

Image Adjustment

SUNAPI

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Chapter 1. Overview

1.1. Description

image.cgi configures camera features such as SSDR, white balance, exposure and OSD. This document describes how to configure each function in detail.

The following submenus are used for image settings.

- **camera**: Configures various settings such as BLC, HLC, Iris, SSNR, etc.
- **whitebalance**: Configures the relative amount of red, green and blue primary colors in the image so that neutral colors are reproduced correctly.
- **imageenhancements**: Adjusts the image sharpness, brightness, saturation, etc.
- **imageenhancements2**: Image setting can be configured with imagepresetmode.
- **irled**: Configures IR LED settings.
- **flip**: Flips the image horizontally/vertically.
- **ssdr**: Configures the SSDR (Samsung Super Dynamic Range) settings.
- **focus**: Changes the focus settings according to the environment.
- **overlay**: Configures OSD (On-screen Display) on the image.
- **multilineosd**: Configures multiple lines of OSD (On-screen Display) on the image.
- **multiimageosd**: Supports overlaying images on the live stream.
- **smartcodec**: Configures smart codec settings.
- **privacy**: Specifies a certain area of the video to be protected for privacy.
- **fisheylens**: Configures the settings for fisheye lenses.
- **fisheyesetup**: Configures the settings, mount position and view modes for fisheye lenses.
- **viewmodes**: Specifies the viewing mode.
- **imagepreset**: Configures the image preset schedule settings.
- **imagepreset2**: Configures each image preset mode.
- **imagealignment**: Configures the image alignment of multiple sensors.
- **imageoptions**: Explains the dependency between various features in image cgi.
- **ptr**: Configures the PTR settings.
- **ptrusage**: Provides information on the number of times the PTR feature was used, to track durability.
- **autoimagealignment**: Adjusts panoramic camera's panoramic image.
- **imagepresetschedule**: Configures image preset mode's scheduling,
- **thermalpalettesetting**: Configures the thermal color palette, upper/lower temperature level, emissivity, and color bar overlay.
- **thermalpalettesettingoptions**: Provides temperature unit's configurable temperature range.

- **spottemperaturereading:** Provides requested spot's temperature information.
- **directionindicator:** Configures settings about direction indicator.
- **noisereduct:** Provides features related image quality control for an analog camera connected to a Hybrid NVR.
- **ptrpreset:** Provides features that can configure settings for ptr presets.
- **stereosensorcalibration:** Calibrates the coordinates of both sensors, which is performed by superimposing a thermal image over a non-thermal image based on the scale and adjustment of the offset.
- **radiometrysettings:** Configures radiometry settings for the camera.
- **radiometrysettingsoptions:** Requests information about radiometry settings.
- **blackbodyconfig:** Configures the use of black body device for the camera.
- **blackbodyconfigoptions:** Requests information about black body settings.
- **focuspreset:** Supports how to configure presets for each focus.
- **thermalnuc:** Thermal camera non uniformity correction settings.
- **lpcapturesetup:** Supports to install camera for LPR capturing.

Chapter 2. Camera

2.1. Description

The **camera** submenu configures various settings, such as BLC, HLC, Iris, SSNR, etc.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin

2.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
camera&action=<value>[&<parameter>=<value>]
```

2.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads the camera settings such as BLC, HLC, SSNR, etc.
	Channel	REQ, RES	<csv>	Channel ID
	LensModel	RES	<enum> SLA-T46XX, SLA-T10XX, SLA-T24XX	Lens models of the camera This parameter is only shown in case of model that support changing lens. Note It is not applied for the fisheye camera.

Action	Parameters	Request/Response	Type/Value	Description
	ImagePresetMode.#.SSNRMode	RES	<enum> Off, Manual, Auto, AIAuto	<p>SSNR Mode</p> <ul style="list-style-type: none"> • Off: Disables SSNR mode. • Manual: SSNR manual mode • Auto: SSNR auto mode • AIAuto: SSNR auto mode using AI engine (AI engine required) <p>SSNRMode Auto Mode and SSNREnable Parameter true values are the same. These two parameters should not be set together.</p> <p>Note Each ImagePresetMode.# can have different image settings. For more details, refer to the "ImagePresetMode" parameter in set actions.</p>
	ImagePresetMode.#.LCEMode	RES	<enum> Full, Horizontal, Sky, Ground, Center75%, Center50%, Center25%, Custom	<p>LCEMode</p> <p>Mode can display the screen with a high contrast based on the set area.</p> <ul style="list-style-type: none"> • Full: Full screen. • Horizontal: Rectangular area in the middle of the screen. • Sky: Rectangular area at the upper part of the screen • Ground: Rectangular area at the lower part of the screen • Center75%: 75% Area size from the center • Center50%: 50% Area size from the center • Center25%: 25% Area size from the center • Custom: If LCEMode is set to this, LCETop, LCEBottom, LCELeft, LCERight parameters can be set.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.LCE Top	RES	<int>	<p>Top position info for the LCE region</p> <p>It sets the top position based on the distance from the upper end of the screen</p> <p>LCEBottom should be greater than LCETop</p>
	ImagePresetMode.#.LCE Bottom	RES	<int>	<p>Bottom position info for the LCE region</p> <p>It sets the bottom position based on the distance from the lower end of the screen</p> <p>LCEBottom should be greater than LCETop</p>
	ImagePresetMode.#.LCE Left	RES	<int>	<p>Left position info for the LCE region</p> <p>It sets the left position based on the distance from the left end of the screen</p> <p>LCERight should be greater than LCELeft</p>
	ImagePresetMode.#.LCE Right	RES	<int>	<p>Right position info for the LCE region</p> <p>It sets the right position based on the distance from the right end of the screen</p> <p>LCERight should be greater than LCELeft</p>
	ImagePresetMode.#.Co mpensationMode	RES	<enum> Off, BLC, HLC, WDR	<p>Compensation mode</p> <ul style="list-style-type: none"> • Off: Disables the compensation function • BLC: Backlight compensation • HLC: High Light compensation • WDR: Wide Dynamic Range

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.BLCLevel	RES	<enum> Low, Medium, High	BLC (Backlight Compensation) level The BLCLevel , BLCAreaTop , BLCAreaBottom , BLCAreaLeft , and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.
	ImagePresetMode.#.NormalizedBLCLevel	RES	<int>	Controls BLC (Backlight Compensation) level, but this adjusts the level in more detail than BLCLevel does.
	ImagePresetMode.#.BLCAreaTop	RES	<int>	Top position info for the BLC region It sets the top position based on the distance from the center of the screen. The BLCLevel , BLCAreaTop , BLCAreaBottom , BLCAreaLeft , and BLCAreaRight parameters are valid only when CompensationMode is set to BLC. For PTZ models, the BLCAreaTop , BLCAreaBottom , BLCAreaRight , and BLCAreaLeft parameters cannot be set altogether; only one of them can be set at a time. These are request only parameters for PTZ models; the device doesn't return the value after a request.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.BLC AreaBottom	RES	<int>	<p>Bottom position info for the BLC region</p> <p>It sets the bottom position based on the distance from the center of the screen.</p> <p>The BLCLevel, BLCAreaTop, BLCAreaBottom, BLCAreaLeft, and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.</p> <p>For PTZ models, the BLCAreaTop, BLCAreaBottom, BLCAreaRight, and BLCAreaLeft parameters cannot be set altogether; only one of them can be set at a time. These are request only parameters for PTZ models; the device doesn't return the value after a request.</p>
	ImagePresetMode.#.BLC AreaLeft	RES	<int>	<p>Left position info for the BLC region</p> <p>It sets the left position based on the distance from the center of the screen.</p> <p>The BLCLevel, BLCAreaTop, BLCAreaBottom, BLCAreaLeft, and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.</p> <p>For PTZ models, the BLCAreaTop, BLCAreaBottom, BLCAreaRight, and BLCAreaLeft parameters cannot be set altogether; only one of them can be set at a time. These are request only parameters for PTZ models; the device doesn't return the value after a request.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.BLC AreaRight	RES	<int>	<p>Right position info for the BLC region</p> <p>It sets the right position based on the distance from the center of the screen.</p> <p>The BLCLevel, BLCAreaTop, BLCAreaBottom, BLCAreaLeft, and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.</p> <p>For PTZ models, the BLCAreaTop, BLCAreaBottom, BLCAreaRight, and BLCAreaLeft parameters cannot be set altogether; only one of them can be set at a time. These are request only parameters for PTZ models; the device doesn't return the value after a request.</p>
	ImagePresetMode.#.BLC AreaCoordinates	REQ,RES	<string>	<p>Sets BLC region as real coordinates. This is supported in certain models only, so users should check their attributes first to see if their model supports this feature.</p> <p>BLCAreaCoordinates value must be specified in the format of <x1,y1,x2,y2>.</p>
	ImagePresetMode.#.HLC Mode	RES	<enum> NightOnly, AllDay, On, Off	HLC (High Light Compensation) mode
	ImagePresetMode.#.HLC Level	RES	<enum> Low, Medium, High	<p>HLC (High Light Compensation) level</p> <p>HLCLevel is valid only when CompensationMode is set to HLC.</p>
	ImagePresetMode.#.Nor malizedHLCLevel	RES	<int>	Controls HLC (High Light Compensation) level, but in more detail than HLCLevel does.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.HLC MaskTone	RES	<int>	<p>Tone of the mask used for a high light compensation area</p> <p>HLCMaskTone is valid only when CompensationMode is set to HLC.</p>
	ImagePresetMode.#.HLC MaskColor	RES	<enum> Black, Blue, Red, Cyan, Magenta	<p>Color of the mask used for a high light compensation area</p> <p>HLCMaskColor is valid only when CompensationMode is set to HLC.</p>
	ImagePresetMode.#.HLC Dim	RES	<bool> True, False	<p>Enables or disables the HLC Dimming feature.</p> <p>If enabled, the brightness of the image is adjusted automatically according to the surrounding environment</p>
	ImagePresetMode.#.HLC AreaTop	RES	<int>	<p>Top position info for the HLC region</p> <p>It sets the top position based on the distance from the center of the screen.</p> <p>The HLCLevel, HLCAreaTop, HLCAreaBottom, HLCAreaLeft, and HLCAreaRight parameters are valid only when CompensationMode is set to HLC.</p>
	ImagePresetMode.#.HLC AreaBottom	RES	<int>	<p>Bottom position info for the HLC region</p> <p>It sets the bottom position based on the distance from the center of the screen.</p> <p>The HLCLevel, HLCAreaTop, HLCAreaBottom, HLCAreaLeft, and HLCAreaRight parameters are valid only when CompensationMode is set to HLC.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.HLC AreaLeft	RES	<int>	<p>Left position info for the HLC region</p> <p>It sets the left position based on the distance from the center of the screen.</p> <p>The HLCLevel, HLCAreaTop, HLCAreaBottom, HLCAreaLeft, and HLCAreaRight parameters are valid only when CompensationMode is set to HLC.</p>
	ImagePresetMode.#.HLC AreaRight	RES	<int>	<p>Right position info for the HLC region</p> <p>It sets the right position based on the distance from the center of the screen.</p> <p>The HLCLevel, HLCAreaTop, HLCAreaBottom, HLCAreaLeft, and HLCAreaRight parameters are valid only when CompensationMode is set to HLC.</p>
	ImagePresetMode.#.HLC AreaCoordinates	REQ,RES	<string>	<p>Sets HLC region with real coordinates. This is supported in certain models only, so users should check their attributes first to see if their model supports this feature.</p> <p>HLCAreaCoordinates value must be expressed in the form of <x1,y1,x2,y2>.</p>
	ImagePresetMode.#.WD RLevel	RES	<enum> Low, Medium, High	<p>WDR (Wide Dynamic Range) sensitivity level</p> <p>WDRLevel is valid only when CompensationMode is set to WDR.</p>
	ImagePresetMode.#.WD RLimit	RES	<int>	<p>WDR limit</p> <p>WDRLimit is valid only when CompensationMode is set to WDR.</p>
	ImagePresetMode.#.WD RBlackLevel	RES	<enum> Low, Medium, High	<p>WDR black level</p> <p>WDRBlackLevel is valid only when CompensationMode is set to WDR.</p>

Action	Parameters	Request/Response	Type/Value	Description
	ImagePresetMode.#.WDRWhiteLevel	RES	<enum> Low, Medium, High	WDR white level WDRWhiteLevel is valid only when CompensationMode is set to WDR.
	ImagePresetMode.#.WDRControlMode	RES	<enum> AlwaysOn, Auto, TurnOffInLowLight, TurnOffInBW	WDRControlMode <ul style="list-style-type: none"> • AlwaysOn: WDRSeamlessTransition, WDRLowLight, WDRIRLEDEnable are not enabled • TurnOffInLowLight: WDRLowLight • TurnOffInBW: WDRIRLEDEnable Note For more details on the parameter features, please see the description of each parameter (WDRSeamlessTransition, WDRLowLight, WDRIRLEDEnable).
	ImagePresetMode.#.WDRAreaTop	RES	<int>	Top position info for WDR region It sets the top position based on the distance from the center of the screen. The WDRLevel , WDRAreaTop , WDRAreaBottom , WDRAreaLeft , and WDRAreaRight parameters are valid only when CompensationMode is set to WDR.
	ImagePresetMode.#.WDRAreaBottom	RES	<int>	Bottom position info for WDR region It sets the bottom position based on the distance from the center of the screen. The HLCLevel , WDRAreaTop , WDRAreaBottom , WDRAreaLeft , and WDRAreaRight parameters are valid only when CompensationMode is set to WDR.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.WDRAreaLeft	RES	<int>	<p>Left position info for WDR region</p> <p>It sets the left position based on the distance from the center of the screen.</p> <p>The WDRLevel, WDRAreaTop, WDRAreaBottom, WDRAreaLeft, and WDRAreaRight parameters are valid only when CompensationMode is set to WDR.</p>
	ImagePresetMode.#.WDRAreaRight	RES	<int>	<p>Right position info for WDR region</p> <p>It sets the right position based on the distance from the center of the screen.</p> <p>The WDRLevel, WDRAreaTop, WDRAreaBottom, WDRAreaLeft, and WDRAreaRight parameters are valid only when CompensationMode is set to WDR.</p>
	ImagePresetMode.#.WDRAreaCoordinates	RES	<string>	<p>Sets WDR region with real coordinates. This is supported in certain models only, so users should check the attributes first to see if their model supports this feature.</p> <p>WDRAreaCoordinates value must be specified in the format of <x1,y1,x2,y2>.</p>
	ImagePresetMode.#.WDRSeamlessTransition	RES	<enum> Off, On	<p>Enables or disables WDR Seamless Transition.</p> <p>If enabled, the image is analyzed and WDR mode is activated automatically when backlight correction is necessary.</p>
	ImagePresetMode.#.WDRLowLight	RES	<enum> Off, On	<p>Enables or disables WDR Low Light.</p> <p>If enabled, the WDR mode is turned off automatically in a low-light environment.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.WDRIRLEDEnable	RES	<enum> Off, On	<p>Enables or disables the WDR IR LED feature.</p> <p>If enabled, the WDR mode is turned off automatically when the B/W mode operates.</p>
	ImagePresetMode.#.ShutterMode	RES	<enum> Auto, Manual, ESC, AFLK	<p>Shutter mode</p> <ul style="list-style-type: none"> • Auto: Adjusts the shutter speed automatically. • Manual: Shutter speed of the camera can be adjusted manually. • ESC: Electronic Shutter Control; adjusts the shutter speed automatically according to the ambient brightness. • AFLK: Anti Flicker; Adjusts the shutter speed when a screen flickers frequently due to a mismatch with the ambient lighting.
	ImagePresetMode.#.PreferredShutterSpeed	RES	<enum>	<p>Preferred shutter speed</p> <p>PreferredShutterSpeed is valid only when ShutterMode is NOT set to AFLK; This parameter is read-only if ShutterMode is set to AFLK.</p>
	ImagePresetMode.#.ManualShutterSpeed	RES	<enum>	<p>Manual shutter speed</p> <p>ManualShutterSpeed is valid only when ShutterMode is set to Manual.</p>
	ImagePresetMode.#.AutoLongShutterSpeed	RES	<enum>	<p>Maximum shutter speed</p> <p>AutoLongShutterSpeed is valid only when ShutterMode is NOT set to AFLK; this parameter is read-only if ShutterMode is set to AFLK.</p>

Action	Parameters	Request/Response	Type/Value	Description
	ImagePresetMode.#.AutoShortShutterSpeed	RES	<enum>	<p>Minimum shutter speed</p> <p>AutoShortShutterSpeed is valid only when ShutterMode is NOT set to AFLK; This parameter is read-only if ShutterMode is set to AFLK.</p>
	ImagePresetMode.#.PreferShutterAISupportEnable	RES	<bool> True, False	<p>Enables or disables auto PreferShutter using AI engine support</p> <p>Note PreferShutterAISupportEnable requires the camera to have an AI engine.</p>
	ImagePresetMode.#.AFLKMode	RES	<enum> Off, On, 50, 60	AFLK (Anti-Flicker) mode
	ImagePresetMode.#.SimpleFocus	RES	<bool> True, False	<p>Automatic focus adjustment after day and night</p> <p>Note Attribute to check for SimpleFocus: "attributes/Image/Support/SimpleFocus"</p>
	ImagePresetMode.#.NegativeModeEnable	RES	<bool> True, False	Enables or disables negative video mode
	ImagePresetMode.#.LensModel	RES	<enum> SLA-T46XX, SLA-T10XX, SLA-T24XX	<p>Not applied for fisheye models</p> <p>Enum values of different lenses for cameras on which the lens can be replaced.</p>
	ImagePresetMode.#.IrisMode	RES	<enum> Auto, Manual, P-Iris, P-Iris-SLAM3180PN, P-Iris-M13VP288IR, P-Iris-SLAM2890PN, ICS	<p>Lens Iris mode</p> <ul style="list-style-type: none"> • Auto: Automatically adjusts the iris. • Manual: Adjusts the iris and focus manually. • P-Iris: Controls the iris of the lens equipped with a step motor.

Action	Parameters	Request/Response	Type/Value	Description
	ImagePresetMode.#.PIrisMode	RES	<enum> Auto, Manual	<p>P-Iris (Precise Iris) mode</p> <ul style="list-style-type: none"> • Auto: Automatically adjusts the amount of surrounding light. • Manual: Adjusts the iris manually. • PIrisMode is valid only when IrisMode is set to P-Iris. <p>Note For P-Iris support better to check "attributes/Image/Support/P-Iris" and "cgis/image/camera" submenu PIrisMode parameter.</p> <p>In some dome models, which only supports Auto Piris, PIrisMode parameter may not be supported, eventhough "attributes/Image/Support/P-Iris" support would be true.</p>
	ImagePresetMode.#.PIrisPosition	RES	<int>	<p>P-Iris (Precise Iris) position</p> <p>PIrisPosition is valid only when IrisMode is set to P-Iris and PIrisMode is set to Manual.</p> <p>The value should be specified in even numbers only.</p>
	ImagePresetMode.#.IrisFno	RES	<enum>	<p>Iris F-stop number</p> <p>IrisFno is valid only when IrisMode is set to P-Iris or Manual.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.SensUpMode	RES	<enum> Off, Auto	<p>Enables or disables Sens-up mode</p> <p>Sens-up function makes a camera more sensitive to light in order to produce clear images even in low light conditions.</p> <p>SensUpMode and SensUpLevel are valid only when ShutterMode is not set to Manual or AFLK. The SensUpMode and SensUpLevel parameters are not available if AGCMode is set to Off.</p>
	ImagePresetMode.#.SensUpLevel	RES	<enum>	<p>Sens-up Level</p> <p>SensUpMode and SensUpLevel are not available if AGCMode is set to Off.</p> <p>SensUpLevel parameter is valid only when SensUpMode is set to Auto.</p>
	ImagePresetMode.#.AGCMode	RES	<enum> Off, Low, Medium, High, Manual, MaxGain	<p>AGC (Automatic Gain Control) mode</p> <p>Adjusts the gain value of the video to control the video brightness.</p> <ul style="list-style-type: none"> • Off: Disables AGC. • Low/ Medium /High: As the level increases to high, the screen is brighter in low lighting. • Manual: Adjusts the AGC level manually • MaxGain: Automatically adjusts the gain level to the MaxGainLevel value and less. <p>If AGCMode is set to Off or Manual, DayNightMode cannot be set to Auto; therefore, SSNREnable, SSNRLevel, SensupModeEnable, and SensupLevel are invalid.</p> <p>And if AGCMode is set to MaxGain and MaxGainLevel less than 30dB, DayNightMode cannot be set to Auto</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.AGC Level	RES	<int>	AGC level AGCLevel is valid only when AGCMode is set to Manual.
	ImagePresetMode.#.AGC MaxGainLevel	RES	<int>	AGC max gain level AGCMaxGainLevel is valid only when AGCMode is set to MaxGain
	ImagePresetMode.#.SSN REnable	RES	<bool> True, False	Enables or disables SSNR (Samsung Super Noise Reduction). If AGCMode is set to Off, SSNREnable and SSNRLevel parameters are not valid.
	ImagePresetMode.#.SSN R2DLevel	RES	<int>	SSNR 2D level If AGCMode is set to Off, SSNREnable and SSNR2DLevel parameters are not valid. SSNR2DLevel is valid only when SSNREnable is set to True. SSNR2DLevel and SSNRLevel cannot be set at the same time.
	ImagePresetMode.#.SSN R3DLevel	RES	<int>	SSNR 3D level If AGCMode is set to Off, SSNREnable and SSNR3DLevel parameters are not valid. SSNR3DLevel is valid only when SSNREnable is set to True. SSNR3DLevel and SSNRLevel cannot be set at the same time.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.SSNRLevel	RES	<int>	<p>SSNR level</p> <p>If AGCMode is set to Off, SSNREnable and SSNRLevel parameters are not valid.</p> <p>SSNRLevel is valid only when SSNREnable is set to True.</p> <p>Changing SSNRLevel applies the same value to both SSNR2DLevel and SSNR3DLevel.</p>
	ImagePresetMode.#.ThermalColorPalette	RES	<enum> WhiteHot, BlackHot, Rainbow, Custom, Sepia, Red, Iron	<p>For thermal cameras only</p> <p>Allows various color palettes.</p>
	ImagePresetMode.#.ExposureControlSpeed	RES	<int> 0, 1	<p>For vehicle cameras only</p> <ul style="list-style-type: none"> • 0: Normal • 1: High
	ImagePresetMode.#.SubShutterSpeedRatio	RES	<enum> x2, x3, x4, x5, x6, x7, x8	<p>For the double shutter camera, it can control the sub shutter speed compared to base shutter speed.</p> <p>Ex.) If the shutter speed is 1/5, or x5, the subshutterspeed is 1/25, or 5 times faster.</p>
set	Channel	REQ, RES	<int>	<p>Channel ID</p> <p>If several devices are connected, it indicates the channel ID. For a network camera, it shows '0'.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode	REQ	<enum> UserPreset 1, UserPreset 2, OutdoorDa ytime, OutdoorNig htime, IndoorBack light, IndoorBrig htScene, NumberPla te, Vivid, Indoor, Outdoor	<p>Each ImagePresetMode can have its own ImagePreset settings.</p> <p>Image settings in any Mode can be changed, but modes except UserPreset1, UserPreset2 have different default image settings.</p>
	LCEMode	REQ, RES	<enum> Off, Low, Medium, High, Manual, Full, Horizontal, Sky, Ground, Center75Pe rcent, Center50Pe rcent, Center25Pe rcent, Custom	<p>LCE (Local Contrast Enhancement) Mode</p> <p>LCEMode can display the screen with a high contrast based on the set area.</p> <ul style="list-style-type: none"> • Full: Full screen. • Horizontal: Rectangular area in the middle of the screen • Sky: Rectangular area at the upper part of the screen • Ground: Rectangular area at the lower part of the screen • Center75Percent: 75% Area size from the center • Center50Percent: 50% Area size from the center • Center25Percent: 25% Area size from the center • Custom: If LCEMode is set to this, the LCETop, LCEBottom, LCELeft, and LCERight parameters can be set.

Action	Parameters	Request/ Response	Type/ Value	Description
	LCETop	REQ, RES	<int>	<p>Top position info for the LCE region</p> <p>It sets the top position based on the distance from the upper end of the screen</p> <p>LCEBottom should be greater than LCETop</p>
	LCEBottom	REQ, RES	<int>	<p>Bottom position info for the LCE region</p> <p>It sets the bottom position based on the distance from the bottom end of the screen</p> <p>LCEBottom should be greater than LCETop</p>
	LCELeft	REQ, RES	<int>	<p>Left position info for the LCE region</p> <p>It sets the left position based on the distance from the left end of the screen</p> <p>LCERight should be greater than LCELeft</p>
	LCERight	REQ, RES	<int>	<p>Right position info for the LCE region</p> <p>It sets the right position based on the distance from the right end of the screen</p> <p>LCERight should be greater than LCELeft</p>
	ThermalColorPalette	REQ, RES	<enum> WhiteHot, BlackHot, Rainbow, Custom, Sepia, Red, Iron, Red- WH, Iron- WH, Midrange- WH	<p>Thermal Color Palette Mode. Each mode can show different types of thermal video.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	CompensationMode	REQ, RES	<enum> Off, BLC, HLC, WDR	<p>Compensation mode</p> <ul style="list-style-type: none"> • Off: Disables the compensation function • BLC: Backlight Compensation • HLC: High Light Compensation • WDR: Wide Dynamic Range
	BLCLevel	REQ, RES	<enum> Low, Medium, High	<p>BLC (Backlight Compensation) level</p> <p>The BLCLevel, BLCAreaTop, BLCAreaBottom, BLCAreaLeft, and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.</p>
	NormalizedBLCLevel	RES	<int>	<p>Controls BLC (Backlight Compensation) level, but this adjusts the level in more detail than BLCLevel does.</p>
	BLCAreaTop	REQ, RES	<int>	<p>Top position info for BLC region</p> <p>It sets the top position based on the distance from the center of the screen.</p> <p>The BLCLevel, BLCAreaTop, BLCAreaBottom, BLCAreaLeft, and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.</p> <p>For PTZ models, the BLCAreaTop, BLCAreaBottom, BLCAreaRight, and BLCAreaLeft parameters cannot be set altogether; only one of them can be set at a time. These are request only parameters for PTZ models; the device doesn't return the value after a request.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	BLCAreaBottom	REQ, RES	<int>	<p>Bottom position info for BLC region</p> <p>It sets the bottom position based on the distance from the center of the screen.</p> <p>The BLCLevel, BLCAreaTop, BLCAreaBottom, BLCAreaLeft, and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.</p> <p>For PTZ models, the BLCAreaTop, BLCAreaBottom, BLCAreaRight, and BLCAreaLeft parameters cannot be set altogether; only one of them can be set at a time. These are request only parameters for PTZ models; the device doesn't return the value after a request.</p>
	BLCAreaLeft	REQ, RES	<int>	<p>Left position info for BLC region</p> <p>It sets the left position based on the distance from the center of the screen.</p> <p>The BLCLevel, BLCAreaTop, BLCAreaBottom, BLCAreaLeft, and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.</p> <p>For PTZ models, the BLCAreaTop, BLCAreaBottom, BLCAreaRight, and BLCAreaLeft parameters cannot be set altogether; only one of them can be set at a time. These are request only parameters for PTZ models; the device doesn't return the value after a request.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	BLCAreaRight	REQ, RES	<int>	<p>Right position info for BLC region</p> <p>It sets the right position based on the distance from the center of the screen.</p> <p>The BLCLevel, BLCAreaTop, BLCAreaBottom, BLCAreaLeft, and BLCAreaRight parameters are valid only when CompensationMode is set to BLC.</p> <p>For PTZ models, the BLCAreaTop, BLCAreaBottom, BLCAreaRight, and BLCAreaLeft parameters cannot be set altogether; only one of them can be set at a time. These are request only parameters for PTZ models; the device doesn't return the value after a request.</p>
	BLCAreaCoordinates	REQ, RES	<string>	<p>Sets BLC region as real coordinates. This is supported in certain models only, so users should check the attributes first to see if their model supports this feature.</p> <p>BLCAreaCoordinates value must be specified in the format of <x1,y1,x2,y2>.</p>
	HLCMode	REQ, RES	<enum> NightOnly, AllDay, On, Off	HLC (High Light Compensation) mode
	HLCLevel	REQ, RES	<enum> Low, Medium, High	<p>HLC (High Light Compensation) level</p> <p>HLCLevel is valid only when CompensationMode is set to HLC.</p>
	HLCMaskTone	REQ, RES	<int>	<p>Tone of the mask used for high light compensation area</p> <p>HLCMaskTone is valid only when CompensationMode is set to HLC.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	HLCMaskColor	REQ, RES	<enum> Black, Blue, Red, Cyan, Magenta	Color of the mask used for high light compensation area HLCMaskColor is valid only when CompensationMode is set to HLC.
	HLCDim	REQ, RES	<bool> True, False	Enables or disables HLC Dimming Feature. If enabled, The brightness of the image is adjusted automatically according to the surrounding environment
	HLCAreaTop	REQ, RES	<int>	Top position info for HLC region It sets the top position based on the distance from the center of the screen. The HLCLevel , HLCAreaTop , HLCAreaBottom , HLCAreaLeft , and HLCAreaRight parameters are valid only when CompensationMode is set to HLC.
	HLCAreaBottom	REQ, RES	<int>	Bottom position info for HLC region It sets the bottom position based on the distance from the center of the screen. The HLCLevel , HLCAreaTop , HLCAreaBottom , HLCAreaLeft , and HLCAreaRight parameters are valid only when CompensationMode is set to HLC.

Action	Parameters	Request/ Response	Type/ Value	Description
	HLCAreaLeft	REQ, RES	<int>	<p>Left position info for HLC region</p> <p>It sets the left position based on the distance from the center of the screen.</p> <p>The HLCLevel, HLCAreaTop, HLCAreaBottom, HLCAreaLeft, and HLCAreaRight parameters are valid only when CompensationMode is set to HLC.</p>
	HLCAreaRight	REQ, RES	<int>	<p>Right position info for HLC region</p> <p>It sets the right position based on the distance from the center of the screen.</p> <p>The HLCLevel, HLCAreaTop, HLCAreaBottom, HLCAreaLeft, and HLCAreaRight parameters are valid only when CompensationMode is set to HLC.</p>
	HLCAreaCoordinates	REQ, RES	<string>	<p>Sets HLC region with real coordinates. This is supported in certain models only, so users should check the attributes first to see if their model supports this feature.</p> <p>HLCAreaCoordinates value must be expressed in the form of <x1,y1,x2,y2>.</p>
	NormalizedHLCLevel	REQ, RES	<int>	<p>Controls HLC (Highlight Compensation) level, but this adjusts the level in more detail than HLCLevel does.</p>
	WDRLevel	REQ, RES	<enum> Low, Medium, High	<p>WDR (Wide Dynamic Range) sensitivity level</p> <p>WDRLevel is valid only when CompensationMode is set to WDR.</p>
	WDRLimit	REQ, RES	<int>	<p>WDR limit</p> <p>WDRLimit is valid only when CompensationMode is set to WDR.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	WDRBlackLevel	REQ, RES	<enum> Low, Medium, High	WDR black level WDRBlackLevel is valid only when CompensationMode is set to WDR.
	WDRWhiteLevel	REQ, RES	<enum> Low, Medium, High	WDR white level WDRWhiteLevel is valid only when CompensationMode is set to WDR.
	WDRControlMode	REQ, RES	<enum> AlwaysOn, Auto, TurnOffInLowLight, TurnOffInBW	WDRControlMode <ul style="list-style-type: none"> • AlwaysOn: WDRSeamlessTransition, WDRLowLight, WDRIRLEDEnable are not enabled. • Auto: WDRSeamlessTransition • TurnOffInLowLight: WDRLowLight • TurnOffInBW: WDRIRLEDEnable <div> Note For more details on the parameter features, please refer to the description of each parameter (WDRSeamlessTransition, WDRLowLight, WDRIRLEDEnable). </div>
	WDRAreaTop	REQ, RES	<int>	Top position info for WDR region It sets the top position based on the distance from the center of the screen. The WDRLevel , WDRAreaTop , WDRAreaBottom , WDRAreaLeft , and WDRAreaRight parameters are valid only when CompensationMode is set to WDR.

Action	Parameters	Request/ Response	Type/ Value	Description
	WDRAreaBottom	REQ, RES	<int>	<p>Bottom position info for WDR region</p> <p>It sets the bottom position based on the distance from the center of the screen.</p> <p>The WDRLevel, WDRAreaTop, WDRAreaBottom, WDRAreaLeft, and WDRAreaRight parameters are valid only when CompensationMode is set to WDR.</p>
	WDRAreaLeft	REQ, RES	<int>	<p>Left position info for WDR region</p> <p>It sets the left position based on the distance from the center of the screen.</p> <p>The WDRLevel, WDRAreaTop, WDRAreaBottom, WDRAreaLeft, and WDRAreaRight parameters are valid only when CompensationMode is set to WDR.</p>
	WDRAreaRight	REQ, RES	<int>	<p>Right position info for WDR region</p> <p>It sets the right position based on the distance from the center of the screen.</p> <p>The WDRLevel, WDRAreaTop, WDRAreaBottom, WDRAreaLeft, and WDRAreaRight parameters are valid only when CompensationMode is set to WDR.</p>
	WDRAreaCoordinates	REQ, RES	<string>	<p>Sets WDR region with real coordinates. This is supported in certain models only, so users should check the attributes first to see if their model supports this feature.</p> <p>WDRAreaCoordinates value must be expressed in the form of <x1,y1,x2,y2>.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ShutterMode	REQ, RES	<enum> Auto, Manual, ESC, AFLK	Shutter mode <ul style="list-style-type: none"> • Auto: Adjusts the shutter speed automatically • Manual: Shutter speed of the camera can be adjusted manually • ESC: Electronic Shutter Control; adjusts the shutter speed automatically according to the ambient brightness • AFLK: Anti Flicker; Adjusts the shutter speed when a screen flickers frequently due to a mismatch with the ambient lighting
	ManualShutterSpeed	REQ, RES	<enum>	Manual shutter speed ManualShutterSpeed is valid only when ShutterMode is set to Manual.
	AutoLongShutterSpeed	REQ, RES	<enum>	Maximum shutter speed AutoLongShutterSpeed is valid only when ShutterMode is NOT set to AFLK; this parameter is read-only if ShutterMode is set to AFLK.
	AutoShortShutterSpeed	REQ, RES	<enum>	Minimum shutter speed AutoShortShutterSpeed is valid only when ShutterMode is NOT set to AFLK; This parameter is read-only if ShutterMode is set to AFLK.
	PreferredShutterSpeed	REQ, RES	<enum>	Prefer shutter speed PreferredShutterSpeed is valid only when ShutterMode is NOT set to AFLK; This parameter is read-only if ShutterMode is set to AFLK.

Action	Parameters	Request/Response	Type/Value	Description
	PreferShutterAISupportEnable	REQ, RES	<bool> True, False	<p>Enable or Disable for auto PreferShutter using AI engine support</p> <p>Note PreferShutterAISupportEnable requires the camera to have an AI engine.</p>
	AFLKMode	REQ, RES	<enum> Off, On, 50, 60	AFLK (Anti-Flicker) mode
	DayNightMode	REQ, RES	<enum> Color, BW, Auto, ExternalBW, Schedule	<p>Day and night mode</p> <p>The controls the IR-cut filter if one is available on the device.</p> <ul style="list-style-type: none"> • Color: IR-cut filter is on; always outputs in color. • BW: IR-cut filter is off; always outputs in black and white. • Auto: IR-cut filter is automatically on or off based on the light level; normally outputs in color but will output black and white under low luminance at night. • ExternalBW: Controls the color of the video when the alarm input terminal is synchronized with an external device. • Schedule: Outputs in color only in the specified time. <p>If AGCMode is set to Off, DayNightMode cannot be set to Auto.</p> <p>Note Attribute to check for DayNight: "attributes/Image/Support/DayNight"</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	DayNightModeSchedule. <ddd>	REQ, RES	<bool> 0, 1	<p>Enables or disables the day and night mode for a scheduled day (every Sunday, Monday, etc.)</p> <p><ddd> stands for day of the week and should be specified in short form such as SUN, MON, TUE, WED, THU, FRI, and SAT in uppercase.</p> <ul style="list-style-type: none"> • 0: Disabled • 1: Enabled <p>e.g. 'DayNightModeSchedule.SUN=1' indicates that day and night mode is activated every Sunday 12:00 AM to 11:59 PM.</p> <p>DayNightModeSchedule.<ddd> is valid only when DayNightMode is set to Schedule.</p> <p>DayNightModeSchedule.<ddd> and DayNightModeSchedule.EveryDay parameters cannot be set together; Everyday cannot be set together with a specific day of the week such as Sunday, Monday, Saturday, etc. for enabling or disabling the day and night mode.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	DayNightModeSchedule. EveryDay	REQ, RES	<bool> 0, 1	<p>Enables or disables the day and night mode every day (always)</p> <ul style="list-style-type: none"> • 0: Disabled • 1: Enabled <p>e.g. 'DayNightModeSchedule.EveryDay=1' indicates that day and night mode is activated every day 12:00 AM to 11:59 PM.</p> <p>DayNightModeSchedule.EveryDay is valid only when DayNightMode is set to Schedule.</p> <p>DayNightModeSchedule.<ddd> and DayNightModeSchedule.EveryDay parameters cannot be set together; Everyday cannot be set together with a specific day of the week such as Sunday, Monday, Saturday, etc. for enabling or disabling the day and night mode.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	DayNightModeSchedule. <ddd>.FromTo	REQ, RES	<string>	<p>Schedule for day and night mode (day of the week and time)</p> <p>DayNightModeSchedule.<ddd>.FromTo must be specified in the format of <hh:mm-hh:mm>.</p> <p><ddd> stands for day of the week and should be specified in short form such as SUN, MON, TUE, WED, THU, FRI, and SAT in uppercase.</p> <p>e.g. 'DayNightModeSchedule.SUN.FromTo=1:0-8:59' indicates that day and night mode is enabled from 1:00 AM to 8:59 AM every Sunday.</p> <p>DayNightModeSchedule.<ddd>.FromTo and DayNightModeSchedule.EveryDay.FromTo parameters cannot be set together; day and night mode schedule for every day and day of the week such as Sunday, Monday, Saturday, etc. cannot be set together.</p>

Action	Parameters	Request/Response	Type/Value	Description
	DayNightModeSchedule. EveryDay.FromTo	REQ, RES	<string>	<p>Schedule for day and night mode (Every day)</p> <p>DayNightModeSchedule.EveryDay.FromTo value must be specified in the format of <hh:mm-hh:mm>.</p> <p>e.g. 'DayNightModeSchedule.EveryDay.FromTo=1:00-8:59' denotes the day and night mode is enabled from 1:00 AM to 8:59 AM every day.</p> <p>DayNightModeSchedule.<ddd>.FromTo and DayNightModeSchedule.EveryDay.FromTo parameters cannot be set together; day and night mode schedule for every day and day of the week such as Sunday, Monday, Saturday, etc. cannot be set together.</p>
	SimpleFocus	REQ, RES	<bool> True, False	<p>Automatic focus adjustment after day and night</p> <div> <p>Note</p> <p>Attribute to check for SimpleFocus: "attributes/Image/Support/SimpleFocus"</p> </div>
	DayNightSwitchingTime	REQ, RES	<enum>	<p>Duration of switch between day and night mode</p> <p>DayNightSwitchingTime is valid only when DayNightMode is set to Auto.</p>
	DayNightSwitchingTimeColorToBW	REQ, RES	<enum>	<p>Duration of switch between day and night mode for switching from color to black/white</p> <p>DayNightSwitchingTimeColorToBW is valid only when DayNightMode is set to Auto.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	DayNightSwitchingBrightnessColorToBW	REQ, RES	<enum> Low, Medium, High	<p>Brightness level of day and night mode for switching from color to black/white</p> <p>DayNightSwitchingBrightnessColorToBW is valid only when DayNightMode is set to Auto.</p>
	DayNightSwitchingTimeBWToColor	REQ, RES	<enum>	<p>Duration of switch between day and night mode for switching from black/white to color</p> <p>DayNightSwitchingTimeBWToColor is valid only when DayNightMode is set to Auto.</p>
	DayNightSwitchingBrightnessBWToColor	REQ, RES	<enum> Low, Medium, High	<p>Brightness level of day and night mode for switching from black/white to color</p> <p>DayNightSwitchingBrightnessBWToColor is valid only when DayNightMode is set to Auto.</p>
	DayNightSwitchingMode	REQ, RES	<enum> VeryFast, Fast, Normal, Slow, VerySlow, Custom	<p>Interval of switch between day and night mode</p> <p>DayNightSwitchingMode is valid only when DayNightMode is set to Auto.</p>
	DNSwitchColorToBWThreshold	REQ, RES	<int>	<p>Threshold value of changing from day to night mode.</p> <p>DNSwitchColorToBWThreshold is valid only when DayNightSwitchingMode is set to Custom.</p> <div> <p>Note</p> <p>Attribute to check for DNSwitchColorToBWThreshold: "attributes/Image/Support/DayNightSwitchThresholdAdjust"</p> </div>

Action	Parameters	Request/Response	Type/Value	Description
	DNSwitchBWToColorThreshold	REQ, RES	<int>	<p>Threshold value of changing from night to day mode.</p> <p>DNSwitchBWToColorThreshold is valid only when DayNightSwitchingMode is set to Custom.</p> <p>Note Attribute to check for DNSwitchBWToColorThreshold: "attributes/Image/Support/DayNightSwitchThresholdAdjust"</p>
	DayNightAlarmIn	REQ, RES	<enum> SwitchToB WIfOpens, SwitchToB WIfCloses	<p>Day and night setup depending on the alarm state.</p> <p>DayNightAlarmIn is valid only when DayNightMode is set to ExternalBW.</p>
	NegativeModeEnable	REQ, RES	<bool> True, False	Enables or disables negative video mode
	IrisMode	REQ, RES	<enum> Auto, Manual, P-Iris, P-Iris-SLAM3180P N, P-Iris-M13VP288I R , P-Iris-SLAM2890P N, ICS	<p>Lens Iris mode</p> <ul style="list-style-type: none"> • Auto: Automatically adjusts the iris. • Manual: Adjusts the Iris and focus manually. • P-Iris: Controls the iris of the lens equipped with a step motor.

Action	Parameters	Request/ Response	Type/ Value	Description
	PIrisMode	REQ, RES	<enum> Auto, Manual	<p>P-Iris (Precise Iris) mode</p> <ul style="list-style-type: none"> • Auto: Automatically adjusts the amount of surrounding light. • Manual: Adjusts the Iris manually. <p>PIrisMode is valid only when IrisMode is set to P-Iris.</p> <p>Note For P-Iris support better to check "attributes/Image/Support/P-Iris" and "cgis/image/camera" submenu PIrisMode parameter.</p> <p>In some dome models, which only supports Auto Piris, PIrisMode parameter may not be supported, eventhough "attributes/Image/Support/P-Iris" support would be true.</p>
	PIrisPosition	REQ, RES	<int>	<p>P-Iris (Precise Iris) position</p> <p>PIrisPosition is valid only when IrisMode is set to P-Iris, and PIrisMode is set to Manual.</p> <p>The value should be specified in even numbers only.</p>
	IrisFno	REQ, RES	<enum>	<p>Iris F-stop number</p> <p>IrisFno is valid only when IrisMode is set to P-Iris or Manual.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	SensUpMode	REQ, RES	<enum> Off, Auto	<p>Enables or disables Sens-up mode</p> <p>Sens-up function makes a camera more sensitive to light in order to produce clear images even in low light conditions.</p> <p>SensUpMode and SensUpLevel are valid only when ShutterMode is not set to Manual or AFLK. The SensUpMode and SensUpLevel parameters are not available if AGCMode is set to Off.</p>
	SensUpLevel	REQ, RES	<enum>	<p>Sens-up Level</p> <p>SensUpMode and SensUpLevel are not available if AGCMode is set to Off.</p> <p>SensUpLevel parameter is valid only when SensUpMode is set to Auto.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	AGCMode	REQ, RES	<enum> Off, Low, Medium, High, Manual, MaxGain	<p>AGC (Automatic Gain Control) mode</p> <p>It adjusts the gain value of the video to control the video brightness.</p> <ul style="list-style-type: none"> • Off: Disables AGC. • Low/ Medium /High: As the level increases to high, the screen is brighter in a low lighting condition. • Manual: Adjusts the AGC level manually • MaxGain: Automatically adjust the gain level to the MaxGainLevel value and less. <p>If AGCMode is set to Off, DayNightMode cannot be set to Auto, and therefore SSNREnable, SSNRLevel, SensupModeEnable and SensupLevel are invalid.</p> <p>And If AGCMode is set to MaxGain and MaxGainLevel less than 30dB, DayNightMode cannot be set to Auto</p>
	AGCLevel	REQ, RES	<int>	<p>AGC level</p> <p>AGCLevel is valid only when AGCMode is set to Manual.</p>
	AGCMaxGainLevel	REQ, RES	<int>	<p>AGC max gain level</p> <p>AGCMaxGainLevel is valid only when AGCMode is set to MaxGain</p>
	SSNREnable	REQ, RES	<bool> True, False	<p>Enables or disables SSNR (Samsung Super Noise Reduction).</p> <p>If AGCMode is set to Off, SSNREnable and SSNRLevel parameters are not valid.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	SSNRMode	REQ, RES	<enum> Off, Manual, Auto, AIAuto	<p>SSNR Mode</p> <ul style="list-style-type: none"> • Off: Disables SSNR Mode. • Manual: SSNR Manual Mode • Auto: SSNR Auto mode • AIAuto: SSNR auto mode using AI engine (AI engine required) <p>SSNRMode Auto Mode and SSNREnable Parameter true values are the same. These two parameters should not be sent together.</p>
	SSNRLevel	REQ, RES	<int>	<p>SSNR level</p> <p>If AGCMode is set to Off, SSNREnable and SSNRLevel parameters are not valid.</p> <p>SSNRLevel is valid only when SSNREnable is set to True.</p> <p>Changing SSNRLevel applies the same value to both SSNR2DLevel and SSNR3DLevel</p>
	SSNR2DLevel	REQ, RES	<int>	<p>SSNR 2D level</p> <p>If AGCMode is set to Off, SSNREnable and SSNR2DLevel parameters are not valid.</p> <p>SSNR2DLevel is valid only when SSNREnable is set to True.</p> <p>SSNR2DLevel and SSNRLevel cannot be set at the same time.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	SSNR3DLevel	REQ, RES	<int>	<p>SSNR 3D level</p> <p>If AGCMode is set to Off, SSNREnable and SSNR3DLevel parameters are not valid.</p> <p>SSNR3DLevel is valid only when SSNREnable is set to True.</p> <p>SSNR3DLevel and SSNRLevel cannot be set at the same time.</p>
	WDRSeamlessTransition	REQ, RES	<enum> Off, On	<p>Enables or disables WDR Seamless transition.</p> <p>If enabled, the image is analyzed and WDR mode is activated automatically when backlight correction is necessary.</p>
	WDRLowLight	REQ, RES	<enum> Off, On	<p>Enables or disables WDR Low Light.</p> <p>If enabled, the WDR mode is turned off automatically in a low-light environment</p>
	WDRIRLEDEnable	REQ, RES	<enum> Off, On	<p>Enables or disables WDR IR LED feature.</p> <p>If enabled, the WDR mode is turned off automatically when the B/W mode operates</p>
	LensModel	REQ, RES	<enum> SLA-T46XX, SLA-T10XX, SLA-T24XX	<p>Not applied for fisheye models</p> <p>Enum values of different lenses, for cameras on which the lens can be replaced.</p> <ul style="list-style-type: none"> • TNB-9000 also support changing lens, and it uses canon lens. So enum values of TNB-9000 are different with other lens changeable models'. Please get exact values from attributes because its values might be changed in each models.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePreview	REQ	<enum> Start, Stop, AWC	<p>Image preview mode</p> <p>Allows viewing of the preview image of the configuration, rather than saving the image configuration to camera.</p> <p>If this parameter is ignored, then preview mode will be stopped and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped, and the original image settings saved in the camera will be applied • AWC: AWC mode will be started
	TemperatureUnit	REQ, RES	<enum> Celsius, Fahrenheit	For thermal cameras only
	ThermalColorPalette	REQ, RES	<enum> WhiteHot, BlackHot, Rainbow, Custom, Sepia, Red, Iron	<p>For thermal cameras only</p> <p>Allows various color palettes</p>
	ThermalVariationSensitivity	REQ, RES	<int>	Sensitivity of thermal variation
	MaximumIris	REQ, RES	<enum> F1.2, F1.4, F1.6, F1.8, F2.0, F2.2, F2.5, F2.8, F3.2, F3.5, F4.0, F4.5, F5.0, F5.6	<p>Maximum Iris</p> <p>Limits auto adjustment aperture value when PIrisMode is Auto on a camera with the EF lens. (Limiting the opening of the aperture prevents the depth of field from shallow)</p>

Action	Parameters	Request/Response	Type/Value	Description
	PreferIris	REQ, RES	<enum> F1.2, F1.4, F1.6, F1.8, F2.0, F2.2, F2.5, F2.8, F3.2, F3.5, F4.0, F4.5, F5.0, F5.6	Prefer Iris If PIrisMode is Auto on a camera with the EF lens and has sufficient brightness, the camera will keep the set aperture value.
	ExposureControlSpeed	REQ, RES	<int> 0, 1	For vehicle cameras only <ul style="list-style-type: none"> • 0: Normal • 1: High
	SubShutterSpeedRatio	REQ, RES	<enum> x2, x3, x4, x5, x6, x7, x8	For the double shutter camera, it can control sub shutter speed compared to base shutter speed. Ex) If shutter speed is 1/5, or x5, the subshutterspeed is 1/25, or 5 times faster.

2.4. Examples

2.4.1. Getting the current camera information

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=camera&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.CompensationMode=Off
Channel.0.BLCAreaTop=30
Channel.0.BLCAreaBottom=70
Channel.0.BLCAreaLeft=30
Channel.0.BLCAreaRight=70
Channel.0.BLCAreaCoordinates=975,548,2319,1304
Channel.0.BLCLevel=Medium
```

```
Channel.0.NormalizedBLCLLevel=50
Channel.0.HLCLLevel=Medium
Channel.0.HLCMaskTone=100
Channel.0.HLCMode=On
Channel.0.HLCMaskColor=Black
Channel.0.HLCDimming=Off
Channel.0.HLCAreaTop=30
Channel.0.HLCAreaBottom=70
Channel.0.HLCAreaLeft=30
Channel.0.HLCAreaRight=70
Channel.0.HLCAreaCoordinates=975,548,2319,1304
Channel.0.NormalizedHLCLLevel=50
Channel.0.WDRLevel=High
Channel.0.WDRAreaTop=1
Channel.0.WDRAreaBottom=100
Channel.0.WDRAreaLeft=1
Channel.0.WDRAreaRight=100
Channel.0.WDRAreaCoordinates=0,0,3327,1871
Channel.0.AutoShortShutterSpeed=1/30
Channel.0.AutoLongShutterSpeed=1/12000
Channel.0.PreferShutterSpeed=1/200
Channel.0.AFLKMode=Off
Channel.0.SSNREnable=True
Channel.0.SSNRMode=Manual
Channel.0.SSNRLevel=12
Channel.0.SSNR2DLevel=12
Channel.0.SSNR3DLevel=12
Channel.0.IrisMode=Auto
Channel.0.PIrisMode=Auto
Channel.0.PIrisPosition=100
Channel.0.AGCMODE=MaxGain
Channel.0.AGCLevel=1
Channel.0.AGCMaxGainLevel=60
Channel.0.DayNightMode=Auto
Channel.0.DayNightSwitchingTime=5s
Channel.0.DayNightSwitchingMode=Normal
Channel.0.DNSwitchColorToBWThreshold=70
Channel.0.DNSwitchBWToColorThreshold=30
Channel.0.SimpleFocus=False
Channel.0.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.DayNightModeSchedule.EveryDay=1
```

```
Channel.0.DayNightModeSchedule.EveryDay.FromTo=00:00-23:59
Channel.0.DayNightModeSchedule.SUN=1
Channel.0.DayNightModeSchedule.SUN.FromTo=00:00-23:59
Channel.0.DayNightModeSchedule.MON=1
Channel.0.DayNightModeSchedule.MON.FromTo=00:00-23:59
Channel.0.DayNightModeSchedule.TUE=1
Channel.0.DayNightModeSchedule.TUE.FromTo=00:00-23:59
Channel.0.DayNightModeSchedule.WED=1
Channel.0.DayNightModeSchedule.WED.FromTo=00:00-23:59
Channel.0.DayNightModeSchedule.THU=1
Channel.0.DayNightModeSchedule.THU.FromTo=00:00-23:59
Channel.0.DayNightModeSchedule.FRI=1
Channel.0.DayNightModeSchedule.FRI.FromTo=00:00-23:59
Channel.0.DayNightModeSchedule.SAT=1
Channel.0.DayNightModeSchedule.SAT.FromTo=00:00-23:59
Channel.0.WDRControlMode=AlwaysOn
Channel.0.ImagePresetMode.UserPreset1.CompensationMode=Off
Channel.0.ImagePresetMode.UserPreset1.BLCAreaTop=30
Channel.0.ImagePresetMode.UserPreset1.BLCAreaBottom=70
Channel.0.ImagePresetMode.UserPreset1.BLCAreaLeft=30
Channel.0.ImagePresetMode.UserPreset1.BLCAreaRight=70
Channel.0.ImagePresetMode.UserPreset1.BLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.UserPreset1.BLCLevel=Medium
Channel.0.ImagePresetMode.UserPreset1.NormalizedBLCLevel=50
Channel.0.ImagePresetMode.UserPreset1.HLCLevel=Medium
Channel.0.ImagePresetMode.UserPreset1.HLCMaskTone=100
Channel.0.ImagePresetMode.UserPreset1.HLCMode=On
Channel.0.ImagePresetMode.UserPreset1.HLCMaskColor=Black
Channel.0.ImagePresetMode.UserPreset1.HLCDimming=Off
Channel.0.ImagePresetMode.UserPreset1.HLCAreaTop=30
Channel.0.ImagePresetMode.UserPreset1.HLCAreaBottom=70
Channel.0.ImagePresetMode.UserPreset1.HLCAreaLeft=30
Channel.0.ImagePresetMode.UserPreset1.HLCAreaRight=70
Channel.0.ImagePresetMode.UserPreset1.HLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.UserPreset1.NormalizedHLCLevel=50
Channel.0.ImagePresetMode.UserPreset1.WDRLevel=High
Channel.0.ImagePresetMode.UserPreset1.WDRAreaTop=1
Channel.0.ImagePresetMode.UserPreset1.WDRAreaBottom=100
Channel.0.ImagePresetMode.UserPreset1.WDRAreaLeft=1
Channel.0.ImagePresetMode.UserPreset1.WDRAreaRight=100
Channel.0.ImagePresetMode.UserPreset1.WDRAreaCoordinates=0,0,3327,1871
```

```

Channel.0.ImagePresetMode.UserPreset1.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.UserPreset1.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.UserPreset1.PreferShutterSpeed=1/200
Channel.0.ImagePresetMode.UserPreset1.AFLKMode=Off
Channel.0.ImagePresetMode.UserPreset1.SSNREnable=True
Channel.0.ImagePresetMode.UserPreset1.SSNRMode=Manual
Channel.0.ImagePresetMode.UserPreset1.SSNRLevel=12
Channel.0.ImagePresetMode.UserPreset1.SSNR2DLevel=12
Channel.0.ImagePresetMode.UserPreset1.SSNR3DLevel=12
Channel.0.ImagePresetMode.UserPreset1.IrisMode=Auto
Channel.0.ImagePresetMode.UserPreset1.PIrisMode=Auto
Channel.0.ImagePresetMode.UserPreset1.PIrisPosition=100
Channel.0.ImagePresetMode.UserPreset1.AGCMode=MaxGain
Channel.0.ImagePresetMode.UserPreset1.AGCLevel=1
Channel.0.ImagePresetMode.UserPreset1.AGCMaxGainLevel=60
Channel.0.ImagePresetMode.UserPreset1.DayNightMode=Auto
Channel.0.ImagePresetMode.UserPreset1.DayNightSwitchingTime=5s
Channel.0.ImagePresetMode.UserPreset1.DayNightSwitchingMode=Normal
Channel.0.ImagePresetMode.UserPreset1.DNSwitchColorToBWThreshold=70
Channel.0.ImagePresetMode.UserPreset1.DNSwitchBWToColorThreshold=30
Channel.0.ImagePresetMode.UserPreset1.SimpleFocus=False
Channel.0.ImagePresetMode.UserPreset1.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.ImagePresetMode.UserPreset1.DayNightModeScheduleEveryDay=1
Channel.0.ImagePresetMode.UserPreset1.DayNightModeSchedule.EveryDay.FromTo=0
0:00-23:59
Channel.0.ImagePresetMode.UserPreset1.DayNightModeScheduleSUN=1
Channel.0.ImagePresetMode.UserPreset1.DayNightModeSchedule.SUN.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset1.DayNightModeScheduleMON=1
Channel.0.ImagePresetMode.UserPreset1.DayNightModeSchedule.MON.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset1.DayNightModeScheduleTUE=1
Channel.0.ImagePresetMode.UserPreset1.DayNightModeSchedule.TUE.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset1.DayNightModeScheduleWED=1
Channel.0.ImagePresetMode.UserPreset1.DayNightModeSchedule.WED.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset1.DayNightModeScheduleTHU=1
Channel.0.ImagePresetMode.UserPreset1.DayNightModeSchedule.THU.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset1.DayNightModeScheduleFRI=1

```

Channel.0.ImagePresetMode.UserPreset1.DayNightModeSchedule.FRI.FromTo=00:00-23:59
Channel.0.ImagePresetMode.UserPreset1.DayNightModeScheduleSAT=1
Channel.0.ImagePresetMode.UserPreset1.DayNightModeSchedule.SAT.FromTo=00:00-23:59
Channel.0.ImagePresetMode.UserPreset1.WDRControlMode=AlwaysOn
Channel.0.ImagePresetMode.UserPreset2.CompensationMode=Off
Channel.0.ImagePresetMode.UserPreset2.BLCAreaTop=30
Channel.0.ImagePresetMode.UserPreset2.BLCAreaBottom=70
Channel.0.ImagePresetMode.UserPreset2.BLCAreaLeft=30
Channel.0.ImagePresetMode.UserPreset2.BLCAreaRight=70
Channel.0.ImagePresetMode.UserPreset2.BLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.UserPreset2.BLCLevel=Medium
Channel.0.ImagePresetMode.UserPreset2.NormalizedBLCLevel=50
Channel.0.ImagePresetMode.UserPreset2.HLCLevel=Medium
Channel.0.ImagePresetMode.UserPreset2.HLCMaskTone=100
Channel.0.ImagePresetMode.UserPreset2.HLCMode=On
Channel.0.ImagePresetMode.UserPreset2.HLCMaskColor=Black
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Channel.0.ImagePresetMode.UserPreset2.HLCAreaTop=30
Channel.0.ImagePresetMode.UserPreset2.HLCAreaBottom=70
Channel.0.ImagePresetMode.UserPreset2.HLCAreaLeft=30
Channel.0.ImagePresetMode.UserPreset2.HLCAreaRight=70
Channel.0.ImagePresetMode.UserPreset2.HLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.UserPreset2.NormalizedHLCLevel=50
Channel.0.ImagePresetMode.UserPreset2.WDRLevel=High
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Channel.0.ImagePresetMode.UserPreset2.WDRAreaLeft=1
Channel.0.ImagePresetMode.UserPreset2.WDRAreaRight=100
Channel.0.ImagePresetMode.UserPreset2.WDRAreaCoordinates=0,0,3327,1871
Channel.0.ImagePresetMode.UserPreset2.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.UserPreset2.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.UserPreset2.PreferShutterSpeed=1/200
Channel.0.ImagePresetMode.UserPreset2.AFLKMode=Off
Channel.0.ImagePresetMode.UserPreset2.SSNREnable=True
Channel.0.ImagePresetMode.UserPreset2.SSNRMode=Manual
Channel.0.ImagePresetMode.UserPreset2.SSNRLevel=12
Channel.0.ImagePresetMode.UserPreset2.SSNR2DLevel=12
Channel.0.ImagePresetMode.UserPreset2.SSNR3DLevel=12
Channel.0.ImagePresetMode.UserPreset2.IrisMode=Auto


```

Channel.0.ImagePresetMode.UserPreset2.PIrisMode=Auto
Channel.0.ImagePresetMode.UserPreset2.PIrisPosition=100
Channel.0.ImagePresetMode.UserPreset2.AGCMODE=MaxGain
Channel.0.ImagePresetMode.UserPreset2.AGCLevel=1
Channel.0.ImagePresetMode.UserPreset2.AGCMaxGainLevel=60
Channel.0.ImagePresetMode.UserPreset2.DayNightMode=Auto
Channel.0.ImagePresetMode.UserPreset2.DayNightSwitchingTime=5s
Channel.0.ImagePresetMode.UserPreset2.DayNightSwitchingMode=Normal
Channel.0.ImagePresetMode.UserPreset2.DNSwitchColorToBWThreshold=70
Channel.0.ImagePresetMode.UserPreset2.DNSwitchBWToColorThreshold=30
Channel.0.ImagePresetMode.UserPreset2.SimpleFocus=False
Channel.0.ImagePresetMode.UserPreset2.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.ImagePresetMode.UserPreset2.DayNightModeScheduleEveryDay=1
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0:00-23:59
Channel.0.ImagePresetMode.UserPreset2.DayNightModeScheduleSUN=1
Channel.0.ImagePresetMode.UserPreset2.DayNightModeSchedule.SUN.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset2.DayNightModeScheduleMON=1
Channel.0.ImagePresetMode.UserPreset2.DayNightModeSchedule.MON.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset2.DayNightModeScheduleTUE=1
Channel.0.ImagePresetMode.UserPreset2.DayNightModeSchedule.TUE.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset2.DayNightModeScheduleWED=1
Channel.0.ImagePresetMode.UserPreset2.DayNightModeSchedule.WED.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset2.DayNightModeScheduleTHU=1
Channel.0.ImagePresetMode.UserPreset2.DayNightModeSchedule.THU.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset2.DayNightModeScheduleFRI=1
Channel.0.ImagePresetMode.UserPreset2.DayNightModeSchedule.FRI.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset2.DayNightModeScheduleSAT=1
Channel.0.ImagePresetMode.UserPreset2.DayNightModeSchedule.SAT.FromTo=00:00-
23:59
Channel.0.ImagePresetMode.UserPreset2.WDRControlMode=AlwaysOn
Channel.0.ImagePresetMode.OutdoorDaytime.CompensationMode=Off
Channel.0.ImagePresetMode.OutdoorDaytime.BLCAreaTop=30
Channel.0.ImagePresetMode.OutdoorDaytime.BLCAreaBottom=70
Channel.0.ImagePresetMode.OutdoorDaytime.BLCAreaLeft=30

```

```

Channel.0.ImagePresetMode.OutdoorDaytime.BLCAreaRight=70
Channel.0.ImagePresetMode.OutdoorDaytime.BLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.OutdoorDaytime.BLCLevel=Medium
Channel.0.ImagePresetMode.OutdoorDaytime.NormalizedBLCLevel=50
Channel.0.ImagePresetMode.OutdoorDaytime.HLCLevel=Medium
Channel.0.ImagePresetMode.OutdoorDaytime.HLCMaskTone=100
Channel.0.ImagePresetMode.OutdoorDaytime.HLCMode=On
Channel.0.ImagePresetMode.OutdoorDaytime.HLCMaskColor=Black
Channel.0.ImagePresetMode.OutdoorDaytime.HLCDimming=Off
Channel.0.ImagePresetMode.OutdoorDaytime.HLCAreaTop=30
Channel.0.ImagePresetMode.OutdoorDaytime.HLCAreaBottom=70
Channel.0.ImagePresetMode.OutdoorDaytime.HLCAreaLeft=30
Channel.0.ImagePresetMode.OutdoorDaytime.HLCAreaRight=70
Channel.0.ImagePresetMode.OutdoorDaytime.HLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.OutdoorDaytime.NormalizedHLCLevel=50
Channel.0.ImagePresetMode.OutdoorDaytime.WDRLevel=Medium
Channel.0.ImagePresetMode.OutdoorDaytime.WDRAreaTop=1
Channel.0.ImagePresetMode.OutdoorDaytime.WDRAreaBottom=100
Channel.0.ImagePresetMode.OutdoorDaytime.WDRAreaLeft=1
Channel.0.ImagePresetMode.OutdoorDaytime.WDRAreaRight=100
Channel.0.ImagePresetMode.OutdoorDaytime.WDRAreaCoordinates=0,0,3327,1871
Channel.0.ImagePresetMode.OutdoorDaytime.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.OutdoorDaytime.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.OutdoorDaytime.PreferShutterSpeed=1/250
Channel.0.ImagePresetMode.OutdoorDaytime.AFLKMode=Off
Channel.0.ImagePresetMode.OutdoorDaytime.SSNREnable=True
Channel.0.ImagePresetMode.OutdoorDaytime.SSNRMode=Manual
Channel.0.ImagePresetMode.OutdoorDaytime.SSNRLevel=12
Channel.0.ImagePresetMode.OutdoorDaytime.SSNR2DLevel=12
Channel.0.ImagePresetMode.OutdoorDaytime.SSNR3DLevel=12
Channel.0.ImagePresetMode.OutdoorDaytime.IrisMode=Auto
Channel.0.ImagePresetMode.OutdoorDaytime.PIrisMode=Auto
Channel.0.ImagePresetMode.OutdoorDaytime.PIrisPosition=100
Channel.0.ImagePresetMode.OutdoorDaytime.AGCMode=MaxGain
Channel.0.ImagePresetMode.OutdoorDaytime.AGCLevel=1
Channel.0.ImagePresetMode.OutdoorDaytime.AGCMaxGainLevel=60
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightMode=Auto
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightSwitchingTime=5s
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightSwitchingMode=Normal

```

```

Channel.0.ImagePresetMode.OutdoorDaytime.DNSwitchColorToBWThreshold=70
Channel.0.ImagePresetMode.OutdoorDaytime.DNSwitchBWToColorThreshold=30
Channel.0.ImagePresetMode.OutdoorDaytime.SimpleFocus=False
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeScheduleEveryDay=1
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeSchedule.EveryDay.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeScheduleSUN=1
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeSchedule.SUN.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeScheduleMON=1
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeSchedule.MON.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeScheduleTUE=1
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeSchedule.TUE.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeScheduleWED=1
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeSchedule.WED.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeScheduleTHU=1
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeSchedule.THU.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeScheduleFRI=1
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeSchedule.FRI.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeScheduleSAT=1
Channel.0.ImagePresetMode.OutdoorDaytime.DayNightModeSchedule.SAT.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorDaytime.WDRControlMode=AlwaysOn
Channel.0.ImagePresetMode.OutdoorNighttime.CompensationMode=Off
Channel.0.ImagePresetMode.OutdoorNighttime.BLCAreaTop=30
Channel.0.ImagePresetMode.OutdoorNighttime.BLCAreaBottom=70
Channel.0.ImagePresetMode.OutdoorNighttime.BLCAreaLeft=30
Channel.0.ImagePresetMode.OutdoorNighttime.BLCAreaRight=70
Channel.0.ImagePresetMode.OutdoorNighttime.BLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.OutdoorNighttime.BLCLevel=Medium
Channel.0.ImagePresetMode.OutdoorNighttime.NormalizedBLCLevel=50
Channel.0.ImagePresetMode.OutdoorNighttime.HLCLevel=Medium
Channel.0.ImagePresetMode.OutdoorNighttime.HLCMaskTone=100
Channel.0.ImagePresetMode.OutdoorNighttime.HLCMode=On

```

```
Channel.0.ImagePresetMode.OutdoorNighttime.HLCMaskColor=Black
Channel.0.ImagePresetMode.OutdoorNighttime.HLCDimming=Off
Channel.0.ImagePresetMode.OutdoorNighttime.HLCAreaTop=30
Channel.0.ImagePresetMode.OutdoorNighttime.HLCAreaBottom=70
Channel.0.ImagePresetMode.OutdoorNighttime.HLCAreaLeft=30
Channel.0.ImagePresetMode.OutdoorNighttime.HLCAreaRight=70
Channel.0.ImagePresetMode.OutdoorNighttime.HLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.OutdoorNighttime.NormalizedHCLLevel=50
Channel.0.ImagePresetMode.OutdoorNighttime.WDRLevel=Medium
Channel.0.ImagePresetMode.OutdoorNighttime.WDRAreaTop=1
Channel.0.ImagePresetMode.OutdoorNighttime.WDRAreaBottom=100
Channel.0.ImagePresetMode.OutdoorNighttime.WDRAreaLeft=1
Channel.0.ImagePresetMode.OutdoorNighttime.WDRAreaRight=100
Channel.0.ImagePresetMode.OutdoorNighttime.WDRAreaCoordinates=0,0,3327,1871
Channel.0.ImagePresetMode.OutdoorNighttime.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.OutdoorNighttime.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.OutdoorNighttime.PreferShutterSpeed=1/200
Channel.0.ImagePresetMode.OutdoorNighttime.AFLKMode=Off
Channel.0.ImagePresetMode.OutdoorNighttime.SSNREnable=True
Channel.0.ImagePresetMode.OutdoorNighttime.SSNRMode=Manual
Channel.0.ImagePresetMode.OutdoorNighttime.SSNRLevel=12
Channel.0.ImagePresetMode.OutdoorNighttime.SSNR2DLevel=12
Channel.0.ImagePresetMode.OutdoorNighttime.SSNR3DLevel=12
Channel.0.ImagePresetMode.OutdoorNighttime.IrisMode=Auto
Channel.0.ImagePresetMode.OutdoorNighttime.PIrisMode=Auto
Channel.0.ImagePresetMode.OutdoorNighttime.PIrisPosition=100
Channel.0.ImagePresetMode.OutdoorNighttime.AGCMODE=MaxGain
Channel.0.ImagePresetMode.OutdoorNighttime.AGCLevel=1
Channel.0.ImagePresetMode.OutdoorNighttime.AGCMaxGainLevel=60
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightMode=Auto
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightSwitchingTime=5s
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightSwitchingMode=Normal
Channel.0.ImagePresetMode.OutdoorNighttime.DNSwitchColorToBWThreshold=70
Channel.0.ImagePresetMode.OutdoorNighttime.DNSwitchBWToColorThreshold=30
Channel.0.ImagePresetMode.OutdoorNighttime.SimpleFocus=False
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeScheduleEveryDay=1
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeSchedule.EveryDay.FromTo=00:00-23:59
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeScheduleSUN=1
```

```

Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeSchedule.SUN.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeScheduleMON=1
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeSchedule.MON.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeScheduleTUE=1
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeSchedule.TUE.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeScheduleWED=1
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeSchedule.WED.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeScheduleTHU=1
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeSchedule.THU.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeScheduleFRI=1
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeSchedule.FRI.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeScheduleSAT=1
Channel.0.ImagePresetMode.OutdoorNighttime.DayNightModeSchedule.SAT.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.OutdoorNighttime.WDRControlMode=AlwaysOn
Channel.0.ImagePresetMode.IndoorBacklight.CompensationMode=WDR
Channel.0.ImagePresetMode.IndoorBacklight.BLCAreaTop=30
Channel.0.ImagePresetMode.IndoorBacklight.BLCAreaBottom=70
Channel.0.ImagePresetMode.IndoorBacklight.BLCAreaLeft=30
Channel.0.ImagePresetMode.IndoorBacklight.BLCAreaRight=70
Channel.0.ImagePresetMode.IndoorBacklight.BLCAreaCoordinates=975,548,2319,13
04
Channel.0.ImagePresetMode.IndoorBacklight.BLCLevel=Medium
Channel.0.ImagePresetMode.IndoorBacklight.NormalizedBLCLevel=50
Channel.0.ImagePresetMode.IndoorBacklight.HLCLevel=Medium
Channel.0.ImagePresetMode.IndoorBacklight.HLCMaskTone=100
Channel.0.ImagePresetMode.IndoorBacklight.HLCMode=On
Channel.0.ImagePresetMode.IndoorBacklight.HLCMaskColor=Black
Channel.0.ImagePresetMode.IndoorBacklight.HLCDimming=Off
Channel.0.ImagePresetMode.IndoorBacklight.HLCAreaTop=30
Channel.0.ImagePresetMode.IndoorBacklight.HLCAreaBottom=70
Channel.0.ImagePresetMode.IndoorBacklight.HLCAreaLeft=30
Channel.0.ImagePresetMode.IndoorBacklight.HLCAreaRight=70
Channel.0.ImagePresetMode.IndoorBacklight.HLCAreaCoordinates=975,548,2319,13
04

```

```
Channel.0.ImagePresetMode.IndoorBacklight.NormalizedHLCLevel=50
Channel.0.ImagePresetMode.IndoorBacklight.WDRLevel=Low
Channel.0.ImagePresetMode.IndoorBacklight.WDRAreaTop=1
Channel.0.ImagePresetMode.IndoorBacklight.WDRAreaBottom=100
Channel.0.ImagePresetMode.IndoorBacklight.WDRAreaLeft=1
Channel.0.ImagePresetMode.IndoorBacklight.WDRAreaRight=100
Channel.0.ImagePresetMode.IndoorBacklight.WDRAreaCoordinates=0,0,3327,1871
Channel.0.ImagePresetMode.IndoorBacklight.AutoShortShutterSpeed=1/60
Channel.0.ImagePresetMode.IndoorBacklight.AutoLongShutterSpeed=1/1500
Channel.0.ImagePresetMode.IndoorBacklight.PreferShutterSpeed=1/200
Channel.0.ImagePresetMode.IndoorBacklight.AFLKMode=Off
Channel.0.ImagePresetMode.IndoorBacklight.SSNREnable=True
Channel.0.ImagePresetMode.IndoorBacklight.SSNRMode=Manual
Channel.0.ImagePresetMode.IndoorBacklight.SSNRLevel=24
Channel.0.ImagePresetMode.IndoorBacklight.SSNR2DLevel=24
Channel.0.ImagePresetMode.IndoorBacklight.SSNR3DLevel=24
Channel.0.ImagePresetMode.IndoorBacklight.IrisMode=Manual
Channel.0.ImagePresetMode.IndoorBacklight.PIrisMode=Auto
Channel.0.ImagePresetMode.IndoorBacklight.PIrisPosition=100
Channel.0.ImagePresetMode.IndoorBacklight.AGCMODE=MaxGain
Channel.0.ImagePresetMode.IndoorBacklight.AGCLevel=1
Channel.0.ImagePresetMode.IndoorBacklight.AGCMaxGainLevel=60
Channel.0.ImagePresetMode.IndoorBacklight.DayNightMode=Auto
Channel.0.ImagePresetMode.IndoorBacklight.DayNightSwitchingTime=5s
Channel.0.ImagePresetMode.IndoorBacklight.DayNightSwitchingMode=Normal
Channel.0.ImagePresetMode.IndoorBacklight.DNSwitchColorToBWThreshold=70
Channel.0.ImagePresetMode.IndoorBacklight.DNSwitchBWToColorThreshold=30
Channel.0.ImagePresetMode.IndoorBacklight.SimpleFocus=False
Channel.0.ImagePresetMode.IndoorBacklight.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeScheduleEveryDay=1
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeSchedule.EveryDay.From
To=00:00-23:59
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeScheduleSUN=1
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeSchedule.SUN.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeScheduleMON=1
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeSchedule.MON.FromTo=00
:00-23:59
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeScheduleTUE=1
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeSchedule.TUE.FromTo=00
:00-23:59
```

```

Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeScheduleWED=1
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeSchedule.WED.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeScheduleTHU=1
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeSchedule.THU.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeScheduleFRI=1
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeSchedule.FRI.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeScheduleSAT=1
Channel.0.ImagePresetMode.IndoorBacklight.DayNightModeSchedule.SAT.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBacklight.WDRControlMode=AlwaysOn
Channel.0.ImagePresetMode.IndoorBrightScene.CompensationMode=Off
Channel.0.ImagePresetMode.IndoorBrightScene.BLCAreaTop=30
Channel.0.ImagePresetMode.IndoorBrightScene.BLCAreaBottom=70
Channel.0.ImagePresetMode.IndoorBrightScene.BLCAreaLeft=30
Channel.0.ImagePresetMode.IndoorBrightScene.BLCAreaRight=70
Channel.0.ImagePresetMode.IndoorBrightScene.BLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.IndoorBrightScene.BLCLevel=Medium
Channel.0.ImagePresetMode.IndoorBrightScene.NormalizedBLCLevel=50
Channel.0.ImagePresetMode.IndoorBrightScene.HLCLevel=Medium
Channel.0.ImagePresetMode.IndoorBrightScene.HLCMaskTone=100
Channel.0.ImagePresetMode.IndoorBrightScene.HLCMode=On
Channel.0.ImagePresetMode.IndoorBrightScene.HLCMaskColor=Black
Channel.0.ImagePresetMode.IndoorBrightScene.HLCDimming=Off
Channel.0.ImagePresetMode.IndoorBrightScene.HLCAreaTop=30
Channel.0.ImagePresetMode.IndoorBrightScene.HLCAreaBottom=70
Channel.0.ImagePresetMode.IndoorBrightScene.HLCAreaLeft=30
Channel.0.ImagePresetMode.IndoorBrightScene.HLCAreaRight=70
Channel.0.ImagePresetMode.IndoorBrightScene.HLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.IndoorBrightScene.NormalizedHLCLevel=50
Channel.0.ImagePresetMode.IndoorBrightScene.WDRLevel=Medium
Channel.0.ImagePresetMode.IndoorBrightScene.WDRAreaTop=1
Channel.0.ImagePresetMode.IndoorBrightScene.WDRAreaBottom=100
Channel.0.ImagePresetMode.IndoorBrightScene.WDRAreaLeft=1
Channel.0.ImagePresetMode.IndoorBrightScene.WDRAreaRight=100
Channel.0.ImagePresetMode.IndoorBrightScene.WDRAreaCoordinates=0,0,3327,1871
Channel.0.ImagePresetMode.IndoorBrightScene.AutoShortShutterSpeed=1/30

```

```

Channel.0.ImagePresetMode.IndoorBrightScene.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.IndoorBrightScene.PreferShutterSpeed=1/60
Channel.0.ImagePresetMode.IndoorBrightScene.AFLKMode=Off
Channel.0.ImagePresetMode.IndoorBrightScene.SSNREnable=True
Channel.0.ImagePresetMode.IndoorBrightScene.SSNRMode=Manual
Channel.0.ImagePresetMode.IndoorBrightScene.SSNRLevel=12
Channel.0.ImagePresetMode.IndoorBrightScene.SSNR2DLevel=12
Channel.0.ImagePresetMode.IndoorBrightScene.SSNR3DLevel=12
Channel.0.ImagePresetMode.IndoorBrightScene.IrisMode=Auto
Channel.0.ImagePresetMode.IndoorBrightScene.PIrisMode=Auto
Channel.0.ImagePresetMode.IndoorBrightScene.PIrisPosition=100
Channel.0.ImagePresetMode.IndoorBrightScene.AGCMODE=MaxGain
Channel.0.ImagePresetMode.IndoorBrightScene.AGCLevel=1
Channel.0.ImagePresetMode.IndoorBrightScene.AGCMaxGainLevel=60
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightMode=Auto
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightSwitchingTime=5s
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightSwitchingMode=Normal
Channel.0.ImagePresetMode.IndoorBrightScene.DNSwitchColorToBWThreshold=70
Channel.0.ImagePresetMode.IndoorBrightScene.DNSwitchBWToColorThreshold=30
Channel.0.ImagePresetMode.IndoorBrightScene.SimpleFocus=False
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeScheduleEveryDay=1
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeSchedule.EveryDay.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeScheduleSUN=1
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeSchedule.SUN.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeScheduleMON=1
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeSchedule.MON.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeScheduleTUE=1
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeSchedule.TUE.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeScheduleWED=1
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeSchedule.WED.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeScheduleTHU=1
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeSchedule.THU.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeScheduleFRI=1

```


Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeSchedule.FRI.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeScheduleSAT=1
Channel.0.ImagePresetMode.IndoorBrightScene.DayNightModeSchedule.SAT.FromTo=00:00-23:59
Channel.0.ImagePresetMode.IndoorBrightScene.WDRControlMode=AlwaysOn
Channel.0.ImagePresetMode.NumberPlate.CompensationMode=Off
Channel.0.ImagePresetMode.NumberPlate.BLCAreaTop=30
Channel.0.ImagePresetMode.NumberPlate.BLCAreaBottom=70
Channel.0.ImagePresetMode.NumberPlate.BLCAreaLeft=30
Channel.0.ImagePresetMode.NumberPlate.BLCAreaRight=70
Channel.0.ImagePresetMode.NumberPlate.BLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.NumberPlate.BLCLevel=Medium
Channel.0.ImagePresetMode.NumberPlate.NormalizedBLCLevel=50
Channel.0.ImagePresetMode.NumberPlate.HLCLevel=Medium
Channel.0.ImagePresetMode.NumberPlate.HLCMaskTone=100
Channel.0.ImagePresetMode.NumberPlate.HLCMode=On
Channel.0.ImagePresetMode.NumberPlate.HLCMaskColor=Black
Channel.0.ImagePresetMode.NumberPlate.HLCDimming=Off
Channel.0.ImagePresetMode.NumberPlate.HLCAreaTop=30
Channel.0.ImagePresetMode.NumberPlate.HLCAreaBottom=70
Channel.0.ImagePresetMode.NumberPlate.HLCAreaLeft=30
Channel.0.ImagePresetMode.NumberPlate.HLCAreaRight=70
Channel.0.ImagePresetMode.NumberPlate.HLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.NumberPlate.NormalizedHLCLevel=50
Channel.0.ImagePresetMode.NumberPlate.WDRLevel=Medium
Channel.0.ImagePresetMode.NumberPlate.WDRAreaTop=1
Channel.0.ImagePresetMode.NumberPlate.WDRAreaBottom=100
Channel.0.ImagePresetMode.NumberPlate.WDRAreaLeft=1
Channel.0.ImagePresetMode.NumberPlate.WDRAreaRight=100
Channel.0.ImagePresetMode.NumberPlate.WDRAreaCoordinates=0,0,3327,1871
Channel.0.ImagePresetMode.NumberPlate.AutoShortShutterSpeed=1/300
Channel.0.ImagePresetMode.NumberPlate.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.NumberPlate.PreferShutterSpeed=1/500
Channel.0.ImagePresetMode.NumberPlate.AFLKMode=Off
Channel.0.ImagePresetMode.NumberPlate.SSNREnable=True
Channel.0.ImagePresetMode.NumberPlate.SSNRMode=Manual
Channel.0.ImagePresetMode.NumberPlate.SSNRLevel=4
Channel.0.ImagePresetMode.NumberPlate.SSNR2DLevel=4
Channel.0.ImagePresetMode.NumberPlate.SSNR3DLevel=4
Channel.0.ImagePresetMode.NumberPlate.IrisMode=Auto

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Channel.0.ImagePresetMode.NumberPlate.PIrisMode=Auto
Channel.0.ImagePresetMode.NumberPlate.PIrisPosition=100
Channel.0.ImagePresetMode.NumberPlate.AGCMODE=MaxGain
Channel.0.ImagePresetMode.NumberPlate.AGCLevel=1
Channel.0.ImagePresetMode.NumberPlate.AGCMaxGainLevel=30
Channel.0.ImagePresetMode.NumberPlate.DayNightMode=Auto
Channel.0.ImagePresetMode.NumberPlate.DayNightSwitchingTime=5s
Channel.0.ImagePresetMode.NumberPlate.DayNightSwitchingMode=Normal
Channel.0.ImagePresetMode.NumberPlate.DNSwitchColorToBWThreshold=70
Channel.0.ImagePresetMode.NumberPlate.DNSwitchBWToColorThreshold=30
Channel.0.ImagePresetMode.NumberPlate.SimpleFocus=False
Channel.0.ImagePresetMode.NumberPlate.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.ImagePresetMode.NumberPlate.DayNightModeScheduleEveryDay=1
Channel.0.ImagePresetMode.NumberPlate.DayNightModeSchedule.EveryDay.FromTo=00:00-23:59
Channel.0.ImagePresetMode.NumberPlate.DayNightModeScheduleSUN=1
Channel.0.ImagePresetMode.NumberPlate.DayNightModeSchedule.SUN.FromTo=00:00-23:59
Channel.0.ImagePresetMode.NumberPlate.DayNightModeScheduleMON=1
Channel.0.ImagePresetMode.NumberPlate.DayNightModeSchedule.MON.FromTo=00:00-23:59
Channel.0.ImagePresetMode.NumberPlate.DayNightModeScheduleTUE=1
Channel.0.ImagePresetMode.NumberPlate.DayNightModeSchedule.TUE.FromTo=00:00-23:59
Channel.0.ImagePresetMode.NumberPlate.DayNightModeScheduleWED=1
Channel.0.ImagePresetMode.NumberPlate.DayNightModeSchedule.WED.FromTo=00:00-23:59
Channel.0.ImagePresetMode.NumberPlate.DayNightModeScheduleTHU=1
Channel.0.ImagePresetMode.NumberPlate.DayNightModeSchedule.THU.FromTo=00:00-23:59
Channel.0.ImagePresetMode.NumberPlate.DayNightModeScheduleFRI=1
Channel.0.ImagePresetMode.NumberPlate.DayNightModeSchedule.FRI.FromTo=00:00-23:59
Channel.0.ImagePresetMode.NumberPlate.DayNightModeScheduleSAT=1
Channel.0.ImagePresetMode.NumberPlate.DayNightModeSchedule.SAT.FromTo=00:00-23:59
Channel.0.ImagePresetMode.NumberPlate.WDRControlMode=AlwaysOn
Channel.0.ImagePresetMode.Vivid.CompensationMode=Off
Channel.0.ImagePresetMode.Vivid.BLCAreaTop=30
Channel.0.ImagePresetMode.Vivid.BLCAreaBottom=70
Channel.0.ImagePresetMode.Vivid.BLCAreaLeft=30
```

```
Channel.0.ImagePresetMode.Vivid.BLCAreaRight=70
Channel.0.ImagePresetMode.Vivid.BLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.Vivid.BLCLevel=Medium
Channel.0.ImagePresetMode.Vivid.NormalizedBLCLevel=50
Channel.0.ImagePresetMode.Vivid.HLCLevel=Medium
Channel.0.ImagePresetMode.Vivid.HLCMaskTone=100
Channel.0.ImagePresetMode.Vivid.HLCMode=On
Channel.0.ImagePresetMode.Vivid.HLCMaskColor=Black
Channel.0.ImagePresetMode.Vivid.HLCDimming=Off
Channel.0.ImagePresetMode.Vivid.HLCAreaTop=30
Channel.0.ImagePresetMode.Vivid.HLCAreaBottom=70
Channel.0.ImagePresetMode.Vivid.HLCAreaLeft=30
Channel.0.ImagePresetMode.Vivid.HLCAreaRight=70
Channel.0.ImagePresetMode.Vivid.HLCAreaCoordinates=975,548,2319,1304
Channel.0.ImagePresetMode.Vivid.NormalizedHLCLevel=50
Channel.0.ImagePresetMode.Vivid.WDRLevel=Medium
Channel.0.ImagePresetMode.Vivid.WDRAreaTop=1
Channel.0.ImagePresetMode.Vivid.WDRAreaBottom=100
Channel.0.ImagePresetMode.Vivid.WDRAreaLeft=1
Channel.0.ImagePresetMode.Vivid.WDRAreaRight=100
Channel.0.ImagePresetMode.Vivid.WDRAreaCoordinates=0,0,3327,1871
Channel.0.ImagePresetMode.Vivid.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.Vivid.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.Vivid.PreferShutterSpeed=1/60
Channel.0.ImagePresetMode.Vivid.AFLKMode=Off
Channel.0.ImagePresetMode.Vivid.SSNREnable=True
Channel.0.ImagePresetMode.Vivid.SSNRMode=Manual
Channel.0.ImagePresetMode.Vivid.SSNRLevel=12
Channel.0.ImagePresetMode.Vivid.SSNR2DLevel=12
Channel.0.ImagePresetMode.Vivid.SSNR3DLevel=12
Channel.0.ImagePresetMode.Vivid.IrisMode=Auto
Channel.0.ImagePresetMode.Vivid.PIrisMode=Auto
Channel.0.ImagePresetMode.Vivid.PIrisPosition=100
Channel.0.ImagePresetMode.Vivid.AGCMODE=MaxGain
Channel.0.ImagePresetMode.Vivid.AGCLevel=1
Channel.0.ImagePresetMode.Vivid.AGCMaxGainLevel=60
Channel.0.ImagePresetMode.Vivid.DayNightMode=Auto
Channel.0.ImagePresetMode.Vivid.DayNightSwitchingTime=5s
Channel.0.ImagePresetMode.Vivid.DayNightSwitchingMode=Normal
Channel.0.ImagePresetMode.Vivid.DNSwitchColorToBWThreshold=70
Channel.0.ImagePresetMode.Vivid.DNSwitchBWToColorThreshold=30
```

```
Channel.0.ImagePresetMode.Vivid.SimpleFocus=False
Channel.0.ImagePresetMode.Vivid.DayNightAlarmIn=SwitchToBWIfCloses
Channel.0.ImagePresetMode.Vivid.DayNightModeScheduleEveryDay=1
Channel.0.ImagePresetMode.Vivid.DayNightModeSchedule.EveryDay.FromTo=00:00-23:59
Channel.0.ImagePresetMode.Vivid.DayNightModeScheduleSUN=1
Channel.0.ImagePresetMode.Vivid.DayNightModeSchedule.SUN.FromTo=00:00-23:59
Channel.0.ImagePresetMode.Vivid.DayNightModeScheduleMON=1
Channel.0.ImagePresetMode.Vivid.DayNightModeSchedule.MON.FromTo=00:00-23:59
Channel.0.ImagePresetMode.Vivid.DayNightModeScheduleTUE=1
Channel.0.ImagePresetMode.Vivid.DayNightModeSchedule.TUE.FromTo=00:00-23:59
Channel.0.ImagePresetMode.Vivid.DayNightModeScheduleWED=1
Channel.0.ImagePresetMode.Vivid.DayNightModeSchedule.WED.FromTo=00:00-23:59
Channel.0.ImagePresetMode.Vivid.DayNightModeScheduleTHU=1
Channel.0.ImagePresetMode.Vivid.DayNightModeSchedule.THU.FromTo=00:00-23:59
Channel.0.ImagePresetMode.Vivid.DayNightModeScheduleFRI=1
Channel.0.ImagePresetMode.Vivid.DayNightModeSchedule.FRI.FromTo=00:00-23:59
Channel.0.ImagePresetMode.Vivid.DayNightModeScheduleSAT=1
Channel.0.ImagePresetMode.Vivid.DayNightModeSchedule.SAT.FromTo=00:00-23:59
Channel.0.ImagePresetMode.Vivid.WDRControlMode=AlwaysOn
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "Camera": [
    {
      "Channel": 0,
      "CompensationMode": "Off",
      "BLCLevel": "Medium",
      "NormalizedBLCLevel": 50,
      "BLCAreaTop": 30,
      "BLCAreaBottom": 70,
      "BLCAreaLeft": 30,
      "BLCAreaRight": 70,
      "BLCAreaCoordinates": [
        {
          "x1": 1125,
```

```

        "y1": 632
    },
    {
        "x2": 2676,
        "y2": 1505
    }
],
"HLCLevel": "Medium",
"NormalizedHLCLevel": 50,
"HLCMaskTone": 100,
"HLCMode": "On",
"HLCMaskColor": "Black",
"HLCDimming": "Off",
"HLCAreaTop": 30,
"HLCAreaBottom": 70,
"HLCAreaLeft": 30,
"HLCAreaRight": 70,
"HLCAreaCoordinates": [
    {
        "x1": 1125,
        "y1": 632
    },
    {
        "x2": 2676,
        "y2": 1505
    }
],
"WDRLevel": "High",
"WDRAreaTop": 1,
"WDRAreaBottom": 100,
"WDRAreaLeft": 1,
"WDRAreaRight": 100,
"WDRAreaCoordinates": [
    {
        "x1": 0,
        "y1": 0
    },
    {
        "x2": 3839,
        "y2": 2159
    }
]

```

```

],
"AutoShortShutterSpeed": "1/25",
"AutoLongShutterSpeed": "1/12000",
"PreferShutterSpeed": "1/200",
"AFLKMode": "Off",
"SSNREnable": true,
"SSNRMode": "Manual",
"SSNRLevel": 12,
"SSNR2DLevel": 12,
"SSNR3DLevel": 12,
"IrisMode": "Auto",
"PIrisMode": "Auto",
"PIrisPosition": 100,
"AGCMode": "MaxGain",
"AGCLevel": 1,
"AGCMaxGainLevel": 60,
"DayNightMode": "Auto",
"DayNightSwitchingTime": "5s",
"DayNightSwitchingMode": "Normal",
"DNSwitchColorToBWThreshold": 70,
"DNSwitchBWToColorThreshold": 30,
"SimpleFocus": false,
"DayNightAlarmIn": "SwitchToBWIfCloses",
"DayNightModeSchedules": {
  "EveryDay": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "SUN": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "MON": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "TUE": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "WED": {

```

```

        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "THU": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "FRI": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "SAT": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    }
},
"WDRControlMode": "AlwaysOn",
"ImagePreset": [
    {
        "ImagePresetMode": "UserPreset1",
        "CompensationMode": "Off",
        "BLCLevel": "Medium",
        "NormalizedBLCLevel": 50,
        "BLCAreaTop": 30,
        "BLCAreaBottom": 70,
        "BLCAreaLeft": 30,
        "BLCAreaRight": 70,
        "BLCAreaCoordinates": [
            {
                "x1": 1125,
                "y1": 632
            },
            {
                "x2": 2676,
                "y2": 1505
            }
        ],
        "HLCLevel": "Medium",
        "NormalizedHLCLevel": 50,
        "HLCMaskTone": 100,
        "HLCMode": "On",
    }
]

```

```

"HLCMaskColor": "Black",
"HLCDimming": "Off",
"HLCAreaTop": 30,
"HLCAreaBottom": 70,
"HLCAreaLeft": 30,
"HLCAreaRight": 70,
"HLCAreaCoordinates": [
    {
        "x1": 1125,
        "y1": 632
    },
    {
        "x2": 2676,
        "y2": 1505
    }
],
"WDRLevel": "High",
"WDRAreaTop": 1,
"WDRAreaBottom": 100,
"WDRAreaLeft": 1,
"WDRAreaRight": 100,
"WDRAreaCoordinates": [
    {
        "x1": 0,
        "y1": 0
    },
    {
        "x2": 3839,
        "y2": 2159
    }
],
"AutoShortShutterSpeed": "1/25",
"AutoLongShutterSpeed": "1/12000",
"PreferShutterSpeed": "1/200",
"AFLKMode": "Off",
"SSNREnable": true,
"SSNRMode": "Manual",
"SSNRLevel": 12,
"SSNR2DLevel": 12,
"SSNR3DLevel": 12,
"IrisMode": "Auto",

```



```
"PIrisMode": "Auto",
"PIrisPosition": 100,
"AGCMode": "MaxGain",
"AGCLevel": 1,
"AGCMaxGainLevel": 60,
"DayNightMode": "Auto",
"DayNightSwitchingTime": "5s",
"DayNightSwitchingMode": "Normal",
"DNSwitchColorToBWThreshold": 70,
"DNSwitchBWToColorThreshold": 30,
"SimpleFocus": false,
"DayNightAlarmIn": "SwitchToBWIfCloses",
"DayNightModeSchedules": {
  "EveryDay": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "SUN": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "MON": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "TUE": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "WED": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "THU": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "FRI": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
}
```

```

        "SAT": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        }
    },
    "WDRControlMode": "AlwaysOn"
},
{
    "ImagePresetMode": "UserPreset2",
    "CompensationMode": "Off",
    "BLCLevel": "Medium",
    "NormalizedBLCLevel": 50,
    "BLCAreaTop": 30,
    "BLCAreaBottom": 70,
    "BLCAreaLeft": 30,
    "BLCAreaRight": 70,
    "BLCAreaCoordinates": [
        {
            "x1": 1125,
            "y1": 632
        },
        {
            "x2": 2676,
            "y2": 1505
        }
    ],
    "HLCLevel": "Medium",
    "NormalizedHLCLevel": 50,
    "HLCMaskTone": 100,
    "HLCMode": "On",
    "HLCMaskColor": "Black",
    "HLCDimming": "Off",
    "HLCAreaTop": 30,
    "HLCAreaBottom": 70,
    "HLCAreaLeft": 30,
    "HLCAreaRight": 70,
    "HLCAreaCoordinates": [
        {
            "x1": 1125,
            "y1": 632
        },
    ],

```

```

        {
            "x2": 2676,
            "y2": 1505
        }
    ],
    "WDRLevel": "High",
    "WDRAreaTop": 1,
    "WDRAreaBottom": 100,
    "WDRAreaLeft": 1,
    "WDRAreaRight": 100,
    "WDRAreaCoordinates": [
        {
            "x1": 0,
            "y1": 0
        },
        {
            "x2": 3839,
            "y2": 2159
        }
    ],
    "AutoShortShutterSpeed": "1/25",
    "AutoLongShutterSpeed": "1/12000",
    "PreferShutterSpeed": "1/200",
    "AFLKMode": "Off",
    "SSNREnable": true,
    "SSNRMode": "Manual",
    "SSNRLevel": 12,
    "SSNR2DLevel": 12,
    "SSNR3DLevel": 12,
    "IrisMode": "Auto",
    "PIrisMode": "Auto",
    "PIrisPosition": 100,
    "AGCMode": "MaxGain",
    "AGCLevel": 1,
    "AGCMaxGainLevel": 60,
    "DayNightMode": "Auto",
    "DayNightSwitchingTime": "5s",
    "DayNightSwitchingMode": "Normal",
    "DNSwitchColorToBWThreshold": 70,
    "DNSwitchBWToColorThreshold": 30,
    "SimpleFocus": false,

```

```

"DayNightAlarmIn": "SwitchToBWIfCloses",
"DayNightModeSchedules": {
  "EveryDay": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "SUN": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "MON": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "TUE": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "WED": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "THU": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "FRI": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "SAT": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  }
},
"WDRControlMode": "AlwaysOn"
},
{
  "ImagePresetMode": "OutdoorDaytime",
  "CompensationMode": "Off",
  "BLCLevel": "Medium",

```

```

"NormalizedBLCLevel": 50,
"BLCAreaTop": 30,
"BLCAreaBottom": 70,
"BLCAreaLeft": 30,
"BLCAreaRight": 70,
"BLCAreaCoordinates": [
    {
        "x1": 1125,
        "y1": 632
    },
    {
        "x2": 2676,
        "y2": 1505
    }
],
"HLCLevel": "Medium",
"NormalizedHLCLevel": 50,
"HLCMaskTone": 100,
"HLCMode": "On",
"HLCMaskColor": "Black",
"HLCDimming": "Off",
"HLCAreaTop": 30,
"HLCAreaBottom": 70,
"HLCAreaLeft": 30,
"HLCAreaRight": 70,
"HLCAreaCoordinates": [
    {
        "x1": 1125,
        "y1": 632
    },
    {
        "x2": 2676,
        "y2": 1505
    }
],
"WDRLevel": "Medium",
"WDRAreaTop": 1,
"WDRAreaBottom": 100,
"WDRAreaLeft": 1,
"WDRAreaRight": 100,
"WDRAreaCoordinates": [

```

```

        {
            "x1": 0,
            "y1": 0
        },
        {
            "x2": 3839,
            "y2": 2159
        }
    ],
    "AutoShortShutterSpeed": "1/25",
    "AutoLongShutterSpeed": "1/12000",
    "PreferShutterSpeed": "1/250",
    "AFLKMode": "Off",
    "SSNREnable": true,
    "SSNRMode": "Manual",
    "SSNRLevel": 12,
    "SSNR2DLevel": 12,
    "SSNR3DLevel": 12,
    "IrisMode": "Auto",
    "PIrisMode": "Auto",
    "PIrisPosition": 100,
    "AGCMode": "MaxGain",
    "AGCLevel": 1,
    "AGCMaxGainLevel": 60,
    "DayNightMode": "Auto",
    "DayNightSwitchingTime": "5s",
    "DayNightSwitchingMode": "Normal",
    "DNSwitchColorToBWThreshold": 70,
    "DNSwitchBWToColorThreshold": 30,
    "SimpleFocus": false,
    "DayNightAlarmIn": "SwitchToBWIfCloses",
    "DayNightModeSchedules": {
        "EveryDay": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        },
        "SUN": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        },
        "MON": {

```

```

        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "TUE": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "WED": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "THU": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "FRI": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "SAT": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    }
},
"WDRControlMode": "AlwaysOn"
},
{
    "ImagePresetMode": "OutdoorNighttime",
    "CompensationMode": "Off",
    "BLCLevel": "Medium",
    "NormalizedBLCLevel": 50,
    "BLCAreaTop": 30,
    "BLCAreaBottom": 70,
    "BLCAreaLeft": 30,
    "BLCAreaRight": 70,
    "BLCAreaCoordinates": [
        {
            "x1": 1125,
            "y1": 632
        },
        {

```

```

        "x2": 2676,
        "y2": 1505
    }
],
"HLCLevel": "Medium",
"NormalizedHLCLevel": 50,
"HLCMaskTone": 100,
"HLCMode": "On",
"HLCMaskColor": "Black",
"HLCDimming": "Off",
"HLCAreaTop": 30,
"HLCAreaBottom": 70,
"HLCAreaLeft": 30,
"HLCAreaRight": 70,
"HLCAreaCoordinates": [
    {
        "x1": 1125,
        "y1": 632
    },
    {
        "x2": 2676,
        "y2": 1505
    }
],
"WDRLevel": "Medium",
"WDRAreaTop": 1,
"WDRAreaBottom": 100,
"WDRAreaLeft": 1,
"WDRAreaRight": 100,
"WDRAreaCoordinates": [
    {
        "x1": 0,
        "y1": 0
    },
    {
        "x2": 3839,
        "y2": 2159
    }
],
"AutoShortShutterSpeed": "1/25",
"AutoLongShutterSpeed": "1/12000",

```



```
"PreferShutterSpeed": "1/200",
"AFLKMode": "Off",
"SSNREnable": true,
"SSNRMode": "Manual",
"SSNRLevel": 12,
"SSNR2DLevel": 12,
"SSNR3DLevel": 12,
"IrisMode": "Auto",
"PIrisMode": "Auto",
"PIrisPosition": 100,
"AGCMode": "MaxGain",
"AGCLevel": 1,
"AGCMaxGainLevel": 60,
"DayNightMode": "Auto",
"DayNightSwitchingTime": "5s",
"DayNightSwitchingMode": "Normal",
"DNSwitchColorToBWThreshold": 70,
"DNSwitchBWToColorThreshold": 30,
"SimpleFocus": false,
"DayNightAlarmIn": "SwitchToBWIfCloses",
"DayNightModeSchedules": {
  "EveryDay": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "SUN": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "MON": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "TUE": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "WED": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
}
```

```

        "THU": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        },
        "FRI": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        },
        "SAT": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        }
    },
    "WDRControlMode": "AlwaysOn"
},
{
    "ImagePresetMode": "IndoorBacklight",
    "CompensationMode": "WDR",
    "BLCLevel": "Medium",
    "NormalizedBLCLevel": 50,
    "BLCAreaTop": 30,
    "BLCAreaBottom": 70,
    "BLCAreaLeft": 30,
    "BLCAreaRight": 70,
    "BLCAreaCoordinates": [
        {
            "x1": 1125,
            "y1": 632
        },
        {
            "x2": 2676,
            "y2": 1505
        }
    ],
    "HLCLevel": "Medium",
    "NormalizedHLCLevel": 50,
    "HLCMaskTone": 100,
    "HLCMode": "On",
    "HLCMaskColor": "Black",
    "HLCDimming": "Off",
    "HLCAreaTop": 30,

```

```

"HLCAreaBottom": 70,
"HLCAreaLeft": 30,
"HLCAreaRight": 70,
"HLCAreaCoordinates": [
  {
    "x1": 1125,
    "y1": 632
  },
  {
    "x2": 2676,
    "y2": 1505
  }
],
"WDRLevel": "Low",
"WDRAreaTop": 1,
"WDRAreaBottom": 100,
"WDRAreaLeft": 1,
"WDRAreaRight": 100,
"WDRAreaCoordinates": [
  {
    "x1": 0,
    "y1": 0
  },
  {
    "x2": 3839,
    "y2": 2159
  }
],
"AutoShortShutterSpeed": "1/50",
"AutoLongShutterSpeed": "1/1500",
"PreferShutterSpeed": "1/200",
"AFLKMode": "Off",
"SSNREnable": true,
"SSNRMode": "Manual",
"SSNRLevel": 24,
"SSNR2DLevel": 24,
"SSNR3DLevel": 24,
"IrisMode": "Manual",
"PIrisMode": "Auto",
"PIrisPosition": 100,
"AGCMode": "MaxGain",

```

```
"AGCLLevel": 1,
"AGCMaxGainLevel": 60,
"DayNightMode": "Auto",
"DayNightSwitchingTime": "5s",
"DayNightSwitchingMode": "Normal",
"DNSwitchColorToBWThreshold": 70,
"DNSwitchBWToColorThreshold": 30,
"SimpleFocus": false,
"DayNightAlarmIn": "SwitchToBWIfCloses",
"DayNightModeSchedules": {
  "EveryDay": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "SUN": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "MON": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "TUE": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "WED": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "THU": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "FRI": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "SAT": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  }
}
```

```

    }
  },
  "WDRControlMode": "AlwaysOn"
},
{
  "ImagePresetMode": "IndoorBrightScene",
  "CompensationMode": "Off",
  "BLCLevel": "Medium",
  "NormalizedBLCLevel": 50,
  "BLCAreaTop": 30,
  "BLCAreaBottom": 70,
  "BLCAreaLeft": 30,
  "BLCAreaRight": 70,
  "BLCAreaCoordinates": [
    {
      "x1": 1125,
      "y1": 632
    },
    {
      "x2": 2676,
      "y2": 1505
    }
  ],
  "HLCLevel": "Medium",
  "NormalizedHLCLevel": 50,
  "HLCMaskTone": 100,
  "HLCMode": "On",
  "HLCMaskColor": "Black",
  "HLCDimming": "Off",
  "HLCAreaTop": 30,
  "HLCAreaBottom": 70,
  "HLCAreaLeft": 30,
  "HLCAreaRight": 70,
  "HLCAreaCoordinates": [
    {
      "x1": 1125,
      "y1": 632
    },
    {
      "x2": 2676,
      "y2": 1505
    }
  ]
}

```

```

    }
  ],
  "WDRLevel": "Medium",
  "WDRAreaTop": 1,
  "WDRAreaBottom": 100,
  "WDRAreaLeft": 1,
  "WDRAreaRight": 100,
  "WDRAreaCoordinates": [
    {
      "x1": 0,
      "y1": 0
    },
    {
      "x2": 3839,
      "y2": 2159
    }
  ],
  "AutoShortShutterSpeed": "1/25",
  "AutoLongShutterSpeed": "1/12000",
  "PreferShutterSpeed": "1/50",
  "AFLKMode": "Off",
  "SSNREnable": true,
  "SSNRMode": "Manual",
  "SSNRLevel": 12,
  "SSNR2DLevel": 12,
  "SSNR3DLevel": 12,
  "IrisMode": "Auto",
  "PIrisMode": "Auto",
  "PIrisPosition": 100,
  "AGCMode": "MaxGain",
  "AGCLevel": 1,
  "AGCMaxGainLevel": 60,
  "DayNightMode": "Auto",
  "DayNightSwitchingTime": "5s",
  "DayNightSwitchingMode": "Normal",
  "DNSwitchColorToBWThreshold": 70,
  "DNSwitchBWToColorThreshold": 30,
  "SimpleFocus": false,
  "DayNightAlarmIn": "SwitchToBWIfCloses",
  "DayNightModeSchedules": {
    "EveryDay": {

```

```

        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "SUN": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "MON": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "TUE": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "WED": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "THU": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "FRI": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "SAT": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    }
},
"WDRControlMode": "AlwaysOn"
},
{
    "ImagePresetMode": "NumberPlate",
    "CompensationMode": "Off",
    "BLCLevel": "Medium",
    "NormalizedBLCLevel": 50,
    "BLCAreaTop": 30,
    "BLCAreaBottom": 70,

```

```

"BLCAreaLeft": 30,
"BLCAreaRight": 70,
"BLCAreaCoordinates": [
  {
    "x1": 1125,
    "y1": 632
  },
  {
    "x2": 2676,
    "y2": 1505
  }
],
"HLCLevel": "Medium",
"NormalizedHLCLevel": 50,
"HLCMaskTone": 100,
"HLCMode": "On",
"HLCMaskColor": "Black",
"HLCDimming": "Off",
"HLCAreaTop": 30,
"HLCAreaBottom": 70,
"HLCAreaLeft": 30,
"HLCAreaRight": 70,
"HLCAreaCoordinates": [
  {
    "x1": 1125,
    "y1": 632
  },
  {
    "x2": 2676,
    "y2": 1505
  }
],
"WDRLevel": "Medium",
"WDRAreaTop": 1,
"WDRAreaBottom": 100,
"WDRAreaLeft": 1,
"WDRAreaRight": 100,
"WDRAreaCoordinates": [
  {
    "x1": 0,
    "y1": 0
  }
]

```



```

    },
    {
        "x2": 3839,
        "y2": 2159
    }
],
"AutoShortShutterSpeed": "1/300",
"AutoLongShutterSpeed": "1/12000",
"PreferShutterSpeed": "1/500",
"AFLKMode": "Off",
"SSNREnable": true,
"SSNRMode": "Manual",
"SSNRLevel": 4,
"SSNR2DLevel": 4,
"SSNR3DLevel": 4,
"IrisMode": "Auto",
"PIrisMode": "Auto",
"PIrisPosition": 100,
"AGCMode": "MaxGain",
"AGCLevel": 1,
"AGCMaxGainLevel": 30,
"DayNightMode": "Auto",
"DayNightSwitchingTime": "5s",
"DayNightSwitchingMode": "Normal",
"DNSwitchColorToBWThreshold": 70,
"DNSwitchBWToColorThreshold": 30,
"SimpleFocus": false,
"DayNightAlarmIn": "SwitchToBWIfCloses",
"DayNightModeSchedules": {
    "EveryDay": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "SUN": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "MON": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },

```

```

        "TUE": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        },
        "WED": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        },
        "THU": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        },
        "FRI": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        },
        "SAT": {
            "DayNightSchedule": true,
            "FromTo": "0:00-23:59"
        }
    },
    "WDRControlMode": "AlwaysOn"
},
{
    "ImagePresetMode": "Vivid",
    "CompensationMode": "Off",
    "BLCLevel": "Medium",
    "NormalizedBLCLevel": 50,
    "BLCAreaTop": 30,
    "BLCAreaBottom": 70,
    "BLCAreaLeft": 30,
    "BLCAreaRight": 70,
    "BLCAreaCoordinates": [
        {
            "x1": 1125,
            "y1": 632
        },
        {
            "x2": 2676,
            "y2": 1505
        }
    ]
}

```

```

],
"HLCLevel": "Medium",
"NormalizedHLCLevel": 50,
"HLCMaskTone": 100,
"HLCMode": "On",
"HLCMaskColor": "Black",
"HLCDimming": "Off",
"HLCAreaTop": 30,
"HLCAreaBottom": 70,
"HLCAreaLeft": 30,
"HLCAreaRight": 70,
"HLCAreaCoordinates": [
    {
        "x1": 1125,
        "y1": 632
    },
    {
        "x2": 2676,
        "y2": 1505
    }
],
"WDRLevel": "Medium",
"WDRAreaTop": 1,
"WDRAreaBottom": 100,
"WDRAreaLeft": 1,
"WDRAreaRight": 100,
"WDRAreaCoordinates": [
    {
        "x1": 0,
        "y1": 0
    },
    {
        "x2": 3839,
        "y2": 2159
    }
],
"AutoShortShutterSpeed": "1/25",
"AutoLongShutterSpeed": "1/12000",
"PreferShutterSpeed": "1/50",
"AFLKMode": "Off",
"SSNREnable": true,

```

```
"SSNRMode": "Manual",
"SSNRLevel": 12,
"SSNR2DLevel": 12,
"SSNR3DLevel": 12,
"IrisMode": "Auto",
"PIrisMode": "Auto",
"PIrisPosition": 100,
"AGCMode": "MaxGain",
"AGCLevel": 1,
"AGCMaxGainLevel": 60,
"DayNightMode": "Auto",
"DayNightSwitchingTime": "5s",
"DayNightSwitchingMode": "Normal",
"DNSwitchColorToBWThreshold": 70,
"DNSwitchBWToColorThreshold": 30,
"SimpleFocus": false,
"DayNightAlarmIn": "SwitchToBWIfCloses",
"DayNightModeSchedules": {
  "EveryDay": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "SUN": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "MON": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "TUE": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "WED": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  },
  "THU": {
    "DayNightSchedule": true,
    "FromTo": "0:00-23:59"
  }
}
```

```

    },
    "FRI": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    },
    "SAT": {
        "DayNightSchedule": true,
        "FromTo": "0:00-23:59"
    }
},
"WDRControlMode": "AlwaysOn"
}
]
}
]
}

```

2.4.2. Setting the AFLK mode as 50

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=camera&action=set&AFLKMode=50
```

set image preset mode's image setting.

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=camera&action=set&AFLKMode=50&ImagePresetMode=Vivid
```

2.4.3. Setting day and night mode to BW

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=camera&action=set&DayNightMode=BW
```

2.4.4. Setting the time schedule for day and night mode

Using day and night mode from 5:32 AM to 8:32 PM on Wednesday

REQUEST

```
http://<Device IP>/stw-
```

```
cgi/image.cgi?submenu=camera&action=set&DayNightMode=BW&DayNightModeSchedule.WED=1&DayNightModeSchedule.WED.FromTo=5:32-20:32
```

Using day and night mode from 1:00 AM to 8:59 AM everyday

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=camera&action=set&DayNightMode=BW&DayNightModeSchedule.EveryDay=1&DayNightModeSchedule.EveryDay.FromTo=1:0-8:59
```

2.4.5. Setting the compensation mode to BLC

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=camera&action=set&CompensationMode=BLC
```

2.4.6. Setting the Iris mode to manual

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=camera&action=set&IrisMode=Manual
```

2.4.7. Setting the P-Iris mode to manual

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=camera&action=set&IrisMode=P-Iris&PIrisMode=Manual
```

2.4.8. Setting the day and night mode to color

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=camera&action=set&DayNightMode=Color
```

2.4.9. Setting the switching time and mode for day and night mode

REQUEST

```
http://<Device IP>/stw-
```

```
cgi/image.cgi?msubmenu=camera&action=set&DayNightMode=Auto&DayNightSwitching  
Time=10s&DayNightSwitchingMode=Slow
```

Chapter 3. White Balance

3.1. Description

The **whitebalance** submenu configures white balance settings.

NOTE | This chapter applies to network cameras only.

Attribute to check for White Balance support: "attributes/Image/Support/WhiteBalance"

Access level

Action	Camera
view	Admin
set	Admin
control	Admin

3.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
whitebalance&action=<value>[&<parameter>=<value>]
```

3.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads white balance settings
	Channel	REQ, RES	<csv>	Channel ID

Action	Parameters	Request/Response	Type/Value	Description
	ImagePresetMode.#.WhiteBalanceMode	RES	<enum> Manual, AWC, ATW, Outdoor, Indoor, ATW1, ATW2, 3200K, 5600K, Mercury, Sodium, NarrowATW	<p>White balance mode</p> <ul style="list-style-type: none"> • Manual: Manually adjust the red and blue gains of the camera video. • AWC: Corrects the colors of the camera video to be optimized to the current lighting condition and screen mode. • ATW: Automatically corrects the colors of the camera video. (2400K~10500K) • Outdoor: Automatically corrects the video colors of the camera to be optimized to the outdoor environment. (1800K~10500K) • Indoor: Automatically corrects the video colors of the camera to be optimized to the indoor environment. (4500K~8500K) • Mercury: Automatically corrects the video colors of the camera to be optimized to a mercury lamp environment. • Sodium: Automatically corrects the video colors of the camera to be optimized to a sodium lamp environment. • NarrowATW: Automatically corrects the video colors of the camera to be optimized to current lighting condition and screen mode in a narrower range than ATW mode (2800K~9000K) <p>Note Each ImagePresetMode.# can have different image settings. For more details, refer to the "ImagePresetMode" parameter in set actions.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.WhiteBalanceManualRedLevel	RES	<int>	<p>Red level of the white balance</p> <p>The higher the value, the greater the red level.</p> <p>WhiteBalanceManualRedLevel is valid only when WhiteBalanceMode is set to Manual.</p>
	ImagePresetMode.#.WhiteBalanceManualBlueLevel	RES	<int>	<p>Blue level of the white balance.</p> <p>The higher the value, the greater the blue level.</p> <p>WhiteBalanceManualBlueLevel is valid only when WhiteBalanceMode is set to Manual.</p>
set	Channel	REQ, RES	<int>	Channel ID
	ImagePreview	REQ	<enum> Start, Stop	<p>Image preview mode</p> <p>Allows the user to view a preview image of the configuration, rather than saving the image configuration to the camera.</p> <p>If this parameter is ignored, then preview mode will be stopped and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped and the original image settings saved in the camera will be applied. <p>CAMERA ONLY</p>

Action	Parameters	Request/Response	Type/Value	Description
	WhiteBalanceMode	REQ, RES	<enum> Manual, AWC, ATW, Outdoor, Indoor, ATW1, ATW2, 3200K, 5600K, Mercury, Sodium, NarrowATW	<p>White balance mode</p> <ul style="list-style-type: none"> • Manual: Adjusts the Red and blue gains of the camera video manually • AWC: Corrects the colors of the camera video to be optimized to the current lighting condition and screen mode (2400K~10500K) • ATW: Corrects the colors of the camera video automatically • Outdoor: Automatically corrects the video colors of the camera to be optimized to the outdoor environment (1800K~10500K) • Indoor: Automatically corrects the video colors of the camera to be optimized to the indoor environment. (4500K~8500K) • Mercury: Automatically corrects the video colors of the camera to be optimized to a mercury lamp environment. • Sodium: Automatically corrects the video colors of the camera to be optimized to a sodium lamp environment. • NarrowATW: Automatically corrects the video colors of the camera to be optimized to current lighting condition and screen mode in a narrower range than ATW mode (2800K~9000K)
	WhiteBalanceManualRedLevel	REQ, RES	<int>	<p>Red level of the white balance</p> <p>The higher the value, the greater the red level.</p> <p>WhiteBalanceManualRedLevel is valid only when WhiteBalanceMode is set to Manual.</p>

Action	Parameters	Request/Response	Type/Value	Description
	WhiteBalanceManualBlueLevel	REQ, RES	<int>	<p>Blue level of the white balance.</p> <p>The higher the value, the greater the blue level.</p> <p>WhiteBalanceManualBlueLevel is valid only when WhiteBalanceMode is set to Manual.</p>
	ImagePresetMode	REQ	<enum> UserPreset1, UserPreset2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	<p>Each ImagePresetMode can have ImagePreset settings.</p> <p>Image settings in any Mode can be changed. Default settings for UserPreset1 and UserPreset2 are the same, whereas other preset mode like OutdoorDaytime, OutdoorNighttime, etc., have specific default settings depending on its name.</p>
control	AWCSet			<p>AWC mode set</p> <p>This parameter is used for a one-time control action to obtain the optimal conditions for the current lighting. It does not require any value.</p> <p>This parameter is valid only when WhiteBalanceMode is set to AWC.</p>

3.4. Examples

3.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=whitebalance&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.WhiteBalanceMode=ATW
Channel.0.WhiteBalanceManualRedLevel=604
Channel.0.WhiteBalanceManualBlueLevel=403
Channel.0.ImagePresetMode.UserPreset1.WhiteBalanceMode=ATW
Channel.0.ImagePresetMode.UserPreset1.WhiteBalanceManualRedLevel=604
Channel.0.ImagePresetMode.UserPreset1.WhiteBalanceManualBlueLevel=403
Channel.0.ImagePresetMode.UserPreset2.WhiteBalanceMode=ATW
Channel.0.ImagePresetMode.UserPreset2.WhiteBalanceManualRedLevel=604
Channel.0.ImagePresetMode.UserPreset2.WhiteBalanceManualBlueLevel=403
Channel.0.ImagePresetMode.OutdoorDaytime.WhiteBalanceMode=ATW
Channel.0.ImagePresetMode.OutdoorDaytime.WhiteBalanceManualRedLevel=604
Channel.0.ImagePresetMode.OutdoorDaytime.WhiteBalanceManualBlueLevel=403
Channel.0.ImagePresetMode.OutdoorNighttime.WhiteBalanceMode=Outdoor
Channel.0.ImagePresetMode.OutdoorNighttime.WhiteBalanceManualRedLevel=604
Channel.0.ImagePresetMode.OutdoorNighttime.WhiteBalanceManualBlueLevel=403
Channel.0.ImagePresetMode.IndoorBacklight.WhiteBalanceMode=ATW
Channel.0.ImagePresetMode.IndoorBacklight.WhiteBalanceManualRedLevel=604
Channel.0.ImagePresetMode.IndoorBacklight.WhiteBalanceManualBlueLevel=403
Channel.0.ImagePresetMode.IndoorBrightScene.WhiteBalanceMode=Indoor
Channel.0.ImagePresetMode.IndoorBrightScene.WhiteBalanceManualRedLevel=604
Channel.0.ImagePresetMode.IndoorBrightScene.WhiteBalanceManualBlueLevel=403
Channel.0.ImagePresetMode.NumberPlate.WhiteBalanceMode=ATW
Channel.0.ImagePresetMode.NumberPlate.WhiteBalanceManualRedLevel=604
Channel.0.ImagePresetMode.NumberPlate.WhiteBalanceManualBlueLevel=403
Channel.0.ImagePresetMode.Vivid.WhiteBalanceMode=ATW
Channel.0.ImagePresetMode.Vivid.WhiteBalanceManualRedLevel=604
Channel.0.ImagePresetMode.Vivid.WhiteBalanceManualBlueLevel=403
```

3.4.2. Setting the white balance to manual

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=whitebalance&action=set&WhiteBalanceMode=Manual
```

3.4.3. Setting the image preset mode's image

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=whitebalance&action=set&WhiteBalanceMode=Manual&Image  
PresetMode=Vivid
```

3.4.4. Setting the white balance (Red level to 70, Blue level to 120)

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=whitebalance&action=set&WhiteBalanceManualRedLevel=70  
&WhiteBalanceManualBlueLevel=120
```

3.4.5. AWC set

For AWC mode setting, **WhiteBalanceMode** must be set to AWC.

REQUEST 1

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=whitebalance&action=set&WhiteBalanceMode=AWC
```

REQUEST 2

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=whitebalance&action=control&AWCSet
```

Chapter 4. Image Enhancements

4.1. Description

The **imageenhancements** submenu configures the image enhancement settings.

Access level

Action	Camera	Encoder	NVR
view	Admin	Admin	User
set	Admin	Admin	User
control	Admin	Admin	

4.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
imageenhancements&action=<value> [&<parameter>=<value>]
```

4.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads image enhancement settings
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID
	OpticalDefogFilterEnable	REQ, RES	<bool> True, False	Enables or disables the optical defog filter.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePreview	REQ	<enum> Start, Stop	<p>Image preview mode</p> <p>Allows the user to view a preview image of the configuration, rather than saving the image configuration to the camera.</p> <p>If this parameter is ignored, then preview mode will be stopped and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped, and the original image settings saved in the camera will be applied. <p>CAMERA ONLY</p>
	SharpnessEnable	REQ, RES	<bool> True, False	<p>Enables or disables image sharpness</p> <p>CAMERA ONLY</p> <p>Note Attribute to check for Sharpness: "attributes/Image/Support/Sharpness"</p>
	SharpnessLevel	REQ, RES	<int>	<p>Sharpness level</p> <p>SharpnessLevel is valid only when SharpnessEnable is set to True.</p> <p>CAMERA ONLY</p>
	Brightness	REQ, RES	<int>	<p>Brightness level</p> <p>The higher the value, the greater the brightness.</p> <p>CAMERA ONLY</p> <p>Note Attribute to check for Brightness: "attributes/Image/Support/Brightness"</p>

Action	Parameters	Request/Response	Type/Value	Description
	Gamma	REQ, RES	<int>	<p>Gamma level</p> <p>The higher the value, the greater the gamma value.</p> <p>CAMERA ONLY</p> <p>Note Attribute to check for Gamma: "attributes/Image/Support/Gamma"</p>
	GammaControl	REQ, RES	<bool>	<p>Gamma Control</p> <p>Adjust the brightness of the image. When On is selected, dark areas are generally brighter.</p> <p>CAMERA ONLY</p> <p>Note When setting On, the screen change due to changes in brightness and gamma items may not be significant.</p>
	Saturation	REQ, RES	<int>	<p>Saturation level</p> <p>The higher the value, the greater the saturation.</p> <p>CAMERA ONLY</p> <p>Note Attribute to check for Saturation: "attributes/Image/Support/Saturation"</p>

Action	Parameters	Request/Response	Type/Value	Description
	Contrast	REQ, RES	<int>	<p>Contrast level</p> <p>The higher the value, the greater the contrast.</p> <p>CAMERA ONLY</p> <p>Note Attribute to check for Saturation: "image/imageenhancements/set/Contrast", "attributes/Image/Support/Contrast",</p>
	DefogMode	REQ, RES	<enum> Off, Auto, Manual	<p>Defogging Mode</p> <p>This enhances the quality of images created in a foggy environment.</p> <ul style="list-style-type: none"> • Off: Disables defogging function • Auto: Automatically compensates the image according to the fog level • Manual: Manually sets the amount of compensation <p>Note Attribute to check for Defog: "attributes/Image/Support/Defog"</p>
	DefogLevel	REQ, RES	<int>	<p>Defogging Level</p> <p>The greater the value, the higher the defogging level.</p> <p>DefogLevel is valid only when DefogMode is set to Manual or Auto.</p>

Action	Parameters	Request/Response	Type/Value	Description
	DISEnable	REQ, RES	<bool> True, False	<p>Enables or disables DIS (Digital Image Stabilization).</p> <p>This compensates the image automatically when the camera vibrates due to external factors such as wind.</p> <p>CAMERA ONLY</p> <p>Note Attribute to check for DIS: "attributes/Image/Support/DIS"</p>
	DISFocalLength	REQ,RES	<int> 2800 to 50000□ (micro meter)	<p>DIS Focal length value adjustable, can check imageoptions submenu "DISFocalLengthStepSize" parameter for allowed step size.</p> <p>CAMERA ONLY</p>
	CAR	REQ, RES	<enum> Off, Low, Medium, High	<p>Color Aberration Reduction</p> <p>This reduces the distortion or blurring of purple in the very bright area of an image.</p> <p>CAMERA ONLY</p>
	LDCEnable	REQ, RES	<bool> True, False	<p>Enables or disables LDC (Lens Distortion Control).</p> <p>LDCEnable and LDCMode cannot be set at the same time.</p> <p>LDCEnable True is same as Manual LDCMode</p> <p>LDCEnable False is same as Off LDCMode</p> <p>CAMERA ONLY</p>

Action	Parameters	Request/Response	Type/Value	Description
	LDCLevel	REQ, RES	<int>	<p>LDC level</p> <p>The greater the value, the higher the LDC level.</p> <p>LDCLevel is valid only when LDCMode is not set to Off.</p> <p>LDCLevel is valid only when LDCEnable is not set to False.</p> <p>CAMERA ONLY</p>
	LDCMode	REQ, RES	<enum> Off, Auto, Manual, FillMode_Manual, FillMode_Auto, StretchMode_Manual, StretchMode_Auto	<p>Provides option to control the LDC feature.</p> <ul style="list-style-type: none"> • Off: Disables LDC function • Auto: Automatically adjusts the LDC • Manual: Manually sets the LDC level • FillMode: The angle of up and down view is not changed, but the angle of left and right view can be cut. FillMode_Manual mode works LDC with LDCLevel value, FillMode_Auto mode is works LDC with automatically • StretchMode: The FOV is not changed, but the aspect ratio can be changed. StretchMode_Manual mode works LDC with LDCLevel value, StretchMode_Auto mode is works LDC with automatically <p>CAMERA ONLY</p>

Action	Parameters	Request/Response	Type/Value	Description
	XCEEnable	REQ RES	<bool>	<p>XCE(eXternd Contrast Enhancement) Enabling This feature is similar to using unsharp mask filtering</p> <p>Note Attribute to check for XCEEnable: "attributes/Image/Support/XCE"</p> <p>CAMERA ONLY</p>
	XCELevel	REQ RES	<int>	<p>User can set filter level</p> <p>Note Attribute to check for XCELevel: "attributes/Image/Support/XCE"</p> <p>CAMERA ONLY</p>
	HorizontalPosition	REQ RES	<int>	<p>It can adjust horizontal analog camera video position ENCODER ONLY</p>
	VerticalPosition	REQ RES	<int>	<p>It can adjust vertical analog camera video position ENCODER ONLY</p>
control	Channel	REQ	<int>	Channel ID
	Reset	REQ	<bool> True, False	The following image parameters are reset to the default value; Contrast, Brightness, SharpnessLevel, Saturation

4.4. Examples

4.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imageenhancements&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
  
Content-type: text/plain
```

<Body>

```
Channel.0.Brightness=50
Channel.0.SharpnessEnable=True
Channel.0.SharpnessLevel=12
Channel.0.Gamma=5
Channel.0.GammaControl=On
Channel.0.Saturation=50
Channel.0.DefogMode=Off
Channel.0.DefogLevel=5
Channel.0.DISEnable=False
Channel.0.LDCEnable=False
Channel.0.LDCMode=Off
Channel.0.LDCLevel=15
Channel.0.Contrast=50
Channel.0.XCEEEnable=False
Channel.0.XCELevel=50
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "ImageEnhancements": [
    {
      "Channel": 0,
      "Brightness": 50,
      "SharpnessEnable": true,
      "SharpnessLevel": 12,
      "Gamma": 5,
      "GammaControl": "On",
      "Saturation": 50,
      "DefogMode": "Off",
      "DefogLevel": 5,
      "DISEnable": false,
      "LDCEnable": false,
      "LDCMode": "Off",
      "LDCLevel": 15,

```

```
        "Contrast": 50,  
        "XCEEnable": false,  
        "XCELevel": 50  
    }  
]  
}
```

4.4.2. Setting the sharpness level to 5

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imageenhancements&action=set&SharpnessLevel=5
```

4.4.3. Setting the image enhancements

Saturation to 60, Defog mode to Manual, DIS to On, and Brightness to 60

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imageenhancements&action=set&Saturation=60&DefogMode=  
Manual&DISEnable=True&Brightness=60
```

Chapter 5. IR LED

5.1. Description

The **irled** submenu configures IR LED (Infra-red Light-Emitting-Diode) settings. IR LED creates brighter and clearer images in low illumination situations.

NOTE | This chapter applies to network cameras only.

Attribute to check for Feature Support: "attributes/Image/Support/IRLED"

Access level

Action	Camera
view	Admin
set	Admin

5.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=  
irled&action=<value>[&<parameter>=<value>]
```

5.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads IR LED settings.
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePreview	REQ	<enum> Start, Stop	<p>Image preview mode</p> <p>Allows the user to view a preview image of the configuration, rather than saving the image configuration to the camera.</p> <p>If this parameter is ignored, then preview mode will be stopped, and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped, and the original image settings saved in the camera will be applied.
	Mode	REQ, RES	<enum> Off, On, Sensor, Schedule, Manual, Auto, Auto1, Auto2	<p>IR LED mode</p> <ul style="list-style-type: none"> • Off: Turns off IR LED. • On: Turns on IR LED. • Sensor: Changes the IR according to the light flux detected by the light sensor. • Schedule: Sets the IR usage time. • Manual: Controls the IR manually. • Auto, Auto1, Auto2: Controls the IR Level automatically. See product specs for detailed information on the actual differences between the modes
	LEDOnLevel	REQ, RES	<int>	<p>LED On level</p> <p>LED is turned on when the light flux is lower than the LED usage level.</p> <p>LEDOnLevel is valid only when Mode is set to Sensor.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	LEDOffLevel	REQ, RES	<int>	<p>LED Off level</p> <p>LED is turned off when the light flux is higher than the LED usage level.</p> <p>LEDOffLevel is valid only when Mode is set to Sensor.</p>
	LEDPowerControlMode	REQ, RES	<enum> Off, Auto	<p>LED power control</p> <ul style="list-style-type: none"> • Off: Turns off the LED power control. • Auto: Controls the screen saturation caused by a nearby object.
	LEDMaxPower	REQ, RES	<enum> Low, Medium, High	<p>Maximum power for IR LED</p> <p>It sets the highest brightness of IR.</p>
	LEDMaxPowerLevel	REQ, RES	<int>	<p>Maximum power level for IR LED</p> <p>It sets the highest IR brightness</p>
	Schedule.EveryDay.From To	REQ, RES	<string>	<p>Schedule for IR LED</p> <p>The schedule sets the time when the IR will remain turned on in the format of <hh:mm-hh:mm>.</p> <p>Schedule.EveryDay.FromTo is valid only when Mode is set to Sensor.</p>
	Level	REQ, RES	<int>	<p>IR LED level</p> <p>Level is valid only when Mode is set to Manual</p>
	Zone.#.Level	REQ, RES	<int>	<p>IR LED level by zone</p> <p>It can be set if Mode is set as Manual.</p>

5.4. Examples

5.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=irled&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.Mode=DayNight
Channel.0.LEDOnLevel=40
Channel.0.LEDOffLevel=60
Channel.0.Schedule.EveryDay.FromTo=19:0-5:0
Channel.0.LEDMaxPower=Medium
Channel.0.LEDPowerControlMode=Auto
```

JSON RESPONSE

```
HTTP/1.0 200 OK

Content-type: application/json

<Body>
```

```
{
  "IRled": [
    {
      "Channel": 0,
      "Mode": "DayNight",
      "LEDOnLevel": 40,
      "LEDOffLevel": 60,
      "Schedule": {
        "EveryDay": {
          "FromTo": "19:0-5:0"
        }
      },
      "LEDMaxPower": "Medium",
      "LEDPowerControlMode": "Auto"
    }
  ]
}
```

```
]
}
```

5.4.2. Setting LED On level

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=irled&action=set&Mode=Sensor&LEDOnLevel=50
```

5.4.3. Setting LED Off level

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=irled&action=set&Mode=Sensor&LEDOffLevel=40
```

5.4.4. Setting LED max power and power control mode

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=irled&action=set&LEDMaxPower=High&LEDPowerControlMode  
=Auto
```

5.4.5. Setting the schedule for IR LED

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=irled&action=set&Mode=Sensor&Schedule.EveryDay.FromTo  
=00:00-01:00
```

5.4.6. Disabling IR LED

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=irled&action=set&Channel=0&Mode=Off
```

5.4.7. Setting IR LED mode to manual and its level

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=irled&action=set&Channel=0&Mode=Manual&Level=50
```

Chapter 6. Flip

6.1. Description

The **flip** submenu configures image flip settings.

NOTE This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin

6.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
flip&action=<value>&[<parameter>=<value>]
```

6.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads image flip settings.
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID
	HorizontalFlipEnable	REQ, RES	<bool> True, False	Enables or disables horizontal image flipping.
	VerticalFlipEnable	REQ, RES	<bool> True, False	Enables or disables vertical image flipping.
	Rotate	REQ, RES	<enum> 0, 90, 270	Rotates a video by a specified angle

6.4. Examples

6.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=flip&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.HorizontalFlipEnable=False
Channel.0.VerticalFlipEnable=False
Channel.0.Rotate=0
```

JSON RESPONSE

```
HTTP/1.0 200 OK

Content-type: application/json

<Body>
```

```
{
  "Flip": [
    {
      "Channel": 0,
      "HorizontalFlipEnable": false,
      "VerticalFlipEnable": false,
      "Rotate": "0"
    }
  ]
}
```

6.4.2. Enabling horizontal flip

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=flip&action=set&HorizontalFlipEnable=True
```

6.4.3. Enabling vertical flip

REQUEST

```
http://<Device IP>/stw-
```

```
cgi/image.cgi?msubmenu=flip&action=set&VerticalFlipEnable=True
```


Chapter 7. SSDR

7.1. Description

The **SSDR** submenu configures the SSDR (Samsung Super Dynamic Range) settings. It regulates the overall brightness by increasing the brightness of the dark area alone in a scene where the difference between bright and dark is severe.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin

7.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
ssdr&action=<value>[&<parameter>=<value>]
```

7.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads SSDR (Samsung Super Dynamic Range) settings.
	Channel	REQ, RES	<csv>	Channel ID
	ImagePresetMode.#.Level	RES	<int>	<p>SSDR level</p> <p>The higher the value, the greater the SSDR level.</p> <p>Level is valid only when Enable is set to True.</p> <div>Note Each ImagePresetMode.# can have different image settings. For more details, refer to the "ImagePresetMode" parameter in set actions.</div>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.DynamicRange	RES	<enum> Narrow, Wide	SSDR mode DynamicRange is valid only when Enable is set to True.
	ImagePresetMode.#.Enable	RES	<bool> True, False	Enables or disables SSDR.
set	Channel	REQ, RES	<int>	Channel ID
	ImagePresetMode	REQ	<enum> UserPreset 1, UserPreset 2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	Each ImagePresetMode can have ImagePreset settings. Image settings in any Mode can be changed, but modes except UserPreset1 and UserPreset2 have different default image settings.
	ImagePreview	REQ	<enum> Start, Stop	Image preview mode Allows the user to view a preview image of the configuration, rather than saving the image configuration to the camera. If this parameter is ignored, then preview mode will be stopped, and the original image configuration will be applied. <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped, and the original image settings saved in the camera will be applied.

Action	Parameters	Request/ Response	Type/ Value	Description
	Enable	REQ, RES	<bool> True, False	Enables or disables SSDR.
	Level	REQ, RES	<int>	SSDR level The higher the value, the greater the SSDR level. Level is valid only when Enable is set to True.
	DynamicRange	REQ, RES	<enum> Narrow, Wide	SSDR mode DynamicRange is valid only when Enable is set to True.

7.4. Examples

7.4.1. Getting the current information for SSDR of channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=ssdr&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain
```

```
<Body>
```

```
Channel.0.Enable=True
Channel.0.Level=12
Channel.0.DynamicRange=Narrow
Channel.0.ImagePresetMode.UserPreset1.Enable=True
Channel.0.ImagePresetMode.UserPreset1.Level=12
Channel.0.ImagePresetMode.UserPreset1.DynamicRange=Narrow
Channel.0.ImagePresetMode.UserPreset2.Enable=True
Channel.0.ImagePresetMode.UserPreset2.Level=12
Channel.0.ImagePresetMode.UserPreset2.DynamicRange=Narrow
Channel.0.ImagePresetMode.OutdoorDaytime.Enable=True
Channel.0.ImagePresetMode.OutdoorDaytime.Level=12
```

```
Channel.0.ImagePresetMode.OutdoorDaytime.DynamicRange=Narrow
Channel.0.ImagePresetMode.OutdoorNighttime.Enable=True
Channel.0.ImagePresetMode.OutdoorNighttime.Level=12
Channel.0.ImagePresetMode.OutdoorNighttime.DynamicRange=Narrow
Channel.0.ImagePresetMode.IndoorBacklight.Enable=True
Channel.0.ImagePresetMode.IndoorBacklight.Level=12
Channel.0.ImagePresetMode.IndoorBacklight.DynamicRange=Narrow
Channel.0.ImagePresetMode.IndoorBrightScene.Enable=True
Channel.0.ImagePresetMode.IndoorBrightScene.Level=12
Channel.0.ImagePresetMode.IndoorBrightScene.DynamicRange=Narrow
Channel.0.ImagePresetMode.NumberPlate.Enable=True
Channel.0.ImagePresetMode.NumberPlate.Level=12
Channel.0.ImagePresetMode.NumberPlate.DynamicRange=Narrow
Channel.0.ImagePresetMode.Vivid.Enable=True
Channel.0.ImagePresetMode.Vivid.Level=10
Channel.0.ImagePresetMode.Vivid.DynamicRange=Narrow
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "SSDR": [
    {
      "Channel": 0,
      "Enable": true,
      "Level": 12,
      "DynamicRange": "Narrow",
      "ImagePreset": [
        {
          "ImagePresetMode": "UserPreset1",
          "Enable": true,
          "Level": 12,
          "DynamicRange": "Narrow"
        },
        {
          "ImagePresetMode": "UserPreset2",
          "Enable": true,
          "Level": 12,
```

```

        "DynamicRange": "Narrow"
    },
    {
        "ImagePresetMode": "OutdoorDaytime",
        "Enable": true,
        "Level": 12,
        "DynamicRange": "Narrow"
    },
    {
        "ImagePresetMode": "OutdoorNighttime",
        "Enable": true,
        "Level": 12,
        "DynamicRange": "Narrow"
    },
    {
        "ImagePresetMode": "IndoorBacklight",
        "Enable": true,
        "Level": 12,
        "DynamicRange": "Narrow"
    },
    {
        "ImagePresetMode": "IndoorBrightScene",
        "Enable": true,
        "Level": 12,
        "DynamicRange": "Narrow"
    },
    {
        "ImagePresetMode": "NumberPlate",
        "Enable": true,
        "Level": 12,
        "DynamicRange": "Narrow"
    },
    {
        "ImagePresetMode": "Vivid",
        "Enable": true,
        "Level": 10,
        "DynamicRange": "Narrow"
    }
]
}
]

```

```
}
```

7.4.2. Enabling SSDR

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=ssdr&action=set&Enable=True
```

7.4.3. Setting the image preset mode's image

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=ssdr&action=set&Enable=True&ImagePresetMode=IndoorBacklight
```

7.4.4. Setting the SSDR level to 10

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=ssdr&action=set&Level=10
```

Chapter 8. Focus

8.1. Description

The **focus** submenu configures the focus settings.

NOTE | NVR supports only control action.

Access level

Action	Camera	NVR
view	Admin	
set	Admin	
control	Admin	User

8.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
focus&action=<value> [&<parameter>=<value>]
```

8.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads the focus settings.
	Channel	REQ, RES	<csv>	Channel ID
	ImagePresetMode.#.Fast AutoFocus	RES	<bool> True, False	Enables or disables Fast Auto Focus mode. Note Each ImagePresetMode.# can have different image settings. For more details, refer to the "ImagePresetMode" parameter in set actions.
	ImagePresetMode.#.IRS hft	RES	<enum> Off, 780, 850, 940	IR wave length setting

Action	Parameters	Request/Response	Type/Value	Description
	ImagePresetMode.#.TemperatureCompensationEnable	RES	<bool> True, False	Enables or disables temperature compensation. This is only available when IrisMode is set to ICS-EG3Z3915TCS-MPEIR.
	ImagePresetMode.#.Mode	RES	<enum> Auto, Manual, OneShotAutoFocus	Focus mode <ul style="list-style-type: none"> • Auto: Adjusts the focus automatically according to the zoom operation. • Manual: Manually Adjust the focus according to the zoom operation. • OneShotAutoFocus: Auto focus is performed once after the zoom operation.
	ImagePresetMode.#.ZoomTrackingMode	RES	<enum> Off, AutoTracking, Tracking	Focus sync mode with zoom operation <ul style="list-style-type: none"> • Off: Only the zoom lens operates. • AutoTracking: Focus is adjusted as per the change in zoom position. • Tracking: Focus is adjusted to predetermined positions as per the change in zoom position.
	ImagePresetMode.#.ZoomTrackingSpeed	RES	<enum> Slow, Medium, Fast	Focus speed in zoom tracking mode ZoomTrackingSpeed is valid only when ZoomTrackingMode is not set to Off.
	ImagePresetMode.#.LensResetSchedule	RES	<enum> Manual, 1Day, 2Days, 3Days, 4Days, 5Days, 6Days, 7Days	Lens reset schedule
	ImagePresetMode.#.SimpleFocusSchedule.Enable	RES	<bool> True, False	State of the simple focus schedule.

Action	Parameters	Request/Response	Type/Value	Description
	ImagePresetMode.#.SimpleFocusSchedule.DurationInDays	RES	<int>	Duration in days when the simple focus should be done.
	ImagePresetMode.#.SimpleFocusSchedule.TimeInHours	RES	<int> 0 to 23	Hour of the day when the simple focus should be done.
	ImagePresetMode.#.AutoFocusRange	RES	<enum> Wide, Narrow	Focus range setting
set	Channel	REQ, RES	<int>	Channel ID
	ImagePresetMode	REQ	<enum> UserPreset1, UserPreset2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	Each ImagePresetMode can have ImagePreset settings. Image settings in any Mode can be changed, but modes except UserPreset1 and UserPreset2 have different default image settings.
	Mode	REQ, RES	<enum> Auto, Manual, OneShotAutoFocus	Focus mode <ul style="list-style-type: none"> • Auto: Adjusts the focus automatically according to the zoom operation.. • Manual: Adjusts the Focus manually according to the zoom operation. • OneShotAutoFocus: Auto Focus performed once after the zoom operation.

Action	Parameters	Request/ Response	Type/ Value	Description
	ZoomTrackingMode	REQ, RES	<enum> Off, AutoTracking, Tracking	Focus sync mode with zoom operation <ul style="list-style-type: none"> • Off: Only the zoom lens operates. • AutoTracking: Focus is adjusted as per the change in zoom position. • Tracking: Focus is adjusted to predetermined positions as per the change in zoom position.
	ZoomTrackingSpeed	REQ, RES	<enum> Slow, Medium, Fast	Focus speed in zoom tracking mode ZoomTrackingSpeed is valid only when ZoomTrackingMode is not set to Off.
	LensResetSchedule	REQ, RES	<enum> Manual, 1Day, 2Days, 3Days, 4Days, 5Days, 6Days, 7Days	Lens reset schedule
	SimpleFocusSchedule.Enable	REQ, RES	<bool> True, False	Enables or disables the simple focus schedule.
	SimpleFocusSchedule.DurationInDays	REQ, RES	<int>	Duration in days when the simple focus should be done.
	SimpleFocusSchedule.TimeInHours	REQ, RES	<int> 0 to 23	Hour of the day when the simple focus should be done.
	FastAutoFocus	REQ, RES	<bool> True, False	Enables or disables Fast Auto Focus mode.
	IRShift	REQ, RES	<enum> Off, 780, 850, 940	IR wave length setting
	TemperatureCompensationEnable	Req, Res	<bool> True, False	Enables or disables temperature compensation This is only available when IrisMode is set to ICS-EG3Z3915TCS-MPEIR.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePreview	REQ	<enum> Start, Stop, AWC	<p>Image preview mode</p> <p>Allows viewing of the preview image of the configuration, rather than saving the image configuration to the camera.</p> <p>If this parameter is ignored, then preview mode will be stopped, and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started. • Stop: Image preview mode will be stopped, and the original image settings saved in the camera will be applied. • AWC: AWC mode will be started.
	AutoFocusRange	REQ, RES	<enum> Wide, Narrow	Focus range setting
control	Channel	REQ, RES	<int>	Channel ID
	Focus	REQ	<enum>	<p>Focus</p> <p>The higher the value, the clearer far objects become. This makes close objects blurry.</p>
	Zoom	REQ	<enum>	Zoom in/out

Action	Parameters	Request/Response	Type/Value	Description
	Mode	REQ	<enum> SimpleFocus, Reset, AutoFocus	<p>Focus mode.</p> <ul style="list-style-type: none"> SimpleFocus: Fits the focus automatically. Reset: Restores the focus adjustment to the default flange back position. AutoFocus: Performs auto focus operation. <p>Note Attribute to check for SimpleFocus: "attributes/Image/Support/SimpleFocus". Attribute to check for Reset Focus: "attributes/Image/Support/ResetFocus".</p>
	FocusAreaCoordinate	REQ	<string>	<p>Focus area coordinates</p> <p>The coordinates should be in the format of x1,y1,x2,y2.</p>
	FocusContinuous	REQ	<enum> Near, Far, Stop	<p>User can request continuous focus move.</p> <p>Note Attribute to check for FocusContinuous: "attributes/Image/Support/FocusContinuousAdjust"</p>
	ZoomContinuous	REQ	<enum> In, Out, Stop	<p>User can request continuous zoom move.</p> <p>Note Attribute to check for ZoomContinuous: "attributes/Image/Support/ZoomContinuousAdjust"</p>

8.4. Examples

8.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=focus&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: text/plain  
<Body>
```

```
Channel.0.FastAutoFocus=True  
Channel.0.ImagePresetMode.UserPreset1.FastAutoFocus=True  
Channel.0.ImagePresetMode.UserPreset2.FastAutoFocus=True  
Channel.0.ImagePresetMode.OutdoorDaytime.FastAutoFocus=True  
Channel.0.ImagePresetMode.OutdoorNighttime.FastAutoFocus=True  
Channel.0.ImagePresetMode.IndoorBacklight.FastAutoFocus=True  
Channel.0.ImagePresetMode.IndoorBrightScene.FastAutoFocus=True  
Channel.0.ImagePresetMode.NumberPlate.FastAutoFocus=True  
Channel.0.ImagePresetMode.Vivid.FastAutoFocus=True
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "Focus": [  
    {  
      "Channel": 0,  
      "FastAutoFocus": true,  
      "ImagePreset": [  
        {  
          "ImagePresetMode": "UserPreset1",  
          "FastAutoFocus": true  
        },  
        {  
          "ImagePresetMode": "UserPreset2",  
          "FastAutoFocus": true  
        }  
      ]  
    }  
  ]  
}
```

```

    {
        "ImagePresetMode": "OutdoorDaytime",
        "FastAutoFocus": true
    },
    {
        "ImagePresetMode": "OutdoorNighttime",
        "FastAutoFocus": true
    },
    {
        "ImagePresetMode": "IndoorBacklight",
        "FastAutoFocus": true
    },
    {
        "ImagePresetMode": "IndoorBrightScene",
        "FastAutoFocus": true
    },
    {
        "ImagePresetMode": "NumberPlate",
        "FastAutoFocus": true
    },
    {
        "ImagePresetMode": "Vivid",
        "FastAutoFocus": true
    }
]
}

```

8.4.2. Setting zoom tracking speed

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?msubmenu=focus&action=set&ZoomTrackingSpeed=Medium

```

8.4.3. Setting the image preset mode's image

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?msubmenu=focus&action=set&ZoomTrackingSpeed=Medium&ImagePreset

```

Mode=Vivid

8.4.4. Setting zoom tracking mode

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focus&action=set&ZoomTrackingMode=AutoTracking
```

8.4.5. Setting focus

Setting focus mode to SimpleFocus

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focus&action=control&Mode=SimpleFocus
```

Setting focus to 100

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=focus&action=control&Focus=100
```

Resetting focus

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focus&action=control&Mode=Reset
```

Setting focus to 10

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=focus&action=control&Focus=10
```

Adjust focus continuously

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focus&action=control&FocusContinuous=Near
```

Stop focus adjust

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focus&action=control&FocusContinuous=Stop
```

8.4.6. Setting zoom

Setting zoom to -10

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=focus&action=control&Zoom=-10
```

Setting zoom to 10

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=focus&action=control&Zoom=10
```

Adjust zoom continuously

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focus&action=control&ZoomContinuous=In
```

Stop zoom Adjust

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focus&action=control&ZoomContinuous=Stop
```

8.4.7. Setting the focus area

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focus&action=control&Mode=SimpleFocus&FocusAreaCoordi  
nate=400,400,600,600
```


8.4.8. Simple focus schedule

NOTE

Only some camera models support this feature, can refer to the cgi section of attribute response.

stw-cgi/attributes.cgi/image/focus

Enable the simplefocus schedule.

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=focus&action=set&SimpleFocusSchedule.Enable=True&SimpleFocusSchedule.DurationInDays=1&SimpleFocusSchedule.TimeInHours=2&Channel=0
```

View the current setting.

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=focus&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "Focus": [
    {
      "Channel": 0,
      "FastAutoFocus": true,
      "SimpleFocusSchedule": {
        "Enable": true,
        "DurationInDays": 1,
        "TimeInHours": 2
      },
      "ImagePreset": [
        {
          "ImagePresetMode": "UserPreset1",
          "FastAutoFocus": true,
          "SimpleFocusSchedule": {
            "Enable": true,
            "DurationInDays": 1,
```

```

        "TimeInHours": 2
    },
    {
        "ImagePresetMode": "UserPreset2",
        "FastAutoFocus": true,
        "SimpleFocusSchedule": {
            "Enable": true,
            "DurationInDays": 1,
            "TimeInHours": 2
        }
    },
    {
        "ImagePresetMode": "OutdoorDaytime",
        "FastAutoFocus": true,
        "SimpleFocusSchedule": {
            "Enable": true,
            "DurationInDays": 1,
            "TimeInHours": 2
        }
    },
    {
        "ImagePresetMode": "OutdoorNighttime",
        "FastAutoFocus": true,
        "SimpleFocusSchedule": {
            "Enable": true,
            "DurationInDays": 1,
            "TimeInHours": 2
        }
    },
    {
        "ImagePresetMode": "IndoorBacklight",
        "FastAutoFocus": true,
        "SimpleFocusSchedule": {
            "Enable": true,
            "DurationInDays": 1,
            "TimeInHours": 2
        }
    },
    {
        "ImagePresetMode": "IndoorBrightScene",

```

```

        "FastAutoFocus": true,
        "SimpleFocusSchedule": {
            "Enable": true,
            "DurationInDays": 1,
            "TimeInHours": 2
        }
    },
    {
        "ImagePresetMode": "NumberPlate",
        "FastAutoFocus": true,
        "SimpleFocusSchedule": {
            "Enable": true,
            "DurationInDays": 1,
            "TimeInHours": 2
        }
    },
    {
        "ImagePresetMode": "Vivid",
        "FastAutoFocus": true,
        "SimpleFocusSchedule": {
            "Enable": true,
            "DurationInDays": 1,
            "TimeInHours": 2
        }
    }
]
}

```

Chapter 9. Overlay

9.1. Description

The **overlay** submenu configures title and time OSD (on-screen display) settings.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin

9.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=  
overlay&action=<value>&[&<parameter>=<value>]
```

9.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads title and time OSD (on-screen display) settings
	Channel	REQ, RES	<csv>	Channel ID
	ImagePresetMode.#.PTZ PositionEnable	RES	<bool> True, False	Enables or disables the PTZ position overlay Note Each ImagePresetMode.# can have different image settings. For more details, refer to the "ImagePresetMode" parameter in set actions.
	ImagePresetMode.#.Pre setNameEnable	RES	<bool> True, False	Enables or disables the preset name overlay.
	ImagePresetMode.#.Ca meraIDEnable	RES	<bool> True, False	Enables or disables the camera ID overlay.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.AzimuthEnable	RES	<bool> True, False	Enables or disables the azimuth overlay. Note Attribute to check for Azimuth: "attributes/PTZSupport/Support/Azimuth"
Set	Channel	REQ, RES	<int>	Channel ID
	ImagePresetMode	REQ	<enum> UserPreset1, UserPreset2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	Each ImagePresetMode can have ImagePreset settings. Image settings in any Mode can be changed, but modes except UserPreset1 and UserPreset2 have different default image settings.
	TitleEnable	REQ, RES	<bool> True, False	Enables or disables title overlay
	Title	REQ, RES	<string>	Camera title Title is valid only when TitleEnable is set to True.
	TitlePositionX	REQ, RES	<int>	Camera title overlay position row The value may vary depending on the model. TitlePositionX and TitlePositionY are valid only when TitleEnable is set to True.

Action	Parameters	Request/ Response	Type/ Value	Description
	TitlePositionY	REQ, RES	<int>	<p>Camera title overlay position column</p> <p>The value may vary depending on the model.</p> <p>TitlePositionX and TitlePositionY are valid only when TitleEnable is set to True.</p>
	TimeEnable	REQ, RES	<bool> True, False	Enables or disables time overlay
	TimeFormat	REQ, RES	<enum>	<p>Time overlay format</p> <p>The time can be specified in the format of <YYYY-MM-DD>, <MM-DD-YYYY>, or <DD-MM-YYYY>.</p> <p>TimeFormat is valid only when the TimeEnable is set to True.</p>
	TimePositionX	REQ, RES	<int>	<p>Time overlay position row</p> <p>TimePositionX and TimePositionY are valid only when TimeEnable is set to True.</p>
	TimePositionY	REQ, RES	<int>	<p>Time overlay position column</p> <p>TimePositionX and TimePositionY are valid only when TimeEnable is set to True.</p>
	WeekdayEnable	REQ, RES	<bool> True, False	<p>Enables or disables the day of week overlay</p> <p>WeekdayEnable is valid only when TimeEnable is set to True.</p>
	PTZPositionEnable	REQ, RES	<bool> True, False	Enables or disables the PTZ position overlay
	AzimuthEnable	REQ, RES	<bool> True, False	<p>Enables or disables the azimuth overlay</p> <p>Note Attribute to check for Azimuth: "attributes/PTZSupport/Support/ Azimuth"</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	CameraIDEnable	REQ, RES	<bool> True, False	Enables or disables the camera ID overlay
	PresetNameEnable	REQ, RES	<bool> True, False	Enables or disables the preset name overlay
	OSDColor	REQ, RES	<enum> White, Red, Blue, Green, Yellow	Color
	FontSize	REQ, RES	<enum> Small, Medium, Large	Font Size
	MacAddressEnable	REQ, RES	<bool> True, False	Enables or disables the device's MAC address overlay
	MacAddressPositionX	REQ, RES	<int>	<p>MAC address overlay position row</p> <p>The value may vary depending on the model.</p> <p>MacAddressPositionX and MacAddressPositionY are valid only when MacAddressEnable is set to True.</p>
	MacAddressPositionY	REQ, RES	<int>	<p>MAC address overlay position column</p> <p>The value may vary depending on the model.</p> <p>MacAddressPositionX and MacAddressPositionY are valid only when MacAddressEnable is set to True.</p>
	IPAddressEnable	REQ, RES	<bool> True, False	Enables or disables the device's IP address overlay

Action	Parameters	Request/ Response	Type/ Value	Description
	IPAddressPositionX	REQ, RES	<int>	<p>IP address overlay position row</p> <p>The value may vary depending on the model.</p> <p>IPAddressPositionX and IPAddressPositionY are valid only when IPAddressEnable is set to True.</p>
	IPAddressPositionY	REQ, RES	<int>	<p>IP address overlay position column</p> <p>The value may vary depending on the model.</p> <p>IPAddressPositionX and IPAddressPositionY are valid only when IPAddressEnable is set to True.</p>
	ImagePreview	REQ	<enum> Start, Stop	<p>Image preview mode</p> <p>Allows the user to view a preview image of the configuration, rather than saving the image configuration to camera.</p> <p>If this parameter is ignored, then preview mode will be stopped and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped and the original image settings saved in the camera will be applied.
control	DeviceTemperatureEnable	REQ	<bool> True, False	Control temperature related information to OSD. Determine whether to show the temperature of device on a screen.
	TemperatureScale	REQ	<enum> Celsius, Fahrenheit	Determine the format of temperature to be shown. Default format is the Celsius.

9.4. Examples

9.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=overlay&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.TitleEnable=True
Channel.0.Title=PNP-9200RH
Channel.0.TitlePositionX=1
Channel.0.TitlePositionY=1
Channel.0.TimeEnable=True
Channel.0.TimeFormat=YYYY-MM-DD
Channel.0.TimePositionX=38
Channel.0.TimePositionY=26
Channel.0.WeekdayEnable=True
Channel.0.FontSize=Small
Channel.0.PTZPositionEnable=True
Channel.0.CameraIDEnable=False
Channel.0.PresetNameEnable=True
Channel.0.AzimuthEnable=False
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "Overlay": [
    {
      "Channel": 0,
      "TitleEnable": true,
      "Title": "PNP-9200RH",
```

```

        "TitlePositionX": 1,
        "TitlePositionY": 1,
        "TimeEnable": true,
        "TimeFormat": "YYYY-MM-DD",
        "TimePositionX": 38,
        "TimePositionY": 26,
        "WeekdayEnable": true,
        "FontSize": "Small",
        "PTZPositionEnable": true,
        "CameraIDEnable": false,
        "PresetNameEnable": true,
        "AzimuthEnable": false
    }
]
}

```

9.4.2. Setting the title overlay position

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?submenu=overlay&action=set&TitleEnable=True&TitlePositionX=6&
TitlePositionY=6

```

9.4.3. Setting time overlay

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?submenu=overlay&action=set&TimeEnable=True&TimeFormat=YYYY-
MM-DD&TimePositionX=5&TimePositionY=5&WeekdayEnable=True

```

9.4.4. Enabling azimuth overlay (OSD)

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?submenu=overlay&action=set&AzimuthEnable=True

```

9.4.5. Enabling device temperature overlay (OSD) with Farenheit format

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=overlay&action=control&DeviceTemperatureEnable=True&T  
emperatureScale=Fahrenheit
```

Chapter 10. Multi Line Overlay

10.1. Description

The **multilineosd** submenu configures multiple OSD (on-screen display) title and time settings.

NOTE

This chapter applies to network cameras only.

Attribute to check for maximum value of OSD title Supported:

"attributes/Image/Limit/MaxOSDTitles"

Attribute to check for maximum value of OSD Date Supported:

"attributes/Image/Limit/MaxOSDDates"

Access level

Action	Camera
view	Admin
add/update	Admin
remove	Admin

10.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
multilineosd&action=<value>&[&<parameter>=<value>]
```

10.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads title and time OSD (on-screen display) settings
	Channel	REQ, RES	<csv>	Channel ID
	Index	REQ, RES	<csv>	OSD Index can be more than the sum of MaxOSDTitles and MaxOSDDate . It is a mandatory parameter.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.Ind ex.#.OSDType	RES	<enum> Date, Title	<p>OSD Type is a mandatory parameter</p> <p>Note Each ImagePresetMode.# can have different image settings. For more details, refer to the "ImagePresetMode" parameter in set actions.</p>
	ImagePresetMode.#.Ind ex.#.WeekDay	RES	<bool> True, False	<p>Enables or disables the day of week overlay.</p> <p>WeekDay is valid only when OSDType is set to Date.</p>
	ImagePresetMode.#.Ind ex.#.DateFormat	RES	<enum> YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY	<p>Date overlay format</p> <p>The time can be specified in any one of the supported formats.</p> <p>DateFormat is valid only when the OSDType is set to Date.</p>
	ImagePresetMode.#.Ind ex.#.OSD	RES	<string>	<p>OSD text to be displayed on the image</p> <p>OSD is valid only when OSDType is set to Title.</p>
	ImagePresetMode.#.Ind ex.#.OSDBlink	RES	<enum> OFF, HDMI	Enables or disables OSD blinking for HDMI video output of the camera.
	ImagePresetMode.#.Ind ex.#.Enable	RES	<bool> True, False	Enables or disables title or date overlay.
	ImagePresetMode.#.Ind ex.#.PositionX	RES	<int>	<p>OSD overlay position row</p> <p>The value may vary depending on the model.</p> <p>The max allowed value changes when font size is changed.</p> <p>Refer to the Image Options command for information on the exact ranges for this value.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.Index.#.PositionY	RES	<int>	OSD overlay position column The value may vary depending on the model. The max allowed value changes when font size is changed. Refer to the Image Options command for information on the exact ranges for this value.
	ImagePresetMode.#.Index.#.OSDColor	RES	<enum> White, Red, Blue, Green, Yellow	OSD Font Color
	ImagePresetMode.#.Index.#.FontSize	RES	<enum> Small, Medium, Large	OSD Font Size
	ImagePresetMode.#.Index.#.Transparency	RES	<enum> Off, Low, Medium, High	To control the transparency of text
add/ update	Channel	REQ, RES	<int>	Channel ID
	ImagePresetMode	REQ	<enum> UserPreset 1, UserPreset 2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	Each ImagePresetMode can have ImagePreset settings. Image settings in any Mode can be changed, but modes except UserPreset1 and UserPreset2 have different default image settings.

Action	Parameters	Request/ Response	Type/ Value	Description
	Index	REQ, RES	<csv>	OSD Index can be more than the sum of MaxOSDTitles and MaxOSDDate . It is a mandatory parameter.
	OSDType	REQ, RES	<enum> Date,Title	OSD Type is a mandatory parameter
	Enable	REQ, RES	<bool> True, False	Enables or disables title or date overlay
	OSD	REQ, RES	<string>	OSD text to be displayed on the image OSD is valid only when OSDType is set to Title.
	PositionX	REQ, RES	<int>	OSD overlay position row The value may vary depending on the model. The max allowed value changes when Font Size is changed. Refer to the Image Options command for information on the exact ranges for this value.
	PositionY	REQ, RES	<int>	OSD overlay position column The value may vary depending on the model. The max allowed value changes when Font Size is changed. Refer to the Image Options command for information on the exact ranges for this value
	DateFormat	REQ, RES	<enum> YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY	Date overlay format The time can be specified in any one of the supported formats. DateFormat is valid only when the OSDType is set to Date.

Action	Parameters	Request/ Response	Type/ Value	Description
	WeekDay	REQ, RES	<bool> True, False	Enables or disables the day of week overlay WeekDay is valid only when OSDType is set to Date.
	OSDColor	REQ, RES	<enum> White, Red, Blue, Green, Yellow	OSD font color
	FontSize	REQ, RES	<enum> Small, Medium, Large	OSD font size
	OSDBlink	REQ, RES	<enum> OFF, HDMI	Enables or disables OSD blinking for HDMI video output of camera.
	Transparency	REQ, RES	<enum> Off, Low, Medium, High	To control the transparency of text
	AdditionalOSD	REQ, RES	<csv> None, PTZPosition , CameraID, PresetName, Azimuth	To enable additional OSD information

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePreview	REQ	<enum> Start, Stop	<p>Image preview mode</p> <p>Allows the user to view a preview image of the configuration, rather than saving the image configuration to camera.</p> <p>If this parameter is ignored, then preview mode will be stopped and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped and the original image settings saved in the camera will be applied.
remove	Channel	REQ, RES	<int>	Channel ID
	ImagePresetMode	REQ	<enum> UserPreset 1, UserPreset 2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	Removes image preset mode's image settings.
	Index	REQ, RES	<csv>	<p>OSD Index can be more than the sum of MaxOSDTitles and MaxOSDDate.</p> <p>It is a mandatory parameter</p>

Action	Parameters	Request/Response	Type/Value	Description
	ImagePreview	REQ	<enum> Start, Stop	<p>Image preview mode</p> <p>Allows the user to view a preview image of the configuration, rather than saving the image configuration to camera.</p> <p>If this parameter is ignored, then preview mode will be stopped and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped and the original image settings saved in the camera will be applied.

10.4. Examples

10.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=multilineosd&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.Index.6.Enable=False
Channel.0.Index.6.OSDType=Date
Channel.0.Index.6.DateFormat=YYYY-MM-DD
Channel.0.Index.6.PositionX=1
Channel.0.Index.6.PositionY=2
Channel.0.Index.6.WeekDay=False
Channel.0.Index.6.FontSize=Small
```

```
Channel.0.Index.6.OSDColor=White
Channel.0.Index.6.Transparency=Off
Channel.0.ImagePresetMode.UserPreset1.Index.6.Enable=False
Channel.0.ImagePresetMode.UserPreset1.Index.6.OSDType=Date
Channel.0.ImagePresetMode.UserPreset1.Index.6.DateFormat=YYYY-MM-DD
Channel.0.ImagePresetMode.UserPreset1.Index.6.PositionX=1
Channel.0.ImagePresetMode.UserPreset1.Index.6.PositionY=2
Channel.0.ImagePresetMode.UserPreset1.Index.6.WeekDay=False
Channel.0.ImagePresetMode.UserPreset1.Index.6.FontSize=Small
Channel.0.ImagePresetMode.UserPreset1.Index.6.OSDColor=White
Channel.0.ImagePresetMode.UserPreset1.Index.6.Transparency=Off
Channel.0.ImagePresetMode.UserPreset2.Index.6.Enable=False
Channel.0.ImagePresetMode.UserPreset2.Index.6.OSDType=Date
Channel.0.ImagePresetMode.UserPreset2.Index.6.DateFormat=YYYY-MM-DD
Channel.0.ImagePresetMode.UserPreset2.Index.6.PositionX=1
Channel.0.ImagePresetMode.UserPreset2.Index.6.PositionY=2
Channel.0.ImagePresetMode.UserPreset2.Index.6.WeekDay=False
Channel.0.ImagePresetMode.UserPreset2.Index.6.FontSize=Small
Channel.0.ImagePresetMode.UserPreset2.Index.6.OSDColor=White
Channel.0.ImagePresetMode.UserPreset2.Index.6.Transparency=Off
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.Enable=False
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.OSDType=Date
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.DateFormat=YYYY-MM-DD
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.PositionX=1
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.PositionY=2
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.WeekDay=False
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.FontSize=Small
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.OSDColor=White
Channel.0.ImagePresetMode.OutdoorDaytime.Index.6.Transparency=Off
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.Enable=False
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.OSDType=Date
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.DateFormat=YYYY-MM-DD
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.PositionX=1
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.PositionY=2
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.WeekDay=False
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.FontSize=Small
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.OSDColor=White
Channel.0.ImagePresetMode.OutdoorNighttime.Index.6.Transparency=Off
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.Enable=False
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.OSDType=Date
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.DateFormat=YYYY-MM-DD
```

```
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.PositionX=1
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.PositionY=2
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.WeekDay=False
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.FontSize=Small
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.OSDColor=White
Channel.0.ImagePresetMode.IndoorBacklight.Index.6.Transparency=Off
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.Enable=False
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.OSDType=Date
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.DateFormat=YYYY-MM-DD
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.PositionX=1
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.PositionY=2
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.WeekDay=False
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.FontSize=Small
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.OSDColor=White
Channel.0.ImagePresetMode.IndoorBrightScene.Index.6.Transparency=Off
Channel.0.ImagePresetMode.NumberPlate.Index.6.Enable=False
Channel.0.ImagePresetMode.NumberPlate.Index.6.OSDType=Date
Channel.0.ImagePresetMode.NumberPlate.Index.6.DateFormat=YYYY-MM-DD
Channel.0.ImagePresetMode.NumberPlate.Index.6.PositionX=1
Channel.0.ImagePresetMode.NumberPlate.Index.6.PositionY=2
Channel.0.ImagePresetMode.NumberPlate.Index.6.WeekDay=False
Channel.0.ImagePresetMode.NumberPlate.Index.6.FontSize=Small
Channel.0.ImagePresetMode.NumberPlate.Index.6.OSDColor=White
Channel.0.ImagePresetMode.NumberPlate.Index.6.Transparency=Off
Channel.0.ImagePresetMode.Vivid.Index.6.Enable=False
Channel.0.ImagePresetMode.Vivid.Index.6.OSDType=Date
Channel.0.ImagePresetMode.Vivid.Index.6.DateFormat=YYYY-MM-DD
Channel.0.ImagePresetMode.Vivid.Index.6.PositionX=1
Channel.0.ImagePresetMode.Vivid.Index.6.PositionY=2
Channel.0.ImagePresetMode.Vivid.Index.6.WeekDay=False
Channel.0.ImagePresetMode.Vivid.Index.6.FontSize=Small
Channel.0.ImagePresetMode.Vivid.Index.6.OSDColor=White
Channel.0.ImagePresetMode.Vivid.Index.6.Transparency=Off
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
```

```

"MultiLineOSD": [
  {
    "Channel": 0,
    "OSDs": [
      {
        "Index": 6,
        "OSDType": "Date",
        "Enable": false,
        "DateFormat": "YYYY-MM-DD",
        "PositionX": 1,
        "PositionY": 2,
        "WeekDay": false,
        "FontSize": "Small",
        "OSDColor": "White",
        "Transparency": "Off"
      }
    ],
    "ImagePreset": [
      {
        "ImagePresetMode": "UserPreset1",
        "OSDs": [
          {
            "Index": 6,
            "OSDType": "Date",
            "Enable": false,
            "DateFormat": "YYYY-MM-DD",
            "PositionX": 1,
            "PositionY": 2,
            "WeekDay": false,
            "FontSize": "Small",
            "OSDColor": "White",
            "Transparency": "Off"
          }
        ]
      },
      {
        "ImagePresetMode": "UserPreset2",
        "OSDs": [
          {
            "Index": 6,
            "OSDType": "Date",

```

```

        "Enable": false,
        "DateFormat": "YYYY-MM-DD",
        "PositionX": 1,
        "PositionY": 2,
        "WeekDay": false,
        "FontSize": "Small",
        "OSDColor": "White",
        "Transparency": "Off"
    }
]
},
{
    "ImagePresetMode": "OutdoorDaytime",
    "OSDs": [
        {
            "Index": 6,
            "OSDType": "Date",
            "Enable": false,
            "DateFormat": "YYYY-MM-DD",
            "PositionX": 1,
            "PositionY": 2,
            "WeekDay": false,
            "FontSize": "Small",
            "OSDColor": "White",
            "Transparency": "Off"
        }
    ]
},
{
    "ImagePresetMode": "OutdoorNighttime",
    "OSDs": [
        {
            "Index": 6,
            "OSDType": "Date",
            "Enable": false,
            "DateFormat": "YYYY-MM-DD",
            "PositionX": 1,
            "PositionY": 2,
            "WeekDay": false,
            "FontSize": "Small",
            "OSDColor": "White",

```

```

        "Transparency": "Off"
    }
]
},
{
    "ImagePresetMode": "IndoorBacklight",
    "OSDs": [
        {
            "Index": 6,
            "OSDType": "Date",
            "Enable": false,
            "DateFormat": "YYYY-MM-DD",
            "PositionX": 1,
            "PositionY": 2,
            "WeekDay": false,
            "FontSize": "Small",
            "OSDColor": "White",
            "Transparency": "Off"
        }
    ]
},
{
    "ImagePresetMode": "IndoorBrightScene",
    "OSDs": [
        {
            "Index": 6,
            "OSDType": "Date",
            "Enable": false,
            "DateFormat": "YYYY-MM-DD",
            "PositionX": 1,
            "PositionY": 2,
            "WeekDay": false,
            "FontSize": "Small",
            "OSDColor": "White",
            "Transparency": "Off"
        }
    ]
},
{
    "ImagePresetMode": "NumberPlate",
    "OSDs": [

```

```

        {
            "Index": 6,
            "OSDType": "Date",
            "Enable": false,
            "DateFormat": "YYYY-MM-DD",
            "PositionX": 1,
            "PositionY": 2,
            "WeekDay": false,
            "FontSize": "Small",
            "OSDColor": "White",
            "Transparency": "Off"
        }
    ],
    },
    {
        "ImagePresetMode": "Vivid",
        "OSDs": [
            {
                "Index": 6,
                "OSDType": "Date",
                "Enable": false,
                "DateFormat": "YYYY-MM-DD",
                "PositionX": 1,
                "PositionY": 2,
                "WeekDay": false,
                "FontSize": "Small",
                "OSDColor": "White",
                "Transparency": "Off"
            }
        ]
    }
]
}

```

10.4.2. Adding multiple text overlay positions

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?submenu=multilineosd&action=add&Index=3&OSDType=Title&Enable=

```



```
True&PositionX=6&PositionY=6&OSD=TestOSD
```

10.4.3. Setting the image preset mode's image

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=multilineosd&action=add&Index=3&OSDType=Title&Enable=  
True&PositionX=6&PositionY=6&OSD=TestOSD&ImagePresetMode=Vivid
```

10.4.4. Setting time overlay

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=multilineosd&action=update&Index=6&OSDType=Date&Enabl  
e=True&DateFormat=YYYY-MM-DD&PositionX=5&PositionY=5&WeekDay=True
```

10.4.5. Enabling azimuth overlay (OSD)

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=multilineosd&action=update&AdditionalOSD=AzimuthEnabl  
e
```

Chapter 11. Multi Image Overlay

11.1. Description

The **multiimageosd** submenu supports overlaying images on the live stream.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
install	Admin
remove	Admin

11.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
multiimageosd&action=<value>&[&<parameter>=<value>]
```

11.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads Image overlay settings
	Channel	REQ, RES	<csv>	Channel ID
	Index	REQ	<csv>	List of overlay image index
	MaxResolution	RES	<string>	Maximum image resolution that can be uploaded for image overlay
	IsInstalled	RES	<bool>	Indicates if an image is already installed or not
set	Channel	REQ, RES	<int>	Channel ID
	PositionX	REQ, RES	<int>	X Coordinate of the image
	PositionY	REQ, RES	<int>	Y Coordinate of the image
install	Channel	REQ, RES	<int>	Channel ID
	Index	REQ, RES	<csv>	Overlay Image Index

Action	Parameters	Request/ Response	Type/ Value	Description
	FileType	REQ, RES	<enum> BMP, GIF, JPG, JPEG, PNG, TIF	Specifies the format of the image that should be installed
remove	Channel	REQ, RES	<int>	Channel ID
	Index	REQ, RES	<int>	Overlay Image Index

11.4. Examples

11.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=multiimageosd&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: text/plain  
<Body>
```

```
Channel.0.Index.1.IsInstalled=True  
Channel.0.MaxResolution=128x128  
Channel.0.Index.1.PositionX=1086  
Channel.0.Index.1.PositionY=728
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "multiimageosd": [  
    {  
      "Channel": 0,  
      "MaxResolution": "128x128",
```

```

    "Imageosds": [
      {
        "Index": 1,
        "IsInstalled": true
        "PositionX": 1086,
        "PositionY": 728
      }
    ]
  }
]
}

```

11.4.2. Installing overlay image

Make sure that the image you are uploading is in a format supported by the device.

Refer to the **image/multiimageosd/install/FileType** response in attributes.cgi for information on supported file formats.

The maximum image resolution supported is provided in the **MaxResolution** parameter.

REQUEST

```
*[.underline]#Step 1:##*
```

Image file needs to be base64 encoded before sending a POST request.

```
> openssl base64 -in image.bmp -out image_base64.bin
```

Step 2:

```
curl -v --digest -u <userid>:<password> --data-urlencode @image_base64.bin "http://<Device IP>/stw-cgi/image.cgi?submenu=multiimageosd&action=install&Index=1&FileType=BMP" -H "Expect:"
```

The above command will produce a request to the device that looks something like:

```

POST /stw-
cgi/image.cgi?submenu=multiimageosd&action=install&Index=1&FileType=BMP
HTTP/1.1
User-Agent: curl/7.26.0
Host: 192.168.22.47
Accept: */*
Content-Length: 147610

```

```
Content-Type: application/x-www-form-urlencoded
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain
```

```
<Body>
```

```
OK
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{  
  "Response": "Success"  
}
```

11.4.3. Removing an installed overlay image

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=multiimageosd&action=remove&Channel=0&Index=1
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain
```

```
<Body>
```

```
OK
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "Response": "Success"  
}
```

Chapter 12. Smart Codec

12.1. Description

The **smartcodec** submenu configures smart codec settings.

Using Smart Codec, specific areas are compressed with high quality and other areas with low quality.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin
add	Admin
remove	Admin

12.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
smartcodec&action=<value> [&<parameter>=<value>]
```

12.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads smart codec settings
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID

Action	Parameters	Request/Response	Type/Value	Description
	Mode	REQ, RES	<enum> FaceDetection, Manual	<p>Smart codec mode</p> <ul style="list-style-type: none"> • FaceDetection: Detects the face and compresses it with high quality • Manual: Defines The area (rectangle type) manually for high quality compression <p>Note add and remove actions are valid only when Mode is set to Manual.</p>
	Sensitivity	REQ, RES	<int>	<p>Face detection sensitivity</p> <p>Sensitivity is valid only when Mode is set to FaceDetection.</p>
	QualityLevel	REQ, RES	<enum>	Quality of user-defined smart codec area or the face detection area
add	Channel	REQ	<int>	Channel ID
	Area.#.Coordinate	REQ, RES	<string>	<p>Area coordinates for smart codec</p> <p>The coordinates should be in the format of <x1,y1,x2,y2,x3,y3,x4>.</p> <p>Note To use the add action, Mode must have been set to Manual, and Area.#.Coordinate must be sent together.</p> <p>Attribute to check for maximum smart codec area(s): "attributes/Image/Limit/MaxSmartCodecArea"</p>
remove	Channel	REQ	<int>	Channel ID

Action	Parameters	Request/Response	Type/Value	Description
	Area	REQ	<csv> All, #	<p>Smart codec area number/index to be deleted</p> <p>This parameter is valid only if Mode is set to Manual.</p> <div> <p>Note</p> <p>To use the remove action, Mode must have been set to Manual, and Area must be sent together.</p> </div>

12.4. Examples

12.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=smartcodec&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.Mode=Manual
Channel.0.QualityLevel=Auto
Channel.0.Area.1.Coordinate=828,384,1860,840
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "SmartCodec": [
    {
      "Channel": 0,
```

```

    "Mode": "Manual",
    "QualityLevel": "Auto",
    "Areas": [
      {
        "Area": 1,
        "Coordinate": [
          {
            "x": 828,
            "y": 384
          },
          {
            "x": 1860,
            "y": 840
          }
        ]
      }
    ]
  }
}

```

12.4.2. Setting smart codec mode to face detection

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?submenu=smartcodec&action=set&Mode=FaceDetection

```

12.4.3. Adding smart codec area 1

To add a smart codec area for high quality compression using the **add** action, the **Mode** parameter must have already been set to Manual; If **Mode** is set to FaceDetection, an error will be returned to the following request.

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?submenu=smartcodec&action=add&Area.1.Coordinate=86,154,973,96
5

```

12.4.4. Removing smart codec area 1

To remove a smart codec area using the **remove** action, the **Mode** parameter must have already been set

to Manual; If **Mode** is set to FaceDetection, an error will be returned to the following request.

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=smartcodec&action=remove&Area=1
```

12.4.5. Removing all smart codec areas

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=smartcodec&action=remove&Area=All
```

Chapter 13. Privacy

13.1. Description

The **privacy** submenu configures privacy mask settings.

NOTE

This chapter applies to network cameras only.

Attribute to check for privacy mask zoom threshold:

"attributes/Image/Support/PrivacyMask.ZoomThreshold"

Attribute to check for privacy mask color:

"attributes/Image/Support/Privacy.MaskColor.Global"

Attribute to check for maximum privacy masks: "attributes/Image/Limit/MaxPrivacyMask"

NVR supports only control action.

Access level

Action	Camera	NVR
view	Admin	
add, update	Admin	
set	Admin	
remove	Admin	
control		User

13.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
privacy&action=<value>[&<parameter>=<value>]
```

13.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads privacy mask settings.
	Channel	REQ	<csv>	Channel ID
	CommonMaskColor	RES	<enum> Gray, Green, Red, Blue, Black, White	This parameter is supported when the Privacy.MaskColor.Global parameter is True. This parameter is used to configure color for all privacy masks.

Action	Parameters	Request/ Response	Type/ Value	Description
	Position.Pan	RES	<float>	Pan value when the device supports PTZ.
	Position.Tilt	RES	<float>	Tilt value when the device supports PTZ.
add	Channel	REQ, RES	<int>	Channel ID
	MaskIndex	RES	<int>	<p>Index of the privacy area</p> <p>The value may vary depending on the model.</p> <p>MaskIndex should not be sent while adding a privacy mask area. The MaskIndex value will be returned in response to a view request.</p>
	MaskName	REQ, RES	<string>	<p>Privacy area's name</p> <p>The name may consist of letters, numbers, hyphens and periods.</p> <div> <p>Note</p> <p>To use the add action, MaskName, MaskColor, and MaskCoordinate parameters must be sent together.</p> </div>
	MaskColor	REQ, RES	<enum> Gray, Green, Red, Blue, Black, White	<p>Color of the privacy area</p> <div> <p>Note</p> <p>To use the add action, MaskName, MaskColor, and MaskCoordinate parameters must be sent together.</p> </div> <div> <p>Note</p> <p>In some cameras, changing the color of each mask is not supported. If Privacy.MaskColor.Global parameter is False, then this feature is available. If this feature is not available, then CommonMaskColor parameter is used and this parameter is used as Common MaskColor.</p> </div>

Action	Parameters	Request/ Response	Type/ Value	Description
	MaskCoordinate	REQ, RES	<string>	Vertices of the privacy area Note To use the add action, MaskName , MaskColor , and MaskCoordinate parameters must be sent together.
	ZoomThresholdEnable	REQ, RES	<bool> True, False	Enables or disables the zoom threshold
	AdjustMode	REQ	<enum> Start	When adding a privacy area with this parameter, the privacy area will be transparent until some times passes or an update command comes with AdjustMode as Stop. Note This parameter is supported when the device has a zoom module.
update	MaskIndex	REQ	<int>	Masks the index number
	ZoomThresholdEnable	REQ, RES	<bool> True, False	Enables or disables the zoom threshold
	AdjustMode	REQ	<enum> Start, Stop	To adjust a privacy area's zoom status without removing it. When this comes as Start, the area will be transparent until some times passes or an update command comes as Stop. Note To use this parameter, the MaskIndex parameter must be sent together. This is supported when the device has a zoom module.
set	Enable	REQ, RES	<bool> True, False	Whether to use a privacy area
	Channel	REQ	<int>	ID of the channel that will use the privacy function

Action	Parameters	Request/ Response	Type/ Value	Description
	MaskPattern	REQ, RES	<enum> Solid, Mosaic1, Mosaic2, Mosaic3, Mosaic4	Masks the pattern
	CurrentIndexOrder	REQ	<csv>	<p>The current MaskIndex list</p> <p>Note To change the MaskIndex order, the NewIndexOrder parameters must be sent together.</p>
	NewIndexOrder	REQ	<csv>	<p>New MaskIndex list for changing the orders</p> <p>Note To change the MaskIndex order, the CurrentIndexOrder parameters must be sent together.</p>
	CornerMasking	REQ,RES	<bool>	Enables corner masking of video image.
remove	Channel	REQ	<int>	ID of the channel to remove the privacy area(s) from.
	MaskIndex	REQ	<csv> All, #	<p>Privacy area(s) to remove</p> <p>Note To use the remove action, MaskIndex parameter must be sent.</p>
control	Channel	REQ	<int>	<p>ID of the channel from which to control the privacy area</p> <p>Note The control action is supported only in PTZ models.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	Mode	REQ	<enum> Start, Move	Privacy mask control mode <ul style="list-style-type: none"> • Start: Moves the screen's center to the center of the drawn area. • Move: Moves the screen's center to the center of the MaskIndex's area.
	MaskIndex	REQ	<int>	Privacy area for which the PTZ coordinates should be adjusted This parameter should be sent only when Mode is Move
	MaskCoordinate	REQ	<string>	Co-ordinates of the privacy mask that is to be drawn. This parameter is used to request PTZ camera to move so that the Privacy area is at the center of the scene.

13.4. Examples

13.4.1. Getting the current information for Privacy of Channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=privacy&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain
```

```
<Body>
```

```
Channel.0.Enable=True
Channel.0.MaskPattern=Solid
Channel.0.MaskIndex=1
Channel.0.MaskName=privacy1
Channel.0.MaskColor=White
Channel.0.MaskCoordinate=456,432,1467,651
```



```
Channel.0.ZoomThresholdEnable=True
Channel.0.Position.Pan=3.78
Channel.0.Position.Tilt=223.58
Channel.0.MaskIndex=2
Channel.0.MaskName=privacy2
Channel.0.MaskColor=White
Channel.0.MaskCoordinate=570,456,1353,627
Channel.0.ZoomThresholdEnable=False
Channel.0.Position.Pan=10.12
Channel.0.Position.Tilt=201.11
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "PrivacyMask": [
    {
      "Channel": 0,
      "Enable": true,
      "MaskPattern": "Solid",
      "Masks": [
        {
          "MaskIndex": 1,
          "MaskName": "privacy1",
          "MaskColor": "White",
          "MaskCoordinate": [
            {
              "x": 456,
              "y": 432
            },
            {
              "x": 1467,
              "y": 651
            }
          ],
          "ZoomThresholdEnable": true,
          "Position": {
            "Pan": 3.77999999713897707,
```

```

        "Tilt": 23.5799999923706056
    },
    {
        "MaskIndex": 2,
        "MaskName": "privacy2",
        "MaskColor": "White",
        "MaskCoordinate": [
            {
                "x": 570,
                "y": 456
            },
            {
                "x": 1353,
                "y": 627
            }
        ],
        "ZoomThresholdEnable": false,
        "Position": {
            "Pan": 10.11999998113497601,
            "Tilt": 201.1099999926183082
        }
    }
]
}

```

13.4.2. Enabling a privacy area

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=privacy&action=set&Enable=True
```

13.4.3. Disabling a privacy area

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=privacy&action=set&Enable=False
```

13.4.4. Setting the privacy protection area

To use the **add** action, **MaskName**, **MaskColor**, and **MaskCoordinate** parameters must be set together. If the mask area is a polygon type, the coordinate format is <x1,y1,x2,y2,x3,y3,x4,y4> and for a rectangle type, the coordinate format is <x1,y1,x2,y2>.

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=privacy&action=add&MaskColor=White&MaskCoordinate=70,  
140,817,807,1000,697,1140,420&MaskName=stwcamera
```

13.4.5. Setting a privacy mask pattern

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=privacy&action=set&MaskPattern=Solid
```

13.4.6. Changing the mask index at the user's request

To reorder the current mask indexes, **CurrentIndexOrder** and **NewIndexOrder** must have valid values based on the **view** action. As the result of the below command, the 5th privacy mask will be returned as the 1st mask, and the 4th privacy mask will be returned as the 2nd mask, and so on.

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=privacy&action=set&currentIndexOrder=1,3,4,5&NewIndex  
Order=5,4,1,3
```

13.4.7. Removing the privacy protection area

To use the **remove** action, the **MaskIndex** parameter must be sent. The mask index value can be requested with the view action.

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=privacy&action=remove&MaskIndex=1
```

13.4.8. Adding a privacy mask with zoom threshold enabled

On enabling a privacy mask with the zoom threshold feature, privacy masks are not displayed between the zoom wide position and threshold position.

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=privacy&action=add&MaskName=M3&MaskColor=Black&MaskCo  
ordinate=100,100,200,200&ZoomThresholdEnable=True
```

13.4.9. Adding a privacy mask when adjusting zoom threshold

Before SUNAPI version 2.6.1, when enabling a privacy mask with the zoom threshold feature, privacy masks were not displayed between the zoom wide position and the threshold position. With the new parameter **AdjustMode**, the mask will be displayed as transparent until an update command with **AdjustMode** as Stop is received or a specific time passes. Then the mask will change to a solid color automatically.

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=privacy&action=add&MaskIndex=1&MaskName=M3&MaskColor=  
Black&MaskCoordinate=100,100,200,200&ZoomThresholdEnable=True&AdjustMode=Sta  
rt
```

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=privacy&action=update&MaskIndex=1&ZoomThresholdEnable  
=True&AdjustMode=Stop
```

13.4.10. Adding a privacy mask in PTZ model using control action

To move the PTZ camera, so that the privacy area being drawn is shown in the middle of the image, Mode and MaskCoordinate parameter must be sent together.

13.4.11. Setting the image preset

To set the image preset with the **set** action, **Schedule.#.Mode** and **Schedule.#.EveryDay.FromTo** must be set together. (If **ScheduleEnable** had been already set to True, the **ScheduleEnable** parameter could be removed for the following request.)

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepreset&action=set&ScheduleEnable=True&Schedule.2  
.Mode=DefinitionFocus&Schedule.2.EveryDay.FromTo=00:00-00:01
```

Chapter 14. Fisheye Lens

14.1. Description

The **fisheyelens** submenu configures the settings for fisheye lenses.

NOTE

This chapter applies to network cameras only.

Attribute to check for Feature Support: "attributes/Image/Support/FisheyeLens"

Access level

Action	Camera
view	Guest
set	Admin

14.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=  
fisheyelens&action=<value>[&<parameter>=<value>]
```

14.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads settings for fisheye lenses
	Channel	REQ, RES	<csv>	Channel ID
	RPLnumber	RES	<string>	RPL number for Immervision fisheye lens
	LensModel	RES	<enum> CBC, Ambarella, BoowonOpt icals, AL1	Lens model
	ViewModeType	RES	<enum> SubregionV iew.1, SubregionV iew.2	View mode
set	Channel	REQ, RES	<int>	Channel ID

Action	Parameters	Request/Response	Type/Value	Description
	CameraPosition	REQ, RES	<enum> Wall, Ceiling, Ground	Camera position

14.4. Examples

14.4.1. Getting the current fisheye lens settings of Channel 0

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=fisheylens&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: text/plain  
<Body>
```

```
Channel.0.LensModel=CBC  
Channel.0.CameraPosition=Wall
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "Overlay": [  
    {  
      "Channel": 0,  
      "LensModel": "CBC",  
      "CameraPosition": "Wall"  
    }  
  ]  
}
```

14.4.2. Setting camera position to ceiling

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=fisheylens&action=set&CameraPosition=Ceiling
```

14.4.3. Setting camera position to wall

REQUEST

```
http://<Device IP>/ stw-  
cgi/image.cgi?msubmenu=fisheylens&action=set&CameraPosition=Wall
```

Chapter 15. View Modes

15.1. Description

The **viewmodes** submenu enables selection of the view mode.

NOTE

This chapter applies to network cameras only.

Attribute to check for Fisheye lens Support: "attributes/Image/Support/FisheyeLens"

Attribute to check for maximum view modes: "attributes/Image/Limit/ViewModes"

Attribute to check for maximum active view modes:

"attributes/Image/Limit/ViewModes.MaxActive"

Attribute to check for Dewarped View: "attributes/Image/Support/ DewarpedView"

Access level

Action	Camera
view	Guest
set	Admin

15.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
viewmodes&action=<value> [&<parameter>=<value>]
```

15.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads the settings for the fisheye lens settings and view mode settings
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID

Action	Parameters	Request/Response	Type/Value	Description
	ViewMode.#.Type	REQ, RES	<enum> Panorama, DoublePanorama, QuadView, QuadView. #, SingleView, CropView, 360Panorama, SubregionView.1, SubregionView.2	View mode Note Attribute to check for panorama view mode: "attributes/Image/Support/ViewModes.Panorama". Attribute to check for double panorama view mode: "attributes/Image/Support/ViewModes.DoublePanorama". Attribute to check for singleview view mode: "attributes/Image/Support/ViewModes.SingleView". Attribute to check for cropview view mode: "attributes/Image/Support/ViewModes.CropView". Attribute to check for quadview view mode: "attributes/Image/Support/ViewModes.QuadView". Attribute to check for 360Panorama view mode: "attributes/Image/Support/ViewModes.360Panorama".

15.4. Examples

15.4.1. Getting the current view mode settings of Channel 0

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=viewmodes&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: text/plain  
<Body>
```

```
Channel.0.ViewMode.1.Type=Panorama
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "ViewModes": [  
    {  
      "Channel": 0,  
      "Views": [  
        {  
          "ViewMode": 1,  
          "Type": "Panorama"  
        }  
      ]  
    }  
  ]  
}
```

15.4.2. Selecting a view mode type

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=viewmodes&action=set&Channel=0&ViewMode.1.Type=Single  
View
```

Chapter 16. Fisheye Setup

16.1. Description

The **fisheyesetup** submenu enables selection of both view mode and camera position at the same time.

NOTE

This chapter applies to network cameras only.

Attribute to check for Fisheye lens Support: "attributes/Image/Support/FisheyeLens"

Attribute to check for maximum view modes: "attributes/Image/Limit/ViewModes"

Attribute to check for maximum active view modes:

"attributes/Image/Limit/ViewModes.MaxActive"

Attribute to check for Dewarped View: "attributes/Image/Support/ DewarpedView"

Access level

Action	Camera
view	Guest
set	Admin

16.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
fisheyesetup&action=<value>[&<parameter>=<value>]
```

16.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads the settings for the view mode.
	Channel	REQ, RES	<csv>	Channel ID
	LensModel	RES	<enum> CBC, Ambarella, BoowonOpt icals, AL1	Lens model
set	Channel	REQ, RES	<int>	Channel ID
	CameraPosition	REQ, RES	<enum> Wall, Ceiling, Ground	Camera position

Action	Parameters	Request/Response	Type/Value	Description
	ViewModeIndex	REQ, RES	<int>	<ul style="list-style-type: none"> • 0 indicates fisheye view • 1 indicated dewarp view
	ViewModeType	REQ, RES	<enum> Panorama, DoublePanorama, QuadView, Quadview.# „ SingleView, CropView, 360Panorama	<p>View mode.</p> <p>Each CameraPosition may support a different viewModeType. Refer to the imageoptions command to understand the dependency between the two parameters.</p> <p>Note</p> <p>Attribute to check for panorama view mode: "attributes/Image/Support/ViewModes.Panorama".</p> <p>Attribute to check for double panorama view mode: "attributes/Image/Support/ViewModes.DoublePanorama".</p> <p>Attribute to check for singleview view mode: "attributes/Image/Support/ViewModes.SingleView</p> <p>Attribute to check for cropview view mode: "attributes/Image/Support/ViewModes.CropView</p> <p>Attribute to check for quadview view mode: "attributes/Image/Support/ViewModes.QuadView".</p> <p>Attribute to check for 360Panorama view mode: "attributes/Image/Support/ViewModes.360Panorama".</p>

16.4. Examples

16.4.1. Getting the current view mode settings of Channel 0

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=fisheyesetup&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.LensModel=CBC
Channel.0.CameraPosition=Ceiling
Channel.0.ViewModeIndex=1
Channel.0.ViewModeType=QuadView
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "Viewmodes": [
    {
      "Channel": 0,
      "LensModel": "CBC",
      "CameraPosition": "Ceiling",
      "ViewModeIndex": "1",
      "ViewModeType": "QuadView"
    }
  ]
}
```

16.4.2. Selecting a view mode type and camera position

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?msubmenu=fisheyesetup&action=set&Channel=0&
CameraPosition=Ceiling&ViewModeIndex=1&ViewModeType=QuadView
```

Chapter 17. Image Preset

17.1. Description

The **imagepreset** submenu configures the image preset.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin

17.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
imagepreset&action=<value>[&<parameter>=<value>]
```

17.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads settings for the image preset
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePreview	REQ	<enum> Start, Stop, AWC	<p>Image preview mode</p> <p>Allows the user to view a preview image of the configuration, rather than saving the image configuration to the camera.</p> <p>If this parameter is ignored, then preview mode will be stopped, and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped, and the original image settings saved in the camera will be applied
	Mode	REQ, RES	<enum> DefinitionFocus, MotionFocus, ReducedNoise, BrightVideo, MotionFocus+ReducedNoise, MotionFocus+BrightVideo, VividVideo, UserPreset	<p>Image preset mode</p> <ul style="list-style-type: none"> • DefinitionFocus: Puts priority on definition • MotionFocus: Puts priority on the motion • ReducedNoise: Puts priority on noise reduction • BrightVideo: Puts priority on the brightness of the video • MotionFocus+ReducedNoise: Puts priority on the motion and noise reduction • MotionFocus+BrightVideo: Puts priority on motion and brightness of the video • VividVideo: Puts more on noise reduction and saturation

Action	Parameters	Request/ Response	Type/ Value	Description
	ScheduleEnable	REQ, RES	<bool> True, False	<p>Enables or disables the schedule for image preset operation</p> <p>If ScheduleEnable is set to True, Schedule.#.Mode and Schedule.#.EveryDay.FromTo should be sent together to set the schedule.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	Schedule.#.Mode	REQ, RES	<enum> Off, DefinitionFocus, MotionFocus, ReducedNoise, BrightVideo, MotionFocus+ReducedNoise, MotionFocus+BrightVideo, VividVideo, UserPreset	<p>Image preset mode in the corresponding schedule</p> <ul style="list-style-type: none"> • Off: Disables the image preset mode • DefinitionFocus: Puts priority on definition • MotionFocus: Puts priority on the motion • ReducedNoise: Puts priority on noise reduction • BrightVideo: Puts priority on the brightness of the video • MotionFocus+ReducedNoise: Puts priority on the motion and noise reduction • MotionFocus+BrightVideo: Puts priority on motion and brightness of the video • VividVideo: Puts more on noise reduction and saturation <p>Schedule.#.Mode and Schedule.#.EveryDay.FromTo parameters are applicable only when ScheduleEnable is set to True.</p> <p>Note To use the set action, Schedule.#.Mode and Schedule.#.EveryDay.FromTo must be sent together.</p>

Action	Parameters	Request/Response	Type/Value	Description
	Schedule.#.EveryDay.FromTo	REQ, RES	<string>	<p>Start time for the image preset</p> <p>The value is specified in the <hh:mm-hh:mm> format.</p> <p>Schedule.#.Mode and Schedule.#.EveryDay.FromTo parameters are applicable only when ScheduleEnable is set to True.</p> <div> <p>Note</p> <p>To use the set action, Schedule.#.Mode and Schedule.#.EveryDay.FromTo must be sent together.</p> </div>

17.4. Examples

17.4.1. Getting the current image preset settings

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=imagepreset&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
Channel.0.Mode=UserPreset
Channel.0.ScheduleEnable=True
Channel.0.Schedule.1.Mode=DefinitionFocus
Channel.0.Schedule.1.EveryDay.FromTo=00:00-06:59
Channel.0.Schedule.2.Mode=MotionFocus
Channel.0.Schedule.2.EveryDay.FromTo=07:00-08:59
Channel.0.Schedule.3.Mode=ReducedNoise
Channel.0.Schedule.3.EveryDay.FromTo=09:00-10:59
Channel.0.Schedule.4.Mode=BrightVideo
```

```
Channel.0.Schedule.4.EveryDay.FromTo=11:00-12:59
Channel.0.Schedule.5.Mode=VividVideo
Channel.0.Schedule.5.EveryDay.FromTo=14:00-23:59
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "ImagePreset": [
    {
      "Channel": 0,
      "Mode": "UserPreset",
      "ScheduleEnable": true,
      "Schedules": [
        {
          "Schedule": 1,
          "Mode": "DefinitionFocus",
          "EveryDay": {
            "FromTo": "00:00-06:59"
          }
        },
        {
          "Schedule": 2,
          "Mode": "MotionFocus",
          "EveryDay": {
            "FromTo": "07:00-08:59"
          }
        },
        {
          "Schedule": 3,
          "Mode": "ReducedNoise",
          "EveryDay": {
            "FromTo": "09:00-10:59"
          }
        },
        {
          "Schedule": 4,
          "Mode": "BrightVideo",
```

```

        "EveryDay": {
            "FromTo": "11:00-12:59"
        },
        {
            "Schedule": 5,
            "Mode": "VividVideo",
            "EveryDay": {
                "FromTo": "14:00-23:59"
            }
        }
    ]
}

```

17.4.2. Setting the image preset

To set the image preset with the **set** action, **Schedule.#.Mode** and **Schedule.#.EveryDay.FromTo** must be set together. (If **ScheduleEnable** had been already set to True, the **ScheduleEnable** parameter could be removed for the following request.)

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?msubmenu=imagepreset&action=set&ScheduleEnable=True&Schedule.2
.Mode=DefinitionFocus&Schedule.2.EveryDay.FromTo=00:00-00:01

```

Chapter 18. Image Alignment

18.1. Description

The **imagealignment** submenu configures the image alignment of multiple sensors.

NOTE

This chapter applies to network cameras only.

Attribute to check for multiple sensor support: "attributes/Image/Support/MultiImager"

Access level

Action	Camera
view	Admin
set	Admin
control	Admin

18.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=  
imagealignment&action=<value>[&<parameter>=<value>]
```

18.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	SensorID	RES	<int>	
set	Channel	REQ, RES	<int>	Channel ID
	AlphaBlending	REQ, RES	<bool> True, False	Enable or disable the Alpha Blending feature of all sensors of a multi-imager camera

Action	Parameters	Request/ Response	Type/ Value	Description
	AlphaBlendingLevel	REQ, RES	<int>	<p>Level when AlphaBlending is enabled.</p> <p>When this value is greater than 0, the overlapping image between 2 sensors will be larger.</p> <div> Note To check if this feature is supported, refer to the values of the following attributes "attributes/Image/Support/Image Alignment" </div>
	FovAngle	REQ, RES	<enum> 180Degree, 209Degree	Field of view angle
control	Channel	REQ	<int>	Channel ID
	Mode	REQ	<enum> Move, Reset	<p>Image preset mode</p> <ul style="list-style-type: none"> • Move: Changes the sensor calibration • Reset : Resets the sensor calibration
	SensorID	REQ	<int>	<p>Senor ID for which calibration needs to be applied</p> <div> Note For information on the Maximum number of sensors supported, refer to the following CGI section in attributes image/imagealignment/control/SensorID </div>

Action	Parameters	Request/ Response	Type/ Value	Description
	Horizontal	REQ	<int>	<p>Distance the image should be adjusted in horizontal direction. Value is Normalized to a range of -N to N, with negative values indicating the image should be adjusted in the leftward direction.</p> <p>A positive value indicates the image should be adjusted in the rightward direction.</p> <p>Note For information on the actual range of the normalized value, refer to the following CGI section in attributes</p> <p>image/imagealignment/control/Horizontal</p>
	Vertical	REQ	<int>	<p>Distance the image should be adjusted in vertical direction. Value is Normalized to a range of -N to N; with negative values indicating the image should be adjusted in an upward direction.</p> <p>A positive value indicates the image should be adjusted in a downward direction.</p> <p>Note For information on the actual range of the normalized value, refer to the following CGI section in attributes</p> <p>image/imagealignment/control/Vertical</p>

18.4. Examples

18.4.1. Aligning the images from different sensors

To adjust the image by 5 units in a rightward direction and 5 units in an upward direction, the following command can be used.

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagealignment&action=control&Channel=0&Mode=Move&Sen  
sorID=1&Horizontal=5&Vertical=-5&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain
```

```
<Body>
```

```
OK
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{  
  "Response": "Success"  
}
```


Chapter 19. Image Options

19.1. Description

The **imageoptions** submenu is used to explain the dependency between various features in image cgi.

NOTE

This chapter applies to network cameras only.

Attribute to check for Fisheye lens Support: "attributes/Image/Support/FisheyeLens"

Attribute to check for OSD Font Size Support: "image/multilineosd/add/FontSize"

Access level

Action	Camera
view	Admin

19.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
imageoptions&action=<value>[&<parameter>=<value>]
```

19.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ,RES	<csv>	Channel ID list
	CameraPosition	RES	<enum> Wal	This parameter will be supported only in Fisheye models. CameraPosition and ViewModeType parameters are dependent. When camera position is changed, the supported view modes will change.

Action	Parameters	Request/ Response	Type/ Value	Description
	ViewModeType	RES	<enum> Overview, 360Panorama, Panorama, DoublePanorama, QuadView, SingleView, OneOverviewAndTripl eView,OneOverviewA ndOctaView,CropView , LeftHalfView, RightHalfView, QuadView.#	This parameter will be supported only in Fisheye models. Supported View mode in each camera position
	TopLeftCoordinates	RES	<enum>	The top left co-ordinate of the view mode in whole image Format=x1,y1
	BottomRightCoordina tes	RES	<enum>	The bottom left co-ordinate of the view mode in whole image Format=x1,y1
	MaxAGCSensorFrame Rate	RES	<enum> 25, 30, 55, 60, 100, 120	Indicates the maximum sensor frame rate that can be set when AGC mode is enabled.
	MaxDISSensorFrameR ate	RES	<enum> 25, 30, 55, 60	Indicates the maximum sensor frame rate the DIS can be set to.
	ImagePresetMode	RES	<enum> UserPreset1, UserPreset2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	The predefined image preset has a defined set of values for the following parameters: SSDRLevel, SSNRLevel, AutoShortShutterSpeed, AutoLongShutterSpeed, Saturation The default value for each parameter in each of the image preset modes is listed in this command.

Action	Parameters	Request/ Response	Type/ Value	Description
	AGCMode	RES	<enum> Off, Low, Medium, High, Manual, MaxGain	AGC (Auto Gain Control) mode adjusts the brightness by controlling the sensitivity of image gain when capturing an object in dim light.
	SSDRLevel	RES	<int>	SSDR level in each image preset mode
	SSNRLevel	RES	<int>	SSNR level in each image preset mode
	AutoShortShutterSpeed	RES	<enum> 2, 1, 1/2, 1/4, 1/5, 1/8, 1/15, 1/20, 1/25, 1/30, 1/50, 1/60, 1/100, 1/120, 1/150, 1/180, 1/200, 1/240, 1/250, 1/300, 1/360, 1/480, 1/500, 1/600, 1/700, 1/1000, 1/1500, 1/2500, 1/5000, 1/10000, 1/12000	Minimum shutter speed in each image preset mode
	AutoLongShutterSpeed	RES	<enum> 2, 1, 1/2, 1/4, 1/5, 1/8, 1/15, 1/20, 1/25, 1/30, 1/50, 1/60, 1/100, 1/120, 1/150, 1/180, 1/200, 1/240, 1/250, 1/300, 1/360, 1/480, 1/500, 1/600, 1/700, 1/1000, 1/1500, 1/2500, 1/5000, 1/10000, 1/12000	Maximum shutter speed in each image preset mode
	Saturation	RES	<int>	Saturation value in each image preset mode
	OSDType	RES	<enum> Date, Title	OSD Type
	PositionX	RES	<int>	Max position X for each OSD Type Note This parameter shall be used when Font Size option is not supported

Action	Parameters	Request/ Response	Type/ Value	Description
	PositionY	RES	<int>	Max position Y for each OSD Type Note This parameter shall be used when Font Size option is not supported
	FontSize	RES	<enum> Small, Medium, Large	Supported OSD Font sizes
	FontSize.#.OSDType	RES	<enum> Date, Title	OSD Types supported
	FontSize.#.PositionX	RES	<int>	Max position X for each OSD Type and each font type Note This parameter shall be used when Font Size option is not supported
	FontSize.#.PositionY	RES	<int>	Max position Y for each OSD Type and each font type Note This parameter shall be used when Font Size option is not supported
	CompensationMode.#.DefaultAutoShortShutterSpeed	RES	<enum>	The default minimum shutter speed for each compensation mode
	CompensationMode.#.DefaultAutoLongShutterSpeed	RES	<enum>	The default maximum shutter speed for each compensation mode
	CompensationMode.#.SensorCaptureFrameRate.#.DefaultPreferShutterSpeed	RES	<enum>	The default prefer shutter speed for each compensation mode at different sensor capture rates
	CompensationMode.#.SensorCaptureFrameRate.#.AutoShortShutterSpeed	RES	<enum>	The possible minimum shutter speed for each compensation mode at different sensor capture rates

Action	Parameters	Request/ Response	Type/ Value	Description
	CompensationMode.# .SensorCaptureFrame Rate.#.AutoLongShutt erSpeed	RES	<enum>	The possible maximum shutter speed for each compensation mode at different sensor capture rates
	CompensationMode.# .SensorCaptureFrame Rate.#.PreferShutterS peed	RES	<enum>	The possible prefer shutter speed for each compensation mode at different sensor capture rates
	CompensationMode.# .SensorCaptureFrame Rate.#.DefaultMaxShu tterSpeed	RES	<enum>	The default maximum shutter speed for each compensation mode at different sensor capture rates
	CompensationMode.# .SensorCaptureFrame Rate.#.DefaultMinShu tterSpeed	RES	<enum>	The default minimum shutter speed for each compensation mode at different sensor capture rates
	BLCAreaCoordinates. MinWidth	RES	<int>	User can set BLC area with real coordinates in some models. These show the valid range for that.
	BLCAreaCoordinates. MinHeight	RES	<int>	User can set BLC area with real coordinates in some models. These show the valid range for that.
	BLCAreaCoordinates. MaxWidth	RES	<int>	User can set BLC area with real coordinates in some models. These show the valid range for that.
	BLCAreaCoordinates. MaxHeight	RES	<int>	User can set BLC area with real coordinates in some models. These show the valid range for that.
	OSDType.Title.Supp ortedSpecialCharacters	RES	<csv>	This shows all special characters that can be written on OSD.
	OSDType.Title.Supp ortedLanguages	RES	<csv>	This shows all all available languages that can be written on OSD.
	BacklightType	RES	<enum> BLC, HLC, WDR	This shows all the supported backlight types.

Action	Parameters	Request/ Response	Type/ Value	Description
	BacklightType.BLC.BLCAreaTop.Min	RES	<int>	<p>User can set BLC area with normalized values. These show the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.BLC.BLCAreaTop.Max	RES	<int>	<p>User can set BLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.BLC.BLCAreaBottom.Min	RES	<int>	<p>User can set BLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.BLC.BLCAreaBottom.Max	RES	<int>	<p>User can set BLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.BLC.BLCAreaLeft.Min	RES	<int>	<p>User can set BLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.BLC.BLCAreaLeft.Max	RES	<int>	<p>User can set BLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.BLC.BLCAreaRight.Min	RES	<int>	<p>User can set BLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	BacklightType.BLC.BLCAreaRight.Max	RES	<int>	<p>User can set BLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.HLC.HLCAreaTop.Min	RES	<int>	<p>User can set HLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.HLC.HLCAreaTop.Max	RES	<int>	<p>User can set HLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.HLC.HLCAreaBottom.Min	RES	<int>	<p>User can set HLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.HLC.HLCAreaBottom.Max	RES	<int>	<p>User can set HLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.HLC.HLCAreaLeft.Min	RES	<int>	<p>User can set HLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.HLC.HLCAreaLeft.Max	RES	<int>	<p>User can set HLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	BacklightType.HLC.HLCAreaRight.Min	RES	<int>	<p>User can set HLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.HLC.HLCAreaRight.Max	RES	<int>	<p>User can set HLC area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.WDR.WDRAreaTop.Min	RES	<int>	<p>User can set WDR area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.WDR.WDRAreaTop.Max	RES	<int>	<p>User can set WDR area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.WDR.WDRAreaBottom.Min	RES	<int>	<p>User can set WDR area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.WDR.WDRAreaBottom.Max	RES	<int>	<p>User can set WDR area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.WDR.WDRAreaLeft.Min	RES	<int>	<p>User can set WDR area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	BacklightType.WDR.WDRAreaLeft.Max	RES	<int>	<p>User can set WDR area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.WDR.WDRAreaRight.Min	RES	<int>	<p>User can set WDR area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	BacklightType.WDR.WDRAreaRight.Max	RES	<int>	<p>User can set WDR area with normalized values. These shows the valid range for that.</p> <p>The values must be within the range of 1 to 100.</p>
	MaxWDRSensorFrameRate	RES	<enum> 20, 30, 50, 60	This shows the maximum framerates that can be supported in a device when WDR is enabled.
	LensModel.#.IrisFno	RES	<enum>	It shows which lensmodel support what IrisFno values.
	LensModel.#.SupportLDCMode	RES	<csv> Off, Manual, Auto, FillMode_Manual, FillMode_Auto, StretchMode_Manual, StretchMode_Auto	This shows which lensmodel supports which LDC modes.
	DISFocalLengthStepSize	RES	<int>	<p>It shows how much DISFocalLength step size is.</p> <p>e.g. stepsize = 100, set value = 2150.</p> <p>applied set value is 2100.</p>
	DayNightSwitchingMode.#.BWToColor	RES	<int>	"DayNightSwitchingMode" have enums that shows switch speed according to light. Each mode has default "BWToColor" & "ColorToBW" value.

Action	Parameters	Request/ Response	Type/ Value	Description
	DayNightSwitchingMode.#.ColorToBW	RES	<int>	"DayNightSwitchingMode" have enums that shows switch speed according to light. Each mode has default "BWToColor" & "ColorToBW" value.
	BacklightType.WDR.#.Max	RES	<int>	User can set WDR area with normalized values. This shows the valid range of that. The values must be within the range of 1 to 100.
	BacklightType.WDR.#.Min	RES	<int>	User can set WDR area with normalized values. This shows the valid range of that. The values must be within the range of 1 to 100.
	WDRAreaCoordinates.MinWidth	RES	<int>	User can set WDR area with real coordinates in some models. These show the valid range for that.
	WDRAreaCoordinates.MinHeight	RES	<int>	User can set WDR area with real coordinates in some models. These show the valid range for that.
	WDRAreaCoordinates.MaxWidth	RES	<int>	User can set WDR area with real coordinates in some models. These show the valid range for that.
	WDRAreaCoordinates.MaxHeight	RES	<int>	User can set WDR area with real coordinates in some models. These show the valid range for that.
	HLCAreaCoordinates.MinWidth	RES	<int>	User can set HLC area with real coordinates in some models. These show the valid range for that.
	HLCAreaCoordinates.MinHeight	RES	<int>	User can set HLC area with real coordinates in some models. These show the valid range for that.

Action	Parameters	Request/Response	Type/Value	Description
	HLCAreaCoordinates.MaxWidth	RES	<int>	User can set HLC area with real coordinates in some models. These show the valid range for that.
	HLCAreaCoordinates.MaxHeight	RES	<int>	User can set HLC area with real coordinates in some models. These show the valid range for that.
	LCEMode.#.Top	RES	<int>	LCE Coordinate top position for each mode. Note Some of the supported LCE modes are Horizontal, Sky, Full, Ground, Center75Percent, Center50Percent, Center25Percent
	LCEMode.#.Left	RES	<int>	LCE Coordinates left positon for each mode.
	LCEMode.#.Bottom	RES	<int>	LCE Coordinates bottom position for each mode.
	LCEMode.#.Right	RES	<int>	LCE Coordinates right posittion for each mode.

19.4. Examples

19.4.1. Aligning the images from different sensors

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?msubmenu=imageoptions&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK

Content-type: text/plain

<Body>
```

```
Channel.0.MaxAGCSensorFrameRate=30
Channel.0.MaxWDRSensorFrameRate=30
Channel.0.ImagePresetMode.UserPreset1.SSDRLevel=12
Channel.0.ImagePresetMode.UserPreset1.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.UserPreset1.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.UserPreset1.PreferShutterSpeed=1/200
Channel.0.ImagePresetMode.UserPreset1.SSNRLevel=12
Channel.0.ImagePresetMode.UserPreset1.SSNR2DLevel=12
Channel.0.ImagePresetMode.UserPreset1.SSNR3DLevel=12
Channel.0.ImagePresetMode.UserPreset1.AGCMODE=High
Channel.0.ImagePresetMode.UserPreset1.Saturation=50
Channel.0.ImagePresetMode.UserPreset2.SSDRLevel=12
Channel.0.ImagePresetMode.UserPreset2.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.UserPreset2.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.UserPreset2.PreferShutterSpeed=1/200
Channel.0.ImagePresetMode.UserPreset2.SSNRLevel=12
Channel.0.ImagePresetMode.UserPreset2.SSNR2DLevel=12
Channel.0.ImagePresetMode.UserPreset2.SSNR3DLevel=12
Channel.0.ImagePresetMode.UserPreset2.AGCMODE=High
Channel.0.ImagePresetMode.UserPreset2.Saturation=50
Channel.0.ImagePresetMode.OutdoorDaytime.SSDRLevel=12
Channel.0.ImagePresetMode.OutdoorDaytime.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.OutdoorDaytime.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.OutdoorDaytime.PreferShutterSpeed=1/250
Channel.0.ImagePresetMode.OutdoorDaytime.SSNRLevel=12
Channel.0.ImagePresetMode.OutdoorDaytime.SSNR2DLevel=12
Channel.0.ImagePresetMode.OutdoorDaytime.SSNR3DLevel=12
Channel.0.ImagePresetMode.OutdoorDaytime.AGCMODE=High
Channel.0.ImagePresetMode.OutdoorDaytime.Saturation=55
Channel.0.ImagePresetMode.OutdoorNighttime.SSDRLevel=12
Channel.0.ImagePresetMode.OutdoorNighttime.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.OutdoorNighttime.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.OutdoorNighttime.PreferShutterSpeed=1/200
Channel.0.ImagePresetMode.OutdoorNighttime.SSNRLevel=12
Channel.0.ImagePresetMode.OutdoorNighttime.SSNR2DLevel=12
Channel.0.ImagePresetMode.OutdoorNighttime.SSNR3DLevel=12
Channel.0.ImagePresetMode.OutdoorNighttime.AGCMODE=High
Channel.0.ImagePresetMode.OutdoorNighttime.Saturation=30
Channel.0.ImagePresetMode.IndoorBacklight.SSDRLevel=12
Channel.0.ImagePresetMode.IndoorBacklight.AutoShortShutterSpeed=1/60
Channel.0.ImagePresetMode.IndoorBacklight.AutoLongShutterSpeed=1/1500
```

```

Channel.0.ImagePresetMode.IndoorBacklight.PreferShutterSpeed=1/200
Channel.0.ImagePresetMode.IndoorBacklight.SSNRLevel=24
Channel.0.ImagePresetMode.IndoorBacklight.SSNR2DLevel=24
Channel.0.ImagePresetMode.IndoorBacklight.SSNR3DLevel=24
Channel.0.ImagePresetMode.IndoorBacklight.AGCMODE=High
Channel.0.ImagePresetMode.IndoorBacklight.Saturation=40
Channel.0.ImagePresetMode.IndoorBrightScene.SSDRLevel=12
Channel.0.ImagePresetMode.IndoorBrightScene.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.IndoorBrightScene.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.IndoorBrightScene.PreferShutterSpeed=1/60
Channel.0.ImagePresetMode.IndoorBrightScene.SSNRLevel=12
Channel.0.ImagePresetMode.IndoorBrightScene.SSNR2DLevel=12
Channel.0.ImagePresetMode.IndoorBrightScene.SSNR3DLevel=12
Channel.0.ImagePresetMode.IndoorBrightScene.AGCMODE=High
Channel.0.ImagePresetMode.IndoorBrightScene.Saturation=60
Channel.0.ImagePresetMode.NumberPlate.SSDRLevel=12
Channel.0.ImagePresetMode.NumberPlate.AutoShortShutterSpeed=1/300
Channel.0.ImagePresetMode.NumberPlate.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.NumberPlate.PreferShutterSpeed=1/500
Channel.0.ImagePresetMode.NumberPlate.SSNRLevel=4
Channel.0.ImagePresetMode.NumberPlate.SSNR2DLevel=4
Channel.0.ImagePresetMode.NumberPlate.SSNR3DLevel=4
Channel.0.ImagePresetMode.NumberPlate.AGCMODE=Low
Channel.0.ImagePresetMode.NumberPlate.Saturation=50
Channel.0.ImagePresetMode.Vivid.SSDRLevel=10
Channel.0.ImagePresetMode.Vivid.AutoShortShutterSpeed=1/30
Channel.0.ImagePresetMode.Vivid.AutoLongShutterSpeed=1/12000
Channel.0.ImagePresetMode.Vivid.PreferShutterSpeed=1/60
Channel.0.ImagePresetMode.Vivid.SSNRLevel=12
Channel.0.ImagePresetMode.Vivid.SSNR2DLevel=12
Channel.0.ImagePresetMode.Vivid.SSNR3DLevel=12
Channel.0.ImagePresetMode.Vivid.AGCMODE=High
Channel.0.ImagePresetMode.Vivid.Saturation=60
Channel.0.OSDType.Title.MaxCharacterLimit=85
Channel.0.OSDType.Title.PositionX=3328
Channel.0.OSDType.Title.PositionY=1872
Channel.0.OSDType.Title.SupportedSpecialCharacters=. -#*+/( ),
Channel.0.OSDType.Date.PositionX=3328
Channel.0.OSDType.Date.PositionY=1872
Channel.0.FontSize.Small.OSDType.Title.MaxCharacterLimit=85
Channel.0.FontSize.Small.OSDType.Title.PositionX=3328

```

```

Channel.0.FontSize.Small.OSDType.Title.PositionY=1872
Channel.0.FontSize.Small.OSDType.Date.PositionX=3328
Channel.0.FontSize.Small.OSDType.Date.PositionY=1872
Channel.0.FontSize.Medium.OSDType.Title.MaxCharacterLimit=85
Channel.0.FontSize.Medium.OSDType.Title.PositionX=3328
Channel.0.FontSize.Medium.OSDType.Title.PositionY=1872
Channel.0.FontSize.Medium.OSDType.Date.PositionX=3328
Channel.0.FontSize.Medium.OSDType.Date.PositionY=1872
Channel.0.FontSize.Large.OSDType.Title.MaxCharacterLimit=85
Channel.0.FontSize.Large.OSDType.Title.PositionX=3328
Channel.0.FontSize.Large.OSDType.Title.PositionY=1872
Channel.0.FontSize.Large.OSDType.Date.PositionX=3328
Channel.0.FontSize.Large.OSDType.Date.PositionY=1872
Channel.0.CompensationMode.Off.DefaultAutoShortShutterSpeed=1/5
Channel.0.CompensationMode.Off.DefaultAutoLongShutterSpeed=1/12000
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.25.DefaultPreferShutterSpeed=1/200
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.25.DefaultMaxShutterSpeed=1/12000
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.25.DefaultMinShutterSpeed=1/25
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.25.AutoShortShutterSpeed=2,1,1/2,1/4,1/5,1/8,1/15,1/20,1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.25.AutoLongShutterSpeed=1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.25.PreferShutterSpeed=1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.30.DefaultPreferShutterSpeed=1/200
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.30.DefaultMaxShutterSpeed=1/12000
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.30.DefaultMinShutterSpeed=1/30
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.30.AutoShortShutterSpeed=2,1,1/2,1/4,1/5,1/8,1/15,1/20,1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000

```

```

Channel.0.CompensationMode.Off.SensorCaptureFrameRate.30.AutoLongShutterSpeed=1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.Off.SensorCaptureFrameRate.30.PreferShutterSpeed=1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.BLC.DefaultAutoShortShutterSpeed=1/5
Channel.0.CompensationMode.BLC.DefaultAutoLongShutterSpeed=1/12000
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.25.DefaultPreferShutterSpeed=1/200
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.25.DefaultMaxShutterSpeed=1/12000
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.25.DefaultMinShutterSpeed=1/25
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.25.AutoShortShutterSpeed=2,1,1/2,1/4,1/5,1/8,1/15,1/20,1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.25.AutoLongShutterSpeed=1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.25.PreferShutterSpeed=1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.30.DefaultPreferShutterSpeed=1/200
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.30.DefaultMaxShutterSpeed=1/12000
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.30.DefaultMinShutterSpeed=1/30
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.30.AutoShortShutterSpeed=2,1,1/2,1/4,1/5,1/8,1/15,1/20,1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.30.AutoLongShutterSpeed=1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.BLC.SensorCaptureFrameRate.30.PreferShutterSpeed=1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.HLC.DefaultAutoShortShutterSpeed=1/5

```

```

Channel.0.CompensationMode.HLC.DefaultAutoLongShutterSpeed=1/12000
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.25.DefaultPreferShutterSpeed=1/200
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.25.DefaultMaxShutterSpeed=1/12000
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.25.DefaultMinShutterSpeed=1/25
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.25.AutoShortShutterSpeed=2,1,1/2,1/4,1/5,1/8,1/15,1/20,1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.25.AutoLongShutterSpeed=1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.25.PreferShutterSpeed=1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.30.DefaultPreferShutterSpeed=1/200
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.30.DefaultMaxShutterSpeed=1/12000
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.30.DefaultMinShutterSpeed=1/30
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.30.AutoShortShutterSpeed=2,1,1/2,1/4,1/5,1/8,1/15,1/20,1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.30.AutoLongShutterSpeed=1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.HLC.SensorCaptureFrameRate.30.PreferShutterSpeed=1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500,1/2500,1/5000,1/10000,1/12000
Channel.0.CompensationMode.WDR.DefaultAutoShortShutterSpeed=1/5
Channel.0.CompensationMode.WDR.DefaultAutoLongShutterSpeed=1/1500
Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.25.DefaultPreferShutterSpeed=1/25
Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.25.DefaultMaxShutterSpeed=1/1500
Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.25.DefaultMinShutterSpeed=1/25

```


Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.25.AutoShortShutterSpeed=2,1,1/2,1/4,1/5,1/8,1/15,1/20,1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500

Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.25.AutoLongShutterSpeed=1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500

Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.25.PreferShutterSpeed=1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500

Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.30.DefaultPreferShutterSpeed=1/30

Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.30.DefaultMaxShutterSpeed=1/1500

Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.30.DefaultMinShutterSpeed=1/30

Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.30.AutoShortShutterSpeed=2,1,1/2,1/4,1/5,1/8,1/15,1/20,1/25,1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500

Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.30.AutoLongShutterSpeed=1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500

Channel.0.CompensationMode.WDR.SensorCaptureFrameRate.30.PreferShutterSpeed=1/30,1/50,1/60,1/100,1/120,1/150,1/180,1/200,1/240,1/250,1/300,1/360,1/480,1/500,1/600,1/700,1/1000,1/1500

Channel.0.WhiteBalanceMode=Manual,ATW,Outdoor,Indoor,AWC,NarrowATW

Channel.0.BacklightType.BLC.BLCAreaTop.Max=70

Channel.0.BacklightType.BLC.BLCAreaTop.Min=1

Channel.0.BacklightType.BLC.BLCAreaBottom.Max=100

Channel.0.BacklightType.BLC.BLCAreaBottom.Min=31

Channel.0.BacklightType.BLC.BLCAreaLeft.Max=70

Channel.0.BacklightType.BLC.BLCAreaLeft.Min=1

Channel.0.BacklightType.BLC.BLCAreaRight.Max=100

Channel.0.BacklightType.BLC.BLCAreaRight.Min=31

Channel.0.BacklightType.HLC.HLCAreaTop.Max=70

Channel.0.BacklightType.HLC.HLCAreaTop.Min=1

Channel.0.BacklightType.HLC.HLCAreaBottom.Max=100

Channel.0.BacklightType.HLC.HLCAreaBottom.Min=31

Channel.0.BacklightType.HLC.HLCAreaLeft.Max=70

Channel.0.BacklightType.HLC.HLCAreaLeft.Min=1

Channel.0.BacklightType.HLC.HLCAreaRight.Max=100

Channel.0.BacklightType.HLC.HLCAreaRight.Min=31

```
Channel.0.BacklightType.WDR.WDRAreaTop.Max=70
Channel.0.BacklightType.WDR.WDRAreaTop.Min=1
Channel.0.BacklightType.WDR.WDRAreaBottom.Max=100
Channel.0.BacklightType.WDR.WDRAreaBottom.Min=31
Channel.0.BacklightType.WDR.WDRAreaLeft.Max=70
Channel.0.BacklightType.WDR.WDRAreaLeft.Min=1
Channel.0.BacklightType.WDR.WDRAreaRight.Max=100
Channel.0.BacklightType.WDR.WDRAreaRight.Min=31
Channel.0.BLCAreaCoordinates.MinWidth=1009
Channel.0.BLCAreaCoordinates.MinHeight=567
Channel.0.BLCAreaCoordinates.MaxWidth=3328
Channel.0.BLCAreaCoordinates.MaxHeight=1872
Channel.0.HLCAreaCoordinates.MinWidth=1009
Channel.0.HLCAreaCoordinates.MinHeight=567
Channel.0.HLCAreaCoordinates.MaxWidth=3328
Channel.0.HLCAreaCoordinates.MaxHeight=1872
Channel.0.WDRAreaCoordinates.MinWidth=1009
Channel.0.WDRAreaCoordinates.MinHeight=567
Channel.0.WDRAreaCoordinates.MaxWidth=3328
Channel.0.WDRAreaCoordinates.MaxHeight=1872
Channel.0.DayNightSwitchingMode.VeryFast.BWToColor=40
Channel.0.DayNightSwitchingMode.VeryFast.ColorToBW=60
Channel.0.DayNightSwitchingMode.Fast.BWToColor=35
Channel.0.DayNightSwitchingMode.Fast.ColorToBW=65
Channel.0.DayNightSwitchingMode.Normal.BWToColor=30
Channel.0.DayNightSwitchingMode.Normal.ColorToBW=70
Channel.0.DayNightSwitchingMode.Slow.BWToColor=25
Channel.0.DayNightSwitchingMode.Slow.ColorToBW=75
Channel.0.DayNightSwitchingMode.VerySlow.BWToColor=20
Channel.0.DayNightSwitchingMode.VerySlow.ColorToBW=80
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{
  "ImageOptions": [
```

```

{
  "Channel": 0,
  "MaxAGCSensorFrameRate": "30",
  "MaxWDRSensorFrameRate": "30",
  "ImagePresetModes": [
    {
      "ImagePresetMode": "UserPreset1",
      "SSDRLevel": 12,
      "AutoShortShutterSpeed": "1/30",
      "AutoLongShutterSpeed": "1/12000",
      "PreferShutterSpeed": "1/200",
      "SSNRLevel": 12,
      "SSNR2DLevel": 12,
      "SSNR3DLevel": 12,
      "AGCMode": "High",
      "Saturation": 50
    },
    {
      "ImagePresetMode": "UserPreset2",
      "SSDRLevel": 12,
      "AutoShortShutterSpeed": "1/30",
      "AutoLongShutterSpeed": "1/12000",
      "PreferShutterSpeed": "1/200",
      "SSNRLevel": 12,
      "SSNR2DLevel": 12,
      "SSNR3DLevel": 12,
      "AGCMode": "High",
      "Saturation": 50
    },
    {
      "ImagePresetMode": "OutdoorDaytime",
      "SSDRLevel": 12,
      "AutoShortShutterSpeed": "1/30",
      "AutoLongShutterSpeed": "1/12000",
      "PreferShutterSpeed": "1/250",
      "SSNRLevel": 12,
      "SSNR2DLevel": 12,
      "SSNR3DLevel": 12,
      "AGCMode": "High",
      "Saturation": 55
    }
  ],

```

```

{
    "ImagePresetMode": "OutdoorNighttime",
    "SSDRLevel": 12,
    "AutoShortShutterSpeed": "1/30",
    "AutoLongShutterSpeed": "1/12000",
    "PreferShutterSpeed": "1/200",
    "SSNRLevel": 12,
    "SSNR2DLevel": 12,
    "SSNR3DLevel": 12,
    "AGCMode": "High",
    "Saturation": 30
},
{
    "ImagePresetMode": "IndoorBacklight",
    "SSDRLevel": 12,
    "AutoShortShutterSpeed": "1/60",
    "AutoLongShutterSpeed": "1/1500",
    "PreferShutterSpeed": "1/200",
    "SSNRLevel": 24,
    "SSNR2DLevel": 24,
    "SSNR3DLevel": 24,
    "AGCMode": "High",
    "Saturation": 40
},
{
    "ImagePresetMode": "IndoorBrightScene",
    "SSDRLevel": 12,
    "AutoShortShutterSpeed": "1/30",
    "AutoLongShutterSpeed": "1/12000",
    "PreferShutterSpeed": "1/60",
    "SSNRLevel": 12,
    "SSNR2DLevel": 12,
    "SSNR3DLevel": 12,
    "AGCMode": "High",
    "Saturation": 60
},
{
    "ImagePresetMode": "NumberPlate",
    "SSDRLevel": 12,
    "AutoShortShutterSpeed": "1/300",
    "AutoLongShutterSpeed": "1/12000",

```

```

        "PreferShutterSpeed": "1/500",
        "SSNRLevel": 4,
        "SSNR2DLevel": 4,
        "SSNR3DLevel": 4,
        "AGCMode": "Low",
        "Saturation": 50
    },
    {
        "ImagePresetMode": "Vivid",
        "SSDRLevel": 10,
        "AutoShortShutterSpeed": "1/30",
        "AutoLongShutterSpeed": "1/12000",
        "PreferShutterSpeed": "1/60",
        "SSNRLevel": 12,
        "SSNR2DLevel": 12,
        "SSNR3DLevel": 12,
        "AGCMode": "High",
        "Saturation": 60
    }
],
"OSDOptions": {
    "OSDTypes": [
        {
            "OSDType": "Title",
            "MaxCharacterLimit": 85,
            "PositionX": 3328,
            "PositionY": 1872,
            "SupportedSpecialCharacters": ". -#*+/(),"
        },
        {
            "OSDType": "Date",
            "PositionX": 3328,
            "PositionY": 1872
        }
    ],
    "FontSizes": [
        {
            "FontSize": "Small",
            "OSDTypes": [
                {
                    "OSDType": "Title",

```

```

        "MaxCharacterLimit": 85,
        "PositionX": 3328,
        "PositionY": 1872
    },
    {
        "OSDType": "Date",
        "PositionX": 3328,
        "PositionY": 1872
    }
]
},
{
    "FontSize": "Medium",
    "OSDTypes": [
        {
            "OSDType": "Title",
            "MaxCharacterLimit": 85,
            "PositionX": 3328,
            "PositionY": 1872
        },
        {
            "OSDType": "Date",
            "PositionX": 3328,
            "PositionY": 1872
        }
    ]
},
{
    "FontSize": "Large",
    "OSDTypes": [
        {
            "OSDType": "Title",
            "MaxCharacterLimit": 85,
            "PositionX": 3328,
            "PositionY": 1872
        },
        {
            "OSDType": "Date",
            "PositionX": 3328,
            "PositionY": 1872
        }
    ]
}

```

```

    ]
  }
]
},
"ShutterSpeedDetails": {
  "CompensationModes": [
    {
      "CompensationMode": "Off",
      "DefaultAutoShortShutterSpeed": "1/5",
      "DefaultAutoLongShutterSpeed": "1/12000",
      "SensorCaptureFrameRates": [
        {
          "SensorCaptureFrameRate": 25,
          "DefaultPreferShutterSpeed": "1/200",
          "DefaultMaxShutterSpeed": "1/12000",
          "DefaultMinShutterSpeed": "1/25",
          "AutoShortShutterSpeed": [
            "2",
            "1",
            "1/2",
            "1/4",
            "1/5",
            "1/8",
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            "1/150",
            "1/180",
            "1/200",
            "1/240",
            "1/250",
            "1/300",
            "1/360",
            "1/480",
            "1/500",
            "1/600",

```

```

        "1/700",
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        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ],
    "AutoLongShutterSpeed": [
        "1/25",
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
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        "1/240",
        "1/250",
        "1/300",
        "1/360",
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        "1/500",
        "1/600",
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        "1/10000",
        "1/12000"
    ],
    "PreferShutterSpeed": [
        "1/25",
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",

```



```

        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
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        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ]
},
{
    "SensorCaptureFrameRate": 30,
    "DefaultPreferShutterSpeed": "1/200",
    "DefaultMaxShutterSpeed": "1/12000",
    "DefaultMinShutterSpeed": "1/30",
    "AutoShortShutterSpeed": [
        "2",
        "1",
        "1/2",
        "1/4",
        "1/5",
        "1/8",
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        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
    ]
}

```

```

        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ],
    "AutoLongShutterSpeed": [
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ],
    "PreferShutterSpeed": [
        "1/30",

```

```

        "1/50",
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        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
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        "1/480",
        "1/500",
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        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ]
}
]
},
{
    "CompensationMode": "BLC",
    "DefaultAutoShortShutterSpeed": "1/5",
    "DefaultAutoLongShutterSpeed": "1/12000",
    "SensorCaptureFrameRates": [
        {
            "SensorCaptureFrameRate": 25,
            "DefaultPreferShutterSpeed": "1/200",
            "DefaultMaxShutterSpeed": "1/12000",
            "DefaultMinShutterSpeed": "1/25",
            "AutoShortShutterSpeed": [
                "2",
                "1",
                "1/2",
                "1/4",
                "1/5",
            ]
        }
    ]
}
]
}

```

```
"1/8",
"1/15",
"1/20",
"1/25",
"1/30",
"1/50",
"1/60",
"1/100",
"1/120",
"1/150",
"1/180",
"1/200",
"1/240",
"1/250",
"1/300",
"1/360",
"1/480",
"1/500",
"1/600",
"1/700",
"1/1000",
"1/1500",
"1/2500",
"1/5000",
"1/10000",
"1/12000"
],
"AutoLongShutterSpeed": [
    "1/25",
    "1/30",
    "1/50",
    "1/60",
    "1/100",
    "1/120",
    "1/150",
    "1/180",
    "1/200",
    "1/240",
    "1/250",
    "1/300",
    "1/360",
```

```

        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ],
    "PreferShutterSpeed": [
        "1/25",
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
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        "1/300",
        "1/360",
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        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ]
},
{
    "SensorCaptureFrameRate": 30,
    "DefaultPreferShutterSpeed": "1/200",
    "DefaultMaxShutterSpeed": "1/12000",

```

```
"DefaultMinShutterSpeed": "1/30",
"AutoShortShutterSpeed": [
    "2",
    "1",
    "1/2",
    "1/4",
    "1/5",
    "1/8",
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    "1/50",
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    "1/120",
    "1/150",
    "1/180",
    "1/200",
    "1/240",
    "1/250",
    "1/300",
    "1/360",
    "1/480",
    "1/500",
    "1/600",
    "1/700",
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    "1/2500",
    "1/5000",
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    "1/12000"
],
"AutoLongShutterSpeed": [
    "1/30",
    "1/50",
    "1/60",
    "1/100",
    "1/120",
    "1/150",
```

```

        "1/180",
        "1/200",
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        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ],
    "PreferShutterSpeed": [
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ]
}

```

```

    }
  ]
},
{
  "CompensationMode": "HLC",
  "DefaultAutoShortShutterSpeed": "1/5",
  "DefaultAutoLongShutterSpeed": "1/12000",
  "SensorCaptureFrameRates": [
    {
      "SensorCaptureFrameRate": 25,
      "DefaultPreferShutterSpeed": "1/200",
      "DefaultMaxShutterSpeed": "1/12000",
      "DefaultMinShutterSpeed": "1/25",
      "AutoShortShutterSpeed": [
        "2",
        "1",
        "1/2",
        "1/4",
        "1/5",
        "1/8",
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        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",

```



```

        "1/2500",
        "1/5000",
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        "1/12000"
    ],
    "AutoLongShutterSpeed": [
        "1/25",
        "1/30",
        "1/50",
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        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ],
    "PreferShutterSpeed": [
        "1/25",
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",

```

```

        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ]
},
{
    "SensorCaptureFrameRate": 30,
    "DefaultPreferShutterSpeed": "1/200",
    "DefaultMaxShutterSpeed": "1/12000",
    "DefaultMinShutterSpeed": "1/30",
    "AutoShortShutterSpeed": [
        "2",
        "1",
        "1/2",
        "1/4",
        "1/5",
        "1/8",
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        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
    ]
}

```

```

        "1/360",
        "1/480",
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        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ],
    "AutoLongShutterSpeed": [
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
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        "1/600",
        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ],
    "PreferShutterSpeed": [
        "1/30",
        "1/50",
        "1/60",
        "1/100",

```

```

        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
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        "1/700",
        "1/1000",
        "1/1500",
        "1/2500",
        "1/5000",
        "1/10000",
        "1/12000"
    ]
}
]
},
{
    "CompensationMode": "WDR",
    "DefaultAutoShortShutterSpeed": "1/5",
    "DefaultAutoLongShutterSpeed": "1/1500",
    "SensorCaptureFrameRates": [
        {
            "SensorCaptureFrameRate": 25,
            "DefaultPreferShutterSpeed": "1/25",
            "DefaultMaxShutterSpeed": "1/1500",
            "DefaultMinShutterSpeed": "1/25",
            "AutoShortShutterSpeed": [
                "2",
                "1",
                "1/2",
                "1/4",
                "1/5",
                "1/8",
                "1/15",
                "1/20",
            ]
        }
    ]
}
]
}

```

```

        "1/25",
        "1/30",
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        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
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        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500"
    ],
    "AutoLongShutterSpeed": [
        "1/25",
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
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        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500"
    ],

```

```

        "PreferShutterSpeed": [
            "1/25",
            "1/30",
            "1/50",
            "1/60",
            "1/100",
            "1/120",
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            "1/240",
            "1/250",
            "1/300",
            "1/360",
            "1/480",
            "1/500",
            "1/600",
            "1/700",
            "1/1000",
            "1/1500"
        ]
    },
    {
        "SensorCaptureFrameRate": 30,
        "DefaultPreferShutterSpeed": "1/30",
        "DefaultMaxShutterSpeed": "1/1500",
        "DefaultMinShutterSpeed": "1/30",
        "AutoShortShutterSpeed": [
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            "1",
            "1/2",
            "1/4",
            "1/5",
            "1/8",
            "1/15",
            "1/20",
            "1/25",
            "1/30",
            "1/50",
            "1/60",
            "1/100",

```

```

        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500"
    ],
    "AutoLongShutterSpeed": [
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",
        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500"
    ],
    "PreferShutterSpeed": [
        "1/30",
        "1/50",
        "1/60",
        "1/100",
        "1/120",

```

```

        "1/150",
        "1/180",
        "1/200",
        "1/240",
        "1/250",
        "1/300",
        "1/360",
        "1/480",
        "1/500",
        "1/600",
        "1/700",
        "1/1000",
        "1/1500"
    ]
}
]
}
]
},
"WhiteBalanceMode": [
    "Manual",
    "ATW",
    "Outdoor",
    "Indoor",
    "AWC",
    "NarrowATW"
],
"BacklightOptions": {
    "BacklightTypes": [
        {
            "BacklightType": "BLC",
            "BLCAreaTop": [
                {
                    "Max": 70,
                    "Min": 1
                }
            ],
            "BLCAreaBottom": [
                {
                    "Max": 100,
                    "Min": 31
                }
            ]
        }
    ]
}

```



```

        }
    ],
    "BLCAreaLeft": [
        {
            "Max": 70,
            "Min": 1
        }
    ],
    "BLCAreaRight": [
        {
            "Max": 100,
            "Min": 31
        }
    ]
},
{
    "BacklightType": "HLC",
    "HLCAreaTop": [
        {
            "Max": 70,
            "Min": 1
        }
    ],
    "HLCAreaBottom": [
        {
            "Max": 100,
            "Min": 31
        }
    ],
    "HLCAreaLeft": [
        {
            "Max": 70,
            "Min": 1
        }
    ],
    "HLCAreaRight": [
        {
            "Max": 100,
            "Min": 31
        }
    ]
}

```

```

    },
    {
        "BacklightType": "WDR",
        "WDRAreaTop": [
            {
                "Max": 70,
                "Min": 1
            }
        ],
        "WDRAreaBottom": [
            {
                "Max": 100,
                "Min": 31
            }
        ],
        "WDRAreaLeft": [
            {
                "Max": 70,
                "Min": 1
            }
        ],
        "WDRAreaRight": [
            {
                "Max": 100,
                "Min": 31
            }
        ]
    }
],
},
"BLCAreaCoordinates": {
    "MinWidth": 1009,
    "MinHeight": 567,
    "MaxWidth": 3328,
    "MaxHeight": 1872
},
"HLCAreaCoordinates": {
    "MinWidth": 1009,
    "MinHeight": 567,
    "MaxWidth": 3328,
    "MaxHeight": 1872
}

```

```

    },
    "WDRAreaCoordinates": {
        "MinWidth": 1009,
        "MinHeight": 567,
        "MaxWidth": 3328,
        "MaxHeight": 1872
    },
    "DayNightSwitchingModes": [
        {
            "DayNightSwitchingMode": "VeryFast",
            "BWToColor": 40,
            "ColorToBW": 60
        },
        {
            "DayNightSwitchingMode": "Fast",
            "BWToColor": 35,
            "ColorToBW": 65
        },
        {
            "DayNightSwitchingMode": "Normal",
            "BWToColor": 30,
            "ColorToBW": 70
        },
        {
            "DayNightSwitchingMode": "Slow",
            "BWToColor": 25,
            "ColorToBW": 75
        },
        {
            "DayNightSwitchingMode": "VerySlow",
            "BWToColor": 20,
            "ColorToBW": 80
        }
    ]
}

```

Chapter 20. PTR

20.1. Description

The **ptr** submenu configures the PTR settings.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
control	Admin

20.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=  
ptr&action=<value>[&<parameter>=<value>]
```

20.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads the focus settings.
	Channel	REQ, RES	<csv>	Channel ID
	PanAngle	RES	<int>	Sets the Pan angle of the lens. Note Supported range may differ depending on model.
	TiltAngle	RES	<int>	Sets the Tilt angle of the lens. Note Supported range may differ depending on model.
	RotateAngle	RES	<int>	Sets the rotation angle of lens. Note Supported range may differ depending on model.
control	Channel	REQ, RES	<int>	Channel ID

Action	Parameters	Request/Response	Type/Value	Description
	AutoRotate	REQ, RES	<bool> True, False	Enables or disables the auto rotation feature of a PTRZ camera.
	Pan	REQ, RES	<int>	Panning to specified angle. This is different from a normal PTZ camera's Pan operation. The purpose of PTR differs.
	Tilt	REQ, RES	<int>	Tilt to specified angle. This is different from a normal PTZ camera's Pan operation. The purpose of PTR differs.
	Rotate	RES	<int>	Rotate to specified angle.
	Mode	REQ	<enum> Continuous, Relative, Reset	If set to Relative, PTR moves in relative mode. If set to Reset, it returns to the initial position. If the value is not set by user, it moves in continuous mode by default.

20.4. Examples

20.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=ptr&action=view&Channel=0
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "ptr": [
    {
      "Channel": 0,
      "PanAngle": 20,
```

```
        "TiltAngle": 12,  
        "RotateAngle": 40  
    }  
]  
}
```

20.4.2. Controlling Pan, Tilt and Rotate position

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=ptr&action=control&Channel=0&Pan=50&Tilt=50&Rotate=50  
&Mode=Continuous
```

20.4.3. Controlling Auto Rotate

REQUEST

```
http://<Device IP>/ stw-  
cgi/image.cgi?submenu=ptr&action=control&Channel=0&AutoRotate=True
```

Chapter 21. PTRZ Usage

21.1. Description

The **ptrzusage** submenu provides information on the number of times the PTR feature was used, to track durability.

NOTE

This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin

21.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=ptrzusage&action=<value> [&<parameter>=<value>]
```

21.3. Parameters

Action	Parameters	Request/Response	Type/Value	Description
view				Reads the PTR usage information
	Channel	REQ, RES	<csv>	Channel ID
	Pan	RES	<int>	Number of times Pan was used
	Tilt	RES	<int>	Number of times Tilt was used
	Rotate	RES	<int>	Number of times Rotate was used

21.4. Examples

21.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=ptrzusage&action=view&Channel=0
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

Content-type: application/json

<Body>

```
{
  "ptr": [
    {
      "Channel": 0,
      "Pan": 0,
      "Tilt": 0,
      "Rotate": 4
    }
  ]
}
```


Chapter 22. Image Enhancements 2

22.1. Description

The **imageenhancements2** submenu configures the image enhancement settings with image preset mode.

Access level

Action	Camera
view	Admin
set	Admin
control	Admin

22.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=  
imageenhancements2&action=<value>[&<parameter>=<value>]
```

22.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads image enhancement settings
	Channel	REQ, RES	<csv>	Channel ID
	ImagePresetMode.#.S harpnessEnable	RES	<bool> True, False	Enables or disables image sharpness Note Attribute to check for Sharpness: "attributes/Image/Support/S harpness" Each ImagePresetMode.# can have different image setting. For more details, refer the "ImagePresetMode" parameter in set action.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.SharpnessLevel	RES	<int>	<p>Sharpness level</p> <p>SharpnessLevel is valid only when SharpnessEnable is set to True.</p>
	ImagePresetMode.#.Brightness	RES	<int>	<p>Brightness level</p> <p>The higher the value, the greater the brightness.</p> <p>Note Attribute to check for Brightness: "attributes/Image/Support/Brightness"</p>
	ImagePresetMode.#.Gamma	RES	<int>	<p>Gamma level</p> <p>The higher the value, the greater the gamma value.</p> <p>Note Attribute to check for Gamma: "attributes/Image/Support/Gamma"</p>
	ImagePresetMode.#.Saturation	RES	<int>	<p>Saturation level</p> <p>The higher the value, the greater the saturation.</p> <p>Note Attribute to check for Saturation: "attributes/Image/Support/Saturation"</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#. DefogMode	RES	<enum> Off, Auto, Manual	<p>Defogging Mode</p> <p>This enhances the quality of images created in a foggy environment.</p> <ul style="list-style-type: none"> • Off: Disables defogging function • Auto: Automatically compensates the image according to the fog level • Manual: Manually sets the amount of compensation <p>Note Attribute to check for Defog: "attributes/Image/Support/Defog"</p>
	ImagePresetMode.#. DefogLevel	RES	<int>	<p>Defogging Level</p> <p>The greater the value, the higher the defogging level.</p> <p>DefogLevel is valid only when DefogMode is set to Manual or Auto.</p>
	ImagePresetMode.#.C AR	RES	<enum> Off, Low, Medium, High	<p>Color Aberration Reduction</p> <p>This reduces the distortion or blurring of purple in the very bright area of an image.</p>
	ImagePresetMode.#. DISEnable	RES	<bool> True, False	<p>Enables or disables DIS (Digital Image Stabilization).</p> <p>This compensates the image automatically when the camera vibrates due to external factors such as wind.</p> <p>Note Attribute to check for DIS: "attributes/Image/Support/DIS"</p>

Action	Parameters	Request/Response	Type/Value	Description
	ImagePresetMode.#.DISFocalLength	RES	<int> 2800 to 50000 (micro meter)	DIS Focal length value adjustable, can check imageoptions submenu "DISFocalLengthStepSize" parameter for allowed step size. CAMERA ONLY
	ImagePresetMode.#.Contrast	RES	<int>	Contrast level The higher the value, the greater the contrast. Note Attribute to check for Saturation: "image/imageenhancements/set/Contrast"
	ImagePresetMode.#.OpticalDefogFilterEnable	RES	<bool> True, False	Enable or disable optical defog filter.
	ImagePresetMode.#.XCEEnable	RES	<bool>	XCE(eXternd Contrast Enhancement) Enabling This feature is similar to using unsharp mask filtering
	ImagePresetMode.#.XCELevel	RES	<int>	User can set filter level
	ImagePresetMode.#.LDCEnable	RES	<bool>	LDC status
	ImagePresetMode.#.LDCLevel	RES	<int>	User can set filter level

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode.#.LDCMode	RES	<enum> Off, Auto, Manual, FillMode_Manual, FillMode_Auto, StretchMode_Manual, StretchMode_Auto	<p>Provides option to control the LDC feature.</p> <ul style="list-style-type: none"> • Off: Disables LDC function • Auto: Automatically adjusts the LDC • Manual: Manually sets the LDC level • FillMode: The angle of up and down view is not changed, but the angle of left and right view can be cut. FillMode_Manual mode works LDC with LDCLevel value, FillMode_Auto mode is works LDC with automatically • StretchMode: The FOV is not changed, but the aspect ratio can be changed. StretchMode_Manual mode works LDC with LDCLevel value, StretchMode_Auto mode is works LDC with automatically
	ImagePresetMode.#.GammaControl	RES	<bool>	<p>Gamma Control</p> <p>Adjust the brightness of the image. When On is selected, dark areas are generally brighter.</p> <p>CAMERA ONLY</p> <p>Note When setting On, the screen change due to changes in brightness and gamma items may not be significant.</p>
set	Channel	REQ, RES	<int>	Channel ID
	OpticalDefogFilterEnable	REQ, RES	<bool> True, False	Enable or disable optical defog filter.

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePresetMode	REQ	<enum> UserPreset1, UserPreset2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	Each ImagePresetMode can have ImagePreset settings. Image settings in any Mode can be changed. But modes except UserPreset1, UserPreset2 have different default image settings.
	ImagePreview	REQ	<enum> Start, Stop	Image preview mode Allows the user to view a preview image of the configuration, rather than saving the image configuration to the camera. If this parameter is ignored, then preview mode will be stopped and the original image configuration will be applied. <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped, and the original image settings saved in the camera will be applied.
	SharpnessEnable	REQ, RES	<bool> True, False	Enables or disables image sharpness <div> Note Attribute to check for Sharpness: "attributes/Image/Support/Sharpness" </div>
	SharpnessLevel	REQ, RES	<int>	Sharpness level SharpnessLevel is valid only when SharpnessEnable is set to True.

Action	Parameters	Request/ Response	Type/ Value	Description
	Brightness	REQ, RES	<int>	<p>Brightness level</p> <p>The higher the value, the greater the brightness.</p> <p>Note Attribute to check for Brightness: "attributes/Image/Support/Brightness"</p>
	Gamma	REQ, RES	<int>	<p>Gamma level</p> <p>The higher the value, the greater the gamma value.</p> <p>Note Attribute to check for Gamma: "attributes/Image/Support/Gamma"</p>
	GammaControl	REQ, RES	<bool>	<p>Gamma Control</p> <p>Adjust the brightness of the image. When On is selected, dark areas are generally brighter.</p> <p>CAMERA ONLY</p> <p>Note When setting On, the screen change due to changes in brightness and gamma items may not be significant.</p>
	Saturation	REQ, RES	<int>	<p>Saturation level</p> <p>The higher the value, the greater the saturation.</p> <p>Note Attribute to check for Saturation: "attributes/Image/Support/Saturation"</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	Contrast	REQ, RES	<int>	<p>Contrast level</p> <p>The higher the value, the greater the contrast.</p> <p>Note Attribute to check for Saturation: "image/imageenhancements/set/Contrast"</p>
	DefogMode	REQ, RES	<enum> Off, Auto, Manual	<p>Defogging Mode</p> <p>This enhances the quality of images created in a foggy environment.</p> <ul style="list-style-type: none"> • Off: Disables defogging function • Auto: Automatically compensates the image according to the fog level • Manual: Manually sets the amount of compensation <p>Note Attribute to check for Defog: "attributes/Image/Support/Defog"</p>
	DefogLevel	REQ, RES	<int>	<p>Defogging Level</p> <p>The greater the value, the higher the defogging level.</p> <p>DefogLevel is valid only when DefogMode is set to Manual or Auto.</p>

Action	Parameters	Request/Response	Type/Value	Description
	DISEnable	REQ, RES	<bool> True, False	<p>Enables or disables DIS (Digital Image Stabilization).</p> <p>This compensates the image automatically when the camera vibrates due to external factors such as wind.</p> <div> Note Attribute to check for DIS: "attributes/Image/Support/DIS" </div>
	DISFocalLength	REQ, RES	<int> 2800 to 50000 (micrometer)	<p>DIS Focal length value adjustable, can check imageoptions submenu "DISFocalLengthStepSize" parameter for allowed step size.</p> <div>CAMERA ONLY</div>
	CAR	REQ, RES	<enum> Off, Low, Medium, High	<p>Color Aberration Reduction</p> <p>This reduces the distortion or blurring of purple in the very bright area of an image.</p>
	LDCEnable	REQ, RES	<bool> True, False	<p>Enables or disables LDC (Lens Distortion Control).</p> <p>LDCEnable and LDCMode cannot be set at the same time.</p> <p>LDCEnable True is same as Manual LDCMode</p> <p>LDCEnable False is same as Off LDCMode</p>
	LDCLevel	REQ, RES	<int>	<p>LDC level</p> <p>The greater the value, the higher the LDC level.</p> <p>LDCLevel is valid only when LDCMode is not set to Off.</p> <p>LDCLevel is valid only when LDCEnable is not set to False.</p>

Action	Parameters	Request/ Response	Type/ Value	Description
	LDCMode	REQ, RES	<enum> Off, Auto, Manual	<p>Provides option to control the LDC feature.</p> <ul style="list-style-type: none"> • Off: Disables LDC function • Auto: Automatically adjusts the LDC • Manual: Manually sets the LDC level • FillMode: The angle of up and down view is not changed, but the angle of left and right view can be cut. FillMode_Manual mode works LDC with LDCLevel value, FillMode_Auto mode is works LDC with automatically • StretchMode: The FOV is not changed, but the aspect ratio can be changed. StretchMode_Manual mode works LDC with LDCLevel value, StretchMode_Auto mode is works LDC with automatically
	XCEEnable	REQ, RES	<bool>	<p>XCE(eXternd Contrast Enhancement) Enabling This feature is similar to using unsharp mask filtering</p>
	XCELevel	REQ RES	<int>	User can set filter level
control	Channel	REQ	<int>	Channel ID
	Reset	REQ	<bool> True, False	<p>The following image parameters are reset to the default value; Contrast, Brightness, SharpnessLevel, Saturation</p>

22.4. Examples

22.4.1. Getting the current information of Channel 0

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=imageenhancements2&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain
```

```
<Body>
```

```
Channel.0.Brightness=50  
Channel.0.SharpnessEnable=True  
Channel.0.SharpnessLevel=12  
Channel.0.Gamma=5  
Channel.0.Saturation=50  
Channel.0.Contrast=50  
Channel.0.ImagePresetMode.UserPreset1.Brightness=50  
Channel.0.ImagePresetMode.UserPreset1.SharpnessEnable=True  
Channel.0.ImagePresetMode.UserPreset1.SharpnessLevel=12  
Channel.0.ImagePresetMode.UserPreset1.Gamma=5  
Channel.0.ImagePresetMode.UserPreset1.Saturation=50  
Channel.0.ImagePresetMode.UserPreset1.Contrast=50  
Channel.0.ImagePresetMode.UserPreset2.Brightness=50  
Channel.0.ImagePresetMode.UserPreset2.SharpnessEnable=True  
Channel.0.ImagePresetMode.UserPreset2.SharpnessLevel=12  
Channel.0.ImagePresetMode.UserPreset2.Gamma=5  
Channel.0.ImagePresetMode.UserPreset2.Saturation=50  
Channel.0.ImagePresetMode.UserPreset2.Contrast=50  
Channel.0.ImagePresetMode.OutdoorDaytime.Brightness=50  
Channel.0.ImagePresetMode.OutdoorDaytime.SharpnessEnable=True  
Channel.0.ImagePresetMode.OutdoorDaytime.SharpnessLevel=16  
Channel.0.ImagePresetMode.OutdoorDaytime.Gamma=5  
Channel.0.ImagePresetMode.OutdoorDaytime.Saturation=55  
Channel.0.ImagePresetMode.OutdoorDaytime.Contrast=55  
Channel.0.ImagePresetMode.OutdoorNighttime.Brightness=50  
Channel.0.ImagePresetMode.OutdoorNighttime.SharpnessEnable=True  
Channel.0.ImagePresetMode.OutdoorNighttime.SharpnessLevel=6  
Channel.0.ImagePresetMode.OutdoorNighttime.Gamma=5
```

```
Channel.0.ImagePresetMode.OutdoorNighttime.Saturation=30
Channel.0.ImagePresetMode.OutdoorNighttime.Contrast=30
Channel.0.ImagePresetMode.IndoorBacklight.Brightness=70
Channel.0.ImagePresetMode.IndoorBacklight.SharpnessEnable=True
Channel.0.ImagePresetMode.IndoorBacklight.SharpnessLevel=6
Channel.0.ImagePresetMode.IndoorBacklight.Gamma=2
Channel.0.ImagePresetMode.IndoorBacklight.Saturation=40
Channel.0.ImagePresetMode.IndoorBacklight.Contrast=40
Channel.0.ImagePresetMode.IndoorBrightScene.Brightness=50
Channel.0.ImagePresetMode.IndoorBrightScene.SharpnessEnable=True
Channel.0.ImagePresetMode.IndoorBrightScene.SharpnessLevel=16
Channel.0.ImagePresetMode.IndoorBrightScene.Gamma=5
Channel.0.ImagePresetMode.IndoorBrightScene.Saturation=60
Channel.0.ImagePresetMode.IndoorBrightScene.Contrast=50
Channel.0.ImagePresetMode.NumberPlate.Brightness=50
Channel.0.ImagePresetMode.NumberPlate.SharpnessEnable=True
Channel.0.ImagePresetMode.NumberPlate.SharpnessLevel=12
Channel.0.ImagePresetMode.NumberPlate.Gamma=5
Channel.0.ImagePresetMode.NumberPlate.Saturation=50
Channel.0.ImagePresetMode.NumberPlate.Contrast=50
Channel.0.ImagePresetMode.Vivid.Brightness=50
Channel.0.ImagePresetMode.Vivid.SharpnessEnable=True
Channel.0.ImagePresetMode.Vivid.SharpnessLevel=14
Channel.0.ImagePresetMode.Vivid.Gamma=5
Channel.0.ImagePresetMode.Vivid.Saturation=60
Channel.0.ImagePresetMode.Vivid.Contrast=60
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "ImageEnhancements": [
    {
      "Channel": 0,
      "Brightness": 50,
      "SharpnessEnable": true,
      "SharpnessLevel": 12,
      "Gamma": 5,
```

```
"Saturation": 50,
"Contrast": 50,
"ImagePreset": [
  {
    "ImagePresetMode": "UserPreset1",
    "Brightness": 50,
    "SharpnessEnable": true,
    "SharpnessLevel": 12,
    "Gamma": 5,
    "Saturation": 50,
    "Contrast": 50
  },
  {
    "ImagePresetMode": "UserPreset2",
    "Brightness": 50,
    "SharpnessEnable": true,
    "SharpnessLevel": 12,
    "Gamma": 5,
    "Saturation": 50,
    "Contrast": 50
  },
  {
    "ImagePresetMode": "OutdoorDaytime",
    "Brightness": 50,
    "SharpnessEnable": true,
    "SharpnessLevel": 16,
    "Gamma": 5,
    "Saturation": 55,
    "Contrast": 55
  },
  {
    "ImagePresetMode": "OutdoorNighttime",
    "Brightness": 50,
    "SharpnessEnable": true,
    "SharpnessLevel": 6,
    "Gamma": 5,
    "Saturation": 30,
    "Contrast": 30
  },
  {
    "ImagePresetMode": "IndoorBacklight",
```

```

        "Brightness": 70,
        "SharpnessEnable": true,
        "SharpnessLevel": 6,
        "Gamma": 2,
        "Saturation": 40,
        "Contrast": 40
    },
    {
        "ImagePresetMode": "IndoorBrightScene",
        "Brightness": 50,
        "SharpnessEnable": true,
        "SharpnessLevel": 16,
        "Gamma": 5,
        "Saturation": 60,
        "Contrast": 50
    },
    {
        "ImagePresetMode": "NumberPlate",
        "Brightness": 50,
        "SharpnessEnable": true,
        "SharpnessLevel": 12,
        "Gamma": 5,
        "Saturation": 50,
        "Contrast": 50
    },
    {
        "ImagePresetMode": "Vivid",
        "Brightness": 50,
        "SharpnessEnable": true,
        "SharpnessLevel": 14,
        "Gamma": 5,
        "Saturation": 60,
        "Contrast": 60
    }
]
}

```

22.4.2. Setting the sharpness level to 5

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imageenhancements2&action=set&SharpnessLevel=5
```

22.4.3. Setting the image preset mode's image

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imageenhancements2&action=set&SharpnessLevel=5&ImageP  
resetMode=IndoorBacklight
```

22.4.4. Setting the image enhancements

Saturation to 60, Defog mode to Manual, DIS to On, and Brightness to 60

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imageenhancements2&action=set&Saturation=60&DefogMode  
=Manual&DISEnable=True&Brightness=60
```

Chapter 23. Auto Image Alignment

23.1. Description

The **autoimagealignment** submenu is newly added for PNM-9030V.

NOTE

Check channel based AutoImageAlignmentSupport attribute to check if a particular channel supports it.

In case of PNM-9030V, only the first channel (panorama channel) supports this feature.

Access level

Action	Camera
view	Admin
set	Admin

23.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
autoimagealignment&action=<value>[&<parameter>=<value>]
```

23.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ, RES	<int>	Channel ID of panoramic channel
set	Channel	REQ, RES	<int>	Channel ID A camera uses from '0' to max fixed channel count-1 for channel ID.
	FovDistance	REQ, RES	<float> 1.5-100	Distance in meters
	FovAngle	REQ, RES	<string> 180Degree, 220Degree	Field of view angle
check	Status	RES	<enum> Idle, InProgress, Complete	

Action	Parameters	Request/Response	Type/Value	Description
	Channel	REQ, RES		

23.4. Examples

23.4.1. Getting auto image alignment settings of the panorama channel

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=autoimagealignment&action=view
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain
```

```
<Body>
```

```
Channel.0.FovDistance=5.0
```

```
Channel.0.FovAngle=180Degree
```

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=autoimagealignment&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{
  "AutoImageAlignment": [
    {
      "Channel": 0,
      "FovDistance": 5,
```

```
        "FovAngle": "180Degree"  
    }  
]  
}
```

23.4.2. Setting calibration value to channel 1 (stiched panoramic channel)

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=autoimagealignment&action=set&Channel=1&FovDistance=2  
5.3&FovAngle=180Degree
```

TEXT RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain

<Body>

OK

Chapter 24. Image Preset 2

24.1. Description

The **imagepreset2** submenu configures the image preset mode, ImagePreview.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin
control	Admin

24.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
imagepreset2&action=<value>[&<parameter>=<value>]
```

24.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads settings for the image preset
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID

Action	Parameters	Request/ Response	Type/ Value	Description
	ImagePreview	REQ	<enum> Start, Stop, AWC	<p>Image preview mode</p> <p>Allows the user to view a preview image of the configuration, rather than saving the image configuration to the camera.</p> <p>If this parameter is ignored, then preview mode will be stopped, and the original image configuration will be applied.</p> <ul style="list-style-type: none"> • Start: Image preview mode will be started • Stop: Image preview mode will be stopped, and the original image settings saved in the camera will be applied
	Mode	REQ, RES	<enum> DefinitionFocus, MotionFocus, ReducedNoise, BrightVideo, , MotionFocus+ReducedNoise, MotionFocus+BrightVideo, VividVideo, UserPreset	<p>Image preset mode</p> <ul style="list-style-type: none"> • DefinitionFocus: Puts priority on definition • MotionFocus: Puts priority on the motion • ReducedNoise: Puts priority on noise reduction • BrightVideo: Puts priority on the brightness of the video • MotionFocus+ReducedNoise: Puts priority on the motion and noise reduction • MotionFocus+BrightVideo: Puts priority on motion and brightness of the video • VividVideo: Puts more on noise reduction and saturation

Action	Parameters	Request/Response	Type/Value	Description
control	ResetImagePresetMode	REQ	<enum> UserPreset 1, UserPreset 2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid	Reset Image Preset mode's image settings. Each Image setting's default value will be applied. About default value, please refer the imageoptions submenu.
	Channel	REQ	<int>	Channel ID

24.4. Examples

24.4.1. Getting the current image preset settings

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=imagepreset2&action=view&Channel=0
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "ImagePreset": [  
    {  
      "Channel": 0,  
      "Mode": "Vivid"  
    }  
  ]  
}
```

24.4.2. Reset image preset mode's image setting

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=imagepreset2&action=control&ResetImagePresetMode=Vivi  
d
```

Chapter 25. Imagepreset schedule

25.1. Description

The **imagepresetschedule** submenu configures the image preset mode's scheduling.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin

25.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
imagepresetschedule&action=<value> [&<parameter>=<value>]
```

25.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads settings for the image preset
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID
	<ddd>.<hourIndex>.Enable	REQ, RES	<bool> True, False	Enables or disables Day and Hour in schedule.

Action	Parameters	Request/Response	Type/Value	Description
	<ddd>.<hourIndex>.Mode	REQ, RES	<csv> UserPreset1, UserPreset2, OutdoorDaytime, OutdoorNighttime, IndoorBacklight, IndoorBrightScene, NumberPlate, Vivid, Indoor, Outdoor	<p>Set image preset mode in the corresponding hour's schedule.</p> <p>Note To use the This parameter, <ddd>.Enable=True, <ddd>.<hourIndex>.Enable=True must be sent together.</p> <p><ddd>.FromTo must be specified in the format of <hh:mm-hh:mm>.</p> <p><ddd> stands for day of the week and should be specified in short form such as SUN, MON, TUE, WED, THU, FRI, and SAT in uppercase.</p> <p>Ex) SUN.Enable=True&SUN.0.Enable=True&SUN.0.Mode=Vivid</p>
	<ddd>.<hourIndex>.Minute	REQ, RES	<csv>	<p>Note To use the This parameter, <ddd>.Enable=True, <ddd>.<hourIndex>.Enable=True must be sent together.</p> <p><ddd>.<hourIndex>.Minute value must be specified in the format of <hh-hh>.</p> <p>Ex) SUN.Enable=True&SUN.0.Enable=True&SUN.0.Minute=30-40</p>

Action	Parameters	Request/Response	Type/Value	Description
	<ddd>.Enable	REQ, RES	<bool> True, False	<p>Enable or disable <ddd> day's scheduling.</p> <p>Note If this parameter is used without <ddd>.<hourIndex>.Enable parameter, Enable <ddd> day's all hour.</p> <p>Ex)</p> <p>SUN.Enable=True means Sunday 24hours.</p>
	Activate	REQ, RES	<enum> Always, Scheduled	<p>Enable or disable scheduling.</p> <ul style="list-style-type: none"> • Always: Disables scheduling. Apply current ImagePreset mode. • Scheduled: Enables scheduling.

25.4. Examples

25.4.1. Getting the current image preset schedule settings

REQUEST

```
http://<IP>/stw-cgi/image.cgi?submenu=imagepresetschedule&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{
  "ImagePresetSchedule": [
    {
      "Channel": 0,
```

```
"Activate": "Off",
"Schedule": {
  "SUN": [
    {
      "HourIndex": 0,
      "Enable": false,
      "Mode": "UserPreset1",
      "Minute": "00-00"
    },
    {
      "HourIndex": 1,
      "Enable": false,
      "Mode": "UserPreset1",
      "Minute": "00-00"
    },
    {
      "HourIndex": 2,
      "Enable": false,
      "Mode": "UserPreset1",
      "Minute": "00-00"
    },
    {
      "HourIndex": 3,
      "Enable": false,
      "Mode": "UserPreset1",
      "Minute": "00-00"
    },
    {
      "HourIndex": 4,
      "Enable": false,
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        "HourIndex": 19,
        "Enable": false,
        "Mode": "UserPreset1",
        "Minute": "00-00"
    },
    {
        "HourIndex": 20,
        "Enable": false,
        "Mode": "UserPreset1",
        "Minute": "00-00"
    },
    {
        "HourIndex": 21,
        "Enable": false,
        "Mode": "UserPreset1",
        "Minute": "00-00"
    },
    {
        "HourIndex": 22,
        "Enable": false,
        "Mode": "UserPreset1",
        "Minute": "00-00"
    },
    {
        "HourIndex": 23,
        "Enable": false,
        "Mode": "UserPreset1",
        "Minute": "00-00"
    }
}
]
}

```

```
}  
]  
}
```

25.4.2. Setting the image preset schedule

Enable Scheduler

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&Activate=Scheduled
```

Enable Sunday 24 hours

REQUEST

```
http://<Device IP>/stw-cgi/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&SUN.Enable=True
```

Enable Sunday 0~1 hour

REQUEST

```
http://<Device IP>/stw-cgi/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&SUN.Enable=True&SUN.0.  
Enable=True
```

Set Sunday hour's mode or minute

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&SUN.Enable=True&SUN.0.  
Enable=True&SUN.0.Mode=Vivid
```

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&SUN.Enable=True&SUN.0.  
Enable=True&SUN.0.Minute=30-40
```

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&SUN.Enable=True&SUN.0.  
Enable=True&SUN.0.Mode=Vivid&SUN.0.Minute=30-40
```

Enable Tuesday 0~4 hours

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&TUE.Enable=True&TUE.0.  
Enable=True&TUE.1.Enable=True&TUE.2.Enable=True&TUE.3.Enable=True
```

Enable Monday 0~4 hours & Tuesday 0~4 hours

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&MON.Enable=True&MON.0.  
Enable=True&MON.1.Enable=True&MON.2.Enable=True&MON.3.Enable=True&TUE.Enable  
=True&TUE.0.Enable=True&TUE.1.Enable=True&TUE.2.Enable=True&TUE.3.Enable=Tru  
e
```

Enable Monday 0~2:30 as Vivid mode

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&MON.Enable=True&MON.0.  
Enable=True&MON.0.Mode=Vivid&MON.1.Enable=True&MON.1.Mode=Vivid&MON.2.Enable  
=True&MON.2.Mode=Vivid&MON.2.Minute=0-30
```

Enable Monday 0~2:30 as Vivid mode & Tuesday 0~2:30 as IndoorBrightScene mode

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=imagepresetschedule&action=set&MON.Enable=True&MON.0.  
Enable=True&MON.0.Mode=Vivid&MON.1.Enable=True&MON.1.Mode=Vivid&MON.2.Enable  
=True&MON.2.Mode=Vivid&MON.2.Minute=0-  
30&TUE.Enable=True&TUE.0.Enable=True&TUE.0.Mode=IndoorBrightScene&TUE.1.Enab  
le=True&TUE.1.Mode=IndoorBrightScene&TUE.2.Enable=True&TUE.2.Mode=IndoorBrig
```

htScene&TUE.2.Minute=0-30

Chapter 26. Thermal Palette Setting

26.1. Description

The **thermalpalettesetting** submenu configures the thermal color palette, upper&lower temperature level, Emissivity, ColorBar overlay.

NOTE This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin

26.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
thermalpalettesetting&action=<value>[&<parameter>=<value>]
```

26.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads settings for the image preset
	Channel	REQ, RES	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID
	ThermalColorPalette	REQ, RES	<enum> WhiteHot, BlackHot, Rainbow, Custom, Sepia, Red, Iron, Red- WH, Iron- WH, Midrange- WH	Configures thermal color palette.

Action	Parameters	Request/ Response	Type/ Value	Description
	UpperTemperatureLevel	REQ, RES	<int>	<p>Set boundary that divides high temperature range and middle temperature range.</p> <p>Note Only if ThermalColorPalette is Red-WH,Iron-WH,Midrange-WH, this parameter is applicable.</p> <p>UpperTemperatureLevel should be greater than LowerTemperatureLevel.</p> <p>Refer thermalpalettesettingoptions submenu for setable range.</p>
	LowerTemperatureLevel	REQ, RES	<int>	<p>Set boundary that divides middle temperature range and low temperature range.</p> <p>Note Only if ThermalColorPalette is Red-WH,Iron-WH,Midrange-WH, this parameter is applicable. UpperTemperatureLevel should be greater than LowerTemperatureLevel. Refer thermalpalettesettingoptions submenu for setable range.</p>
	NormalizedEmissivity	REQ, RES	<int>	<p>Configure overall NormalizedEmissivity of material shown in video. This configuration can effect camera's accuracy to detect temperature.</p> <p>Note Emissivity: The emissivity of the surface of a material is its effectiveness in emitting energy as thermal radiation.</p>
	ColorBarOverlay	REQ, RES	<bool> True, False	<p>Enable or disable Colorbar overlay in video.</p>

Action	Parameters	Request/Response	Type/Value	Description
	ThermalVariationSensitivity	REQ, RES	<int>	<div>Sensitivity of thermal variation</div> <div>Note This parameter applies to thermal channels only Attribute to check for ThermalVariationSensitivity: "attributes/Image/Support/[ChannelID]/ThermalVariationSensitivity"</div>

26.4. Examples

26.4.1. Getting the current thermal palette settings

REQUEST

```
http://<IP>/stw-cgi/image.cgi?submenu=thermalpalette&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK

Content-type: application/json

<Body>
```

```
{
  "ThermalPaletteSetting": [
    {
      "Channel": 0,
      "ThermalColorPalette": "WhiteHot",
      "UpperTemperatureLevel": 60,
      "LowerTemperatureLevel": 20,
      "NormalizedEmissivity": 95,
      "ColorBarOverlay": false,
      "ThermalVariationSensitivity": 12
    }
  ]
}
```


26.4.2. Setting the image preset schedule

Set thermal color palette, Emissivity, Color bar overlay, Upper temperature level, Lower temperature level

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=thermalpalettesetting&action=set&Channel=0&ThermalCol  
orPalette=Red-  
WH&NormalizedEmissivity=51&ColorBarOverlay=True&UpperTemperatureLevel=70&Low  
erTemperatureLevel=30
```

Chapter 27. Thermal Palette Setting Options

27.1. Description

The **thermalpalettesettingoptions** submenu provides temperature unit's setable temperature range.

This submenu is applicable for temperature detection camera.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin

27.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=
thermalpalettesettingoptions&action=<value>[&<parameter>=<value>]
```

27.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads settings for the image preset
	Channel	REQ, RES	<csv>	Channel ID
	MinimumTemperatureLevel.Celsius	RES	<int>	Shows minimum celsius temperature value.
	MaximumTemperatureLevel.Celsius	RES	<int>	Shows maximum celsius temperature value.
	MinimumTemperatureLevel.Fahrenheit	RES	<int>	Shows minimum fahrenheit temperature value.
	MaximumTemperatureLevel.Fahrenheit	RES	<int>	Shows maximum fahrenheit temperature value.

27.4. Examples

27.4.1. Getting setable temperature range of each units

REQUEST

```
http://<IP>/stw-
```

```
cgi/image.cgi?msubmenu=thermalpalettesettingoptions&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "ThermalPaletteSettingOptions": [  
    {  
      "Channel": 0,  
      "MinimumTemperatureLevel": {  
        "Celsius": {  
          "Min": -19,  
          "Max": 128  
        },  
        "Fahrenheit": {  
          "Min": -2,  
          "Max": 263  
        }  
      },  
      "MaximumTemperatureLevel": {  
        "Celsius": {  
          "Min": -18,  
          "Max": 129  
        },  
        "Fahrenheit": {  
          "Min": -1,  
          "Max": 264  
        }  
      }  
    }  
  ]  
}
```

Chapter 28. Spot Temperature Reading

28.1. Description

The **spottemperaturereading** submenu provides the requested spot's temperature information.

This submenu is applicable for temperature detection cameras.

NOTE This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin

28.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=
spottemperaturereading&action=<value>[&<parameter>=<value>]
```

28.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads settings for the image preset.
	Channel	REQ, RES	<int>	Channel ID
	ScreenCoordinates	REQ	<string>	Request screen coordinates to display temperature information.
	Temperature	RES	<float>	Shows the spot's current temperature.
	Unit	RES	<enum> Celsius, Fahrenheit	Shows the current temperature's unit.
	ScreenResolution	REQ	<string>	Shows the current screen's resolution. Note This parameter should be set with ScreenCoordinates .

28.4. Examples

28.4.1. Getting the requested spot's temperature

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=spottemperaturereading&action=view&Channel=0&ScreenRe  
solution=640x480&ScreenCoordinates=334,216
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "SpotTemperatureReading": [  
    {  
      "Channel": 0,  
      "Temperature": 30.5,  
      "Unit": "Celsius"  
    }  
  ]  
}
```

Chapter 29. Direction Indicator

29.1. Description

The **directionindicator** submenu provides the feature to set and show options related to each direction.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
set	Admin

29.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=  
directionindicator&action=<value>[&<parameter>=<value>]
```

29.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view				Reads settings for the direction-related settings.
	Channel	REQ, RES	<csv>	Channel ID
	Enable	REQ, RES	<bool> True, False	Used to request to enable or disable this feature. Enables or disables the direction indicating feature
	Direction	REQ, RES	<csv> Top, TopRight, Right, BottomRight, Bottom, BottomLeft, Left, TopLeft	Users can select specific directions that they want. Multiple directions are allowed to set.
set	Channel	REQ	<int>	Channel value to set.

Action	Parameters	Request/Response	Type/Value	Description
	Direction.#.AzimuthEnable	REQ,RES	<bool> True, False	Device shows an azimuth value in each direction if user sets this value to True.
	Direction.#.Show	REQ,RES	<bool> True, False	Device shows a direction string in each direction if user sets this value to True.
	Direction.#.Text	REQ,RES	<string>	User can set name for each direction using this parameter.
	Direction.#.PositionX	REQ,RES	<int>	User can specify the position of the information that will appear on screen.
	Direction.#.PositionY	REQ,RES	<int>	User can specify the position of the information that will appear on screen.
	ImagePreview	REQ	<enum> Start, Stop	Image preview mode Allows viewing the preview image of the configuration rather than saving the image configuration to camera.

29.4. Examples

29.4.1. Getting direction information

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=directionindicator&action=view&Channel=0
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: plain/text_  
<Body>
```

```
Channel.0.Enable=False  
Channel.0.FontSize=Small  
Channel.0.Direction.Top.AzimuthEnable=False  
Channel.0.Direction.Top.Show=False  
Channel.0.Direction.Top.Text=
```

```
Channel.0.Direction.Top.PositionX=50
Channel.0.Direction.Top.PositionY=1
Channel.0.Direction.TopRight.AzimuthEnable=False
Channel.0.Direction.TopRight.Show=False
Channel.0.Direction.TopRight.Text=
Channel.0.Direction.TopRight.PositionX=100
Channel.0.Direction.TopRight.PositionY=1
Channel.0.Direction.Right.AzimuthEnable=False
Channel.0.Direction.Right.Show=False
Channel.0.Direction.Right.Text=
Channel.0.Direction.Right.PositionX=100
Channel.0.Direction.Right.PositionY=13
Channel.0.Direction.BottomRight.AzimuthEnable=False
Channel.0.Direction.BottomRight.Show=False
Channel.0.Direction.BottomRight.Text=
Channel.0.Direction.BottomRight.PositionX=100
Channel.0.Direction.BottomRight.PositionY=26
Channel.0.Direction.Bottom.AzimuthEnable=False
Channel.0.Direction.Bottom.Show=False
Channel.0.Direction.Bottom.Text=
Channel.0.Direction.Bottom.PositionX=50
Channel.0.Direction.Bottom.PositionY=26
Channel.0.Direction.BottomLeft.AzimuthEnable=False
Channel.0.Direction.BottomLeft.Show=False
Channel.0.Direction.BottomLeft.Text=
Channel.0.Direction.BottomLeft.PositionX=1
Channel.0.Direction.BottomLeft.PositionY=26
Channel.0.Direction.Left.AzimuthEnable=False
Channel.0.Direction.Left.Show=False
Channel.0.Direction.Left.Text=
Channel.0.Direction.Left.PositionX=1
Channel.0.Direction.Left.PositionY=13
Channel.0.Direction.TopLeft.AzimuthEnable=False
Channel.0.Direction.TopLeft.Show=False
Channel.0.Direction.TopLeft.Text=
Channel.0.Direction.TopLeft.PositionX=1
Channel.0.Direction.TopLeft.PositionY=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```


Content-type: application/json

<Body>

```
{
  "DirectionIndicators": [
    {
      "Channel": 0,
      "Enable": false,
      "FontSize": "Small",
      "Directions": [
        {
          "Direction": "Top",
          "AzimuthEnable": false,
          "Show": false,
          "Text": "",
          "PositionX": 50,
          "PositionY": 1
        },
        {
          "Direction": "TopRight",
          "AzimuthEnable": false,
          "Show": false,
          "Text": "",
          "PositionX": 100,
          "PositionY": 1
        },
        {
          "Direction": "Right",
          "AzimuthEnable": false,
          "Show": false,
          "Text": "",
          "PositionX": 100,
          "PositionY": 13
        },
        {
          "Direction": "BottomRight",
          "AzimuthEnable": false,
          "Show": false,
          "Text": "",
          "PositionX": 100,
```

```

        "PositionY": 26
    },
    {
        "Direction": "Bottom",
        "AzimuthEnable": false,
        "Show": false,
        "Text": "",
        "PositionX": 50,
        "PositionY": 26
    },
    {
        "Direction": "BottomLeft",
        "AzimuthEnable": false,
        "Show": false,
        "Text": "",
        "PositionX": 1,
        "PositionY": 26
    },
    {
        "Direction": "Left",
        "AzimuthEnable": false,
        "Show": false,
        "Text": "",
        "PositionX": 1,
        "PositionY": 13
    },
    {
        "Direction": "TopLeft",
        "AzimuthEnable": false,
        "Show": false,
        "Text": "",
        "PositionX": 1,
        "PositionY": 1
    }
]
}

```

29.4.2. Setting information for the top direction

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=directionindicator&action=set&Channel=0&AzimuthEnable  
=True&Show=True&Direction=Top&Text=North&PositionX=50&PositionY=1
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: plain/text  
<Body>
```

```
OK
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "Response": "Success"  
}
```

Chapter 30. Noise Reduction

30.1. Description

The **noisereduct** submenu provides features related to image quality control for analog camera connected to Hybrid NVR.

NOTE This chapter applies to Hybrid NVR Only.

Access level

Action	NVR
view	USER

30.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=
noisereduct&action=<value>[&<parameter>=<value>]
```

30.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	RES		Channel ID
set	Channel	REQ		Channel ID
	NoiseLevel	REQ,RES	<int>	Noise reduction level. The higher the level value, the more the noise reduction and the higher the image quality.
	HorizontalPos	REQ,RES	<int>	Horizontal position. It's a feature for screen adjustment, not for noise reduction.
	VerticalPos	REQ,RES	<int>	Vertical position. It's a feature for screen adjustment, not for noise reduction.
	HorizontalScale	REQ,RES	<int>	Horizontal scale. It's a feature for screen adjustment, not for noise reduction.
	VerticalScale	REQ,RES	<int>	Vertical scale. It's a feature for screen adjustment, not for noise reduction.

30.4. Examples

30.4.1. Getting each channel noise reduction value

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=noisereduct&action=view&Channel=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "NoiseReduct": [  
    {  
      "Channel": 1,  
      "NoiseLevel": 0,  
      "HorizontalPos": 0,  
      "VerticalPos": 0,  
      "HorizontalScale": 0,  
      "VerticalScale": 0  
    }  
  ]  
}
```

30.4.2. Setting each channel noise reduction value

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=noisereduct&action=view&Channel=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
  
Content-type: application/json
```

<Body>

```
{  
  "Response": "Success"  
}
```

Chapter 31. PTR Preset

31.1. Description

The **ptrpreset** submenu provides features that can configure settings for ptr presets.

NOTE | This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin
update	Admin
control	Admin

31.2. Syntax

```
http://<Device IP /stw-cgi/image.cgi?msubmenu=
ptrpreset&action=<value> [&<parameter>=<value>]
```

31.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Name	RES	<string> Up to 12 characters	The predefined name of presets.
	Enable	RES	<bool> True, False	If this value is set to false, the preset position has not been set yet.
	Configurable	RES	<bool> True, False	User can change the preset position when this value is set to true; other presets have predefined values.
update	Preset	REQ	<int>	The number of preset to be saved
control	Preset	REQ	<int> 1~4	The number of preset to be moved
	PresetName	REQ	<string> initialize, 360, 200, user	The name of preset to be moved. These are predefined values and match with Preset numbers in sequence.

31.4. Examples

31.4.1. Getting the current camera information for PTZ preset (this submenu supports only JSON response)

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=ptrpreset&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{
  "PtrPresets": [
    {
      "Preset": 1,
      "Name": "initialize",
      "Enable": 1,
      "Configurable": "False"
    },
    {
      "Preset": 2,
      "Name": "360",
      "Enable": 1,
      "Configurable": "False"
    },
    {
      "Preset": 3,
      "Name": "200",
      "Enable": 0,
      "Configurable": "False"
    },
    {
      "Preset": 4,
      "Name": "user",
      "Enable": 1,
      "Configurable": "True"
    }
  ]
}
```



```
}  
]  
}
```

31.4.2. Moving to predefined preset (Preset 2 means 360 preset)

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=ptrpreset&action=control&Preset=2
```

TEXT RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain

<Body>

OK

31.4.3. Updating the current position to match the user preset

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=ptrpreset&action=update&Preset=4
```

TEXT RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain

<Body>

OK

Chapter 32. Stereo Calibration

32.1. Description

The **stereosensorcalibration** submenu provides commands to calibrate the coordinates of both sensors, which is performed by superimposing a thermal image over a non-thermal image based on the scale and adjustment of the offset.

NOTE | This chapter is applicable to dual thermal cameras.

Access level

Action	Camera
view	Admin
set	Admin

32.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=
stereosensorcalibration&action=<value> [&<parameter>=<value>]
```

32.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ	<csv>	Channel ID
	HeightScale	RES	<float>	Height scale Height scale between normal and thermal images
	WidthScale	RES	<float>	Width scale Width scale between normal and thermal images
	ZoomScale	RES	<float>	Zoom scale Zoom scale between normal and thermal images
	CalibrationCompleted	RES	<bool> True, False	Calibration completed Shows whether calibration settings are performed or not

Action	Parameters	Request/ Response	Type/ Value	Description
set	Channel	REQ,RES	<int>	Channel ID
	CalibrationOffset	REQ,RES	<string>	Position offset of the thermal image The CalibrationOffset is expressed in <x,y>.

32.4. Examples

32.4.1. Getting the current calibration setting values from camera

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=stereosensorcalibration&action=view&Channel=1
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: text/plain  
<Body>
```

```
Channel.1.HeightScale=3.44  
Channel.1.WidthScale=3.44  
Channel.1.ZoomScale=1.22  
Channel.1.CalibrationCompleted=False  
Channel.1.CalibrationOffset=0,0
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
  
Content-type: application/json  
  
<Body>
```

```
{  
  "StereoSensorCalibration": [  
    {  
      "Channel": 1,  
      "HeightScale": 3.44,  
      "WidthScale": 3.44,  
      "ZoomScale": 1.22,  
      "CalibrationCompleted": false,  
      "CalibrationOffset": "0,0"  
    }  
  ]  
}
```

```

        "HeightScale": 3.44,
        "WidthScale": 3.44,
        "ZoomScale": 1.22,
        "CalibrationCompleted": false,
        "CalibrationOffset": [
            {
                "x": 0,
                "y": 0
            }
        ]
    }
]
}

```

32.4.2. Setting calibration position offset

REQUEST

```

http://<Device IP>/stw-
cgi/image.cgi?msubmenu=stereosensorcalibration&action=set&CalibrationOffset=
-1,2&Channel=1

```

TEXT RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain

<Body>

OK

JSON RESPONSE

HTTP/1.0 200 OK

Content-type: application/json

<Body>

```

{
    "Response": "Success"
}

```

}

Chapter 33. Radiometry Settings

33.1. Description

The **radiometrysettings** submenu configures radiometry settings in the camera.

NOTE

This chapter is applicable to dual thermal cameras.

Attribute to check for feature support:

"attributes/Eventsource/Support/[ChannelID]/BodyTemperatureDetection"

Access level

Action	Camera
view	Admin
set	Admin

33.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
radiometrysettings&action=<value>[&<parameter>=<value>]
```

33.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ	<csv>	Channel ID
set	Channel	REQ, RES	<int>	Channel ID
	DistanceToObject	REQ, RES	<int>	Distance to the object for which the temperature is to be measured (in centimeters)
	EnableRelativeHumidity	REQ, RES	<bool> True, False	Whether to use the RelativeHumidity setting
	RelativeHumidity	REQ, RES	<float>	Relative humidity (in percentage)
	EnableAtmosphericTemperature	REQ, RES	<bool> True, False	Whether to use the AtmosphericTemperature setting
	AtmosphericTemperature	REQ, RES	<float>	Atmospheric temperature
	EnableTemperatureOffset	REQ, RES	<bool> True, False	Whether to use the TemperatureOffset setting

Action	Parameters	Request/ Response	Type/ Value	Description
	TemperatureOffset	REQ, RES	<float>	Offset for measured temperature Offset value to apply to the measured temperature value.

33.4. Examples

33.4.1. Getting current radiometry settings for Channel 1

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=radiometrysettings&action=view&Channel=1
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: text/plain  
<Body>
```

```
Channel.1.DistanceToObject=300  
Channel.1.EnableRelativeHumidity=True  
Channel.1.RelativeHumidity=50.0  
Channel.1.EnableAtmosphericTemperature=True  
Channel.1.AtmosphericTemperature=23.0  
Channel.1.EnableTemperatureOffset=True  
Channel.1.TemperatureOffset=0.0
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "RadiometrySettings": [  
    {  
      "Channel": 1,  
      "DistanceToObject": 300,
```

```
        "EnableRelativeHumidity": true,  
        "RelativeHumidity": 50,  
        "EnableAtmosphericTemperature": true,  
        "AtmosphericTemperature": 23,  
        "EnableTemperatureOffset": true,  
        "TemperatureOffset": 0  
    }  
]  
}
```

33.4.2. Setting radiometry settings to use distance to object, relative humidity, and atmospheric temperature

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=radiometrysettings&action=set&Channel=1&DistanceToObj  
ect=350&EnableRelativeHumidity=True&RelativeHumidity=50&EnableAtmosphericTem  
perature=True&AtmosphericTemperature=25.5
```

TEXT RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain

<Body>

OK

JSON RESPONSE

HTTP/1.0 200 OK

Content-type: application/json

<Body>

```
{  
    "Response": "Success"
```


}

Chapter 34. Radiometry Settings

34.1. Description

The **radiometrysettingsoptions** submenu provides information on radiometry settings.

NOTE

This chapter is applicable to dual thermal cameras.
Attribute to check for feature support:
"attributes/Eventsource/Support/[ChannelID]/BodyTemperatureDetection"

Access level

Action	Camera
view	Admin
set	Admin

34.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
radiometrysettings&action=<value>[&<parameter>=<value>]
```

34.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ,RES	<csv>	Channel ID
	DefaultDistanceToObject	RES	<int>	Default value for DistanceToObject
	DefaultRelativeHumidity	RES	<float>	Default value for Relative humidity
	DefaultAtmosphericTemperature	RES	<float>	Default value for Atmospheric temperature
	Temperature.Celsius.Min	RES	<float>	Minimum Celsius temperature
	Temperature.Celsius.Max	RES	<float>	Maximum Celsius temperature
	Temperature.Fahrenheit.Min	RES	<float>	Minimum Fahrenheit temperature
	Temperature.Fahrenheit.Max	RES	<float>	Maximum Fahrenheit temperature
	TemperatureOffset.Celsius.Min	RES	<float>	Minimum Celsius temperature for temperatureoffset parameter

Action	Parameters	Request/ Response	Type/ Value	Description
	TemperatureOffset.Celsius.Max	RES	<float>	Maximum Celsius temperature for temperatureoffset parameter
	TemperatureOffset.Fahrenheit.Min	RES	<float>	Minimum Fahrenheit temperature for temperatureoffset parameter
	TemperatureOffset.Fahrenheit.Max	RES	<float>	Maximum Fahrenheit temperature for temperatureoffset parameter

34.4. Examples

34.4.1. Getting radiometry settings for Channel 1 (this submenu supports only JSON response)

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=radiometrysettingsoptions&action=view&Channel=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{  
  "RadiometrySettingsOptions": [  
    {  
      "Channel": 1,  
      "DefaultDistanceToObject": 300,  
      "DefaultRelativeHumidity": 50,  
      "DefaultAtmosphericTemperature": 23,  
      "Temperature": {  
        "Celsius": {  
          "Min": 10,  
          "Max": 35  
        },  
        "Fahrenheit": {  
          "Min": 50,  

```

```
        "Max": 95
      },
    },
    "TemperatureOffset": {
      "Celsius": {
        "Min": -3,
        "Max": 3
      },
      "Fahrenheit": {
        "Min": -37.4,
        "Max": 37.4
      }
    }
  }
}
```

Chapter 35. BlackBody Config

35.1. Description

The **blackbodyconfig** submenu is used to configure the use of a black body device with the camera.

NOTE

This chapter is applicable to dual thermal cameras.

Attribute to check for feature support:

"attributes/Eventsource/Support/[ChannelID]/BodyTemperatureDetection"

Access level

Action	Camera
view	Admin
set	Admin

35.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=
blackbodyconfig&action=<value>[&<parameter>=<value>]
```

35.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ	<csv>	Channel ID
	CurrentBlackBodyTemperature	RES	<float>	Current temperature of BlackBody It shows the temperature of the set blackbody. If Enable is false, it is displayed as 0
set	Channel	REQ,RES	<int>	Channel ID
	Enable	REQ,RES	<bool> True, False	Enables or disables BlackBody
	Coordinates	REQ,RES	<string> Format=x1,y1,x2,y2	Coordinates of BlackBody position The coordinates are expressed in <x1,y1,x2,y2>
	EnableBlackBodyBeepAlarm	REQ, RES	<bool> True, False	Enables or disables BlackBody alarm
	BlackBodyTemperature	REQ, RES	<float>	Temperature of BlackBody

Action	Parameters	Request/Response	Type/Value	Description
	BlackBodyTemperatureOffset	REQ, RES	<float>	Temperature offset of BlackBody Blackbody temperature modification
	BlackBodyEmissivity	REQ, RES	<int>	Emissivity of BlackBody
	BlackBodyDistance	REQ, RES	<int>	Distance between BlackBody and Camera
	BlackBodyHeight	REQ, RES	<int>	Height of BlackBody
	CameraHeight	REQ, RES	<int>	Height of Camera
	CameraAngle	REQ, RES	<float>	Angle of Camera

35.4. Examples

35.4.1. Getting the current blackbody config for Channel 1

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=blackbodyconfig&action=view&Channel=1
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: text/plain  
<Body>
```

```
Channel.1.Enable=True  
Channel.1.CurrentBlackBodyTemperature=37.0  
Channel.1.Coordinates=10,10,20,20  
Channel.1.EnableBlackBodyBeepAlarm=False  
Channel.1.BlackBodyTemperature=37.0  
Channel.1.BlackBodyTemperatureOffset=1.0  
Channel.1.BlackBodyEmissivity=96  
Channel.1.BlackBodyDistance=300  
Channel.1.BlackBodyHeight=180  
Channel.1.CameraHeight=180  
Channel.1.CameraAngle=0.0
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "BlackBodyConfig": [
    {
      "Channel": 1,
      "Enable": true,
      "CurrentBlackBodyTemperature": 37,
      "Coordinates": [
        {
          "x": 10,
          "y": 10
        },
        {
          "x": 20,
          "y": 20
        }
      ],
      "EnableBlackBodyBeepAlarm": false,
      "BlackBodyTemperature": 37,
      "BlackBodyTemperatureOffset": 1,
      "BlackBodyEmissivity": 96,
      "BlackBodyDistance": 300,
      "BlackBodyHeight": 180,
      "CameraHeight": 180,
      "CameraAngle": 0
    }
  ]
}
```

35.4.2. Setting blackbody configurations for Channel 1

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?submenu=blackbodyconfig&action=set&Channel=1&Coordinates=10,1
0,20,20&EnableBlackBodyBeepAlarm=True&BlackBodyTemperature=30&BlackBodyTempe
```

```
ratureOffset=1.0&BlackBodyEmissivity=70&BlackBodyDistance=300&BlackBodyHeight=100&CameraHeight=150&CameraAngle=3
```

TEXT RESPONSE

```
HTTP/1.0 200 OK  
Content-type: text/plain  
<Body>
```

```
OK
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "Response": "Success"  
}
```


Chapter 36. BlackBody Config Options

36.1. Description

The **blackbodyconfigoptions** submenu provides information about blackbody settings.

NOTE

This chapter is applicable to dual thermal cameras.

Attribute to check for feature support:

"attributes/Eventsource/Support/[ChannelID]/BodyTemperatureDetection"

Access level

Action	Camera
view	Admin
set	Admin

36.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=  
balckbodyconfigoptions&action=<value>[&<parameter>=<value>]
```

36.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ, RES	<csv>	Channel ID
	Coordinates.MinWidth	RES	<int>	Minimum size of Coordinates width
	Coordinates.MinHeight	RES	<int>	Minimum size of Coordinates height
	Coordinates.MaxWidth	RES	<int>	Maximum size of Coordinates width
	Coordinates.MaxHeight	RES	<int>	Maximum size of Coordinates height
	DefaultBlackBodyTempe rature	RES	<float>	Default value for BlackBodyTemperature
	DefaultBlackBodyEmissiv ity	RES	<int>	Default value for BlackBodyEmissivity
	DefaultBlackBodyDistanc e	RES	<int>	Default value for BlackBodyDistance
	DefaultBlackBodyHeight	RES	<int>	Default value for BlackBodyHeight
	DefaultCameraHeight	RES	<int>	Default value for CameraHeight
	DefaultCameraAngle	RES	<float>	Default value for CameraAngle

Action	Parameters	Request/Response	Type/Value	Description
	Temperature.Celsius.Min	RES	<float>	Minimum Celsius temperature for BlackBodyTemperature
	Temperature.Celsius.Max	RES	<float>	Maximum Celsius temperature for BlackBodyTemperature
	Temperature.Fahrenheit.Min	RES	<float>	Minimum Fahrenheit temperature for BlackBodyTemperature
	Temperature.Fahrenheit.Max	RES	<float>	Maximum Fahrenheit temperature for BlackBodyTemperature
	TemperatureOffset.Celsius.Min	RES	<float>	Minimum Celsius temperature for BlackBodyTemperatureOffset
	TemperatureOffset.Celsius.Max	RES	<float>	Maximum Celsius temperature for BlackBodyTemperatureOffset
	TemperatureOffset.Fahrenheit.Min	RES	<float>	Minimum Fahrenheit temperature for BlackBodyTemperatureOffset
	TemperatureOffset.Fahrenheit.Max	RES	<float>	Maximum Fahrenheit temperature for BlackBodyTemperatureOffset

36.4. Examples

36.4.1. Getting blackbody config options for Channel 1 (this submenu supports only JSON response)

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=blackbodyconfigoptions&action=view&Channel=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{
  "BlackBodyConfigOptions": [
    {
      "Channel": 1,
```

```

    "Coordinates": {
        "MinWidth": 0,
        "MinHeight": 0,
        "MaxWidth": 319,
        "MaxHeight": 239
    },
    "DefaultBlackBodyTemperature": 37,
    "DefaultBlackBodyEmissivity": 96,
    "DefaultBlackBodyDistance": 300,
    "DefaultBlackBodyHeight": 180,
    "DefaultCameraHeight": 180,
    "DefaultCameraAngle": 0,
    "Temperature": {
        "Celsius": {
            "Min": 30,
            "Max": 45
        },
        "Fahrenheit": {
            "Min": 86,
            "Max": 113
        }
    },
    "TemperatureOffset": {
        "Celsius": {
            "Min": -1,
            "Max": 1
        },
        "Fahrenheit": {
            "Min": -1.8,
            "Max": 1.8
        }
    }
}
]
}

```

Chapter 37. Focus Preset

37.1. Description

The **focuspreset** submenu supports the configuration of presets per focus.

NOTE

Attribute to check for feature support:
"attributes/Image/Support/[ChannelID]/FocusPreset"

Access level

Action	Camera
view	Admin
set	Admin
add	Admin
control/remove	Admin

37.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=  
focuspreset&action=<value> [&<parameter>=<value>]
```

37.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ,RES	<csv>	Channel ID
set	Channel	REQ	<int>	Channel ID
	Enable	REQ	<bool> True, False	Enables presets per channel
add	Channel	REQ	<int>	Channel ID
	Preset	REQ,RES	<int>	Index of preset
	Name	REQ,RES	<string>	Name of preset
	IRShiftEnable	REQ,RES	<bool> True, False	Enables IR-based focus
	IRShiftValue	REQ,RES	<int> 0 to 200	IR focus shift value

Action	Parameters	Request/ Response	Type/ Value	Description
control/ remove	Channel	REQ	<int>	Channel ID
	Preset	REQ	<int>	Index of preset

37.4. Examples

37.4.1. Getting the current focus preset configuration

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focuspreset&action=view&Channel=0
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{  
  "FocusPresets": [  
    {  
      "Channel": 0,  
      "Enable": true,  
      "Presets": [  
        {  
          "Preset": 1,  
          "Name": "test",  
          "IRShiftEnable": true,  
          "IRShiftValue": 100  
        }  
      ]  
    }  
  ]  
}
```

37.4.2. Add the current focus setting to the new preset

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focuspreset&action=add&Preset=1&Name=test&IRShiftEnab  
le=True&IRShiftValue=100
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
  
Content-type: application/json  
  
<Body>
```

```
{  
  "Response": "Success"  
}
```

37.4.3. Control to move to a saved focus preset

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focuspreset&action=control&Preset=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
  
Content-type: application/json  
  
<Body>
```

```
{  
  "Response": "Success"  
}
```

37.4.4. Remove a focus preset

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?submenu=focuspreset&action=remove&Preset=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK  
Content-type: application/json  
<Body>
```

```
{  
  "Response": "Success"  
}
```

Chapter 38. Thermal NUC

38.1. Description

The **thermalnuc** submenu used in scheduling the NUC (Non Uniformity Correction).

NOTE

Attribute to check for feature support:
"attributes/Image/Support/[ChannelID]/ThermalNUC"

Access level

Action	Camera
view	Admin
set	Admin
control	Admin

38.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?submenu=
thermalnuc&action=<value> [&<parameter>=<value>]
```

38.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
view	Channel	REQ,RES	<csv>	Channel ID
set	Channel	REQ	<int>	Channel ID
	DisplayEnable	REQ,RES	<bool> True,False	Enable OSD when NUC is in progress.
	DisplayPosition	REQ,RES	<enum> LowerLeft,L owerRight, UpperLeft, UpperRight	OSD display position.
	IntervalMode	REQ,RES	<enum> Auto,5min,1 5min,Sched ule	Correction interval Note When the interval mode is set as Schedule , the user can configure a custom day and time to apply the correction.

Action	Parameters	Request/Response	Type/Value	Description
	<ddd>.Enable	REQ,RES	<bool> True, False	Day for which the schedule should be enabled. Note Here, <ddd> refers to the three letters of the weekday; SUN, MON, TUE, etc.
	<ddd>.<hourIndex>.Enable	REQ,RES	<bool> True, False	Hour of a particular day when the schedule should be enabled. Note Here, <hourIndex> refers to an hour index from 0 to 23
	<ddd>.<hourIndex>.Mode	REQ,RES	<enum> Auto,5min,15min	Correction interval mode.
control	Channel	REQ	<int>	Channel ID for which the NUC should be applied.

38.4. Examples

38.4.1. Getting the settings related to the current NUC schedule

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?submenu=thermalnuc&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{
  "ThermalNUCSetting": [
    {
      "Channel": 1,
      "DisplayEnable": "False",
```

```
"DisplayPosition": "LowerLeft",
"IntervalMode": "Auto",
"Schedule": {
  "SUN": [
    {
      "HourIndex": 0,
      "Enable": false,
      "Mode": "Auto"
    },
    {
      "HourIndex": 1,
      "Enable": false,
      "Mode": "Auto"
    },
    {
      "HourIndex": 2,
      "Enable": false,
      "Mode": "Auto"
    },
    {
      "HourIndex": 3,
      "Enable": false,
      "Mode": "Auto"
    },
    {
      "HourIndex": 4,
      "Enable": false,
      "Mode": "Auto"
    },
    {
      "HourIndex": 5,
      "Enable": false,
      "Mode": "Auto"
    },
    {
      "HourIndex": 6,
      "Enable": false,
      "Mode": "Auto"
    },
    {
      "HourIndex": 7,
```

```
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 8,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 9,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 10,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 11,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 12,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 13,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 14,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 15,  
        "Enable": false,
```

```
        "Mode": "Auto"
    },
    {
        "HourIndex": 16,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 17,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 18,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 19,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 20,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 21,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 22,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 23,
```

```

    }
],
"MON": [
    {
        "HourIndex": 0,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 1,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 2,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 3,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 4,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 5,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 6,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 7,
        "Enable": false,

```

```

        "Mode": "Auto"
    },
    {
        "HourIndex": 8,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 9,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 10,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 11,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 12,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 13,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 14,
        "Enable": false,
        "Mode": "Auto"
    },
    {
        "HourIndex": 15,
        "Enable": false,
        "Mode": "Auto"
    }

```

```
    },  
    {  
        "HourIndex": 16,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 17,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 18,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 19,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 20,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 21,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 22,  
        "Enable": false,  
        "Mode": "Auto"  
    },  
    {  
        "HourIndex": 23,  
        "Enable": false,  
        "Mode": "Auto"  
    }  
}
```

```
],  
  "TUE": [  
    {  
      "HourIndex": 0,  
      "Enable": false,  
      "Mode": "Auto"  
    },  
    {  
      "HourIndex": 1,  
      "Enable": false,  
      "Mode": "Auto"  
    },  
    {  
      "HourIndex": 2,  
      "Enable": false,  
      "Mode": "Auto"  
    },  
    {  
      "HourIndex": 3,  
      "Enable": false,  
      "Mode": "Auto"  
    },  
    {  
      "HourIndex": 4,  
      "Enable": false,  
      "Mode": "Auto"  
    },  
    {  
      "HourIndex": 5,  
      "Enable": false,  
      "Mode": "Auto"  
    },  
    {  
      "HourIndex": 6,  
      "Enable": false,  
      "Mode": "Auto"  
    },  
    {  
      "HourIndex": 7,  
      "Enable": false,  
      "Mode": "Auto"
```



```

},
{
    "HourIndex": 8,
    "Enable": false,
    "Mode": "Auto"
},
{
    "HourIndex": 9,
    "Enable": false,
    "Mode": "Auto"
},
{
    "HourIndex": 10,
    "Enable": false,
    "Mode": "Auto"
},
{
    "HourIndex": 11,
    "Enable": false,
    "Mode": "Auto"
},
{
    "HourIndex": 12,
    "Enable": false,
    "Mode": "Auto"
},
{
    "HourIndex": 13,
    "Enable": false,
    "Mode": "Auto"
},
{
    "HourIndex": 14,
    "Enable": false,
    "Mode": "Auto"
},
{
    "HourIndex": 15,
    "Enable": false,
    "Mode": "Auto"
},

```

```
{
  "HourIndex": 16,
  "Enable": false,
  "Mode": "Auto"
},
{
  "HourIndex": 17,
  "Enable": false,
  "Mode": "Auto"
},
{
  "HourIndex": 18,
  "Enable": false,
  "Mode": "Auto"
},
{
  "HourIndex": 19,
  "Enable": false,
  "Mode": "Auto"
},
{
  "HourIndex": 20,
  "Enable": false,
  "Mode": "Auto"
},
{
  "HourIndex": 21,
  "Enable": false,
  "Mode": "Auto"
},
{
  "HourIndex": 22,
  "Enable": false,
  "Mode": "Auto"
},
{
  "HourIndex": 23,
  "Enable": false,
  "Mode": "Auto"
}
],
```

```
"WED": [  
  {  
    "HourIndex": 0,  
    "Enable": false,  
    "Mode": "Auto"  
  },  
  {  
    "HourIndex": 1,  
    "Enable": false,  
    "Mode": "Auto"  
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```

```

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    {
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        "Enable": false,
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    }
]
}

```

38.4.2. Configure the NUC schedule

REQUEST

```
http://<Device IP>/stw-  
cgi/image.cgi?msubmenu=thermalnuc&action=set&DisplayEnable=True&DisplayPosit  
ion=LowerLeft&IntervalMode=Schedule&SUN.0.Enable=True&SUN.Enable=True&SUN.0.  
Mode=Auto&Channel=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: application/json
```

```
<Body>
```

```
{  
  "Response": "Success"  
}
```

Chapter 39. LP Capture Setup

39.1. Description

The **lpcapturesetup** guides you to an optimized camera installation angle when using license plate recognition on the road. Set the camera's height and road distance and move the camera to see the guided values.

NOTE | This chapter is applicable for cameras which have gyrosensor and support LPR feature.

Access level

Action	Camera
view	Admin
set	Admin
check	Admin

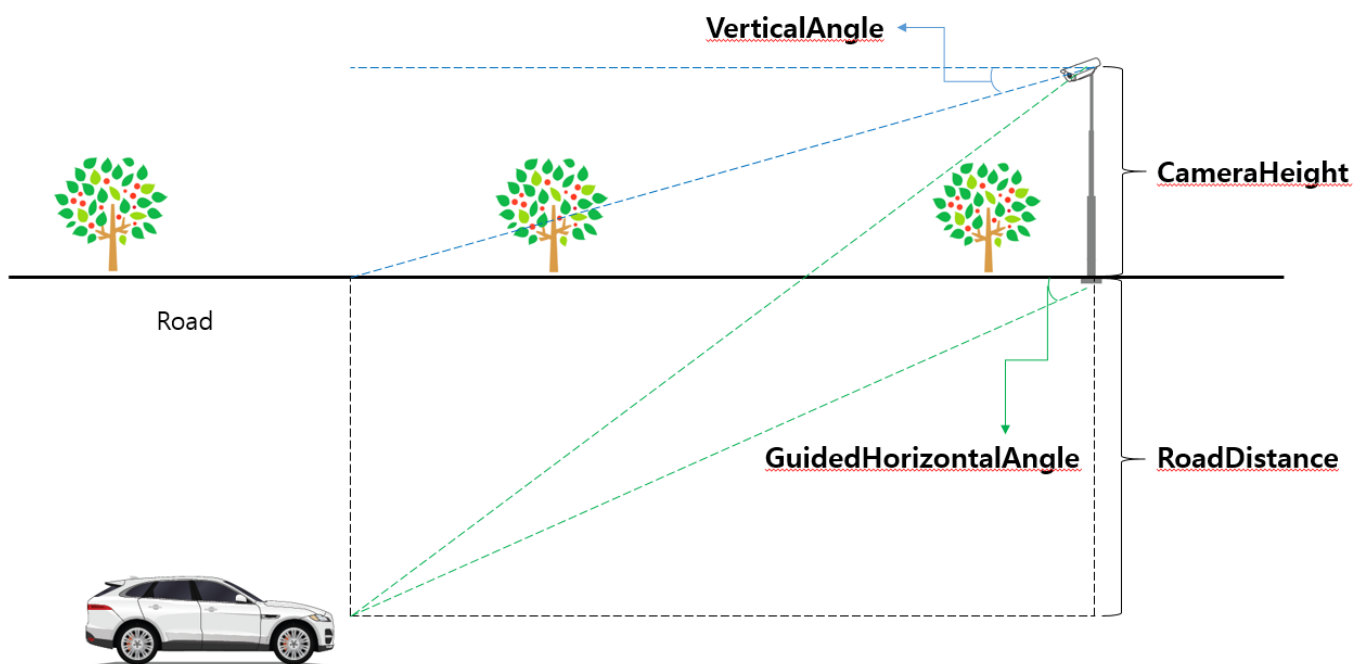
39.2. Syntax

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=
lpcapturesetup&action=<value>[&<parameter>=<value>]
```

39.3. Parameters

Action	Parameters	Request/ Response	Type/ Value	Description
set	CameraHeight	REQ,RES	<int>	Height(m) of camera
	RoadDistance	REQ,RES	<int>	Vertical distance(m) between car and camera. Check below picture for reference
check	VerticalAngle	RES	<int>	Vertical angle of the current camera position
	RollAngle	RES	<int>	Rotate angle of the current camera position
	GuidedHorizontalAngle	RES	<int>	The horizontal angle at which the camera should point at the vehicle. This value is calculated by CameraHeight, RoadDistance, and VerticalAngle. Check below picture for reference

Action	Parameters	Request/Response	Type/Value	Description
view	GuidedHorizontalAngleMin	RES	<int>	Minimum recommended value of the horizontal angle at which the camera is looking at the vehicle
	GuidedHorizontalAngleMax	RES	<int>	Maximum recommended value of the horizontal angle at which the camera is looking at the vehicle
	VerticalAngleMax	RES	<int>	Maximum recommended value of camera vertical angle
	VerticalAngleMin	RES	<int>	Minimum recommended value of camera vertical angle
	RollAngleMax	RES	<int>	Maximum recommended value of camera rotation angle
	RollAngleMin	RES	<int>	Minimum recommended value of camera rotation angle



39.4. Examples

39.4.1. Setting the camera height & RoadDistance

REQUEST

```
http://<Device IP>/stw-
cgi/image.cgi?msubmenu=lpcapturesetup&action=set&CameraHeight=5&RoadDistance
=5
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "Response": "Success"
}
```

39.4.2. Getting current vertical angle, roll angle and guided horizontal angle

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=lpcapturesetup&action=check
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
  "VerticalAngle": 20,
  "RollAngle": 5,
  "GuidedHorizontalAngle": 25,
}
```

39.4.3. Getting setting values & recommended values range

REQUEST

```
http://<Device IP>/stw-cgi/image.cgi?msubmenu=lpcapturesetup&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{  
  "CameraHeight": 5,  
  "RoadDistance": 5,  
  "GuidedHorizontalAngleMin": 0,  
  "GuidedHorizontalAngleMax": 30,  
  "VerticalAngleMin": 0,  
  "VerticalAngleMax": 30,  
  "RollAngleMin": 0,  
  "RollAngleMax": 15,  
}
```