OptoFidelity™ HMD IQ

For measuring image quality of head-mounted displays, near-eye displays and optical engines

OptoFidelity™ HMD IQ

Complete station to test image quality of head-mounted displays (HMD) and optical engines

OptoFidelity™ HMD IQ is a complete station to test and measure near-eye displays (NED) and head-mounted displays (HMD) with an image source (display) and projection optics (lens). HMD IQ is designed to provide repeatable results of the assembled near-eye display at production or R&D. System can be configured to support early development version of near-eye displays with possible adapter board as well as fully integrated head-mounted displays. OptoFidelity™ HMD IQ enables high UPH production testing and is designed to enable the measurements listed below.

HMD IQ TEST EXAMPLES
- Binocular disparity
- Checkerboard contrast
- Chromatic aberration
- Color
- Color uniformity
- Eyebox
- Field of view (FOV)
- Geometric distortion
- Interpupillary distance
- Michelson contrast
- Modulation transfer function (MTF)
- Relative luminance
- Uniformity

CONTENT OF DELIVERY
- Robot and motion control
- Calibrated HMD Eye (camera and lens combination)
- Sensor and camera assisted DUT positioning
- Cabinet
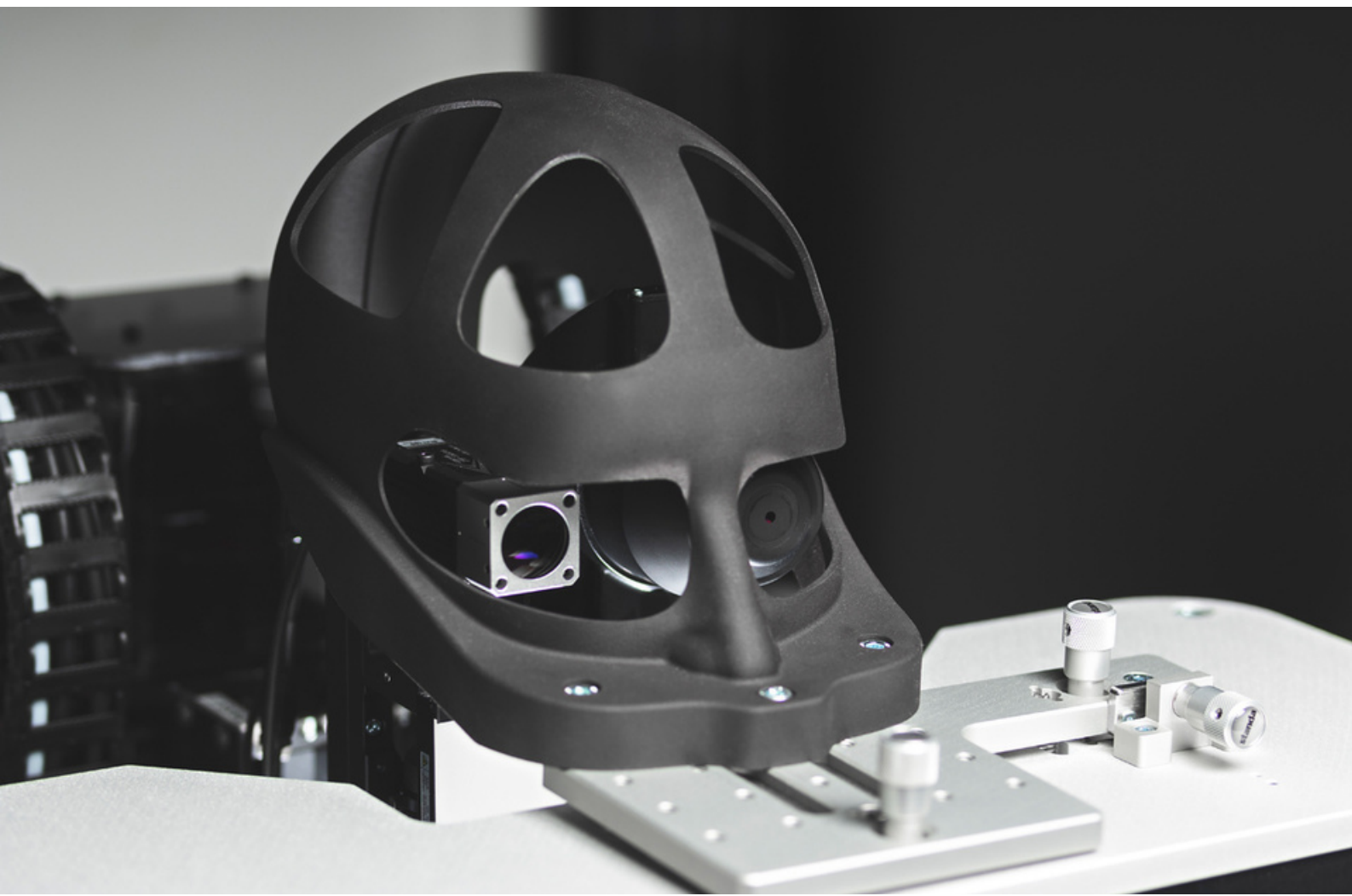- Software for system control and HMD IQ test configuration

OptoFidelity™ OptoEye

Calibrated lens and camera system for image quality testing of head-mounted AR/VR displays

OptoFidelity™ OptoEye is a combined motorized lens and camera system for mimicking the performance of the human eye, with the purpose of characterizing head-mounted augmented and virtual reality displays in both R&D and production environments.

Contrary to standard lenses, OptoFidelity™ OptoEye features an external entrance pupil with the same size as the human eye and controllable focus. The external pupil allows to position the lens in the eye relief location, where it can capture with a single shot the full field of view of the tested device, exactly as the user would perceive it. Controllable focus mimics human eye focusing to objects in different distances.

The instrument is delivered fully characterized and comes with a camera that is optimized for the application and test requirements. As part of a complete OptoFidelity robotics and software platform for precision DUT alignment and image analysis, it becomes an unbeatable solution for automated near-eye display testing.

Our products are all equipped with easy-to-use software tools for test configuration, results analysis and reporting.

About OptoFidelity

We develop the best performing automation products and measurement technologies for our customers, enabling their innovations for a smarter future.

OptoFidelity works with the world's largest device manufacturers and innovators. It is a globally recognized pioneer in test automation and metrology solutions. Our customers use our human-like robot-assisted metrology platforms for product development, production, and quality assurance. Our products come with easy-to-use software tools for test configuration, analyses and reporting.

LOCATIONS
FINLAND: Tampere (Global HQ), Oulu and Espoo
USA: Cupertino (CA) and Redmond (WA)
GREATER CHINA: Zhuhai, Suzhou, Shenzhen, Hong Kong and Taipei

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12/2022

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