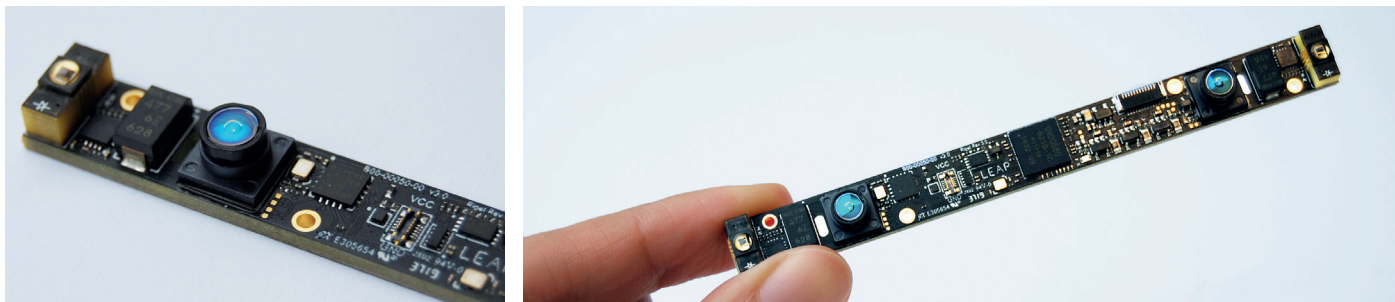


# ultraleap<sup>®</sup>

## Ultraleap Rigel™



### The world's most powerful hand tracking hardware

The Ultraleap Rigel is a next-generation optical hand tracking module that captures the movement of users' hands and fingers so they can interact naturally with digital content. It is designed to be integrated into enterprise-grade hardware solutions, displays, installations, and virtual/augmented reality headsets for AR/VR/XR prototyping, research, and development.

The module uses the same core software as its predecessor, the Leap Motion Controller. Both can discern 27 distinct hand elements, including bones and joints, and track them even when they are obscured by other parts of the hand. The Ultraleap Rigel features a wider field of view, a longer tracking range, lower power consumption, and smaller form factor. It's capable of tracking hands within a 3D interactive zone that extends from 10cm (4") to 75cm (29.5") preferred or more, extending from the device in a 160x160° field of view. With a 90Hz refresh rate on USB2 and low-latency software, the time between motion and photon falls beneath the human perception threshold<sup>1</sup>.



The Ultraleap Rigel features a 160°x160° field of view and an interactive tracking range up to 1 meter (3 feet) max.

### Example applications

- Entertainment (location-based VR/AR experiences, arcades, amusement parks)
- Healthcare (stroke rehabilitation, training, mirror, medical imaging, lazy eye treatment)
- Therapy and education (anatomic visualizations, hands-on learning)
- Personnel training (flight simulators, complex computer systems)
- Industrial design and engineering (automotive, assembly lines, facilities management)
- Robotics (bomb disposal, telepresence, robotic controls, AI-assisted teaching)
- Global team collaboration

### Easy to integrate and use

The Ultraleap Rigel is designed for robust integration into consumer and enterprise-grade products, and can be retro-fitted to existing concepts or hardware. Plugins for Unity and Unreal enable developers working with two leading 3D development platforms to incorporate hand tracking into their established workflow. The Unity integration features:

- Powerful Interaction Engine enabling natural hand/object interactions
- Example scenes with interactive scripts and menus
- Optimized rigged hand models and auto-rigging pipeline for custom hand designs

<sup>1</sup>Internal benchmarking tests have determined that the Leap Motion software is capable of sub-millisecond image processing, though this varies by environmental conditions and number of hands. The camera framerate imposes 11 milliseconds of latency (1/90 seconds) on USB2. Note that game engines, GPUs, and display systems are also factors in total system latency.

## Specifications

	Height	Width	Depth	Weight
Metric	8mm	105mm	10mm	8g
Imperial	0.3"	4.1"	0.4"	0.3oz
Product category:	Specialized sensor			
Description:	Ultraleap Rigel for hand tracking			
Power supply:	USB 5V (module has onboard voltage regulators to generate required 1.2V, 1.8V, 2.8V and 3.3V)			
Data connection:	USB 2.0/3.0			
Ingress protection:	N/A (requires an infrared-pass visible-light-blocking window for robust use)			
Mounting methods:	Capable of being mounted on a VR headset using the Leap Motion VR Developer Mount, or recessed/embedded into a larger hardware installation (recommended)			
Interaction zone:	Between 10cm (4") to 75cm (29.5") preferred, up to 1m (36") maximum; 160x160° field of view			
Cameras:	Two near-infrared 180° field-of-view cameras, spaced 64 millimetres apart; 800x800 resolution downsampled to 400x400; with infrared-transparent window, operates in the 850 nanometre +/-25 spectral range; typically operates at 90Hz but hardware is capable of 170+ on USB3			
LEDs:	Two, spaced on either side of the cameras			
Range:	Beyond arm's length (>1m); varies depending on hand perspective conditions			
Construction:	Printed circuit board with sensors, LEDs, and other electronic components			
Ambient operating temperature:	32° to 122° F (0° to 50°C)			
Minimum system requirements (desktop):	Windows® 7+; AMD Phenom™ II or Intel® Core™ i3/i5/i7 processor; 2 GB RAM; USB 2.0 port			
Minimum system requirements (VR):	Windows 7 SP1 64 bit or newer; Intel® Core™ i5-4590 equivalent or greater; 8GB+ RAM; 3x USB 3.0 port; NVIDIA GTX 970 / AMD R9 290 equivalent or greater with compatible HDMI 1.3 video output			

## Where to buy it

The Ultraleap Rigel is only available directly from Ultraleap. For distribution and licensing, get in touch with us at [www.ultraleap.com/contact](http://www.ultraleap.com/contact).

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