat	on Enabler			_		×
Add Application	Validate Installs Locate Known Apps					
pplication Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List	

- 3) If your Moldflow is installed to a non standard directory, please click Add Application, locate your mfresview.exe. The standard path is \Program Files\ Autodesk\Moldflow Communicator 20xx\bin (xx= year release number, e.g. 18).
- Place the checkmark in the **Enabled** column. 4)
- 5) Click Save and Close.
- 6) Start the ZLink Client and then launch Moldflow. Load a Moldflow project file. In Moldflow, click on File and select Options.

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7) Go To Viewing Options and tick the checkbox at Use Perspective Mode for new windows.

Hintergrund und Fa	arben	Sprac	che und Hilfesystem	Internet	Bericht
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8) Moldflow is now properly configured for use with ZLink.

SETUP GUIDE: FLEDERMAUS

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known Fledermaus installation locations and add them to the list.

United Screens Applicatio	on Enabler			_	
Add Application	Validate Installs Locate Known Apps				
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List

- 3) If your Fledermaus is installed to a non standard directory, please click Add Application, locate your Fledermaus.exe. The standard path is \Program Files\ QPS\Fledermaus\bin.
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Start the ZLink Client and then launch Fledermaus. Load a Fledermaus project file. In Fledermaus, click on View and select Properties. Set the Projection Type to Perspective.
- 7) Fledermaus is now properly configured for use with ZLink.

SETUP GUIDE: QIMERA

- 1) Open the ZLink Application Enabler via the ZLink Launcher.
- **2)** Click Locate Known Apps. The Launcher will search the standard program files folders for known Qimera installation locations and add them to the list.

United Screens Application E	nabler			_	
Add Application	Validate Installs Locate Known Apps]			
pplication Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List

- 3) If your Fledermaus is installed to a non standard directory, please click Add Application, locate your qimera.exe. The standard path is \Program Files\QPS\ Qimera\bin.
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Qimera is now properly configured for use with ZLink.

SETUP GUIDE: PETREL

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- **2)** Click Locate Known Apps. The Launcher will search the standard program files folders for known Petrel installation locations and add them to the list.

United Screens Application E	nabler				
Add Application	Validate Installs Locate Known Apps				
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List

- If your Petrel is installed to a non standard directory, please click Add Application, locate your Petrel.exe. The standard path is \Program Files\Schlumberger\Petrel 2016, or potentially \Program Files\Schlumberger\Petrel 2017 for the 2017 version; 2018 /19 /20 alike.
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Petrel is now properly configured for use with ZLink.

SETUP GUIDE: ACUTE3D VIEWER

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- **2)** Click Locate Known Apps. The Launcher will search the standard program files folders for known Acute3D Viewer installation locations and add them to the list.

United Screens Applicatio	n Enabler			_	• ×
Add Application	Validate Installs Locate Known Apps				
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List

- 3) If your Acute3D Viewer is installed to a non standard directory, please click Add Application, locate your CCViewer.exe. The standard path is \Program Files\ Bentley\Acute3D Viewer\bin.
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Acute3D Viewer is now properly configured for use with ZLink.

SETUP GUIDE: MESHLAB

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- **2)** Click Locate Known Apps. The Launcher will search the standard program files folders for known Meshlab installation locations and add them to the list.

United Screens Application Ena	bler			_		×
Add Application	Validate Installs Locate Known Apps					
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List	
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ick for additional information on runn	ing your applications			Sav	e and Clos	e

- 3) If your Meshlab is installed to a non standard directory, please click Add Application, locate your Meshlab.exe. The standard path is \Program Files\VCG\ MeshLab.
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Meshlab is now properly configured for use with ZLink.

SETUP GUIDE: SKETCHUP

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- **2)** Click Locate Known Apps. The Launcher will search the standard program files folders for known Sketchup installation locations and add them to the list.

	Validate Installs Locate Known Apps				
Add Application	Validate Installs Locate Known Apps Working Directory	Application Version	Graphic Library	Enabled	Remo from L
ication Name	Working Directory	Application Version	Graphic Library	Enabled	ſ

- 3) If your Sketchup is installed to a non standard directory, please click Add Application, locate the SketchUp.exe file. It's usually located in \Program Files\ SketchUp\SketchUp 20xx (xx =year/version).
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Sketchup is now properly configured for use with ZLink.

SETUP GUIDE: VISTABLE 2.6+

- Open the ZLink Application Enabler via the ZLink Launcher. 1)
- Click Locate Known Apps. The Launcher will search the standard program files 2) folders for known visTABLE installation locations and add them to the list.

United Screens Application	on Enabler				
Add Application	Validate Installs Locate Known Apps				
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List

- If your VisTABLE is installed to a non standard directory, please click Add 3) Application, locate your 3dc64.exe. The standard path is \Program Files (x86)\ visTABLE\2.x\bin\ (x= version number).
- Place the checkmark in the **Enabled** column. 4)
- Click Save and Close. 5)
- If you have installed VisTABLE into its standard directory, you can skip Step 7 and 6) instead download this support package. Copy the Vistable_OpenGL Shortcut to C:\ Program Files (x86)\visTABLE\2.0\bin\. Keep the vistable_VR_start.vbs on your desktop.
- If you have installed VisTABLE into a custom directory, do the following: 7) Create a shortcut to 3dc64.exe and open its properties. Add the following parameter in the target line: -8c1b014c-2b6d-442c-a6b7-06e3112f5eeb, so the full path looks like this:

"YOUR CUSTOM PATH\visTABLE\2.x\bin\3dc64.exe" -8c1b014c-2b6d-442c-a6b7-06e3112f5eeb.

Hint: You can copy and paste the GUID / letter-number sequence from this PDF. Launching this shortcut launches the 3D Viewer of VisTABLE in OpenGL mode which is required for VR bridging with ZLink.

8) Launch VisTABLE. Launch the newly created/downloaded shortcut. Load a visTABLE file. Click the three bars in the top left corner and select "Settings" ("Einstellungen" in German).



9) Disable Show Environment.

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← Einstellungen			
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- **10)** Now close visTABLE and the 3dc64.exe. For the daily use, launch the software components in the following order (after having started ZLink via the Launcher -> CONNECT):
 - 3dc64.exe custom shortcut
 - visTABLE
 - or simply use the VBS file from the support package
- **11)** VisTABLE is now properly configured for use with ZLink.

SETUP GUIDE: AUTODESK 3DS MAX

- **1)** Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known 3dsMax installation locations and add them to the list.

United Screens Application	on Enabler			_	
Add Application	Validate Installs Locate Known Apps]			
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List
ck for additional information c	a numing your applications			Sau	e and Clo

- 3) If your 3ds Max is installed to a non standard directory, please click Add Application, locate your 3dsmax.exe. The standard path is \Program File\ Autodesk\3ds Max 20xx\ (xx = version number).
- 4) Place the checkmark in the **Enabled** column.
- 5) Click Save and Close.
- 6) Start 3ds Max. Click the button in the top left corner to display the menu, select Options.

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7) Switch to the Viewports tab. Click on Choose Driver. Select Legacy OpenGL and exit 3ds Max.

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8) 3dsMax is now properly configured for use with ZLink.

SETUP GUIDE: 3D TOOL

- 1) Open the ZLink Application Enabler via the ZLink Launcher.
- 2) Click Locate Known Apps. The Launcher will search the standard program files folders for known 3D-Tool installation locations and add them to the list.

United Screens Application E	nabler			_	□ >
Add Application	Validate Installs Locate Known Apps				
Application Name	Working Directory	Application Version	Graphic Library	Enabled	Remove from List

- 3) If your 3D-Tool is installed to a non standard directory, please click Add Application, locate your 3D-Tool.exe. The standard path is \Program Files\3D-Tool FreeViewer Vxx\ (xx = version number). 3D Tool Basic, Advanced and Premium are configured similarly to the free viewer.
- Place the checkmark in the Enabled column. 4)
- 5) Click Save and Close.

- 6) 3D-Tool is now properly configured for use with ZLink.
- 7) NOTE: Start the ZLink Client and then launch 3D-Tool. Load any 3D model. Enable Perspective in the 3D Mode tab.



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CONTACT

UNITED SCREENS GmbH

Behringstraße 28a 22765 Hamburg Germany

Chief Executive Officer: Harald Roth

Phone: +49 (0)40 571 996 47 info[at]united-screens.tv support[at]united-screens.tv

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