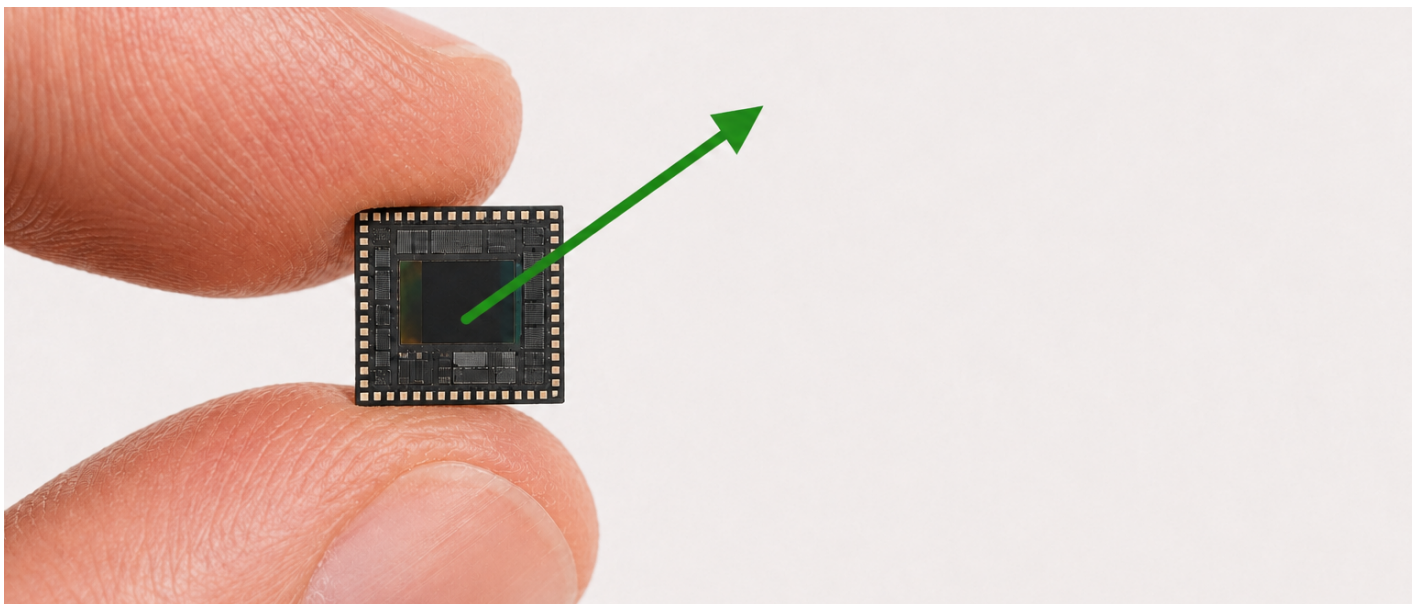


Optical orientation on-chip: oriometry

Orientation first.

RayIQ is the world's first oriometer. It measures orientation continuously from radiant-field structure - before, during, and after image capture - without forming an image itself.



Conceptual rendering - not device geometry

NON-IMAGING

No picture is formed or stored. RayIQ measures field structure rather than reconstructing a scene.

LENSLESS

The orientation measurement does not depend on conventional camera optics or image formation.

ORIENTATION-FIRST

Orientation is the primary output. Position and motion require additional observations or sensor fusion.

The missing measurement

A camera samples images. An IMU propagates orientation from inertial change without an external optical reference. RayIQ supplies a continuous radiant-field orientation reference around every exposure.

A NEW MEASUREMENT CLASS

One orientation reference. Many systems.

RayIQ is designed as a compact sensing layer that can operate in defined optical environments or complement inertial, optical, and environmental sensors.

Navigation and control

An external orientation reference for vehicles, drones, instruments, and mobile platforms.

Robotics and autonomy

Orientation information for machines operating with inertial and environmental sensors.

Motion tracking

Before, during, and after each exposure, RayIQ measures orientation. Fused with synchronized imagery, motion blur becomes a cue to the 3D motion of curvilinear body segments.

Safety and optical systems

Directional radiant-field measurements for detection, alignment, monitoring, and control.

Development status

Surf6 Motion is advancing RayIQ through modeling, calibration, scaled prototypes, and application-specific testing toward CMOS implementation.

ISSUED U.S. PATENTS

10,698,067
11,121,281
11,150,318
11,585,931

PARTNERSHIP OPPORTUNITIES

Technical development | Research validation | Semiconductor fabrication | Licensing | Application integration