

## 5. TV 101

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TV101 is basic functionality outside of VIZIO Home and apps required for TV support. Some notifications are included in TV101 as well. Refer to the 2024 SmartCast System Settings spec, version 7.0 or latest.

### 5.0 TV101 Basic Requirements

	TV101 Requirements	
1	OOBE setup with IR/BT remote.	
2	Input Selection using Input Selector	List of inputs in modified sidebar.
3	Input Change Control	Displays for physical inputs when input is changed
4	Quick Menu	
5	Setting Adjustment via IR/BT remote or SmartCast Mobile	<ul style="list-style-type: none"><li>• Picture Adjustment</li><li>• Audio Adjustment and Selection</li><li>• HDMI setup including CEC and Gaming</li><li>• Network setup including digit pad for IP address entry</li><li>• Bluetooth pairing for remote, headphones, game controllers</li><li>• Antenna channel scan and setup</li><li>• Accessibility</li><li>• System setup and controls</li><li>• Support</li><li>• Privacy and Legal including Viewing Data and Ads support</li><li>• VIZIO hidden menu</li></ul>
6	Back Panel button function	
7	Remote keys functions	
8	OTA updates	
9	TV control	<ul style="list-style-type: none"><li>• Volume Control</li><li>• Full screen notifications (offline mode, no sync)</li><li>• Voice Control</li></ul>

### 5.1 Picture Controls

	Picture Control Requirements	
1	Three sets of picture mode settings based on content	<ul style="list-style-type: none"><li>• SDR or HLG content</li><li>• HDR10/HDR10+ content</li><li>• Dolby Vision content</li></ul>

2	Picture modes	<ul style="list-style-type: none"> <li>Bright</li> <li>Calibrated (tuned)</li> <li>Calibrated Dark (tuned)</li> <li>Sports</li> <li>Vivid is supported but not user selectable.</li> <li>User created global picture modes (max 4)</li> </ul>
3	Brightness (SDR) or Tone Mapping (HD)	Brightness previously named Backlight.
4	Black Level (previously named Brightness)	
5	COLOR	<ul style="list-style-type: none"> <li>Color</li> <li>Tint</li> <li>Color Temperature</li> </ul>
6	CLARITY	<ul style="list-style-type: none"> <li>Contrast Enhancer (formerly Black Detail)</li> <li>Dark Detail (Dolby Vision only)</li> <li>Super Resolution</li> <li>Sharpness</li> <li>Edge Enhancement</li> <li>Signal Noise</li> <li>Block Noise</li> <li>Contour Smoothing</li> </ul>
7	MOTION CONTROL	<ul style="list-style-type: none"> <li>Judder Reduction</li> <li>Motion Blur Reduction</li> <li>Clear Action</li> </ul>
8	PICTURE MODE EDIT	<ul style="list-style-type: none"> <li>Save</li> <li>Delete OR Reset</li> </ul>
9	Advanced Picture	<ul style="list-style-type: none"> <li>Film Mode</li> <li>Active Pixel Tuning</li> <li>Active Full Array Or Global Dimming (formerly Backlight Control)</li> <li>Ambient Light Sensor - if can tune correctly</li> <li>Aspect Ratio</li> <li>Enhanced Viewing Angle (as per panel)</li> </ul>
10	Color Calibration	<p>Displays after PQ Color calibration key combo is entered and deep links to Picture menu.</p> <ul style="list-style-type: none"> <li>Color Tuner</li> <li>White Balance Tuner</li> <li>Reset Color Temperature</li> </ul>
11	Gamma	<p>Displays after PQ Color calibration key combo is entered and deep links to Picture menu.</p> <p>1.8, 2.0, 2.1 (default), 2.2, 2.4</p>
12	PQ Test Patterns	<p>Displays after PQ Color calibration key combo is entered and deep links to Picture menu.</p> <p>Test Patterns are used for visual inspection of Picture Quality (PQ)</p> <ul style="list-style-type: none"> <li>Flat - white opaque 1920x1080 fill with settings of RGB</li> <li>Ramp - 21 bar pattern with black on the left, white (red, green or blue) on the right</li> <li>SMPTE - industry standard color bars</li> <li>Uniformity analyzer - 80% white with a Refer to the Audio Quality Specification version 3.4.1 for audio quality. 200x100 box at 40% white screen center.</li> </ul>

Refer to the Picture Modes Specification version 5.0 or latest for picture quality requirements.

### 5.1.3 Gray Background Limitation

Pure gray backgrounds display the imperfections and lack of uniformity intrinsic to a panel and should be avoided. If a gray background must be used include variation in the background such as swirls, avoid shading or ramping of gray that can display banding on the TV.

## 5.2 Audio Controls

Audio Control Requirements	
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1	Volume and Mute	
2	Audio Out	<ul style="list-style-type: none"> <li>• SoundBar (if connected)</li> <li>• TV Speakers</li> <li>• Optical</li> </ul>
3	Surround Sound	
4	ClearDialog	
5	Volume Leveling	
6	Bass	
7	Treble	
8	Audio Delay	Lip sync Compensation, limited to adding additional audio delay only.
9	Digital Audio Out	Auto, PCM, Digital
10	Display of VIZIO Soundbar settings for TV control	Only for ARC/eARC connected VIZIO sounders
11	Support processing over 2 channel PCM audio data.	

Refer to the Audio Quality Specification version 3.4.1 for audio quality.

### 5.3 HDMI & Gaming Controls

	HDMI & Gaming Requirements	
1	Gaming/PC Mode	
2	Game HDR	Not for V skus
3	HDMI Settings	<ul style="list-style-type: none"> <li>• HDMI Mode</li> <li>• 4:4:4 Color Space</li> <li>• Color Space Range</li> <li>• CEC Device Control</li> <li>• Picture Position &amp; Size</li> <li>• HDMI Device Info</li> </ul>

### 5.4 Network

	Network Requirements	
1	My Networks	
2	<ul style="list-style-type: none"> <li>• Wi-FiName1 OR</li> <li>• Not Connected</li> </ul>	<ul style="list-style-type: none"> <li>• Up to 5 networks</li> <li>• Forget</li> </ul>
3	More Wi-Fi Networks	
4	Network Information	
5	Test Connection	
6	Add Network Manually	
7	Advanced Network IP Setup	

### 5.5 Antenna Channels

Platform supports a tuner that requires ATSC (VSB modulation) and for Incremental scan also includes Cable (QAM modulation Version1,9).

Antenna Channels Requirements	Details
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1	Channel scan (Find Channels)	<ul style="list-style-type: none"> <li>Digital channels</li> </ul>
2	Incremental scan (Find More Channels)	<ul style="list-style-type: none"> <li>Additional channels</li> <li>Analog and cable modulations</li> </ul>
3	Hide Channels	Channels not included with channel up/down
4	Antenna digital audio source	

## 5.6 Bluetooth and Remote

	Bluetooth and Remote Requirements	Details
1	Voice Remote	
2	Headphones	Paired devices, More available Devices
3	Game Controllers	Paired devices, More available Devices

## 5.7 Accessibility

	Accessibility Requirements	
1	Closed Captions	
2	Talk Back	Including Speech Rate
3	Video Description	
4	Zoom mode	

## 5.8 System Settings and Controls

	System Requirements	
1	Language	
2	TV Information	<ul style="list-style-type: none"> <li>TV Name</li> <li>Serial Number</li> <li>Model Name</li> <li>Versions of VIZIO sources</li> <li>Source Type</li> <li>Content state (resolution, Frame Rate, Audio In, Audio Out, High Definition Resolution, Variable Refresh Rate)</li> <li>Network information including RSSI and MAC addresses for Wi-Fi/Wired.</li> <li>Security Types including WEP, WPA+TKIP/AES, WPA+AES, WP2+AES or none</li> <li>Remote Information (Bluetooth only)</li> <li>Application information</li> <li>Qterics (ULI) information for customer support including Netflix ESN, Country</li> </ul>
3	TV Name	
4	Time	
5	Manage Input List	<ul style="list-style-type: none"> <li>Rename</li> <li>Hide</li> </ul>
	• HDMI ports only	
6	Sleep Timer	
7	Power Controls	<ul style="list-style-type: none"> <li>Input at Power On</li> <li>Power Mode</li> <li>USB Power</li> <li>Power Indicator</li> <li>Auto Power Off</li> </ul>

8	Parental Controls	<ul style="list-style-type: none"> <li>System Pin (Set or Reset)</li> <li>Antenna</li> <li>WatchFree+ (deep links to WatchFree+)</li> </ul>
9	Store Demo	

### 5.8.1 Qterics (ULI) Status Menu

TV reports status information to Qterics (ULI) that it needs to maintain for that particular unit. During the once/day communication that string status is sent to the Qterics (ULI), NOC and would be accessible via both the Website and NrWs API. The TV platform would be tasked with putting together the status from the versions of the components. The order shown below is the order that they should be presented in the menu.

	Qterics Requirements	Examples	Notes
1	ESN:	15 Digit Serial Number <ul style="list-style-type: none"> <li>ESN: SPFJAB1400001)</li> <li>Example of disambiguaty ESN: 14LASPFJAB00001</li> </ul>	Electronic Serial Number. Previously the physical SN was rearranged to provide disambiguation between the menu and physical value. During support communication, this allows disambiguity of the electronic versus chassis serial number. Board replacement can create instances where the SN and ESN are not the same value.
2	SV	SV: 14	Software Version. Should be displayed as a decimal value.
3	REG		Registration Status. Should be displayed as Yes/No.
4	NP	NP: 15/15	Number of Provisioned Objects. Should be displayed as a decimal value.
5	Netflix ESN	Netflix ESN: VIZSCU35X0000000003366	Serial number with VIZIO appended at beginning
6	UID	UID: 8765432	ULI ID Should be displayed as a decimal value.
7	Dev ID	Dev ID: E5BEF <ul style="list-style-type: none"> <li>truncate 32 characters to 8 left most character</li> </ul>	Device ID - Device/Core ID
8	Prov ID	Prov ID: 8d20f <ul style="list-style-type: none"> <li>truncate 32 characters to 8 left most character</li> </ul>	Prov ID – provisional/DRMP ID
9	DA	DA:3.5.1.1	Device agent
10	Country	Country: USA	Options are USA, Mexico, Canada, Unknow

### 5.8.2 Store Demo Mode Scripting

Any Mass Produced product may end up as part of a demo in a retail environment. The embedded video or Retail End Cap is typically focused at VIZIO only product/TVs.

**The Goal:** To play a pre-determined file name and type from embedded video automatically, or when the system receives a specific IR event. Scripting defines requirements for play of the demo and includes file names, number of loops, PQ requirements customized by sku, defines IR hex value or system symbol required to invoke a specific file playback should be located in the Control Script also saved with the embedded video. The ability to play the internal Overlay Store Demo, which resides in the file system of the device, should also be possible over top of HDMI content but not for embedded content. All standard retail demo requirements apply to the embedded demo video.

## 5.9 Support

	Support Requirements	
1	Restart TV	
2	Support code	
3	Updates	
4	Reset to Factory Settings	
5	TV Speaker Test	
6	User manual	

## 5.10 Privacy and Legal

	Privacy & Legal Requirements	Details
1	VIZIO Privacy Policy	
2	Viewing Data	
3	Advertising <ul style="list-style-type: none"><li>Limited ad tracking</li><li>Reset TV ID</li></ul>	
4	License List	