

Meta Quest 3 is a virtual reality (VR) headset developed by Reality Labs, a division of Meta Platforms. It was unveiled on June 1, 2023, and released on October 10 as a successor to the Quest 2.

The headset features updated hardware with elements of the Quest Pro, including a thinner form factor and lenses, and additional sensors and color passthrough cameras intended for mixed reality software.

Specifications

Hardware

The Quest 3's design is an evolution of that of the Quest 2, combined with elements of the Meta Quest Pro. It uses a pair of LCD displays with a per-eye resolution of 2064×2208 (an increase over the 1832×1920 resolution of the Quest 2), viewed through pancake lenses similar to the Quest Pro to enable a thinner enclosure.^[4] The face of the headset is adorned with three "pills" containing sensors and cameras; the two outer pills each contain a monochrome camera used for positional tracking, and a color camera used for mixed reality passthrough. The center pill contains a depth sensor, which is used in combination with other sensors to sense the user's surroundings for boundaries and mixed reality experiences.^{[5][4]}

The Quest 3 uses the Snapdragon XR2 Gen 2, a system-on-chip manufactured by Qualcomm and based on their Snapdragon 8 Gen 2 flagship mobile phone SoC,^[6] which Meta has touted as having more than twice the raw graphics (GPU) performance of the Snapdragon XR2 Gen 1 used by the Quest 2 and other similar standalone headsets.^{[7][8]}

The headset ships with "Touch Plus" controllers; they are similar in design to the Touch Pro controllers used by Quest Pro, and replace the infrared sensor ring with infrared sensors in the body of the controller, augmented by internal sensors and input from the headset's hand tracking. Unlike the Touch Pro controllers, they do not use a dedicated processor and cameras for on-board positional

Meta Quest 3



Meta Quest 3 with controllers

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|---------------------------|--|
| Codename | "Stinson" "Eureka" |
| Developer | Reality Labs |
| Type | <u>Virtual reality headset</u> |
| Release date | October 10, 2023 |
| Lifespan | 2023-present |
| Introductory price | US \$499 (128GB) / \$649 (512GB) |
| Operating system | Quest system software, based on <u>Android</u> source code |
| System on a chip | <u>Qualcomm Snapdragon XR2 Gen 2</u> |
| Memory | 8 GB LPDDR5 |
| Storage | 128 GB, 512 GB |
| Display | 2x 2064 x 2208p RGB-stripe LCD panels, one per eye @ 90-120Hz ^[1] |
| Graphics | <u>Adreno 740</u> ^[2] |
| Controller input | <u>Oculus Touch</u> |
| Connectivity | <u>Wi-Fi 6E</u> , <u>Bluetooth 5.2</u> |

tracking, and are powered by AA batteries rather than rechargeable batteries.^[9] Quest 3 is also compatible with the Touch Pro controllers.^{[10][11]}

| | |
|------------------------|---|
| Power | Li-ion 3.87 VDC 4879 mAh ^[3] |
| Online services | Quest Store |
| Mass | 515 g (18.2 oz) |
| Predecessor | <u>Quest 2</u> |
| Website | <u>www.meta.com/quest/quest-3/</u> (<u>https://www.meta.com/quest/quest-3/</u>) |

Software

The Quest 3 is backward compatible with all Quest 2 software.^[12] Existing software may receive updates to add higher fidelity graphics (including high resolution textures) when running on Quest 3; due to platform limitations, it is difficult to distribute separate packages targeting Quest 2 and Quest 3 on Quest Store, which may result in software consuming additional storage on Quest 2 due to the inclusion of Quest 3-specific assets in a unified package.^{[13][14]}

During a private presentation to employees, Meta virtual reality vice president Mark Rabkin stated that there were plans for 41 new Quest apps and games to be released at launch;^[15] during a digital presentation on June 1, 2023, Meta showcased Quest titles scheduled for the late-2023 launch window such as *Assassin's Creed Nexus VR*, *Asgard's Wrath 2*, *Ghostbusters: Rise of the Ghost Lord*, *I Expect You to Die 3*, *Onward*, *PowerWash Simulator*, *Samba de Amigo*, *Stranger Things VR*, and *Vampire: The Masquerade — Justice* among others.^[16] During Connect, Meta announced that Xbox Cloud Gaming would be available as an app for Meta Quest 3 in December 2023.^[17]

Release

According to a roadmap obtained by *The Verge* in February 2023, Meta planned for the Quest 3, internally codenamed "Stinson", to be released later that year.^[15] *The Verge's* roadmap corroborated with files, including schematics, of the Quest 3 shared in September 2022 by virtual reality analyst Brad Lynch.^[18]

Ahead of an official announcement, *Bloomberg* writer Mark Gurman published a newsletter on May 28, 2023, reporting from a private event where he had received a hands-on demo of a Quest 3 prototype—codenamed "Eureka".^{[19][20]} Ahead of a VR gaming digital presentation later that day, Meta officially revealed the Quest 3 on June 1, 2023 via a video on Mark Zuckerberg's Instagram account.^[21] The teaser announced that the Quest 3 would be released in late 2023, and be priced at US\$499.99 for a 128 GB model (with larger storage options to be announced in the future).^[22] Several publications noted the timing of the announcement, as it came four days prior to Apple's Worldwide Developers Conference (WWDC)—where the company was expected to (and ultimately did) announce an augmented reality headset.^{[23][24][25]}

The Meta Quest 3 was made available for pre-order on September 28, 2023, with orders shipping the following month, and the 128 GB and 512 GB models priced at US\$499.99 and US\$649.99 respectively.^{[26][27]} All pre-order units were bundled with *Asgard's Wrath 2*, and pre-orders of the 512 GB model were also bundled with six months of Meta Quest+ subscription service.^[26]

Reception

In a hands-on report published prior to the official unveiling, *Bloomberg* writer Mark Gurman found that the new AR passthrough mode was significantly better than any previous Meta products (including Quest Pro), with it being good enough to clearly read and use one's phone through, but that controller tracking

was less accurate. Meta explained that it will improve the controller tracking accuracy over time before launch with a variety of already discovered but then not yet implemented tracking technologies and software updates.^{[19][20]}

Wired praised the upgraded hardware of the Quest 3, and its form factor for having a more comfortable and "secure" fit. It was felt that the color passthrough cameras were better than the previous monochrome cameras, but still had a blurry appearance, and that the available apps did not use mixed reality to its full potential. The user interface was also criticized for being largely unchanged from past models, lacking in application management functions, and having unclear migration paths for cloud save data from previous Quest headsets. In conclusion, it was argued that "everything it does, it does well, but it does nothing at the apex of its class", and that the Quest 3 "might not be enough to make mainstream adoption of VR or MR an actual reality."^[4]

Polygon similarly praised the technical and ergonomic updates to the Quest 3, and described the device as being "much more complete out of the box, with fewer obvious areas for improvement than the Quest 2". It was noted that not many games had been specifically updated for Quest 3 at launch, but that those which did had improved visual fidelity (such as *Red Matter 2*, which was described as approaching the fidelity of *Half-Life: Alyx*), and that performance improvements were not universal among existing titles not yet updated. It was argued that the headset's library of native software had "worthwhile experiences", but that "Meta's feed of new, interesting games is slow compared to the release rhythm set by traditional game consoles", and that the Quest 3 "feels kind of like a mid-generation console refresh, but without the benefit of having dozens of amazing games that feel greatly improved out of the gate."^[13]

Images



Meta Quest 3 front View



Meta Quest 3 back View



Meta Quest 3 side View



Meta Quest 3 Top View



Meta Quest 3 display unit in a Target

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External links

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