

Introduction

SUNAPI

v2.6.2

2023-04-07



Copyright

© 2023 Hanwha Vision Co., Ltd. All rights reserved.

Restriction

Do not copy, distribute, or reproduce any part of this document without written approval from Hanwha Vision Co., Ltd.

Disclaimer

Hanwha Vision Co., Ltd. has made every effort to ensure the completeness and accuracy of this document, but makes no guarantee as to the information contained herein. All responsibility for proper and safe use of the information in this document lies with users. Hanwha Vision Co., Ltd. may revise or update this document without prior notice.

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

Table of Contents

1. Introduction to SUNAPI	4
1.1. Overview	4
1.2. SUNAPI Command Structure	5
1.2.1. Syntax	5
1.2.2. Submenus	5
1.2.3. Actions	6
1.3. Response Format	6
1.4. Examples	6
1.4.1. Example of the View Action	6
1.4.2. Example of the Set Action	8
1.4.3. Note on Sample Requests & Responses	10
1.5. Access level	10
1.6. Authentication	10
1.7. Index numbers	10
1.8. Error codes	10
1.9. Special HTTP Error codes	14
1.10. Style Conventions on SUNAPI Reference	15
1.10.1. Syntax	15
1.10.2. Parameters	15
1.11. Support	16
2. Revision History	17
2.1. Version 2.6.2	17
2.2. Version 2.6.1	19
2.3. Version 2.6.0	20
2.4. Version 2.5.9	21
2.5. Version 2.5.8	23
2.6. Version 2.5.7	25
2.7. Version 2.5.6	28
2.8. Version 2.5.5	30
2.9. Version 2.5.4	32
2.10. Version 2.5.3	35
2.11. Version 2.5.2	39
2.12. Version 2.5.1	41
2.13. Version 2.5.0	44
2.14. Version 2.4.3	46
2.15. Version 2.4.2	47

2.16. Version 2.4.1 48

2.17. Version 2.4.0 49

2.18. Version 2.3.2 51

2.19. Version 2.3.1 53

2.20. Version 2.3.0 54

2.21. Version 2.2.1 55

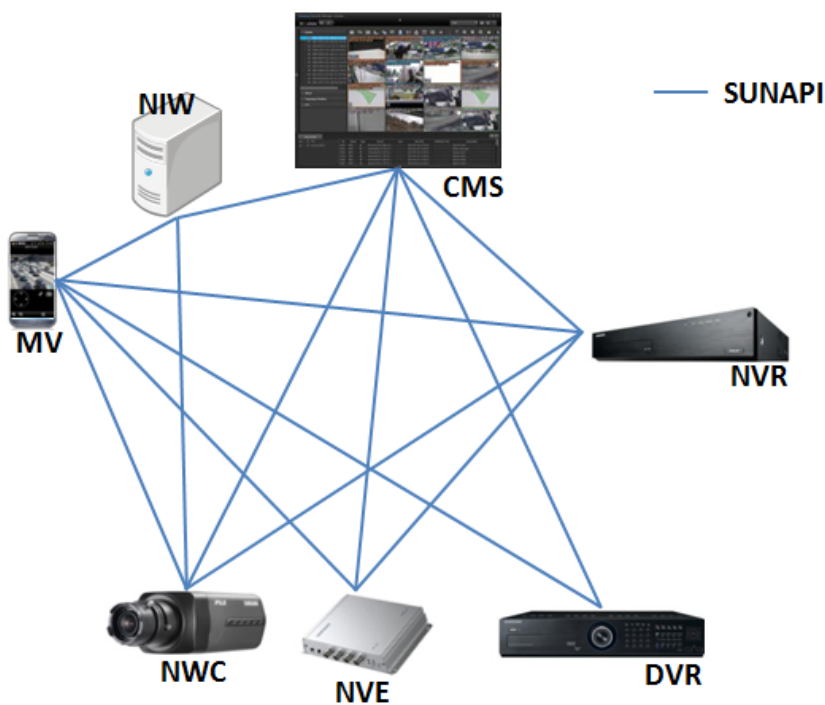
2.22. Version 2.0.0 61

Chapter 1. Introduction to SUNAPI

1.1. Overview

The Smart Unified Network API (SUNAPI) provides a single, seamless interface for controlling and configuring the various products which make up a networked video security system. It can integrate products such as network cameras, storage devices (NVR and DVR), encoders and central monitoring software (CMS), including both Hanwha Vision products and products from other third-party vendors.

SUNAPI allows you to access product features by simply entering standard HTTP URLs. The URLs pass variables to SUNAPI's CGI, which interfaces with the specific product. This simplified interface system makes it possible for central monitoring software to access the features of a diverse set of products in a standardized way. This makes SUNAPI a valuable tool for developers of central monitoring software and other network video applications.



SUNAPI provides CGIs to perform the following functions:

- System configuration: system.cgi configures general system settings and performs factory resets to restore the system. It can also view system logs, event logs and access logs.
- Network management: network.cgi sets up the network which connects the video security products. It configures IP, DNS, DDNS and other settings.
- Security management: security.cgi sets up security features such as RTSP, SSL and IP address filtering (which allows only authorized addresses to connect). It also sets up systems users and configures their access permissions.
- Video streaming: video.cgi requests http retrieval of JPG images or MJPEG stream, and media.cgi configures profiles, which include video/audio codec settings, audio input/output settings, etc.

- Image adjustment: image.cgi configures camera features such as BLC, privacy, white balance, exposure and OSD.
- Server settings: transfer.cgi configures the FTP and SMTP server settings for transferring event video and images.
- Event monitoring and handling: eventsource.cgi, eventrules.cgi, and eventstatus.cgi manage events such as motion detection, face detection and tampering.
- PTZ control: ptzcontrol.cgi and ptzconfig.cgi manage the camera's pan, tilt and zoom and detail configuration.
- Searching stored data: recording.cgi configures recording schedules and related settings. It also provides an interface to search recorded videos.
- Open SDK installation: opensdk.cgi installs and manages the Open SDK application.

1.2. SUNAPI Command Structure

SUNAPI commands are HTTP URLs. Each URL specifies the target device's IP address and the CGI which provides the command. This is followed by a query string which specifies the command's submenu, action and parameters.

1.2.1. Syntax

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

Device IP address CGI name Submenu Action Parameter

The following is an example of a device information request:

```
http://192.168.0.100/stw-cgi/system.cgi?msubmenu=deviceinfo&action=view
```

The text in the URL command is case-sensitive. For example, if you type **msubmenu=DeviceInfo** instead of **msubmenu=deviceinfo**, an error message will be generated.

To set a port number, add a colon after the IP address and enter the number in the format of <Device IP>:<Port Number> as in the example below.

```
http://192.168.0.100:20/stw-cgi/system.cgi?msubmenu=deviceinfo&action=view
```

NOTE

For NVR, a channel number is mandatory wherever it is applicable.

1.2.2. Submenus

Each CGI is divided into submenus which perform specific functions. For example, **system.cgi** has submenus such as **deviceinfo**, which sets up product information, and **date**, which sets the date. In the

SUNAPI syntax, the submenu is specified in the query string by assigning a value to the 'msubmenu' variable. For example, msubmenu=deviceinfo.

1.2.3. Actions

An action must be specified for each SUNAPI command. SUNAPI offers the following action types:

- view: Requests the current setting information.
Generally, the **view** action does not take parameters, and returns only response parameters and values, which are marked as **RES** on the parameter table in the SUNAPI reference document. In some cases, the view action does take request parameters.
- set: Specifies new settings with new parameters.
- control: Controls data settings.
- update: Updates existing parameters with new values. updates the current data. The **update** and **add** actions are used instead of the **set** action to add or modify list data such as the user list data or the IP filtering list data.
- add: Adds new parameters.
- install: Installs data.
- remove: Deletes the existing parameters.

1.3. Response Format

A SUNAPI response is in text format for all the commands, except for the attributes response, which is in XML format. From SUNAPI version 2.5 onwards two types of response format (Text and JSON) are supported; by default, the response format will be text and if the request has special header (Accept: application/json) the response will be in JSON format.

1.4. Examples

Below are Examples for getting and setting information.

1.4.1. Example of the View Action

To get device information, the following request is used:

REQUEST

```
http://192.168.0.100/stw-cgi/system.cgi?msubmenu=deviceinfo&action=view
```

ACTUAL REQUEST MESSAGE

For the default request as shown below, the response will be in text format.

```
GET /stw-cgi/system.cgi?msubmenu=deviceinfo&action=view HTTP/1.1
User-Agent: xxxxx
```

Host: 192.168.0.100

Accept: */*

For a request in the format below, the response will be in JSON format from SUNAPI 2.5 onwards.

JSON REQUEST MESSAGE

GET /stw-cgi/system.cgi?msubmenu=deviceinfo&action=view HTTP/1.1

User-Agent: XXXXXX

Host: 192.168.0.100

Accept: application/json

The following response will be sent:

TEXT RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain

<Body>

Model=XNF-9010RV

SerialNumber=ZLNA70GKA0001JZ

FirmwareVersion=2.01.00_20200721_R201

BuildDate=2020.07.21

WebURL=http://www.hanwhavision.com/

DeviceType=NWC

ConnectedMACAddress=00:09:18:5B:BD:3A

ISPVersion=1.00_200721

BootloaderVersion=ver=U-Boot 2020.07-svn2693 (Jul 21 2020 - 18:09:00

CGIVersion=2.5.7

ONVIFVersion=19.12

DeviceName=Camera

DeviceLocation=Location

DeviceDescription=Description

Memo=Memo

Language=English

PasswordStrength=Strong

OpenSDKVersion=4.00_200702

FirmwareGroup=XNF-9010RV

JSON RESPONSE

```
{
  "Model": "XNF-9010RV",
  "SerialNumber": "ZLNA70GKA0001JZ",
  "FirmwareVersion": "2.01.00_20200721_R201",
  "BuildDate": "2020.07.21",
  "WebURL": "http://www.hanwhavision.com/",
  "DeviceType": "NWC",
  "ConnectedMACAddress": "00:09:18:5B:BD:3A",
  "ISPVersion": "1.00_200721",
  "BootloaderVersion": "ver=U-Boot 2020.07-svn2693 (Jul 06 2020 - 18:09:00",
  "CGIVersion": "2.5.7",
  "ONVIFVersion": "19.12",
  "DeviceName": "Camera",
  "DeviceLocation": "Location",
  "DeviceDescription": "Description",
  "Memo": "Memo",
  "Language": "English",
  "PasswordStrength": "Strong",
  "OpenSDKVersion": "4.00_200702",
  "FirmwareGroup": "XNF-9010RV"
}
```

1.4.2. Example of the Set Action

To set the language to English, the following request should be used:

REQUEST

```
http://192.168.0.100/stw-
cgi/system.cgi?submenu=deviceinfo&action=set&Language=English
```

The following response is sent:

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"
}
```

When an error occurs, an error message will be returned, as shown below:

REQUEST

```
http://192.168.0.100/stw-
cgi/system.cgi?submenu=deviceinfo&action=set&Language=
```

TEXT RESPONSE

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

```
NG
Error Code: 604
Error Details:
Invalid Input Value(s)
```

JSON RESPONSE

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

```
{
  "Response": "Fail",
  "Error": {
```

```
    "Code": 604,  
    "Details": "Invalid Input Value(s)"  
  }  
}
```

1.4.3. Note on Sample Requests & Responses

The SUNAPI reference provides code samples in each Chapter. The samples in SUNAPI documentation are meant for reference only. The returned Data in the samples can differ from the actual data depending on the product model and its configuration.

1.5. Access level

SUNAPI has 4 types of access for CGI requests, Guests, Users, and Admin, which are based on the SUNAPI action level.

If a user doesn't have the permission to perform the particular action, then all the CGI parameters corresponding to the action will not be accessed. For example, an Access Level specified as "Admin" will be given only with the admin login, and other user logins will not have access to the corresponding features.

Access Level is stated in the SUNAPI reference documents.

1.6. Authentication

For Hanwha Vision products, the Digest Authentication is used for secure authentication.

1.7. Index numbers

All index numbers start from **1** in SUNAPI, except channel number, deviceid(POS) and the snmptrap submenu in network.cgi, which all start from **0**. In this reference document, the hash sign (#) represents an index number.

1.8. Error codes

When an error occurs during a **set** action command, the following error codes can be returned:

Error Code	Define	Response(Text)	Response(JSON)	Description
600	Invalid submenu	NG Error Code: 600 Error Details: Submenu Not Found	{ "Response": "Fail", "Error": { "Code": 600, "Details": "Submenu Not Found" } }	An unsupported menu was requested
601	Invalid action	NG Error Code: 601 Error Details: Action Not Found	{ "Response": "Fail", "Error": { "Code": 601, "Details": "Action Not Found " } }	An unsupported action was requested
602	Invalid parameter	NG Error Code: 602 Error Details: Invalid Parameter(s)	{ "Response": "Fail", "Error": { "Code": 602, "Details": "Invalid Parameter(s) " } }	The parameters don't match the existing settings in the request. e.g.) When IPv6Type=Auto and the user requests the IPv6Address, an error occurs.
603	Missing Required Parameter	NG Error Code: 603 Error Details: Missing Required Parameter(s)	{ "Response": "Fail", "Error": { "Code": 603, "Details": "Missing Required Parameter(s) " } }	The user request is missing a required parameter.
604	Invalid Value	NG Error Code: 604 Error Details: Invalid Input Value(s)	{ "Response": "Fail", "Error": { "Code": 604, "Details": "Invalid Input Value(s) " } }	The user request has an invalid parameter value.

Error Code	Define	Response(Text)	Response(JSON)	Description
605	List is full	NG Error Code: 605 Error Details: List Full	{ "Response": "Fail", "Error": { "Code": 605, "Details": "List Full" } }	The user has attempted to add data to a list that is full.
606	Duplicate value	NG Error Code: 606 Error Details: Duplicate Value	{ "Response": "Fail", "Error": { "Code": 606, "Details": "Duplicate Value" } }	The user has attempted to set a value that is already being used in another field.
607	Unknown error	NG Error Code: 607 Error Details: Unknown Error	{ "Response": "Fail", "Error": { "Code": 607, "Details": "Unknown Error" } }	System-related error
608	Feature not implemented OR Not supported	NG Error Code: 608 Error Details: Feature(s) Not Implemented OR Not Supported	{ "Response": "Fail", "Error": { "Code": 608, "Details": "Feature(s) Not Implemented OR Not Supported" } }	When an unsupported service or feature is requested.
609	Not Authorized	NG Error Code: 609 Error Details: Not Authorized	{ "Response": "Fail", "Error": { "Code": 609, "Details": "Not Authorized" } }	A login error has occurred.

Error Code	Define	Response(Text)	Response(JSON)	Description
610	Cannot Access Resource	NG Error Code: 610 Error Details: Cannot Access Resource	{ "Response": "Fail", "Error": { "Code": 610, "Details": "Cannot Access Resource" } }	The other session is using the resource.
611	Invalid File	NG Error Code: 611 Error Details: Invalid File	{ "Response": "Fail", "Error": { "Code": 611, "Details": "Invalid File" } }	File is invalid.
612	Configuration Not Found	NG Error Code: 612 Error Details: Configuration Not Found	{ "Response": "Fail", "Error": { "Code": 612, "Details": "Configuration Not Found" } }	A configuration is not found. e.g.) for cameras not registered in NVR, there will be no response for camera-related CGI requests
613	Cannot Set Simultaneously	NG Error Code: 613 Error Details: Tried to set values at once that can't be set simultaneously	{ "Response": "Fail", "Error": { "Code": 613, "Details": "Tried to set values at once that can't be set simultaneously" } }	When some features are not available to be set at the same time
614	Service Not Ready	NG Error Code: 614 Error Details: Service not ready	{ "Response": "Fail", "Error": { "Code": 614, "Details": "Service not ready" } }	When some features are not ready to service

Error Code	Define	Response(Text)	Response(JSON)	Description
615	Configuration Cannot Applied	NG Error Code: 615 Error Details: The configuration cannot be applied	{ "Response": "Fail", "Error": { "Code": 615, "Details": "The configuration cannot be applied" } }	When some configurations cannot be set
616	Configuration Incompatible	NG Error Code: 616 Error Details: The configuration is not compatible	{ "Response": "Fail", "Error": { "Code": 616, "Details": "The configuration is not compatible" } }	When some configurations are not compatible
700	Requested parameter is not found	NG Error Code: 700 Error Details: <Tag Name>: Not Found	{ "Response": "Fail", "Error": { "Code": 700, "Details": "<Tag Name>: Not Found " } }	attributes.cgi error The user request contains an unsupported tag
701	Error in XML file	NG Error Code: 701 Error Details: Invalid XML	{ "Response": "Fail", "Error": { "Code": 701, "Details": "Invalid XML " } }	attributes.cgi error The XML format is incorrect

1.9. Special HTTP Error codes

The following special error codes will be sent when additional password is required or when the device is locked on 5 successive login attempts with wrong password.

Error Code	Status Message	Title	Body
490	Status: 490 AccountBlocked	490 - Account Blocked	You have exceeded the maximum number of login attempts, Please try after some time.
491	Status: 491 AdditionalPasswordRequired	491 - Additional Password Required	Additional Passwords is required for this action

1.10. Style Conventions on SUNAPI Reference

The SUNAPI reference document is for developers of central monitoring software (CMS) as well as developers of applications for viewing, streaming and webcasting video.

1.10.1. Syntax

Text in the angle brackets is replaceable. In the example below, the text <Device IP> can be replaced with the actual IP address of the device, such as 192.168.0.100.

```
http://<Device IP>/stw-  
cgi/system.cgi?submenu=<value>&action=<value>&<parameter>=<value>
```

1.10.2. Parameters

Parameter information is displayed in tables like the one below:

Action	Parameter	Request/ Response	Type/ Value	Description
view set control	Parameter name	REQ RES	<int> <float> <bool> <string> <enum> <csv>	Brief parameter description

- The Action column shows the type of action performed on the parameter.
- The Parameter column shows the name of the parameter.
- The Request/Response column shows if the parameter is a request parameter (REQ) or a response parameter (RES).
- The Type/
Value column shows the value types as well as the allowed values and ranges. Value types are as follows:
 - <enum> indicates enumeration values.

- <int> indicates integer values.
- <float> indicates floating point values
- <string> indicates string data.
- <bool> indicates boolean values.
- <csv> indicates comma-separated values. Set multiple values separated by commas.
- The Description column offers a brief description of the parameter.

1.11. Support

Visit <http://step.hanwhavision.com> for the latest documents and technical support.

Chapter 2. Revision History

2.1. Version 2.6.2

Date: 2022-01-30

System

- New device class AMS (Audio Management System) added
- systemlog
 - MQTTConnection enum value added to Type parameter
 - SSDManagement enum value added to Type parameter
- deviceinfo
 - DeviceType list extended with NetworkSpeaker and NetworkMic.
 - SpeakerType parameter added
- registeredsubdevices submenu added
- speakergroups submenu added
- ssdstorage submenu added
- localvms submenu added

Network

- sipsetup
 - CallStopEnable parameter added
- sipaccount
 - SIPProxyAddress parameter added
- sipcall
 - TestCallState parameter added
 - CallRequest parameter added
 - Ringing enum value added to CallState parameter
 - StopCallRequest parameter deprecated (Use CallRequest parameter instead)
- mqttclient submenu added

Recording

- eventsearch submenu added

Image

- imageoptions
 - OSDType.Title.SupportedLanguages parameter added
- focus

- SimplefocusSchedule added

Media

- videoprofile
 - IsDPMPProfile parameter added
- speakervolume submenu added

Eventsources

- proximitysensor submenu added
- dtmf
 - HandoverIndex parameter added
- mqttpublication, mqttsubscription submenu added

Eventstatus

- New Events Added
 - ProximitySensor
 - MQTTSubscription
- eventstatus
 - MQTTSubscription parameter added

Eventrules

- dynamicrules
 - Rule.#.EventAction.#.MQTTMessageIndex parameter added
 - MQTTPublication enum value added to EventAction.#.Type parameter
 - MQTTSubscription enum value added to EventSource.#.Type parameter
- dynamicrulesoptions
 - MQTTPublication enum value added to EventSource.#.ActionTypes and AppEventSource.#.ActionTypes parameter
- audiooutfiles
 - Name parameter added under control operation
 - SpeakerID parameter added under control operation
 - GroupID parameter added under control operation
- ttsfiles submenu added

AI

- metaattributearch
 - async search support added
- ocrsearch

- async search support added
- facerecognitionsearch
 - async search support added

2.2. Version 2.6.1

Date: 2022-08-01

System

- powermode submenu added
- eventlog
 - Supported Type extended with DynamicRule

Media

- metadatashare submenu added
- cameradiscovery
 - ANALOG enum value added to Protocol parameter

PTZConfig

- ptzsettings
 - MountPosition parameter added

Image

- camera
 - ThermalVariationSensitivity parameter added
- ptr
 - PanAngle parameter added to view response
 - TiltAngle parameter added to view response
- privacy
 - AdjustMode parameter added
- imagealignment
 - AlphaBlendingLevel parameter added
- imageoptions
 - LCEMode.#.Top parameter added
 - LCEMode.#.Bottom parameter added
 - LCEMode.#.Left parameter added
 - LCEMode.#.Right parameter added
- thermalnuc submenu added

- stereosensorcalibration
 - ZoomScale parameter added to view response

EventRules

- dynamicrules
 - Rule.#.Status parameter added
 - Rule.#.EventSource.#.Type supported values updated
 - Rule.#.EventSource.#.AppName parameter added
 - Rule.#.EventSource.#.RuleIndexType parameter added
 - Rule.#.EventSource.#.RuleIndex parameter added
 - Rule.#.EventSource.#.Channel parameter added
 - Rule.#.EventSource.#.State parameter added
 - Rule.#.EventAction.#.Type parameter added
 - Rule.#.EventAction.#.AudioClipIndex parameter added
 - Rule.#.EventAction.#.HandoverIndex parameter added
- dynamicruleoptions submenu added
- schedulelist
 - Schedule.#.IsFixed parameter added
 - EveryDay Parameter added
 - EveryDay<h> parameter added
 - <dddh>.FromTo parameter added
 - EveryDay<h>.FromTo parameter added

Application programmers guide

- pw_init cgi statuscheck submenu
 - MaxPasswordLength parameter added

IP Installer

- RSA Key Response updated to include maximum password length supported
- Device Type 0x07: LEDBox newly added

2.3. Version 2.6.0

Date: 2022-01-24

System

- systemimage submenu added.

Network

- tutk submenu deprecated.

- p2p submenu added.
- interface.
 - ICMPEnable parameter added.

Security

- users
 - Optional current password verification support added.
 - New user authority option for Privacy area access added.

Image

- multiimageosd
 - New parameters added to support the changing image position.
- privacy
 - New parameters added to support the reordering mask index.

Media

- videoinput submenu added.
- videocodecinfo
 - MinFPS parameter added.

Event

- ledindicator
 - EnableFlickeringAlarm parameter added
- eventstatusschema submenu modified.

PTZ

- exclusiveptzcontrol submenu added.

2.4. Version 2.5.9

Date: 2021-08-09

Network

- Sipsetup submenu added.
- NatTraversal submenu added.
- Sipaccount submenu added.
- Siprecipients submenu added.
- Sipcall submenu added.

Security

- 802Dot1x

- ClientCertificateInUse parameter added.
- CACertificateInUse parameter added.
- ssl
 - Certificate.#.Issuer parameter added.
 - Certificate.#.SerialNumber parameter added.
 - Certificate.#.Signature parameter added.
 - Certificate.#.Thumbprint parameter added.
 - Certificate.#.IsEncrypted parameter added.
 - Certificate.#.Version parameter added.
- rsa
 - PublicKeyFormat parameter added.
- Cacertificate submenu added.

Media

- Wisestream
 - AISupportEnable parameter added.
- Videoprofile
 - IsEvenNumberFrameRateProfile parameter added.
 - IsVoIPProfile parameter added.
- Videocodecinfo
 - VoIP profile resolution and bitrate parameters added.
- Camera
 - SubShutterSpeedRatio parameter added.
 - PreferShutterAISupportEnable parameter added.
- Imageoptions
 - MaxDISSensorFrameRate parameter added.
- eqsettings
 - Removed because this submenu has been deprecated.

Transfer

- ftp
 - ReportyFileType parameter added.
 - PreEventDuration and PostEventDuration parameter added.

Eventrules

- handover2

- Action parameter added.
- Query parameter added.

Eventsources

- Videoanalysis2
 - DefinedArea.#.ObjectTypeFilterDetails parameter added.
 - Line.#.ObjectTypeFilterDetails parameter added.
- Heatmap
 - AutoReference parameter added.
 - ManualModeEnable parameter added.
 - ManualReference parameter added.
- Callrequest submenu added.
- Dtmf submenu added.
- Tamperswitch submenu added.
- Objectdetection
 - ObjectTypeDetails parameter added.
 - HandoverIndex parameter added.
- Metaimagetransfer
 - ImageQuality parameter added.
- Socialdistancingviolation submenu added.
- Indicationpass submenu added.
- Ledindicator submenu added.
- Parkingdetection submenu added.

Ptzcontrol

- Digitalrtz submenu added.
- Supportedptzactions submenu added.

Opensdk

- Apps
 - Update action based on AppID added.
- Metaframeschema submenu added.
- Metaframecapability submenu added.

2.5. Version 2.5.8

Date: 2021-02-18

System

- Deviceinfo
 - New Device type "IOBox" added
 - CameraRegistrationMode parameter added for recorder.
- Geolocation submenu added
- Clientregister submenu added

Network

- Onvifdiscovery submenu added
- Ssl submenu updated for self-signed certificate creation.
- Camerausers
 - IsInitPasswordSet parameter added to view

Video

- Slideshow submenu added

Media

- Videooutput
 - Quadview type is added
- Videoprofile
 - RTPMulticastType and RTPMulticastAddressIPv6 parameters added for configuring Ipv6 multicast address to profile.

Image

- Irled
 - LEDMaxPowerLevel and Zone.#.Level parameter added
- Imagealignment
 - FovAngle parameter added
- Imageoptions
 - LensModel.#.SupportLDCMode parameter added
- Thermalpalettesetting
 - ThermalVariationSensistivity parameter added
- Focuspreset submenu added
- Stereosensorcalibration submenu added
- Blackbodyconfig submenu added
- Blackbodyconfigoptions submenu added
- Radiometrysettings submenu added
- Radiometrysettingsoptions submenu added

Eventsources

- ThermalDetectionmode submenu added
- BodyTemperatureDetection submenu added
- TemperatureMeasurementRegion submenu added
- MaskDetection submenu added
- CellMotion submenu added
- Autotracking
 - ObjectFilterEnable and ObjectTypeFilter parameter added

Eventrules

- Ioboxregister submenu added

Ptzcontrol

- Areazoom
 - Profile parameter added
- Aux
 - Activate status parameter added

Ptzconfig

- Ptzsettings
 - ProportionalPTSpeed parameter added
- PtcCorrection submenu added

Ai

- Aiengine
 - FaceRecognitionAgreementTime and AgreementStatus parameter added

2.6. Version 2.5.7

Date:2020-07-16

System

- Deviceinfo
 - GUIVersion parameter added for Recorder
- Date
 - DateFormat and Timeformat parameters added for Recorder
- Firmwareupdate
 - OnlineUpgrade parameter added for Recorder
- Monitorout

- Optimalresolution parameter added for Recorder
- Peerconnectioninfo submenu added

Network

- Interface
 - Interfacelabel parameter added
- Snmptrap
 - UseCommunity parameter added
- Dhcpserver and poestatus submenus added

Security

- SSL
 - Clientcertificateauthentication and updatehostname parameters added
- Users
 - Admin access privilege option added for normal users
- Camerausers
 - Password encryption support added
- Cameravalidationstatus, clienthttpsstatus, and tlsversion submenus added

Video

- Thumbnail submenu added

Media

- Videoprofile
 - Showall parameter added to show non-video profiles
- Videocodecinfo
 - Compression level parameters added
- Videoencoderinstances submenu added

Image

- Camera submenu updated
- Whitebalance
 - Whitebalance mode parameter added
- Imageenhancements, imageenhacement2
 - LDCmode,xce,Disfocallength and gammacontrol parameters added
- Focus
 - Focuscontinuos and Zoomcontinuos parameters added
- Iamgeoptions submenu updated

Eventsources

- Videoanalysis2
 - Rulename and objectfilter parameters added
- Tamperingdetection
 - Rulename parameter added
- Defocusdetection
 - Rulename parameter added
- Sourceoptions
 - Exclude area min and max index parameters added
 - Minimumareainpixel parameter added

Eventrules

- Dynamicrule and schedulelist submenus added
- Handover, Handover2
 - Connectionmode parameter added for http/https

Io

- Alarmoutput
 - IOPortindex parameter added for notifying the physical port index
- Ioport submenu added for configurable IO

Ptzconfig

- Digitalautotracking
 - Objecttype filter parameter added

Recording

- General
 - Substream recording parameters added
- Timeline
 - BkID parameter added for recorder (bookmark)
- Bookmark and diskutility submenus added

Opensdk

- Opensdkeventinfo
 - Type parameter added

Ai

- Metaattributesearch, ocrsearch, objectdetectfromimage, imagelibrary, facerecognitionsearch, aiengine, and aitimeline submenus added

2.7. Version 2.5.6

Date:2020-02-20

System

- Deviceinfo
 - ActualDeviceTypeparameter added
- Stratocast, Stratocastregister submenu added
- Serial
 - DeviceId parameter added
- Systemlog
 - Type parameter added
- Storageinfo
 - IsSDCardEncrypted parameter added
 - NewDASPassword parameter added
 - IsNewDASPasswordEncrypted parameter added
 - IsDASEncryptable parameter added
 - DASPassword parameter added
 - IsDASPasswordEncrypted parameter added

Network

- Interface
 - MTUSize parameter added
- Ethstatus submenu added

Security

- Camerausers submenu added

Media

- Videosource
 - VideoType parameter added
 - Add/Remove actions added
- Videooutput
 - RebootRequired parameter added
- Streamurl
 - RecordStreamType parameter added
- Videocodecinfo
 - <EncodingType>.General.<Width>X<Height>.FrameLockMaxFPS added

- <EncodingType>.Record.<Width>X<Height>.FrameLockMaxFPS added
- Cameraregister
 - IsBypassSupported parameter added
 - VideoState, AudioState parameter added

Image

- Camera
 - ImagePresetMode.#.BLCAreaCoordinates
 - ImagePresetMode.#.NormalizedBLC added
 - BLCAreaCoordinates parameter added
 - NormalizedBLCLevel parameter added
- Ptr
 - Mode parameter added
- Ptrpreset submenu added
- Imageoptions
 - BLCAreaCoordinates-based parameter added
 - OSDType.Title.SupportedSpecialCharacters parameter added
 - BacklightType-based parameter added
 - MaxWDRSensorFrameRate parameter added
- directionindicator, noisereduction submenus added

Eventsources

- Overspeed submenu added
- Tamperingdetection
 - ChannelIDList parameter added
- Temperaturechangedetection
 - TemperatureChange.ROI.#.HandoverIndex parameter added
- Boxtemperaturedetection
 - ROI.#.HandoverIndex parameter added

Eventrules

- Rules
 - Support for PeopleCount added

Eventstatus

- Support for OpenSDK event added
- Eventstatus

- Support for EventFilter monitoridff added
- Metadataschema
 - EventName parameter added

Ptzcontrol

- Osdmenu, Rs485Command submenus added

Ptzconfig

- Panzeroposition submenu added
- Ptzprotocol
 - Status parameta added

Opensdk

- Apps, Debug, Appstatus, Manifest
 - Channel parameter added
- Opensdkeventinfo submenu added

Display

- videooutlayout and spoutout submenus added

2.8. Version 2.5.5

Date:2019-01-20

System

- Deviceinfo
 - ONVIFVersion parameter added
- Serial
 - Serialinterface parameter is added
- Storageinfo
 - DasPassword support is added
- Usbconfig
 - Enable parameter added

Network

- Rtspovertls submenu added

Media

- Videosource
 - VideoMode & Sensorcapturesize support list extended
- Videosourceoptions

- Sensorcapturesize support extended
- Videoprofile
 - Isfixedframerateprofile parameter added
- Cameraregister
 - Camchannel parameter added
- Cameraconnection
 - Camchannel parameter added

Image

- Camera
 - ImagePresetMode based settings added
- Whitebalance
 - ImagePresetMode based settings added
- Imageenhancements2 submenu added
- Ssdr
 - Imagepresetmode based settings added
- Focus
 - Imagepresetmode based settings added
- Overlay
 - Imagepresetmode based settings added
- Multilineosd
 - Imagepresetmode based settings added
- Imageoptions
 - AgcMode and Imagepresetmode parameter added
- Autoimagealignment submenu added
- Imagepreset2 submenu added
- Imagepresetschedule submenu added
- Thermalpalletesetting submenu added
- Thermalpalletesettingoptions submenu added
- Spottemperaturereading submenu added

Transfer

- Dataserver submenu added

Eventsources

- Videoanalysis2

- Roi based Duration support added
- Defined area intrusion duration added
- DetectionResult overlay support added
- Wiperhousing submenu added
- SoureOptions
 - Eventsource expanded for BoxTemperature detection
 - Eventaction expanded for AudioClip playback
- Boxtemperaturedetection submenu added
- Boxtemperaturedetectionoptions submenu added

Eventrules

- Rules
 - Support for boxtemperaturedeteciton and audioclip added
- Audiooutfiles submenu added
- Internalhandovercalibration submenu added
- Audiooutfileschedule submenu added

Eventstatus

- Eventstatus
 - Support for BoxTemperatureDetection,HousingTampering, WaterLevelWarning added
- Metadataschema submenu added
- Eventstatusschema submenu added

Ptzconfig

- Presetimageconfig
 - OpticalDefogFilterEnable parameter added
- Presetvideoanalysis2
 - ROI duration and Defined area instrusionduration support added
- Ptzsettings
 - Imagepresetmode support added

Recording

- Timeline
 - Boxtemperaturedetection event support added

2.9. Version 2.5.4

Date:2018-08-07

System

- Deviceinfo
 - DeviceReady and DeviceMode parameters added
- Date
 - LastSyncTime, Week, DSTStart, DSTEnd, TimeZone and ActivateServer parameters added
- Storageinfo
 - SDCardEncryption parameter added
- Added holday, hddalarm, raid, monitorin and monitorout submenus

Network

- Added dhcpclients submenu

Media

- Videosource
 - RemoteName, VideoType and VideoMode parameters added
- Added videosourceoptions and eqsettings submenus
- Videoprofile
 - H264.MinDynamicFPS parameter added
- Audioinput
 - NoiseReduction and NoiseReductionSensitivity parameters added
- Videocodecinfo
 - AllProfiles parameter added
- Added Cameraregister, Autoregister and Cameradiscovery submenus
- Camerapasswordchange
 - OldPassword and IsPasswordEncrypted parameters added
- Added Cameraconnection submenu

Image

- Camera
 - LensModel, TemperatureUnit, ThermalColorPalette, ExposureControlSpeed parameters added
 - DayNightMode extended with ScheduleBW
- Focus
 - AutoFocusRange parameter added
- Imageoptions
 - CompensationMode.#.SensorCaptureFrameRate.#.DefaultMaxShutterSpeed
 - and CompensationMode.#.SensorCaptureFrameRate.#.DefaultMinShutterSpeed parameters added

Eventsources

- Videoanalysis2
 - ROI.#.HandoverIndex, DefinedArea.#.HandoverIndex and Line.#.HandoverIndex parameters added
- Audioanalysis
 - ConfigurationToken and HandoverIndex parameters added
- Facedetection
 - DynamicArea parameter added
- Heatmap
 - Resolution parameter added
- Tamperingdetection
 - HandoverIndex parameter added
- Sourceoptions
 - ROIIncludeMinIndex, ROIIncludeMaxIndex,
 - ROIExcludeMinIndex, ROIExcludeMaxIndex, DefinedAreaIncludeMinIndex,
 - DefinedAreaIncludeMaxIndex, DefinedAreaExcludeMinIndex and
 - DefinedAreaExcludeMaxIndex parameters added
- Added temperaturechangedetection, temperaturechangedetectionoptions and shockdetection submenus

Eventactions

- Complexaction parameter added

Eventrules

- Rules
 - EventSource enum extended with ShockDetection
- Added handover2 submenu

Eventstatus

- Eventstatus
 - Channel.#.EventType parameter extended with ShockDetection, TemperatureChangeDetection

Ptzcontrol

- Continuous
 - ViewModeType parameter added
- Stop
 - ViewModeType parameter added

Ptzconfig

- Presetimageconfig
 - AutoFocusRange parameter added
- presetvideoanalysis2
 - ROI.#.HandoverIndex, DefinedArea.#.HandoverIndex and Line.#.HandoverIndex parameters added
- Ptzsettings
 - SpeedType parameter added
- Ptlimits
 - DaysAfterReboot and StartTime parameters added
- Ptzprotocol
 - ConnectionPortType parameter added

Recording

- Timeline
 - Type and Channel.#.Result.#.Type parameters extended with ShockDetection, TemperatureChangeDetection

Display

- Added layout, decoderboardinfo, wall, sequence and favorite submenus

2.10. Version 2.5.3

Date: 2017-09-15

System

- Added power, iscsidiscovery and sdcardinfo submenus
- Deviceinfo
 - RequestedClientIPAddress parameter added
- Date
 - SyncType enum extended with GPS
- Serial
 - Signaltermination parameter added
- Systemlog
 - GsensorEvent and GPSTDisconnect event added
- Eventlog
 - QueueEvent added
- Profileaccesinfo

- Channel-based profilenamelist and currentbitrate parameters added
- Databasereset
 - Datatype extended with QueueEvents
- Storageinfo:
 - IsNASPasswordEncrypted and IsCHAPPasswordEncrypted added
- digitalsignage:
 - IsFTPPasswordEncrypted added

Network

- Added Mts and wifi submenus
- Interface
 - InterfaceType extended with WIFI
 - IsPPoEPAsswordEncrypted parameter added
- Dynamicdns
 - IsPublicPasswordEncrypted parameter added
- Snmp
 - IsPasswordEncrypted parameter added

Security

- Added rsa submenu
- 802Dot1x
 - IsEAPOLPasswordEncrypted parameter added
- Additionalpassword
 - IsPasswordEncrypted parameter added
- Users
 - IsPasswordEncrypted parameter added
- Usergroups
 - EventMenuAccess extended with Gsensor
 - NetworkMenuAccess extended with MTS

Media

- Added setsynchronizationpoint submenu
- Videosource
 - Videosourcetoken parameter added
- Videooutput
 - Channel parameter added

- Videoprofile
 - Viewmodetype extended with QuadView.# parameter.
- Multicast
 - Channel parameter added
- Mediaoptions
 - Viewmodetype extended with QuadView.# parameter.
- Videocodecinfo
 - Viewmode extended with QuadView.#

Image

- Added ptr, ptrusage, scheduler and flangeback submenus
- Camera
 - LensModel and IrisMode parameters added
- Focus
 - ImagePreview parameter added
 - IRShift parameter added
 - Temperature compensation enable added
- Fisheylens
 - RPLnumber parameter added
 - LensModel parameter enum extended with BoowonOpticals
- Fisheyesetup
 - LensModel parameter enum extended with BoowinOpticals
 - ViewModeType parameter enum extended with QuadView.#
- Multilineosd
 - OSDblink parameter is added
 - ViewModeType parameter enum extended with QuadView.#
- Viewmodes
 - ViewMode.#.Type parameter enum extended with QuadView.#
- Imageoptions
 - ViewModeType parameter enum extended with QuadView.#

Transfer

- ftp
 - IsPasswordEncrypted parameter added
- Sntp
 - IsPasswordEncrypted parameter added

- http
 - IsPasswordEncrypted parameter added
 - IsProxyPasswordEncrypted parameter added

Eventsources

- Added Peoplecount, Heatmap and QueueManagement and gsensor submenus
- Facedetection
 - Overlaycolor parameter is added
- Sourceoptions
 - Extended the enum with peoplecount, heatmap and queuemanagement.

Eventactions

- Added Complexaction submenu
- Sntp
 - Supported enum in Systemevent extended with EmergencyTrigger and gsensor

Eventrules

- Handover
 - IsPasswordEncrypted parameter added

Eventstatus

- Added Eventscheme submenu
- QueueEvent support added to Channel.#.Eventtype
- EmergencyTrigger, InternalHDDWarmup, GSensorEvent, GPSDisconnect, WiFiSignalChanged added to Systemevent

Ptzconfig

- Presetimageconfig
 - Gamma, Control, LDCEnable, LDCMode, LDCLevel, SSNRMMode, SSNR2DLevel, SSNR3DLevel parameters added
- Ptzsettings
 - Imagepreview parameter added
- Ptlimits
 - Channel, TiltRange parameter added

Recording

- Added queuesearch submenu added
- General
 - Recordoverlap extended support for FogDetection, AudioAnalysis, EmergencyTrigger, GSensorEvent

- Timeline
 - Type parameter extended for QueueEvent, Videoloss, EmergencyTrigger, InternalHDDWarmup, GSensorEvent

Opensdk

- Added Debug submenu

2.11. Version 2.5.2

Date: 2017-05-15

System

- Added logserver and sessioninfo submenu
- systemlog
 - Added DatabaseRemove, USBWIFIConnect, and USBWIFIDisconnect to Type
- eventlog
 - Added FogDetection and AudioAnalysis to Type
- firmwareupdate
 - Added check action

Network

- Added tutk submenu

Media

- Added mediaoption submenu
- videoprofile
 - Added CropRatio
 - Added MJPEG.PriorityType
 - Added H264.DynamicFPSEnable
 - Added H265.DynamicFPSEnable
- videocodecinfo
 - Added <EncodingType>.General.<Width>X<Height>.DefaultFPS
 - Added <EncodingType>.Record.<Width>X<Height>.DefaultFPS
 - Added <EncodingType>.Email.<Width>X<Height>.DefaultFPS
 - Added <EncodingType>.DigitalPTZ.<Width>X<Height>.DefaultFPS
 - Added <EncodingType>.General.<ViewMode>.<Width>X<Height>.DefaultFPS
 - Added <EncodingType>.DigitalPTZ.<ViewMode>.<Width>X<Height>.DefaultFPS
 - Added <EncodingType>.Record.<ViewMode>.<Width>X<Height>.DefaultFPS
 - Added <EncodingType>.Email.<ViewMode>.<Width>X<Height>.DefaultFPS

Image

- camera
 - Added On and Off values to HLCMode
 - Added Black, Blue, Red, Cyan, and Magenta values to HLCMaskColor
 - Added HLCDim
 - Added HLCAreaTop
 - Added HLCAreaBottom
 - Added HLCAreaLeft
 - Added HLCAreaRight
 - Added PreferredShutterSpeed
 - Added SSNR2DLevel
 - Added SSNR3DLevel
 - Added WDRSeamlessTransition
 - Added WDRLowLight
 - Added WDRIRLEDEnable
- imageenhancements
 - Added control action
 - Added Contrast
 - Added LDCEnable
 - Added LDCMode
 - Added LDCLevel
- imageoptions
 - Added LeftHalfView and RightHalfView values to ViewModeType
 - Added TopLeftCoordinates
 - Added BottomRightCoordinates
 - Added CompensationMode.#.DefaultAutoShortShutterSpeed
 - Added CompensationMode.#.DefaultAutoLongShutterSpeed
 - Added CompensationMode.#.SensorCaptureFrameRate.#.DefaultPreferShutterSpeed
 - Added CompensationMode.#.SensorCaptureFrameRate.#.AutoShortShutterSpeed
 - Added CompensationMode.#.SensorCaptureFrameRate.#.AutoLongShutterSpeed
 - Added CompensationMode.#.SensorCaptureFrameRate.#.PreferShutterSpeed

Recording

- Timeline
 - Added FogDetection and AudioAnalysis to Type

- Added DefocusDetection, FogDetection, and AudioAnalysis to Channel.#.Result.#.Type

PTZ

- Added ptzmode submenu

Event

- Added videoanalysis2 submenu under eventsources.cgi
- Added audioanalysis submenu under eventsources.cgi
- Added fogdetection submenu under eventsources.cgi
- Added samples submenu under eventsources.cgi
- Added pushnotification under eventstatus.cgi
- facedetection
 - Added DetectionArea.#.Mode
- tamperingdetection
 - Added DarknessDetection, Duration, SensitivityLevel, and ThresholdLevel parameters
- defocusdetection
 - Added Duration, ThresholdLevel, and AutoSimpleFocus parameters
- heatmap
 - Added the check action
- eventrules.cgi
 - Added FogDetection, and AudioAnalysis values to EventSource
- eventstatus.cgi
 - FogDetection, SDFormat, SDFail, SDFull, SDInsert, AudioAnalytics, and USBWIFIConnect to Channel.#.EventType

OpenSDK

- Changed ApplicationSessionID to ApplicationSessionId

2.12. Version 2.5.1

Date: 2016-09-30

System

- Added databasereset submenu
- Systemlog
 - New Type (databasefull) added

Media

- Videoprofilepolicy
 - Added Channel

- streamuri
 - DeviceID added
 - Profiletoken added
- Videoprofile
 - Added IsDigitalPTZProfile
 - Added Bitrate
 - Added H264.BitrateControlType
 - Added H265.BitrateControlType
 - Added MPEG4.BitrateControlType
 - Added ViewModeIndex
 - Added ViewModeType
- Videocodecinfo
 - ChannelIDList added
 - ViewMode added
 - MaxUnknownTargetBitrate added
 - MinUnknownTargetBitrate added
 - <EncodingType>.IsDigitalPTZSupported
 - Viewmode based resolution and fps added

Network

- Portconf
 - ProtocolType added
- Added Standbydeviceinfo submenu

Eventsources

- Added Heatmap submenu
- Added peoplecount submenu
- Added autotracking submenu

Recording

- Added Posconf submenu
- Added poseventconf submenu
- Added posdata submenu
- Added poscalendar submenu
- Timeline
 - PrimaryDeviceIPAddress added

- Added metadata submenu
- Calendarsearch
 - PrimaryDeviceIPAddress added
 - IgnoreChannelBasedResults added
 - Result added
- Searchrecordingperiod
 - ResultsInUTC added
- Storage
 - Channel added
- Added smartsearch submenu
- Heatmapsearch
 - ResultImageType added
 - ResultAsImage added
- Added peoplecountsearch submenu

Security

- Usergroups
 - DeviceMenuAccess added
- Added Additionalpassword submenu

PtzControl

- SubViewIndex parameter added for all ptz operations

EventStatus

- Eventstatus
 - Pos EventType added

Image

- Privacy
 - Channel Added
 - Mode added
 - Mask Index added
 - Mask Coordinates added
- Viewmodes
 - ViewMode Type added
- Focus
 - Mode added

- Fisheylens
 - LensModel added
- Added Fisheyesetup submenu
- Added Imagealignment submenu
- Added imageoptions submenu

Eventrules

- Handover
 - PresetIndex added
- Added scheduler submenu

Ptzconfig

- Preset
 - SubViewIndex added
- PtzSettings
 - RememberLastPosition and RememberLastPositionduration added

2.13. Version 2.5.0

Date: 2016-06-20

NOTE | JSON response support added

System

- Device Information
 - Added Memo
- Firmwareupdate
 - Added IgnoreMultipartResponse
- OnvifFeature
 - Added FocusControl

Network

- Added portconf submenu

Media

- Videoprofile
 - Added IsFixedProfile
 - Added H264.DynamicGOVLength
 - Added H265.DynamicGOVLength
- Videocodecinfo

- Added <encodingtype>.Record.<width>X<height>.DefaultCBRTarget
- Added <encodingtype>.Record.<width>X<height>.DefaultVBRTarget
- Added <encodingtype>.DigitalPTZ.<width>X<height>.Width
- Added <encodingtype>.DigitalPTZ.<width>X<height>.Height
- <EncodingType>.DigitalPTZ.<Width>X<Height>.MaxFPS
- <EncodingType>.DigitalPTZ.<Width>X<Height>.MinCBRTargetBitrate
- <EncodingType>.DigitalPTZ.<Width>X<Height>.MaxCBRTargetBitrate
- <EncodingType>.DigitalPTZ.<Width>X<Height>.DefaultCBRTargetBitrate

Image

- Camera
 - Added SSNRMode
 - Added ImagePreview
- Whitebalance
 - Added ImagePreview
- Imageenhancements
 - Added ImagePreview
- Irled
 - Added Mode
 - Added ImagePreview
- SSDR
 - Added Imagepreview
- Focus
 - Added FastAutoFocus
- Overlay
 - Added ImagePreview
- Privacy
 - Added CommonMaskColor
- Added fisheyesetup submenu
- Added multiimageosd submenu
- Added multilineosd submenu
- Added imageoptions submenu
- Imagepreset
 - Added imagepreview
 - Added Mode

- Added Schedule.#.Mode

Eventsources

- Added defocusdetection submenu
- Added Sourceoptions submenu
- Audiodetection
 - Added check action
- Rules
 - Added eventsource

Eventrules

- Added handover submenu

Eventstatus

- Eventstatus
 - Profile.#.DigitalAutoTracking added

Ptz

- Continuous
 - Added IgnoreIfBusy
 - Added digitalautotracking submenu

2.14. Version 2.4.3

Date: 2016-05-15

System

- Eventlog
 - Type: added Defocusdetecion, TrackingStart and TrackingEnd.

Media

- Videoprofile
 - IsDigitalPTZProfile added

Image

- Focus
 - Channel added for NVR
 - Mode added for NVR

EventStatus

- Eventstatus
 - New eventtypes added (DefocusDetection and Tracking added)

Recording

- General
 - RecordOverlap (DefocusDetection and Tracking added)
- Timeline
 - Type(DefocusDetection and Tracking added)
- Added Smartsearch submenu

2.15. Version 2.4.2

Date: 2016-01-30

System

- Added vehicleinformation submenu

Network

- DNS
 - Interfacename added
- Dynamicdns
 - Interfacename added

Media

- Streamuri
 - Eventsearchtype added

Eventstatus

- Eventstatus
 - New eventtypes added (SDFail and SDFull added)

Eventactions

- Sntp
 - SystemEvent added
 - RecipientGroupID.#.SystemEvent added

Ptzcontrol

- Added Aux submenu

Recording

- Storage
 - Channel added
- Timeline
 - EventSearchType added

2.16. Version 2.4.1

Date: 2015-03-28

System

- Added gps submenu
- Added autobackup submenu
- Added digitalsignage submenu

Network

- Interface
 - Added IPv4SubnetMask
- Dns
 - Added IPType

Security

- Usergroups
 - DeviceMenuAccess Added

Media

- Videoprofilepolicy
 - LiveMode added
- Videoprofile
 - H265.BitrateControlType added
 - H265GoveLength added
 - H265.Profile added
 - H265.EntropyCoding added
 - H265.SmartCodecEnable added
- Added camerapasswordchange submenu

Image

- Imageenhancements
 - LDCEnable added
 - LDCLevel added
- Flip
 - Rotate added

Transfer

- ftp
 - Status added

- Sntp
 - Status added

2.17. Version 2.4.0

Date: 2014-02-28

System

- Device Information
 - Added MicomVersion
- Date and Time
 - Added NTPStatus and NTPLastUpdatedTime
- Factory Reset
 - Added the 'None' value to ExcludeSettings
- Storage Information
 - Added SlotNumber, Storage.#.Usage, Storage.#.Model, and Storage.#.Temperature, TargetIP, Port, TargetIQN, CHAPUserID, and CHAPPassword

Network

- Added svp submenu (15 SVP)
- Added bandwidth submenu (16 Bandwidth)
- Network Interface
 - Added IsDefaultGateway, and HostName
- DNS
 - Added Type
- DDNS
 - Added SamsungQuickConnectStatus
- SNMP Trap Settings
 - Added Trap.#.LinkDown and Trap.#.WarmStart
- RTSP
 - Added MobilePort

Security

- Added usergroups submenu (8 User Group Configuration)
- Added authority submenu (9 Authority)
- IP Address Filtering
 - Added IPType for the set action
- 802.1x

- Added InterfaceName for the install and remove actions
- User Configuration
 - Added UserName, ViewerAccess, GroupID, and UserLevel

Video/Audio

- Added sessionkey submenu (2.10 Session Key)
- Video Source
 - Added Name, and State
- Video-Profile Policy
 - Added NetworkProfile and LiveProfile
- Stream URI
 - Added ClientType

Event

- Added networkalarminput submenu (2.9 Network Alarm Input)
- Added smtp submenu of eventactions.cgi (3.1 Email Sending)
- Added complexaction submenu of eventactions.cgi (3.2 Complex Action)
- Event Status
 - Added SystemEvent for the check action

Transfer

- Added smtpusers submenu (4 SMTP Users)
- Added smtpgroups submenu (5 SMTP User Groups)

PTZ

- Continuous PTZ Operation Control
 - Added Iris
- Stop Control
 - Added 'Pan', 'Tilt' and 'Zoom' values to OperationType

I/O

- Added alarmreset submenu (5 Alarm Reset)
- Alarm Output
 - Added AlarmOutput.#.<dddh>

Recording

- Added manualrecording submenu(6 Manual Recording)
- Added searchrecordingperiod submenu (9 Recording Period)
- Added heatmapsearch submenu (10 Heat Map Search)

- Storage
 - Added DiskEndBeep
- General
 - Added FullFrameBandwidth, FullFrameRate, KeyFrameBandWidth, KeyFrameRate, Codec, RecordOverlap, SourceProfile, Resolution, FrameRate, CompressionLevel, AudioEnable, and BitrateLimit
- Recording Schedule
 - Added the 'enum' to value type <ddd>, Everyday, <dddh>, and Everyday<h> for NVR
- Timeline
 - Added the 'UserInput' value to Channel.#.Result.#.Type

2.18. Version 2.3.2

Date: 2014-12-12

System

- Device Information
 - Added OpenSDKVersion
- Storage Information
 - Added Storage.#.Status

Network

- SNMP Trap Settings
 - Added p.#.AlarmInput.#, Trap.#.AlarmOutput.#, and Trap.#.TamperingDetection

Security

- 802.1x Setup
 - Added EAPOLType

Video/Audio

- Stream URI
 - Added OverlappedID

Image

- Camera
 - Added the 'Off' and 'On' values to AFLKMode
 - Added the 'P-Iris-SLAM2890PN' value to IrisMode
 - Added AGCLevel
- White Balance
 - Added the 'Mercury' and 'Sodium' values to WhiteBalanceMode

- Focus
 - Added Channel and FocusAreaCoordinate for the Control action
- Overlay
 - Added AzimuthEnable
- Privacy
 - Added MaskIndex, MaskPattern, and ZoomThresholdEnable
- Image Preset
 - Added the 'UserPreset' value to Mode
 - Added the 'Off' and 'UserPreset' values to Schedule.#.Mode

Event

- Video Analytics Setup
 - Added the 'Off' value to EntireAreaMode
 - Added DetectionType for the view action
- Event Status
 - Added Aux for check, monitor, and monitordiff actions

PTZ

- Requesting Camera's Position Information
 - Added ZoomPulse and Iris
- Preset Image Configuration
 - Added AfterActionTrackingTime and AFLKMode
 - Added the 'Off' and 'VideoAnalytics' values to AfterAction
 - Added the 'Mercury' and 'Sodium' values to WhiteBalanceMode
- Preset Video Analysis Setup
 - Added ROI.#.Coordinate and ROIMode
- PTZ Settings
 - Added DigitalPTZEnable, and NorthDirection

Recording

- Added overlapped submenu (Chapter 5 Overlapped Recording)
- Storage
 - Added AutoDeleteEnable and AutoDeleteDays
- Timeline
 - Added the 'UserInput' value to Type and Channel.#.Result.#.Type
 - Added OverlappedID

2.19. Version 2.3.1

NOTE

Internal release

Video/Audio

- Video Profile
 - Added ViewModeIndex
- Video Codec Info
 - Added ViewMode
 - Added <EncodingType>.General.<ViewMode>.<Width>X<Height>.Width, <EncodingType>.General.<ViewMode>.<Width>X<Height>.Height, <EncodingType>.General.<ViewMode>.<Width>X<Height>.MaxFPS, <EncodingType>.General.<ViewMode>.<Width>X<Height>.MaxCBRTargetBitrate, <EncodingType>.General.<ViewMode>.<Width>X<Height>.MinCBRTargetBitrate, <EncodingType>.General.<ViewMode>.<Width>X<Height>.DefaultCBRTargetBitrate, <EncodingType>.General.<ViewMode>.<Width>X<Height>.MaxVBRTargetBitrate, <EncodingType>.General.<ViewMode>.<Width>X<Height>.MinVBRTargetBitrate, <EncodingType>.General.<ViewMode>.<Width>X<Height>.DefaultVBRTargetBitrate

Image

- Added the fisheylens submenu
- Added the viewmodes submenu

Event

- Event Status
 - Added IncludeTimestamp and Timestamp for check, monitor, and monitordiff actions

PTZ

- Absolute Position Control
 - Added ViewModeIndex and SubViewIndex
- Relative Position Control
 - Added ViewModeIndex and SubViewIndex
- Continuous PTZ Operation Control
 - Added ViewModeIndex
- Requesting Camera's Position Information
 - Added ViewModeIndex and SubViewIndex
- Moving to Preset Position
 - Added ViewModeIndex
- Group Control
 - Added ViewModeIndex

- Moving to Home Position
 - Added ViewModeIndex
- Stop Control
 - Added ViewModeIndex
- Movement Control
 - Added ViewModeIndex
- Group Setup
 - Added ViewModeIndex
- Home Position Setup
 - Added ViewModeIndex
- Preset Configuration
 - Added ViewModeIndex

2.20. Version 2.3.0

NOTE

Internal release

System

- Device Information
 - Added PasswordStrength
- Event Log
 - Added the 'OpenSDK' and 'PTZMotion' values to Type
- Profile Access Information
 - Added the 'Optimized' value to User.#.ClientNetworkConnectionStatus

Video/Audio

- Video Profile
 - Added ATCTrigger and ATCEventType

Event

- Auto Tracking
 - Added the TrackingAreas parameter to the view action
 - Added the TargetLockCoordinate parameter to the control action
 - Added the TrackingAreaEnable parameter to the set action
 - Added Channel, TrackingAreaID, Coordinate parameters to the add action
 - Added Channel and TrackingAreaID to the remove action
- Alarm Input

- Changed AlarmInput.#.Enable to AlarmInput.#.Enable
- Event Rules
 - Added the 'OpenSDK' and 'UserInput' values to EventSource
- Event Status
 - Added the 'PTZMotion', 'UserInput' values to Channel.#.EventType for the check, monitor, and monitordiff actions

Image

- Camera
 - Deleted the 'Off' value from AFLKMode

PTZ

- Auto Run Setup
 - Added the 'Schedule' value to Mode of the set action
 - Added the SwingMode parameter to the set action
 - Added the update action including the Channel, ScheduleMode, FromTo, Preset, Group, Trace, AutoPanSpeed, AutoPanTiltAngle, Tour, and SwingMode parameters
- Preset Image Configuration
 - Added the DefogMode and DefogLevel parameters
 - Changed the 'OneShot' value of FocusMode to 'OneShotAutoFocus'
- Preset Video Analysis Setup
 - Added MinimumObjectSizeInPixels, MaximumObjectSizeInPixels, IVRuleType, DetectionResultOverlay, and DisplayRules parameters
- PTZ Settings
 - Added the ProportionalPTSpeedMode parameter

I/O

- Added the UserInput submenu (4 User Input State)

Recording

- Timeline
 - Added the 'UserInput' value to Type

Open SDK

- Added opensdk.cgi with the apps, appstatus, and manifest submenus

2.21. Version 2.2.1

NOTE

Internal release

Date: 2014-01-17

System

- 2 Device Information
 - Added PTZBoardVersion, InterfaceBoardVersion, and TrackingVersion
- 3 Date and Time
 - Added NTPURLList
- 5 System Log
 - Added the 'NASFormat', 'NASFail', 'NASFull', 'NASConnect, and 'NASDisconnect' values to Type
- 7 Event Log
 - Added the 'Tracking' value to Type
- 11 Firmware Update
 - Added Status, FirmwareModule, and Progress
- 14 Storage Information
 - Added Storage.#.UsedSpace, Storage.#.TotalSpace, Storage.#.Type, Storage, Enable, DefaultFolder, NASIP, NASUserID, NASPassword, Status, and Mode parameters

Network

- Removed submenus - arping, upnpnat
- 2 Network Interface
 - Removed AutoIPv6Address, IsDefaultGateway, HostName, DomainName, and IPv6RouterAdvertisement
 - Added 'Default' value to IPv6Type
 - Removed the InterfaceType value
 - Removed value ranges for IPv4PrefixLength and IPv6PrefixLength
- 3 DNS
 - Removed Type and SearchDomainList
- 4 DDNS
 - Removed 'www.changeip.org' value from PublicServiceEntry
 - Eliminated maximum value length for SamsungProductID, PublicHostName, PublicUserName, and PublicPassword
- 5 Bonjour
 - Eliminated maximum value length for FriendlyName
- 6 UPnP Discovery
 - Eliminated maximum value length for FriendlyName
- 8 SNMP Setup

- Eliminated maximum value length for ReadCommunity, WriteCommunity, and UserPassword
- 10 QoS Setup
 - Removed value ranges for Index, PrefixLength, and DSCP
- 13 RTSP
 - Changed values '0' and '60' to '0s' and '60s' for Timeout

Security

- 2 IP Address Filtering
 - Removed value ranges for IPIndex and Mask
- 3 802.1x Setup
 - Removed value of Status
 - Eliminated maximum value length for EAPOLId and EAPOLPassword
- 7 Configuring Users
 - Eliminated maximum value length for UserID, Index, and Password

Video/Audio

- 2.1 Snapshot
 - Changed ProfileID to Profile
 - Removed value range for Profile
- 2.2 Stream
 - Added the Resolution parameter
 - Changed ProfileID to Profile
 - Removed value ranges for Profile, FrameRate, and CompressionLevel
- 2.3 Video Source
 - Added value '20' to SensorCaptureFrameRate
- 2.5 Video-Profile Policy
 - Removed value ranges for DefaultProfile, EventProfile, and RecordProfile
- 2.6 Video Profile
 - Added MPEG4.BitrateControlType, MPEG4.GOVLength MPEG4.PriorityType, and H264.SmartCodecEnable
 - Removed the value for Resolution
 - Removed value ranges for Profile, Name, ATCLimit, SVNPMulticastTTL, RTPMulticastTTL, CropAreaCoordinate, FrameRate, CompressionLevel, Bitrate, and H264.GOVLength
- 2.7 Audio Input
 - Added the value to SampleRate
- 2.8 Audio Output

- Added the value to SampleRate
- 2.9 Stream URI
 - Removed OverlappedID
 - Removed value range for Profile
- 2.10 Multicast
 - Removed value range for Profile
- 2.11 Video Codec Info
 - Added Profile parameter

Image

- Added the following submenus
 - ired (Chapter 5 IR LED)
 - smartcodec (Chapter 10 Smart Codec)
 - fisheylens (Chapter 12 Fisheye Lens)
 - imagepreset (Chapter 13 Image Preset)
- 2 Camera
 - Added HLCMode, HLCLevel, HLCMaskTone, HLCMaskColor, WDRLimit, WDRBlackLevel, WDRWhiteLevel, ShutterMode, ManualShutterSpeed, DayNightModeSchedule.EveryDay, DayNightModeSchedule.EveryDay.FromTo, DayNightSwitchingTimeColorToBW, DayNightSwitchingBrightnessColorToBW, DayNightSwitchingTimeBWToColor, DayNightSwitchingBrightnessBWToColor, NegativeModeEnable, SensUpMode, and SensUpLevel parameters
 - Removed the values from AutoLongShutterSpeed, AutoShortShutterSpeed, DayNightSwitchingTime and IrisFno
 - Removed value ranges for BLCAreaTop, BLCAreaBottom, BLCAreaLeft, BLCAreaRight, and SSNRLevel
 - Added values 'P-Iris-SLAM3180PN' and 'P-Iris-M13VP288IR' to IrisMode
- 3 White Balance
 - Added values 'ATW1', 'ATW2', '3200K', and '5600K' to WhiteBalanceMode
 - Removed value ranges for WhiteBalanceManualRedLevel and WhiteBalanceManualBlueLevel
- 4 Image Enhancement
 - Removed value ranges for SharpnessLevel, Brightness, Gamma, Saturation, and DefogLevel
 - Added CAR
- 7 SDDR
 - Removed value range for Level
- 8 Focus
 - Added Mode, ZoomTrackingMode, ZoomTrackingSpeed, and LensResetSchedule of set action and

Zoom of the control action

- Removed value from Focus
- 9 Overlay
 - Added PTZPositionEnable, CameraIDEnable, PresetNameEnable, and OSDColor
 - Removed value ranges for Title, TitlePositionX, and TitlePositionY
- 11 Privacy
 - Changed the value range for MaskIndex and MaskName

Transfer

- FTP
 - Changed maximum value length of Host
- SMTP
 - Changed maximum value length of Host

Event

- Added following submenus
 - videoloss (Chapter 2.5 Video Loss)
 - autotracking (Chapter 2.6 Auto Tracking)
- Video Analytics Setup
 - Added ObjectSize, MinimumObjectSizeInPixels, and MaximumObjectSizeInPixels
 - Removed value from ROIIndex
 - Removed the value range for MinimumObjectSize and MaximumObjectSize
 - Changed the parameter name from DefinedArea.#.Coordinates to DefinedArea.#.Coordinate and from Line.#.Coordinates to Line.#.Coordinate.
 - Changed the value type of EntireAreaMode from enum to csv
- Face Detection Setup
 - Changed the parameter name from DetectionArea.#.Coordinates to DetectionArea.#.Coordinate
 - Removed the value from DetectionAreaIndex
 - Removed the value range for Sensitivity
- Audio Detection
 - Removed the value range for InputThresholdLevel
- Event Rules
 - Added EveryDay, EveryDay<h>, and EveryDay<h>.FromTo
 - Removed the value range for PresetNumber
- Event Status
 - Removed the values for AlarmInput and AlarmOutput

- Removed ChangedConfigURI from the check action
- Added SystemEvent to the monitor and monitordiff actions
- Added value 'Tracking' to Channel.#.EventType

I/O

- Alarm Output
 - Removed value from AlarmOutput.#.ManualDuration and AlarmOutput.#.ManualDuration

PTZ

- Added following submenus of ptzcontrol.cgi
 - absolute (Chapter 2.1 Absolute Position Control)
 - relative (Chapter 2.2 Relative Position Control)
 - query (Chapter 2.4 Requesting Current PTZ Info)
 - swing (Chapter 2.6 Swing Control)
 - group (Chapter 2.7 Group Control)
 - tour (Chapter 2.8 Tour Control)
 - trace (Chapter 2.9 Trace Control)
 - home (Chapter 2.10 Moving to Home Position)
 - areazoom (Chapter 2.11 Zoom Area)
- Added following submenus of ptzconfig.cgi
 - swing (Chapter 3.1 Swing Setup)
 - group (Chapter 3.2 Group Setup)
 - tour (Chapter 3.3 Tour Setup)
 - trace (Chapter 3.4 Trace Setup)
 - autorun (Chapter 3.5 Auto Run Setup)
 - home (Chapter 3.6 Home Position Setup)
 - presetimageconfig (Chapter 3.8 Preset Image configuration)
 - presetvideoanalysis (Chapter 3.9 Preset Video Analysis Setup)
 - ptzsettings (Chapter 3.10 PTZ Settings)
 - ptlimits (Chapter 3.11 PT Operation Limits)
- 2.3 Continuous PTZ Operation Control
 - Added the NormalizedSpeed parameter
 - Removed value ranges for Pan, Tilt, Zoom, and Duration
- 2.12 Stop Control
 - Added values 'Focus' and 'Iris' to OperationType
- 2.13 Movement Control

- Removed value ranges for MoveSpeed

Recording

- General
 - Removed values for PreEventDuration and PostEventDuration

2.22. Version 2.0.0

Date: 2013-03-29

NOTE

Internal release

-First edition