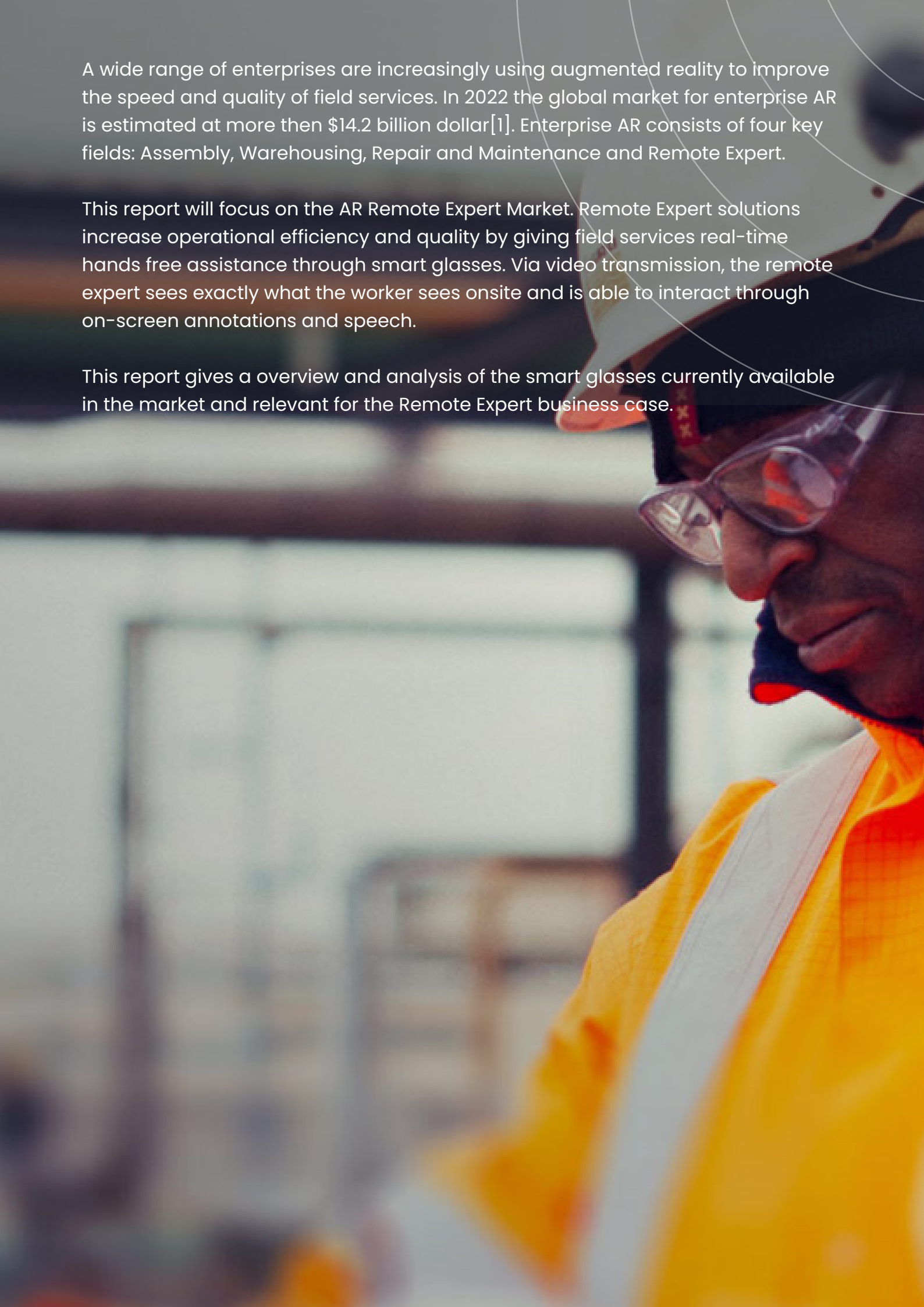


Remote Expert Smart glasses Industry benchmark



A wide range of enterprises are increasingly using augmented reality to improve the speed and quality of field services. In 2022 the global market for enterprise AR is estimated at more than \$14.2 billion dollar[1]. Enterprise AR consists of four key fields: Assembly, Warehousing, Repair and Maintenance and Remote Expert.

This report will focus on the AR Remote Expert Market. Remote Expert solutions increase operational efficiency and quality by giving field services real-time hands free assistance through smart glasses. Via video transmission, the remote expert sees exactly what the worker sees onsite and is able to interact through on-screen annotations and speech.

This report gives a overview and analysis of the smart glasses currently available in the market and relevant for the Remote Expert business case.

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1. Remote Expert Background

Background

AR Smart glass introduction

AR Smart glasses are defined as wearable computer glasses that add information to what the wearer sees [2]. In essence all AR smart glasses carry three components:

1. A camera to capture the environment.
2. A screen that can display digital information. This information can be projected in 2D and/or 3D (using markers).
3. A frame to keep it all together

The main benefit of a AR smart glasses compared to other remote support solutions via tablet or smartphone, is that the wearer of the smart glass has its hands-free to perform tasks. Further, the expert has the exact same point of view as the wearer of the AR smart glass, as the camera is integrated into the AR smart glass.

This report makes a analysis of the most relevant commercially available smart glasses in the market. Smart glasses that are not launched into the market yet, or are taken off the market at this point in time are excluded from the list. This report does not claim to have a complete overview all the smart glasses available, but has included the most relevant smart glasses for Enterprise usage.

Smart glass overview

Enterprise Focus

1. DAQRI
2. REALWEAR
3. VUZIX M300
4. VUZIX M300 XL
5. Vuzix M400
6. VUZIX Blade
7. Epson Moverio
8. Toshiba Dyna Edge
9. Microsoft HoloLens 2
10. Google Glass Enterprise Edition 2

Consumer

1. Microsoft HoloLens 1
2. Magic Leap
3. North AR

Background

Enterprise versus Consumer focus

The AR smart glass manufacturers can be divided in two core categories based on their target market, Enterprise or Consumer.

Consumer AR smart glass manufacturers focus on visual experience, available content and integration with the existing digital ecosystem. The consumer smart glass market is still a very niche market and growing at a slow pace. Soon, large technology giants, for example Apple, are expected to enter the market. Market expectations differ widely, but strong growth is expected.

The enterprise smart glass market is a more developed market with a estimation of around 20 Mio headset shipped by the end of 2020[3]. Enterprise smart glass manufacturers focus on specific enterprise use cases, durability and ease of use.

This report will focus on the Enterprise AR smart glass manufacturers

Enterprise Focus

1. Realwear HMT-1
2. VUZIX M300 XL
3. Vuzix M400
4. Vuzix Blade
5. Epson Moverio BT-300
6. Toshiba Dyna Edge
7. Microsoft Hololens 2
8. Google Glass Enterprise Edition 2
9. Daqri (fold)

Consumer

1. Microsoft Hololens 1
2. Magic Leap
3. North AR

Background

Monocular versus Binocular

Monocular AR smart glasses provide a single display for viewing the AR content. Usually through a small display element in front of one eye [4]. Most enterprise AR headsets are monocular. Binocular smart glasses provides a display for each eye, creating a stereoscopic view. Example of a binocular AR headset is the Magic Leap.

The main advantage of monocular headsets is that they are less obtrusive than binocular smart glasses. Furthermore, the cost of monocular headset are in general lower.

Binocular headsets have a more natural feel for the user as they can use both eyes to see the augmented reality content. This allows for a natural depth perception. Further, most binocular smart glasses have integrated depth cameras, allowing 3D scanning and 3D object viewing.

Monocular AR smart glasses are mostly used for the Remote Expert business case, as they provide sufficient functionality and are more cost efficient compared to binocular smart glasses

Monocular

1. Realwear HMT-1
2. Vuzix M400
3. VUZIX M300 XL
4. Vuzix Blade
5. Toshiba Dyna Edge
6. North AR


Binocular

1. Daqri (fold)
2. Epson Moverio BT-300
3. Microsoft Hololens 1
4. Microsoft Hololens 2
5. Magic Leap
6. Google Glass Enterprise Edition 2

Background

History of AR smart glasses

The AR smart glass market is maturing fast. In this maturing process new companies have emerged and others have failed. One of the first AR smart glasses in the market was the Google Glass, who inspired a new generation of AR smart glass manufacturers.

- 
- 2009
 - Google starts Google Glass Project
 - 2010
 - Military contractor Vuzix launches first AR headset: STAR 1200
 - Daqri is founded
 - 2011
 - Magic Leap is founded
 - 2012
 - 2013
 - Google starts selling Google Glass
 - Meta is founded out of kickstarter campaign
 - 2014
 - Daqri unveils Smart Helmet
 - Magic Leap announced second funding round of \$542 Mio
 - 2015
 - Military contractor Osterhout Design Group (ODG) launch the R-7 smart
 - 2016
 - Microsoft launches Microsoft HoloLens development kit
 - Realwear is founded and launches Realwear HMT-1
 - 2017
 - DAQRI launches smart glass into the market
 - Google launches Google Glass Enterprises
 - Vuzix launches Vuzix M300 & Vuzix Blade
 - ODG launches R-8 and R-9
 - Meta launches Meta 2
 - Epson launches Epson Moverio BT-300
 - 2018
 - Magic Leap launches the Magic Leap One
 - Realwear receives a series A funding of \$19.3 Mio
 - ODG & Meta fold
 - 2019
 - Realwear receives series B of \$80 Mio
 - Daqri sells of hardware division and prepares for shutdown
 - Microsoft announces HoloLens 2
 - 2020
 - Microsoft HoloLens 2 launched
 - Vuzix M400 launched

2. Remote Expert Smart glasses (for enterprises)

Enterprise Focus

1. Vuzix Blade
2. Vuzix M300XL
3. Vuzix M400
4. Toshiba Dyna Edge
5. Epson Moverio BT-300
6. Realwear HMT-1
7. Microsoft Hololens 2
8. Google Glass Enterprise Edition 2
9. Daqri

Vuzix Blade



The Vuzix Blade is an AR headset that is mostly used for remote support. With the Vuzix Blade you can easily share what you are seeing. This is especially useful during inspections, reparations and maintenance. The Vuzix Blade is one of the most comfortable AR headsets since you wear it like normal glasses. You do need a smartphone connected to the smart glass to use it.

Product specifications

AR View:	Monocular	Memory:	1GB System RAM / 8 GB internal storage
FOV(horizontal):	19 degree	Battery:	470 mAh internal battery
Weight:	85 Gram	Battery life:	4-8 Hours
Build-in Audio:	No (Earphone jack)	Controls:	Touch pad
Microphone:	Yes (Noise canceling)	Operating system:	Android
Connectivity:	WiFi, Bluetooth	Chip:	Quad Core ARM CPU
Charging:	Micro USB		
Camera:	8MP with 720P video		

Commercial Details

Price:	€ 760
Warranty:	1 Year
Industry and safety	
Compliance:	PPE

Hardware

Build-in display	✓
Build-in audio	✗
Standalone	✗

Pros & Cons

- ✓ Connection with Android and iOS
- ✓ Lowest price in its category
- ✓ 8 MP camera
- ✗ Needs connection with smartphone
- ✗ Unable to move display
- ✗ Fragile

Expert opinion

General

The Vuzix blade looks and feels like a normal glass. A smartphone is needed but this also brings advantages. For example, it is easy to adjust settings of the device with a smartphone. The size and weight of the device make it comfortable to wear. Because it is fragile, its not optimal for industrial environments.

Ergonomics

The Vuzix Blade comes closes to a normal glass, the device can be worn comfortable for a very long time.

Vuzix M300 XL



The Vuzix M300 XL is an AR headset with an onboard processor and a monocular display. The headset is mostly used for remote support and during inspections and reparations. With the camera on the headset you can easily share your surroundings with an expert and immediately receive feedback. This allows for a better work process and more effective and efficient practices.

Product specifications

AR View:	Monocular	Memory:	2GB System RAM / 64 GB internal storage
FOV(horizontal):	16.7 degree	Battery:	160 mAh internal battery 860 mAh external battery (swappable)
Weight:	150 Gram	Battery life:	4-8 hours
Build-in Audio:	Yes (Ear speaker)	Controls:	Touch pad, navigation button, voice recognition
Microphone:	Yes (Noise canceling)	Operating system:	Android
Connectivity:	WiFi, Bluetooth, GPS	Chip:	Dual Core Intel Atom CPU
Charging:	Micro USB		
Camera:	10MP with 1080P video		

Commercial Details

Price:	€ 950
Warranty:	1 Year
Industry and safety Compliance:	PPE

Hardware

Build-in display	✓
Build-in audio	✓
Standalone	✓

Pros & Cons

- ✓ 10 MP camera
- ✓ Android operating system
- ✓ Relatively cheap
- ✓ Swappable batteries
- Small view
- Fragile

Expert opinion

General

This Vuzix model doesn't require an extra device. Its battery is swappable and the device is still pretty light. It has three ways to navigate (touch pad, navigation buttons and voice recognition) which makes it easy to use. Biggest disadvantage is that its fragile. Therefore not optimal for industrial environments.

Ergonomics

The device is relatively light and will therefore fit comfortable for several hours. Most of the weight will press down on your ears, this can get uncomfortable after several hours.

Vuzix M400



The Vuzix M400 is the successor of the Vuzix M300XL. Setting itself apart with a IP67 rating (water and dust proof) and a very robust frame. The Vuzix M400 has an outstanding camera. Providing 4K video and 12.8 MP camera shots. This allows for easier error spotting/diagnostics, therefore, enabling a higher level of work efficiency.

Product specifications

AR View:	Monocular	Display Resolution:	640x360
Controls:	Touchpad, headmotion, Voice	Operating system:	Android 8.1
Built-in Audio:	Yes (Ear speaker)	Input:	USB-C
Microphone:	Yes (Noise canceling)	Field of view:	16.8 degrees
Connectivity:	Wifi, Bluetooth, USB, GPS	CPU:	8 Core 2.52Ghz Qualcomm XRI
Battery:	1000 mAh internal battery	Weight:	180 grams
Charging:	USB-C	Warranty:	1 Year
Camera	12MP and 4K 30FPS video	Certifications:	IP 67, water, dust and drop resistant
RAM:	6GB		

Commercial Details

Price:	€ 1.846
Warranty:	1 Year
Industry and safety	
Compliance:	PPE, IP67

Hardware

Build-in display	✓
Build-in audio	✓
Standalone	✓

Pros & Cons

- ✓ 4K Camera
- ✓ Fall, water and dust resistant
- ✓ Swappable battery
- Small view

Expert opinion

General

Ergonomics

Toshiba DynaEdge



The Toshiba DynaEdge is a smart glass tethered to a PC pocket pack. Toshiba cooperated with Vuzix on the smart glass to ensure optical quality. The PC pocket pack makes it stand out as it is the only smart glass running on Windows. Furthermore, it's the lightest weight smart glass, making it very comfortable to wear.

Product specifications

AR View:	Monocular	Memory:	4GB RAM / 512GB internal memory
FOV(horizontal):	17 degree	Battery:	5800 mAh internal battery
Weight:	50 Gram	Battery life:	5-6 hours
Build-in Audio:	No (earphone jack)	Controls:	Touch pad, Voice
Microphone:	Yes (Noise canceling)	Operating system:	Windows 10 Pro
Connectivity:	WiFi, Bluetooth	Chip:	Intel Pentium processor 4405U
Charging:	Micro USB		
Camera:	5MP, 1080P video		

Commercial Details

Price:	€ 1.200
Warranty:	1 Year
Industry and safety	
Compliance:	Directive 2014/53/EU.

Hardware

Build-in display	✓
Build-in audio	✗
Standalone	✗

Pros & Cons

- ✓ Windows based
- ✓ Can handle large amounts of data
- ✓ Light weight
- ✗ External microcomputer
- ✗ Fragile

Expert opinion

General

This device comes with a portable computer and possesses high quality features like: high quality display (monocular), high quality camera. The device is suited for processing large amounts of data. However, it's very fragile to use and therefore limited in its usage.

Ergonomics

Due to the computer the frame of the device is very light, it is therefore very comfortable to wear, also for a long time.

Epson Moverio BT-300



The Epson Moverio BT-300 is the third generation of the company's smart eyeglass lineup. It comes with a new lightweight form factor - 20% lighter than the BT-200 range - that has a 'Google' feel and is equipped with an OLED display, which projects an image in front of the eyes. Its standout by being the lowest priced binocular headset in the market and makes use of a controller.

Product specifications

AR View:	Binocular	Memory:	2GB RAM / 16 GB internal memory
FOV(horizontal):	23 degree	Battery:	2950 mAh internal battery
Weight:	69 Gram	Battery life:	5-6 hours
Build-in Audio:	No (Earphone jack)	Controls:	Controller
Microphone:	No (Earphone jack)	Operating system:	Android 5.1
Connectivity:	WiFi, Bluetooth, GPS	Chip:	Intel® Atom™ x5, 1.44GHz Quad Core
Charging:	Micro USB		
Camera:	5 MP, 1080P video		

Commercial Details

Price:	€ 669
Warranty:	1 Year
Industry and safety	
:	-

Hardware

Build-in display	✓
Build-in audio	✗
Standalone	✓

Pros & Cons

- ✓ Low Pricing
- ✓ Light weight and easy to wear
- ✗ Fragile
- ✗ AR hard to see

Expert opinion

General

The Epson Moverio BT-300 is a low priced headset that does the job. The video streaming is of average quality and the battery life of 6 hours is sufficient. The controller and the fact that its very fragile make it difficult to apply in industrial environments

Ergonomics

Lightweight device that is easy to wear. Still feels comfortable after several hours. The controller is a bit unhandy in operations

Realwear HMT-1



The Realwear HMT-1 is an AR smart glass specifically designed for heavy industrial workers who need to be hands free while contacting their coworkers. The headset works with a voice recognition system which can be used for remote support on any location. The headset has been created to withstand frigid zones as well as the hottest environments. The Realwear also has a special edition (different price) that is ATEX Zone 1 & IECEx Zone 1 and CSA C1-D1 certified, so safe to use even in potentially explosive areas.

Product specifications

AR View:	Monocular	Memory:	2GB RAM / 16GB internal memory
FOV(horizontal):	20 degree	Battery:	3250 mAh internal battery
Weight:	380 Gram	Battery life:	5-6 hours
Build-in Audio:	Yes (Ear speaker)	Controls:	Voice, Gaze
Microphone:	Yes (Noise canceling)	Operating system:	Android 6.0.1 + WearHF™
Connectivity:	WiFi, Bluetooth	Chip:	2.0 GHz 8-core Qualcomm® Snapdragon™ 625
Charging:	USB C		
Camera:	16 MP, 1080P video		

Commercial Details

Price:	€1.995
Warranty:	1 Year
Industry and safety	
Compliance:	CSA C1-D1, ATEX & IECEx Zone 1 (optional), PPE support, IP66 (water and dust proof)

Hardware

Build-in display	✓
Build-in audio	✓
Standalone	✓

Pros & Cons

- ✓ Super robust
- ✓ High end camera
- ✓ Easy to wear with safety helmet
- Voice commands can be forgotten

Expert opinion

General

The Realwear HMT-1 is especially developed for industrial usage. It is very robust and is IP66 rated (water and dust proof). Its speech recognition is one of the best in the world, which allows you to operate handsfree. However, remembering the right commands might sometimes give problems.

Ergonomics

Suited for use in combination with safety helmets and safety glasses. Headband is adjustable and device is comfortable to wear for several hours.

Microsoft HoloLens 2



The HoloLens 2 offers an untethered immersive mixed reality experience and is ideal for Remote expertise and concepting in the business market

The system is made to operate with hand gestures, you do not need separate controllers. For example, you can grab objects with simple squeezes and scroll through options with a wave. This makes it easier to perform other actions such as factory work or equipment repairs. You can also work with voice control that allows you to work with both hands in a production environment.

Product specifications

AR View:	Binocular	Chip:	Qualcomm Snapdragon 850
Controls:	Voice recognition, Hand gestures, Eye tracking, Head motion	Field of view:	52 Degrees
Built-in Audio:	Yes	Resolution:	2048 x 1080 (per eye)
Microphone:	Yes	Camera:	8MP & 1080p 30fps
Connectivity:	WiFi, Bluetooth, GPS	Memory:	63 GB
Battery:	N/A	Certification:	EN66
Charging:	USB-C	Warranty:	1 Year
Operating system:	Microsoft Holographic OS		

Pros & Cons

- ✓ Built for remote support
- ✓ Excellent eye tracking
- ✓ Spatial mapping
- ✗ No IP rating

Expert opinion

General

Ergonomics

Not commercially available anymore

Daqri



The Daqri is an high-end AR smart glass that has been specifically created for industrial use. The headset can be used for different purposes as it has various cameras. It has one that scans the depth of spaces. This allows the headset to place 3D models in a room which could be of use during instructions and training. The Daqri works together with the Worksense platform that allows for immediate work process improvement.

Product specifications

AR View:	Binocular	Memory:	2GB RAM, 64GB Internal memory
FOV(horizontal):	39 degree	Battery:	5800 mAh internal battery
Weight:	335 Gram	Battery life:	4 hours
Build-in Audio:	No (earphone jack)	Controls:	Head motion
Microphone:	Yes (Noise canceling)	Operating system:	DAQRI VOS
Connectivity:	WiFi, Bluetooth	Chip:	6th Generation Intel Core m7
Charging:	USB C		
Camera:	10MP, 1080P video		

Commercial Details

Price:	€ 6.000* per year (Inc software)
Warranty:	1 Year
Industry and safety	
Compliance:	IEC 60950-1, ANSI/ISEA Z87.1, EN166 IS, PPE support

Hardware

Build-in display	✓
Build-in audio	✗
Standalone	✗

Pros & Cons

- ✓ Access to Worksense platform
- ✓ Hands-free control
- ✓ Stereoscopic AR content
- ✓ Multi-purpose
- ✗ External microcomputer
- ✗ Obligated Worksense license
- ✗ High price

Expert opinion

General

One of the most advanced Smart Glasses on the market. The device is binocular, has a depth camera and comes with its own portable computer. This makes the DAQRI suited for the most advanced applications for AR glasses.

Ergonomics

Relatively comfortable for its size, suited for comfortable accessories, head size may influence fit, gets heavy for user when glass is used for a longer time

Not commercially available



Google Glass 1 & 2


In 2012 Google launched the Google Glass, which it discontinued in 2015. In May 2019 Google announced the Google Glass Enterprise Edition 2. Currently only selling on request.

Specifications

AR View:	Binocular	Memory:	?
FOV(horizontal):	?	Battery:	820mAh
Weight:	46 gram	Battery life:	?
Build-in Audio:	Yes	Controls:	?
Microphone:	Yes	Operating system:	Android Oreo
Connectivity:	Wifi, Bluetooth	Chip:	Qualcomm Snapdragon XR1
Charging:	USB C		
Camera:	8MP		

Commercial Details

Pre order price:	\$999
Countries selling:	Only on special request



3. Remote Expert Smart glass comparison

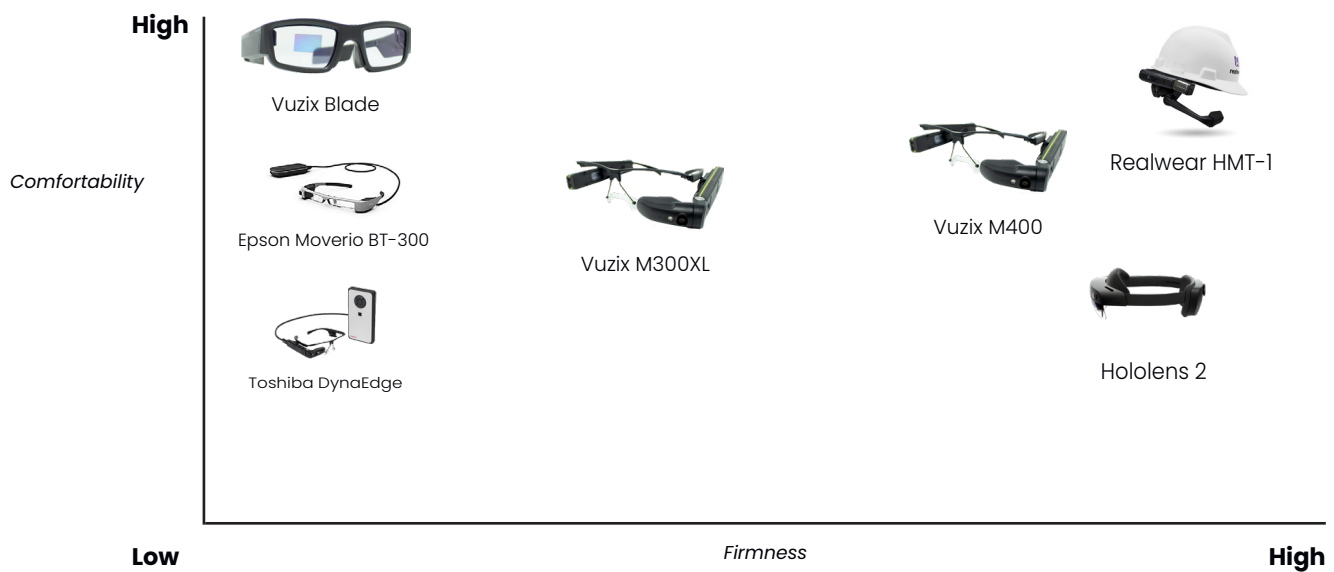
Comparison

	Vuzix Blade	Vuzix M300 XL	Vuzix M400	Realwear HMT - 1	Microsoft Hololens 2	Toshiba Dyna Edge	Epson Moverio BT-300
AR View	Monocular	Monocular	Monocular	Monocular	Binocular	Monocular	Binocular
FOV	19 degree	16.7 degree	16.8 Degree	20 Degree	43 degree	17 Degree	23 Degree
Weight	85 Gram	150 Gram	180 Gram	380 Gram	566 Gram	50 gram	69 Gram
Build-in Audio	No	Yes	Yes	Yes	Yes	No	No
Microphone	Yes	Yes	Yes	Yes	Yes	Yes	No
Connectivity	Wifi, Blue-tooth	Wifi, Bluetooth, GPS	Wifi, Blue-tooth, GPS	Wifi, Blue-tooth	Wifi, Bluetooth,	Wifi,Bluetooth	Wifi,Bluetooth, GPS
Charging	Micro USB	Micro USB	USB C	USB C	USB C	Micro USB	Micro USB
Camera	8MP, 720P video	10MP, 1080P video	12MP, 4K video	16MP, 1080P	8MP, 1080P video	5MP, 1080P video	5MP, 1080P video
Memory	1GB RAM, 8GB Internal storage	2GB RAM, 64 GB Internal storage	6 GB RAM, 64GB internal storage	2 GB RAM, 16GB internal storage	4G RAM, 64GB internal storage	4GB RAM, 512GB Internal storage	2GB Ram, 16 GB Internal storage
Battery	470 mAh	160 mAh internal + 860 Mah swappable battery	1000 mAh	3250 mAh		5800 mAh	2950 mAh
Battery life	4-8 hours	4-8 Hours	4 hours	5-6 Hours	2-3 Hours	5-6 hours	5-6 hours
Controls	Touch pad, Head motion	Touch pad, navigation buttons, voice recognition	ouch pad, navigation buttons, voice recognition	Voice, Gaze	Hand recognition, Voice	Touch pad, Voice	Controller
Operating System	Android	Android	Android	Android 6.0.1 + WearHF™	Windows Holographic Operating System	Windows 10 Pro	Android 5.1
Chip	Quad Core ARM CPU	Intel dual core ATOM	8 Core 2.52Ghz Qualcomm XR1	2.0 GHz 8-core Qualcomm® Snapdragon™ 625	Qualcomm Snapdragon 850	Intel Pentium processor 4405U	Intel® Atom™ x5, 1.44GHz Quad Core
Price	€760	€950	€1.846	€1.995	€4.250	€2.009	€669
Warranty	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year

Comparison

Firmness

Depending on the use case, the AR smart glass needs a certain firmness to withstand the environment. For example, industrial environments require a very high amount of firmness from the smart glass, while field service for consumers services require a much lower amount of firmness.



Comparison

Video Quality

For the remote expert business case, a important element is the possible video quality that can be streamed. The quality of video stream is influenced by the camera and chipset.

Three indicators are important to watch:

- Video Resolution

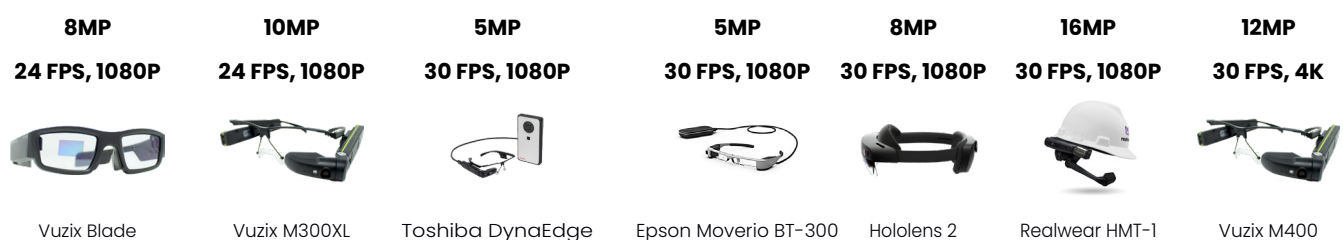
Video resolution are written down in horizontal pixels. Currently all AR smart glasses stream 1080P video (1920px x 1080 px). Together with FPS this is the most important indicator.

- FPS (Frames Per Second)

Frames Per Second (FPS) gives a indication of how smooth the video stream will be. 30FPS indicates a smooth video stream.

- MP (Megapixels)

Megapixels shows how many data the camera can capture. This does not mean that the video stream directly will be visibly better (as it cannot always process this extra data). However, it gives a indication that the sensor of the camera is more sensitive then lower resolution camera's.



Video stream / Camera quality

Comparison

Industrial Certificates

For AR Smart glasses there are multiple safety certificates that can be obtained.

The most important safety certificates are:

- PPE / EN Rating (<https://bit.ly/2oPjFsq>)

Can only be obtained for smart glasses who cover both eyes (for example, DAQRI & Vuzix Blade). smart glasses that only cover one eye will note their compatibility. In essence this means that you can use the smart glass in combination with a safety glass.

- IPX Rating (<https://bit.ly/2Svob9Q>)

The IPX rating indicates till what amount the smart glass is water/dust proof.

- Drop proof

Drop proof is not an official standard, but indicated by the manufacturer.

- ATEX (<https://bit.ly/2oLO4YM>)

ATEX is an abbreviation for "ATmosphere EXplosible". ATEX concerns the placing on the market of explosion-proof electrical and mechanical equipment, components and protective systems. Realwear is currently the only supplier in the market that can deliver ATEX certified smart glass. The standard version of the Realwear HMT-1 is not ATEX approved

	Vuzix Blade	Vuzix M300 XL	Vuzix M400	Realwear HMT - 1	Microsoft Hololens 2	Toshiba Dyna Edge	Epson Moverio BT-300
PPE(EN rating)	EN166/170	Compatible	Compatible	Compatible	EN66	Compatible	No
IP65/66/67/68 (Water & dust)	-	-	IP67	IP66	-	-	-
Drop proof	No	No	Yes (2 meter)	Yes (2 meter)	No	No	No
ATEX	No	No	No	Optional (Zone 1)	No	No	No

Comparison

Pricing

Low



Epson Moverio BT-300

- €669



Vuzix Blade

- €760

www.vr-expert.nl/ar-bril/vuzix-blade/



Toshiba DynaEdge

- €1.200

<https://vr-expert.nl/ar-bril/realwear-hmt-1/>



Vuzix M300XL

- €950



Vuzix M400

- €1.846

www.vr-expert.nl/ar-bril/vuzix-m400/



Realwear HMT-1

- €1.995

<https://vr-expert.nl/ar-bril/realwear-hmt-1/>

High



Hololens 2

- €4.250

History



Realwear HMT-1

2016: Company Founded	2017: Realwear HMT-1 Launched	2018: 20 Mio Series A Honeywell starts distribution	2019: 80 Mio Series B Shell & Kazakhstan purchase large amounts
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Daqri

2010: Company founded	2013: 15 Mio Series A	2016: Series B, Estimated 50 mio	2017: Launch smart glass	2019: Folds
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Toshiba DynaEdge

2018:
Launched in the market



Epson Moverio BT-300

2012: Epson launches Moverio Smart glasses	2014: Epson launches Moverio BT-200	2018: Epson launches Moverio BT-300
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Vuzix Blade

1997: Founded as military night vision company	2015: Intel purchases 30% stock (25Mio)	2019: Vuzix Blade launched
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Vuzix M300XL

2010: Vuzix launches Star 1200 AR glass	2018: Vuzix M300XL Launched	2020: Vuzix M400 launched
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Vuzix M400

2016: Microsoft sends out Hololens development edition	2017: Hololens 1 Commercial edition launched	2019: Hololens 2 announced	2020: Hololens 2 Launched
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HoloLens 2

Comparison



realwear

Foundation: 2016
HQ Location: Vancouver, Canada
Investors: Qualcomm Ventures,
Columbia Ventures,
JP Morgan Chase,
Bose Ventures,
Teradyne, Kopin
Number of employees: 101-250
Website: <https://www.realwear.com/>

EPSON®

Foundation: 1942
HQ Location: Suwa, Nagano, Japan
Owner: Seiko group
Number of employees: 67.605
Website: <https://epson.com/moverio-smart-glasses-augmented-reality-devices-headsets>

VUZIX®

Foundation: 1997
HQ Location: Rochester, New York, US.
Investors: Intel (NASDAQ stock exchange)
Number of employees: 45
Website: <https://www.vuzix.com/>

 **Microsoft**

Foundation: 1975
HQ Location: Redmond, Washington, U.S
Owner: Privat
Number of employees: 151.163
Website: <https://www.microsoft.com/en-us/hololens/buy>

TOSHIBA

Foundation: 1875
HQ Location: Minato, Tokio, Japan
Owner: -
Number of employees: 141.256
Website: <http://nl.dynabook.com/generic/dynaedge/>

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