ultraleap

Leap Motion Controller™

The world's leading hand tracking technology

The Leap Motion Controller from Ultraleap is an optical hand tracking module that captures the movement of users' hands and fingers so they can interact naturally with digital content. Small, fast, and accurate, the Leap Motion Controller can be used for productivity applications with Windows computers, integrated into enterprise-grade hardware solutions or displays, or attached to virtual/augmented reality headsets for AR/VR/XR prototyping, research, and development.

The controller is capable of tracking hands within a 3D interactive zone that extends up to 60cm (24") or more, extending from the device in a 140x120° typical field of view. Leap Motion's software is able to discern 27 distinct hand elements, including bones and joints, and track them even when they are obscured by other parts of the hand.

An accessory component, the VR Developer Mount (https://www.ultraleap.com/product/vr-developer-mount/), allows for easy, reliable, and consistent attachment of the device to virtual reality headsets such as the Oculus Rift and HTC Vive. The Leap Motion App Gallery features 75+ legacy desktop applications and a demo suite for virtual reality.

The Leap Motion Controller features a 140x120° field of view and an interactive tracking range of up to 60cm (24") or more.

Example applications

- Touchless public interfaces (interactive kiosks, digital out-of-home, elevators)
- 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 (telepresence, robotic controls, AI-assisted teaching)
- Remote collaboration

Robust and safety compliant

The Leap Motion Controller is certified compliant to safety and electrical regulatory standards. Its robustness and external certification enable commercial projects, including sterile environments.

Easy to integrate and use

The Leap Motion Controller is designed for simple integration into customer applications 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.
- Our TouchFree application detects a user's hand in mid-air and converts it to an on-screen cursor, allowing touchscreen interfaces to be retrofitted with touchless gesture control.

Specifications

Power supply:	5V DC via USB connector (minimum 0.5A)
Data connection:	USB 2.0 (packaged with USB 2/3 hybrid cable, but can be used with any certified USB standard cables with the Hi-Speed USB 2.0 logo featured on the packaging).
Ingress protection:	Splash resistant
Mounting methods:	May be placed on a desktop, mounted on a VR headset using the Leap Motion VR Developer Mount (https://www.ultraleap.com/product/vr-developer-mount/), or recessed into a larger hardware installation.
Interaction zone:	Depth of up to 60cm (24") preferred, up to 80cm (31") maximum; 140×120° typical field of view. Tracking works in a range of environmental conditions.
Cameras:	Two 640x240-pixel near-infrared cameras; spaced 40 millimetres apart; with infrared-transparent window, operate in the 850 nanometre +/-25 spectral range; typically operates at 120Hz; capable of image capture within 1/2000th of a second.
Camera interface:	Experimental Universal Video Class (UVC) release provides access to low-level controls such as LED brightness, gamma, exposure, gain, resolution, etc.; examples in C, Python, and Matlab, as well as OpenCV bindings.
LEDs:	Three, spaced on either side and between the cameras, baffled to prevent overlaps.
Construction:	Aluminium and scratch-resistant glass
Ambient operating temperature:	32º to 113º F (0º to 45ºC)
Storage temperature:	14º to 122º F (-10º to 50º C)
Relative Humidity:	5% to 85% (non-condensing)
Operating Altitude:	0 to 10,000 feet (0 to 3048 meters)
Compliance:	CE, FCC, CAN ICES-3, REACH, RoHS
Minimum system requirements (desktop):	Windows® 7+ or Mac® OS X 10.7 (note that OSX is no longer formally supported); AMD Phenom™ II or Intel® Core™ i3/i5/i7 processor; 2 GB RAM; USB 2.0 port. VR headsets may come with their own system requirements.

All dimensions are in mm

Weight: 32g

Where to buy it

For a list of authorized retailers, visit www.ultraleap.com
Some applications, including those distributed for more than US$500 or designed for use with or control of industrial, commercial or medical equipment, require a separate license from Ultraleap.

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