

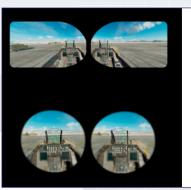
VRGINEERS - XTAL 3 VIRTUAL REALITY-

MAIN CHARACTERISTICS

The **XTAL 3 Virtual Reality** headset has been developed and designed for pilot training, with the input of civil and military pilots, to fulfill their professional expectations. The headset ergonomics complies with Naval Air Station Patuxent River pilots' feedback and provides the expected support for full mission training. Full RGB 4K resolution per eye and patented custom-made non-fresnel VR lenses create realistic simulations with undistorted image across the entire wide field of view. Vrgineers development team designed advanced optical correction algorithms, which can correct optical flaws such as chromatic aberration or barrel distortion.

INTEGRATED EYE TRACKING

Eye-tracking technology tracks and gathers the pilot's gaze in real-time. The instructors can use the data for debriefing and behavioral analyses visualized via heatmaps after the session. The instructors and pilots benefit from identifying problems with scanning patterns, increasing their awareness and efficiency in standard procedures.



XTAL 3

- + Wide field of view
- High resolution
 Professional training

Consumer VR Headset

- Limited field of view
- Low resolution
- Gaming industry



TECHNICAL SPECIFICATIONS

RESOLUTION DISPLAYS REFRESH RATE

FIELD OF VIEW

ADVANCED FEATURES
EYE TRACKING

POSITIONAL TRACKING

HAND TRACKING IPD

HEADSET CONNECTIVITY

SOFTWARE SUPPORT

3840 x 2160 per eye

Two fast-switching 4K LCD displays for virtual reality 75 Hz @ 4K per eye, 120 Hz @ QHD per eye 180° horizontal, 120° vertical (maximum experimental values) 140° horizontal, 90° vertical (default values)

Foveated Rendering, Timewarp

Gaze analyses, heatmap visualization, running native 120 Hz (up to 210 Hz)

Lighthouse (SteamVR)/ART/Optitrack/Polhemus/Vicon or custom

Embedded Ultraleap Sensor Auto IPD – range 56-74 mm

VirtualLink (5 m / 16.40 ft) cable or DisplayPort 1.4 , USB 3.2 gen 2, Power 12V, 3A (5m / 16.40 ft)

Microsoft Windows

Steam VR and OpenXR drivers Unity, Unreal and other game engines plugins C++ libraries (DirectX,

OpenGL, Vulkan)

SIMULATION SUPPORT Commercial: Prepar3D, DCS World, X-Plane

11/12, Microsoft Flight Simulator, Aerofly FS, FlyInside Professional: Prepar3D, MCS, X-Plane 11/12, Bohemia Interactive Simulations (VBS3, VBS4, Blue IG), MAK, Simigon, multiSim, Metrea

WEIGHT

(without headstrap)

600g

DIMENSIONS

(headset only)

293 x 123 x 113 mm