Apple Accessibility Conformance Report
Based on Voluntary Product Accessibility Template® (VPAT®)

Name of Product: MacBook Pro (16-inch, 2023)

Product Description: A portable personal computer with a 16-inch screen running the macOS Ventura 13.2 operating system

Date: 24th January, 2023

Contact information: accessibility@apple.com

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports**: The functionality of the product has at least one method that meets the criteria without known defects or meets with equivalent facilitation.
- **Supports with Exceptions**: Some functionality of the product does not meet the criteria.
- **Does Not Support**: Majority of functionality of the product does not meet the criteria.
- **Not Applicable**: The criteria are not relevant to the product.
- **Not Evaluated**: The product has not been evaluated against the criteria. This can be used only with WCAG 2.0 Level AAA.

WCAG 2.0 Report -

Table 1: Conformance Criteria, Level A -

Refer to the macOS Ventura v12.0 VPAT

Table 2: Conformance Criteria, Level AA -

Refer to the macOS Ventura v12.0 VPAT

2018 Section 508 Report -

Chapter 3: Functional Performance Criteria -

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that does not require user vision.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays that start instantly when connected. There is also support for over 30 braille tables supporting a wide range of languages. MacBook Pro supports Hey Siri, which allows you to connect with Siri hands-free. For more information on the accessibility features of macOS, please see the macOS VPAT.

Criteria	Conformance Level	Remarks and Explanations
302.2 With Limited Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited vision.	Supports	macOS includes many features to assist users with low vision, including but not limited to: VoiceOver, VoiceOver cursor zoom, a scalable mouse cursor, and Zoom—a built-in screen magnification feature. For more information on the accessibility features of macOS, please see the macOS VPAT.
302.3 Without Perception of Color. Where a visual mode of operation is provided, ICT shall provide at least one visual mode of operation that does not require user perception of color.	Supports with exceptions	macOS uses color to convey information. In many cases, when color is used, it provides an alternative information display that does not rely on color. For example, color controls are used in the title bar of macOS windows that allow a user to close, minimize or maximize a window. While color indicates each control's function, each control also has a unique symbol and position that indicates its function without relying on color information. But, there are some visual elements that do not include an alternative information display. macOS also provides system-level control of display characteristics that cannot be overridden by applications, including options to: • Switch the display from color to grayscale. • Invert light and dark colors displayed on the screen. • Differentiate certain elements without color. • Increase contrast of elements on the screen. • Reduce the transparency of elements on the screen. All of these features are accessed through System Preferences for Accessibility and can be used together in different combinations to suit the user's needs. For more information on the accessibility features of macOS, please see the macOS VPAT.

Criteria	Conformance Level	Remarks and Explanations
302.4 Without Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that does not require user hearing.	Supports	macOS includes many features to assist users without hearing, including but not limited to: Flash screen, Notifications, Type to Siri, and FaceTime. For more information on the accessibility features of macOS, please see the macOS VPAT.
302.5 With Limited Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited hearing.	Supports	Volume can be controlled at the system level. External speakers can be attached if necessary for further amplification. macOS also supports Mono Audio to combine the left and right stereo channels into a mono signal played through both left and right speakers and headphones so all of the audio program can be heard more easily. For more information on the accessibility features of macOS, please see the macOS VPAT.
302.6 Without Speech. Where speech is used for input, control, or operation, ICT shall provide at least one mode of operation that does not require user speech.	Supports	Siri supports a Type to Siri mode to request web searches, send messages, track down documents, set reminders, or turn on accessibility settings. For more information on the accessibility features of macOS, please see the macOS VPAT.
302.7 With Limited Manipulation. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that does not require fine motor control or simultaneous manual operations.	Supports	macOS includes many features to assist users with limited manipulation, including but not limited to: Sticky Keys, Slow Keys, Dictation, Switch Control, the Accessibility Keyboard, Adjustable Keyboard repeat delay, and Tracking speed. For more information on the accessibility features of macOS, please see the macOS VPAT.

Criteria	Conformance Level	Remarks and Explanations
302.8 With Limited Reach and Strength. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that is operable with limited reach and limited strength.	Supports	macOS includes many features to assist users with limited manipulation, including but not limited to: Sticky Keys, Slow Keys, Dictation, Switch Control, the Accessibility Keyboard, Adjustable Keyboard repeat delay, Tracking speed, and Hey Siri. For more information on the accessibility features of macOS, please see the macOS VPAT.
302.9 With Limited Language, Cognitive, and Learning Abilities. ICT shall provide features making its use by individuals with limited cognitive, language, and learning abilities simpler and easier.	Supports	macOS includes many features to assist users with limited language, cognitive and learning abilities, including but not limited to: Text to Speech, Simple Finder, Word Completion, Safari Reader, and Dictionary. For more information on the accessibility features of macOS, please see the macOS VPAT.

Chapter 4: Hardware -

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality		
402.1 General		
402.2 Speech-Output Enabled		

Criteria	Conformance Level	Remarks and Explanations
402.2.1 Information Displayed On-Screen. Speech output shall be provided for all information displayed on-screen.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from https://www.apple.com/accessibility/vision/
402.2.2 Transactional Outputs. Where transactional outputs are provided, the speech output shall audibly provide all information necessary to verify a transaction.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from https://www.apple.com/accessibility/vision/
402.2.3 Speech Delivery Type and Coordination. Speech output shall be delivered through a mechanism that is readily available to all users, including, but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized. Speech output shall be coordinated with information displayed on the screen.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from https://www.apple.com/accessibility/vision/

Criteria	Conformance Level	Remarks and Explanations
402.2.4 User Control. Speech output for any single function shall be automatically interrupted when a transaction is selected. Speech output shall be capable of being repeated and paused.	Supports	VoiceOver supports audio ducking to allow screen reader information to interrupt other audio. There are keyboard commands and trackpad gestures available to repeat and pause speech output.
402.2.5 Braille Instructions. Where speech output is required by 402.2, braille instructions for initiating the speech mode of operation shall be provided. Braille shall be contracted and shall conform to 36 CFR part 1191, Appendix D, Section 703.3.1.	Supports	Apple provides information on supported braille displays through the Apple Knowledge base at Braille displays that work with VoiceOver on your Mac.
402.3 Volume		
402.3.1 Private Listening. Where ICT provides private listening, it shall provide a mode of operation for controlling the volume. Where ICT delivers output by an audio transducer typically held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.	Supports	Volume can be controlled at the system level. External speakers can be attached if necessary for further amplification.
402.3.2 Non-private Listening. Where ICT provides non-private listening, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. A function shall be provided to automatically reset the volume to the default level after every use.	Not applicable	

Criteria	Conformance Level	Remarks and Explanations
402.4 Characters on Display Screens. At least one mode of characters displayed on the screen shall be in a sans serif font. Where ICT does not provide a screen enlargement feature, characters shall be 3/16 inch (4.8 mm) high minimum based on the uppercase letter "I". Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.	Supports	Standard font is sans serif. Displays provide screen enlargement feature. Characters contrast with their background with dark characters on a light background. More information is available at https://www.apple.com/accessibility/mac/vision/
402.5 Characters on Variable Message Signs. Characters on variable message signs shall conform to section 703.7 Variable Message Signs of ICC A117.1-2009 (incorporated by reference, see 702.6.1).	Not applicable	
403 Biometrics		
403.1 General. Where provided, biometrics shall not be the only means for user identification or control.	Supports	Users can authenticate using a password, i.e. Touch ID is not required do so.
404 Preservation of Information Provided for Accessibility		
404.1 General. ICT that transmits or converts information or communication shall not remove non-proprietary information provided for accessibility or shall restore it upon delivery.	Supports	Accessibility structure, markup, and descriptions are preserved when converting documents, spreadsheets, presentations, and images into different formats.
405 Privacy		

Criteria	Conformance Level	Remarks and Explanations
405.1 General. The same degree of privacy of input and output shall be provided to all individuals. When speech output required by 402.2 is enabled, the screen shall not blank automatically.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. VoiceOver has a screen curtain option available to those who would like additional privacy. More information is available at https://www.apple.com/accessibility/mac/vision/
406 Standard Connections		
406.1 General. Where data connections used for input and output are provided, at least one of each type of connection shall conform to industry standard non-proprietary formats.	Supports with exceptions	All ports and connectors are compliant with publicly available industry standards, including but not limited to: Thunderbolt 4 (USB-C), HDMI, SDXC, and the headphone jack. More information on product technical specifications at https://www.apple.com/macbook-pro-14-and-16/specs/
407 Operable Parts		
407.2 Contrast. Where provided, keys and controls shall contrast visually from background surfaces. Characters and symbols shall contrast visually from background surfaces with either light characters or symbols on a dark background or dark characters or symbols on a light background.	Supports	Keys and controls have visual contrast with light characters on dark background. More information is available at https://www.apple.com/accessibility/vision/
407.3 Input Controls		
407.3.1 Tactilely Discernible. Input controls shall be operable by touch and tactilely discernible without activation.	Supports	Keyboard keys (F and J) have discernible nubs to assist users in Keyboard orientation. Arrows keys are in an inverted-T arrangement, making them easier to find by touch alone.
407.3.2 Alphabetic Keys. Where provided, individual alphabetic keys shall be arranged in a QWERTY-based keyboard layout and the "F" and "J" keys shall be tactilely distinct from the other keys.	Supports	Keyboard keys (F and J) have discernible nubs to assist users in Keyboard orientation.

Criteria	Conformance Level	Remarks and Explanations
407.3.3 Numeric Keys. Where provided, numeric keys shall be arranged in a 12-key ascending or descending keypad layout. The number five key shall be tactilely distinct from the other keys. Where the ICT provides an alphabetic overlay on numeric keys, the relationships between letters and digits shall conform to ITU–T Recommendation E.161 (incorporated by reference, see 702.7.1).	Not applicable	
407.4 Key Repeat. Where a keyboard with key repeat is provided, the delay before the key repeat feature is activated shall be fixed at, or adjustable to, 2 seconds minimum.	Supports	Key repeat can be configured at the system level. Go to system preferences, select Keyboard and the Key Repeat speed can be adjusted on a slider.
407.5 Timed Response. Where a timed response is required, the user shall be alerted visually, as well as by touch or sound, and shall be given the opportunity to indicate that more time is needed.	Supports with exceptions	There are limited controls over time limits throughout macOS. macOS provides settings to turn the display off after a range of time frames including "Never". More information on these settings is available from Change Battery preferences on a Mac notebook macOS also provides settings on when to start a screen saver and allows for a screen saver which can act as a warning that the computer will go in sleep mode. More information on screen saver settings is available from Use a screen saver on your Mac
407.6 Operation. At least one mode of operation shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.	Supports with minor exceptions	1. Sticky Keys, Mouse Keys, and Slow Keys can be used for one-hand operation of the MacBook Pro. 2. Multi-touch trackpad gestures can all be accomplished in alternate, acceptable ways. More information is available at https://www.apple.com/accessibility/mobility/

Criteria	Conformance Level	Remarks and Explanations
407.7 Tickets, Fare Cards, and Keycards. Where tickets, fare cards, or keycards are provided, they shall have an orientation that is tactilely discernible if orientation is important to further use of the ticket, fare card, or keycard.	Not applicable	
407.8 Reach Height and Depth	Not applicable	Not applicable
408 Display Screens		
408.2 Visibility. Where stationary ICT provides one or more display screens, at least one of each type of display screen shall be visible from a point located 40 inches (1015 mm) above the floor space where the display screen is viewed.	Not applicable	
408.3 Flashing. Where ICT emits lights in flashes, there shall be no more than three flashes in any one-second period.	Supports	Note: Safari and WebKit use web standards such as HTML and CSS to display web pages. Web content authors are responsible for ensuring their own implementations of flashing content.
409 Status Indicators		
409.1 General. Where provided, status indicators shall be discernible visually and by touch or sound.	Supports	Status indicators are visually discernible and VoiceOver provides spoken output for the status when that key is pressed such as caps lock and screen brightness, macOS provides a setting to produce sound with increasing/decreasing volume.
410 Color Coding		

Criteria	Conformance Level	Remarks and Explanations
410.1 General. Where provided, color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports with exceptions	VoiceOver, the built-in screen reader, provides sound and text for conveying the meaning of color. macOS uses color to convey information. In many cases, when color is used, it provides an alternative information display that does not rely on color. For example, color controls are used in the title bar of macOS windows that allow a user to close, minimize or maximize a window. While color indicates each control's function, each control also has a unique symbol and positional placement that indicates its function without relying on color information. But, there are some elements that do not include an alternative visual option. macOS also provides system-level control of display characteristics that cannot be overridden by applications, including options to: • Switch the display from color to grayscale. • Invert light and dark colors displayed on the screen. • Differentiate certain elements without color. • Increase contrast of elements on the screen. • Reduce the transparency of elements on the screen. All of these features are accessed through the Accessibility system preference and can be used together in different combinations to suit the user's needs. More information is available at https://www.apple.com/accessibility/vision/
411 Audible Signals		

Criteria	Conformance Level	Remarks and Explanations
411.1 General. Where provided, audible signals or cues shall not be used as the only means of conveying information, indicating an action, or prompting a response	Supports	macOS includes a variety of Accessibility features to augment audible signals: **Flash Screen** - macOS provides a visual indication of alert sounds via the Flash Screen feature. When a Mac application attempts to play a system beep alert, macOS instead flashes the screen. **Notifications** – Applications can notify the user of important information using the notification system built into macOS. Notifications all appear in the upper right of the screen making them easy to notice. **Dock Notification** – The icons of running applications that need attention visually jump up and down in the Dock, providing visual notification in addition to an audible beep or flash. More information is available at https://www.apple.com/accessibility/hearing/
412 ICT with Two-Way Voice Communication		
412.2 Volume Gain		
412.2.1 Volume Gain for Wireline Telephones. Volume gain conforming to 47 CFR 68.317 shall be provided on analog and digital wireline telephones.	Not applicable	
412.2.2 Volume Gain for Non-Wireline ICT. A method for increasing volume shall be provided for non-wireline ICT.	Not applicable	
412.3 Interference Reduction and Magnetic Coupling		

Criteria	Conformance Level	Remarks and Explanations
412.3.1 Wireless Handsets. ICT in the form of wireless handsets shall conform to ANSI/IEEE C63.19-2011 (incorporated by reference, see 702.5.1).	Not applicable	
412.3.2 Wireline Handsets. ICT in the form of wireline handsets, including cordless handsets, shall conform to TIA-1083-B (incorporated by reference, see702.9.1).	Not applicable	
412.4 Digital Encoding of Speech. ICT in IP-based networks shall transmit and receive speech that is digitally encoded in the manner specified by ITU-T Recommendation G.722.2 (incorporated by reference, see 702.7.2) or IETF RFC 6716 (incorporated by reference, see 702.8.1).	Not applicable	
412.5 Real-Time Text Functionality	Not applicable	
412.6 Caller ID. Where provided, caller identification and similar telecommunications functions shall be visible and audible.	Not applicable	
412.7 Video Communication. Where ICT provides real-time video functionality, the quality of the video shall be sufficient to support communication using sign language.	Supports	More information on product technical specifications at https://www.apple.com/macbook-pro-14-and-16/specs/
413 Closed Caption Processing Technologies		
413.1.1 Decoding and Display of Closed Captions. Players and displays shall decode closed caption data and support display of captions.	Supports	macOS supports display of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/hearing/

Criteria	Conformance Level	Remarks and Explanations
413.1.2 Pass-Through of Closed Caption Data. Cabling and ancillary equipment shall pass through caption data.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/hearing/
414 Audio Description Processing Technologies		
414.1.1 Digital Television Tuners. Digital television tuners shall provide audio description processing that conforms to ATSC A/53 Digital Television Standard, Part 5 (2014) (incorporated by reference, see 702.2.1). Digital television tuners shall provide processing of audio description when encoded as a Visually Impaired (VI) associated audio service that is provided as a complete program mix containing audio description according to the ATSC A/53 standard.	Not applicable	
414.1.2 Other ICT. ICT other than digital television tuners shall provide audio description processing.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/hearing/
415 User Controls for Captions and Audio Descriptions		

Criteria	Conformance Level	Remarks and Explanations
415.1.1 Where ICT provides operable parts for volume control, ICT shall also provide operable parts for caption selection.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. In the default media player provided by the AV Media Playback API, there are controls for selecting the captions alongside volume adjustment. This is also true of the media players in QuickTime and Apple TV app, as well are in the default media player provided by WebKit. Third-party developers can implement their own custom media players, where they choose whether or not to support selection of captions. More information is available at https://www.apple.com/accessibility/hearing/
415.1.2 Audio Description Controls. Where ICT provides operable parts for program selection, ICT shall also provide operable parts for the selection of audio description.	Supports	In the default media player provided by the AV Media Playback API, there are controls for selecting the audio descriptions alongside volume adjustment. This is also true of the media players in QuickTime and Apple TV app, as well are in the default media player provided by WebKit.

Chapter 5: Software -

Refer to the macOS Ventura v12.0 VPAT

Chapter 6: Support Documentation and Services -

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope		
602 Support Documentation		
602.2 Accessibility and Compatibility Features. Documentation shall list and explain how to use the accessibility and compatibility features required by Chapters 4 and 5. Documentation shall include accessibility features that are built-in and accessibility features that provide compatibility with assistive technology.	Supports	Mac product documentation is available online in an accessible format in accessible HTML format through; • Apple Support at https://www.apple.com/support • macOS new release page at https:/www.apple.com/macOS • MacBook Pro product page at https://www.apple.com/macbook-pro/ • Accessibility product page at https://www.apple.com/accessibility/mac/ Every Mac includes a built-in, interactive VoiceOver tutorial, interactive keyboard learning utility (called Keyboard Practice), and contextual menu system for VoiceOver. macOS help content is also available through the macOS Help menu as well as online through Apple Support. The Switch Control and Accessibility Keyboard guide and the Voice Over guide are delivered as online manual in accessible HTML from https://support.apple.com/en_US/manuals/macos. The Voice Over guide is available electronic .brf braille at no charge. Charges may apply for embossed braille. VPATs for Apple products are available at https://support.apple.com/accessibility/vpat.
602.3 Electronic Support Documentation. Documentation in electronic format, including Web-based self-service support, shall conform to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (incorporated by reference, see 702.10.1).	Supports	The electronic web-based product documentation for macOS conforms to both Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0.

Criteria	Conformance Level	Remarks and Explanations
602.4 Alternate Formats for Non-Electronic Support Documentation. Where support documentation is only provided in non-electronic formats, alternate formats usable by individuals with disabilities shall be provided upon request.	Supports	Product documentation for macOS is available in embossed braille via third party provider.
603 Support Services		
603.2 Information on Accessibility and Compatibility Features. ICT support services shall include information on the accessibility and compatibility features required by 602.2.	Supports	Apple Support provides advisors with information on accessibility and compatibility features for Macs and macOS. This information is also documented in the product documentation.
603.3 Accommodation of Communication Needs. Support services shall be provided directly to the user or through a referral to a point of contact. Such ICT support services shall accommodate the communication needs of individuals with disabilities.	Supports	Support via the Internet is available through the Apple Knowledge base at http://www.apple.com/support. For additional information on the many service and support options offered by Apple visit www.apple.com/support.

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