iPad Pro 12,9 inch (5th generation) - Technical Specifications





Finish

- Silver
- Space Gray

Capacity[1]

- 128GB
- 256GB
- 512GB
- 1TB
- 2TB

Size and Weight[2]

- **Wi-Fi models**
  - Width: 8.46 inches (214.9 mm)
  - Height: 11.04 inches (280.6 mm)
  - Depth: 0.25 inch (6.4 mm)
  - Weight: 1.5 pounds (682 grams)
- **Wi-Fi + Cellular models**
  - Width: 8.46 inches (214.9 mm)
  - Height: 11.04 inches (280.6 mm)
  - Depth: 0.25 inch (6.4 mm)
  - Weight: 1.51 pounds (685 grams)

Buttons and Connectors

- Five microphones
- Four speakers
- Top button
- Volume up/down
- Camera
- Magnetic connector
- Thunderbolt/USB 4
- Smart Connector
- Nano-SIM tray

In the Box

- iPad Pro
- USB-C Charge Cable (1 meter)
- 20W USB-C Power Adapter

Display

- Liquid Retina XDR display
- 12.9-inch (diagonal) mini-LED backlit Multi-Touch display with IPS technology
- 2D backlighting system with 2596 full-array local dimming zones
- 2732-by-2048-pixel resolution at 264 pixels per inch (ppi)
- ProMotion technology
- Wide color display (P3)
- True Tone display
- Fingerprint-resistant oleophobic coating
- Fully laminated display
- Antireflective coating
- 1.8% reflectivity
- SDR brightness: 600 nits max
- XDR brightness: 1000 nits max full screen, 1600 nits peak (HDR content only)
- 1,000,000:1 contrast ratio
- Supports Apple Pencil (2nd generation)

The 12.9-inch iPad Pro display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured as a standard rectangular shape, the screen is 12.9 inches diagonally (actual viewable area is less).

Chip

- Apple M1 chip
- 8-core CPU with 4 performance cores and 4 efficiency cores
- 8-core GPU
- 16-core Neural Engine
- 8GB RAM on models with 128GB, 256GB, or 512GB storage
- 16GB RAM on models with 1TB or 2TB storage

Camera

- Pro camera system: Wide and Ultra Wide cameras
- Wide: 12MP, ƒ/1.8 aperture
- Ultra Wide: 10MP, ƒ/2.4 aperture, and 125° field of view
- 2x optical zoom out
- Digital zoom up to 5x
- Five-element lens (Wide and Ultra Wide)
- Brighter True Tone flash
- Panorama (up to 63MP)
- Sapphire crystal lens cover
- Autofocus with Focus Pixels (Wide)
- Smart HDR 3
- Wide color capture for photos and Live Photos
- Lens correction (Ultra Wide)
- Advanced red-eye correction
- Photo geotagging
- Auto image stabilization
- Burst mode
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 25 fps, 30 fps, or 60 fps (Wide)
- 1080p HD video recording at 25 fps, 30 fps, or 60 fps
- 720p HD video recording at 30 fps
- 2x optical zoom out
- Audio zoom
- Brighter True Tone flash
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Extended dynamic range for video up to 30 fps
- Cinematic video stabilization (4K, 1080p, and 720p)
- Continuous autofocus video
- Playback zoom
- Video formats recorded: HEVC and H.264
- Stereo recording

TrueDepth Camera

- 12MP Ultra Wide camera, 122° field of view
- ƒ/2.4 aperture
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with six effects (Natural, Studio, Contour, Stage, Stage Mono, High-Key Mono)
- Animoji and Memoji
- Smart HDR 3
- 1080p HD video recording at 25 fps, 30 fps, or 60 fps
- Time-lapse video with stabilization
- Extended dynamic range for video up to 30 fps
- Cinematic video stabilization (1080p and 720p)
- Wide color capture for photos and Live Photos
- Lens correction
- Retina Flash
- Auto image stabilization
- Burst mode

Video Calling[3]

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

Audio Calling[3]

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

Speakers

- Four speaker audio

Microphones

- Five studio-quality microphones for calls, video recording, and audio recording

Cellular and Wireless

- **All models**
  802.11ax Wi-Fi 6; simultaneous dual band (2.4GHz and 5GHz); HT80 with MIMO
  Bluetooth 5.0 technology
- **Wi-Fi + Cellular models**
  Model A2301 and A2379:
  5G NR (Bands n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n66, n71, n77, n78, n79)[4]
  5G NR mmWave (Bands n260, n261)
  FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 14, 17, 18, 19, 20, 21, 25, 26, 28, 29, 30, 32, 66, 71)
  TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)
  UMTS/HSPA/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
  GSM/EDGE (850, 900, 1800, 1900 MHz)
  Data only[5]
  Wi-Fi calling[4]
  eSIM[6]
  Learn more about cellular data

For details on 5G and LTE support, contact your carrier and see apple.com/ipad/cellular/networks.

SIM Card

- Nano-SIM (supports Apple SIM[6])
- eSIM[6]

Location

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

Sensors

- Face ID
- LiDAR Scanner
- Three-axis gyro
- Accelerometer
- Barometer
- Ambient light sensor

Face ID

- Enabled by TrueDepth camera for facial recognition
- 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 Face ID within apps and on the web
- Send and receive money in Messages

Learn more about Apple Pay

Siri[7]

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

Learn more about Siri

Charging and Expansion
Thunderbolt / USB 4 port with support for:

- Charging

- DisplayPort
- Thunderbolt 3 (up to 40Gb/s)
- USB 4 (up to 40Gb/s)
- USB 3.1 Gen 2 (up to 10Gb/s)

Display Support

- Supports full native resolution on the built-in display at millions of colors
  - Supports one external display with up to 6K resolution at 60Hz
- Thunderbolt 3 digital video output
  - Native DisplayPort output over USB-C
  - VGA, HDMI, DVI, and Thunderbolt 2 output supported using adapters (sold separately)[8]
- Video mirroring
  - Up to 4K AirPlay for mirroring, photos, and video out to Apple TV (2nd generation or later) or AirPlay 2-enabled smart TV
  - Video mirroring and video out support through USB-C Digital AV Multiport Adapter and USB-C VGA Multiport Adapter (adapters sold separately)[8]

Power and Battery[9]

- Built-in 40.88-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-C to computer system
- **Wi-Fi + Cellular models**
  - Up to 9 hours of surfing the web using cellular data network

Operating System
iPadOS 15
iPadOS comes with powerful features and built-in apps designed to take advantage of the unique capabilities of iPad.
Learn more about iPadOS

Accessibility
Built-in accessibility features supporting vision, mobility, hearing, and cognitive disabilities help you get the most out of your iPad. Learn more about Accessibility

Features include:

- VoiceOver
- Voice Control
- Zoom
- Magnifier
- RTT support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Spoken Content

Built-in Apps

- App Store
- Books
- Calendar
- Camera
- Clock
- Contacts
- FaceTime
- Files
- Find My
- Home
- iTunes Store
- Magnifer
- Mail
- Maps
- Measure
- Messages
- Music
- News
- Notes
- Photo Booth

- Photos
- Podcasts
- Reminders
- Safari
- Settings
- Shortcuts
- Siri
- Stocks
- Tips
- Translate
- 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
- Clips
- Swift Playgrounds
- Support

System Requirements

- Apple ID (required for some features)
- Internet access[10]
- Syncing to a Mac or PC requires:
  - macOS Catalina 10.15 or later using the Finder
  - macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
  - Windows 10 and iTunes 12.12 or later (free download from itunes.com/download)

Languages

- **Language support**
  English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, 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), Ainu, Albanian, Amharic, Arabic (Modern Standard, Najdi), Armenian, Assamese, Assyrian, 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, Fula (Adlam), Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Igbo, Indonesian, Irish Gaelic, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari), Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili, Malay (Arabic, Latin), Malayalam, Maltese, Manipuri (Bangla, Meetei Mayek), Maori, Marathi, Mongolian, Navajo, Nepali, Norwegian (Bokmål, Nynorsk), Odia, Pashto, Persian, Persian (Afghanistan), Polish, Portuguese (Brazil, Portugal), Punjabi, Rohingya, Romanian, Russian, Sanskrit, Santali (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili, Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese, Welsh
- **QuickType keyboard support with autocorrection**
  Arabic (Modern Standard), Arabic (Najdi), Bangla, Bulgarian, Catalan, Cherokee, Chinese - Simplified (Pinyin QWERTY), Chinese - Traditional (Pinyin QWERTY), Chinese - Traditional (Zhuyin), Croatian, Czech, Danish, Dutch, English (Australia), English (Canada), English (India), English (Japan), English (Singapore), English (UK), English (U.S.), Estonian, Filipino, Finnish, Dutch (Belgium), French (Belgium), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari), Hindi (Transliteration), Hungarian, Icelandic, Indonesian, Irish Gaelic, Italian, Japanese (Kana), Japanese (Romaji), Korean (2-set), Latvian, Lithuanian, Macedonian, Malay, Marathi, Norwegian (Bokmål), Norwegian (Nynorsk), Persian, Persian (Afghanistan), Polish, Portuguese (Brazil), Portuguese (Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic), Serbian (Latin), Slovak, Slovenian,

Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Swedish, Tamil (Anjal), Tamil (Tamil 99), Telugu, Thai, Turkish, Ukrainian, Urdu, Vietnamese

- **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 (Modern Standard, Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- **QuickType keyboard support with multilingual input**
  English (U.S.), English (Australia), English (Canada), English (India), English (Singapore), English (UK), Chinese – Simplified (Pinyin), Chinese – Traditional (Pinyin), French (France), French (Belgium), French (Canada), French (Switzerland), German (Germany), German (Austria), German (Switzerland), Italian, Japanese (Romaji), Portuguese (Brazil), Portuguese (Portugal), Spanish (Spain), Spanish (Latin America), Spanish (Mexico), Dutch (Belgium), Dutch (Netherlands), Hindi (Latin)
- **QuickType keyboard support with contextual suggestions**
  English (U.S.), English (Australia), English (Canada), English (India), English (Singapore), English (UK), Chinese (Simplified), French (Belgium), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Italian, Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Arabic (Modern Standard), Arabic (Najdi), Dutch (Belgium), Dutch (Netherlands), Hindi (Devanagari), Hindi (Latin), Russian, Swedish, Portuguese (Brazil), Turkish, Vietnamese
- **QuickPath keyboard support**
  English (U.S.), English (Australia), English (Canada), English (India), English (Singapore), English (UK), Chinese (Simplified), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Italian, Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Portuguese (Brazil), Portuguese (Portugal), Dutch (Belgium), Dutch (Netherlands), Swedish, 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 (Japan), Korean (Republic of Korea), Mandarin Chinese (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Türkiye)
- **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, Shanghainese (China mainland), Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
  English (UK, U.S.), Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Bilingual dictionary support**
  Arabic – English, Chinese (Simplified) – English, Chinese (Traditional) – English, Dutch – English, French – English, French – German, German – English, Gujarati – English, Hindi – English, Indonesian – English, Italian – English, Japanese – English, Japanese – Chinese (Simplified), Korean – English, Polish – English, Portuguese – English, Russian – English, Spanish – English, Tamil – English, Telugu – English, Thai – English, Urdu – English, Vietnamese – English
- **Thesaurus**
  English (UK, U.S.), Chinese (Simplified)
- **Spell check**
  English, French, German, Italian, Spanish, Arabic, Arabic Najdi, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish
- **Apple Pay supported regions**
  Armenia, Australia, Austria, Azerbaijan, Bahrain, Belarus, Belgium, Brazil, Bulgaria, Canada, China mainland,[11] Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Georgia, Germany, Greece, Greenland, Guernsey, Hong Kong, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Japan, Jersey, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macao, Malta, Mexico, Monaco, Montenegro, Netherlands, New Zealand, Norway, Palestine, Poland, Portugal, Qatar, Romania, San Marino, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, UK, Ukraine, United Arab Emirates, U.S., Vatican City

Video Playback

- Supported formats include HEVC, H.264, and ProRes
- HDR with Dolby Vision, HDR10, and HLG

Audio Playback

- Supported formats include AAC, MP3, Apple Lossless, FLAC, Dolby Digital, Dolby Digital Plus, and Dolby Atmos
- Spatial audio playback
- User-configurable maximum volume limit

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; .usdz (USDZ Universal)

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 Pro and the Environment
iPad Pro is designed with the following features to reduce its environmental impact:[12] Learn more about the iPad Pro Product Environmental Report

Made with better materials

- 100% recycled aluminum in the enclosure
- 100% recycled rare earth elements in the magnets of the speakers and enclosure
- 100% recycled tin in the solder of the main logic board, True Tone flash, and wireless charger for Apple Pencil
- 35% or more recycled plastic in multiple components

Energy efficient

- ENERGY STAR® certified[13]

Smarter chemistry[14]

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

Green manufacturing

- Apple's Zero Waste Program helps suppliers eliminate waste sent to landfill
- All final assembly supplier sites 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. Learn more about Apple's commitment to the Environment

1. Available space is less and varies due to many factors. A standard configuration uses approximately 12GB to 17GB of space, including iPadOS 15 with its latest features and Apple apps that can be deleted. Apple apps that can be deleted use about 4.5GB of space, and you can download them back from the App Store. Storage capacity subject to change based on software version, settings, and iPad model.
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. 5G, Gigabit 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 5G and LTE support, contact your carrier and see apple.com/ipad/cellular.
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. Standard dynamic range video content only.
9. Testing conducted by Apple in March 2021 using preproduction iPad Pro 11-inch (3rd generation) and iPad Pro 12.9-inch (5th 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 (cellular models subscribed to LTE and 5G carrier networks). 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, network, and many other factors. Battery tests are conducted using specific iPad units; actual results may vary.

10. Wireless broadband recommended; fees may apply.
11. In China mainland, you can use Apple Pay on the web in Safari only on compatible iPhone and iPad models using iOS 11.2 or later.
12. Data accurate as of product launch.
13. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
14. 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.

Some features may not be available for all countries or all areas. View complete list.

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