

VPAT™ for iPhone X

The following Voluntary Product Accessibility information refers to the iPhone X (“iPhone”). For more information on the accessibility features of the iPhone and to learn more about iPhone features, visit <http://www.apple.com/iphone> and <http://www.apple.com/accessibility>.

Voluntary Product Accessibility Template
Summary Table

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Section 1194.21 Software Applications and Operating Systems	Not applicable	
Section 1194.22 Web-based internet information and applications	Not applicable	
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Section 1194.24 Video and Multi-media Products	Not applicable	
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Section 1194.26 Desktop and Portable Computers	Not applicable	
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Section 1194.23 Telecommunications products – Detail

Criteria	Supporting Features	Remarks and explanations
(a) Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.	Supported with exception	<p>iPhone supports TTY mode with TTY Software in iOS 11. Software TTY allows you to place and receive TTY calls without the need for traditional hardware teletypewriter accessories.</p> <p>iPhone can also support TTY machines through TTY mode and the Apple iPhone TTY Adapter which connects to iPhone via a Lightning to 3.5mm Headphone Jack Adapter which ships in the iPhone box.</p> <p>iPhone does not support intermixing speech and TTY.</p>
(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.	Supported with exception	<p>iPhone supports TTY mode with TTY Software in iOS 11. Software TTY allows You to place and receive TTY calls over carriers' cellular voice networks without the need for traditional hardware teletypewriter accessories.</p> <p>iPhone can also support TTY machines through TTY mode and the Apple iPhone TTY Adapter which connects to iPhone via a Lightning to 3.5mm Headphone Jack Adapter which ships in the iPhone box.</p>
(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.	Supported	<p>Users can playback and manage voicemail when in TTY mode using Visual Voice Mail on iPhone or by accessing the wireless operator's voicemail system directly. Using Software TTY, Transcripts are saved and accessible via call history in the phone app.</p>
(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.	Supported	<p>Users can browse voicemail messages, SMS and MMS messages and email messages and in non-sequential order with no response time limit. Users can also access the wireless operator's voicemail system directly.</p>
(e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.	Supported with exception	<p>iPhone supports audible caller ID using the built-in VoiceOver screen reader and can play distinctive ring-tones and text-tones, and use custom vibration alerts. VoiceOver adds a Pronunciation Editor to customize the way words are pronounced, additional voices and support for multiple audio sources.</p> <p>iPhone's Siri supports natural-language voice commands to send messages, schedule meetings, place phone calls, control music playback, input text, speak out content on the screen, check the weather, and more. Siri can talk back to you and read text messages, acknowledge voice commands, respond to questions, and more.</p> <p>VoiceOver is available in over 35 languages. Siri supports the prominent languages of 36 countries. Dictation is available in 32 languages.</p> <p>iPhone displays caller ID information visually even when used in TTY mode but caller ID information is not transmitted to a TTY device.</p>
(f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided.	Supported	

(g) If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use.	Not supported	
(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.	Supported with exception	<p>iPhone contains a telecoil and is rated under the Federal Communication Commission hearing aid compatibility guidelines as follows: M3,T4.</p> <p>iPhone is compatible with ear loop devices, Bluetooth-enabled hearing aid solutions, and Made for iPhone hearing aids. Any of these wired devices with a 3.5mm headphone jack can connect to the iPhone via a Lightning to 3.5mm Headphone Jack Adapter which ships in the iPhone Box.</p> <p>For more information about iPhones and hearing aid compatibility, see www.apple.com/support/hac</p>
(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.	Supported with exception	<p>iPhone is rated under the Federal Communication Commission hearing aid compatibility guidelines as follows: M3,T4.</p> <p>iPhone is compatible with ear loop devices, Bluetooth-enabled hearing aid solutions, and Made for iPhone hearing aids. Any of these wired devices with a 3.5mm headphone jack can connect to the iPhone via a Lightning to 3.5mm Headphone Jack Adapter which ships in the iPhone Box.</p> <p>For more information about iPhones and hearing aid compatibility, see www.apple.com/support/hac</p>
(j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.	Supported with exception	<p>iPhone supports wireless industry standards for the transmission of voice and data, including UMTS/HSPA+/DC-HSDPA, CDMA/EV-DO Rev. A, GSM/EDGE, LTE, Bluetooth 5.0, and 802.11 a/b/g/n/ac Wi-Fi.</p> <p>iPhone supports the pass-through of closed-captioned video and video descriptions in industry-standard formats.</p> <p>The Lightning connector is proprietary and is common to the latest-generation Apple products, is backward-compatible with the legacy dock connector via adapters, and is licensed by Apple for use in third-party products. Lightning is compatible with industry standard Universal Serial Bus (USB).</p>
(k) Products which have mechanically operated controls or keys, shall comply with the following:		
(1) Controls and keys shall be tactilely discernible without activating the controls or keys.	Supported	<p>The built-in VoiceOver screen reader provides audio and visual feedback for touchscreen controls without requiring the user to activate them.</p> <p>The Sleep/Wake, Side Switch and Volume rocker switch are also tactilely discernible.</p> <p>The Volume rocker switch must be pressed to determine the current volume setting.</p>

(2) Controls and keys shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2 N) maximum.	Supported	<p>iPhone includes a number of Accessibility features to support motor control:</p> <ul style="list-style-type: none"> • AssistiveTouch which provides an alternative set of screen gestures for users who may have difficulty touch gestures that requires only a single finger or apparatus to operate. • Switch Control which provides an alternate method for navigating and making onscreen selections. iPhone will cycle through and emphasize the available onscreen options, and users can make their desired selection by tapping the screen or using supported assistive devices. • Touch Accommodations which provides a means to adjust how the screen responds to touches, such as controlling how long you touch before it's recognized or whether it ignores repeated touches.
(3) If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.	Supported	<p>iPhone uses a non-mechanical, onscreen keyboard. An external Bluetooth wireless keyboard (available separately) can also be used for text input.</p> <p>The repeat rate for external wireless keyboards is user configurable, along with Sticky keys and Slow keys under Accessibility settings.</p>
(4) The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.	Supported	<p>The side-switch is the only locking mechanical switch. It can be locked in two positions which are visually, and physically discernible.</p> <p>If Sticky Keys are enabled, a visual ideograph is displayed to indicate the state of the keys being pressed.</p>

Section 1194.25 Self-Contained, Closed Products – Detail

Criteria	Supporting Features	Remarks and explanations
(a) Self contained products shall be usable by people with disabilities without requiring an end-user to attach Assistive Technology to the product. Personal headsets for private listening are not Assistive Technology.	Supported with exception	<p>iPhone includes a screen reader called VoiceOver that enables the iPhone to be used without seeing the screen. Also, VoiceOver can be controlled in most applications via key commands entered on a standard Bluetooth keyboard. VoiceOver is available in over 35 languages, and Voice Control is available in 24 languages.</p> <p>iPhone's Siri supports natural-language voice commands to send messages, schedule meetings, place phone calls, control music playback, input text, speak out content on the screen, check the weather, and more. Siri can talk back to you and read text messages, acknowledge voice commands, respond to questions, and more.</p> <p>iPhone includes support for mono audio output and closed captioning.</p> <p>iPhone supports TTY mode with TTY Software in iOS 11. Software TTY allows you to place and receive TTY calls without the need for traditional hardware teletypewriter accessories.</p> <p>iPhone can also support TTY machines through TTY mode and the Apple iPhone TTY Adapter which connects to iPhone via a Lightning to 3.5mm Headphone Jack Adapter which ships in the iPhone box.</p> <p>iPhone includes Switch Control which provides an alternate method for navigating and making onscreen selections. iPhone will cycle through and emphasize the available onscreen options, and users can make their desired selection by tapping the screen or using supported assistive devices.</p>

(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supported with exception	<p>iPhone includes an auto-lock feature that is on by default and locks the screen after a period of inactivity. But it can be disabled in the Settings app using the setting “never”. (For managed devices, “never” is only available if allowed by the enterprise. This option is also unavailable when using VPN on Demand).</p> <p>iPhone includes Switch Control which provides an alternate method for navigating and making onscreen selections. iPhone will cycle through and emphasize the available onscreen options, and users can make their desired selection by tapping the screen or using supported assistive devices. Switch Control allows for control of auto scan timing to remain on an item up to 25 seconds before moving to the next item, as well as the ability to loop through selections up to 10 times and to pause on the first item after pressing a switch.</p>
(c) Where a product utilizes touchscreens or contact-sensitive controls, an input method shall be provided that complies with Section 1194.23 (k) (1) through (4).	Supported	<p>The built-in VoiceOver screen reader provides audio and visual feedback for touchscreen controls. Also, VoiceOver can be controlled in most applications via key commands entered on a standard Bluetooth keyboard.</p> <p>iPhone’s Siri supports natural-language voice commands to send messages, schedule meetings, place phone calls, control music playback, input text, speak out content on the screen, check the weather, and more. Siri can talk back to you and read text messages, acknowledge voice commands, respond to questions, and more.</p> <p>iPhone supports more than 70 Bluetooth wireless braille displays and braille tables for more than 25 international languages. Some braille displays provide input buttons that can be used in addition to iPhone’s on screen controls.</p> <p>iPhone includes a number of Accessibility features to support motor control:</p> <ul style="list-style-type: none"> • AssistiveTouch which provides an alternative set of screen gestures for users who may have difficulty touch gestures that requires only a single finger or apparatus to operate. • Switch Control which provides an alternate method for navigating and making onscreen selections. iPhone will cycle through and emphasize the available onscreen options, and users can make their desired selection by tapping the screen or using supported assistive devices. • Touch Accommodations which provides a means to adjust how the screen responds to touches, such as controlling how long you touch before it’s recognized or whether it ignores repeated touches.
(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.	Supported	<p>In addition to Face ID that may be used to unlock iPhone, a user may alternatively enter a passcode to unlock iPhone. This passcode can also be disabled.</p> <p>Apple Pay which is offered in select countries can be used by entering a passcode.</p>
(e) When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime.	Supported	<p>Prior to iPhone 7, iPhone used an industry standard 3.5mm audio headphone jack and supports interrupt, pause and restart for controlling audio output.</p> <p>iPhone provides auditory output support via a Lightning to 3.5mm Headphone Jack Adapter which ships in the box.</p>

(f) When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.	Not applicable	
(g) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	
(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.	Supported	iPhone provides adjustable brightness, as well as settings to invert colors onscreen (white on black) for a higher contrast, an option to replace colors in iOS with grayscale, and a range of user adjustable display color filters to support different forms of color blindness or other vision challenges.
(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supported	
(j) (1) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48 inch length on products which are freestanding, non-portable, and intended to be used in one location and which have operable controls.	Not applicable	
(j)(2) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and 15 inches minimum above the floor.	Not applicable	
(j)(3) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor.	Not applicable	
(j)(4) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Operable controls shall not be more than 24 inches behind the reference plane.	Not applicable	

Section 1194.31 Functional performance criteria – Detail

Criteria	Supporting Features	Remarks and explanations
<p>(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.</p>	<p>Supported</p>	<p>iPhone includes a built-in screen reader called VoiceOver that enables iPhone to be used by those who are blind or visually impaired. Also, VoiceOver can be controlled in most applications via key commands entered on a standard Bluetooth keyboard.</p> <p>iPhone’s Siri supports natural-language voice commands to send messages, schedule meetings, place phone calls, control music playback, input text, speak out content on the screen, check the weather, and more. Siri can talk back to you and read text messages, acknowledge voice commands, respond to questions, and more.</p> <p>VoiceOver is available in over 35 languages, and Voice Control is available in 24 languages. Siri supports the prominent languages of 36 countries. Dictation is available in 32 languages. For more information about iPhone accessibility features, see www.apple.com/accessibility.</p> <p>iPhone supports more than 70 Bluetooth wireless braille displays (sold separately) and braille tables for more than 25 international languages. Some braille displays provide input buttons that can be used in addition to iPhone’s on screen controls.</p>
<p>(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people who are visually impaired shall be provided.</p>	<p>Supported</p>	<p>iPhone includes a feature called Zoom, which can magnify the screen up to 1,500% and includes multiple Zoom modes and it works with VoiceOver so you can better see and hear what’s on your screen. iPhone offers Dynamic Type which offers an option for larger text for people with 20/70 vision. iPhone also supports Speak Screen where Siri can read all the content of the page back to you, highlighting what is being read.</p> <p>iOS includes a feature called Magnifier that works like a digital magnifying glass for real-life objects. It uses the camera on an iOS device, and includes support for color filters and the ability to take a photo to get a static close-up of the item in question.</p> <p>For more information about iPhone accessibility features, see www.apple.com/accessibility</p>

<p>(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided</p>	<p>Supported</p>	<p>iPhone supports Software TTY mode as well as Hardware TTY with an addition of an Apple iPhone TTY Adapter.</p> <p>iPhone supports text messaging using SMS, MMS, iMessage and other third party web-based internet services or applications (sold separately) that support Internet Messaging services (IM) such as WhatsApp, WeChat, LINE, Facebook Messenger and Snapchat. Additional third-party applications (sold separately) designed for people who are deaf or hard of hearing may be available for iPhone.</p> <p>Users can choose custom vibration alerts instead of ring tones. Incoming calls and message alerts are displayed visually on the bright LCD touchscreen, and, at the user's option, by flashing the LED camera flash.</p> <p>iPhone's Siri supports a Type to Siri mode to request web searches, send messages, track down documents, set reminders, or turn on accessibility settings.</p> <p>Some users may be able to use the FaceTime video calling feature for sign language communications. FaceTime requires that both parties to the call have an internet connection (e.g., via Wi-Fi or cellular data service) and a device capable of making a FaceTime video call.</p> <p>iPhone is compatible with ear loop devices, Bluetooth-enabled hearing aid solutions, and Made for iPhone hearing aids. For more information about iPhone accessibility features and solutions, see www.apple.com/accessibility</p>
<p>(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.</p>	<p>Supported with exception</p>	<p>iPhone provides a gain that can be adjusted to over 20 dB. iPhone also includes a built-in speakerphone and earphones (EarPods).</p> <p>iPhone is compatible with ear loop devices, Bluetooth-enabled hearing aid solutions, and Made for iPhone hearing aids. Any of these wired devices with a 3.5mm headphone jack can connect to the iPhone via a Lightning to 3.5mm Headphone Jack Adapter which ships in the iPhone Box.</p> <p>For more information about iPhone accessibility features and solutions, see www.apple.com/accessibility</p>
<p>(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.</p>	<p>Supported</p>	<p>iPhone includes Switch Control which provides an alternate method for navigating and making onscreen selections. iPhone will cycle through and emphasize the available onscreen options, and users can make their desired selection by tapping the screen or using supported assistive devices.</p>

<p>(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.</p>	<p>Supported with exception</p>	<p>Using the iPhone touchscreen requires the use of a bare finger or conductive device. Users with motor skills or other disabilities that prevent them from having direct skin contact with the touchscreen may also choose to use a conductive stylus.</p> <p>iPhone includes a number of Accessibility features to support motor control:</p> <ul style="list-style-type: none"> • AssistiveTouch which provides an alternative set of screen gestures for users who may have difficulty touching the screen or pressing the iPhone buttons. AssistiveTouch is compatible with joysticks and other adaptive accessories. • Switch Control which provides an alternate method for navigating and making onscreen selections. iPhone will cycle through and emphasize the available onscreen options, and users can make their desired selection by tapping the screen or using supported assistive devices. • Touch Accommodations which provides a means to adjust how the screen responds to touches, such as controlling how long you touch before it's recognized or whether it ignores repeated touches. • For devices that support 3D Touch, iPhone allows the user to change the force required to activate 3D Touch in Accessibility settings. AssistiveTouch and Switch Control also provide means for activating 3D Touch functionality without applying force to the screen. <p>Siri supports natural-language voice commands to send messages, schedule meetings, place phone calls, control music playback, input text, speak out content on the screen, check the weather, and more. Siri can talk back to you and read text messages, acknowledge voice commands, respond to questions, and more.</p> <p>iPhone also includes Guided Access which allows a parent, teacher, or administrator to limit an iOS device to one app and restrict touch input on certain areas of the screen.</p> <p>For more information about iPhone accessibility features and solutions, see www.apple.com/accessibility</p> <p>Some Bluetooth wireless braille displays provide input buttons that can be used in addition to iPhone's on screen controls.</p>
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Section 1194.41 Information, Documentation and Support – Detail

Criteria	Supporting Features	Remarks and explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge	Supported	Product documentation is accessible on iPhone in HTML via the web and can be read on-screen using the built-in screen reader VoiceOver. Product and support documentation are also available on the Web in an HTML format that is compatible with screen readers for the blind and visually impaired, can be displayed in large print using web browsers and software magnifiers for those with low vision at www.apple.com/support and can be printed using a personal computer and suitable printing device.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supported	Information about Apple product accessibility and compatibility features is available on the Web in an HTML format that is compatible with screen readers for the blind and visually impaired, including the built-in iPhone screen reader VoiceOver, can be displayed in large print using web browsers and software magnifiers for those with low vision at http://www.apple.com/accessibility and can be printed using a personal computer and suitable printing device.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supported	E-mail, telephone, and support via the Web are available.

DISCLAIMERS:

Some features described in this document are not available in all areas, may be subject to additional fees or payments, and may be dependent on your cellular carrier network policies and wireless service plan, including, for example, LTE and FaceTime over cellular.

iPhone includes iOS 11, Apple EarPods with Lightning connector, Lightning to 3.5mm Headphone Jack Adapter, Lightning to USB Cable and USB Power Adapter. Other accessories or products mentioned in this document (e.g., assistive devices, styluses, hearing aids, adapters, hearing aids, and so on) are sold separately by Apple and/or third parties.

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