

## Apple Watch SE (2nd generation) - Tech Specs

Year introduced: 2022

Identify your Apple Watch

Material and Finish

Aluminum case

Midnight

Starlight

Silver

Size and Weight

44mm

Height: 44mm

Width: 38mm

Depth: 10.7mm

368 by 448 pixels

977 sq mm display area

Weight (GPS): 32.9 grams

Weight (GPS + Cellular): 33 grams

Fits 140–245mm wrists

40mm

Height: 40mm

Width: 34mm

Depth: 10.7mm

324 by 394 pixels

759 sq mm display area

Weight (GPS): 26.4 grams

Weight (GPS + Cellular): 27.8 grams

Fits 130–200mm wrists

Hardware and Buttons

Digital Crown

Microphone

Side button

Speaker/air vent

Optical heart sensor

Controls

Digital Crown with haptic feedback

Side button

Siri

Chip

S8 SiP with 64-bit dual-core processor

2-core Neural Engine

32GB capacity

Sensors

Second-generation optical heart sensor

Compass

Always-on altimeter

High-g accelerometer

High dynamic range gyroscope

Ambient light sensor

## Health and Wellness

### Heart Rate app

High and low heart rate notifications<sup>1</sup>

Irregular rhythm notifications<sup>1</sup>

Medications app

Mindfulness app

Noise app

Sleep app including sleep stages

## Display

Retina LTPO OLED display

Ion-X front glass

Up to 1000 nits maximum brightness

326 pixels per inch

## Power and Battery Life

All-day battery life, up to 18 hours of normal use<sup>2</sup>

Built-in rechargeable lithium-ion battery

Up to 80% charge in about 1.5 hours<sup>3</sup>

[Learn more about Power and Battery Life](#)

## Operating System

watchOS

watchOS is the world's most advanced wearable operating system, with apps and features designed to keep you active, healthy, safe, and connected.

[Learn more about watchOS](#)

## Workouts and Activity

Running

Custom workouts

Customizable Workout Views

Training load

Heart Rate Zones

Race Route

Pacer

Stride length, ground contact time, and vertical oscillation

Automatic track detection

Multisport workout

Hiking

Compass with bearing, incline, elevation, and coordinates

Custom waypoints

Automatically generated waypoints to cellular connectivity

Backtrack GPS data

Offline maps with custom route creation

Topographic maps for thousands of national and regional parks (U.S. only)

Hundreds of curated hikes across all 63 U.S. national parks

Cycling

Average speed, elevation gained, and distance

Connection to cycling accessories via Bluetooth

Functional Threshold Power

Power Zones

Cadence

Live Activity on iPhone

Swimming

Pool swim or open water swim

Custom workouts for pool swims

Splits and auto sets

SWOLF score

Automatic stroke detection

Kickboard detection

Average pace, total distance, and laps

More Workouts

Skiing

Snowboarding

Outdoor Rowing

Paddling

Golf

Walk

Elliptical

Rower

Stair Stepper

HIIT

Yoga

Functional Strength Training

Dance

Cooldown

Core Training

Pilates

Tai Chi

Wheelchair

Kickboxing

Multisport

Other

Safety

Emergency SOS<sup>4</sup>

International emergency calling<sup>5</sup>

Crash Detection<sup>4</sup>

Fall Detection

Noise monitoring

Backtrack

Durability

Water resistance 50m (swimproof)<sup>6</sup>

Connectivity

L1 GPS, GNSS, Galileo, and QZSS

LTE and UMTS<sup>7</sup>

Wi-Fi 4 (802.11n)

Bluetooth 5.3

Apple Pay

GymKit

Support for Apple Watch For Your Kids<sup>8</sup>

International roaming<sup>9</sup>

Accessibility

Built-in accessibility features supporting vision, mobility, hearing, and cognitive disabilities.

[Learn more about Accessibility](#)

Features include:

VoiceOver

Zoom

On/Off Labels

Reduce Transparency

Increase Contrast

Color Filters

Text Size

Bold Text

Reduce Motion

Hourly Chimes

AssistiveTouch

Button Click Speed

Touch Accommodations

Auto-Answer Calls

Type to Siri

RTT Support

Audio Volume Balance

Auto Transcription

Live Speech

Accessibility Shortcut

Mono Audio

Taptic Time

Personal Voice

Environmental Requirements

Operating temperature: 32° to 95° F (0° to 35° C)

Nonoperating storage temperature: -4° to 113° F (-20° to 45° C)

Relative humidity: 5% to 90% noncondensing

Operating altitude: 0 feet to 10,000 feet (0m to 3000m)

Apple Watch SE and the Environment

Apple Watch SE is designed to reduce environmental impact:10, 11

See the Apple Watch SE Product Environmental Report (PDF)

Progress toward Apple 2030

Apple Watch SE paired with Sport Loop is one of Apple's first carbon neutral products:

30% recycled or renewable content<sup>12</sup>

100% of manufacturing electricity sourced from clean electricity<sup>13</sup>

50% or more shipped without airplanes<sup>14</sup>

75% emissions reduction against baseline<sup>15</sup>



7.2 kg CO<sub>2</sub>e total remaining emissions covered by high-quality carbon credits<sup>16</sup>

See Apple's commitment

## Materials

100% recycled aluminum in the case

100% recycled gold in the plating of multiple printed circuit boards

100% recycled tin in the solder of multiple printed circuit boards

100% recycled tungsten in the Taptic Engine

100% recycled rare earth elements in all magnets

100% fiber-based packaging<sup>17</sup>

44% recycled content in fiber packaging

## Energy

100% of manufacturing electricity for Apple Watch SE and Sport Loop is sourced from clean electricity

100% of expected customer energy use matched with clean electricity<sup>18</sup>

Meets California Energy Commission's energy efficiency standards for battery charger systems<sup>19</sup>

## Waste

No established final assembly sites generate waste sent to landfill as part of Apple's Zero Waste Program

Smarter chemistry<sup>20</sup>

Arsenic-free display glass

Mercury-, BFR-, and PVC-free

Meets European REACH regulation on nickel

## Compatibility

iPhone Xs or later, including iPhone SE (2nd generation or later), with iOS 18 or later

## In the Box

Apple Watch SE

## Band

Apple Watch Magnetic Charger to USB-C Cable (1m)

Irregular rhythm notification requires the latest version of watchOS and iOS. It is not intended for use by people under 22 years old or those who have been previously diagnosed with atrial fibrillation (AFib).

All-day battery life is based on the following use: 90 time checks, 90 notifications, 45 minutes of app use, and a 60-minute workout with music playback from Apple Watch via Bluetooth, over the course of 18 hours; Apple Watch SE (2nd generation) (GPS) usage includes connection to iPhone via Bluetooth during the entire 18-hour test; Apple Watch SE (2nd generation) (GPS + Cellular) usage includes a total of 4 hours of LTE connection and 14 hours of connection to iPhone via Bluetooth over the course of 18 hours. Testing conducted by Apple in August 2022 using preproduction Apple Watch SE (2nd generation) (GPS) and Apple Watch SE (2nd generation) (GPS + Cellular), each paired with an iPhone; all devices tested with prerelease software. Battery life varies by use, configuration, cellular network, signal strength, and many other factors; actual results will vary.

Charge times are from 0–80% and 0–100% using the included Apple Watch Magnetic Charger to USB-C Cable. Testing conducted by Apple in August 2022 using preproduction Apple Watch SE (2nd generation) (GPS) and Apple Watch SE (2nd generation) (GPS + Cellular), each paired with an iPhone; all devices tested with prerelease software, Apple Watch Magnetic Charger to USB-C Cable (Model A2652), and Apple 20W USB-C Power Adapter (Model A2305). Charge time varies with settings and environmental factors; actual results will vary.

Emergency SOS requires a cellular connection or Wi-Fi calling with an internet connection from your Apple Watch or nearby iPhone.

Requires Apple Watch Series 7, SE, Ultra, or later. For a list of supported countries and regions, see [apple.com/watchos/feature-availability](https://apple.com/watchos/feature-availability).

Apple Watch SE has a water resistance rating of 50 meters under ISO standard 22810:2010. This means that it may be used for shallow-water activities like swimming in a pool or ocean. Apple Watch SE should not be used for scuba diving, waterskiing, or other activities involving high-velocity water or submersion below shallow depth. Water resistance is not a permanent condition and can diminish over time. For additional information see [support.apple.com/en-us/HT205000](https://support.apple.com/en-us/HT205000).

Wireless service plan required for cellular service. Contact your service provider for more details. Connection may vary based on network availability. Check [apple.com/watch/cellular](https://apple.com/watch/cellular) for participating wireless carriers and eligibility. See [support.apple.com/HT207578](https://support.apple.com/HT207578) for additional setup instructions.

Not all features will be available if the Apple Watch is set up through Apple Watch For Your Kids. Wireless service plan required for cellular service. Contact your service provider for more details. Check [apple.com/watch/cellular](https://apple.com/watch/cellular) for participating wireless carriers and eligibility.

International roaming coverage is determined by your carrier. Please check with your carrier for details. For a list of supported carriers, see [apple.com/watch/cellular](https://apple.com/watch/cellular).

Data accurate as of product launch. Product statements are based on U.S. configuration of Apple Watch SE paired with Sport Loop.

Carbon neutral combinations of this product include Apple Watch SE paired with Sport Loop, Milanese Loop, Braided Solo Loop, and Pride Edition Braided Solo Loop.

Product recycled or renewable content is the mass of certified recycled material relative to the overall mass of the device, not including packaging or in-box accessories.

Our manufacturing electricity is sourced from clean electricity, including a mix of supplier and Apple clean energy projects.

50% of all carbon neutral products by weight are planned, as of product launch, to be shipped via non-air modes of transportation over the lifetime of the products.

Carbon reductions are calculated against a baseline scenario: 1) No use of clean electricity for manufacturing or product use, beyond what is already available on the latest modeled grid (based on regional emissions factors). 2) Apple's carbon intensity of key materials as of 2015 (our baseline year for our 2030 product carbon neutrality goal). Carbon intensity of materials reflects use of recycled content and production technology. 3) Apple's average mix of transportation modes (air, rail, ocean, ground) by product line across three years (fiscal years 2017 to 2019) to best capture the baseline transportation emissions of our products.

For more information about our use of carbon credits, please see the Product Environmental Report.

Based on retail packaging as shipped by Apple. Breakdown of U.S. retail packaging by weight. Adhesives, inks, and coatings are excluded from our calculations of plastic content and packaging weight.

Apple is matching 100% of expected electricity consumption only for carbon neutral aluminum Apple Watch Series 10, Apple Watch SE, and Apple Watch Ultra 2 combinations.

Apple Watch SE meets California Energy Commission's Energy Efficiency Standards for Small Battery Charger Systems as outlined in the California Code of Regulations.

Apple's Regulated Substances Specification describes Apple's restrictions on the use of certain chemical substances in materials in Apple products, accessories, manufacturing processes, and packaging used for shipping products to Apple's end-customers. Restrictions are derived from international laws or directives, regulatory agencies, eco-label requirements, environmental standards, and Apple policies. Every Apple product is free of PVC and phthalates except for AC power cords in India, Thailand (for two-prong AC power cords), and South Korea, where we continue to seek government approval for our PVC and phthalates replacement. Apple products comply with the European Union Directive 2011/65/EU and its amendments, including exemptions for the use of lead such as high-temperature solder. Apple is working to phase out the use of these exempted substances for new products where technically possible.

The ability to measure blood oxygen is no longer available on Apple Watch units sold by Apple in the United States beginning January 18, 2024. These are indicated with part numbers ending in LW/A. Learn how to identify your Apple Watch.

Apple Watch Ultra 2, Apple Watch Series 10, and Apple Watch SE require iPhone Xs or later with iOS 18 or later.