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Moverio® BT-45CS AR Smart Glasses

A new reality for smart workforce collaboration.

Incredible image quality — integrated Si-OLED technology, proprietary optical engine and binocular see-through Full HD display with 34° field-of-view create a seamless viewing experience

Easy wearability — features adjustable, padded headband, plus helmet mounting options, to comfortably accommodate a variety of frontline work attire

Moverio intelligent controller — easy-to-use touchscreen interface and array of connectivity options help maximize convenience and usability

Robust, durable design — shock- and dust-resistant with military grade drop test compliance and IP52 rating

Headset flip-up function — allows users to secure a clear field of view for enhanced efficiency and safety; tinted and clear ANSI Z87.1 compatible shields can be attached to the headset for added eye protection

Advanced camera — centered 8MP auto-focus camera with optimized camera angle precisely captures wearer's point of view, allowing for a true "see-what-I-see" experience between wearer and remote expert

Wireless connectivity — dual band Wi-Fi® and Bluetooth® 5.0 support fast, stable connections and allow connectivity with wide range of peripherals to expand functionality

Dynamic usability — headset is equipped with 9-axis and ambient light sensors and controller is equipped with GPS sensors, which allow developers to unleash full potential of augmented reality via Moverio SDK

Built-in audio — integrated speaker and noise-canceling microphone enhance the quality of hands-free communication; can connect external audio devices via the mini audio jack

Convenient second camera — 13MP camera on the intelligent controller gives users the ability to take detailed, up-close photos for enhanced precision

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Optical

Display Device Type Si-OLED (Silicon-Organic Light-Emitting Diode)
Brightness 1000 cd/m2 (Max)
Contrast 5000,000:1
Transmittance Headset 40%, Shade 2%
Display Size 0.453 Inch Wide Panel
Aspect Ratio 16:9
Pixel Number 2,073,600 (1920 x 1080) RGB
Refresh Rate 60 Hz
Field of View 34° (diagonal)
Screen Size (Projected Distance) 120" at 5 m
Color Reproduction 24-bit color (16.77 million colors)

Sensors

Compass Yes
Gyroscope Yes
Accelerometer Yes
Ambient Light Sensor Yes
Data Transfer Method USB 2.0, Sensor Class HID1.11

Camera

Pixel Number 8 megapixel
Resolution and Frame Rate 8M (3264 x 2448) @ 30/10/1 fps, 4M (2560 x 1440) @ 30/20/2 fps, 1920 x 1080 @ 30/5 fps, 1600 x 1200 @ 30/5 fps, 1280 x 720 @ 60/30/10 fps, 640 x 480 @ 60/30 fps
Focus Type Auto
Exposure Type Auto
White Balance Type Auto
Depth of Field 110 mm to ∞
Field of View Horizontal 60° over, vertical 45° over
Data Transfer Method USB 2.0, Audio UAC, Video UVC 1.1
Supported Video Format H.264, MJPG, YUV
Supported Image Format JPEG

Video Input

USB Type-C
Video I/F DisplayPort Alternate Mode (DP Alt Mode)
Display Port Version 1.2

Video Input (continued)

Resolution 1080p/60 Hz
EDID Supported
HDCP Supported
Data Transfer Method USB 2.0, Device Class HID 1.11, Data Type Sensor Data, Headset API Control, Firmware Update

Audio

Audio 3.5 mm audio jack (CTIA standard earphones with microphone compatibility)
Audio Dual noise-reduction microphone, speaker
Audio Output 80 dBA, 92 dBA (when using Moverio Link/ Moverio Link Pro)

Other

Supported 3D Format Side-by-Side Format (using the Utility application software)
Firmware Update Supported Requires connecting to PC by USB Type-C
Supported OS for Host Device (USB Type Connection) Windows 10 (depends on supported status of USB Type-C on connected device), Android 8.0 or later

General

Temperature (Operating) 41 °F – 95 °F (5 °C – 35 °C)
Humidity (Operating) 20% – 80%
Temperature (Storage) 14 °F – 140 °F (-10 °C – 60 °C)
USB Power Delivery Rev. 3.0, Input (5.0 V) (1.5 A)
ANSI Shade ANSI Z87.1 safety-glass compliant
Dust-Resistant and Waterproof IP52 (except for USB port)
Drop Resistance MIL-STD-810H Drop Test Compliant

Dimensions/Weight

Headset Dimensions (W x D x H)
200 mm W x 290 mm D x 57 mm H, approx. 185 g (without shade, harness and IF box)
Headband Dimensions (W x D x H)
195 mm W x 279 mm D x 120 mm H, approx. 545 g (headset and headband with shade, top strap, harness and IF box), approx. 260 g (without top strap and clip)
Helmet Clip Dimensions (W x D x H)
36 mm W x 62 mm D x 54 mm H, approx. 85 g (without rubber band and clip)

Controller

Display Device Type IPS LCD
Brightness 330 cd/m2 (max.)
Contrast Up to 800:1
Display Size 2.95" panel
Pixels 409,920 (480 x 854) RGB
Refresh Rate 60 Hz
Color Reproduction 24-bit color (16.77 million colors)
OS Version Android 10
CPU Qualcomm SXR1130
Battery 3,400 mAh
Battery Type Lithium Polymer
Memory 4GB
Storage 64GB
External Memory micro SD (2GB max.), micro SDHC (32GB max.), micro SDXC (2TB max.)
Camera 13 megapixel, auto focus
Bluetooth Standard Ver. 5
USB 2.0
Supported File Formats
Movie MPEG-2, MPEG-4, H.263, H.264, H.265 (HEVC), VP8, VP9
Audio AAC, HE-AAC, AMR, FLAC, MP3 (8 to 320 kbps), CBR/VBR, Vorbis, WAV, Opus
User Interface Touch panel, Power Button, Volume Keys, Back Key, Home Key, History Key, Function Key
Audio Microphone, receiver, speaker (0.5 W), 3.5 mm audio jack (CTIA standard earphones with microphone compatibility)

What's in the Box

Moverio BT-45CS Smart Glasses, Headband, Helmet Clip, Dark Shade, Clear Shade, Carrying Case, Cleaning Cloth, Controller, USB Cable, SD Card Eject Pin, Start Guide
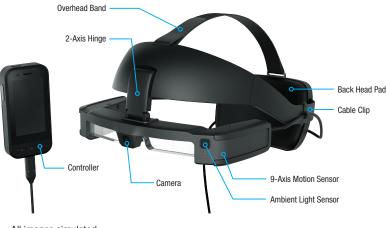
Eco Features

RoHS compliant
Recyclable product[1]
Epson America, Inc. is a SmartWay® Transport Partner[2]

Ordering Information

Moverio BT-45CS	V11H970120
Shade Pack	V12HA61W01
Head Pad Pack	V12HA91W01
Controller	V12HA24020

Overhead Band
2-Axis Hinge
Controller
Camera
Ambient Light Sensor
9-Axis Motion Sensor
Back Head Pad
Cable Clip

Front Head Pad (Replaceable)
Adjustment Dial
USB Type-C
IF Box
Audio Jack
Mic
Speaker

All images simulated.

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