

Attributes

SUNAPI

v2.6.2

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Contact Information

Hanwha Vision Co., Ltd.

Hanwha Vision 6, Pangyo-ro 319beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488, KOREA
www.hanwhavision.com

Hanwha Vision America

500 Frank W. Burr Blvd. Suite 43 Teaneck, NJ 07666
hanwhavisionamerica.com

Hanwha Vision Europe

Heriot House, Heriot Road, Chertsey, Surrey, KT16 9DT, United Kingdom
hanwhavision.eu

Hanwha Vision Middle East FZE

Jafza View 18, Office 2001-2003, Po Box 263572, Jebel Ali Free Zone, Dubai, United Arab Emirates
www.hanwhavision.com/ar

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Chapter 1. Overview

1.1. attributes.cgi

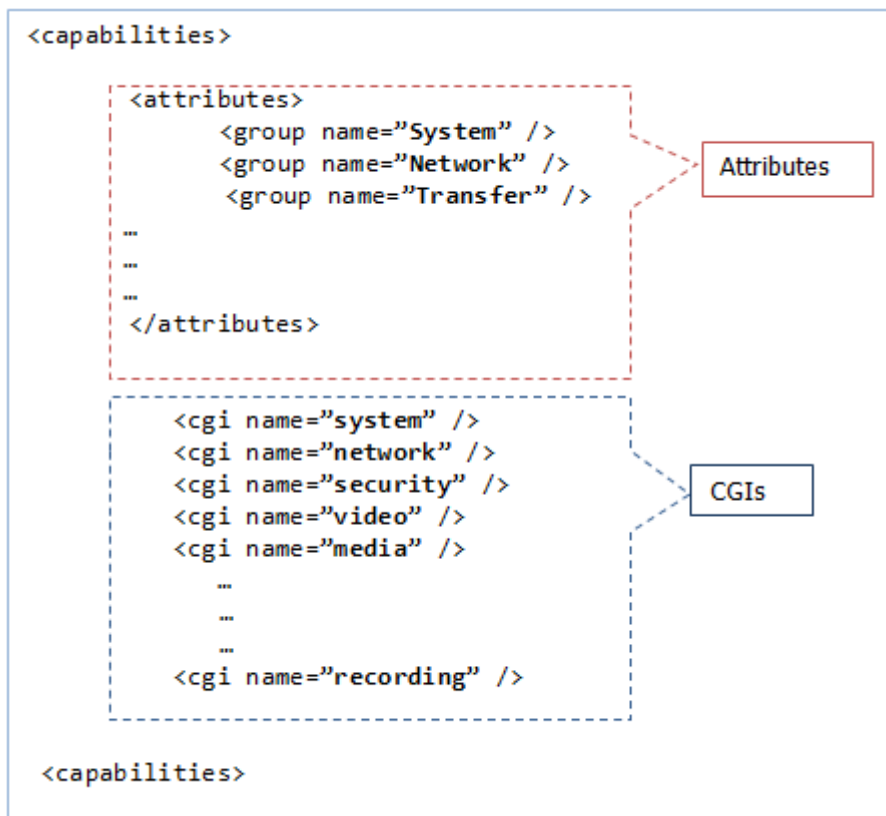
The attributes and capabilities of Hanwha Vision video surveillance devices are requested by using **attributes.cgi**.

The following CGI command returns device attributes and CGI information including parameters and allowed value ranges in XML format.

```
http://<Device IP>/stw-cgi/attributes.cgi
```

The XML contains two sections.

- attributes
- cgi



Each section can be requested separately. It will be explained in detail in Chapter 2 and Chapter 3.

Chapter 2. Attributes

2.1. Overview

The attributes section of the XML contains a few high-level attributes of the features that the device supports.

2.2. Attribute request

The following command returns only the attributes data.

```
http://<Device IP>/stw-cgi/attributes.cgi/attributes
```

2.3. Group and category

Attributes are grouped based on the relevant feature and the CGI that is used. The groups are organized by features and have names such as **System**, **Network**, **Transfer**, etc. Each group is further divided into the following categories:

- **Property:** Whether or not the attribute is supported by the device.
- **Support:** Whether or not the feature is supported.
- **Limit:** The limits of the device regarding the feature e.g. the number of video channels the device has or the maximum number of users it allows.

2.4. Example data

Below is the **attributes** part of the XML file.

The **attributes** part consists of groups such as System, Network, IO, etc. The System group has 3 categories: Property, Support, and Limit. It provides information such as the NIC count and the maximum number of channels (shown in the Limit category) as well as whether or not system configurations or firmware updates are supported (shown in the Support category).

```
<attributes>
```

```
<group name="System">
```

```
<category name="Property">
```

```
<attribute name="ISPVersion" type="bool" value="True" accesslevel="guest" />
```

```
<attribute name="PTZBoardVersion" type="bool" value="False"  
    accesslevel="guest" />
```

```
<attribute name="InterfaceBoardVersion" type="bool" value="False"  
    accesslevel="guest" />
```

```
...
```

```
</category>
```

```
<category name="Support">
```

```
<attribute name="ConfigRestore" type="bool" value="True" accesslevel="admin"/>
```

```
<attribute name="ConfigBackup" type="bool" value="True" accesslevel="admin" />
```

```
<attribute name="FWUpdate" type="bool" value="True" accesslevel="admin" />
```

```
...
```

```
...
```

```
</category>
```

```
<category name="Limit">
```

```
<attribute name="NICCount" type="int" value="1" accesslevel="guest" />
```

```
<attribute name="MaxChannel" type="int" value="1" accesslevel="guest" />
```

```
...
```

```
...
```

```
</category>
```

```
</group>
```

```

...
<group name="Network">
  <category name="Limit">
    <attribute name="MaxIPv4Filter" type="int" value="10" accesslevel="guest" />
  ...
  ...
</category>
</group>
...
<group name="IO">
  <category name="Limit">
    <attribute name="MaxAlarmOutput" type="int" value="1" accesslevel="suser" />
  ..
</category>
  <category name="Support">
    <attribute name="AlarmOutput" type="bool" value="True" accesslevel="suser" />
  ..
</category>
</group>
...
...
...
</attributes>

```

2.5. Attributes

The following is an attribute table.

2.5.1. System Group

Category	Attribute	Type	Access Level			
			Camera	NVR	Decoder	Encoder
Property	MicomVersion	bool		User	User	
	ISPVersion	bool	Guest			Guest
	PTZBoardVersion	bool	Guest			Guest
	InterfaceBoardVersion	bool	Guest			Guest
	TrackingVersion	bool	Guest			Guest
	BootLoaderVersion	bool	Guest			Guest
	ModelName	string	Guest	User	User	Guest
	ONVIFVersion	string	Guest	User	User	Guest
	SUNAPIVersion	string	Guest	User	User	Guest

Category	Attribute	Type	Access Level			
	FirmwareVersion	string	Guest	User	User	Guest
	ModelType	enum	Guest			
Support	GlobalConfiguration	bool		User	User	
	RS422	bool	Admin			Admin
	ConfigRestore	bool	Admin	Admin	Admin	Admin
	ConfigRestore.ExcludeGroups	enum	Admin	Admin	Admin	Admin
	ConfigRestore.ExcludeGroups.Network.Selectable	bool	Admin	Admin	Admin	Admin
	ConfigRestore.ExcludeGroups.Camera.Selectable	bool		Admin	Admin	
	ConfigRestore.ExcludeGroups.Authority.Selectable	bool		Admin	Admin	
	ConfigBackup	bool	Admin	Admin	Admin	Admin
	FWUpdate	bool	Admin	User	User	Admin
	Shutdown	bool		User	User	
	Restart	bool	Admin			Admin
	GPS	bool		User		
	AutoBackup	bool		User		
	DigitalSignage	bool		User		
	OpenSDK	bool	Admin			Admin
	FreeStyleSplitMode	bool			User	
	DisplayMerge	csv			User	
	SDCardEncryption	bool	Suser			
	FullDuplex	bool		User		
	OneOpenAppPerChannel	bool	Suser			
	SupportChannelExpansionFeature	bool	Guest			
	LogServer	bool	Admin	User		Admin
	AIFeatures	bool		User		
	AIEngine	bool		User		
	Stratocast	bool	Admin			
	HybridThermal	bool	Guest			
	ManufacturerChange	bool	Admin			
	SSDStorage	bool	Admin			

Category	Attribute	Type	Access Level			
	LocalVMS	bool	Admin			
	VirtualCropChannel	bool	Guest			
	MultiLanguageEventSchema	bool	Admin			
	LiveEventDisplay	bool		User		
	PowerMode	bool	Guest			
Limit	MaxHDMIOut	int	Guest			Guest
	NICCount	int	Guest	User	User	Guest
	MaxChannel	int	Guest	User	User	Guest
	MaxPOS	int		User		
	MaxVGAOut	int			User	
	MaxHDMIOut	int	ADMIN	User	User	ADMIN
	MaxHDMIIn	int			User	
	MaxLiveSession	int		User		
	MaxSearchSession	int		User		
	MaxBackupSession	int		User		
	OpenSDK.MaxApps	int	Admin			Admin
	MaxSSDStorage	int	Admin			
	MaxPartitionPerSSD	int	Admin			
	MaxAnalog	int		User		
	MaxVGASpotCount	int		User		
	MaxAnalogSpotCount	int		User		
	ChannelExpansionLimit	int	Guest			
	MaxAudioSubDevices	int	Guest			
	AMS ONLY MaxSpeakerGroups	int	Guest			

2.5.2. Network Group

Category	Attribute	Type	Access Level			
			Camera	NVR	Decoder	Encoder
Limit	MaxIPv4Filter	int	Guest	User	User	Guest
	MaxIPv6Filter	int	Guest	User	User	Guest
	MaxIPv4QoS	int	Guest	User	User	Guest

Category	Attribute	Type	Access Level			
	MaxIPv6QoS	int	Guest	User	User	Guest
	MaxNetCam	int		User		
	MaxSIPAccountCount	int	Guest			
	MaxRecipientCount	int	Guest			
	MaxRecipientInGroup	int	Guest			
Support	BandwidthControl	bool		User	User	
	POE	bool		User	User	
	WiFi	bool	Admin	User	User	Admin
	TUTK	bool		User	User	
	POEExtender	bool	Admin			
	MTUSize	bool	Guest			
	SIP	bool	Admin			
	DDNSP2P	bool		User		
	MQTT	bool	Admin			

2.5.3. Transfer Group

Category	Attribute	Type	Access Level			
			Camera	NVR	Decoder	Encoder
Support	SMTP	bool	Admin	User		Admin
	HTTP	bool	Admin	User		Admin
	FTP	bool	Admin	User		Admin
	DataServer	bool	Guest			
Limit	SMTP.MaxRecipients		Admin			Admin

2.5.4. Security Group

Category	Attribute	Type	Access Level			
			Camera	NVR	Decoder	Encoder
Limit	MaxAdditionalPasswords	int		User	User	
	MaxUser	int	Guest	User	User	Guest
	MaxGroup	int		Admin	Admin	
	MaxUserPerGroup	int		Admin	Admin	
	MaxSMTPGroup	int		User	User	
	MaxSMTPUser	int		User	User	

Category	Attribute	Type	Access Level			
	MaxSMTPUserPerGroup	int		User	User	
Support	AdminIDChangeable	bool	Admin	User	User	
	ClientCertificateAuthentication	bool	Admin			
	AdminAccess	bool	Admin			
	MaxSelfSignedCertificates	int	Guest			
	NewPasswordPolicy	bool	Guest			
	CurrentPasswordVerification	enum	User			

2.5.5. Media Group

Category	Channel	Attribute	Type	Access Level			
				Camera	NVR	Decoder	Encoder
Limit	Channel.#	MaxAudioInput	int	Guest	User	User	Guest
		MaxAudioOutput	int	Guest	User	User	Guest
		MaxProfile	int	Guest	User	User	Guest
		MaxResolution	enum	Guest			Guest
	StreamingMetadata		csv		User		
	StreamingProfiles		csv		User		
	MaxVideoOutput		int	Guest			
	MaxAudioInput		int	Guest			
Support	Channel.#	WiseStream	bool	Guest			Guest
		DynamicGOV	bool	Guest			Guest
		DynamicFPS	bool	Guest			
		Protocol.SUNAPI	bool		User	User	
		ChannelAudioOutput	bool		User	User	
		DeviceAudioOutput	bool	Suser			Suser
		MultiAudioOutput	Bool	Admin			Admin
		AudioIn	bool	Suser	User	User	Suser

Category	Channel	Attribute	Type	Access Level			
		VideoOut	bool	Suser			
		ATC	bool	Guest			Guest
		Crop	bool	Guest			Guest
		VideoEncodingType	enum	Guest	User	User	Guest
		AudioEncodingType	enum	Guest	User	User	Guest
		VideoSetting	bool	Admin			Admin
		ExactTimeStamp	bool	Guest			Guest
		Live	bool	Guest	User		Guest
		FixedProfileCodecChange	bool	Guest			Guest
		ShowNonVideoProfile	bool	Guest			Guest
		ProfileAddByIndex	bool	Admin			Admin
		Stream.UDP	bool	Guest	User		Guest
		Stream.TCP	bool	Guest	User		Guest
		Stream.Multicast	bool	Guest	User		Guest
		Stream.MulticastIPV6	bool	Guest			
		Stream.RTSPOverRTSPOverTCP	bool	Guest	User		Guest
		Stream.RTSPOverHTTP	bool	Guest	User		Guest
		Stream.RTSPOverHTTPS	bool	Guest	User		Guest
		Stream.MultiProfiles	bool		User		
		Stream.Metadata	bool		User		
		Stream.SRTP.UDP	bool	Guest			
		Stream.SRTP.TCP	bool	Guest			
		Stream.SRTP.Multicast	bool	Guest			
		Stream.SRTP.RTSPOverRTSPOverTCP	bool	Guest			
		Stream.SRTP.RTSPOverHTTP	bool	Guest			
		Stream.SRTP.RTSPOverHTTPS	bool	Guest			
		Stream.RTSPBlockSize	bool	Guest			
		Stream.BackchannelOverPost	bool		admin		
		Metadata.ImageType	csv	Guest			
		Metadata.ImageTransfer	bool	Guest			
		Metadata.ClassTypes	bool	Guest			

Category	Channel	Attribute	Type	Access Level			
		Metadata.ClassTypeDetails	bool	Guest			
		SensorCaptureMode	bool	Guest			
		DynamicPrivacyMask	bool	Guest			
	GlobalSensorMode		bool	Guest			
	MetadataShare		bool	Guest			
	DynamicPrivacyMask		bool	Guest			

2.5.6. Image Group

Category	Channel	Attribute	Type	Access Level			
				Camera	NVR	Decoder	Encoder
Limit	Channel.#	MaxSmartCodecArea	int	Guest			Guest
		MaxPrivacyMask	int	Guest			Guest
		MaxPrivacyMask.Rectangle	int	Guest			Guest
		MaxPrivacyMask.Polygon	int	Guest			Guest
		MaxOSDTitles	int	Guest			Guest
		MaxOSDDates	int	Guest			Guest
		ViewModes	int	Guest			Guest
		ViewModes.MaxActive	int	Guest			Guest
		MaxIRZoneCountInCeilingMode	int	Guest			
		MaxIRZoneCountInWallMode	int	Guest			
		MaxFocusPreset	int	Guest			
		MaxIRZoneCount	int	Guest			
Support	Channel.#	Defog	bool	Admin	User		Admin
		ProfileBasedDewarpedView	bool	Guest	User		Guest
		MultiImager	bool	Guest	User		Guest
		OSDLanguages	csv	Guest			Guest

Category	Channel	Attribute	Type	Access Level			
		Gamma	bool	Admin			Admin
		Saturation	bool	Admin			Admin
		Sharpness	bool	Admin			Admin
		Brightness	bool	Admin			Admin
		ResetFocus	bool		User		
		SimpleFocus	bool		User		
		SimpleFocus.FocusArea	bool	Admin			Admin
		PrivacyMask.ZoomThreshold	bool	Suser			Admin
		Privacy.MaskColor.Global	bool	Suser			Admin
		FocusAdjust	bool	Admin			
		ZoomAdjust	bool	Admin			
		IRLED	bool	Admin			
		ZoneBasedIRLED	bool	Guest			
		DIS	bool	Admin			
		P-Iris	bool	Admin			
		DayNight	bool	Admin			
		FisheyeLens	bool	Guest	User		
		DewarpedView	bool	Guest	User		
		ThermalFeatures	bool	Guest			
		PTRZ	bool	Suser			
		ViewModes.360Panorama	bool	Guest			
		ViewModes.360Panorama.Sub Views	int	Guest			
		ViewModes.360Panorama.PTZ	bool	Guest			
		ViewModes.360Panorama.PTZ .Features	csv	Guest			
		ViewModes.OneOverviewAndT ripleView	bool	Guest			
		ViewModes.OneOverviewAndT ripleView.SubViews	int	Guest			
		ViewModes.OneOverviewAndT ripleView.PTZ	bool	Guest			

Category	Channel	Attribute	Type	Access Level			
		ViewModes.OneOverviewAndTripleView.PTZ.Features	csv	Guest			
		ViewModes.OneOverviewAndOctaView	bool	Guest			
		ViewModes.OneOverviewAndOctaView.SubViews	int	Guest			
		ViewModes.OneOverviewAndOctaView.PTZ	bool	Guest			
		ViewModes.OneOverviewAndOctaView.PTZ.Features	csv	Guest			
		ViewModes.Overview	bool	Guest			
		ViewModes.Overview.SubViews	int	Guest			
		ViewModes.Overview.PTZ	bool	Guest			
		ViewModes.Overview.PTZ.Features	csv	Guest			
		ViewModes.LeftHalfView	bool	Guest			
		ViewModes.LeftHalfView.SubViews	int	Guest			
		ViewModes.LeftHalfView.PTZ	bool	Guest			
		ViewModes.LeftHalfView.PTZ.Features	csv	Guest			
		ViewModes.RightHalfView	bool	Guest			
		ViewModes.RightHalfView.SubViews	int	Guest			
		ViewModes.RightHalfView.PTZ	bool	Guest			
		ViewModes.RightHalfView.PTZ.Features	csv	Guest			
		ViewModes.SingleView	bool	Guest			
		ViewModes.SingleView.SubViews	int	Guest			
		ViewModes.SingleView.PTZ	bool	Guest			
		ViewModes.SingleView.PTZ.Features	csv	Guest			
		ViewModes.QuadView	bool	Guest			

Category	Channel	Attribute	Type	Access Level			
		ViewModes.QuadView.SubViews	int	Guest			
		ViewModes.QuadView.PTZ	bool	Guest			
		ViewModes.QuadView.PTZ.Features	csv	Guest			
		ViewModes.QuadView.#	bool	Guest			
		ViewModes.QuadView..#.SubViews	int	Guest			
		ViewModes.QuadView..#.PTZ	bool	Guest			
		ViewModes.QuadView..#.PTZ.Features	csv	Guest			
		ViewModes.Panorama	bool	Guest			
		ViewModes.Panorama.SubViews	int	Guest			
		ViewModes.Panorama.PTZ	bool	Guest			
		ViewModes.Panorama.PTZ.Features	csv	Guest			
		ViewModes.DoublePanorama	bool	Guest			
		ViewModes.DoublePanorama.SubViews	int	Guest			
		ViewModes.DoublePanorama.PTZ	bool	Guest			
		ViewModes.DoublePanorama.PTZ.Features	csv	Guest			
		ViewModes.CropView	bool	Guest			
		ViewModes.CropView.SubViews	int	Guest			
		ViewModes.CropView.PTZ	bool	Guest			
		ViewModes.CropView.PTZ.Features	csv	Guest			
		NormalizedOSDRange	bool	Guest			Guest
		AutoImageAlignmentSupport	bool	Guest			
		ImageSettings	bool	Admin			
		Iris	bool	Admin			
		Iris-Fno	bool	Admin			

Category	Channel	Attribute	Type	Access Level			
		LDC	bool	Admin			
		Crop	bool	Admin			
		DynamicArea	bool	Guest			
		AutoFocus	bool	Admin			
		DirectionIndicator	bool	Suser			
		OSDArrow	bool	Suser			
		Contrast	bool	Admin			
		WhiteBalance	bool	Admin			
		BackLight	bool	Admin			
		DayNightSwitchThresholdAdjust	bool	Admin			
		XCE	bool	Admin			
		FocusContinuousAdjust	bool	Admin			
		ZoomContinuousAdjust	bool	Admin			
		AntiFlicker	bool	Guest			
		AGC	bool	Guest			
		ShutterControl	bool	Guest			
		ThermalVariationSensitivity	bool	Guest			
		FocusPreset	bool	Guest			
		HorizontalFlip	bool	Guest			
		VerticalFlip	bool	Guest			
		Rotate	enum	Guest			
		UnifiedFlip	bool	Guest			
		RotateAndLDCIncompatible	bool	Admin			
		RotateAndVideoOutIncompatible	bool	Admin			
		PrivacyIndexReorder	bool	Guest			
		ImageAlignment	csv	Guest			
		ThermalNUC	bool	Guest			
		PrivacyAndDISIncompatible	bool	Admin			
	GlobalRotateView		bool	Guest			

Category	Channel	Attribute	Type	Access Level			
	GlobalLD CMode		bool	Guest			
	GlobalMaskPattern		bool	Guest			
	GlobalMultiImageOSD		bool	Guest			

2.5.7. PTZSupport Group

Category	Channel	Attribute	Type	Access Level			
				Camera	NVR	Decoder	Encoder
Support	Channel.#	Preset	Bool	Suser	User	User	Suser
		Swing	Bool	Suser	User	User	Suser
		Group	Bool	Suser	User	User	Suser
		DigitalZoom	Bool	Suser			Suser
		Trace	bool	Suser	User	User	Suser
		AutoRun	bool	Suser	User	User	Suser
		Home	bool	Suser	User	User	Suser
		Tour	bool	Suser	User	User	Suser
		PresetRename	bool	Admin	User	User	Admin
		PTZLimit	bool	Admin	User	User	Admin
		AreaZoom	bool	Suser	User	User	Suser
		Query.Pan	bool	Suser	User	User	Suser
		Query.Tilt	bool	Suser	User	User	Suser
		Query.Zoom	bool	Suser	User	User	Suser
		Query.Focus	bool	Suser	User	User	Suser
		Query.Iris	bool	Suser	User	User	Suser
		OSDMenu.On	bool	Admin	User	User	Admin
		OSDMenu.Off	bool	Admin	User	User	Admin
		OSDMenu.Up	bool	Admin	User	User	Admin
		OSDMenu.Down	bool	Admin	User	User	Admin

Category	Channel	Attribute	Type	Access Level			
		OSDMenu.Right	bool	Admin	User	User	Admin
		OSDMenu.Left	bool	Admin	User	User	Admin
		OSDMenu.Select	bool	Admin	User	User	Admin
		OSDMenu.Return	bool	Admin	User	User	Admin
		Absolute.Pan	bool	Suser	User	User	Suser
		Absolute.Tilt	bool	Suser	User	User	Suser
		Absolute.Zoom	bool	Suser	User	User	Suser
		Absolute.Focus	bool	Suser	User	User	Suser
		Absolute.Iris	bool	Suser	User	User	Suser
		Absolute.PanSpeed	bool	Suser	User	User	Suser
		Absolute.TiltSpeed	bool	Suser	User	User	Suser
		Absolute.ZoomSpeed	bool	Suser	User	User	Suser
		Continuous.Pan	bool	Suser	User	User	Suser
		Continuous.Tilt	bool	Suser	User	User	Suser
		Continuous.Zoom	bool	Suser	User	User	Suser
		Continuous.Focus	bool	Suser	User	User	Suser
		Continuous.Iris	bool	Suser	User	User	Suser
		Continuous.PanSpeed	bool	Suser	User	User	Suser
		Continuous.TiltSpeed	bool	Suser	User	User	Suser
		Continuous.ZoomSpeed	bool	Suser	User	User	Suser
		Relative.Pan	bool	Suser	User	User	Suser
		Relative.Tilt	bool	Suser	User	User	Suser
		Relative.Zoom	bool	Suser	User	User	Suser
		Relative.Focus	bool	Suser	User	User	Suser
		Relative.Iris	bool	Suser	User	User	Suser
		3AxisPTZ	bool	Suser	User	User	Suser
		Azimuth	bool	Suser			Suser
		ProfileBasedDigitalPTZ	bool	Suser			
		DigitalAutoTracking	bool	Suser	User	User	Suser
		DigitalPTZ	bool	Suser	User	User	Suser
		ExternalPTZ	bool	Suser			Suser
		RealPTZ	bool	Suser			Suser

Category	Channel	Attribute	Type	Access Level			
		ZoomOnly	bool	Suser			Suser
		AuxCommands	csv	Suser	User	User	
		PanTiltOnly	bool	Suser			
		PanZeroPosition	bool	Suser			
		SmartZoom	bool	Suser			
		PTCorrection	bool	Suser			
		AIAutoTracking	bool	Suser			
		PresetImageConfig	bool	Suser			
		PresetVideoAnalysis	bool	Suser			
		MountPosition	bool	Suser			
	GlobalPTZMode		bool	Suser			
	DigitalRTZOnlyInDefaultSettings		bool	Suser			
Limit	Channel.#	MaxPreset	int	Guest	User	User	Guest
		MaxGroupCount	int	Guest	User	User	Guest
		MaxTourCount	int	Guest	User	User	Guest
		MaxTraceCount	int	Guest	User	User	Guest
		MaxPresetCountPerGroup	int	Guest	User	User	Guest
		MaxGroupCountPerTour	int	Guest	User	User	Guest

2.5.8. Recording Group

Category	Channel or Attribute	Attribute	Type	Access Level			
				Camera	NVR	Decoder	Encoder
Support	Channel.#	QueueManagement	bool	Admin			
		SearchVideoSummary	bool		User		
		Backup	bool	Admin	User		
		SearchCalendar	bool	Admin	User		

Category	Channel or Attribute	Attribute	Type	Access Level			
		SearchTimeline	bool	Admin	User		
		SearchEvent	bool	Admin	User		
		SearchMotionGrid	bool		User		
		PeopleCountSearch	bool	Admin			
		SmartSearch	bool		User		
		SearchHeatMap	bool		User		
		AISearchTypes	csv		User		
		SearchBookmark	bool		User		
	SearchMetadata		bool		User		
	ContinuousPlayNVR		bool		User		
	RecordStreamLimitation		bool	Guest			
	RAID		bool		User		
	FailOverRecording		bool		User		
	SearchPOS		bool		User		
	SearchPeriod		bool		User		
	Recording		bool	Admin	User		
	ManualRecordingStart		bool		User		
	ManualRecordingStop		bool		User		
	RecordingStatus		bool	Admin	User		
	Overlapped		bool	Admin	User		
	PlaybackType		enum	Admin	User		
	PlaybackSpeed		enum	Admin	User		
	NAS		bool	Admin			
	iSCSI		bool	Admin	User		
	SearchByUTCTime		bool	Admin	User		
	HeatMapGridArea		string		User		
	RecordPriorityOrder		csv		User		
	DualTrackRecording		bool		Guest		

Category	Channel or Attribute	Attribute	Type	Access Level			
	DiskUtility		csv		User		
	DistributedRecording		bool		User		
	GlobalRecordFileType		bool	Guest			
Limit	MaxPlaybackChannels		int		User		
	MaxSmartSearchDays		int		User		
	MaxMetadataSearchDays		int		User		
	MaxSmartSearchIncludeAreas		int		User		
	MaxSmartSearchExcludeAreas		int		User		
	MaxSmartSearchLines		int		User		
	NumberOfStorageDevices		int	Admin	User		
	PreferRecordingCodec		enum	Admin			
	RecordingGOVLengthMultiplierFactor		float	User			

2.5.9. EventSource Group

Category	Channel or Attribute	Attribute	Type	Access Level			
				Camera	NVR	Decoder	Encoder
Limit	Channel.#	MaxROI.Include	int	Guest			Guest
		MaxROI.Exclude	int	Guest			Guest
		MaxIVRule.Area.Include	int	Guest			Guest
		MaxIVRule.Area.Exclude	int	Guest			Guest
		MaxIVRule.Line	int	Guest			Guest

Category	Channel or Attribute	Attribute	Type	Access Level			
		MaxFaceDetection.Area.Include	int	Guest			Guest
		MaxFaceDetection.Area.Exclude	int	Guest			Guest
		MaxParkingArea	int	Guest			
		MaxExcludeParkingArea	int	Guest			
	MaxQueues		int	Guest			Guest
	MaxPeopleCountRule		int	Guest			
	MaxHeatMap.Area.Exclude		int	Guest			
	MaxROI		int	Guest			Guest
	MaxFaceDetectionArea		int	Guest			Guest
	MaxTamperingDetectionArea		int	Guest			Guest
	MaxTrackingArea		int	Guest			Guest
	MaxAlarmInput		int	Guest	User	User	Guest
	MaxNetworkAlarmInput		int		User	User	
	MaxIVRule		int	Guest			Guest
	MaxIVRule.Line		int	Guest			Guest
	MaxIVRule.Area		int	Guest			Guest
	ROICoordinate.MinX		int	Guest			Guest
	ROICoordinate.MinY		int	Guest			Guest
	ROICoordinate.MaxX		int	Guest			Guest
	ROICoordinate.MaxY		int	Guest			Guest
	MaxIVRule.Area.Include		int	Guest			Guest
	MaxIVRule.Area.Exclude		int	Guest			Guest

Category	Channel or Attribute	Attribute	Type	Access Level			
	MaxROI.Include		int	Guest			Guest
	MaxROI.Exclude		int	Guest			Guest
	MaxCoordinate.DefinedArea.AppearDisappear		int	Guest			Guest
	MaxCoordinate.DefinedArea.Entering		int	Guest			Guest
	MaxCoordinate.DefinedArea.Exiting		int	Guest			Guest
	MaxHeatMapLevel		int	Guest			Guest
	MaxBoxTemperatureDetectionArea		int	Guest			
	MaxBodyTemperatureDetectionArea		int	Guest			
	MaxDTMFCodeCount		int	Guest			
	MaxDynamicRule		int	Admin			
	MaxDynamicRule.EventSource		int	Admin			
	MaxScheduleCount		int	Admin			
	MaxMQTTMessageCount		int	Admin			
	MaxMQTTSubscriptionCount		int	Admin			
	MaxAudioFiles AMS ONLY		int	Guest			
	MaxTTSFiles AMS ONLY		int	Guest			
Support	Channel.#	VideoAnalytics	csv	Guest	User	User	Guest
		AudioAnalytics	csv	Guest	User	User	Guest
		ThermalGridArea	string	Admin			Admin
		IVRule	bool	Admin			Admin
		GetIVRule	bool	Admin			Admin
		OverlayIVRule	bool	Guest			Guest

Category	Channel or Attribute	Attribute	Type	Access Level			
		AdjustMDIVRuleOnFlipMirror	bool	Guest			Guest
		ObjectDetection	bool	Guest	Admin		
		ObjectTypes	csv		Admin		
		ObjectDetection.EventActions	csv	Guest			
		FaceDetection	bool	Guest			Guest
		HeadDetection	bool	Guest			
		FaceDetection.EventActions	csv	Guest			Guest
		Tracking	bool	Guest			Guest
		Tracking.EventActions	csv	Guest			Guest
		Metadata	bool	Admin	User	User	Admin
		AdvancedMotionDetection	bool		User	User	
		BodyTemperatureDetection	bool	Guest			
		BodyTemperatureDetection.EventActions	csv	Guest			
		BoxTemperatureDetection	bool	Guest			
		TamperingDetection.DarknessDetection	bool	Guest			
		MaskDetection	bool	Guest			
		MaskDetection.EventActions	csv	Guest			
		ParkingDetection	bool	Guest			
		ParkingDetection.EventActions	csv	Guest			
		LEDIndicator	bool	Guest			
		LEDIndicator.SourceChannel	csv	Guest			
		CallRequest	bool	Guest			

Category	Channel or Attribute	Attribute	Type	Access Level			
		CallRequest.EventActions	csv	Guest			
		TamperingSwitch	bool	Guest			
		TamperingSwitch.EventActions	csv	Guest			
		DTMF	bool	Guest			
		DTMF.EventActions	csv	Guest			
		ProximitySensor	bool	Guest			
		ProximitySensor.EventActions	csv	Guest			
		SocialDistancingViolation	bool	Guest			
		SocialDistancingViolation.EventActions	csv	Guest			
	ROIType		enum	Admin			Admin
	TamperingDetection		bool	Guest			Guest
	NetworkAlarmInput		bool		User	User	
	AlarmInput		bool	Guest	User	User	Guest
	AlarmOutput		bool	Guest	User	User	Guest
	AudioDetection		bool	Guest	User	User	Guest
	UserInput		bool	Guest			Guest
	UserInput.EventActions		csv	Guest			Guest
	NetworkDisconnect		bool	Guest	User	User	Guest
	VideoLoss		bool		User	User	
	VA.Passing		bool	Guest			Guest
	VA.Enter		bool	Guest			Guest
	VA.Exit		bool	Guest			Guest
	VA.Appear		bool	Guest			Guest
	VA.Disappear		bool	Guest			Guest
	VA.MotionDetection		bool	Guest			Guest
	VA.MotionDetection.Overlay		bool	Guest			Guest

Category	Channel or Attribute	Attribute	Type	Access Level			
	VA.MotionDetection.ObjectSize		bool	Guest			Guest
	VA.AppearDisappearanceType		enum	Admin			Admin
	VA.Intrusion		bool	Guest			Guest
	VA.Loitering		bool	Guest			Guest
	TamperingDetection.EventActions		csv	Guest	User	User	Guest
	AlarmInput.EventActions		csv	Guest	User	User	Guest
	AudioDetection.EventActions		csv	Guest	User	User	Guest
	NetworkDisconnect.EventActions		csv	Guest	User	User	Guest
	VideoLoss.EventActions		csv	Guest	User	User	Guest
	VA.MotionDetection.EventActions		csv	Guest	User	User	Guest
	Timer		bool	Guest			Guest
	Timer.EventActions		csv	Guest			Guest
	DefocusDetection		bool	Guest			Guest
	DefocusDetection.EventActions		csv	Guest	User	User	Guest
	OpenSDK		bool	Guest			Guest
	OpenSDK.EventActions		csv	Guest			Guest
	FogDetection		bool	Guest			Guest
	FogDetection.EventActions		csv	Guest	User	User	Guest
	TemperatureChangeDetection		bool	Guest			Guest
	TemperatureChangeDetection.EventActions		csv	Guest			Guest
	ShockDetection		bool	Guest			Guest

Category	Channel or Attribute	Attribute	Type	Access Level			
	ShockDetection.EventActions		csv	Guest			Guest
	AudioAnalysis		bool	Guest			Guest
	WaterLevelWarning		bool	Guest			
	HousingTampering		bool	Guest			
	BoxTemperatureDetection.EventActions		csv	Guest			
	BodyTemperatureDetection		bool	Guest			
	BodyTemperatureDetection.EventActions		csv	Guest			
	TamperingDetection.DarknessDetection		bool	Guest			
	ChannelBasedROICoordinate		bool	Guest			
	GlobalAudioDetection		bool	Guest			
	GlobalAudioAnalysis		bool	Guest			
	CallRequest		bool	Guest			
	CallRequest.EventActions		csv	Guest			
	TamperingSwitch		bool	Guest			
	TamperingSwitch.EventActions		csv	Guest			
	DTMF		bool	Guest			
	DTMF.EventActions		csv	Guest			
	ProximitySensor		bool	Guest			
	ProximitySensor.EventActions		csv	Guest			
	DynamicRule		bool	Admin			

2.5.10. IO Group

Category	Attribute	Type	Access Level			
			Camera	NVR	Decoder	Encoder
Limit	MaxAlarmOutput	int	Guest	User	User	Guest
	MaxAux	int	Guest	User	User	Guest
	MaxConfigurableIO	bool	Guest			
Support	AlarmOutput	bool	Suser	User	User	Suser
	Aux	bool	Suser	User	User	Suser
	RS485	bool	Suser	User		Suser
	AlarmReset	bool	Admin	User		Admin
	PowerRelayIndices	int	Suser			
	ConfigurableIO	bool	Suser			

Chapter 3. CGI

3.1. Overview

Each CGI part of the XML represents the submenus, actions and parameters available in the corresponding CGI. The XML data contains the parameter data type, allowed ranges/values and type of parameter (request/response).

The following command returns only the cgi part of the XML.

```
http://<Device IP>/stw-cgi/attributes.cgi/<cgi name>
```

3.2. Examples

The following example shows a request for only the system-related submenus and parameters of the device.

REQUEST

```
http://<Device IP>/stw-cgi/attributes.cgi/system
```

RESPONSE

```
HTTP Code: 200 OK  
Content-Type: text/xml  
<Body>
```

```

<cgi name="system">
<submenu name="deviceinfo">
  <action name="view" accesslevel="guest">
    <parameter name="Model" request="false" response="true">
      <dataType>
        <string maxlen="31" />
      </dataType>
    </parameter>
    <parameter name="FirmwareVersion" request="false" response="true">
      <dataType>
        <string maxlen="15" />
      </dataType>
    </parameter>
    ...
  </action>
  <action name="set" accesslevel="admin">
    <parameter name="DeviceName" request="true" response="true">
      <dataType>
        <string maxlen="8" />
      </dataType>
    </parameter>
    <parameter name="Language" request="true" response="true">
      <dataType>
        <enum>
          <entry value="English" />
          <entry value="Korean" />
          ...
        </enum>
      </dataType>
    </parameter>
  </action>
  ...
</submenu>

```

```

<submenu name="date">
  <action name="view" accesslevel="guest">
    <parameter name="LocalTime" request="false" response="true">
      <dataType>
        <string format="YYYY-MM-DD hh:mm:ss"/>
      </dataType>
    </parameter>
    ...
  </action>
  <action name="set" accesslevel="admin">
    <parameter name="SyncType" request="true" response="true">
      <dataType>
        <enum>
          <entry value="NTP"/>
          <entry value="Manual"/>
        </enum>
      </dataType>
    </parameter>
    <parameter name="NTPURLList" request="true" response="true">
      <dataType>
        <csv>
          <entry value="MaxEntries=5"/>
        </csv>
      </dataType>
    </parameter>
    ...
  </action>
  ...
</submenu>
<submenu name="systemlog">
  ...
</submenu>
...
</cgi>

```