

Date: October 8, 2014

Name of Product: FLEX System x440

VPAT Summary

Criteria	Status	Remarks and Explanations
Section 1194.21 Software Applications and Operating Systems	Not applicable	Not applicable
Section 1194.22 Web-based Internet information & applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
Section 1194.23 Telecommunications Products	Supports	Refer to Section 1194.23 in VPAT Details section below.
Section 1194.24 Video and Multi-media Products	Not applicable	Not applicable
Section 1194.25 Self-Contained, Closed Products	Supports	Refer to Section 1194.25 in VPAT Details section below.
Section 1194.26 Desktop and Portable Computers	Supports	Refer to Section 1194.26 in VPAT Details section below.
Section 1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
Section 1194.41 Information, Documentation, and Support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

Section 1194.22 Web-based Internet information and applications - Detail

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).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	The following component meets this criterion: - Integrated Management Module II 1.34: - Web Interface - Text alternatives are provided.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not applicable	The following component does not apply to this criterion: - Integrated Management Module: - Web Interface - No multimedia used.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	The following component meets this criterion: - Integrated Management Module: - Web Interface - Tests show that color information has alternative text or another means of conveying information.
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	The following component meets this criterion: - Integrated Management Module: - Web Interface - Tests resulted in readable pages.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	The following component does not apply to this criterion: - Integrated Management Module: - Web Interface - There are no image maps.
(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	The following component does not apply to this criterion: - Integrated Management Module: - Web Interface - There are no image maps.
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table	The following component meets this criterion: - Integrated Management Module: - Web Interface - Tables are properly described

Criteria	Supporting Features	Remarks and Explanations
	cell are clear and can be communicated by a screen reader.	with their column headings and the relationships between cells.
(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.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	The following component meets this criterion: - Integrated Management Module: - Web Interface - Tables are properly described with their column headings and the relationships between cells.
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Not applicable	The following component does not apply to this criterion: - Integrated Management Module: - Web Interface - There are no frames.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	The following component meets this criterion: - Integrated Management Module: - Web Interface - There is no content on the web pages that flashes.
(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.	Supports: When necessary, the application has been designed with text-only pages to communicate equivalent information to disabled users.	The following component meets this criterion: - Integrated Management Module: - Web Interface - Text-only pages are provided when accessibility cannot be accomplished any other way. The context help is an example of this.
(l) 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	The following component does not apply to this criterion: - Integrated Management Module: - Web Interface - No scripts provided.
(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 (l).	Not applicable	The following component does not apply to this criterion: - Integrated Management Module: - Web Interface - No applets, plug-ins, and non-HTML content.
(n) When electronic forms are designed to be completed on-line, 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	The following component does not apply to this criterion: - Integrated Management Module: - Web Interface - There are no forms.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	The following component meets this criterion: - Integrated Management Module: - Web Interface - Screen reader keyboard command INSERT+F6 provides a correct list for each web page so the web pages are properly encoded with section headings that are recognized by screen reader.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports: When a timed response is required, an option to request more time to complete the action is provided to the user.	The following component meets this criterion: - Integrated Management Module: - Web Interface - The IMM Web Interface has a timeout for inactivity where once the time expires the user must log into the interface again. To avoid the timeout some navigation through the pages must occur.

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.	Not applicable	
(b) Telecommunications products which include voice communication functionality shall support all	Not applicable	

Criteria	Supporting Features	Remarks and Explanations
commonly used cross-manufacturer non proprietary standard TTY signal protocols.		
(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.	Not applicable	
(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunication 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	
(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	
(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	
(g) If the telecommunications product allows a user to adjust the receiver volume, a function shall be provided to automatically reset the volume to the default level after every use.	Not applicable	
(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	
(i) Interface 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.	Not applicable	
(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 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	
(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: Touch can be used to identify and distinguish controls and keys without activating them.	The following component meets this criterion: - FLEX System x440: - Compute Node hardware - Both Power button and HDD release latches are discernible without activation.
(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 and latches can be reached and operated using one hand and require minimal dexterity for ease of use by mobility impaired users.	The following component meets this criterion: - FLEX System x440: - Compute Node hardware - Power push button optimized for use with mouth stick. Hot swap HDD release. There is one handed operation, not super intuitive or easy. x440 has two release latches to remove compute node from chassis.
(k)(3) Products which have mechanically operated controls 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.	Not applicable	The following component does not apply to this criterion: - FLEX System x440: - Compute Node hardware - No key repeat on server hardware.
(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.	Not applicable	The following component does not apply to this criterion: - FLEX System x440: - Compute Node hardware - No toggle or locking

Criteria	Supporting Features	Remarks and Explanations
		controls.

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.	Not applicable	
(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not applicable	
(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).	Not applicable	
(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.	Not applicable	
(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	The following component does not apply to this criterion: - FLEX System x440: - Compute Node hardware - No system sounds in server hardware.
(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.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	The following component meets this criterion: - FLEX System x440: - Compute Node hardware - Color used as enhancement only.
(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.	Not applicable	
(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	
(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.		

Criteria	Supporting Features	Remarks and Explanations
(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.		
(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.		

Section 1194.26 Desktop and Portable Computers - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).	Supports: See 1194.23(k) 1 through 4.	The following component meets this criterion: - FLEX System x440: - Compute Node hardware - Power button is reachable and operable with one hand and minimal dexterity. Recessed design is optimized for inadvertent operation protection and mouth stick operation. Hard drive cam handle release is operable with one hand. Latches (cover removal, cam handle release, etc.) are all designed for activation with a single hand. Some service tasks (node installation, node removal, etc.) require two hands due to weight and size.
(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).	Not applicable	The following component does not apply to this criterion: - FLEX System x440: - Compute Node hardware - Product does not utilize touchscreens or touch operated controls.
(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.	Not applicable	The following component does not apply to this criterion: - FLEX System x440: - Compute Node hardware - Product does not utilize biometric forms of user identification.
(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards.	Supports: The product design uses industry standard ports so that alternative equipment and assistive technologies can be accommodated.	The following component meets this criterion: - FLEX System x440: - Compute Node hardware - Industry standard USB port. KVM dongle (shipped standard with each Flex System chassis) converts dongle connector to industry standard USB (2) and Video (1) ports for each compute node.

Section 1194.31 Functional Performance - Detail

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: See the following for supporting features: - 1194.22 all - 1194.23 k1, k4 - 1194.25 a, b, c, e, f, g - 1194.26 b, d	The following components meet this criterion: - FLEX System x440: - Compute Node hardware - Integrated Management Module II: - Web Interface
(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	Supports: See the following for supporting features: - 1194.22 n	The following component meets this criterion: - FLEX System x440: - Compute Node hardware

Criteria	Supporting Features	Remarks and Explanations
what are visually impaired shall be provided.	- 1194.25 h - 1194.26 d	The following component does not apply to this criterion: - Integrated Management Module II: - Web Interface
(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.	Supports: See the following for supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.25 e, f	The following component meets this criterion: - FLEX System x440: - Compute Node hardware The following component does not apply to this criterion: - Integrated Management Module II: - Web Interface
(d) Where audio information is important for the use of the 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: See the following for supporting features: - 1194.23 k4 - 1194.25 e, f	The following components meet this criterion: - FLEX System x440: - Compute Node hardware - Integrated Management Module II: - Web Interface
(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.	Not applicable	
(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: See the following for supporting features: - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	The following components meet this criterion: - FLEX System x440: - Compute Node hardware - Integrated Management Module II: - Web Interface

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.	Supports: Product support documentation is provided in at least one accessible format.	The following component meets this criterion: - FLEX System x440: - InfoCenter - Images have text alternatives or are described in the surrounding text. Only one form is used in the Info Center for feedback and it is compliant. Tables are coded to standards and relationships between cells can be programmatically determined. Web pages are readable without style sheets. Color is not used as the only means of conveying information. Content is not affected by scripting. HTML versions of the content in PDFs will be available in the IC. Skip to main content is provided. Frames have titles and are accessible. No image maps used. Multimedia is not used. No time limits required for any user interaction with the product documentation. HTML versions of PDFs will be provided to allow for accessibility.
(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: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	The following component meets this criterion: - FLEX System x440: - InfoCenter - Section in the information center covers accessibility.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support	

Criteria	Supporting Features	Remarks and Explanations
	services.	

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