

# immersa XR-Bridge User Manual

## What is immersa-xr-bridge?

immersa-xr-bridge makes a openxr device out of your professional stereoscopic 3D setup.

See [the official page](#) for more information and use-cases.

## System Requirements

### Required:

- Windows 11 (64-bit)
- OpenXR application to view running in OpenGL or Vulkan. D3D11/12 support is not yet officially available (please contact Schneider Digital if your application depends on D3D11/12).

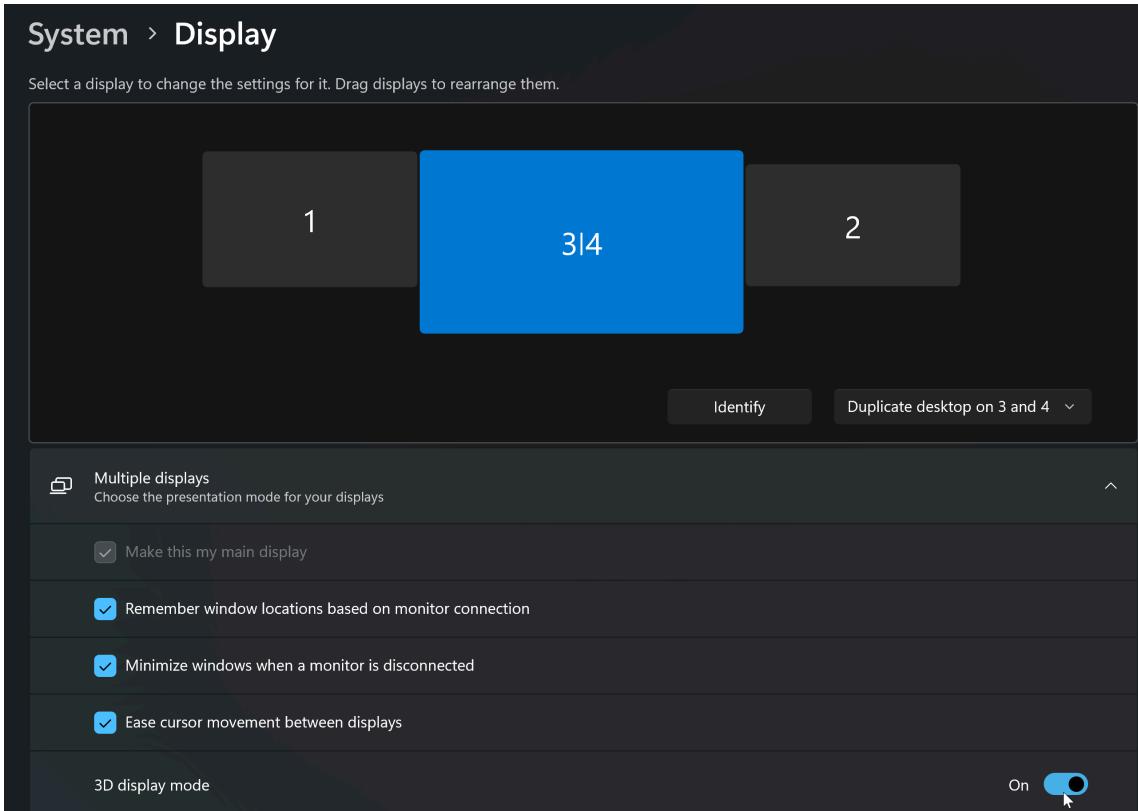
### Hardware

- AMD Professional Graphics Card
- NVIDIA Quadro/RTX Professional GPU with stereo drivers
- Stereo-capable display
- 3DConnexion SpaceMouse

*The application needs your 3D setup running in stereo mode with windows 3D display option enabled.*

- [Here](#) is a description and video for nvidia cards.
- [Here](#) for AMD

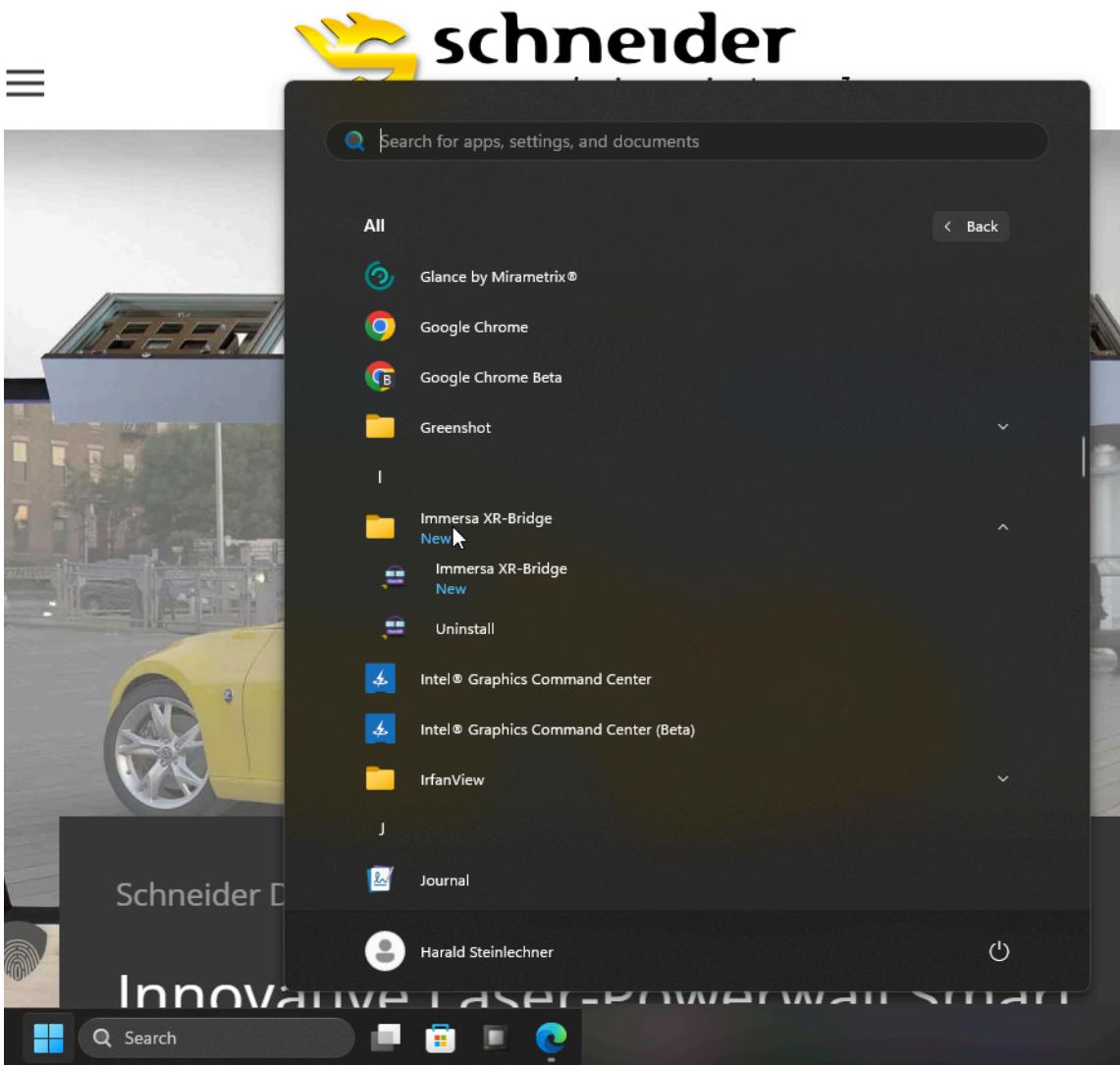
3D needs to be enabled in windows:



The setup can be verified via [RedBlue.exe](#). On PluraView Blue should appear on your top monitor.

## Installation

1. Run `immersa-xr-bridge-24.0.0-win64.exe`
2. Follow installer prompts
3. Application installs to: `C:\Program Files\Schneider Digital\immersa-xr-bridge\`
4. Desktop and Start Menu shortcuts created, you can find it in the start menu, or simply search for Immersa XR-Bridge.

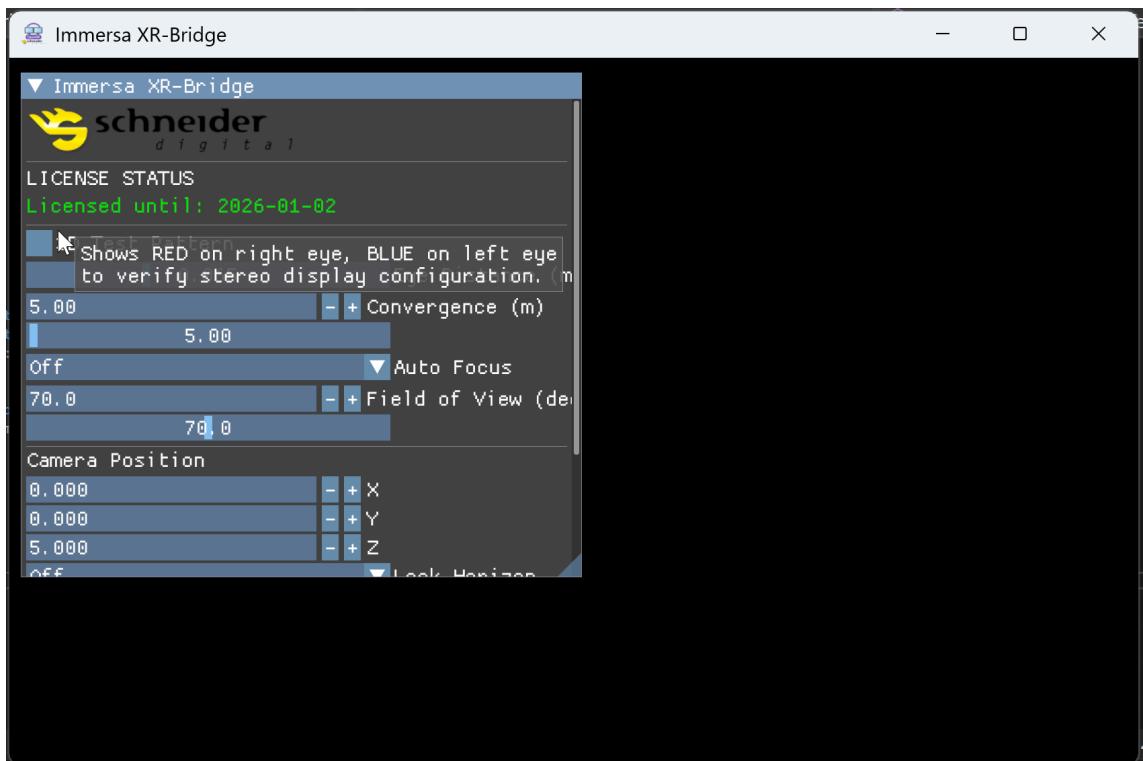


## Startup

1. Start Immersa XR-Bridge.
2. **Run your OpenXR application** (e.g., `hello_xr.exe -G Vulkan`) The immersa-xr-bridge window appears with title "Schneider Digital OpenXR Immersa XR-Bridge"
3. **Stereo output appears** in immersa-xr-bridge window

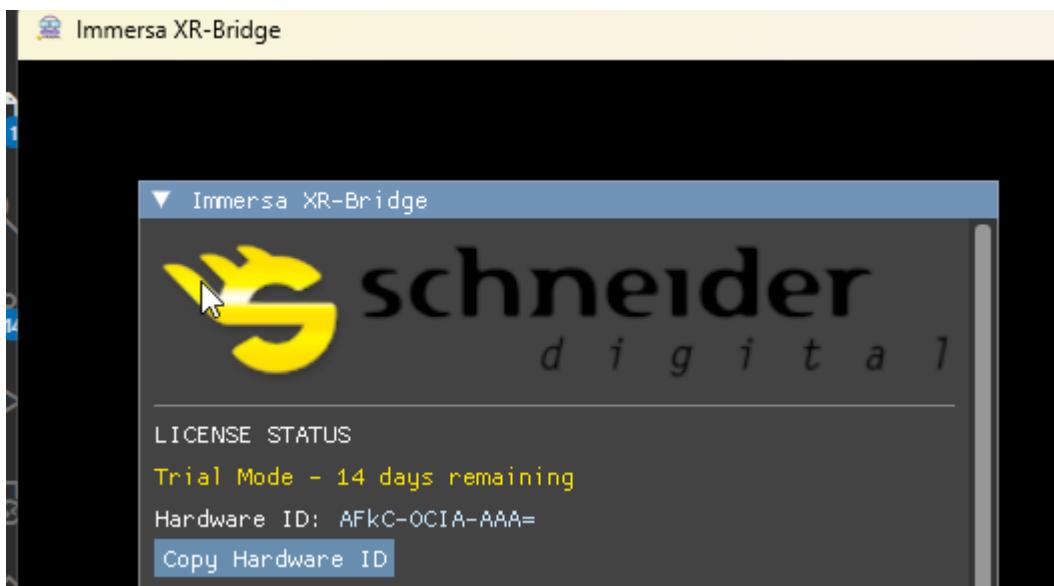
## Check your 3D setup

Use the "Test pattern" mode to check your 3D setup. You should see blue on the Right screen (typically the upper one) and red on the other screen.



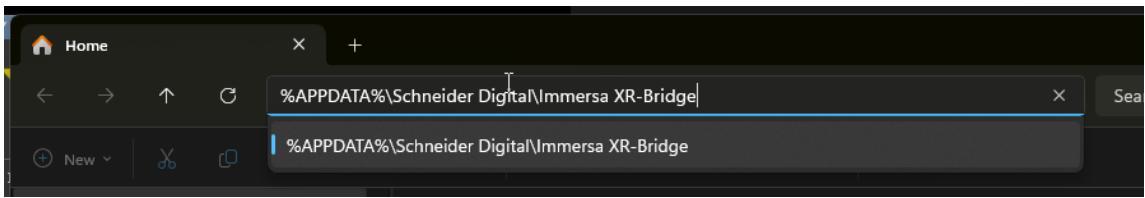
## Licensing

By default the application is in trial mode for 14 days after installation.

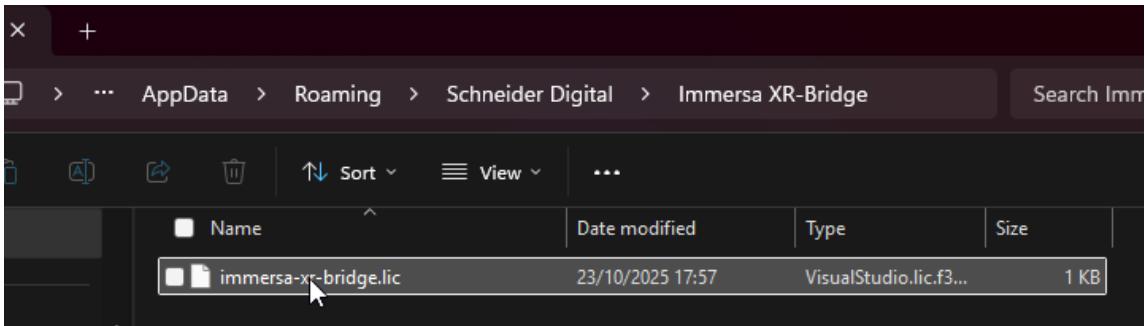


To enable a permanent licence, copy the Hardware ID to the clipboard by clicking "Copy Hardware ID" (or type it manually) into a license request for Schneider Digital.

Copy the license into %APPDATA%\Schneider Digital\Immersa XR-Bridge:



The folder then looks like this:



## Controls

### 3DConnexion SpaceMouse

If you have a SpaceMouse connected, use it for 6DOF camera navigation. The device is automatically detected and enabled when immersa-xr-bridge starts.

### Mouse Navigation

Recommended navigation via 3DConnexion Space Mouse. There is a fallback mode with keyboard and mouse:

**Left-click + drag** - Orbit camera around scene **Scroll wheel** - Zoom in/out **Double-click** - Set pivot point at cursor depth

### Keyboard Shortcuts

Key	Function
<b>T</b>	Toggle GUI visibility
<b>T</b>	Cycle themes (Spectrum → Dark → Light)
<b>M</b>	Cycle non-stereo view modes (both eyes → left only → right only)
<b>D</b>	Toggle depth visualization
<b>P</b>	Toggle pivot point display
<b>C</b>	Toggle cursor display

### GUI Controls

The GUI window displays the Schneider Digital logo at the top, followed by stereo control settings:

**Eye Distance** - Inter-pupillary distance (0.00 - 0.20 m)

**Convergence Distance** - Distance at which left/right eye views converge

- Manual control via slider/buttons
- Auto Focus modes (see below)

**Auto Focus** - Automatically adjusts convergence based on scene depth:

- **Off** - Manual control
- **Pivot Point** - Converges to distance of pivot point (also automatically adjusts eye distance)

**Field of View** - Horizontal FOV in degrees (40 - 100°)

**Camera Position (X, Y, Z)** - Direct camera position control in meters

- Editable via text input or +/- buttons
- Updates in real-time

**Swap Eyes** - Swap left/right eye views

**Flip Image** - Vertical flip of framebuffer (necessary for vulkan unity)

**Reset Camera** - Return to default position (distance=5.0, yaw=0, pitch=0)

**FPS Counter** - Real-time frame rate display

## Display Modes

**Quad-buffer stereo** (automatic if available):

- Requires compatible GPU and display
- Best quality, true stereo output
- Message on startup: "Running in quad buffer stereo mode"

**Side-by-side fallback** (automatic):

- Used when quad-buffer unavailable
- Message on startup: "Not running in stereo mode. Using side-by-side rendering."
- Press **M** to view individual eyes

## Advanced configuration

1. **Configure OpenXR runtime** (if needed):

If you selected "**No**" when installer asked to set default OpenXR runtime, manually configure:

**Option A - System-wide (requires admin):**

```
setx XR_RUNTIME_JSON "C:\Program Files\Schneider Digital\immersa-xr-bridge\openxr_monado.json" /M
```

**Option B - Current user only:**

```
setx XR_RUNTIME_JSON "C:\Program Files\Schneider Digital\immersa-xr-bridge\openxr_monado.json"
```

### Option C - Current session only:

```
set XR_RUNTIME_JSON=C:\Program Files\Schneider Digital\immersa-xr-bridge\openxr_monado.json
```

**Note:** If you selected "Yes" during installation, skip this step.

## Console & Logging

By default, immersa-xr-bridge runs without a console window and logs output to a file for debugging.

### Log file location:

```
%LOCALAPPDATA%\Schneider Digital\immersa-xr-bridge\immersa-xr-bridge.log
```

### To view real-time console output:

```
"C:\Program Files\Schneider Digital\immersa-xr-bridge\immersa-xr-bridge.exe" --console
```

### Use cases:

- Troubleshooting license validation errors
- Debugging OpenXR connection issues
- Viewing performance warnings

**Tip:** Check the log file first when troubleshooting - it persists across runs and captures startup errors.

## Troubleshooting

### Image is upside down.

This happens currently for Unity. Use the Flip Image Button.

### 3D does not work

Use the 3D Test Pattern button and verify that 3D mode works (top screen should be Red, Bottom Screen shot be blue).

## Viewing Logs

### Check log file for errors:

```
%LOCALAPPDATA%\Schneider Digital\immersa-xr-bridge\immersa-xr-bridge.log
```

### View real-time output:

```
"C:\Program Files\Schneider Digital\immersa-xr-bridge\immersa-xr-bridge.exe" --console
```

The log file captures startup errors, license validation results, and runtime warnings.

## License Errors

License errors are shown in a popup dialog on startup and logged to the log file.

**"License file not found"** → Reinstall immersa-xr-bridge using official installer → Check log file for details

**"License has expired"** → Contact Schneider Digital for renewed license → Check log file for expiration date

**"License is not valid for this computer"** → License is hardware-locked. Contact Schneider Digital for new license → Check log file for hardware ID mismatch details

## OpenXR Issues

**OpenXR app doesn't connect to immersa-xr-bridge** → Verify `XR_RUNTIME_JSON` points to correct location:

```
echo %XR_RUNTIME_JSON%
```

Should show: `C:\Program Files\Schneider Digital\immersa-xr-bridge\openxr_monado.json`

**"Runtime not found" error** → Ensure immersa-xr-bridge is running BEFORE launching OpenXR app

## Display Issues

**No stereo effect** → Check GPU supports quad-buffer stereo (Quadro/RTX Professional) → Verify stereo drivers installed → Use **M** key to verify both eyes rendering different views

**GUI not visible** → Press **Tab** to toggle GUI visibility

**Cursor stuck or invisible** → Move mouse over immersa-xr-bridge window → Press **C** to toggle cursor visibility

**"Screen is upside-down"** → Use the flip image setting.

## Performance Issues

**Low frame rate** → Check FPS counter in GUI → Reduce OpenXR application resolution/quality → Close unnecessary applications

**Frame skipping** → Check console for "Skipped frame" messages → Compositor writing faster than display can consume

## Support

For technical support, license issues, or questions:

**Schneider Digital** Contact information available at installation directory or company website

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**Version:** 1.0.1 **OpenXR Runtime:** Monado 24.0.0 (BSD-1.0 License)