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Spectar™ 2.0 with HoloLens 2

HoloLens 2 Technical Specs

Microsoft HoloLens 2 is an untethered holographic computer. It refines the holographic computing journey started by HoloLens (1st gen) to provide a more comfortable and immersive experience paired with more options for collaborating in mixed reality.

Display

Optics	See-through holographic lenses (waveguides)
Holographic resolution	2k 3:2 light engines
Holographic density	>2.5k radiants (light points per radian)
Eye-based rendering	Display optimization for 3D eye position

Sensors

Head tracking	4 visible light cameras
Eye tracking	2 Infrared (IR) cameras
Depth	1-MP Time-of-Flight depth sensor
Inertial measurement unit (IMU)	Accelerometer, gyroscope, magnetometer
Camera	8-MP stills, 1080p30 video

Audio and speech

Microphone array	5 channels
Speakers	Built-in spatial sound

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Compute and connectivity

System on chip	Qualcomm Snapdragon 850 Compute Platform details
Holographic processing unit	Second-generation custom-built holographic processing unit
Memory	4-GB LPDDR4x system DRAM
Storage	64-GB UFS 2.1
WiFi	802.11ac 2x2
Bluetooth	5.0
USB	USB Type-C

Power

Battery Life	2-3 hours of active use. Up to 2 weeks of standby time.
Battery technology	Lithium batteries
Charging behavior	Fully functional when charging
Cooling type	Passively cooled (no fans)
Power draw	In order to maintain/advance Internal Battery Charge Percentage while the device is on, it must be connected minimum to a 15W charger.

Fit

Sizing	Single size with adjustable band. Fits over eyeglasses
Weight	566 grams

Human understanding

Hand tracking	Two-handed fully articulated model, direct manipulation
Eye tracking	Real-time tracking
Voice	Command and control on-device; Cortana natural language with internet connectivity

Environment understanding

Six Degrees of Freedom (6DoF) tracking	World-scale positional tracking
Spatial mapping	Real-time environment mesh
Mixed reality capture	Mixed hologram and physical environment photos and videos

Safety

- Product Safety
- Product Safety Warnings and Instructions
- Eye safety: HoloLens 2 has been tested and conforms to the basic impact protection requirements of ANSI Z87.1, CSA Z94.3 and EN 166.
- SAR Information

Regulatory information

HoloLens Regulatory: Includes information on temperature, disposal, radio and TV interference, and more.

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Spectar™ 2.0 Technical Features

Spectar is a cloud and software platform that converts BIM files from existing workflows (Revit, AutoCAD, Navis), stores and delivers them to a HoloLens application that enables field teams to see the models at 1:1 scale on the job site. Spectar 2.0 is built to fully leverage the HoloLens 2 hardware, with improved computing, powerful features and tools, and superior user experience.

Spectar™ Portal

Single Sign On (SSO)

Same login across all Spectar products and tools

Adjustable user-specific permission levels

Cloud-Based

Simple Dropbox-like cloud-based portal

Enables the latest uploaded BIM files to be viewed on site instantly with Spectar and the HoloLens

Flexible content organization and management according to project needs

Model upload version control

File storage and shared access for floor plans, source models, media, and zip files

Integrated Payment

Enables account administrators to easily manage paid subscription

Spectar™ Cloud

Model Transformation and Storage

Model transformation in the cloud with no impact to a user's computer processing resources

Real time updates and access to uploaded files

Processing server auto-scaling for faster uploads with greater scalability and fewer processing or download errors

Secure isolated storage for each customer to mitigate the risks of "cross- contamination"

Spectar™ HoloLens App

Dynamic Content Loading

Spectar's proprietary tiling feature enables larger models to be loaded onsite without having to re-download and reposition every zone separately

Shared project coordinates for simple HoloTarget management

Model Position

Quickly position, rotate, and fine tune the model for a full level to real world on all three axes in under a minute, without the need for QR codes or changes to the construction environment.

Independent, user-controlled model positioning accuracy based on user needs

Repositioning Anchors

Consistent and accurate on-the-go model placement, giving field workers the ability to reposition with digital anchors on the fly

Offline Functionality

Download the model quickly in areas of high bandwidth, and use onsite with no need for Wi-Fi*

**Network connection still required to login for a session and download new content.*

444 Flower St. Los Angeles, CA 90071 | Phone: (310) 622-4594 | Toll-Free: 1 (888) 850-0966 | **sales@spectar.io**