

Section 508 Conformance Audit Voluntary Product Accessibility Template

Marketing Model Number: Latitude E5450/5450

Regulatory Number: P48G

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Section 508 Evaluation Template

This Voluntary Product Accessibility Template (VPAT) provides guidance on the accessibility characteristics of the **Latitude E5450/5450** as of October 17, 2014.

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The current version of the **Latitude E5450/5450** was tested for conformance with Section 508 of the Rehabilitation Act, specifically, the U.S. Access Board's Technical Requirements. This product was tested as of **October 17, 2014** and is only valid for the version and date it was tested.

VPAT™ Summary Table Voluntary Product Accessibility Template®

VPAT Summary	Total Standards	Total Applicable Standard	Supports	Exceptions
Section 1194.21 Software Applications and Operating Systems	12	12	12	0
Section 1194.22 Web-based Internet Information and Applications	16	0	0	0
Section 1194.23 Telecommunications Products	14	4	4	0
Section 1194.24 Video and Multi- media Products	5	0	0	0
Section 1194.25 Self-Contained, Closed Products	13	9	9	0
Section 1194.26 Desktop and Portable Computers	4	4	4	0
Section 1194.31 Functional Performance Criteria	6	6	6	0
Section 1194.41 Information, Documentation and Support	3	3	3	0
Total	73	38	38	0

Section 1194.21 Software Applications and Operating Systems -- Detail VPAT™ Voluntary Product Accessibility Template®

Criteria	Supporting Features	Remarks and explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports	Supports via Microsoft Windows Operating System. Product functions are executable from a keyboard where the function itself or the result of performing a function can be discerned textually. Navigation of the application menus via the operating system from the keyboard, as well as, Microsoft accessibility features including StickyKeys, Filter Keys, and ToggleKeys are supported. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports	Supports via Microsoft Windows Operating System. Applications running on this product do not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(c) A well-defined on-screen indication of the current focus	Supports	Supports via Microsoft Windows Operating System.

shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.		This product supports a well-defined on- screen indication of the current focus that moves among interactive interface elements as the input focus changes. The focus is programmatically exposed so Assistive Technology can track focus and focus changes. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports	Supports via Microsoft Windows Operating System. Information about user interface elements is made available to Assistive Technology. Text equivalents for program element images are available for applications that adhere to standard Windows Application Programming Interfaces (APIs). For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports	Supports via Microsoft Windows Operating System. Bitmap images meanings (controls, status indictors, or other programmatic elements) are consistent throughout the application's performance. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret	Supports	Supports via Microsoft Windows Operating System. Textual information (text content, text input caret location, and text attributes) for displaying text are provided.

location, and text attributes.		For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports	Supports via Microsoft Windows Operating System. User selected contrast and color selections and other individual display attributes set through Microsoft Windows are not superseded while running applications. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supports	Supports via Microsoft Windows Operating System. User has the option of selecting a non-animated presentation mode. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(i) 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	Supports via Microsoft Windows Operating System. This product does not use color coding as the only means to convey information, indicating an action, prompting responses or distinguishing visual elements. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports	Supports via Microsoft Windows Operating System. This product permits a user to adjust color selections through Microsoft Windows which provides a range of contrast levels for applications that allow a user to adjust

		color and contrast settings. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports	Supports via Microsoft Windows Operating System. Flashing or Blinking text - Blinking does not occur in the prohibited range. The cursor blink rate can be adjusted by the user to less than 2Hz. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs
(I) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports	Supports via Microsoft Windows Operating System. Form information, field elements, and functionality for completion and submission of electronic forms are accessible with Assistive Technology. For more information regarding the accessibility of Microsoft Operating Systems: Microsoft VPATs

Section 1194.22 Web-based Internet information and applications -- Detail VPAT™ Voluntary Product Accessibility Template®

Criteria	Supporting Features	Remarks and explanations
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Not Applicable	This product is a laptop computer, therefore not an internet application.

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(f) Client-side image maps shall be provided instead of server- side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(g) Row and column headers shall be identified for data tables.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(i) Frames shall be titled with text that facilitates frame identification and navigation	Not Applicable	This product is a laptop computer, therefore not an internet application.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater	Not Applicable	This product is a laptop computer, therefore not an internet application.

than 2 Hz and lower than 55 Hz.		
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(I) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (I).	Not Applicable	This product is a laptop computer, therefore not an internet application.
(n) When electronic forms are designed to be completed online, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not Applicable	This product is a laptop computer, therefore not an internet application.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Not Applicable	This product is a laptop computer, therefore not an internet application.

(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	This product is a laptop computer, therefore not an internet application.	
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Note to 1194.22: The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium: Paragraph (a) - 1.1, (b) - 1.4, (c) - 2.1, (d) - 6.1, (e) - 1.2, (f) - 9.1, (g) - 5.1, (h) - 5.2, (i) - 12.1, (j) - 7.1, (k) - 11.4.

Section 1194.23 Telecommunications Products – Detail VPAT™ Voluntary Product Accessibility Template®

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.	Not Applicable	Not a Telecommunications Product or System.
(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.	Not Applicable	Not a Telecommunications Product or System.
(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users	Not Applicable	Not a Telecommunications Product or System.

with their TTYs.		
(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.	Not Applicable	Not a Telecommunications Product or System.
(e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.	Not Applicable	Not a Telecommunications Product or System.
(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.	Not Applicable	Not a Telecommunications Product or System.
(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 Applicable	Not a Telecommunications Product or System.
(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.	Not Applicable	Not a Telecommunications Product or System.
(i) Interference to hearing	Not	Not a Telecommunications Product or

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.	Applicable	System.
(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.	Not Applicable	Not a Telecommunications Product or System.
(k)(1) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be tactilely discernible without activating the controls or keys.	Supports	Tactile marks are present on the "F" and "J" keys on the keyboard. Controls, keys and latches are tactilely discernible.
(k)(2) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be operable with one hand and shall not require tight grasping, pinching, twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2N) maximum.	Supports	Controls, keys and latches may be triggered with one hand and do not require tight grasping, pinching or twisting of the wrist. Controls and keys may be activated using less than 5 pound of force (pressure).
(k)(3) Products which have mechanically operated controls	Supports	Support provided via Microsoft Windows Operating Systems.

or keys shall comply with the following: 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.		
(k)(4) Products which have mechanically operated controls or keys shall comply with the following: The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.	Supports	Supported via Microsoft Operating Systems Accessibility Features. Provides audible feedback when toggling and locking keys are set.

Section 1194.24 Video and Multi-media Products – Detail VPAT™ Voluntary Product Accessibility Template®

Criteria	Supporting Features	Remarks and explanations
(a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption	Not Applicable	This product is not a Video or Multi-media Product. Does not have analog television receiver or display circuitry.

decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. (b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary	Not Applicable	This product is not a Video or Multi-media Product.
audio program playback circuitry. (c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.	Not Applicable	Does not have tuner capabilities. This product is not a Video or Multi-media Product. This product contains no user required multimedia presentations.
(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual Not Applicable information necessary for the comprehension of the content, shall be audio described.	Not Applicable	This product is not a Video or Multi-media Product. This product contains no user required multimedia presentations.
(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.	Not Applicable	This product is not a Video or Multi-media Product. This product contains no user required multimedia presentations.

Section 1194.25 Self-Contained, Closed Products – Detail VPAT™ Voluntary Product Accessibility Template®

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	Not Applicable	This product is not a self-contained, closed product.

Technology to the product. Personal headsets for private listening are not Assistive Technology.		
(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	This product is not a self-contained, closed product.
(c) Where a product utilizes touchscreens or contact-sensitive controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).	Supports	The laptop has a touchpad for mouse functions. The keyboard and operating system provide an alternative to mouse input.
(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.	Supports	Other forms of security and user identification such as a password can be used as well.
(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.	Not Applicable	This product is not a self-contained, closed product.
(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	Not Applicable	This product is not a self-contained, closed product.

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function shall be provided to automatically reset the volume to the default level after every use.		
(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.	Supports	Color coding is not used as the sole means of conveying information or indicating an action.
(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.	Supports	The operating system can be used to select user display settings.
(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports	Flashing or Blinking text - Blinking does not occur in the prohibited range. The cursor blink rate can be adjusted by the user to less than 2Hz.
(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.	Supports	The position of the operable controls 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.
(j)(2) Products which are freestanding, non-portable, and	Supports	Products have operable controls that are 10 inches or less behind the reference

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.		plane, the height is 54 inches maximum and 15 inches minimum above the floor.
(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.	Supports	Product has operable controls that 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.
(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.	Supports	Products have operable controls that comply with the following: Operable controls shall not be more than 24 inches behind the reference plane.

Section 1194.26 Desktop and Portable Computers – Detail VPAT™ Voluntary Product Accessibility Template®

Criteria	Supporting Features	Remarks and explanations
(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).	Supports	Controls, keys and latches are tactilely discernible. Controls, keys and latches may be

		triggered with one hand and do not require tight grasping, pinching or twisting of the wrist. Controls and keys may be activated using less than 5 pound of force (pressure). Key repeat support is provided via Microsoft Windows Operating Systems. The status of locking and toggle controls and keys is supported via Microsoft Operating Systems Accessibility Features. Provides audible feedback when toggling and locking keys are set.
(b) If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).	Supports	A touchpad is used for pointing devices. Alternative forms of input are provided via the keyboard and the operating system, Controls, keys and latches are tactilely discernible. Controls, keys and latches may be triggered with one hand and do not require tight grasping, pinching or twisting of the wrist. Controls and keys may be activated using less than 5 pound of force (pressure). Key repeat support is provided via Microsoft Windows Operating Systems. The status of locking and toggle controls and keys is supported via Microsoft Operating Systems Accessibility Features. Provides audible feedback when toggling and locking keys are set.
(c) 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.	Supports	Password alternatives are available through the keyboard.
(d) Where provided, at least one	Supports	Dell uses publicly available industry

of each type of expansion slots, ports and connectors shall comply with publicly available industry standards

Section 1194.31 Functional Performance Criteria – Detail VPAT™ Voluntary Product Accessibility Template®

Criteria	Supporting Features	Remarks and explanations
(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.	Supports	The product may be operated without vision. Information retrieval is supported by the operating system (Windows) when combined with assistive technology for example, screen reader (Jaws), screen magnification (MAGic) and speech recognition (Dragon Naturally Speaking) software. Industry standard ports and connectors allow hardware assistive technology to be connected.
(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.	Supports	The product may be operated without vision and does not require visual acuity greater than 20/70. Information retrieval is supported by the operating system (Windows) when combined with assistive technology for example, screen reader (Jaws), screen magnification (MAGic) and speech recognition (Dragon Naturally Speaking) software. Industry standard ports and connectors allow hardware assistive technology to be connected.
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or	Supports	Does not require user hearing to operate or for information retrieval. Industry standard ports and connectors allow for assistive technology to be used to enhance optional

support for Assistive Technology used by people who are deaf or hard of hearing shall be provided		auditory information if the user desires.
(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.	Supports	Does not require user hearing to operate or for information retrieval. Industry standard ports and connectors allow for assistive technology to be used to enhance optional auditory information if the user desires.
(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.	Supports	User speech is not required for operations.
(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.	Supports	Operation and information retrieval does not require fine motor control and simultaneous actions. The product can be operated with limited reach and strength. Reference 1194.26(a) and 1194.26(b) for details.

Section 1194.41 Information, Documentation and Support – Detail VPAT™ Voluntary Product Accessibility Template®

Criteria	Supporting Features	Remarks and explanations
(a) Product support documentation provided to endusers shall be made available in alternate formats upon request, at no additional charge	Supports	Alternative forms of access to product support documentation in alternative formats are currently available by contacting Dell Customer and Technical Support: http://support.dell.com at no additional charge to the end user.

(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.	Supports	Alternative forms of access to descriptions of the accessibility and compatibility features in alternative formats are currently available via Dell Customer Support and Technical Support Services: http://support.dell.com at no additional charge to the end user.
(c) Support services for products shall accommodate the communication needs of endusers with disabilities.	Supports	Dell Provides support for Technical Support via Online Chat, Telephone and Email. Dell has a dedicated TTY line available