

## 5 HDMI and Gaming

- 5.0 Gaming Sku Support
- 5.1 Game/PC Mode
  - 5.1.1 Gaming/PC Mode Requirements
  - 5.1.2 Automatic Low Latency for PC
  - 5.1.3 Game/PC Mode if AMD VSIF detected
  - 5.1.4 Game/PC Mode if Dolby Vision Game VSIF detected
  - 5.1.5 Game/PC Mode if HDMI Forum VRR detected
  - 5.1.6 Variable Refresh Rate Requirements (Not for VHD skus)
    - 5.1.6.1 Variable Refresh Rate FreeSync Detection and Logo (N/A for 2024 skus)
    - 5.1.6.2 Variable Refresh Rate Active
    - 5.1.6.3 Automatic Variable Refresh Rate if AMD VSIF detected
    - 5.1.6.4 Automatic Variable Refresh Rate if Dolby Vision Game VSIF detected
    - 5.1.6.5 Automatic Variable Refresh Rate if HDMI Forum VRR detected
    - 5.1.6.6 Automatic Variable Refresh Rate to support Nvidia G-sync or 09h
    - 5.1.6.7 Gaming Latency Performance
    - 5.1.6.8 Game/PC Mode (HD skus only)
- 5.2 Game HDR (not for VHD/VFD skus)
  - 5.2.1 Game HDR Requirements
- 5.3 HDMI Settings
  - 5.3.1 HDMI Mode
    - 5.3.1.1 HDMI Mode Requirements
    - 5.3.1.2 HDMI Mode (VHD/VFD only)
  - 5.3.2 4:4:4 Color Space
    - 5.3.2.1 4:4:4 Color Space Requirements (4K/VQD skus only)
  - 5.3.3 Color Space Range
    - 5.3.3.1 Color Space Range Requirements
  - 5.3.4 CEC Device Control
    - 5.3.4.1 CEC Requirements
    - 5.3.4.2 CEC Audio Device
    - 5.3.4.3 CEC Automatic Input Naming
    - 5.3.4.4 CEC Automatic Power On
  - 5.3.5 One Touch Play
  - 5.3.6 Device Discovery
  - 5.3.7 Picture Size and Position
    - 5.3.7.1 Picture Size
    - 5.3.7.2 Picture Position
- 5.4 HDMI Device Info (Not for VHD)
  - 5.4.1 HDMI Device Name

The HDMI and Gaming submenu is selectable for all inputs but Gaming/PC Mode, Game HDR and HDMI Settings are grayed for all inputs except for HDMI.

	HDMI & Gaming Settings	Submenu	Notes/Submenu
1	Gaming/PC Mode		HDMI only, grayed out all other inputs
2	Game HDR		Not for HD skus, grayed out HDMI only, grayed out all other inputs
3	HDMI Settings		HDMI only, grayed out all other inputs
4		HDMI Mode	
5		4:4:4 Color Space	
6		Color Space Range	
7		CEC Device Control	
8		One Touch Play	
9		Device Discovery	
10		Picture Size and Position	
11			Picture Size
12			Picture Position

13	HDMI Device Info	Below are indented	Display only, grayed out Visible when menu opens
14		Input:	Gaming Input Device Name OR if none then Input. display only, grayed out
15		Resolution:	display only, grayed out
16		Frame Rate:	display only, grayed out
17		HDR:	display only, grayed out Not for HD skus
18		Variable Refresh Rate:	display only, grayed out
19		Audio Out:	display only, grayed out

## 5.0 Gaming Sku Support

	Year	Model	VRR Range	AMD FreeSync logo	Game HDR	Notes
1	2024	VFD32M-0807 VFD40M-0809 VFD43M-0804		none		Was planned to cert, but removed requirement.
2	2023. Applies to 2024	VQP65C-84 VQP75C-84	TV ›= 48" (16:9)  Avg Lum (100%) = 175 nits, (65%) = 250 nits, (10%) = 540 nits  Min = .5 millinits  Corner white = 300 nits	FreeSync Premium Pro	X	
3						
4	2024	n/a	Resolution must be 4K  0 - 144HZ	FreeSync		
5	2024	n/a	›= 20 Hz if 1080P  ›= 120 Hz if 4K	FreeSync Premium		

## 5.1 Game/PC Mode

	Setting	Behavior	Notes
1	Auto (default)	For Auto setting, the TV EDID reports Automatic Low Latency Mode (ALLM) support for HDMI sources. If low latency mode is detected for the HDMI source, then automatically reduce latency by removing defined picture quality settings to reduce throughput delay and display a notification. When the low latency mode is no longer detected, then restore all picture quality settings.	The notification is: "Game detected, optimizing by reducing latency."
2	On	Game Low latency applies to content while the source is selected and gray out of PQ settings apply.	If ALLM is detected then display the Freesync logo. For games and PC with mouse.
3	Off	Low latency is not enabled for PC or for games but if ALLM is detected, then low latency is enabled temporarily with no setting change. Help text updated to clarify behavior.	Select On to reduce video delay (lag). Select Off to disable video delay reduction for PC (for watching content), but for devices that support ALLM turn off this setting from the game console.

### 5.1.1 Gaming/PC Mode Requirements

	Requirements	Notes
1	Gaming/PC Mode reduces throughput delays by not applying picture quality settings that delay the display.	



4		User can change the setting for Game/PC Mode
5	AMD game VSIF no longer detected	
6		Restore Game/PC Mode to setting before detection
7		Disable Variable Refresh Rate

#### 5.1.4 Game/PC Mode if Dolby Vision Game VSIF detected

	Detection	Requirements
1	Automatic detection of Dolby Vision VSIF	
2		Game/PC mode changed to On if needed
3		Enables Variable Refresh Rate
4		User can change the setting for Game/PC Mode
5	Dolby Vision game VSIF no longer detected	
6		Restore Game/PC Mode to setting before detection
7		Disable Variable Refresh Rate

#### 5.1.5 Game/PC Mode if HDMI Forum VRR detected

	Detection	Requirements
1	Automatic detection of HDMI Forum VRR	
2		Game/PC mode changed to On if needed
3		Enables Variable Refresh Rate
4		User can change the setting for Game/PC Mode
5	HDMI Forum VRR no longer detected	
6		Restore Game/PC Mode to setting before detection
7		Disable Variable Refresh Rate

#### 5.1.6 Variable Refresh Rate Requirements (Not for VHD skus)

	Requirements	Notes
1	VRR no longer requires a setting. ALLM is sufficient to automatically apply VRR and display the logo when detected.	
2	VRR is used to prevent tearing and reduce stuttering caused by misalignment with content's frame rate if lower than the TV's refresh rate.	
3	For supported models, FreeSync by AMD is used to support Variable Refresh Rate if AMD VSIF is detected in the content.	
4	VRR support is detected by source by rereading EDID. This is done to update the source device by forcing Hot Plug Detection (HPD). When the Variable Refresh Rate setting is changed, then the EDID data block on VRR is updated and then hot plug detect (HPD) must be asserted by the TV to signal the source device to read the EDID again.	The source device determines the TV Variable Refresh Rate capability by reading the TV's EDID.
5	When AMD FreeSync content displays then the Freesync logo displays.	
6	If VRR flag detected without AMD VSIF then non-FreeSync adaptive sync HDMI VRR applies to content.	

7	<p>To certify AMD Freesync, Variable Refresh rate must apply to input signals from with a minimum 20 Hz range (e.g. 40 Hz to 60 HZ).</p> <p>For AMD Premium Freesync, VRR must apply to input signals from highest is at least 2.5 times higher than the lowest.</p>	No AMD cert, then no Freesync logo display allowed.
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#### 5.1.6.1 Variable Refresh Rate FreeSync Detection and Logo (N/A for 2024 skus)

	FreeSync Level	EDID	FreeSync Detection	FreeSync Brand in UI	VRR Range	Average Luminance (100%)
1	VRR no FreeSync	VRR flag	n/a	n/a	n/a	n/a
2	VRR with Xbox, others	MConstant	n/a	n/a	n/a	n/a
3	FreeSync	AMD VSDB v.1	AMD VSIF v.1	FreeSync logo at the start of content	Min 20Hz range 40 - 60Hz	n/a
4	FreeSync Premium	AMD VSDB v.2	AMD VSIF v.1 and v. 2	FreeSync logo at the start of content	Min. Ratio of 2.5: 1 (i.e. 48 - 120Hz)	n/a
5	FreeSync Premium Pro	AMD VSDB v.2	AMD VSIF v.1 and v. 2	FreeSync logo at the start of content	Min. Ratio of 2.5: 1 (i.e. 48 - 120Hz)	350 nits
6	Dolby Vision game VSIF	DV game VSIF	n/a	n/a	n/a	n/a

#### 5.1.6.2 Variable Refresh Rate Active

	VRR is active IF	Picture Settings grayed out and not available
1	Source detects TV EDID capability supports VRR and/or AMD VSIF v.1 or v.2 for FreeSync	
2	VRR is active: VRR metadata and/or AMD VSIF v.1 or v.2 is sent by the source (e.g. games). For most HDMI sources this setting has no effect because VRR is not detected.	
3	If a source device (such as Xbox) includes VRR and the MConstant bit, then MConstant bit must be detected as 0 from the source device to apply VRR. If detected from source device as 1 then VRR does not apply. If no MConstant detected from the source device, then use 0 as the value.	
4	If FreeSync is active, e.g. VRR is set to On and AMD VSIF v.1 or v.2 is detected, then display the FreeSync logo in the Gaming submenu when opened.	
5	If VRR flag detected without AMD VSIF then non-FreeSync adaptive sync HDMI VRR applies.	
6	For FHD, Variable Refresh Rate is limited to 2K content (4K not supported by FHD).	
7	For HD, Variable Refresh Rate does not apply.	
8	Grayed out and turned off when VRR is set to On and active.	
9		Contrast Enhancer
10		Dark Detail
11		Active Pixel Tuning
12		Signal noise
13		Contour smoothing
14		Judder reduction
15		Motion blur reduction
16		Clear action

17		Super Resolution
18		Enhanced Viewing Angle

### 5.1.6.3 Automatic Variable Refresh Rate if AMD VSIF detected

	Detection	Requirements
1	Automatic detection of AMD VSIF (Freesync)	Gaming/PC mode can be any setting.
2		Changes Gaming/PC mode to On if needed.
3		Variable Refresh Rate enabled.
4		User can change the setting for Gaming/PC mode.
5	AMD game VSIF no longer detected	Restore Gaming/PC mode to setting before detection
6		Variable Refresh Rate disabled.

### 5.1.6.4 Automatic Variable Refresh Rate if Dolby Vision Game VSIF detected

	Automatic Variable Refresh Rate Detection	Requirement
1	Automatic detection of Dolby Vision game VSIF	Gaming/PC mode is can be any setting
2		Changes to Game Picture Mode
3		Changes Gaming/PC mode to On if needed (default is On for Game picture mode)
4		Variable Refresh Rate enabled.
5		User can change the setting for Gaming/PC mode
6	Dolby Vision game VSIF no longer detected	Restore previous picture mode
7		Restore Gaming/PC mode to setting before detection
8		Variable Refresh Rate disabled.

### 5.1.6.5 Automatic Variable Refresh Rate if HDMI Forum VRR detected

	Automatic Variable Refresh Rate Detection	Requirement
1	Automatic detection of HDMI Forum VRR	Gaming/PC mode is can be any setting
2		
3		Changes Gaming/PC mode to On if needed (default is On for Game picture mode)
4		Variable Refresh Rate enabled.
5		User can change the setting for Gaming/PC mode
6	HDMI Forum VRR no longer detected	
7		Restore Gaming/PC mode to setting before detection
8		Variable Refresh Rate disabled.

### 5.1.6.6 Automatic Variable Refresh Rate to support Nvidia G-sync or 09h

	Variable Refresh Rate Detection	Requirement
1	Applies to 5695/5691/5583	G-sync is the Nvidia proprietary version of AMD Freesync.

2	Automatic detection of Nvidia G-Sync.	Detection of Nvidia G-Sync changes the following: <ul style="list-style-type: none"> <li>• Game Picture Mode</li> <li>• Gaming/PC mode to On</li> <li>• Variable Refresh Rate enabled</li> <li>• User can change GLL and VRR to Off again is desired.</li> </ul>
3	Nvidia G-Sync no longer detected	<ul style="list-style-type: none"> <li>• Restore previous picture mode</li> <li>• Restore Gaming/PC mode to setting before detection - due to PC automatic detection this is likely ON.</li> <li>• Variable Refresh Rate disabled.</li> </ul>
4	Detection of Nvidia InfoFrame 09h for the 30 series.	Detection of Nvidia InfoFrame 09h changes the following: <ul style="list-style-type: none"> <li>• Game Picture Mode</li> <li>• Gaming/PC mode to On</li> <li>• Variable Refresh Rate enabled</li> <li>• HDMI mode changes</li> <li>• 5691/5695/5695s: Enable 2.1 (required for 4K 120 )</li> <li>• 5583: Enable Auto (2.1 not supported)               <ul style="list-style-type: none"> <li>• HDMI port renamed to Nvidia graphics card name.</li> <li>• User can change GLL and VRR to Off again is desired.</li> <li>• If the Nvidia card is removed then restore to previous setting</li> </ul> </li> <li>• Picture mode</li> <li>• Gaming/PC mode setting</li> <li>• Variable Refresh Rate disabled</li> <li>• HDMI port name</li> </ul>

### 5.1.6.7 Gaming Latency Performance

	Gaming Latency by Panel	Gaming Latency Performance Requirements
1	Game mode latency HDMI 60 Hz panel	9 msec
2	Game mode latency HDMI 120 Hz panel (LD)	6 msec
3	Game mode latency HDMI 120 Hz panel (no LD)	5 msec
4	Game mode latency HDMI 240 Hz panel (LD)	4 msec

### 5.1.6.8 Game/PC Mode (HD skus only)

	Requirements	Notes
1	For HD skus Game/PC Mode is the only setting for Game support.	

## 5.2 Game HDR (not for VHD/VFD skus)

	Settings	Behavior	Notes
1	On	1. Tone Mapping is set to 50 and grayed out, reverts previous value when set to Off. 2. Game console controls tone mapping based on category and luminance values defined by VIZIO.	The Game HDR setting enables the tone mapping intended for gaming when the On setting is selected.
2	Off (default)	Normal tone mapping based on HDR metadata.	

### 5.2.1 Game HDR Requirements

	Requirements	Notes
1	Tone Mapping specifically for gaming is also available based on HGIG.	The standard tone mapping for HDR is intended for movie content.

2	Game HDR is only available for HDMI ports and saved by input.	Gray out Game HDR if source is VIZIO HOME, COMP or WatchFree+
3	Game HDR is only for HDR content and is grayed out and set to off if content is not HDR.	

## 5.3 HDMI Settings

	Requirements	Notes
1	HDMI Settings is only selectable if the source is HDMI	
2	HDMI Settings is grayed out and the submenu is not selectable if the source is not HDMI.	

### 5.3.1 HDMI Mode

	Setting	Requirements	Notes
1	Auto (default for 18G (4K60) ports)	<p>The Auto setting includes 2 methods of detection</p> <ul style="list-style-type: none"> <li>Compatibility (HDMI 1.4) enabled initially and switches to HDMI 2.1 if HDCP 2.2 or 2.3 is detected or whitelisted devices below. <b>HDMI 1.4 is detected and Compatibility set</b></li> <li>If signal is invalid</li> <li>If HDCP i= 1.x</li> <li>If DVI with TMDS &lt; 185 MHz</li> <li>If TDMS clock &gt; 40 MHz (image is 800x600, 480P) <ul style="list-style-type: none"> <li>Standard (HDMI 2.1) enabled with SPDIF discovery if CEC discovery to identify device.</li> </ul> </li> <li>Xbox One</li> <li>Xbox Series X/S</li> <li>Playstation 4</li> <li>Playstation 5</li> </ul>	This setting is to solve the 3G/6G switch issue. Reverted back to HDCP instead of SCDS detection because the change in fielded skus resulted in issues.
2	Standard  (default for 48G (4K120) ports)	Allows direct selection of HDMI 2.1 EDID.	4K 120 Hz Gaming Port  HDMI 2.1 EDID using HF-VSDB EDID method
3	Compatibility	HDMI 1.4 style EDID  No HF-VSDB, No SCDS	This is fallback position for customer support use.

#### 5.3.1.1 HDMI Mode Requirements

	Requirements	Notes
1	To change HDMI Mode, the HDMI port is source. Grayed out for all other inputs.	
2	<p>The release of HDMI 2.0 changed and expanded the color subsampling with support of 4K at 60 hertz as follows:</p> <ul style="list-style-type: none"> <li>4:2:0 (10 bit) HDMI 1 – 4</li> <li>4:4:4 (8 bit) HDMI 1- 4</li> </ul>	<p>Older devices based on HDMI 1.4 don't recognize the new standard and blank the TV.</p> <p>Does not apply to FHD/HD skus.</p>
3	HDMI 2.1 supersedes 2.0.	Does not apply to FHD/HD skus.
4	HDMI Mode is saved by input only, not saved by picture mode.	
5	When an HDMI Mode is selected, the TV must blank to change the HDMI color gamut if changing from Auto to 2.0/2.1 or 1.4. Before blanking, the TV displays a warning message "The TV is restarting to change HDMI Mode". The screen is blanked while the color subsampling for the selected HDMI port is changed to avoid odd displays. NOTE: Technically the TV is blanked, not restarted. After completion, a notification displays ("HDMI Mode is SETTING.")	Does not apply to FHD/HD skus.

#### 5.3.1.2 HDMI Mode (VHD/VFD only)



	Settings	Requirements	Notes
1	Auto	Auto uses EDID with HF_SCDS (Sink Capabilities Data Structure).	<p>To define the EDID automatically using SCDS, first the HDMI port is selected (HDMI-1, HDMI-2).</p> <p>SCDS structure EDID is more reliable (nearly 100%) compared to HF-VSDB.</p> <p>SPDIF discovery of Xbox changes setting for HDMI port to Auto. This includes</p> <ul style="list-style-type: none"> <li>• Xbox One</li> <li>• Xbox Series X/S</li> <li>• Playstation 4</li> <li>• Playstation 5</li> </ul>
2	Compatibility (default)	HDMI 1.4 EDID  No HF-VSDB, No SCDS	<p>This is fallback position for customer support use.</p> <p>Standard HDMI 1.4 EDID.</p>

### 5.3.2 4:4:4 Color Space

	Settings	Requirements
1	Off (default)	4:4:4 and RGB (if present) are down converted to 4:2:2 to allow adjustment of picture settings grayed out with 4:4:4.
2	On	<p>Upon detection of 4:4:4 content, the 4:4:4 Color Space setting allows display of 4:4:4 content with full color.</p> <p>4:4:4 and RGB (if present) are not down converted to 4:2:2.</p>

#### 5.3.2.1 4:4:4 Color Space Requirements (4K/VQD skus only)

	Requirements	Notes
1	Applies to all HDMI inputs for 4K/VQD skus	<p>4:4:4 Color Range does NOT display for HD/VFD skus as not applicable.</p> <p>Previously named Full Color 4:4:4.</p>
2	<p>When source is RGB and setting is on, the following settings are disabled and grayed out:</p> <ul style="list-style-type: none"> <li>• Color</li> <li>• Tint</li> <li>• Sharpness</li> <li>• Contrast Enhancer (old name Black Detail)</li> <li>• Super Resolution</li> <li>• Edge Enhancement</li> <li>• Active Pixel Tuning</li> <li>• Judder Reduction</li> <li>• Motion Blur Reduction</li> <li>• Signal Noise</li> <li>• Block Noise</li> <li>• Contour Smoothing</li> <li>• Film Mode</li> </ul>	<p>Confirmed the following are adjustable:</p> <ul style="list-style-type: none"> <li>• Backlight</li> <li>• Contrast</li> <li>• Brightness</li> </ul>
3	<p>When source is YCbCr 444 and setting is on, the following settings are disabled, grayed out:</p> <ul style="list-style-type: none"> <li>• Super Resolution (only for UHD signals)</li> <li>• Judder Reduction</li> <li>• Motion Blur Reduction</li> <li>• Signal Noise</li> <li>• Block Noise</li> <li>• Contour Smoothing</li> <li>• Film Mode</li> </ul>	<p>Confirmed the following are adjustable:</p> <ul style="list-style-type: none"> <li>• Brightness</li> <li>• Contrast</li> <li>• Tint</li> <li>• Sharpness</li> <li>• Contrast Enhancer (old name Black detail)</li> <li>• Edge Enhancement</li> <li>• Active Pixel Tuning</li> <li>• Color</li> <li>• Super Resolution no gray out FHD, HD, SD.</li> </ul>
4	Disabled and grayed out if the signal source is DV. When the source is no longer DV then 4:4:4 Color Space is again available and the previous setting, if On, restored.	

5	Saved by input only, not by picture mode.	
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### 5.3.3 Color Space Range

	Settings	Requirements	Notes
1	Auto (default)	Auto determines the source and correctly selects original HDMI input source as YCbCr or RGB and then proceeds as required.	
2	YCbCr	YCbCr is for an HDMI source with YCbCr color space that when converted to RGB was limited to 16 – 235 RGB. An algorithm is used to remap the YCbCr color space to the RGB 0 – 255.	Setting provided to force selection if Auto does provide desired support.
3	RGB	RGB setting is for an HDMI source with a full 0 – 255 color space, such as a PC.	Setting provided to force selection if Auto does provide desired support.

#### 5.3.3.1 Color Space Range Requirements

	Requirements	Notes
1	Color Space Range for all TV's has been based on REC 709. Quantum Dot TV's based on REC 2020.	
2	Color space is limited to REC 709 if used for creation of the current content.	
3	The Color Space Range setting defines the color subsampling for content from an HDMI source.	
4	This setting only applies to HDMI inputs and is saved by input.	Not saved by picture mode.
5	Color Space Range is available for HDMI for all types of content (SDR, HDR, HDR10, HDR10+ and HLG).	
6	Gray out the Color Space Range setting if: <ul style="list-style-type: none"> <li>Platform cannot support color space for the HDMI content (for example, interlaced content)</li> <li>Content is Dolby Vision as Dolby handles automatically and cannot be adjusted.</li> </ul>	Only applies to HDMI ports.

### 5.3.4 CEC Device Control

	Settings	Description
1	Enabled (default)	The enabled setting provides automatic discovery and name assignment for CEC for devices as well as device control.
2	Disabled	<p>If CEC is disabled:</p> <ul style="list-style-type: none"> <li>No CEC commands are issued for any devices including a sound bar or audio system</li> <li>One Touch Play and Device Discovery are grayed out</li> <li>Devices are delisted under device discovery</li> <li>CEC device name resets to default HDMI port name (e.g. HDMI-1) or custom name if entered prior to discovery.</li> <li>Mute eArc channel and turn off encoders (not enough computing resource on the audio processor while sound effects of the speaker channel are in use and may cause audio cutting issues)</li> </ul>

#### 5.3.4.1 CEC Requirements

	CEC requirements	Notes
1	Consumer Electronics Control (CEC) supports control of HDMI connected devices using one remote, typically the TV remote, using CEC commands.	Not all HDMI devices support CEC.
2	CEC support must be enabled on both the TV and the device to work.	
3	CEC Vendor ID 00:19:9D.	

4	HDMI EDID ID is VIZ (3A59h).	
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#### 5.3.4.2 CEC Audio Device

	Requirements	Notes
1	Supported CEC Commands limited to <ul style="list-style-type: none"> <li>Power</li> <li>Volume</li> <li>Mute</li> </ul>	<ul style="list-style-type: none"> <li>A power on command for ARC/eARC device issued when TV is powered on.</li> <li>A remote key press of Volume Up/ Down or Mute issues CEC command to the ARC/eARC device.</li> <li>Volume and Mute IP based commands from the SmartCast app issues CEC command to the ARC/eARC audio device.</li> </ul>
2	TV speakers setting is Auto, then TV speakers are automatically turned off with ARC/eARC audio device	
3	The volume slider displays with "Audio System" above with each volume adjustment including mute.	
4	The ARC/eARC device is powered on and off with the TV. If turned off while the TV is on, then the TV speakers are turned on again and volume/mute control TV speakers.	

#### 5.3.4.3 CEC Automatic Input Naming

	Requirements CEC Automatic Input Naming	Notes
1	if CEC is enabled, hot plug detection of HDMI device assigns a name to the HDMI input as supplied by the device. <ul style="list-style-type: none"> <li>VIZIO Soundbar</li> <li>VIZIO Elevate</li> <li>VIZIO AIO</li> <li>VIZIO MicMe SB</li> </ul>	Exception: VIZIO Sound bars are named
2	No notification displays including when an ARC/eARC device is detected on an HDMI port other than HDMI-1 (the ARC port).	

#### 5.3.4.4 CEC Automatic Power On

	Requirements CEC Automatic Power On	Notes
1	Do not issue a CEC power command to peripheral devices when: <ul style="list-style-type: none"> <li>The user powers on the TV.</li> </ul>	The intent is to drive users to VIZIO Home when no sync is found because peripheral device is off.
2	A CEC power command MUST be issued to ARC audio device or sound bar when: <ul style="list-style-type: none"> <li>The user powers on the TV</li> </ul>	
3	Do issue a CEC power command to peripheral devices when: <ul style="list-style-type: none"> <li>HDMI input or AppleTV selected from the input selector</li> <li>HDMI input or AppleTV selected from VIZIO Home.</li> </ul>	

#### 5.3.5 One Touch Play

	Setting	Requirement	Notes
1	Disabled (default)	<ol style="list-style-type: none"> <li>Disables support for One Touch Play to power on the TV with press of the PLAY key on a CEC device.</li> <li>Disables support for One Touch Play to switch to CEC device with press of the device PLAY key.</li> </ol>	TV remote must be used to power on the TV and to switch inputs.

2	Enabled	<ol style="list-style-type: none"> <li>1. Enables support for One Touch Play to power on the TV with press of the PLAY key on a CEC device.</li> <li>2. Enables support for One Touch Play to switch to CEC device with press of the device PLAY key.</li> </ol>	
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### 5.3.6 Device Discovery

	Requirements	Notes
1	A maximum of 12 CEC devices can be connected to the TV, directly or indirectly.	Only one audio device is allowed per TV.
2	<p>If CEC is enabled:</p> <ul style="list-style-type: none"> <li>• CEC enabled devices are automatically discovered.</li> <li>• If a CEC device is not discovered, select Device Discovery and press OK to force discovery.</li> <li>• Discovered devices are grayed out and listed below Device Discovery with the device name discovered (e.g. not the rename by VIZIO for soundbars or by user).</li> <li>• Controls received by the TV are issued as CEC commands to the discovered device.</li> </ul>	<p>Examples of supported commands:</p> <ul style="list-style-type: none"> <li>• Play/Pause of BD player</li> <li>• Volume and Mute for ARC/eARC device</li> </ul>
3	Current remotes do not include transport functions. A press of OK, Right and Left keys are issued as CEC commands as OK, Right and Left as some devices interpret as Pause, Forward and Reverse.	If using an older remote, Pause, Play, Forward and Reverse are included and sent as CEC commands to the device.
4	<p>If CEC is disabled:</p> <ul style="list-style-type: none"> <li>• No commands are issued for any device including ARC/eARC device</li> <li>• Device discovery is grayed out and discovered devices are delisted.</li> <li>• Name reverts back to the default port name or customer name if entered before discovery.</li> </ul>	

### 5.3.7 Picture Size and Position

	Requirements	Notes
1	Picture Size and Position benefits content that does not have a 1:1 pixel ratio on the TV.	<ul style="list-style-type: none"> <li>• 480i</li> <li>• 480p</li> <li>• 720p</li> <li>• 1080i/p (for 4K models only).</li> </ul>
2	<p>Picture Size and Position submenu is grayed out and not available if:</p> <ul style="list-style-type: none"> <li>• Content is 120 Hz. (PC connected to HDMI is most common 120 Hz source)</li> <li>• Input has no signal source</li> <li>• Cast streaming</li> <li>• Source is UHD with 4K or source is HD/FHD with 1080i/p or 4K.</li> <li>• 4:4:4 content and 4:4:4 Color Space is enabled.</li> </ul>	Applies only to HDMI inputs. No longer applies to OTA channels that are now included in WatchFree+.

#### 5.3.7.1 Picture Size

	Requirements	Notes
1	Picture Size configures the picture size of the current input.	To change Picture Size for another input, exit settings, change input and the select Picture Size again.
2	Picture Size is saved by input globally for all Picture Modes.	Changes do not create a picture mode.
3	Picture size can be configured from a range of -50 to 50 with default of 0 for both horizontal and vertical size.	

4	Vertical Picture Size.	
	<ul style="list-style-type: none"> <li>As the value is increased from the SmartCast app or using the IR remote, the vertical size of the display is increased and the adjustment is annunciated on the TV.</li> <li>As the value decreased from the SmartCast app or using the IR remote, first the picture position is restored to default, then the vertical size of the display is decreased and the adjustment is annunciated on the TV.</li> </ul>	
5	Horizontal Picture Size.	
	<ul style="list-style-type: none"> <li>As the value is adjusted right from the SmartCast app or using the IR remote, the horizontal display size is increased and the adjustment is annunciated on the TV.</li> <li>As the value is adjusted left from the SmartCast app or using the IR remote, first the picture position is restored to default, then the horizontal display size is decreased and the adjustment is annunciated on the TV.</li> </ul>	

### 5.3.7.2 Picture Position

	Requirements	Notes
1	Picture Position configures the picture size of the current input.	To change Picture Position for another input, exit settings, change input and the select Picture Position again.
2	Picture Position is saved by input globally for all Picture Modes.	Changes do not create a picture mode.
3	Picture Position can be configured from a range of -50 to 50 with default of 0 for both horizontal and vertical size.	

## 5.4 HDMI Device Info (Not for VHD)

	Requirements	Settings
1	Header is <b>HDMI Device Info</b>	
2	System Info pertinent to gamers, below the header and indented.	Input: <ul style="list-style-type: none"> <li>Resolution:</li> <li>Frame Rate:</li> <li>HDR:</li> <li>Variable Refresh Rate:</li> <li>Audio Out:</li> </ul>
3	Format same as for System Info: <ul style="list-style-type: none"> <li>Single spaced</li> <li>Indented</li> <li>Colons follow the feature</li> </ul>	
4	Add an extra row of space	
5	Grayed and unselectable	
6	FreeSync logo displays right of the text if applicable for current content.	

### 5.4.1 HDMI Device Name

	Requirements	Notes
1	The Input is a reference only listing of the Gaming input device name.	
2	The HDMI port replaced with the Gaming Input device name as follows: <ul style="list-style-type: none"> <li>CEC assigned name</li> <li>User defined device type from Input Name setting(e.g. Game or Xbox)</li> <li>User device name from Input Name setting</li> </ul>	Example is (using provided CEC name) <ul style="list-style-type: none"> <li>Input: PlayStation 5</li> <li>Input: Xbox</li> <li>Input: Game</li> </ul>

3	<p>The HDMI port is not included unless a device name is not assigned. If no assignment then the port or app name displays (e.g. VIZIO Home and WatchFree+).</p>	<p>If no device name then display is port only. Examples:</p> <ul style="list-style-type: none"><li>• Input: HDMI-1</li><li>• Input: HDMI-2</li><li>• Input: VIZIO Home</li></ul>
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