IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MYPORT TECHNOLOGIES, INC., Plaintiff, v. APPLE, INC. Defendant.	Civil Action No. **DEMAND FOR JURY TRIAL**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff MyPort Technologies, Inc. ("MyPort" or "Plaintiff") brings this action for patent infringement under 35 U.S.C. § 1, *et seq*., against Defendant Apple, Inc. and alleges as follows:

THE PARTIES

1. Plaintiff MyPort is a Delaware corporation formed on November 18, 1999, with an address at 2711 Northview Drive, McKinney, Texas 75072. MyPort's founder and current CEO is Mr. Michael Malone.

2. Defendant Apple is a California corporation with its principal place of business at One Apple Park Way, Cupertino, CA 95014. Apple is a publicly traded company that may be served through its registered agent for service, CT Corporation Trust Company, 1209 Orange Street, Wilmington, Delaware 19801.

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the provisions of the Patent Laws of the United States of America, Title 35, U.S.C., § 1 *et seq*.

4. This Court has subject matter jurisdiction over MyPort's claims under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has both general and personal jurisdiction over Apple. Apple has committed acts within this District giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over Apple would not offend traditional notions of fair play and substantial justice.

6. Apple has conducted and continues to conduct business within this District. Apple, directly or through subsidiaries or intermediaries (including distributors, retailers, and others), ships, distributes, makes, uses, offers for sale, sells, imports, and/or advertises (including by providing interactive web pages) its products and/or services in the United States and in this District and/or contributes to and actively induces its customers and others to ship, distribute, make, use, offer for sale, sell, import, and/or advertise (including the provision of interactive web pages) infringing products and/or services in the United States and this District.

7. Apple, directly and through subsidiaries or intermediaries (including distributors, retailers, and others), has purposefully and voluntarily placed one or more of its infringing products and/or services, as described below, into the stream of commerce with the expectation that those products will be purchased and used by customers and/or consumers in this District. These infringing products and/or services have been and continue to be made, used, sold, offered for sale, purchased, and/or imported by customers and/or consumers in this District.

8. Venue in this District is proper under 28 U.S.C. §§ 1391 and 1400(b).

9. MyPort is an entity organized under the laws of Delaware and resides in Delaware for purposes of venue under 28 U.S.C. § 1400(b).

10. Apple has a regular and established place of business in this District. Apple has employees and operates a retail store in this District at 125 Christiana Mall, Newark, DE 19702. *See* https://www.apple.com/retail/christianamall/ (last

accessed Nov. 5, 2024); https://www.christianamall.com/en/directory/apple-8718.html (last accessed Nov. 5, 2024). Apple's retail store at 125 Christiana Mall sells and offers for sale infringing products and/or services.

11. Venue is also proper based on the facts alleged in the foregoing paragraphs, which MyPort incorporates as if fully set forth herein.

THE PATENTS-IN-SUIT

12. United States Patent No. 9,832,017 ("the '017 Patent"), entitled "Apparatus for personal voice assistant, location services, multi-media capture, transmission, speech to text conversion, photo/video image/object recognition, creation of searchable metatag(s)/ contextual tag(s), storage and search retrieval" issued on November 28, 2017. A true and correct copy of the '017 Patent is attached as Exhibit A.

13. United States Patent No. 10,237,067 ("the '067 Patent"), entitled "Apparatus for voice assistant, location tagging, multi-media capture, transmission, speech to text conversion, photo/video image/object recognition, creation of searchable metatags/ contextual tags, storage and search retrieval" issued on March 19, 2019. A true and correct copy of the '067 Patent is attached as Exhibit B.

14. United States Patent No. 10,721,066 ("the '066 Patent"), entitled "Method for voice assistant, location tagging, multi-media capture, transmission, speech to text conversion, photo/video image/object recognition, creation of searchable metatags/contextual tags, storage and search retrieval" issued on July 21, 2020. A true and correct copy of the '066 Patent is attached as Exhibit C.

15. United States Patent No. 11,188,998 ("the '998 Patent"), entitled "Method for embedding searchable information, encryption, signing operation, transmission, storage and

retrieval" issued on November 30, 2021. A true and correct copy of the '998 Patent is attached as Exhibit D.

16. MyPort owns the '017 Patent, the '067 Patent and the '066 Patent (collectively, the "Speech and Image Recognition Patents"). MyPort also owns the '998 Patent. The Speech and Image Recognition Patents and the '998 Patent are collectively referred to as the Patents-in-Suit.

17. Each of the Patents-in-Suit is valid and enforceable.

18. MyPort has the exclusive right to sue and collect remedies for past infringement of the Patents-in-Suit.

BACKGROUND

19. MyPort incorporates the allegations of the foregoing paragraphs as if fully restated herein.

20. The patented innovations described herein originate from work by Mr. Michael Malone, the sole named inventor of each of the Malone Patents-in-Suit, during his forty-eight years in the technology industry. In the early 1990s, he co-founded a company that engineered, manufactured and distributed fax over internet routers for fax machines, and was a pioneer in bridging the gap between faxes, which were limited to being sent over analog telephone lines, and digital internet communications such as email and texts. A few years later, he co-founded another company in the internet shopping and e-commerce space.

21. In or around 2000, Mr. Malone formed MyPort Technologies, Inc. to patent and protect his numerous inventions in the space of encryption, geotagging, and the use of speech recognition and image recognition to create metadata tags to allow digital photographs to be easily stored and searched.

22. At the time of the invention for the Speech and Image Recognition Patents, the ability for a digital media device, such as a smartphone, to store many media files presented problems, including making it difficult and time-consuming to manually describe and index every media file (such as a picture). There also existed the problem that when these media files were emailed or sent to another party, the receiving party could not search the media files for the specific key indexes that the owner had intended.

23. The patented inventions of the Speech and Image Recognition Patents solved these and other existing problems by, among other things, conceiving of the use of a microphone to capture audio information; a camera to capture image information; GPS to capture location and time information, and the use of data converters to process, convert, and store the audio and image information into a text based searchable file, such as a metadata tag, using speech recognition and image recognition, such as artificial intelligence and/or machine learning, for storage and search retrieval.

24. MyPort's patented innovations of the Speech and Image Recognition Patents have become essential to modern photo, and photo application development. MyPort's Speech and Image Recognition Patents have been cited as prior art against later patent applications from industry leaders on more than one hundred occasions. These patents were recently asserted against and licensed by Samsung.

25. Similarly, at the time of the invention of the '998 Patent, it became increasingly easy to copy, counterfeit, falsify, and misuse digital information of all kinds. The patented inventions of the '998 Patent solved this problem, among others, by providing for securing transmissions by encrypting the digital information as an encrypted file with a digital certificate that is sent and received across the transmission network.

26. The Malone Patents-in-Suit are directed to a patent-eligible, non-abstract idea.

27. The Speech and Image Recognition Patents are directed to systems and methods for improving the usability and functionality of a capture device, which is a technological solution to the problems inherent in existing in digital media devices, including in the way that digital audio and image/video files are transmitted, indexed, stored, and retrieved. The claims of the Speech and Image Recognition Patents do not recite an abstract idea under Alice step one. Rather, the recited inventions improve the functioning of a digital media device by (1) saving storage space, (2) allowing users to more quickly tag their images in a searchable format and therefore actually use their image storage, and (3) preventing the keys to image storage and organization—which are what allow an image to not be lost to the user forever among thousands of other images—from being lost when the image is transferred from one device to another.

28. The Speech and Image Recognition Patents advance the prior art. They address, among other things, a specific improvement to the way in which image and audio information can be stored and search on digital media devices. They include the use of speech recognition and image recognition, such as artificial intelligence, to create metadata searchable tags. The claims specify materials (such as a microphone, camera, data converter, transmitter, etc.), structures and systems, together with software, to enhance and improve upon the capturing and storing of image and audio information. The technological improvements described and claimed in the Malone Patents-in-Suit were not conventional, well-known, or routine at the time of their respective inventions but rather involved novel and non-obvious approaches to problems and shortcomings prevalent in the art at the time. For example, the use of speech recognition and image recognition to create searchable tags as associated metadata for images was not routine or conventional at the time of the invention. *See, e.g.*, ’017 Patent at col. 5:39-58; ’066 Patent at

col. 5:62-6:14; and ’067 Patent at col. 5:50-6:2. The patent specification further describes how the systems and methods of the claimed technology provide a technical improvement over conventional storage, search, and retrieval methods of digital media files. *See, e.g.,* ’017 Patent at col. 2:22-3:30; ’066 Patent at col. 2:43-3:18; and ’067 Patent at col. 2:31-3:39.

29. The claims of the Speech and Image Recognition Patents are additionally patent-eligible because they recite an inventive combination of components and functions, and Apple cannot establish that this combination was routine and conventional. Namely, the claim elements maintain the association between the between the digital image and the text and image recognition context tags in order address problems involving migrating large numbers of files to a new device, sending files to other devices, and the potential loss of “key index words” when files were transferred. ’017 Patent at 2:49-59; ’067 Patent at 2:59-3:2; and ’066 Patent at 3:4-15. Further, the claimed first data converter, media/second data converter, and—for claims 6-9—combiner, are not generic structures or otherwise well understood, conventional, or routine.

30. The ’998 Patent is patent eligible for the same reasons as the Speech and Image Recognition Patents as noted above. Additionally, the claims of the ’998 Patent are directed to a technological solution to a technological problem. The written description discloses improving security of digital information through specific means of generating a digital certificate that is encoded onto the image and/or audio files and then encrypted in such a way that the file cannot be used without access to a secret key, and the claims reflect this improvement. ’998 Patent at 8:54-9:3. The ’998 Patent claims, therefore, recite patent eligible subject matter at Alice step one.

31. One example of a problem with the prior art is that the file metadata is not stored using any secure method. The ’998 patented invention provides a user the ability to attach, mix, and modify media files easily and mark each image, video, audio, photograph or media file as his

or her own work, to eliminate the possibility of plagiarism and to provide a digital certificate while transmitting said media files for secure storage or to another recipient or source. *Id.* at 15:51-57.

32. The claims of the ’998 Patent are necessarily rooted in computer technologies and provide technical and practical solutions to overcome problems associated with prior art encrypted systems. The claimed systems and methods are rooted in computer technologies at least because, for example, they are directed to improving security of data storage in a computer system.

33. The claims of the ’998 Patent describe and claim solutions to the problems in the art by controlling an encryptor to encrypt the augmented captured information as an encrypted file and then to initiate a signing operation for adding signature information to the file and to place the identifiable encrypted file in association with subscriber information, among other steps. *See, e.g. id.* at Claim 1. These steps were unconventional and non-generic.

34. The written description for each Patent-in-Suit supports each of the elements of the claims, allowing a person of skill in the art to understand what the elements cover and how the non-conventional and non-routine combination of claim elements differed markedly from and improved upon an isolated element that may have been considered conventional, generic, or routine.

ALLEGATIONS OF PATENT INFRINGEMENT

35. Apple makes, uses, sells, offers for sale, and/or imports certain products and systems, that include, but are not limited to, smartphones and tablets (“Accused Products”). Identification of the Accused Products will be provided in Plaintiff’s infringement contentions pursuant to the Court’s scheduling order and local rules. Non-limiting examples of the Accused

Products include different versions of the Apple smartphones and tablets, such as the iPhone 6 / 6 Plus; iPhone 6S / 6S Plus; iPhone SE (1st); iPhone 7 / 7 Plus; iPhone 8 / 8 Plus; iPhone X; iPhone XS / XS Max; iPhone XR; iPhone 11; iPhone 11 Pro / 11 Pro Max; iPhone SE (2nd); iPhone 12 / 12 Mini; iPhone 12 Pro / 12 Pro Max; iPhone 13 / 13 Mini; iPhone 13 Pro / 13 Pro Max; iPhone SE (3rd); iPhone 14 / 14 Plus; iPhone 14 Pro / 14 Pro Max; iPhone 15 / 15 Plus; iPhone 15 Pro / 15 Pro Max; iPad Air (1st generation); iPad Mini 2; iPad Mini 3; iPad Air 2; iPad Mini 4; iPad Pro (1st generation); iPad (5th generation); iPad Pro (2nd generation); iPad (6th generation); iPad Pro (3rd generation); iPad Mini (5th generation); iPad Air (3rd generation); iPad (7th generation); iPad Pro (4th generation); iPad (8th generation); iPad Air (4th generation); iPad Pro (5th generation); iPad (9th generation); iPad Mini (6th generation); iPad Air (5th generation); iPad Pro (6th generation); iPad (10th generation). These Accused Products directly infringe, literally and/or under the doctrine of equivalents, one or more claims of each of the Patents-in-Suit.

36. MyPort sent a letter to Apple on October 13, 2020, identifying MyPort patents, including each of the Patents-in-Suit, or applications pending at the time that led to the Patents-in-Suit, and specifically alleged that "Apple's iPad, iPad Mini, iPhone, and iPod Touch infringe least the following claims: '017 patent claims 13-17; '067 patent claims 6-9 and 13-17; and '066 patent claims 13-17" and included claim charts enclosing the same. Legal counsel for MyPort and Apple then spoke on the phone on or about December 1, 2020, to discuss the substance of MyPort's allegations. Apple then responded to MyPort's letter on or about January 12, 2021, and the parties exchanged subsequent correspondence. As such, Apple knew of MyPort's patent portfolio and knew or should have known that it infringed the Patents-in-Suit at least as early as October 13, 2020.

37. MyPort has, to the extent required, complied with the marking statute, 35 U.S.C. § 287.

38. As set forth below, the Accused Products incorporate, without any license or permission from MyPort, technology protected by the Patents-in-Suit.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 9,832,017

39. MyPort reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

40. Apple has infringed at least claim 13 and one or more of its dependents of the ’017 Patent under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, the Accused Products.

41. As just one non-limiting example, set forth below with claim language in italics is a description of infringement of exemplary claim 13 of the ’017 Patent (MyPort reserves the right to modify this description, including on the basis of information it obtains during discovery): *a system for capturing image and audio information for storage comprising*: To the extent the preamble is limiting, the Accused Products, such as the iPad Mini 5, contains a camera for capturing image information and a microphone capable of capturing audio information, and memory capable of storing this information.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens
- Hybrid IR filter
- Backside illumination
- Live Photos

* * *

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

* * *

Microphones

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

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

42. The Accused Products include *internal storage*. The Accused Products, such as the iPad Mini 5, provide flash memory, cache memory, and RAM to store information.

iPad mini (5th generation) – Technical Specifications

* * *

Capacity[1]

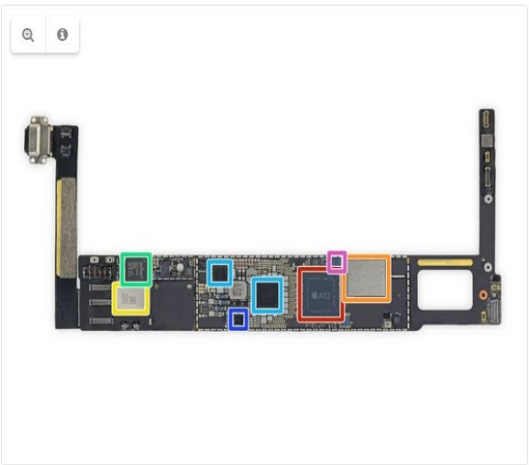
- 64GB
- 256GB

* * *

Chip

- A12 Bionic chip with 64-bit architecture
- Neural Engine
- Embedded M12 coprocessor

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).



- Let's see what kind of silicon Apple managed to squeeze in here:
  - Apple APL1W81 A12 Bionic SoC, layered over Samsung K3UH4H40AM-MGCL 3 GB LPDDR4X DRAM
  - Toshiba TSB3243VD1190CHNA1 64 GB flash memory
  - Apple/USI 339S00551 Bluetooth/WiFi module
  - Broadcom BCM15900 touchscreen controller
  - Apple 343S00282-A0 and 343S00286-A0 (likely PMIC's)
  - NXP 1612A1 USB charging controller
  - NXP 100VB27 NFC controller

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).

43. The Accused Products include *a microphone interfaceable with external audio information source that generates external audio information*. The Accused Products, such as the iPad Mini 5, contain a microphone capable of recording audio information from an external

audio information source. For example, the microphone can record the words of a user who dictates into the microphone.

iPad mini (5th generation) – Technical Specifications

* * *

Microphones

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

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

- Notice the clean lines and muted colors in Apple's foray into abstract art. The second image is *extra* abstract thanks to X-rays.
- Let's channel our inner art critic and try to spot some differences between the newest Mini and its predecessor:
  - Different battery model, with updated (i.e. incompatible) connectors
    - Rated for 19.32 Wh, it matches the last Mini's, has less than the standard iPad's 32.9 Wh, and comes in a little over the Galaxy Note9's 15.4 Wh.
  - Upgraded front-facing camera module
  - Updated ambient light (True Tone) sensors
  - A migrated set of microphones

Here's a clean view with no markings, in case you want to spot the differences yourself.

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).

44. The Accused Products include *a first data converter for capturing the first external audio information from the microphone.* The Accused Products, such as the iPad Mini

5, use the device processor and software for capturing the external audio information from the microphone.

Dictate text on iPhone

With Dictation on iPhone, you can dictate text anywhere you can type it. You can also use typing and Dictation together—the keyboard stays open during Dictation so you can easily switch between voice and touch to enter text.

Dictation requests are processed on your device in many languages—no internet connection is required. When dictating in a search box, dictated text may be sent to the search provider in order to process the search.

Note: Dictation may not be available in all languages or in all countries or regions, and features may vary.

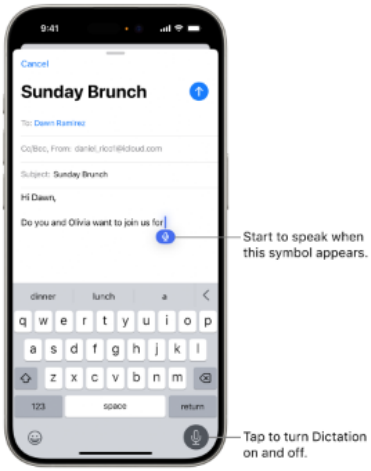
When using Dictation, cellular data charges may apply. See View or change cellular data settings.

Turn on Dictation

1. Go to Settings > General > Keyboard.
2. Turn on Enable Dictation. If a prompt appears, tap Enable Dictation.

To learn more about how Apple protects your information and lets you choose what you share, tap About Dictation & Privacy below Dictation, or see the Apple Privacy website.

Dictate text



Source: support.apple.com/en-us/HT208343 (last accessed Nov. 5, 2024).

45. The Accused Products include *a camera interfacing with an image source to capture an image therefrom.* The camera of the Accused Products, such as the iPad Mini 5, interfaces with an image source. It senses the image and converts it to a series of quantized pixels that, in aggregate, make up the image.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens
- Hybrid IR filter
- Backside illumination
- Live Photos

* * *

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

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  - Upgraded front-facing camera module
  - Updated ambient light (True Tone) sensors
  - A migrated set of microphones

Here's a clean view with no markings, in case you want to spot the differences yourself.

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).

Take photos with your iPad camera

Learn how to take photos with your iPad camera. Choose from camera modes such as Photo, Pano, and Square, and use camera features such as Burst and Live Photos.

Take a photo

Photo is the standard mode that you see when you open Camera. Use Photo mode to take still photos. Swipe the mode selector up or down to choose a different mode, such as Video, Pano, Time-lapse, Slo-mo, and Portrait (on supported models).

1. Open Camera on your iPad.
2. Tap the Shutter button or press either volume button.

Note: For your security, a green dot appears at the top of the screen when Camera is in use. See Control access to hardware features.

Source: support.apple.com/guide/ipad/take-photos-ipad99b53a71/ipados (last accessed Nov. 5, 2024).

46. The Accused Products include *the first data converter processing the captured external audio information and storing it in a first digital audio format as stored digital audio within the capture device, the camera for processing the captured image and storing it as a stored digital image.* Each Accused Product includes a first data converter (e.g., relevant portions of the processor and associated software) that processes the user's words dictated into the microphone (i.e., the captured external audio information) to convert the external audio information into digital audio data and further stores it as digital audio in the device's memory.

Each Accused Product has a camera (including the use of relevant portions of the processor and associated software) that processes images and stores the images as a digital file.

Add or view titles, captions and more in Photos on iCloud.com

You can view metadata about a photo or video, such as the location where it was taken and what camera was used. You can also add or edit a title or caption.

1. In Photos on iCloud.com, double-click the photo or video you want to see more information about.
2. Click ⓘ in the Photos toolbar.
3. To add or edit a title or caption, click Edit, enter text, then click Save.

   The title appears in the Photos toolbar when you view a photo. You can also see it from the thumbnail view.

   To view the caption, open the photo, then click ⓘ.

Note: If you add or edit a caption for a photo or video in your iCloud Shared Photo Library, all participants can see the changes.

Source: https://support.apple.com/en-au/guide/icloud/mm54e2d3fb7a/icloud#:~:text=You%20can%20view%20metadata%20about,Apple%20Account%20(if%20necessary) (last accessed Nov. 5, 2024).

Dictate text on iPhone

With Dictation on iPhone, you can dictate text anywhere you can type it. You can also use typing and Dictation together—the keyboard stays open during Dictation so you can easily switch between voice and touch to enter text.

Dictation requests are processed on your device in many languages—no internet connection is required. When dictating in a search box, dictated text may be sent to the search provider in order to process the search.

Note: Dictation may not be available in all languages or in all countries or regions, and features may vary.

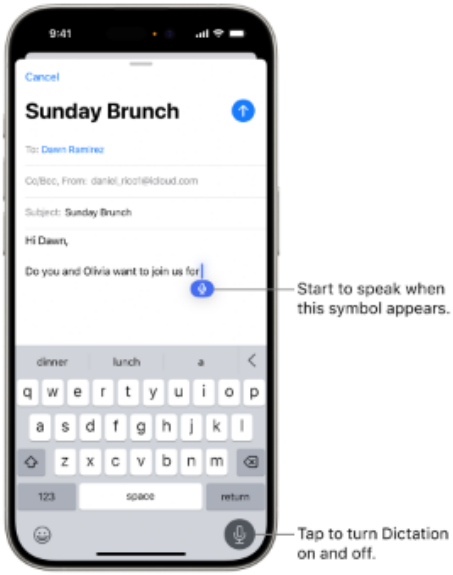
When using Dictation, cellular data charges may apply. See View or change cellular data settings.

Turn on Dictation

1. Go to Settings > General > Keyboard.
2. Turn on Enable Dictation. If a prompt appears, tap Enable Dictation.

To learn more about how Apple protects your information and lets you choose what you share, tap About Dictation & Privacy below Dictation, or see the Apple Privacy website.

Dictate text



Source: support.apple.com/en-us/HT208343 (last accessed Nov. 5, 2024).

What Is Core Audio?

Core Audio is the digital audio infrastructure of iOS and OS X. It includes a set of software frameworks designed to handle the audio needs in your applications. Read this chapter to learn what you can do with Core Audio.

A Little About Digital Audio and Linear PCM

Most Core Audio services use and manipulate audio in linear pulse-code-modulated (*linear PCM*) format, the most common uncompressed digital audio data format. Digital audio recording creates PCM data by measuring an analog (real world) audio signal's magnitude at regular intervals (the *sampling rate*) and converting each sample to a numerical value. Standard compact disc (CD) audio uses a sampling rate of 44.1 kHz, with a 16-bit integer describing each sample—constituting the resolution or *bit depth*.

- A *sample* is single numerical value for a single channel.
- A *frame* is a collection of time-coincident samples. For instance, a stereo sound file has two samples per frame, one for the left channel and one for the right channel.
- A *packet* is a collection of one or more contiguous frames. In linear PCM audio, a packet is always a single frame. In compressed formats, it is typically more. A packet defines the smallest meaningful set of frames for a given audio data format.

Source:

developer.apple.com/library/archive/documentation/MusicAudio/Conceptual/CoreAudioOverview/WhatisCoreAudio/WhatisCoreAudio.html#//apple_ref/doc/uid/TP40003577-CH3-SW1 (last accessed Nov. 5, 2024).

To begin recording, the app installs a tap on the input node and starts up the audio engine, which begins collecting samples into an internal buffer. When a buffer is full, the audio engine calls the provided block. The app's implementation of that block passes the samples directly to the request object's `append(_:)` method, which accumulates the audio samples and delivers them to the speech recognition system.

Source: developer.apple.com/documentation/speech/recognizing_speech_in_live_audio.

View, share, and print photos on iPad

All photos and videos you take with Camera are saved in Photos. With iCloud Photos turned on, all new photos and videos are automatically uploaded and available in Photos on all your devices that are set up with iCloud Photos (with iOS 8.1, iPadOS 13, or later).

Source: support.apple.com/guide/ipad/view-share-and-print-photos-ipad99b53b6d/ipados (last accessed Nov. 5, 2024).

Framework

Speech

Perform speech recognition on live or prerecorded audio, and receive transcriptions, alternative interpretations, and confidence levels of the results.

iOS 10.0+ | iPadOS 10.0+ | Mac Catalyst 13.0+ | macOS 10.15+ | visionOS 1.0+

Overview

Use the Speech framework to recognize spoken words in recorded or live audio. The keyboard's dictation support uses speech recognition to translate audio content into text. This framework provides a similar behavior, except that you can use it without the presence of the keyboard. For example, you might use speech recognition to recognize verbal commands or to handle text dictation in other parts of your app.

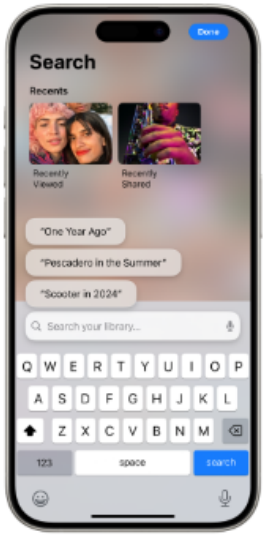
Source: developer.apple.com/documentation/speech (last accessed Nov. 5, 2024).

47. The Accused Products include *a second data converter for converting the received digital audio to a text based searchable file as a text context tag and creating an image recognition searchable context tag with image recognition of at least a portion of the digital image and associating the text and image recognition context tags with the digital image*. When the Accused Products capture spoken audio, the Accused Products can perform speech recognition. The speech recognition converts the digital audio into text in the image's tag field. The Accused Products also use machine learning (or image recognition) to automatically apply image recognition tags to photos stored on the device.

Search for photos and videos on iPhone

When you tap Search in the Photos app, you see suggestions of dates, people, and locations to help you find what you're looking for.

Tap the suggestions or type keywords into the search field—for example, a person's name, date, location, or object—to help you find a specific photo.



Search for photos and videos

1. Go to the Photos app on your iPhone.
2. Tap Search, then search by any of the following:
   - Date (month or year)
   - Place (city or state)
   - Business names (museums, for example)
   - Category (beach or sunset, for example)
   - Events (sports games or concerts, for example)
   - A person identified in People & Pets (see Find and name people and pets)
   - Text (an email address or phone number, for example)
   - Caption (see See photo and video information)

Tip: Looking for something more specific? Refine your search with multiple keywords—keep adding keywords until you find the right photo. Search also suggests keywords to add to your search.

Source: https://support.apple.com/guide/iphone/search-for-photos-and-videos-iph392d77d5f/18.0/ios/18.0 (last accessed Nov. 5, 2024)

See also Apple Photos.

48. As shown above, the Accused Products include *internal storage storing the digital image in association with the text and image recognition context tags*. The Accused Products, such as the iPad Mini 5, provide flash memory, cache memory, and RAM to store information.

49. Apple has committed acts of infringement without license or authorization. Apple knew or should have known that its actions would cause direct and indirect infringement of the ’017 Patent. On information and belief, Apple acted with objective recklessness by proceeding despite an objective high likelihood that its actions constituted infringement of a valid patent, where such action constitutes egregious misconduct.

50. Apple is also liable under 35 U.S.C. § 271(b) for actively inducing infringement and continuing to actively induce infringement. Apple actively induced its customers, distributors, end-users, vendors including customer-support and/or manufacturers to infringe the ’017 Patent. On information and belief, Apple possessed a specific intent to induce infringement, and in fact did induce infringement, by engaging in affirmative acts such as by selling and causing the Accused Products to be manufactured, by providing user guides, installation or instruction manuals, and other training materials, by advertising and solicitation and otherwise providing sales-related materials, and by instructing and/or demonstrating to customers, distributors, end-users, vendors including customer-support and/or manufacturers the normal operation of the Accused Products that infringe the ’017 Patent. Non-limiting examples of such are found above in the various screenshots that instruct performance of the infringing use of the technology. Apple is aware and/or willfully blind that these affirmative acts infringe and/or would induce infringement of the ’017 Patent, of which it had knowledge.

51. Apple is also liable under 35 U.S.C. § 271(c) for contributing to and continuing to contribute to the infringement of the ’017 Patent by, among other things, providing a system for capturing image and audio information for storage in its Accused Products and by encouraging, at a minimum, customers, distributors, end-users, vendors including customer-support and/or manufacturers in this District and elsewhere, to infringe the ’017 Patent. By importing, exporting, manufacturing, distributing, selling, and/or providing the Accused Products and/or Services for their intended use to customers, distributors, end-users, vendors including customer-support and/or manufacturers, Apple has infringed one or more claims of the ’017 Patent. The infringing functionality in the Accused Products is material to the inventions claimed in the ’017 Patent, has no substantial non-infringing uses, and is known to Apple (on information and belief) to be especially made or adapted for use in infringing the ’017 Patent, and which is otherwise not staple articles of commerce suitable for substantial non-infringing use. There are no non-infringing uses for the infringing functionality in the Accused Products other than to create searchable tags as associated metadata for image and/or audio files. Apple is aware and/or willfully blind that these affirmative acts infringe and/or constitute contributory infringement of the ’017 Patent, of which it had knowledge.

52. Apple is liable for indirect infringement, i.e., both inducement and contributory infringement, based on the direct infringement that is the result of activities performed by customers, distributors, end-users, vendors including customer-support and/or manufacturers who use all elements or perform all steps of one or more claims of the ’017 Patent. For example, end users of Apple’s Accused Products infringe, either directly or under the doctrine of equivalents, one or more claims of the ’017 Patent (*e.g.*, claim 13 and one or more of its

dependents). At a minimum, Apple is liable for the indirect infringement of claim 13 and one or more of its dependents of the ’017 Patent.

53. MyPort has been damaged because of Apple’s infringing conduct. Apple is, thus, liable to MyPort in an amount that adequately compensates MyPort for Apple’s infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 10,237,067

54. MyPort reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

55. Apple has infringed at least claim 6 and one or more of its dependents of the ’067 Patent under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, the Accused Products.

56. As just one non-limiting example, set forth below with claim language in italics is a description of infringement of exemplary claim 6 of the ’067 Patent (MyPort reserves the right to modify this description, including on the basis of information it obtains during discovery): *a system for capturing image and audio information for storage comprising: a capture device*: To the extent the preamble is limiting, the Accused Products, such as the iPad Mini 5, contains a camera for capturing image information and a microphone capable of capturing audio information, and memory capable of storing this information.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens
- Hybrid IR filter
- Backside illumination
- Live Photos

* * *

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

* * *

Microphones

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

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024)

57. The Accused Products include *internal storage*. The Accused Products, such as the iPad Mini 5, provide flash memory, cache memory, and RAM to store information.

iPad mini (5th generation) – Technical Specifications

* * *

Capacity[1]

- 64GB
- 256GB

* * *

Chip

- A12 Bionic chip with 64-bit architecture
- Neural Engine
- Embedded M12 coprocessor

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).

58. The Accused Products include *a microphone interfaceable with an external audio information source that generates external audio information.* The Accused Products, such as

the iPad Mini 5, contain a microphone capable of recording audio information from an external audio information source. For example, the microphone can record the words of a user who dictates into the microphone.

iPad mini (5th generation) – Technical Specifications

* * *

Microphones

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

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).

59. The Accused Products include *a first data converter for capturing the first external audio information from the microphone*. The Accused Products, such as the iPad Mini

5, uses the device processor and software for capturing the external audio information from the microphone.

Dictate text on iPhone

With Dictation on iPhone, you can dictate text anywhere you can type it. You can also use typing and Dictation together—the keyboard stays open during Dictation so you can easily switch between voice and touch to enter text.

Dictation requests are processed on your device in many languages—no internet connection is required. When dictating in a search box, dictated text may be sent to the search provider in order to process the search.

Note: Dictation may not be available in all languages or in all countries or regions, and features may vary.

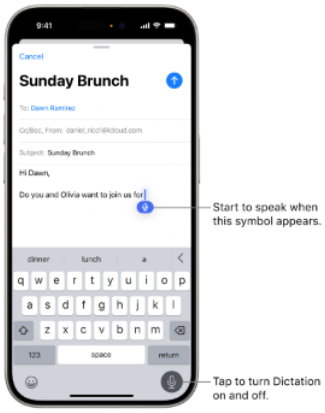
When using Dictation, cellular data charges may apply. See View or change cellular data settings.

Turn on Dictation

1. Go to Settings > General > Keyboard.
2. Turn on Enable Dictation. If a prompt appears, tap Enable Dictation.

To learn more about how Apple protects your information and lets you choose what you share, tap About Dictation & Privacy below Dictation, or see the Apple Privacy website.

Dictate text



Source: support.apple.com/en-us/HT208343 support.apple.com/en-us/HT208343 (last accessed Nov. 5, 2024).

60. The Accused Products include *a camera interfacing with an external image source to capture an image therefrom.* The camera of the Accused Products, such as the iPad Mini 5, interfaces with an image source. It senses the image and converts it to a series of quantized pixels that, in aggregate, make up the image.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens
- Hybrid IR filter
- Backside illumination
- Live Photos

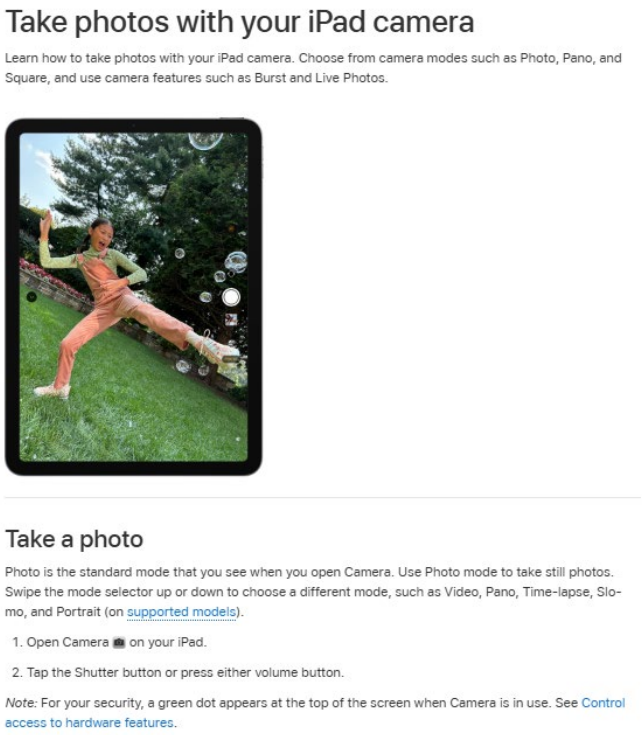
* * *

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).



Source: support.apple.com/guide/ipad/take-photos-ipad99b53a71/ipados (last accessed Nov. 5, 2024).

61. The Accused Products include *the first data converter processing the captured external audio information and storing it in a first digital audio format as stored digital audio in internal storage within the capture device, the camera for processing the captured image and storing it as a stored digital image in internal storage.* Each Accused Product includes a first data converter (e.g., relevant portions of the processor and associated software) that processes the user's words dictated into the microphone (i.e., the captured external audio information) to convert the external audio information into digital audio data and further stores it as digital audio in the device's memory. Each Accused Product has a camera (including the use of relevant portions of the processor and associated software) that processes images and stores the images as a digital file.

Add or view titles, captions and more in Photos on iCloud.com

You can view metadata about a photo or video, such as the location where it was taken and what camera was used. You can also add or edit a title or caption.

1. In Photos on iCloud.com, double-click the photo or video you want to see more information about.
2. Click ⓘ in the Photos toolbar.
3. To add or edit a title or caption, click Edit, enter text, then click Save.

   The title appears in the Photos toolbar when you view a photo. You can also see it from the thumbnail view.

   To view the caption, open the photo, then click ⓘ.

Note: If you add or edit a caption for a photo or video in your iCloud Shared Photo Library, all participants can see the changes.

Source: https://support.apple.com/en-au/guide/icloud/mm54e2d3fb7a/icloud#:~:text=You%20can%20view%20metadata%20about,Apple%20Account%20(if%20necessary) (last accessed Nov. 5, 2024).

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With Dictation on iPhone, you can dictate text anywhere you can type it. You can also use typing and Dictation together—the keyboard stays open during Dictation so you can easily switch between voice and touch to enter text.

Dictation requests are processed on your device in many languages—no internet connection is required. When dictating in a search box, dictated text may be sent to the search provider in order to process the search.

Note: Dictation may not be available in all languages or in all countries or regions, and features may vary.

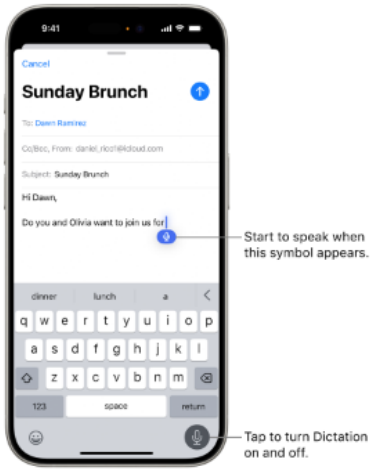
When using Dictation, cellular data charges may apply. See View or change cellular data settings.

Turn on Dictation

1. Go to Settings > General > Keyboard.
2. Turn on Enable Dictation. If a prompt appears, tap Enable Dictation.

To learn more about how Apple protects your information and lets you choose what you share, tap About Dictation & Privacy below Dictation, or see the Apple Privacy website.

Dictate text



Source: support.apple.com/en-us/HT208343 (last accessed Nov. 5, 2024).

What Is Core Audio?

Core Audio is the digital audio infrastructure of iOS and OS X. It includes a set of software frameworks designed to handle the audio needs in your applications. Read this chapter to learn what you can do with Core Audio.

A Little About Digital Audio and Linear PCM

Most Core Audio services use and manipulate audio in linear pulse-code-modulated (*linear PCM*) format, the most common uncompressed digital audio data format. Digital audio recording creates PCM data by measuring an analog (real world) audio signal's magnitude at regular intervals (the *sampling rate*) and converting each sample to a numerical value. Standard compact disc (CD) audio uses a sampling rate of 44.1 kHz, with a 16-bit integer describing each sample—constituting the resolution or *bit depth*.

- A *sample* is single numerical value for a single channel.
- A *frame* is a collection of time-coincident samples. For instance, a stereo sound file has two samples per frame, one for the left channel and one for the right channel.
- A *packet* is a collection of one or more contiguous frames. In linear PCM audio, a packet is always a single frame. In compressed formats, it is typically more. A packet defines the smallest meaningful set of frames for a given audio data format.

Source:

developer.apple.com/library/archive/documentation/MusicAudio/Conceptual/CoreAudioOverview/WhatisCoreAudio/WhatisCoreAudio.html#//apple_ref/doc/uid/TP40003577-CH3-SW1 (last accessed Nov. 5, 2024).

To begin recording, the app installs a tap on the input node and starts up the audio engine, which begins collecting samples into an internal buffer. When a buffer is full, the audio engine calls the provided block. The app's implementation of that block passes the samples directly to the request object's `append(_:)` method, which accumulates the audio samples and delivers them to the speech recognition system.

Source: developer.apple.com/documentation/speech/recognizing_speech_in_live_audio.

View, share, and print photos on iPad

All photos and videos you take with Camera are saved in Photos. With iCloud Photos turned on, all new photos and videos are automatically uploaded and available in Photos on all your devices that are set up with iCloud Photos (with iOS 8.1, iPadOS 13, or later).

Source: support.apple.com/guide/ipad/view-share-and-print-photos-ipad99b53b6d/ipados (last accessed Nov. 5, 2024).

Framework

Speech

Perform speech recognition on live or prerecorded audio, and receive transcriptions, alternative interpretations, and confidence levels of the results.

iOS 10.0+ | iPadOS 10.0+ | Mac Catalyst 13.0+ | macOS 10.15+ | visionOS 1.0+

Overview

Use the Speech framework to recognize spoken words in recorded or live audio. The keyboard's dictation support uses speech recognition to translate audio content into text. This framework provides a similar behavior, except that you can use it without the presence of the keyboard. For example, you might use speech recognition to recognize verbal commands or to handle text dictation in other parts of your app.

Source: developer.apple.com/documentation/speech (last accessed Nov. 5, 2024).

62. The Accused Products include *capturing, as captured data, location information and time information associated with at least the capture of the image and storing the captured data as stored captured data.* The Accused Products include location settings that allow the mobile device to determine location and time information of a captured image.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens

* * *

- Auto image stabilization
- Photo geotagging

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

* * *

Location

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

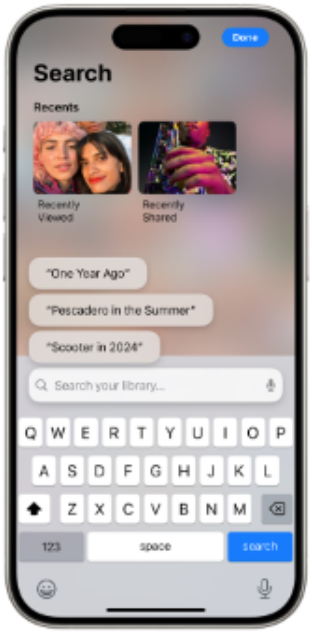
Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

63. The Accused Products include *a media data converter for converting the received digital audio to a text based searchable file as a text context tag and creating an image recognition searchable context tag with image recognition of at least a portion of the digital image and associating the text and image recognition context tags with the digital image and captured data.* When the Accused Products capture spoken audio, the Accused Products can perform speech recognition. The speech recognition converts the digital audio into text in the image's tag field. The Accused Products also use machine learning (or image recognition) to automatically apply image recognition tags to photos on the device.

Search for photos and videos on iPhone

When you tap Search in the Photos app, you see suggestions of dates, people, and locations to help you find what you're looking for.

Tap the suggestions or type keywords into the search field—for example, a person's name, date, location, or object—to help you find a specific photo.



Search for photos and videos

1. Go to the Photos app on your iPhone.
2. Tap Search, then search by any of the following:
   - Date (month or year)
   - Place (city or state)
   - Business names (museums, for example)
   - Category (beach or sunset, for example)
   - Events (sports games or concerts, for example)
   - A person identified in People & Pets (see Find and name people and pets)
   - Text (an email address or phone number, for example)
   - Caption (see See photo and video information)

Tip: Looking for something more specific? Refine your search with multiple keywords—keep adding keywords until you find the right photo. Search also suggests keywords to add to your search.

Source: https://support.apple.com/guide/iphone/search-for-photos-and-videos-iph392d77d5f/18.0/ios/18.0 (last accessed Nov. 5, 2024)

See also Apple Photos.

64. As shown above, the Accused Products include *internal storage storing the digital image in association with the text and image recognition context tags in addition to the stored captured data*. The Accused Products, such as the iPad Mini 5, provide flash memory, cache memory, and RAM to store information.

65. Apple has committed acts of infringement without license or authorization. Apple knew or should have known that its actions would cause direct and indirect infringement of the ’067 Patent. On information and belief, Apple acted with objective recklessness by proceeding despite an objective high likelihood that its actions constituted infringement of a valid patent, where such action constitutes egregious misconduct.

66. Apple is also liable under 35 U.S.C. § 271(b) for actively inducing infringement and continuing to actively induce infringement. Apple actively induced its customers, distributors, end-users, vendors including customer-support and/or manufacturers to infringe the ’067 Patent. On information and belief, Apple possessed a specific intent to induce infringement, and in fact did induce infringement, by engaging in affirmative acts such as by selling and causing the Accused Products to be manufactured, by providing user guides, installation or instruction manuals, and other training materials, by advertising and solicitation and otherwise providing sales-related materials, and by instructing and/or demonstrating to customers, distributors, end-users, vendors including customer-support and/or manufacturers the normal operation of the Accused Products that infringe the ’067 Patent. Non-limiting examples of such are found above in the various screenshots that instruct performance of the infringing use

of the technology. Apple is aware and/or willfully blind that these affirmative acts infringe and/or would induce infringement of the ’067 Patent, of which it had knowledge.

67. Apple is also liable under 35 U.S.C. § 271(c) for contributing to and continuing to contribute to the infringement of the ’067 Patent by, among other things, providing a system for capturing image and audio information for storage in its Accused Products and by encouraging, at a minimum, customers, distributors, end-users, vendors including customer-support and/or manufacturers in this District and elsewhere, to infringe the ’067 Patent. By importing, exporting, manufacturing, distributing, selling, and/or providing the Accused Products and/or Services for their intended use to customers, distributors, end-users, vendors including customer-support and/or manufacturers, Apple has infringed one or more claims of the ’067 Patent. The infringing functionality in the Accused Products is material to the inventions claimed in the ’067 Patent, has no substantial non-infringing uses, and is known to Apple (on information and belief) to be especially made or adapted for use in infringing the ’067 Patent, and which is otherwise not staple articles of commerce suitable for substantial non-infringing use. There are no non-infringing uses for the infringing functionality in the Accused Products other than to create searchable tags as associated metadata for image and/or audio files. Apple is aware and/or willfully blind that these affirmative acts infringe and/or constitute contributory infringement of the ’067 Patent, of which it had knowledge.

68. Apple is liable for indirect infringement, i.e., both inducement and contributory infringement, based on the direct infringement that is the result of activities performed by customers, distributors, end-users, vendors including customer-support and/or manufacturers who use all elements or perform all steps of one or more claims of the ’067 Patent. For example, end users of Apple’s Accused Products infringe, either directly or under the doctrine of

equivalents, one or more claims of the ’067 Patent (*e.g.*, claim 6 and one or more of its dependents). At a minimum, Apple is liable for the indirect infringement of claim 6 and one or more of its dependents of the ’067 Patent.

69. MyPort has been damaged because of Apple’s infringing conduct. Apple is, thus, liable to MyPort in an amount that adequately compensates MyPort for Apple’s infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 10,721,066

70. MyPort reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

71. Apple has infringed at least claim 13 and one or more of its dependents of the ’066 Patent under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, the Accused Products.

72. As just one non-limiting example, set forth below with claim language in italics is a description of infringement of exemplary claim 13 of the ’066 Patent (MyPort reserves the right to modify this description, including on the basis of information it obtains during discovery): *a method for capturing image and audio information for storage, comprising*: To the extent the preamble is limiting, the Accused Products, such as the iPad Mini 5, performs a method for capturing image information via a camera and a microphone capable of capturing audio information, and memory capable of storing this information.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens
- Hybrid IR filter
- Backside illumination
- Live Photos

* * *

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

* * *

Microphones

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

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

73. The Accused Products include *internal storage*. The Accused Products, such as the iPad Mini 5, provide flash memory, cache memory, and RAM to store information.

iPad mini (5th generation) – Technical Specifications

* * *

Capacity[1]

- 64GB
- 256GB

* * *

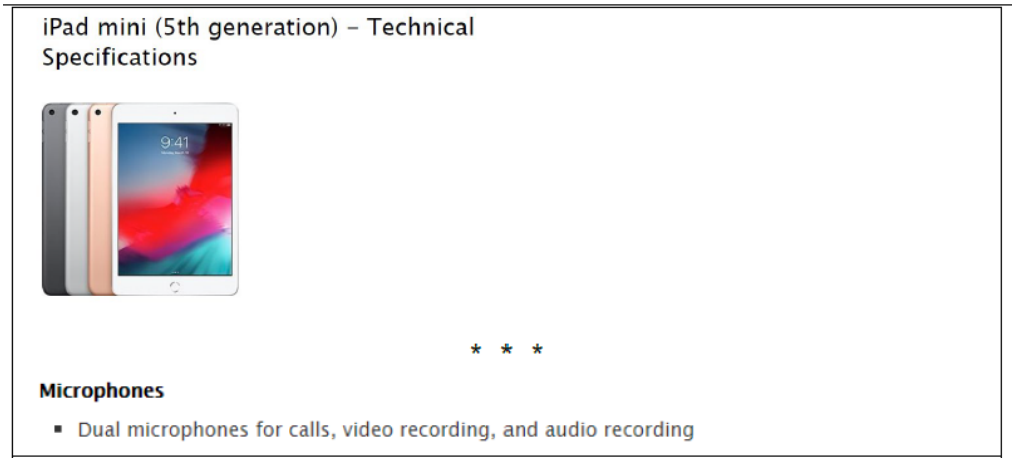
Chip

- A12 Bionic chip with 64-bit architecture
- Neural Engine
- Embedded M12 coprocessor

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).

74. The Accused Products include *interfacing a microphone with an external audio information source that generates external audio information.* The Accused Products, such as the iPad Mini 5, contain a microphone capable of recording audio information from an external audio information source. For example, the microphone can record the words of a user who dictates into the microphone.



Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

- Notice the clean lines and muted colors in Apple's foray into abstract art. The second image is *extra* abstract thanks to X-rays.
- Let's channel our inner art critic and try to spot some differences between the newest Mini and its predecessor:
  - Different battery model, with updated (i.e. incompatible) connectors
    - Rated for 19.32 Wh, it matches the last Mini's, has less than the standard iPad's 32.9 Wh, and comes in a little over the Galaxy Note9's 15.4 Wh.
  - Upgraded front-facing camera module
  - Updated ambient light (True Tone) sensors
  - A migrated set of microphones

Here's a clean view with no markings, in case you want to spot the differences yourself.

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).

75. The Accused Products include *converting with a first data converter the external audio information from the microphone*. The Accused Products, such as the iPad Mini 5, uses the device processor and software to capture the external audio information from the microphone.

Dictate text on iPhone

With Dictation on iPhone, you can dictate text anywhere you can type it. You can also use typing and Dictation together—the keyboard stays open during Dictation so you can easily switch between voice and touch to enter text.

Dictation requests are processed on your device in many languages—no internet connection is required. When dictating in a search box, dictated text may be sent to the search provider in order to process the search.

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Turn on Dictation

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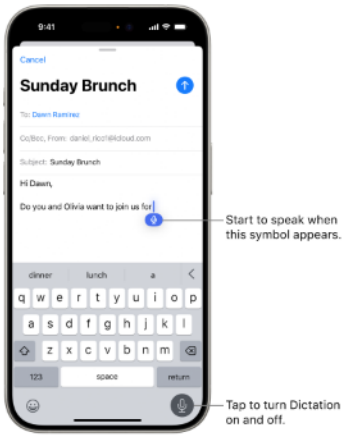
To learn more about how Apple protects your information and lets you choose what you share, tap About Dictation & Privacy below Dictation, or see the Apple Privacy website.

Dictate text



Source: support.apple.com/en-us/HT208343 (last accessed Nov. 5, 2024).

76. The Accused Products include *interfacing a camera with an image source to capture an image therefrom.* The camera of the Accused Products, such as the iPad Mini 5, interfaces with an image source. It senses the image and converts it to a series of quantized pixels that, in aggregate, make up the image.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens
- Hybrid IR filter
- Backside illumination
- Live Photos

* * *

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

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  - Different battery model, with updated (i.e. incompatible) connectors
    - Rated for 19.32 Wh, it matches the last Mini's, has less than the standard iPad's 32.9 Wh, and comes in a little over the Galaxy Note9's 15.4 Wh.
  - Upgraded front-facing camera module
  - Updated ambient light (True Tone) sensors
  - A migrated set of microphones

Here's a clean view with no markings, in case you want to spot the differences yourself.

Source: www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589 (last accessed Nov. 5, 2024).

Take photos with your iPad camera

Learn how to take photos with your iPad camera. Choose from camera modes such as Photo, Pano, and Square, and use camera features such as Burst and Live Photos.

Take a photo

Photo is the standard mode that you see when you open Camera. Use Photo mode to take still photos. Swipe the mode selector up or down to choose a different mode, such as Video, Pano, Time-lapse, Slo-mo, and Portrait (on supported models).

1. Open Camera on your iPad.
2. Tap the Shutter button or press either volume button.

Note: For your security, a green dot appears at the top of the screen when Camera is in use. See Control access to hardware features.

Source: support.apple.com/guide/ipad/take-photos-ipad99b53a71/ipados (last accessed Nov. 5, 2024).

77. The Accused Products include *capturing within a capture device, as captured data, location information and time information associated with at least the capture of the image and storing the captured data as stored captured data.* The Accused Products include location settings that allow the mobile device to determine location and time information of a captured image.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens

* * *

- Auto image stabilization
- Photo geotagging

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

* * *

Location

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

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

78. The Accused Products include *the first data converter processing the captured external audio information and storing it in a first digital audio format as stored digital audio within the capture device, the camera for processing the captured image and storing it as a stored digital image.* Each Accused Product includes a first data converter (e.g., relevant portions of the processor and associated software) that processes the user's words dictated into the microphone (i.e., the captured external audio information) to convert the external audio information into digital audio data and further stores it as digital audio in the device's memory. Each Accused Product has a camera (including the use of relevant portions of the processor and associated software) that processes images and stores the images as a digital file.

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Add or view titles, captions and more in Photos on iCloud.com

You can view metadata about a photo or video, such as the location where it was taken and what camera was used. You can also add or edit a title or caption.

1. In Photos on iCloud.com, double-click the photo or video you want to see more information about.
2. Click ⓘ in the Photos toolbar.
3. To add or edit a title or caption, click Edit, enter text, then click Save.

   The title appears in the Photos toolbar when you view a photo. You can also see it from the thumbnail view.

   To view the caption, open the photo, then click ⓘ.

Note: If you add or edit a caption for a photo or video in your iCloud Shared Photo Library, all participants can see the changes.

Source: https://support.apple.com/en-au/guide/icloud/mm54e2d3fb7a/icloud#:~:text=You%20can%20view%20metadata%20about,Apple%20Account%20(if%20necessary) (last accessed Nov. 5, 2024).

Dictate text on iPhone

With Dictation on iPhone, you can dictate text anywhere you can type it. You can also use typing and Dictation together—the keyboard stays open during Dictation so you can easily switch between voice and touch to enter text.

Dictation requests are processed on your device in many languages—no internet connection is required. When dictating in a search box, dictated text may be sent to the search provider in order to process the search.

Note: Dictation may not be available in all languages or in all countries or regions, and features may vary.

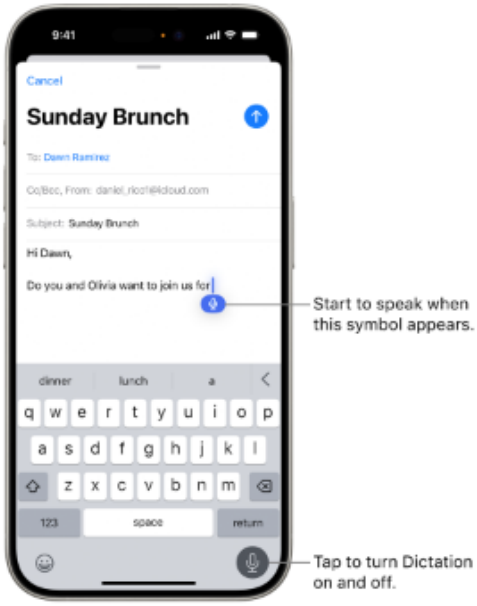
When using Dictation, cellular data charges may apply. See View or change cellular data settings.

Turn on Dictation

1. Go to Settings > General > Keyboard.
2. Turn on Enable Dictation. If a prompt appears, tap Enable Dictation.

To learn more about how Apple protects your information and lets you choose what you share, tap About Dictation & Privacy below Dictation, or see the Apple Privacy website.

Dictate text



Source: support.apple.com/en-us/HT208343 (last accessed Nov. 5, 2024).

What Is Core Audio?

Core Audio is the digital audio infrastructure of iOS and OS X. It includes a set of software frameworks designed to handle the audio needs in your applications. Read this chapter to learn what you can do with Core Audio.

A Little About Digital Audio and Linear PCM

Most Core Audio services use and manipulate audio in linear pulse-code-modulated (*linear PCM*) format, the most common uncompressed digital audio data format. Digital audio recording creates PCM data by measuring an analog (real world) audio signal's magnitude at regular intervals (the *sampling rate*) and converting each sample to a numerical value. Standard compact disc (CD) audio uses a sampling rate of 44.1 kHz, with a 16-bit integer describing each sample—constituting the resolution or *bit depth*.

- A *sample* is single numerical value for a single channel.
- A *frame* is a collection of time-coincident samples. For instance, a stereo sound file has two samples per frame, one for the left channel and one for the right channel.
- A *packet* is a collection of one or more contiguous frames. In linear PCM audio, a packet is always a single frame. In compressed formats, it is typically more. A packet defines the smallest meaningful set of frames for a given audio data format.

Source:

developer.apple.com/library/archive/documentation/MusicAudio/Conceptual/CoreAudioOverview/WhatisCoreAudio/WhatisCoreAudio.html#//apple_ref/doc/uid/TP40003577-CH3-SW1 (last accessed Nov. 5, 2024).

To begin recording, the app installs a tap on the input node and starts up the audio engine, which begins collecting samples into an internal buffer. When a buffer is full, the audio engine calls the provided block. The app's implementation of that block passes the samples directly to the request object's `append(_:)` method, which accumulates the audio samples and delivers them to the speech recognition system.

Source: developer.apple.com/documentation/speech/recognizing_speech_in_live_audio.

View, share, and print photos on iPad

All photos and videos you take with Camera are saved in Photos. With iCloud Photos turned on, all new photos and videos are automatically uploaded and available in Photos on all your devices that are set up with iCloud Photos (with iOS 8.1, iPadOS 13, or later).

Source: support.apple.com/guide/ipad/view-share-and-print-photos-ipad99b53b6d/ipados (last accessed Nov. 5, 2024).

Framework

Speech

Perform speech recognition on live or prerecorded audio, and receive transcriptions, alternative interpretations, and confidence levels of the results.

iOS 10.0+ | iPadOS 10.0+ | Mac Catalyst 13.0+ | macOS 10.15+ | visionOS 1.0+

Overview

Use the Speech framework to recognize spoken words in recorded or live audio. The keyboard's dictation support uses speech recognition to translate audio content into text. This framework provides a similar behavior, except that you can use it without the presence of the keyboard. For example, you might use speech recognition to recognize verbal commands or to handle text dictation in other parts of your app.

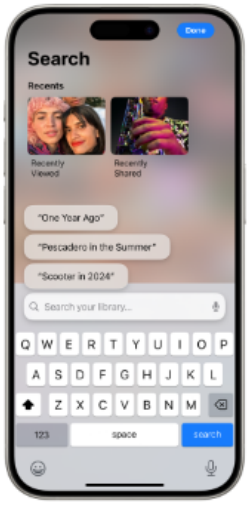
Source: developer.apple.com/documentation/speech (last accessed Nov. 5, 2024).

80. The Accused Products include *converting with a second data converter the received digital audio to a text based searchable file as a text context tag and creating an image recognition searchable context tag with image recognition of at least a portion of the digital image and associating the text and image recognition context tags with the digital image and with the stored captured data.* When the Accused Products capture spoken audio, the Accused Products can perform speech recognition. The speech recognition converts the digital audio into text in the image's tag field. The Accused Products also use machine learning (or image recognition) to automatically apply image recognition tags to photos stored on the device.

Search for photos and videos on iPhone

When you tap Search in the Photos app, you see suggestions of dates, people, and locations to help you find what you're looking for.

Tap the suggestions or type keywords into the search field—for example, a person's name, date, location, or object—to help you find a specific photo.



Search for photos and videos

1. Go to the Photos app on your iPhone.
2. Tap Search, then search by any of the following:
   - Date (month or year)
   - Place (city or state)
   - Business names (museums, for example)
   - Category (beach or sunset, for example)
   - Events (sports games or concerts, for example)
   - A person identified in People & Pets (see Find and name people and pets)
   - Text (an email address or phone number, for example)
   - Caption (see See photo and video information)

Tip: Looking for something more specific? Refine your search with multiple keywords—keep adding keywords until you find the right photo. Search also suggests keywords to add to your search.

Source: https://support.apple.com/guide/iphone/search-for-photos-and-videos-iph392d77d5f/18.0/ios/18.0 (last accessed Nov. 5, 2024)

See also Apple Photos.

81. As shown above, the Accused Products include *storing in the internal storage the digital image in association with the text and image recognition context tags in addition to the stored captured data*. The Accused Products, such as the iPad Mini 5, provide flash memory, cache memory, and RAM to store information.

82. Apple has committed acts of infringement without license or authorization. Apple knew or should have known that its actions would cause direct and indirect infringement of the ’066 Patent. On information and belief, Apple acted with objective recklessness by proceeding despite an objective high likelihood that its actions constituted infringement of a valid patent, where such action constitutes egregious misconduct.

83. In the event Apple itself does not perform the entire process, the infringement of the ’066 Patent is attributable to Apple because Apple directs and controls the users of the Accused Products to perform acts that result in infringement, and Apple receives benefit from its infringement.

84. Apple is also liable under 35 U.S.C. § 271(b) for actively inducing infringement and continuing to actively induce infringement. Apple actively induced its customers, distributors, end-users, vendors including customer-support and/or manufacturers to infringe the ’066 Patent. On information and belief, Apple possessed a specific intent to induce infringement, and in fact did induce infringement, by engaging in affirmative acts such as by selling and causing the Accused Products to be manufactured, by providing user guides, installation or instruction manuals, and other training materials, by advertising and solicitation and otherwise providing sales-related materials, and by instructing and/or demonstrating to customers, distributors, end-users, vendors including customer-support and/or manufacturers the normal operation of the Accused Products that infringe the ’066 Patent. Non-limiting examples

of such are found above in the various screenshots that instruct performance of the infringing use of the technology. Apple is aware and/or willfully blind that these affirmative acts infringe and/or would induce infringement of the ’066 Patent, of which it had knowledge.

85. Apple is also liable under 35 U.S.C. § 271(c) for contributing to and continuing to contribute to the infringement of the ’066 Patent by, among other things, providing a system for capturing image and audio information for storage in its Accused Products and by encouraging, at a minimum, customers, distributors, end-users, vendors including customer-support and/or manufacturers in this District and elsewhere, to infringe the ’066 Patent. By importing, exporting, manufacturing, distributing, selling, and/or providing the Accused Products and/or Services for their intended use to customers, distributors, end-users, vendors including customer-support and/or manufacturers, Apple has infringed one or more claims of the ’066 Patent. The infringing functionality in the Accused Products is material to the inventions claimed in the ’066 Patent, has no substantial non-infringing uses, and is known to Apple (on information and belief) to be especially made or adapted for use in infringing the ’066 Patent, and which is otherwise not staple articles of commerce suitable for substantial non-infringing use. There are no non-infringing uses for the infringing functionality in the Accused Products other than to create searchable tags as associated metadata for image and/or audio files. Apple is aware and/or willfully blind that these affirmative acts infringe and/or constitute contributory infringement of the ’066 Patent, of which it had knowledge.

86. Apple is liable for indirect infringement, i.e., both inducement and contributory infringement, based on the direct infringement that is the result of activities performed by customers, distributors, end-users, vendors including customer-support and/or manufacturers who use all elements or perform all steps of one or more claims of the ’066 Patent. For example,

end users of Apple's Accused Products infringe, either directly or under the doctrine of equivalents, one or more claims of the '066 Patent (e.g., claim 13 and one or more of its dependents). At a minimum, Apple is liable for the indirect infringement of claim 13 and one or more of its dependents of the '066 Patent.

87. MyPort has been damaged because of Apple's infringing conduct. Apple is, thus, liable to MyPort in an amount that adequately compensates MyPort for Apple's infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 11,188,998

88. MyPort reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

89. Apple has infringed at least claim 1 and one or more of its dependents of the '998 Patent under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, the Accused Products.[1]

90. As just one non-limiting example, set forth below with claim language in italics is a description of infringement of exemplary claim 1 of the '998 Patent (MyPort reserves the right to modify this description, including on the basis of information it obtains during discovery): *a method for interfacing with a device and acquiring information with the device from an environment external to the device to be transmitted to a receiving facility and for transmitting the acquired information thereto, comprising:* To the extent the preamble is limiting, the

[1] As it relates to the '998 Patent, the "Accused Products" also includes the corresponding Apple iOS software and server.

Accused Products, such as iMessage compatible devices such as the iPhone and iPad, enable a user to capture still image, video, and audio information from the surrounding environment.

91. The Accused Products include *a capture device and the capture device controlled to capture the information from the external environment*.

What is the difference between iMessage, RCS, and SMS/MMS?

You can use the Messages app on your iPhone, iPad, Mac, Apple Watch, or Apple Vision Pro to send messages. Those messages are sent as iMessage, RCS, or SMS/MMS. Learn more about the difference between the message types.

iMessage

iMessages can be sent to another iPhone or another Apple device over Wi-Fi or cellular-data networks. With iMessage, you can send texts, high resolution photos and videos, documents, links, Tapbacks, text effects, Live Stickers, message effects, and more. iMessage supports delivery and read receipts and typing indicators. iMessages appear in blue text bubbles on your device.

When you use iMessage, your conversations are encrypted end-to-end, so they can't be read while they're sent between devices.

To turn iMessage on or off, go to Settings > Apps > Messages.

If Wi-Fi is unavailable, iMessages will be sent over cellular data. Cellular data rates might apply.

Source: https://support.apple.com/en-us/104972 (last accessed Nov. 5, 2024)

92. The Accused Products include *where the information is selected from the group consisting of a video segment, a still image and an audio segment, each of which varies in real time in the external environment and relative to time in the external environment prior to capture by the capture device, and converting the information to converted information for storage in a*

storage area as captured information. iMessage compatible devices such as the iPhone and iPad, enable a user to capture still image, video, and audio information from the surrounding environment, and transmit via iMessage.

What is the difference between iMessage, RCS, and SMS/MMS?

You can use the Messages app on your iPhone, iPad, Mac, Apple Watch, or Apple Vision Pro to send messages. Those messages are sent as iMessage, RCS, or SMS/MMS. Learn more about the difference between the message types.

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If Wi-Fi is unavailable, iMessages will be sent over cellular data. Cellular data rates might apply.

Source: https://support.apple.com/en-us/104972 (last accessed Nov. 5, 2024)

93. The Accused Products include *controlling a device processor to create a file comprised of a representation of the captured information associated with a representation of the date and time of the capture of the information as augmented captured information, wherein the representation of the date and time information in association with the representation of the captured information forms the file containing the augmented captured*

information. iMessage compatible devices contain a microcontroller and associated peripheral and memory components. For instance, the iPad Mini contains a 64-bit microcontroller that is capable of creating a file and maintaining a record of the time and date the file was created, accessed, and modified (*i.e.*, geotagging). The time and date information can be captured as an inherent property of the file.

iPad mini (5th generation) – Technical Specifications

* * *

Camera

- 8-megapixel camera
- ƒ/2.4 aperture
- Five-element lens

* * *

- Auto image stabilization
- Photo geotagging

Video Recording

- 1080p HD video recording
- Slo-mo (240 fps)
- Time-lapse video with stabilization
- Video image stabilization
- 3x video zoom
- Video geotagging

* * *

Location

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

Source: https://support.apple.com/en-us/111904 (last accessed Nov. 5, 2024).

94. The Accused Products include *controlling an encryptor on the device processor to encrypt the augmented captured information as an encrypted file containing encrypted*

augmented captured information. iMessage compatible devices contain hardware and software that encrypt messages sent in iMessage "on the device," *i.e.,* locally. A message in iMessage is encrypted before it is sent.

Hardware security overview

For software to be secure, it must rest on hardware that has security built in. That's why Apple devices—running iOS, iPadOS, macOS, tvOS, and watchOS—have security capabilities designed into silicon. These capabilities include a CPU that powers system security features, as well as additional silicon that's dedicated to security functions. Security-focused hardware follows the principle of supporting limited and discretely defined functions to minimize attack surface. Such components include a boot ROM, which forms a hardware root of trust for secure boot, dedicated AES engines for efficient and secure encryption and decryption, and a Secure Enclave. The *Secure Enclave* is a component on Apple system on chip (SoC) that is included on all recent iPhone, iPad, Apple Watch, Apple TV and HomePod devices, and on a Mac with Apple silicon as well as those with the Apple T2 Security Chip. The Secure Enclave itself follows the same principle of design as the SoC does, containing its own discrete boot ROM and AES engine. The Secure Enclave also provides the foundation for the secure generation and storage of the keys necessary for encrypting data at rest, and it protects and evaluates the biometric data for Face ID and Touch ID.

Storage encryption must be fast and efficient. At the same time, it can't expose the data (or *keying material*) it uses to establish cryptographic keying relationships. The AES hardware engine solves this problem by performing fast in-line encryption and decryption *as files are written or read*. A special channel from the Secure Enclave provides necessary keying material to the AES engine without exposing this information to the Application Processor (or CPU) or overall operating system. This helps ensure that the Apple Data Protection and FileVault technologies protect users' files without exposing long-lived encryption keys.

Apple has designed secure boot to protect the lowest levels of software against tampering and to allow only trusted operating system software from Apple to load at startup. Secure boot begins in immutable code called the Boot ROM, which is laid down during Apple SoC fabrication and is known as the *hardware root of trust*. On Mac computers with a T2 chip, trust for macOS secure boot begins with the T2. (Both the T2 chip and the Secure Enclave also execute their own secure boot processes using their own separate boot ROM—this is an exact analogue to how the A-series, M1, and M2 chips boot securely.)

* * *

iCloud security overview

iCloud stores a user's contacts, calendars, photos, documents, and more and keeps the information up to date across all of their devices automatically. iCloud can also be used by third-party apps to store and sync documents as well as key values for app data as defined by the developer. Users set up iCloud by signing in with an Apple ID and choosing which services they would like to use. Certain iCloud features, such a iCloud Drive, and iCloud Backup can be disabled by IT administrators using mobile device management (MDM) configuration profiles.

iCloud uses strong security methods and employs strict policies to protect user data. Most iCloud data is first encrypted on the user's device, using device-generated iCloud keys, before being uploaded to iCloud servers. For data that isn't end-to-end encrypted, the user's device securely uploads these iCloud keys to iCloud Hardware Security Modules in Apple data centers. This allows Apple to help the user with data recovery, and decrypt the data on the user's behalf whenever they need it, (for example, when they sign in on a new device, restore from a backup, or access their iCloud data on the web). Data moving between the user's devices and iCloud servers is separately encrypted in transit with TLS, and iCloud servers store user data with an additional layer of encryption at rest.

Encryption keys, when available to Apple, are secured in Apple data centers. When processing data stored in a third-party data center, these encryption keys are accessed only by Apple software running on secure servers, and only while conducting the necessary processing. For additional privacy and security, many Apple services use end-to-end encryption, which means the user's iCloud data can be accessed only by the users themselves, and only from the trusted devices where they are signed in with their Apple ID.

Source: apple-platform-security-guide.pdf (last accessed Nov. 5, 2024)

95. The Accused Products include *controlling the device processor to initiate a signing operation for adding signature information to the file including the encrypted augmented captured information to provide an identifiable encrypted file, wherein the signature information provides information to the receiving facility that allows identification of the party claiming to have created the captured information for later identification of the party*. Apple Push Notification (APN) is used to convey information about the media (*e.g.,* its location in iCloud and cryptographic keys). The augmented captured information consists of, among other things, a representation of the media file. iMessage-compatible devices generate public and private keys for the encryption and signing keys. The device uses the signing key and elliptical curve digital signature algorithm (ECDSA) to create a cryptographic signature.

How iMessage sends and receives messages securely

Users start a new iMessage conversation by entering an address or name. If they enter a phone number or email address, the device contacts the Apple Identity Service (IDS) to retrieve the public keys and APNs addresses for all of the devices associated with the addressee. If the user enters a name, the device first uses the user's Contacts app to gather the phone numbers and email addresses associated with that name and then gets the public keys and APNs addresses from IDS.

The user's outgoing message is individually encrypted for each of the receiver's devices. The public encryption keys and signing keys of the receiving devices are retrieved from IDS. For each receiving device, the sending device generates a random 88-bit value and uses it as an HMAC-SHA256 key to construct a 40-bit value derived from the sender and receiver public key and the plaintext. The concatenation of the 88-bit and 40-bit values makes a 128-bit key, which encrypts the message with it using AES in Counter (CTR) Mode. The 40-bit value is used by the receiver side to verify the integrity of the decrypted plaintext. This per-message AES key is encrypted using RSA-OAEP to the public key of the receiving device. The combination of the encrypted message text and the encrypted message key is then hashed with SHA-1, and the hash is signed with the Elliptic Curve Digital Signature Algorithm (ECDSA) using the sending device's private signing key. In iOS 13 or later and iPadOS 13.1 or later, devices may use an Elliptic Curve Integrated Encryption Scheme (ECIES) encryption instead of RSA encryption.

The resulting messages, one for each receiving device, consist of the encrypted message text, the encrypted message key, and the sender's digital signature. They are then dispatched to the APNs for delivery. Metadata, such as the timestamp and APNs routing information, isn't encrypted. Communication with APNs is encrypted using a forward-secret TLS channel.

Source: apple-platform-security-guide.pdf (last accessed Nov. 5, 2024)

96. The Accused Products include *controlling the device processor to place the identifiable encrypted file including both the encrypted augmented captured information and the unencrypted signature information in association with subscriber information as a transmission file for transmission to a receiving facility requiring the subscriber information, the subscriber information required at the receiving facility for a lookup operation to obtain additional information to allow further processing of the augmented captured information at the receiving facility*. Apple associates the encrypted file and unencrypted signature information with subscriber information, e.g., via routing information and the Transport Layer Security ("TLS") session between sender and APNs that authenticate the sender.

How iMessage sends and receives messages securely

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The resulting messages, one for each receiving device, consist of the encrypted message text, the encrypted message key, and the sender's digital signature. They are then dispatched to the APNs for delivery. Metadata, such as the timestamp and APNs routing information, isn't encrypted. Communication with APNs is encrypted using a forward-secret TLS channel.

Source: apple-platform-security-guide.pdf (last accessed Nov. 5, 2024)

97. The Accused Products include *controlling a transmitter on the device for transmitting the transmission file to the receiving facility in order to further process the augmented captured information at the receiving facility*. All iMessage compatible devices include a transmitter, that is compliant with wireless communication standards including 802.11ax and BlueTooth ® 5.0, and as well as wired communications.

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**
	  ◦ UMTS/HSPA/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz); GSM/EDGE (850, 900, 1800, 1900 MHz)
	  ◦ Gigabit-class LTE (Models A2068 and A2069: bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 34, 38, 39, 40, 41, 42, 46, 48, 66, 71)[4]
	  ◦ Data only[5]
	  ◦ Wi-Fi calling[4]
	  ◦ eSIM[6]

Source: https://support.apple.com/en-us/118452 (last accessed Nov. 5, 2024)

98. The Accused Products include *receiving the transmission file and accepting the identifiable encrypted file after verification of the subscriber information.* The APN server is a receiving facility and accepts the identifiable encrypted file.

How iMessage sends and receives messages securely

Users start a new iMessage conversation by entering an address or name. If they enter a phone number or email address, the device contacts the Apple Identity Service (IDS) to retrieve the public keys and APNs addresses for all of the devices associated with the addressee. If the user enters a name, the device first uses the user's Contacts app to gather the phone numbers and email addresses associated with that name and then gets the public keys and APNs addresses from IDS.

The user's outgoing message is individually encrypted for each of the receiver's devices. The public encryption keys and signing keys of the receiving devices are retrieved from IDS. For each receiving device, the sending device generates a random 88-bit value and uses it as an HMAC-SHA256 key to construct a 40-bit value derived from the sender and receiver public key and the plaintext. The concatenation of the 88-bit and 40-bit values makes a 128-bit key, which encrypts the message with it using AES in Counter (CTR) Mode. The 40-bit value is used by the receiver side to verify the integrity of the decrypted plaintext. This per-message AES key is encrypted using RSA-OAEP to the public key of the receiving device. The combination of the encrypted message text and the encrypted message key is then hashed with SHA-1, and the hash is signed with the Elliptic Curve Digital Signature Algorithm (ECDSA) using the sending device's private signing key. In iOS 13 or later and iPadOS 13.1 or later, devices may use an Elliptic Curve Integrated Encryption Scheme (ECIES) encryption instead of RSA encryption.

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Source: apple-platform-security-guide.pdf (last accessed Nov. 5, 2024)

99. Apple has committed acts of infringement without license or authorization. Apple knew or should have known that its actions would cause direct and indirect infringement of the ’998 Patent. On information and belief, Apple acted with objective recklessness by proceeding despite an objective high likelihood that its actions constituted infringement of a valid patent, where such action constitutes egregious misconduct.

100. In the event Apple itself does not perform the entire process, the infringement of the ’998 Patent is attributable to Apple because Apple directs and controls the users of the Accused Products to perform acts that result in infringement, and Apple receives benefit from its infringement.

101. Apple is also liable under 35 U.S.C. § 271(b) for actively inducing infringement and continuing to actively induce infringement. Apple actively induced its customers, distributors, end-users, vendors including customer-support and/or manufacturers to infringe the ’998 Patent. On information and belief, Apple possessed a specific intent to induce infringement, and in fact did induce infringement, by engaging in affirmative acts such as by selling and causing the Accused Products to be manufactured, by providing user guides, installation or instruction manuals, and other training materials, by advertising and solicitation and otherwise providing sales-related materials, and by instructing and/or demonstrating to customers, distributors, end-users, vendors including customer-support and/or manufacturers the normal operation of the Accused Products that infringe the ’998 Patent. Non-limiting examples of such are found above in the various screenshots that instruct performance of the infringing use of the technology. Apple is aware and/or willfully blind that these affirmative acts infringe and/or would induce infringement of the ’998 Patent, of which it had knowledge.

102. Apple is also liable under 35 U.S.C. § 271(c) for contributing to and continuing to contribute to the infringement of the ’998 Patent by, among other things, providing a system for capturing image and audio information for storage in its Accused Products and by encouraging, at a minimum, customers, distributors, end-users, vendors including customer-support and/or manufacturers in this District and elsewhere, to infringe the ’998 Patent. By importing, exporting, manufacturing, distributing, selling, and/or providing the Accused Products and/or Services for their intended use to customers, distributors, end-users, vendors including customer-support and/or manufacturers, Apple has infringed one or more claims of the ’998 Patent. The infringing functionality in the Accused Products is material to the inventions claimed in the ’998 Patent, has no substantial non-infringing uses, and is known to Apple (on information and belief) to be especially made or adapted for use in infringing the ’998 Patent, and which is otherwise not staple articles of commerce suitable for substantial non-infringing use. There are no non-infringing uses for the infringing functionality in the Accused Products other than to transmit and receive the encrypted file. Apple is aware and/or willfully blind that these affirmative acts infringe and/or constitute contributory infringement of the ’998 Patent, of which it had knowledge.

103. Apple is liable for indirect infringement, i.e., both inducement and contributory infringement, based on the direct infringement that is the result of activities performed by customers, distributors, end-users, vendors including customer-support and/or manufacturers who use all elements or perform all steps of one or more claims of the ’998 Patent. For example, end users of Apple’s Accused Products infringe, either directly or under the doctrine of equivalents, one or more claims of the ’998 Patent (e.g., claim 1 and one or more of its

dependents). At a minimum, Apple is liable for the indirect infringement of claim 1 and one or more of its dependents of the ’998 Patent.

104. MyPort has been damaged because of Apple’s infringing conduct. Apple is, thus, liable to MyPort in an amount that adequately compensates MyPort for Apple’s infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

DEMAND FOR JURY TRIAL

MyPort demands a trial by jury on all claims and issues triable of right by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests the following relief:

a) A judgment in favor of MyPort that Apple has infringed, either literally and/or under the doctrine of equivalents, the Patents-in-Suit;

b) An award of damages adequate to compensate MyPort for Apple’s infringement of the Patents-in-Suit, and in no event less than a reasonable royalty for Apple’s acts of infringement, including all pre-judgment and post-judgment interest at the maximum rate permitted by law;

c) An award of trebled damages under 35 U.S.C. § 284;

d) A declaration that this case is exceptional under 35 U.S.C. § 285;

e) An award of MyPort’s costs and attorney’s fees under 35 U.S.C. § 285 and other applicable law; and

Any other remedy to which MyPort may be entitled.

Dated: December 6, 2024

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