Expanding Access to Service and Repairs for Apple Devices

April 2022
At Apple, we aim to create the best experience for our customers. We also believe the best technology is technology that lasts, which is why we design our products to be durable so that they rarely require maintenance or repair.

The result is products that are better for people and the planet. Creating durable products minimises the need for repair and helps us get the most out of the finite resources used to make every product. We’re continuing to find innovative ways to use more recycled materials across our products, a key part of our goal to end our reliance on carbon-intensive mining.

Creating long-lasting products requires an approach that combines hardware designed to endure the rigours of everyday use, ongoing software updates that unlock new features and functionality, and – when needed – high-quality repair services. Apple employees, from engineers to product designers, work together to deliver products that meet this vision, for example introducing water resistance, drop performance, security, privacy and repairability. The challenge is to design for both durability and ease of repair, as the technologies that increase durability, such as the use of adhesives to achieve water resistance, can make repair more challenging. We believe our products strike the right balance. And we have seen that they hold their value better and are used longer than comparable devices.\textsuperscript{1,2,3,4,5}

If a repair is needed, we believe we have a responsibility to customers and the environment to offer convenient access to safe, reliable and secure repairs to help customers get the most out of their devices. That’s why we now offer more repair options to help our customers get their devices back up and running as soon as possible. We’ve nearly doubled the size of our industry-leading service and repair network over the last few years by adding more Apple Authorised Service Providers and launching the Independent Repair Provider programme.

Repairing modern electronic devices is usually best handled by a trained professional repair technician, such as those in our repair network. But we know some of our users have experience with the complexities of repairing electronic devices. With that in mind, Apple took a major step forward in April 2022 with the launch of Self Service Repair, providing customers access to genuine Apple parts, tools and repair manuals.
We’re constantly innovating to make our products more durable and useful – finding every opportunity to learn from our experience, consumer feedback and our service network to improve our products. And we’re committed to doing the right thing for our customers and the environment by delivering long-lasting products.

Our commitment to the environment

We are at a pivotal moment in addressing climate change, one of the greatest threats of our time. At Apple, we see an opportunity to help drive change and uncover innovations that make our products even better for the planet. We aim to build durable, long-lasting products that make the best use of the finite resources inside them.

As part of our circular economy strategy, we’re moving toward a future where we can implement low-carbon designs, create recycling technologies that help end our reliance on carbon-intensive mining, build products only using recycled and renewable materials, and invest in expanding our repair network. Apple’s worldwide operations are already carbon-neutral, and we’re committed to extending that progress to our entire carbon footprint by 2030 – including our supply chain and the electricity used by the products we make. In fiscal year 2021, nearly 20% of the materials we sent in our products came from recycled sources, and we doubled our use of recycled tungsten, rare earth elements and cobalt.

To find out more about Apple’s commitment to the environment, please view Apple’s 2022 Environmental Progress Report.
Preserving users' security and privacy

We're committed to protecting users' security and privacy during the service and repair process.

Apple has established strict security procedures to safeguard user information when repairs involve the Face ID and Touch ID modules. These modules rely on highly sensitive biometric data and often safeguard personal data, such as financial and medical information.

We give technicians in our network access to our cloud-based diagnostic system, allowing them to use remote software tools to diagnose potential issues using just the device's serial number. As a result, technicians don't need to obtain customers' device passwords to complete most repairs, and user data is kept private.

### Apple's approach to service and repairs

We believe customers should have access to safe and reliable service and repairs that do not compromise their security, their privacy or the functionality of their device. We also know that a repair is more likely to be done correctly when it's performed by skilled, trained professionals, using genuine Apple parts engineered for quality and safety, and tools designed for the repair.

**Trained Technicians:** Every technician in our service and repair network goes through more than a dozen hours of training and certification courses, ensuring they have the expertise to repair products correctly. Our training teaches them to diagnose issues and perform repair processes that have been rigorously engineered and tested to meet our safety and quality standards. When a new product is introduced, technicians are required to take additional training and certification courses before they can perform repairs on the new device.

**Genuine Apple parts:** Apple and Apple Authorised Service Providers only use genuine Apple parts in a repair. Every Apple part is designed to meet the same high safety and quality standards as parts used in new products. We require repair technicians at Apple and Apple Authorised Service Providers to use genuine parts designed to get a customer’s product back working exactly the way it should. These same Apple parts were also made available to Independent Repair Providers beginning in 2019 and are now available to anyone through Self Service Repair. Every repair performed by Apple and Apple Authorised Service Providers is backed by an Apple repair warranty.
Safely replacing iPhone batteries

iPhone contains industry-leading soft-pack lithium-ion batteries, giving iPhone longer battery life. These batteries should be handled and replaced with care because in some instances, non-genuine parts and tools or poor workmanship during a repair have led to Apple devices being damaged or becoming unsafe.

Technicians in Apple’s service and repair network are trained to perform battery replacements safely. They use tools custom-engineered to perform the repair, only use genuine Apple parts and take care to avoid mishandling components. With Self Service Repair, Apple provides customers access to the same genuine parts and tools, along with repair manuals to guide them on how to safely perform the replacement.

Apple tools: Apple tools are specified and engineered to provide the most reliable repairs for Apple products, when used as described in Apple’s repair manuals. In fact, we’ve designed them for professional repair technicians who rely on these tools for high-volume repairs across multiple product models. Apple tools are engineered, tested and verified to provide the same performance, functionality and safety as the factory tools used to build Apple products. These repair tools are designed with precision in mind, so technicians can, for example, apply the right pressure to reseal a display, apply the exact torque on a screw or use targeted heat to soften an adhesive, enabling repairs that won’t damage the device.

These professional-grade tools are available to all providers in our service and repair network. And now, with Self Service Repair, they are also available for purchase, or in rental kits, to customers who are capable of performing their own repairs.
Expanding access to service and repairs

Over the past 3 years, we have nearly doubled the number of service locations to over 8,000, offering more ways for consumers to access repairs. Our repair network helps to extend the life of products and helps the planet by getting the most out of the finite resources used to create them. Apple’s service and repair network is comprised of:

- **Apple Stores and mail-in repairs.** Customers can visit more than 500 Apple Stores worldwide for service and repairs. We also offer customers the option of posting their devices directly to Apple.

- **Apple Authorised Service Providers (AASPs).** AASPs are independent companies authorised by Apple to perform in- and out-of-warranty repairs, using genuine Apple parts and tools, Apple training, service guides and software tools to perform service and repairs. Any repair done by an AASP is backed by an Apple repair warranty. There are currently more than 5,000 Apple Authorised Service Providers worldwide, supporting more than 100,000 active technicians, that provide the same services and repairs that Apple Stores offer. As a result, in the US, eight out of ten Apple customers are located within 20 minutes of an AASP. In many cases, AASPs also offer service at a customer’s home or office.

- **Independent Repair Providers (IRPs).** Customers also have the option to repair their devices at more than 3,000 IRPs in more than 170 countries. The IRP programme gives independent repair shops access to the same parts, tools, training and resources as Apple Stores and AASPs. While we always recommend the use of genuine Apple parts, IRPs may offer genuine parts or third-party alternatives to provide customers with more choice. The IRP Programme continues to expand:

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<tr>
<th>Year</th>
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<td>2019</td>
<td>Launch for iPhone in the US</td>
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<td>2020</td>
<td>Expansion to Mac</td>
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<td>Expansion to Europe and Canada</td>
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<td>2021</td>
<td>Expansion to more than 170 countries</td>
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Self Service Repair

For the vast majority of customers, the safest and most reliable repair is achieved through an Apple Store or one of the thousands of Apple Authorised Service Providers and Independent Repair Providers around the world. Repairing modern electronic devices that are complex, highly integrated and miniaturised isn’t easy – and these technicians have the expertise, training, parts and tools to get the repair done right. For customers with experience in the complexities of repairing electronic devices, we created the Self Service Repair programme – which provides access to repair manuals and the same genuine Apple parts and tools used by Apple’s service and repair network, at the same cost.

In its initial phase, the Self Service Repair programme is offering access to more than 200 individual parts and tools, allowing customers to perform the most common repairs on iPhone 12 and later models, soon to be followed by Mac computers with Apple silicon. This programme launched in April 2022 in the US and will expand to Europe later in 2022.

We give customers a credit back from their purchase if they return certain used parts for recycling following a repair. Apple’s policy of offering AASPs, IRPs and Self Service Repair customers a credit for the return of used parts enables us to refurbish parts to our high quality and performance standards, or recover resources through recycling.

Service and Repair Options for Apple Devices

The table below shows the different service and repair options for Apple devices.

<table>
<thead>
<tr>
<th>Apple Stores and Mail-in Apple Repair Centres</th>
<th>Apple Authorised Service Providers (AASPs)</th>
<th>Independent Repair Providers (IRPs)</th>
<th>Self-Service Repair (SSR)</th>
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<td>Number of locations worldwide</td>
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<td>500+ retail locations</td>
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<td>Many products can also be sent to Apple</td>
<td>Select locations: At-home service and repairs (see above)</td>
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<td>Repair manuals provided by Apple</td>
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<th>Parts and tools</th>
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<td>Only genuine Apple parts and tools are used</td>
<td>Only genuine Apple parts and tools are used</td>
<td>Genuine Apple parts and tools are made available at the same cost as AASPs. IRPs may use third-party parts and tools</td>
<td>Offers genuine Apple parts and tools for the most commonly serviced modules, at the same cost as AASPs</td>
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Apple's journey to improve device longevity

We believe that the best technology is technology that lasts, which is why we design our products to be durable enough to rarely require maintenance or repair. While the durability of our technology minimises the need for repair, service and repair still play an important role in helping our users get the most out of their devices. We customise our approach for each product, based on how we expect our customers to use them. And the goal remains consistent across all products: to keep them in use as long as possible.

Durability is a top priority. For example, to improve iPhone durability over the years we introduced water- and dust-resistance and, recently, the industry-first Ceramic Shield front cover. In fact, research has shown iPhone to be the most durable smartphone tested.\(^7\)

We’ve also improved repairability. iPhone 13 has more modules that can be repaired than previous iPhone models, including the battery, display and speakers, making it the most repairable iPhone ever. In 2022, we introduced a new repair for the TrueDepth Camera on recent iPhone models. The newest generation of MacBook Pro notebooks feature batteries that are easier to access and repair.

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* iPhone 7, iPhone X and iPhone 13 models are splash, water and dust resistant and were tested under controlled laboratory conditions. iPhone 7 and iPhone X have a rating of IP67 under IEC standard 60529 (maximum depth of 1 metre up to 30 minutes). iPhone 13 has a rating of IP68 under IEC standard 60529 (maximum depth of 6 metres up to 30 minutes). Splash, water and dust resistance are not permanent conditions and resistance may decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
By building durable hardware, providing ongoing software updates and convenient access to repair, consumers can use our devices longer. For example, MacBook Pro lasts an average of 2–4 years longer than traditional PCs.¹ Apple products tend to have higher resale values, and are passed on to new users more often.²³ Apple products tend to have higher resale values, and are passed on to new users more often.³ For example, iPhone 12 and iPhone 13 retain more of their value than any other smartphone model released in the same year.³ By designing products to last, we are doing the right thing for our customers, and we are doing the right thing for the planet by getting the most out of the finite resources we use to build them.

**Increased hardware and software support**

In addition to increasing the durability and repairability of devices:

- We provide service and parts for products long after they were last distributed. For example, nearly all Apple products can be serviced or repaired for at least seven years after they’re last sold.
- Apple offers MacBook Pro and MacBook Air batteries for up to ten years from when the product was last distributed for sale.
- iPhone benefits from software support that generally lasts years longer than other smartphones.³⁸ For example, iOS 15, our most recent release, extends support back to iPhone 6s (2015).
- MacOS Monterey, the current major release of macOS, supports notebooks released since 2015.
Frequently Asked Questions

How can customers – including those in rural areas who are not near an Apple Store – get their devices serviced or repaired?

There are many ways that customers can access Apple's service and repair network, even from rural areas. We have worked to expand the network of service providers so customers can have convenient access to repairs not only at Apple Stores, but also at Apple Authorised Service Providers and Independent Repair Providers. For example, in the US, eight out of ten Apple customers are within 20 minutes of an AASP. Visit https://getsupport.apple.com/ or download the Apple Support app from the App Store to find an Apple Authorised Service Provider. If customers can’t access any of these providers, they can also contact Apple Support to use the mail-in option, which is available for most Apple products. Customers who are interested in repairing their own devices can also choose Self Service Repair.

Why does Apple use adhesives in products?

Adhesives are essential for modern electronic devices. They’re strong and lightweight, and help make devices water-resistant by sealing internal components against liquids and spills. Devices that use adhesives are also more material-efficient and enable technologies such as Super Retina XDR displays. In addition, some adhesives are reversible, allowing devices to be serviced and repaired. For example, iPhone batteries are adhered in place using stretch-release adhesives, which can be removed by pulling a tab.

Why are third-party repairs sometimes less expensive than repairs through Apple's network?

Apple believes that the safest and most reliable repairs are those handled by a trained technician using genuine Apple parts, tools, processes and diagnostics. Genuine Apple parts and tools are properly engineered, rigorously tested and tailored for each product, to ensure the highest quality, integrity, safety and environmental performance.

Non-genuine parts or tools used in repairs may cost less, but we can’t stand behind their safety or reliability.
Why are Apple’s tools more expensive than other third-party tools?

Our tools are engineered for professional repair providers, to deliver the same performance as factory tools used to build Apple products. They’re also designed to be shared across multiple product models. For example, by using interchangeable product-specific repair trays, the Display Press and Battery Press are compatible with all iPhone devices released in the last 7 years.

Why isn’t Apple releasing schematics for use in board-level repairs?

Industry and repair experts agree that the vast majority of board-level repairs are best performed in a factory environment using specialised equipment capable of producing high quality, reliable and repeatable results to meet original equipment manufacturer (OEM) standards. Boards are packed with many small components necessary for the device’s proper functioning. For example, ball grid array (BGA) parts require specialised equipment for their repair that is restricted to factory or advanced repair environments due to its cost and complexity. Therefore, board-level repairs, particularly those involving soldered components, are best performed by certified technicians who use controlled processes, calibrated factory equipment and rigorous testing.

Why does Apple require use of System Configuration to complete a repair?

System Configuration is a post repair software tool that completes the repair for genuine Apple parts and ensures a genuine Apple part – designed, tested and manufactured for Apple quality and performance standards – was installed. Running System Configuration has a number of purposes that vary based on the part replaced. For example, displays, cameras, battery and ambient light sensors have calibration values that are customised to each individual part during manufacturing. Transferring these values ensures maximum performance and quality after a repair.

How is a customer’s product warranty affected by a Self Service Repair?

The customer’s product warranty is not affected by a Self Service Repair. However, any issue or damage caused by the customer over the course of the repair would not be covered by Apple.
Sources


2. Kantar WorldPanel ComTech, data for US, 12 months ending June 2017.


6. Spoonauer, Mark, “iPhone 13 battery life tested: All four models compared”,


   *Tech Times*, 17 July 2021.


11. “How to Solder Ball Grid Arrays,” *Electronics Notes*. 