

XTAL



XTAL Product Sheet

High-end VR headset for professional use

Design, engineer, prototype, train and run simulations in VR in a truly life-like fashion and experience reality before it happens.

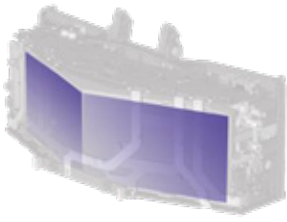
XTAL



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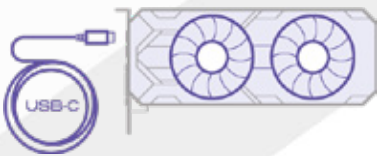
Best-in-class Crystal Clear VR Image

High-density LCD displays with 8K horizontal resolution (4K per eye) paired with our patented non-Fresnel VR lenses



Enterprise-ready

Secured and compatible with Autodesk and Dassault Systemes products. Supporting multiple tracking systems.



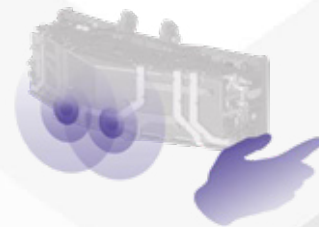
VirtualLink Cable

Breakthrough cable joins DisplayPort, power and data transfer into a single USB-C cable



Deep Immersion Experience

- 180° FOV
- Designed to work with glasses



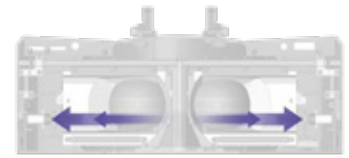
World's 1st Integrated Hand Tracking

New highly accurate Ultraleap Motion sensor embedded directly into the headset



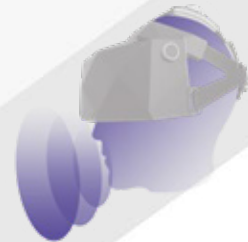
Foveated Rendering & Data Analysis

Eye tracking for optimization of GPU usage and data gathering



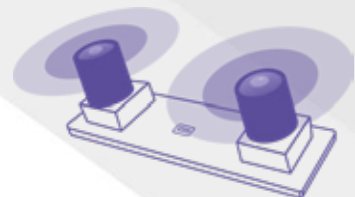
AutoEye - Automatic IPD System

Automatically aligns lenses to users' eyes for optimal experience



Voice Commands

Built in microphone paired with voice recognition SW to enable voice commands in VR



Augmented Reality

AR module add-on enables wide array of new use cases

Technical Specification

Resolution	7680 x 2160 (2x4K, i.e. 3840 x 2160 per eye)
Display type	LCD
Field of view	180° (Diagonal)
Refresh rate	75 Hz
Optics	Patented custom-designed non-Fresnel VR lenses
Head mount	Advanced hard head strap with synthetic leather material
Hand tracking	Integrated Ultraleap Motion Rigel hand tracking sensor
Audio	Integrated microphone with voice commands recognition system (accessible via Windows native drivers) Built-in soundcard with audio jack
Connection	VirtualLink – USB-C alternate mode, 5m/16,4 ft
Dimensions	Height: 123 mm/4,8 in, Width: 299 mm/11,7 in, Depth: 148 mm/5,8 in
Weight	Headset: 800 g/1,76 lbs. (without head strap) Head strap (incl. balance counter-weight): 440 g/0,97 lbs.

Security

Meets the highest security standards and is capable to fully operate offline. No data are being kept or sent to any 3rd party.

Flexible license and usage policy to fit any legal requirements.

XTAL



SW Requirements:

Windows 10 operating system

HW Requirements:

VirtualLink-supported GPUs:

GeForce RTX: 2080 Ti, 2080, 2070, 2060, 8000, 6000, 5000, 4000

VirtualLink adapter-supported GPUs:

RTX 2080 Mobile, AMD FX700 (with HDCP disabled)

SW Compatibility:

Autodesk VRED native support

SteamVR (OpenVR) support

Dassault Systèmes software

IC.IDO by ESI

Tracking

Integrated 3DoF

Available extensions (6DoF):

AR Tracking

Optitrack

SteamVR Lighthouse 1.0 or 2.0

Mo-Sys

Vicon

Polhemus

*Proprietary controllers for the tracking systems can be used with each respective system

Computing power requirements

<p>High-end professional PC Intel® Xeon® E5-2683 v4 (16 Cores, 2.10 GHz) 64 GB RAM DDR4 2x NVIDIA® Quadro® RTX 8000 in SLI Windows 10 OS</p>	<p>Professional Laptop (HP ZBook 17 G6) Intel® Core™ i9-9880H (2,30 GHz to 4,80 GHz, 8 cores) 32 GB RAM DDR4 NVIDIA® Quadro® RTX 5000 Windows 10 OS</p>
<p>Mid-range PC Intel® Core™ i7-7700K Processor (Quad-Core, 4.20 GHz) 32 GB RAM DDR4 NVIDIA® RTX 2080 Ti Windows 10 OS</p>	<p>Gaming Laptop (Alienware M17) Intel® Core™ i7-9750H (6-Core, 12MB Cache, up to 4.5GHz w/ Turbo Boost) 16 GB RAM DDR4 NVIDIA® RTX 2060 Windows 10 OS</p>

Enterprise & Military License

XTAL Enterprise & Military License is the only license with unlimited usage and right to use XTAL for any commercial purposes.

Duration: 1-year otherwise stated differently in Purchase Order

Enterprise & Military Commercial use License includes:

- XTAL documentation
- XTAL firmware upgrades
- XTAL service application (VRG Tool) upgrades
- XTAL computer drivers (i.e.: Windows 10 driver for SteamVR)

For developers:

- Plug-ins: Unity, Unreal, Unigine, Crytek
- C++ libraries (i.e. for Direct X, OpenGL, Vulkan)
- Access to BETA drivers (i.e. Mixed Reality SDK, Eye Tracking drivers, Inside-out tracking drivers)
- Access to custom firmware versions (example: experimental firmware versions with overclocked peripherals, turned off different functions such as microphone and others)

Access to above is provided directly by VRgineers INC technical support.

- Best practice guide for flight simulators such as Xplane11, Lockheed Martin P3D, DCS and others
- Direct access to XTAL developers for technical consultations
- Commercial license for UltraLeap hand tracking
- Access to purchase and test experimental XTAL hardware (example: XTAL prototypes, controllers, tracking systems, camera systems and others) per request
- One year manufacturer advanced warranty

XTAL package contents

- XTAL HMD
- Head strap
- 5m VirtualLink interconnecting cable
- Cleaning set
- Optional accessories subject to individual order (tracking system support, controllers etc.)
- Suitcase for safe transport and storage

Complex solutions including content creation, VR showroom design or AR are proceed on demand.