

## iPad (8th generation) – Technical specifications



### Finish

- Silver
- Space Gray
- Gold

### Capacity<sup>1</sup>

- 32GB
- 128GB

### Size and Weight<sup>2</sup>

- Wi-Fi
  - Height: 9.8 inches (250.6 mm)
  - Width: 6.8 inches (174.1 mm)
  - Depth: 0.29 inch (7.5 mm)
  - Weight: 1.08 pounds (490 grams)
- Wi-Fi + Cellular
  - Height: 9.8 inches (250.6 mm)
  - Width: 6.8 inches (174.1 mm)
  - Depth: 0.29 inch (7.5 mm)
  - Weight: 1.09 pounds (495 grams)

### Buttons and Connectors

- Home/Touch ID sensor
- Stereo speakers
- Smart Connector
- Lightning connector
- 3.5 mm headphone Jack
- On/Off – Sleep/Wake
- Volume Up/Down
- Nano-SIM tray (cellular models)
- Dual microphones

### In the Box

- iPad
- Lightning to USB-C Cable
- USB-C Power Adapter

### Display

- Retina display
- 10.2-inch (diagonal) LED-backlit Multi-Touch display with IPS technology
- 2160-by-1620-pixel resolution at 264 pixels per inch (ppi)
- 500 nits brightness
- Fingerprint-resistant oleophobic coating
- Supports Apple Pencil (1st generation)

### Chip

- A12 Bionic chip with 64-bit architecture
- Neural Engine

### Camera

- 8MP camera
- f/2.4 aperture
- Five-element lens
- Hybrid IR filter
- Backside illumination
- Live Photos
- Autofocus
- Panorama (up to 43MP)
- HDR for photos
- Exposure control
- Burst mode
- Tap to focus
- Timer mode
- Auto image stabilization
- Body and face detection
- Photo geotagging

### Video Recording

- 1080p HD video recording at 30 fps
- Slo-mo video support for 720p at 120 fps
- Time-lapse video with stabilization
- Video image stabilization
- Body and face detection
- 3x video zoom
- Video geotagging

### FaceTime HD Camera

- 1.2MP photos
- f/2.4 aperture
- Retina Flash
- Backside illumination
- Live Photos
- 720p HD video recording
- HDR for photos
- Body and face detection
- Burst mode
- Exposure control
- Timer mode

### Video Calling<sup>3</sup>

- FaceTime video
- iPad to any FaceTime-enabled device over Wi-Fi or cellular

### Audio Calling

- FaceTime audio
- iPad to any FaceTime-enabled device over Wi-Fi or cellular

### Speakers

- Stereo speakers

### Microphones

- Dual microphones for calls, video recording, and audio recording

### Cellular and Wireless

- All models
  - Wi-Fi (802.11a/b/g/n/ac); dual band (2.4GHz and 5GHz); HT80 with MIMO
  - Bluetooth 4.2 technology
- Wi-Fi + Cellular model
  - UMTS/HSPA/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz); GSM/EDGE (850, 900, 1800, 1900 MHz)
  - Gigabit-class LTE (Bands 1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 14, 17, 18, 19, 20, 21, 25, 26, 29, 30, 34, 38, 39, 40, 41, 66, 73)<sup>4</sup>
  - Data only<sup>5</sup>
  - Wi-Fi calling<sup>6</sup>
  - eSIM<sup>6</sup>
  - [Learn more about cellular data](#)

### SIM Card

- Nano-SIM (supports Apple SIM<sup>6</sup>)
- eSIM<sup>6</sup>

### Location

- All models
  - Digital compass
  - Wi-Fi
  - iBeacon microlocation
- Wi-Fi + Cellular model
  - Built-in GPS/GNSS
  - Cellular

### Sensors

- Touch ID
- Three-axis gyro
- Accelerometer
- Barometer
- Ambient light sensor

### Touch ID

- Unlock iPad
- Secure personal data within apps
- Make purchases from the iTunes Store, App Store, and Apple Books

### Apple Pay

- Pay with your iPad using Touch ID within apps and on the web
- Send and receive money in Messages

[Learn more about Apple Pay](#)

### Siri<sup>7</sup>

- Use your voice to send messages, set reminders, and more
- Get proactive suggestions
- Use hands-free
- Listen and identify songs

[Learn more about Siri](#)

### Power and Battery<sup>8</sup>

- All models
  - Built-in 32.4-watt-hour rechargeable lithium-polymer battery
  - Up to 10 hours of surfing the web on Wi-Fi or watching video
  - Charging via power adapter or USB to computer system
- Wi-Fi + Cellular model
  - Up to 9 hours of surfing the web using cellular data network

### Operating System

#### iPadOS 14

iPadOS comes with powerful features and built-in apps designed to take advantage of the unique capabilities of iPad. [See what's new in iPadOS 14](#)

### Accessibility

Accessibility features help people with disabilities get the most out of their new iPad. With built-in support for vision, hearing, mobility, and learning, you can create and do amazing things. [Learn more - Accessibility](#)

Features include:

- Voice Control
- VoiceOver
- Zoom
- Magnifier
- Siri and Dictation
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

### Built-in Apps

- App Store
- Books
- Calendar
- Camera
- Clock
- Contacts
- FaceTime
- Files
- Find My
- Home
- iTunes Store
- Mail
- Maps
- Measure
- Messages
- Music
- News
- Notes
- Photo Booth
- Photos
- Podcasts
- Reminders
- Safari
- Settings
- Shortcuts
- Siri
- Stocks
- Tips
- TV
- Voice Memos

### Free Apps from Apple

*Pages, Numbers, Keynote, iMovie, GarageBand, Clips and Apple Store app are preinstalled on iPad.*

- Pages
- Numbers
- Keynote
- iMovie
- GarageBand
- Apple Store
- Trailers
- Remote
- Music Memos
- Clips
- Swift Playgrounds
- Support

### System Requirements

- Apple ID (required for some features)
- Internet access<sup>9</sup>

Syncing to a Mac or PC requires:

- macOS Catalina 10.15 using the Finder
- macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
- Windows 7 or later using iTunes 12.10 or later (free download from [www.itunes.com/download](http://www.itunes.com/download))

### Languages

- Language support**
  - English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Spain), Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- QuickType keyboard support**
  - English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY, Pinyin 10 Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10 Key, Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2-Set, 10 Key), Spanish (Latin America, Mexico, Spain), Albanian, Arabic (Modern Standard, Najdi), Armenian, Assamese, Azerbaijani, Bangla, Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Stroke, Sucheng), Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Emoji, Estonian, Faroese, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Indonesian, Irish, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari, Latin), Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Malthili (Bangla), Malay (Arabic, Latin), Malayalam, Maltese, Manipuri (Bangla, Meetei Mayek), Maori, Marathi, Mongolian, Nepali, Norwegian, Odia, Pashto, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Sanskrit, Santali (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili, Swedish, Tajik, Tamil (Anjali, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese, Welsh
- QuickType keyboard support with predictive input**
  - English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic (Najdi and MSA), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- Siri languages**
  - English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Hebrew (Saudi Arabia), United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Arabic (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- Dictation languages**
  - English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- Definition dictionary support**
  - English, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Korean, Spanish, Danish, Dutch, Hebrew, Hindi, Norwegian, Portuguese, Russian, Swedish, Thai, Turkish
- Thesaurus**
  - English (UK, U.S.)
- Bilingual dictionary support**
  - Arabic, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Spanish, Korean, Dutch, Hindi, Portuguese, Russian, Thai, Vietnamese
- Spell check**
  - English, French, German, Italian, Spanish, Arabic, Arabic Najdi, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

### Audio Playback

- Audio formats supported: AAC (8 to 320 Kbps), Protected AAC (from iTunes Store), HE-AAC, MP3 (8 to 320 Kbps), MP3 VBR, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Audible formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+), Apple Lossless, AIFF, and WAV
- User-configurable maximum volume limit

### TV and Video

- AirPlay Mirroring, photos, audio, and video out to Apple TV (2nd generation or later)
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)
- Video formats supported: H.264 video up to 4K, 30 frames per second, High Profile level 4.2 with AAC-LC audio up to 160 Kbps, 48kHz, stereo audio or Dolby Audio up to 1008 Kbps, 640 by 480 pixels, 30 frames per second, m4v, .mp4, and .mov file formats; MPEG-4 video up to 2.5 Mbps, 640 by 480 pixels, 30 frames per second, Simple Profile with AAC-LC audio up to 160 Kbps per channel, 48kHz, stereo audio or Dolby Audio up to 1008 Kbps, 48kHz, stereo or multichannel audio, in .m4v, .mp4, and .mov file formats; Motion JPEG (M-JPEG) up to 35 Mbps, 1280 by 720 pixels, 30 frames per second, audio in .avi file format

### Mail Attachment Support

- Viewable document types**
  - .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote); .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint); .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip, .ics

### Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

### iPad and the Environment

iPad is designed with the following features to reduce its environmental impact.<sup>10</sup> [See the iPad Product Environmental Report](#)

### Made with better materials

- 100% recycled aluminum in the enclosure
- 100% recycled tin in the solder of the main logic board
- 60% or more recycled plastic in multiple components

### Energy efficient

- ENERGY STAR<sup>®</sup> certified<sup>11</sup>

### Smarter chemistry<sup>12</sup>

- Arsenic-free display glass
- Mercury-free display
- BFR-, PVC-, and beryllium-free

### Green manufacturing

- Apple's Zero Waste Program helps suppliers eliminate waste sent to landfill
- All final assembly plants are transitioning to 100% renewable energy for Apple production

### Responsible packaging

- 100% of virgin wood fiber comes from responsibly managed forests
- Recyclable, majority-fiber packaging

### Apple and the Environment

We're committed to making our products without taking from the earth, and to become carbon neutral across our entire business, including products, by 2030. [See Apple's commitment](#)

1. Available space is less and varies due to many factors. A standard configuration uses approximately 10GB to 13GB of space (including iPadOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them. Storage capacity subject to change based on software version and may vary by device.

2. Size and weight vary by configuration and manufacturing process.

3. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.

4. Data plan required. Gigabit-class LTE and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see [apple.com/ipad/LTE](http://apple.com/ipad/LTE).

5. Cellular data plan is sold separately. The model you purchase is configured to work with a particular cellular network technology. Check with your carrier for compatibility and cellular data plan availability.

6. Not all carriers support Apple SIM and eSIM. See your carrier for details. Not available in China mainland.

7. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.

8. Testing conducted by Apple in August 2020 using preproduction iPad (8th generation) units and software. Testing consisted of full battery discharge while performing each of the following tasks: video playback and internet browsing using Wi-Fi or cellular data network; video content was a repeated 2-hour 23-minute movie purchased from the iTunes Store. Internet over Wi-Fi and cellular data network tests were conducted using dedicated web servers, browsing snapshot versions of 20 popular web pages. All settings were default except: Wi-Fi was associated with a network (except for internet browsing over cellular data network); the Wi-Fi feature Ask to Join Networks and Auto-Brightness were turned off; Brightness was set to 50%; and WPA2 encryption was enabled. Battery life depends on device settings, usage, and many other factors. Battery tests are conducted using specific iPad units; actual results may vary.

9. Wireless broadband recommended; fees may apply.

10. Data accurate as of product launch.

11. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.

12. Apple defines its restrictions on harmful substances, including definitions for what Apple considers to be "free of," in the [Apple Regulated Substances Specification](#). Every Apple product is free of PVC and phthalates with the exception of 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.

Published Date: Feb 4, 2021