Immersa XR-Bridge User Manual

What is immersa-xr-bridge?

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

System Requirements

Required:

- Windows 11 (64-bit)
- OpenXR application to view

Hardware

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

For 3D mouse navigation (recommmended):

- 3DConnexion SpaceMouse

Installation

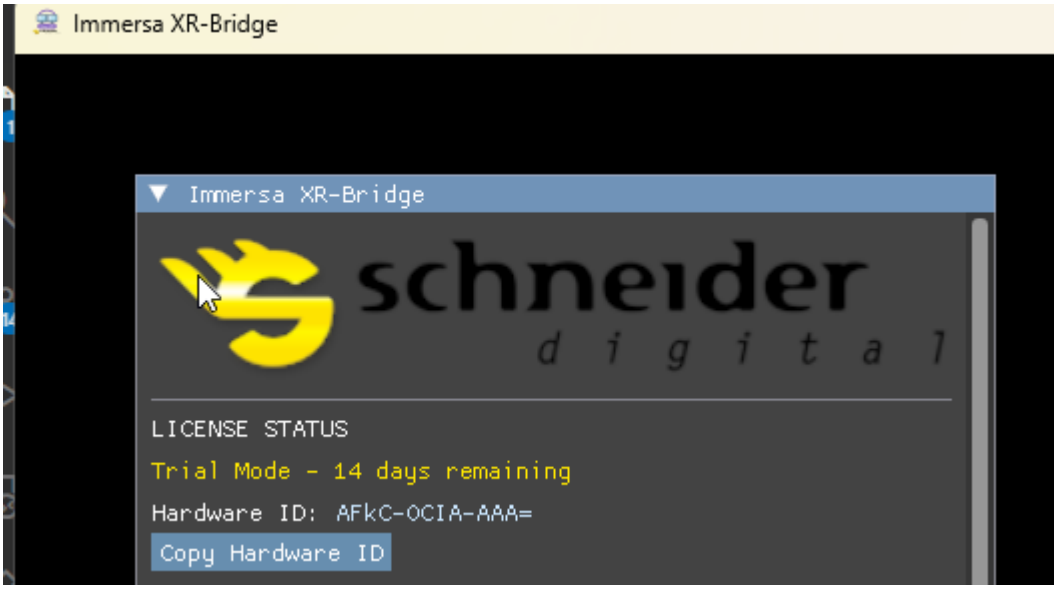
1. Run `immersa-xr-bridge-24.0.0-win64.exe`
2. Follow installer prompts
3. Application installs to: `C:\Program Files\Schneider Digital\immersa-xr-bridge\`
4. Desktop and Start Menu shortcuts created, you can find it in the start menu, or simply search for Immersa XR-Bridge.

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

Licensing

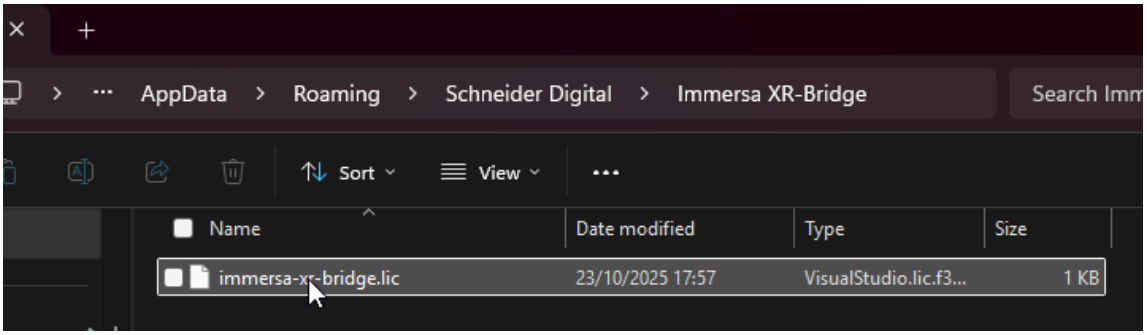
By default the application is in trial mode for 14 days after installation.



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
Tab	Toggle GUI visibility
T	Cycle themes (Spectrum → Dark → Light)
M	Cycle non-stereo view modes (both eyes → left only → right only)
D	Toggle depth visualization
P	Toggle pivot point display
C	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

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