

It's been a long spell since Apple had folks this excited about a new piece of tech. From eye-tracking technology to a three-dimensional interface, Vision Pro comes crammed with features. But the wow factor about the Augmented Reality (AR) headset is actually the price: \$3,499 USD.

Vision Pro "will be available early next year on apple.com and at Apple Store locations in the US, with more countries coming later next year," according to a press release.

With that in mind, can the launch of the Vision Pro be a watershed moment for Apple? How does it fare against Meta's flagship offering? Which one should you get? Here's what the AR/VR showdown really comes down to.

A Peek Under the Hood of Vision Pro

Apple's first AR headset was unveiled by CEO Tim Cook at the Worldwide Developers Conference (WWDC) 2023 that was organised by the big tech company in California's Cupertino on Monday, 5 June.

Simply put, Vision Pro is a new type of computer that's supposed to "seamlessly blend digital content with the physical world, while allowing users to stay present and connected to others," at least according to Apple.

Vision Pro will reportedly feature the following:

- An operating system called visionOS.
- "A custom aluminum alloy frame that gently curves around the user's face."
- Two ultra-high-resolution displays with 23 million pixels. For context, that's apparently like staring at a 4K TV – out of each eye.
- A unique dual-chip design: While the M2 chip is there to ensure "standalone performance, the brand-new R1 chip processes input from 12 cameras, five sensors, and six microphones."
- A three-dimensional camera
- "High-performance eye tracking system that uses high-speed cameras and a ring of LEDs that project invisible light patterns onto the user's eyes for responsive, intuitive input."
- An advanced Spatial Audio system, which is driven by "audio pods positioned next to each ear to deliver personalized sound and adapt to the environment."
- A battery that's capable of running for two hours on a single charge.

- A new feature called EyeSight that lets the user see others through the lens of the headset while also giving "visual cues to others about what the user is focused on."

Apple CEO Tim Cook said at this event, "Just as the Mac introduced us to personal computing, and iPhone introduced us to mobile computing, Apple Vision Pro introduces us to spatial computing. Built upon decades of Apple innovation, Vision Pro is years ahead and unlike anything created before – with a revolutionary new input system and thousands of groundbreaking innovations. It unlocks incredible experiences for our users and exciting new opportunities for our developers."

What You're Paying for When You Buy Vision Pro

While we can't (yet) tell what it feels like to wear or use Vision Pro, here's some fancy stuff that you can reportedly do with it:

Browse through apps by either looking at them, tapping your fingers to select, flicking your wrist to scroll, or using your voice to dictate commands. Apple further claimed that owing to the display, the app icons can "fill the space around users, be moved anywhere, and scale to the perfect size."

"They [app icons] even react to lighting and cast shadows," it added.

Play over 100 Apple Arcade games, "with incredible immersive audio and support for popular game controllers," Apple said.

Watch 3D movies and TV shows on a screen that "feels 100 feet wide."

Create your own Iris-based Optic ID in order to instantly lock or unlock Apple Vision Pro. "A user's Optic ID data is fully encrypted, is not accessible to apps, and never leaves their device, meaning it is not stored on Apple servers," the company asserted.

In order to also ensure the privacy of those around you, the EyeSight feature of Vision Pro "includes a visual indicator that makes it clear to others when a user is capturing a spatial photo or video."

Meta's Mixed-Reality Quest

In a likely attempt to stay one step ahead of Apple, Mark Zuckerberg introduced an upgraded version of Meta's virtual and mixed reality headset called Quest 3 on 1 June. Starting at \$499.99 USD, Quest 3 will be available to ship from 27 September, as long as you live in Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Poland, South Korea, Spain, Sweden, Switzerland, Taiwan, United Kingdom, and the United States. Evidently, India is yet to make it to this list.

Quest 3 runs on a Snapdragon chipset that promises to be twice as powerful as the one used to drive the Quest 2 headset.

"Quest 3 is compatible with the Quest 2 catalog of over 500 VR games, apps, and experiences (and counting), and we've got even more exciting new VR and MR titles lined up for launch," according to a blog post by the company.

"Starting June 4, we're lowering the price of Quest 2 to \$299.99 USD for the 128GB SKU and \$349.99 USD for the 256GB SKU..." the post further read.

Despite layoffs and antitrust troubles, Meta is still looking to ramp up its AR/VR efforts. As per figures reported by *The Verge* on 1 March, the tech giant has sold over 20 million Quest headsets.

"We continue to expect Reality Labs [Meta's AR/VR division] operating losses to increase year-over-year in 2023," the company had said in its report for the first quarter of 2023.

How Does Vision Pro Stack Up Against Quest 3?

"If we want to start with the hardware, the biggest difference between the two will be privacy. Because Apple has this entirely new system of biometric authentication called Optic ID," said Nadeem Sarwar, a senior contributor at tech news site Digital Trends. In contrast, Meta shares face data captured by the Quest Pro headset with third-party apps and services – albeit in an anonymized format. But that doesn't seem to be enough for Ibrahim Khatri, the CEO of Privezi Solutions.

"Data interception is also a potential risk, where communication channels between the VR headset and external devices can be compromised, resulting in data breaches," he told **The Quint**.

Another distinguishing feature of the Apple Vision Pro is EyeSight. **"When you are wearing the Meta Quest Pro which already has the pass-through tech, you can see your external environment but the person who is around you cannot see the part of your face that is covered by the headset,"** Sarwar said.

On the other hand, Vision Pro has a front-facing display that shows the user's eyes to the people around them in order to indicate whether the user is in a virtual reality or mixed reality setting.

This subtle difference matters because it makes the Vision Pro user feel more natural, and it doesn't look like you're talking or just sitting beside someone who is disconnected from reality, Sarwar opined.

On the OS front, Apple seems to have gone for something entirely familiar and that may be a good thing.

"visionOS is built on the same foundations as iOS and MacOS, which means that you don't need to rely on any third party application or any third party platform. You just plug the headset to your Mac and you'll instantly get access to the MacOS platform with multiple screens or virtual desktops and 4k resolution all around you," Sarwar explained.

Will Vision Pro Give Apple a Leg-Up in the AR/VR Market?

Unlike Meta and other headset makers who are using "off-the-shelf" chips, Apple's brand new R1 chip is capable of eliminating lag to the extent that new images reach the display in just 12 milliseconds.

According to **Nadeem Sarwar**, one of the biggest problems with Meta's Quest headset is the lack of a content library. "Despite the high-asking price of Vision Pro, I think Apple's content library is going to play a huge role when it comes to market reception," he said.

"If you go into the metaverse and log in to Meta's platform, you still see a virtual avatar of your body which lacks length. An update may come out later in the fall season that will add to your avatar. But it's still not realistic, Sarwar said.

He isn't alone in his lack of enthusiasm. Meta employees themselves reported being uncomfortable on using the Quest headset to hold workplace meetings in the metaverse, according to a recent *Bloomberg* report.

"If you take the Vision Pro headset, Apple is creating a 3D realistic, anamorphic avatar of your face and pushing it into FaceTime. So you are not relying on a cartoonish representation of yourself."

Nadeem Sarwar. Digital Trends contributor

Apple's retail footprint could be yet another big advantage over Meta, especially since India's first Apple Store in Mumbai's BKC and another one in New Delhi's Saket was opened for business in April this year.

It is reportedly looking to set up three more Apple Stores in Borivali (Mumbai), DLF Promenade (New Delhi), and Worli (Mumbai) over the next four years. Probably with the Vision Pro available in stores.

As far as market competition goes, the tech giant appears to have a lot working in its favour. But it may also have to watch out for smaller players wanting a slice of Apple's pie.