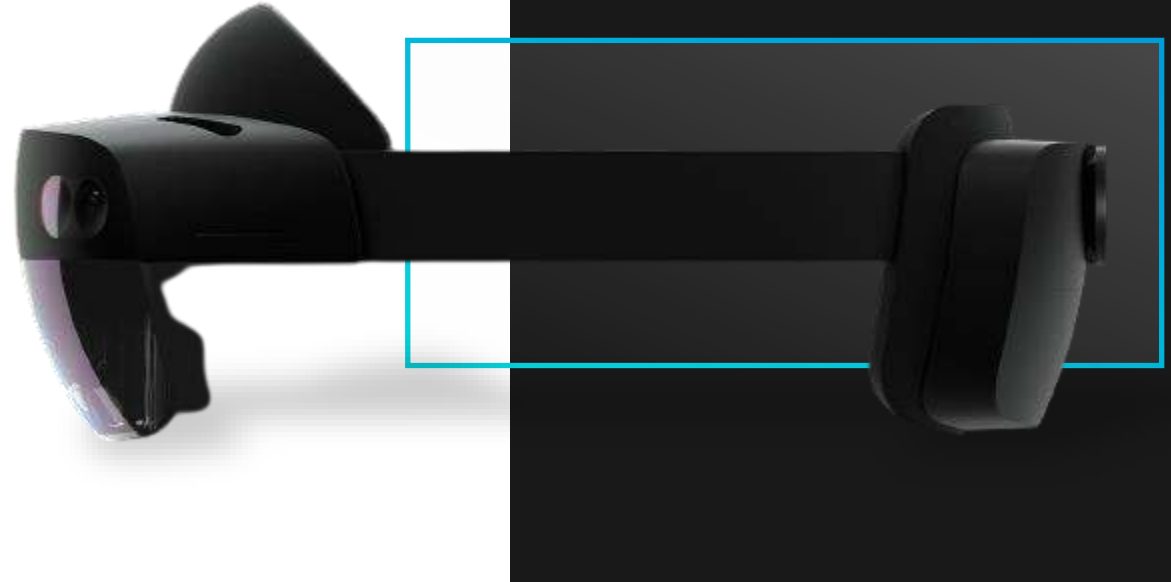




The HoloLens 2 & Use Cases

Data Sheet

[See More](#)



Display

Optics See-through holographic lenses (waveguides)

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 IR cameras

Depth 1-MP time-of-flight (ToF) depth sensor

IMU Accelerometer, gyroscope, magnetometer

Camera 8-MP stills, 1080p30 video



Audio and speech

Microphone array	5 channels
Speakers	Built-in spatial sound

Environment understanding

6DoF tracking	World-scale positional tracking
Spatial Mapping	Real-time environment mesh
Mixed Reality Capture	Mixed hologram and physical environment photos and videos

Human understanding

Hand tracking	Two-handed fully articulated model, direct manipulation
Eye tracking	Real-time tracking
Voice	Command and control on-device; natural language with internet connectivity
Windows Hello	Enterprise-grade security with iris recognition

Power

Battery life	2–3 hours of active use
Charging	USB-PD for fast charging
Cooling	Passive (no fans)
Battier	lithium batteries

Compute and connectivity

HPU	Second-generation custom-built holographic processing unit
Memory	4-GB LPDDR4x system DRAM
Storage	64-GB UFS 2.1
Wi-F	Wi-Fi: Wi-Fi 5 (802.11ac 2x2)
Bluetooth	5
USB	USB Type-C
SoC	Qualcomm Snapdragon 850 Compute Platform



Fit

Single size

Fits over glasses

Weight 566g

Software

Windows Holographic Operating System

Microsoft Edge

Dynamics 365 Remote Assist

Dynamics 365 Guides

3D Viewer

Use Cases

Manufacturing

From improved onboarding and upskilling of employees to increased operational efficiency to reduced errors and waste, mixed reality is transforming manufacturing

Retail

In the retail of the future, your customers will be able to view and interact with any item in the product catalog. Offer unparalleled customer experiences and save costs at the same time. Design product presentations and change the layout and size of the premises or your product range in real time and true to scale..

Healthcare

Mixed reality is empowering providers, payors, and health science experts to reimagine healthcare by accelerating diagnoses and reducing time-to-care, enabling personalization and improving outcomes.

Education

Mixed reality is improving learning outcomes and transforming education with new affordable tools and devices that increase student engagement and expand student reach.

Sales & Marketing

Bring sales and marketing to a new level with outstanding product presentations. Trigger customer emotions and spark the fire for products with AR.

Development And Design

Rapid prototyping in AR will make collaboration and meetings interactive and visual. Also, see construction faults faster and speed up time to market.

Smart Building

Starting from the planning phase till the fully functional building. There are plenty of use cases boosting productivity and ROI.

Manufacturing



Remote Support

If your manufacturing line is down or your product isn't working as designed, equip your field service team with HoloLens to reduce downtime and ensure a first-time fix.

Empower your field service agents with critical documentation and service maintenance data while they stay heads up and hands free. Connect your front-line technicians with experts anywhere in the world for real-time remote assistance.



Digital Knowledge Management

While automation has increased the efficiency of your machines, today's manufacturing processes still rely heavily on human labor. Increase worker productivity with mixed reality visual guidance, including checklists and step-by-step instructions. Eliminate errors and improve product quality by arming workers with real-time insights and a complete picture of the task at hand—ensuring every employee can be your best employee.



Onboarding and upskilling

Agility in your manufacturing capabilities is a key to success in today's ever-changing world. But your operations can only be as agile as your workforce. Upskill veteran workers more often and onboard new employees more quickly with simulated on-the-job training. Ensure valuable knowledge doesn't retire with your employees. Use mixed reality to close skills gaps and virtually extend that knowledge across your workforce.



Development and Design

Digital Engineering and prototyping

Visualize CAD data in 3 D. Instead of discussing and presenting new designs and developments in 2D, 3 D AR Object make meetings more interactive. Possible construction faults are discovered faster and the time to market experiences a real boost.

AR Quality Assurance

Scan real world objects with AR glasses and see if everything is correctly in place. With the help of AR, reference and actual values are compared. Are there deviances? AR will tell you in seconds.

Factory Planning & AR Measuring

Plan and measure factories, assemblies and machines. Consider visualizing all pipes in AR before putting them into place. The advantages: See directly whether there is space enough form an ergonomic point of view, whether machines will fit, and also if maintenance can do their checks.

Education



Drive better learning outcomes

With mixed reality educators can simplify complex disciplines such as anatomy, molecular chemistry, architectural design

HoloLens has proven to be effective at improving knowledge retention, enabling students to learn in 3D and easily collaborate with other students and teachers to get the support they need.



Transform class time

Enhance the curriculum and the classroom experience via visual instruction & discussion aids.

Maximize learning time in the classroom by enabling students to visualize trainings and concepts in 3D.

Enable students to learn at their own pace inside and outside the classroom with HoloLens.



Empower every student

Deliver interactive learning experiences to students no matter their location or the devices they use

students to learn better and faster, equipping them with knowledge they can immediately apply.

Educators, parents, and communities can build personalized learning experiences for those who need it the most.

Marketing

- ▶ Create a unique emotional experience and demonstrate your product in AR at trade fairs and showrooms.
- ▶ Demonstrate your product in web conference session with the help of other mobile devices.

Pre-Sales

- ▶ Create a unique emotional experience and demonstrate your product in AR at trade fairs.
- ▶ Explain every details of your AR Product
- ▶ Take measurements and important object information in AR (check out the pics ... she is measuring the stairs.

Sales

- ▶ Give Product presentations in AR
- ▶ Upsell new product features in AR
- ▶ Remote Collaboration in AR

Sales & Marketing

After Sales:

- ▶ Add Information to your product in AR (eg. manuals)
- ▶ (<https://www.hyundainews.com/gallery/videos/10414>)
- ▶ In case of error – connect AR Items with Remote Support
- ▶ Connect your AR items with any order management systems (eg. spare part catalog)



Retail



Retails Stores

- ▶ Show products directly from the catalogue in AR
- ▶ Furnish Rooms in AR
- ▶ Customize Product presentation in AR according to the individual buyer needs
- ▶ Provide an unforgettable customers experience



E-commerce

- ▶ Reference from you web shop to an app, so that customer can visualize at home your products in AR

Shopping Center

- ▶ Provide indoor navigation in AR

Smart Building

Conceptions

- ▶ Visualize the entire building in AR
- ▶ Showcase infrastructure elements such as pipes, networking equipment, etc, and make changes before putting it into reality
- ▶ Showcase and equip rooms and buildings in AR

Enrich the building with information

- ▶ Provide visitor information in AR
- ▶ Provide indoor navigation in AR
- ▶ Provide user manuals for appliances, technical devices, etc.
- ▶ Provide materials (PDF, Videos, etc.) for building infrastructure

Remote Support

- ▶ Connect your infrastructure with suppliers, eg. heating technologies, and use remote support



Health



Empower care teams

Multidisciplinary care teams encompassing specialized clinicians, clinical staff and healthcare administrators often span multiple hospitals or locations, adding time, cost and complexity to patient care.

Enable care teams to collaborate remotely and conduct virtual patient consultations with real-time spatial information to accelerate diagnoses and reduce time-to-treatment.

Use mixed reality to superimpose 3D views of MRI images and CT scans to assist specialists and surgeons before and during surgery—improving precision and reducing the need for additional interventions.



Enhance the patient experience

Enable individualized treatment plans, accelerated clinical diagnoses, and improve outcomes with HoloLens 2 and mixed reality applications.

Empower doctors and clinicians to rapidly share imaging results, better contextualize physician-patient conversations, and drive more informed patient decision-making—improving quality of care and the patient experience.

Equip frontline healthcare workers to improve access and care delivery to aging and underserved populations with assisted care options.



Reimagine healthcare

Provide faster and better care at lower costs by deploying mixed reality before, during, and after procedures.

Enable innovative telehealth solutions to improve care coordination, expand provider access, and address skill shortages.

Leverage mixed reality to enable continuous learning and widespread knowledge sharing. Doctors, nurses, technicians can train and practice using simulated training,—ensuring the entire organization keeps pace with advances in science and technology.

The AR Stylus

Use Cases

The stylus AR is an intuitive device to interact with virtual content in AR

Quality Control

The Stylus enables a natural way of interaction. It comes along with new features like making notes and measuring gap dimensions. The user acceptance of AR increases as users have a better interaction experience.

Prototyping

Add important features such as marking, highlighting, picking and writing, which will be improving your AR experience.

Measurement

The Stylus is the perfect tool for measurement because of its high level of precision and intuitive usage. Measurement in Augmented Reality has a lot of advantages incl. the fast virtualization of real world objects in several industrial use case scenarios. The Stylus can also be used in robotics design and training.

The AR Stylus

Datasheet

Dimensions

Stylus: 145 x 16 x 22 mm (5,7x0,6x0,8 inch)
HMU: 160 x 46 x 44 mm (6,2 x 1,8 x 1,7 inch)
Mount: 182x110x12mm (71x4,3x0,4 inch)

Interface

Bluetooth4.0
Micro USB for charging

Tracking details

3 cameras for infrared-tracking.
Exchangeable tracking module
Active volume : 400x400x600mm
Accuracy: +-1mm

Power

Stylus Battery Life up to 7h
HMU
Battery Life up to 4h

Input/Output

Stylus2 buttons
Haptic feedback(vibration)
Status LED
HMU2 buttons
Status LED

What's in the box?

Stylus, Head-Mounted Unit (HMU). Carrying Case, USB charging cable, Booklet



The ISAR SDK: Remote Streaming of AR/VR apps

Got big AR and VR data and don't want to lose information and data?

- ▶ **Consider Remote Streaming and Outsource Computing Power to the (Private) Cloud**



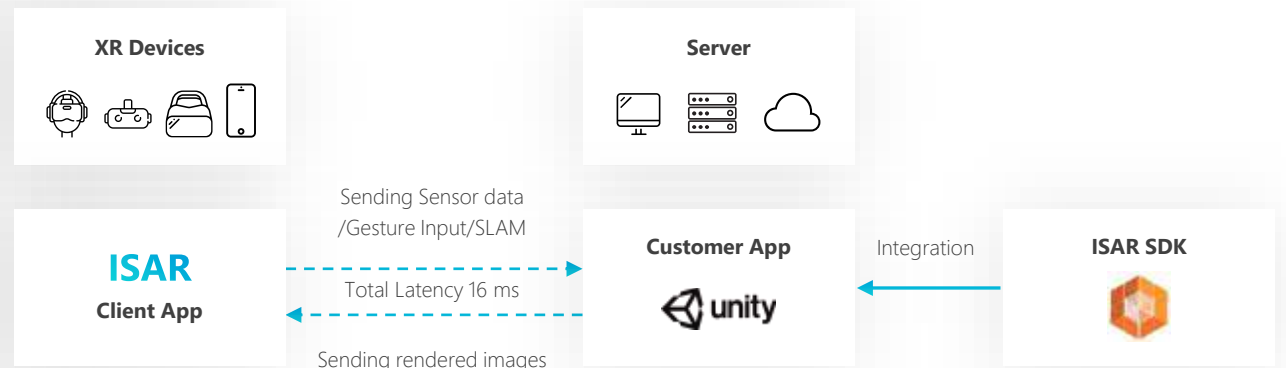
Benefits

- ▶ Unlimited Performance of any AR or VR application
- ▶ Cross Platform: Stream entire app from server structure to any mobile device
- ▶ High quality visualization of 3D data
- ▶ Simplify and reduce development time of XR applications (10 x faster development)
- ▶ Centralized management of applications via server
- ▶ Multiuser functionality



How Does It Work?

- ▶ The ISAR SDK is simply added to the XR application in Unity installed in the cloud or on premise.
- ▶ The entire XR application is streamed to a mobile device
- ▶ connection between the client app and the server App enables a real-time streaming of XR content.





Contact

Alexander Stöger



astoeger@alegerglobal.com



Tel.: +49 385 3937 8556

Mob.: +43 660 288 5576



www.alegerglobal.com