

#### SPECIFICATION SHEET

# Smart Glasses

### Moverio<sup>®</sup> BT-35ES Smart Glasses

## Moverio smart glasses with intelligent controller for remote collaboration.

**HD image quality** — high-quality video streaming via Epson's advanced Si-OLED micro-projection technology, 720p resolution, high brightness and a 23° wide field of view

**Fully transparent, dual (binocular) displays** — see-through display, in your field of vision, projected into your surroundings; view high-quality content while still focusing on the task at hand

**Ideal for remote collaboration** — sophisticated 5 MP camera makes it seamless; get service and support via a hands-free, see-what-I-see experience over an active Internet connection

**Simple user interface** — intuitive Google-certified touch controller with the latest Android OS, a high-resolution camera, flashlight and sensors to facilitate remote collaboration

Durable, flexible design - fits a wide range of head sizes and over prescription eyewear

**Works both indoors and outdoors** — ambient light sensor detects the surrounding brightness and automatically adjusts the display brightness to the optimum settings; built-in flip-up shade

**Simple out-of-the-box experience** — preloaded with productivity apps such as Chrome, Gmail, Google Drive<sup>™</sup> and a QR code reader, plus Epson's pre-installed Moverio Link Pro app to control the Moverio smart glasses

**Built-in audio** — speaker, mini jack and noise-cancelling microphone in controller to support voice recognition capability

**Enhanced connectivity** — dual-band Wi-Fi and Bluetooth connectivity provide a fast, stable connection with a wide range of peripheral devices

**Convenient portability** — rechargeable battery in controller offers up to 5 hours of battery life<sup>1</sup>; 64GB builtin memory (expandable to 2TB)

**Safety-glass certified** — comes with an attachable ANSI Z87.1 safety-glass compliant shield to ensure maximum eye-protection



#### Moverio® BT-35ES Smart Glasses

#### Display

Headset

#### Display Device Type Si-OLED (Silicon-Organic Light-Emitting Diode)

Contrast 100,000:1 Transmittance Headset 40% Shade 2% Display Size 0.43"-wide panel (16:9) Pixel Number 921,600 pixels (1280 x 720 x RGB)

#### Refresh Rate 30Hz

Field of View 23 degrees (diagonal) Screen Size (Projected Distance) 40 inch at 2.5 m; 320" at 20 m

Color Reproduction 24-bit color (16.77 million colors) Controller Display Device Type IPS LCD Brightness 330 cd/m<sup>2</sup> (MAX) Contrast 800:1 Display Size 2.95"-wide panel

Pixel Number 409,920 pixels (480x854xRGB) Refresh Rate 60 Hz Color Reproduction 24-bit color (16.77 million colors) Platform

**OS Version** Android<sup>™</sup> 9

CPU and Memory

CPU Qualcomm SXR1130 Memory 4 GB Storage 64 GB External Memory microSD (2 GB maximum), microSDHC (32 GB maximum), microSDXC (2 TB maximum)

#### Sensors

GPS Yes, in Controller Compass Yes, 9-axis in both Headset and Controller Gyroscope Yes, 9-axis in both Headset and Controller Accelerometer Yes, 9-axis in both Headset and Controller Proximity Sensor Yes, in both Headset and Controller Proximity Sensor Yes, in Controller Data Transfer Method USB Protocol: USB 2.0 Device Class for Sensor: HID sensor Camera Pixels 5MP

Resolution and Frame Rate  $2592 \times 1944 (5M) @ 15 Hz, 1920 \times 1080 @ 30Hz/15Hz, 1280 \times 720 @ 60 Hz/30 Hz/15 Hz, 640 \times 480 @ 60Hz$ Focus Type Pan focus Focus Type Pan focus Focal Length 60 cm to  $\infty$ Data Transfer Method USB Protocol: USB 2.0 Device Class for Audio: UAC Device Class for Audio: UVC 1.1 Supported File Format: Motion JPEG

#### Connectivity

Wireless LAN IEEE 802.11 a/b/g/n/ac, 2x2 Dual Band Bluetooth

#### Version: 5.0

Profile: Bluetooth Classic (A2DP 1.3/AVRCP 1.3/HSP 1.2/HID 1.0/ PAN PANU/PAN NAP/OPP1.2.1/SPP), Bluetooth LE (SCPP/HOGP) **USB** 

Bottom Port: USB Type-C DP Alt, USB 2.0, USB 3.0 Side port: USB Type-C USB 2.0 Audio 3.5 mm audio jack (CTIA standard earphones with microphone compatible)

#### User Interface

Touch panel

**Operation Keys** Power button, Volume keys, BACK key, HOME key, History key, Function key

#### **Supported File Format**

Video 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

#### Video Input

USB Type-C Video I/F: DisplayPort Alternate Mode (DP Alt Mode) DisplayPort: Version 1.2 Resolution: 1920x1080@60Hz/59.94Hz, 1280x720@60Hz/59.94Hz, 1280x720@30Hz, 640x480@60Hz Audio Codec: LPCM (32 kHz, 44.1 kHz, 48 kHz) EDID: Supported HDCP: Version 1.3 HDMI Type A HDMI: Version 1.4 Resolution: 1920x1080@60Hz/59.94Hz, 1280x720@60Hz/59.94Hz, 1280x720@30Hz, 640x480@60Hz Audio Codec: LPCM (32 kHz, 44.1 kHz, 48 kHz) EDID: Supported **Data Transfer** USB Type-C

USB Protocol: USB 2.0 Data Type: Sensor data, Headset API control, firmware update

#### Sound Input / Output

Headset Audio Jack 3.5 mm, 4 pole mini jack (CTIA standard earphones

#### with microphone compatible) Supported Earphone

Play Frequency Band: 20 Hz-20 kHz (recommended)

Impedance: Over 16Ω Output (Maximum Voltage): Under 27 mV

Maximum input: 3.0 mW

Supported Mic

Impedance: 2.2 kΩ @ 1kHz

#### Directionality: Omnidirectional Controller

Audio Microphone, receiver, speaker (0.5 W), 3.5 mm audio jack (CTIA standard earphones with microphone compatible)

#### Other

Supported 3D Format Side by Side format (using the Utility application software)

Headset IF box LED Indicator Orange/Blue/White Headset IF box 05D Function No signal, Brightness Setting, Volume Setting, 2D/3D mode Setting, Auto Brightness Setting, Mode Setting

Firmware Update Supported (Requires connecting to PC by USB Type-C)

Supported the OS for host device (USB Type Connection) Windows10 (\* Depends on supported status of USB Type-C on connected device)

Global Navigation Satellite System GPS/GLONASS/Galileo/ QZSS/BDS

#### General

Operating 41 °F to 95 °F (5 °C to 35 °C) Humidity (Operating) 20% to 80% Temperature (Storage) 14 °F to 140 °F (-10 °C to 60 °C) Humidity (Storage, Unfrozen) Headset = 20% to 80% Controller = 10% to 90% **Power Supply Voltage I/F Unit** USB Micro-B: 5.0 V, 1.5A (DC input) USB Type-C: Current @ 1.5 A **Power Supply Voltage AC Adapter** Input: 100-240V AC +/- 10%, 50/60 Hz with micro USB cable Output: 5.0 V, 2 A Power Consumption Max. 6.5W (Standby 0.3W) Headset Dimensions (W x D x H) W193.5 mm x D176 mm x H30 mm (without shade) Controller Dimensions (W x D x H) W55 mm x D110 mm x H23 mm Headset Weight Approx, 4.2 oz (without shade) Interface Weight Approx. 1.6 oz (without Belt clip and Cable retainer) Controller Weight Approx. 6.5 oz Battery 3400mAh Battery Type lithium polymer

Water Proof IPx2 (except for USB port)

#### Language

**OSD** English **Language** EN/JA/FR/ES/PT/DE/IT/NL/ZHT/UK/DA/FI/NO/SV/CS/PL/ HU/TR/RU/AR/KK

#### **Developer Resources**

Developer Portal https://tech.moverio.epson.com/en/ Videos/Webinars www.youtube.com/moverio

#### Eco Features

RoHS compliant Recyclable product<sup>2</sup> Epson America, Inc. is a SmartWay<sup>®</sup> Transport Partner<sup>3</sup>

#### Ordering Information

Contact:

Moverio BT-35ES Smart Glasses Moverio BT-35E Temple Grip, Nose Pads, Neck Strap Combo Pack BT-35E Shade Unit Pack V11H935020AL

V12H884W01 V12H883W01

1 Battery life will vary depending on usage. 2 | For convenient and reasonable recycling options, visit www.epson.com/recycle 3 | SmartWay is an innovative partnership of the U.S. Environmental Protection Agency that reduces greenhouse gases and other air pollutants and improves fuel efficiency.

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