
Singularity's ONI earbuds deliver outstanding audio thanks to MEMS speaker tech

Description

I have long flirted with the idea that I'm an audiophile, though I don't typically spend thousands of dollars on either headphones or speakers, and I only sporadically indulge in lossless audio. True audiophiles would likely balk at my home Sonos system and penchant for AirPods (Pro and Max primarily), but I like to think I place a high value on generally getting good sound. The [ONI earbuds from Singularity](#), which are the first earbuds on the market to use cutting-edge MEMS (micro-electromechanical systems) speaker tech, have shown me that any perceived differences in different types of audio on different playback devices I was experiencing before pale in comparison to what's actually possible — for a price.

The basics

The Singularity ONI's design will be familiar to anyone who has used in-ear monitors before — they include two core buds, which work in tandem with fully removable audio cables and a variety of ear tip options. You'll notice, though, that the buds themselves look and feel very substantial, which is a combination of their physical design and materials: Each bud is made from grade 5 titanium (which you may recognize from Apple's latest iPhone 15 Pro), polished to a mirror finish.

The external surface of the ONI buds also features perforations for venting, which the company says results in less of that pressure feeling you get when using noise-isolating buds, as well as less sweat and earwax buildup. The vents don't prevent the buds from being excellent at blocking out background noise with a proper ear tip fit, however.

What's going on inside the earbuds is the real technological innovation here, impressive as the casing of each bud is in its own right. The use of xMEMS, which works by making a membrane made up of microscopic electromechanical systems vibrate by converting electrical energy into mechanical movement to produce sound waves, offers the ability to produce higher-quality sounds versus other more traditional methods for making speakers, with less distortion or noise introduced to the signal, even at loud volumes.

The Singularity ONI also come with an included wrapped cable, with a 4.4 mm balanced audio connector and a range of different-sized memory foam tips. It also includes a handy ruggedized carrying case and a mesh travel pouch. All of that is \$1,500 — expensive, to be sure, but somewhat mild when you start looking across the entire spectrum of truly hi-fi audio equipment.

When considering price, however, it's important to understand that in order to use the ONI buds properly, you'll need a DAC that specifically supports xMEMS tech — and right now that means the [iFi IDSD Diablo X](#), a \$1,099 add-on that means your entry-level price for experiencing xMEM portable audio right now is \$2,599 all in.

Performance

Now that you're properly sticker-shocked, let me tell you what it is you're paying for. As mentioned above, though I typically like to think of myself as someone who appreciates good audio, I have also traditionally been skeptical of what kind of returns you get for your money at the more extreme upper ends of the audiophile gear spectrum. The Singularity ONI have me reconsidering that position.



Image Credits: Singularity Industries

Using the ONI means plugging in via the Diablo X, which has an internal battery but which can also be connected to continuous power via USB-C. It also means having a service that supports lossless audio and decoding via codecs supported by the Diablo X. Luckily the DAC supports a wide range of decoding, including PCM and DSD, but if you want to really experience what it can do, I recommend also having a Tidal subscription and using their MQA quality playback on a desktop computer operating system.

Once all those pieces were in place, I found that the audio experience was quite unlike anything I was used to — in terms of quality, clarity, sound stage and presence, the Singularity ONI blew me away. It was not unlike the experience of jumping from 720p SDR all the way up to 4K HDR video, for comparison: Particularly on classical recordings and others where a lot of attention is paid to the specific mix and generating very intentional atmospherics, the impact of using the ONI versus other high-end headsets backed by more traditional speaker tech was intense and immediately apparent.

You will see benefits, too, from using lossless playback in other applications, including Apple Music, and even on Android via Tidal and other apps, but the most significant difference in my experience was when using Tidal at MQA quality with music specifically mastered for that on a Mac. That probably actually describes a very common setup for the relatively narrow market that the Singularity ONI and iFi Diablo X are aimed at.

Bottom line

The Singularity ONI have a relatively high bar for entry, including net cost, as well as the relative clunkiness of the physical setup (as opposed to, say, just plugging in some headphones) and the requirements when it comes to streaming service specifics to really get the appreciable benefits. However, once you pass that bar, the benefits are dramatic and undeniable.

xMEMS is still a brand-new technology when it comes to consumer speaker applications, but this debut serves as a great tech demo for what's possible, which hopefully means that subsequent efforts help scale its use and bring costs down so more people can experience its benefits, with less fiddly requirements to make it work. If you're a serious audiophile who has the money to spend and wants to experience the cutting edge, it's a worthwhile endeavor and expense.

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