You can easily disassemble this repairable smartwatch using just a Phillips screwdriver

The Spectra is a new smartwatch designed from the ground up to be hackable and easy to repair. It was created by Pocuter, a company that has spent the last few years honing an expertise in building small electronics like its tiny Pocuter One computer. What makes the Spectra unique is that it’s repairable, yet with a design that mirrors the Apple Watch which is much harder to get into.

The wearable is now available for preorder through a Kickstarter crowdfunding campaign with delivery expected as early as July 2025. Early backers can preorder one discounted to around $209, while full pricing is closer to around $272. The Spectra is the company’s seventh Kickstarter campaign, but also appears to be one of its most ambitious. Three years into developing the prototype it still hasn’t fully finalized the hardware, so while there may be less risk with backing this one, there’s still some.

a:hover]:text-gray-63 [&>a:hover]:shadow-underline-black dark:[&>a:hover]:text-gray-bd dark:[&>a:hover]:shadow-underline-gray [&>a]:shadow-underline-gray-63 dark:[&>a]:text-gray-bd dark:[&>a]:shadow-underline-gray”>Image: Pocuter
Powered by an Espressif ESP32-S3 processor “maxed out with 8MB RAM and 32MB executable flash memory,” the Spectra has a 368×448 AMOLED display, a digital crown, Wi-Fi, Bluetooth, fitness tracking and environmental sensors, and a microSD slot

inside allowing storage to theoretically be boosted to half a terabyte with a memory card. That’s all stuffed inside a CNC milled aluminum frame that the company plans to sell upgrades for, including a stainless steel alternative.

The Spectra’s internal design also prioritizes access to the battery, iFixit discovered, with a mainboard that swings out of the way and the use of spring contacts instead of a cable that needs to be detached. Small devices like wearables and earbuds typically have batteries that are notoriously difficult to swap, but like Fairphone’s Fairbuds, maybe the Spectra will encourage other companies to change that.

a:hover]:text-gray-63 [&>a:hover]:shadow-underline-black dark:[&>a:hover]:text-gray-bd dark:[&>a:hover]:shadow-underline-gray [&>a]:shadow-underline-gray-63 dark:[&>a]:text-gray-bd dark:[&>a]:shadow-underline-gray”>Image: iFixit
The Pocuter team “plans to provide replacement options for every single part,” it told iFixit, which shared just how easy an unassembled prototype of the smartwatch is to build and later disassemble. (Pocuter hasn’t specified if the final watch will be shipped pre-assembled.) Seven Phillips head screws hold it all together, instead of glues and epoxies that often make repairs overly complicated or entirely impossible.

The wearable will also run a custom operating system called SpectraOS based on JavaScript. Promised features include an interactive debugger streamlining app development, secure application sandboxing, and support for Linux, macOS, and Windows. It won’t have access to Apple or Google’s robust app stores, so taking full advantage of the Spectra may benefit from some coding experience, not just basic screwdriver skills.

https://www.theverge.com/2024/11/22/24303386/pocuter-spectra-smartwatch-repairable-hackable-wearable