

## Microsoft HoloLens

Microsoft HoloLens is the first fully self-contained holographic computer running Windows 10. It is completely untethered—no wires, phones, or connection to a PC needed. Microsoft HoloLens allows you to place holograms in your physical environment providing a heads-up, hands-free way to see your world.

### HoloLens Device Specifications

<b>Software</b>	Windows 10 Windows Mixed Reality	<b>Wireless</b>	Wi-Fi 802.11ac wireless networking  Bluetooth 4.1 Low Energy (LE) wireless connectivity
<b>Weight</b>	579g (1.28 lbs.)	<b>Audio</b>	3D audio speakers  3.5mm audio jack
<b>Optics / Display</b>	2.3 megapixel widescreen see-through holographic lenses (waveguides)  2 HD 16:9 light engines (screen aspect ratio)  Holographic Density: >2.5k radiant (light points per radian)  1 2.4-megapixel photographic video camera  Automatic pupillary distance calibration	<b>Ports</b>	Micro USB 2.0
<b>Sensors</b>	1 IMU (Accelerometer, gyroscope, and magnetometer)  4 environment sensors  1 energy-efficient depth camera with a 120°x120° angle of view  Four-microphone array  1 ambient light sensor	<b>Physical Buttons</b>	Power  Volume up/down  Brightness up/down
<b>Processors</b>	Intel 32-bit (1GHz) with TPM 2.0 support  Custom-built Microsoft Holographic Processing Unit (HPU 1.0)	<b>What's in the box</b>	HoloLens Development Edition  Clicker  Carrying case  Charger and cable  Microfiber cloth  Nose pads  Overhead strap
<b>Memory</b>	2GB RAM	<b>OS and Apps</b>	Windows 10  Calibration  Holograms  Learn Gestures  Settings  Windows Feedback  Windows Store  Microsoft Edge  Photos
<b>Storage</b>	64GB (flash memory)	<b>Hardware / Software Requirements</b>	Windows 10 PC  Visual Studio 2015  Unity
<b>Power</b>	Battery Life  2-3 hours of active use  Up to 2 weeks on standby mode  Fully functional when charging  Passively cooled (no fans)  Battery status LED nodes (battery level and power/standby mode settings)		
<b>Security</b>	Windows 10 software updates  Additional security and device management available for Commercial Suite		

## Human understanding capabilities

The holograms you'll see with Microsoft HoloLens can appear lifelike, and can move, be shaped, and change according to interaction with you or the physical environment in which they are visible. Interact with holograms using the navigation commands below:

<b>Spatial sound</b>	Allows the user to hear binaural audio which can simulate spatial effects, meaning the user, virtually can perceive, and locate a sound, as though it is coming from a virtual pinpoint or location.
	Learn more: <a href="https://www.youtube.com/watch?v=aB3TDjYklmo">https://www.youtube.com/watch?v=aB3TDjYklmo</a>
<b>Gaze tracking</b>	Allows the user to bring application focus to whatever the user is perceiving to navigate and explore, the technology can tell exactly what and where to show the images for each pupil to generate stereoscopic 3D illusions.
	Learn more: <a href="https://www.youtube.com/watch?v=zCPiZlWdVws">https://www.youtube.com/watch?v=zCPiZlWdVws</a>
<b>Gesture input</b>	Allows the user to use the "bloom" gesture to pull up a UI navigation menu screen (similar to a Windows key on a Windows keyboard, this is your "home" button) Use the air tap gesture to select menu commands (similar to clicking an imaginary computer mouse)
	Learn more: <a href="https://www.youtube.com/watch?v=kwn9Lh0E_vU">https://www.youtube.com/watch?v=kwn9Lh0E_vU</a>
<b>Voice support</b>	Allows the user to use voice commands (similar to asking Cortana, Siri, Google a question) Allows developers to use the Text to Speech capability (i.e. speech recognition) to create voice inputs for apps they are creating in Unity.
	Learn more: <a href="https://www.youtube.com/watch?v=eHMKOpNUtR8">https://www.youtube.com/watch?v=eHMKOpNUtR8</a>

	Commercial Suite	Development Edition
HoloLens device and clicker	Included	Included
App dev support: forums/community	Included	Included
1 year OEM warranty	Included	-
Enterprise features		-
Kiosk mode	Included	-
Mobile Device Management	Included	-
Identity with PIN unlock	Included	-
Windows Update for Business	Included	-
Data security	Included	-
Work/remote access	Included	-
Windows Store for Business	Included	-
Devices available	US/Canada, Australia, France, Germany, Ireland, Puerto Rico, New Zealand, United Kingdom	US/Canada, Australia, France, Germany, Ireland, Puerto Rico, New Zealand, United Kingdom
Supported languages	US - English only	US - English only
Purchase at Microsoft Store (hololens.com)	Online	Online
Sales channel	A minimum of 5 units; Order handled by a Microsoft account representative	-