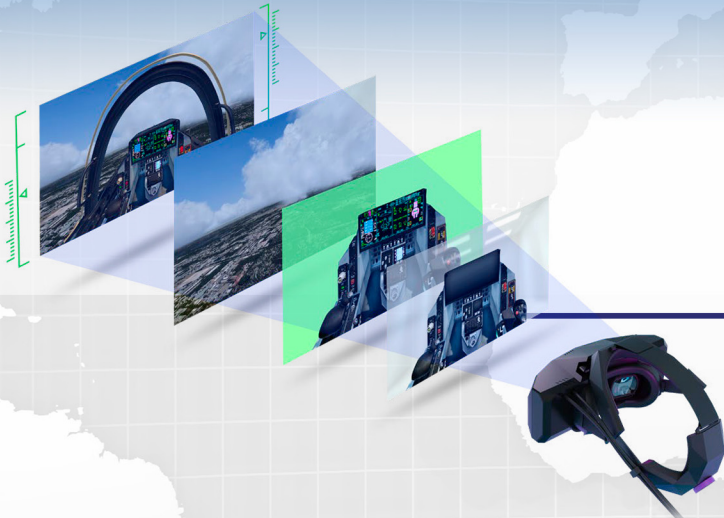## VRGINEERS - XTAL 3 NEO PILOT DEDICATED HEADSET

MAIN CHARACTERISTICS

Representing the state-of-the-art technology used in next-generation training, the XTAL 3 Mixed Reality headset was developed to meet the high requirements of professional pilots. Besides the common attributes of the XTAL 3 Virtual Reality headset, it has the embedded mixed reality module. MR technology has the potential to revolutionize pilot training by providing a highly immersive and interactive learning experience that can improve safety, reduce costs, and enhance the effectiveness of training programs.

ADVANCED MASKING

With advanced masking using the combination of green screen function and 3D object mapping, any environment and airplane cockpit can be easily masked and used for mixed reality simulation.

FIDELITY

The Fidelity level and combination of front-facing cameras and matching 4k resolution screens enable pilots to read the instrument panels and MFDs.

TECHNICAL SPECIFICATIONS

VIRTUAL REALITY RESOLUTION	3840×2160 per eye	**DISPLAYS**	Two fast-switching 4K LCD displays for mixed reality
VIRTUAL REALITY REFRESH RATE	75 Hz @ 4K per eye, 120 Hz @ QHD per eye	**EYE TRACKING**	Gaze analyses, heat map visualization, running native 120 Hz (up to 210 Hz)
FIELD OF VIEW	180° horizontal, 120° vertical (maximum experimental values) 140° horizontal, 90° vertical (default values)	**POSITIONAL TRACKING**	Lighthouse (SteamVR)/ART/Optitrack/Polhemus/Vicon or custom
		HAND TRACKING	Embedded Ultraleap Sensor
MIXED REALITY RESOLUTION & REFRESH RATE	Foveated profiles: up to 3072×3040 @75Hz Uncompressed profiles: 4056x3040 @30Hz 3040×3040 @40Hz 2028×1512 @120Hz / @90Hz / @75Hz 1536×1520 @120Hz / @90Hz / @75Hz	**IPD**	Auto IPD range 56-74 mm
		HEADSET CONNECTIVITY	VirtualLink (5 m/16.4 ft) cable or DisplayPort 1.4 , USB 3.2 gen2, Power 12V, 3A (5 m/16.4 ft)
		OS	Microsoft Windows
		SOFTWARE SUPPORT	Steam VR and OpenXR drivers, Unity, Unreal, and other game engine plugins, C++ libraries (DirectX, OpenGL, Vulkan)

MIXED REALITY FIELD OF VIEW *	Horizontal FOV	Vertical FOV
HIGH FIDELITY LENS	60 °	40 °
BALANCE LENS	80 °	60 °
IMMERSIVE LENS	125 °	85 °
INFINITE LENS	170 °	120 °

SIMULATION SUPPORT	Commercial: Prepar3D, DCS World, X-Plane 11/12, Microsoft Fli- ght Simulator, Aerofly FS, FlyInside Professional: Prepar3D, MCS, X-Plane 11/12, Bohemia Interactive Simulations (VBS3, VBS4, Blue IG), MAK, Simigon, multiSim, Metrea
WEIGHT (without head strap)	700 g
DIMENSIONS (headset only)	293 x 123 x 113 mm

*The values may differ depending on the software settings and hardware version and used measurement method.

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