

OptoFidelity™ BUDDY



Performance tester with 3 or 6 degrees of freedom
for any AR/VR/XR head-mounted display

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OptoFidelity™ BUDDY is a comprehensive system for virtual, augmented and extended reality (VR, AR, XR) head-mounted display (HMD) performance testing and calibration in both R&D and in manufacturing lines. BUDDY with its patented technologies has been serving customers since 2017.

BUDDY is available in two different motion configurations: with either 3 or 6 degrees of freedom robot cell. The robot cell and integrated vision module ensure the most accurate and reliable test procedures for HMD performance, including motion-to-photon latency, content stability and pose-drifting.

The system is based on non-intrusive measurement comparing the changes in the virtual world pose to the robotics pose. Measurement performance comes from OptoFidelity's proprietary vision module and robotics platform, which enables unbeatable repeatability, time synchronization, and position based triggering.



Test Case Examples

	BUDDY 3 DOF	BUDDY 6 DOF
DISPLAY TEMPORAL CHARACTERISTICS <ul style="list-style-type: none"> • Pixel persistence • Refresh rate 	<ul style="list-style-type: none"> • • 	<ul style="list-style-type: none"> • •
MOTION TRACKING ACCURACY <ul style="list-style-type: none"> • Stationary jitter • Drifting • Prediction overshoot/undershoot • Tracking repeatability 	<ul style="list-style-type: none"> • • • • 	<ul style="list-style-type: none"> • • • •
MOTION-TO-PHOTON (M2P) LATENCY	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
OPTIONAL FEATURES <ul style="list-style-type: none"> • Video see-through latency • Hand controller latency • Hand controller tracking accuracy 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • • •





Measure motion-to-photon latency, content stability and pose-drifting with BUDDY, which is suitable for both AR and VR glasses.

About OptoFidelity

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

HEADQUARTER

OptoFidelity Oy
Visiokatu 3
FI-33720
Tampere
Finland

SALES

sales@optofidelity.com
+358 44 430 0100

WWW

[optofidelity.com](https://www.optofidelity.com)

SOCIAL MEDIA

linkedin.com/company/optofidelity
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twitter.com/OptoFidelity
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