

Embargo until Thursday March 20, 8AM PST

Introducing Bigscreen Beyond 2 with breakthrough VR optics and eyetracking

After years of research & development and breakthroughs in optics, the next-generation Bigscreen Beyond is launching today with two new models, Beyond 2 and Beyond 2e.

Overview

Breakthrough Optics

At the heart of Beyond 2 lies a breakthrough in optics. Our new pancake optic design achieves a groundbreaking 116° diagonal field of view, beating leading VR headsets including Meta Quest 3 and Valve Index.

Beyond 2 inherits the incredible dual 1-inch micro-OLED displays from Beyond 1 with 2560x2560 pixels per eye, an ultra-high resolution significantly greater than the Meta Quest 3 and Valve Index. The OLED displays operate at 90Hz and 75Hz, with unbeatable contrast and vibrant colors compared to LCD displays commonly used in VR headsets.

Beyond 2 has also managed to improve brightness and massively reduced glare. The new lens design features dramatic improvements over Beyond 1 with total edge-to-edge clarity and a very large sweet spot.

Utilizing advanced manufacturing capabilities and next-generation materials, Beyond delivers the world's best pancake optics with stunning visual specifications in an unbelievable form factor.

Bigscreen Beyond 2 measured at 116° diagonal, 108° horizontal, 96° vertical. Valve Index measured at 114° diagonal, 110° horizontal, 110° vertical. Meta Quest 3 measured at 110° diagonal, 108° horizontal, 99° vertical. Measured using WIMFOV in independent measurements at minimum eye relief and default accessories.

Each display runs at the full 2560x2560 pixel resolution at both 90Hz and 75Hz. At 90Hz, the PC renders at a lower resolution due to bandwidth limitations such as DisplayPort 1.4. Using Display Stream Compression and the display's built-in scaler, at 90Hz Beyond upscales the image to the full 2560x2560 resolution. This upscaling has a slight reduction in sharpness. Read more: <https://www.bigscreenvr.com/displays>

Adjustable IPD

In order to achieve the best visual fidelity and reduce eyestrain, each optic should be aligned with each eye. The positioning is known as IPD or Interpupillary Distance and it varies from person to person. Beyond 1 came in 18 different sizes and was a fixed IPD system. Like shoes, picking the right size was important for a great experience.

Beyond 2 features an innovative adjustable IPD mechanism that adjusts each optic independently to the perfect position in front of each eye.

Universal-fit with the new Halo Mount

With Beyond 1, Bigscreen introduced the custom-fit cushion. Using a 3D Face Scan with an iPhone (required), a cushion is manufactured to the unique face shape of each customer for ultimate comfort. Beyond 2 supports the same custom-fit cushions as Beyond 1, while also introducing two new solutions.

The Halo Mount is a new accessory inspired by tactical night vision goggles. Fine tuned controls for tilt and eye relief (distance from optics to the eye) allows for perfectly positioning the headset.

For cushions, the Halo Mount can be used in 3 ways: the Lightseal (included), the Custom-Fit Cushion, or no cushion at all. The Halo Mount can be used with the Soft Strap (included), the Audio Strap, or 3rd-party straps. The Halo Mount begins shipping to customers later this year in Q3 2025.

Notably, the Halo Mount and the Lightseal are a universal-fit solution and therefore Beyond no longer needs an iPhone for a 3D Face Scan like the Beyond 1's custom-fit cushion required.

Designed for enterprise use cases

Improvements in optics, adjustable IPD, and the new universal-fit Halo Mount make Beyond 2 well suited for businesses using VR. Beyond is currently deployed by customers in industries such as aerospace, aviation, automotive, nuclear energy, and humanoid robotics.

Unbelievable Form Factor gets lighter

The redesigned Beyond 2 is 16% lighter than its predecessor, weighing just 107 grams, 4-6X lighter than other headsets such as the Meta Quest 3 and Apple Vision Pro.

New Colors

Beyond 2 comes in three unique colors. Like Beyond 1, Beyond 2 is available in Carbon Black. Crystal Clear is a new fully transparent design that shows off the intricate inner workings of the headset. Nuclear Orange is a shockingly vibrant color that makes a bold fashion statement.

Eyetracking with Beyond 2e

Inside Beyond 2e, our flagship model, is the world's smallest eyetracking suite with image sensors the size of a grain of sand. Beyond uses cutting edge techniques in artificial intelligence and computer vision such as training and fine tuning individualized pupil models running on-device on AMD® and NVIDIA® GPUs with inference accelerated by NVIDIA® CUDA®. Unlike any VR headset before, this novel approach achieves precise, accurate, low-latency eyetracking in a privacy-centric manner. Beyond 2e with eyetracking adds a mere 1.05 grams of weight, a testament to Bigscreen's core design philosophy: every gram matters.

With APIs to natively access cameras and pupil positions, Beyond supports developers and the modding community. Eyetracking hardware is driven by Bigscreen's native eyetracking software, but also supports 3rd-party software and open source mods such as EyetrackVR (ETVR). Bigscreen's eyetracking software will first launch in a public beta program while integrating with SteamVR, OpenXR, and game developers such as VRChat before a wider roll out in the summer of 2025.

General Details

Studio-grade Audio

Thanks to acoustic design and engineering, Beyond has a dual microphone array with studio-grade microphone quality that rivals professional audio gear. The Bigscreen Beyond Audio Strap provides exceptional fidelity with Koss® speakers and improved ergonomics.

SteamVR Tracking

Beyond has highly accurate 6DOF head and controller tracking thanks to SteamVR Tracking, with support for SteamVR 1.0 and 2.0 Base Stations. It also supports the SteamVR ecosystem of controllers, such as the Valve Index Controllers.

Backwards Compatibility

Beyond accessories such as Custom-Fit Face Cushions, 5-meter Fiber Optic Cable, and Link Box are backwards compatible between Beyond 1 and Beyond 2.

Prescription Lens Inserts manufactured before 2025 for Beyond 1 will work with Beyond 2, but will not fit in Beyond 2e. Prescription Lens Inserts manufactured in 2025 onwards are compatible with Beyond 1, 2, and 2e.

Delivery & Pricing

Beyond 2 starts at \$1019, and Beyond 2e starts at \$1219.

The first batch ships in April 2025. The Halo Mount ships in Q3 2025.

For a limited time, customers that own a Beyond 1 and wish to upgrade can purchase the Beyond 2 for just \$849 or Beyond 2e for \$1049. Customers upgrading can reuse their backwards compatible accessories from Beyond 1 such as the Custom-Fit Face Cushion, Link Box, 5-meter Fiber Optic Cable, straps, and other 3rd-party accessories.

Customers can purchase Bigscreen Beyond from www.bigscreenvr.com. Bigscreen Beyond ships from our Los Angeles, Calif. factory to customers around the world including to the United States, Canada, Japan, United Kingdom, Europe, New Zealand, and Australia with planned expansion to countries such as South Korea, Mexico, Israel, and UAE later this year.

Specifications

- **Field of View:** 116 degree diagonal field of view
- **Weight:** 107 grams
- **IPD:** Adjustable, 48mm to 75mm (55mm to 70mm physically)
- **Resolution:** 2560 x 2560 per eye
- **Refresh Rate:** 90Hz, 75Hz
- **6DOF Tracking:** SteamVR tracking.
- **Tracking Requirements:** SteamVR 1.0 and 2.0 Base Stations (not included)
- **Eyetracking:** Yes, Beyond 2e
- **Full-body tracking:** Compatible with SteamVR Trackers such as HTC Vive Trackers, Tundra Trackers (not included)
- **Controllers:** Compatible with SteamVR controllers such as Valve Index Controllers (not included)

- **Audio Input:** Dual microphone array
- **Audio Output:** Built-in on-ear speakers with the Audio Strap (not included)
- **Accessory Ports:** 1 x USB-C
- **Cable:** 5-meter Fiber Optic Cable

PC Requirements

- **GPU:** Nvidia RTX 2070 or AMD RX 5700 XT or newer (DisplayPort 1.4 and DSC required)
- **CPU:** Quad Core Intel or AMD
- **Ports:** 1 x DisplayPort 1.4, 2 x USB 3.0 ports
- **OS:** Windows 10 or Windows 11