PRODUCT SUPPORT INFO

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SPC Camera Integration

This document describes the basic configuration steps, how to configure IP cameras to make them available for the integration into the SPC system.

- Supported Vanderbilt/Siemens IP Cameras and encoder
- Supported 3rd IP Cameras
- SPC settings
- Test options
- General information about the CGI command

Table of content

1. IP Camera Configuration

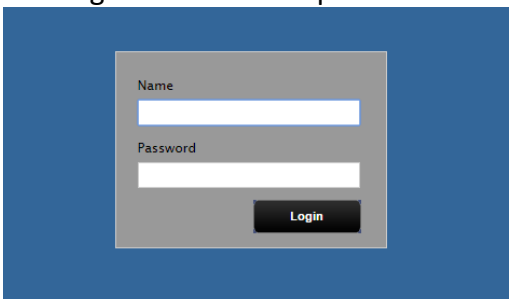
1.1. Settings for Vanderbilt/Siemens IP Cameras

1.1.1 Basic Configuration for Vanderbilt/Siemens Camera streaming

Mandatory stream settings:

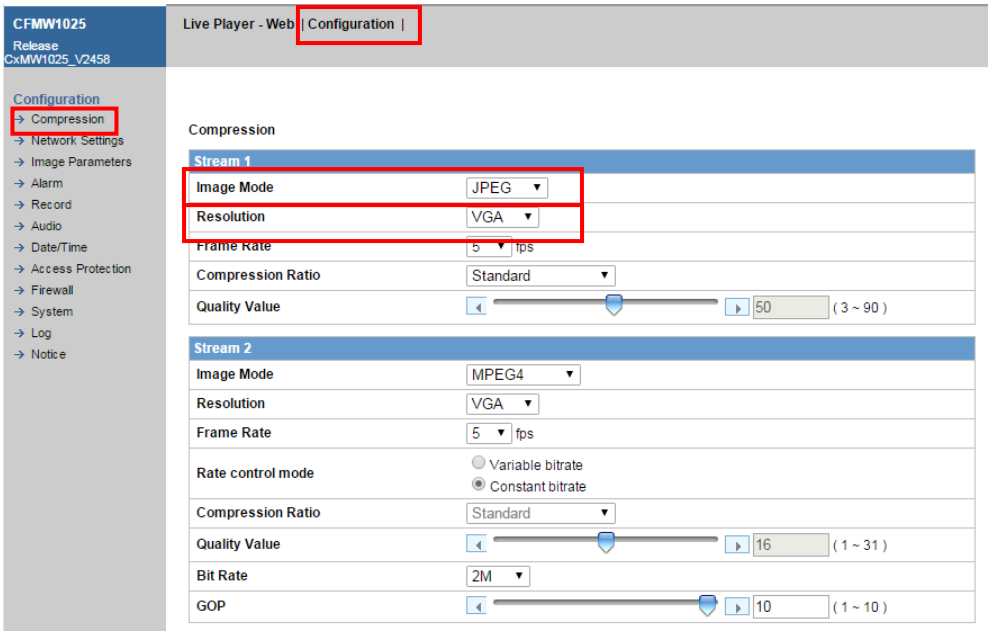
- Resolution: VGA (min. 320x240 - max. 640x480)
- Streaming codec: MJPEG / JPEG
- IP address: set to a free IP address in the same IP range as the SPC
- Streaming port: 80 (recommended)

- Open the web browser, enter the IP-address from the camera and log in. (Default login: “admin” and password: “admin”)

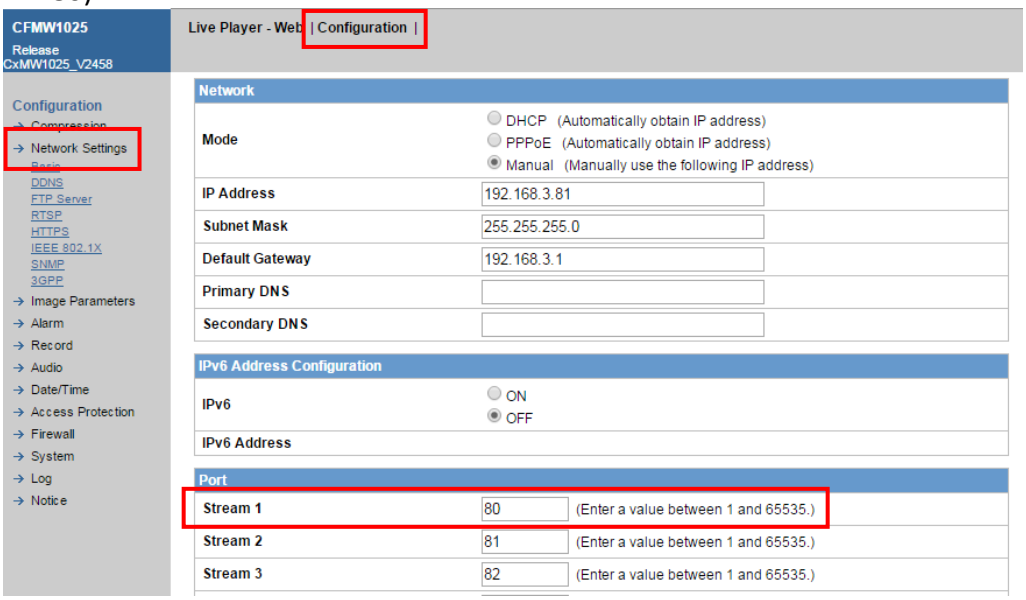


Remark: Make sure that the IP-address of the camera is in the same IP network range as the SPC panel.

- To configure the image compression from the defined stream, select “Configuration” / “Compression” / “Image Mode” select “JPEG” or “MJPEG” and for “Resolution”: VGA.



- To configure the network settings from the defined stream, select “Configuration” / “Network Settings” / “Port” and enter the port for the image streaming (default port 80).



1.1.2 Test options

To verify if the camera is set up correctly, open the web browser and enter the following string into the web browser address field.

http://	<IP-address>/	cgi-bin/	stilljpeg

If no picture is shown, please verify the camera settings above.

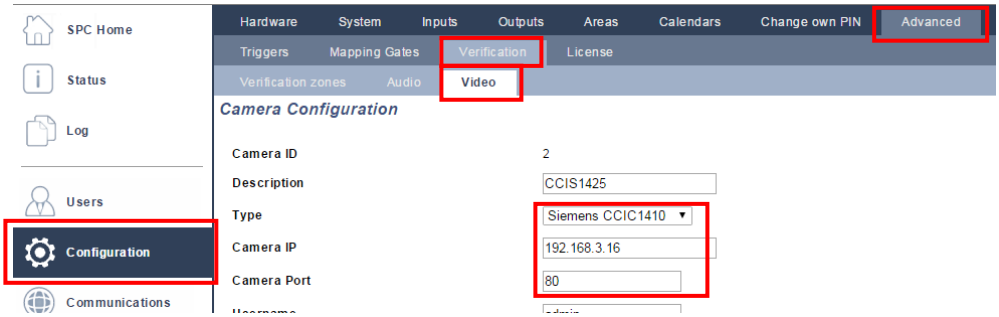
1.1.3 SPC configuration for Vanderbilt/Siemens IP Cameras

Required SPC settings to support Vanderbilt cameras:

- Camera type : Siemens CCIC1410 or Siemens CMFC1315
- Network: IP address of the camera
- Streaming port: Streaming port (defined in the camera)
- Command string: /cgi-bin/stilljpeg

To configure these settings in SPC panel, please follow the instructions. (See below)

- Open the SPC webpage / enable Full Engineer mode / select “Configuration” / “Advanced” / “Verification” / “Video” add a new camera and enter the camera details (type, IP & port).



1.2. Settings for Vanderbilt/Siemens Video Encoder

1.2.1 Basic Configuration for Vanderbilt/Siemens Video Encoder streaming

The CNE 0410 / 0810 / 1610 with the Firmware V1.2.0_151015 or later, requires the Firmware 3.6.6 or later on the SPC panel. The configuration itself is nearly the same as for the Vanderbilt/Siemens cameras, only the CGI string need to be adjusted.

1.2.2 Test options

To verify if the camera is set up correctly, open the web browser and enter the following string into the web browser address field:

http://	<IP-address>/	“cgi-string“

If no picture is shown, please check out the section 1.2.1 in this manual.

1.2.3 SPC Configuration for Vanderbilt/Siemens Video Encoder

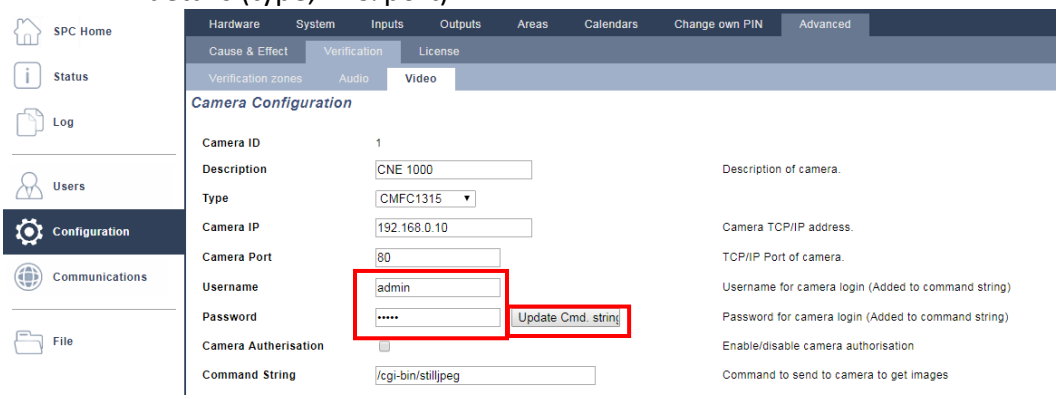
Required SPC settings to support Vanderbilt video encoder:

- Camera type : Siemens CCIC1410 or Siemens CMFC1315
- Network: IP address of the encoder
- Streaming port: Streaming port (defined in the encoder)
- Command string: /Streaming/channels/1/picture?snapShotImageType=JPEG&videoResolutionWidth=704&videoResolutionHeight=576&username=YWRtaW4=&pwd=YWRtaW4=

To adjust the above command string to your own CNE device, please enter the username and password in the corresponding fields and update the string with the “Update Cmd. String” button.

To configure these settings in SPC panel, please follow the instructions. (see below)

- Open the SPC webpage / enable Full Engineer mode / select “Configuration” / “Advanced” / “Verification” / “Video” / add a new camera and enter the camera details (type, IP & port).



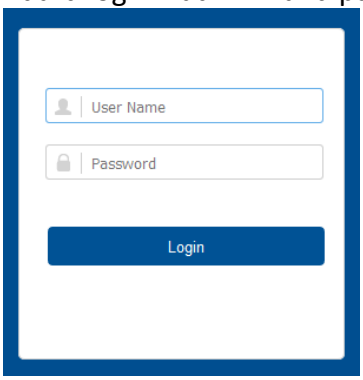
1.3. Settings for Eventys IP Cameras

1.3.1 Basic Configuration for Eventys Camera streaming

Mandatory stream settings:

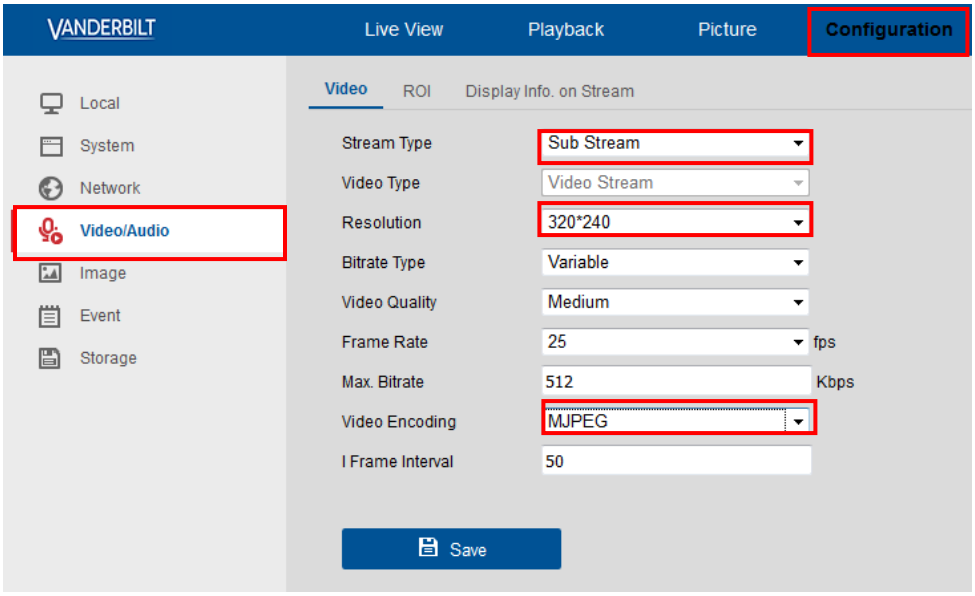
- Resolution (sub-stream): VGA (min. 320x240 - max. 640x480)
- Streaming codec: MJPEG / JPEG
- IP address: set to a free IP address in the same IP range as the SPC
- Streaming port: 80 (recommended)

- Open the web browser, enter the IP-address from the camera and log in. (Standard login: “admin” and password: “admin”)



Remark: Make sure that the IP-address of the camera is in the same IP network range as the SPC panel.

- To configure the image compression from the defined stream, select “Configuration” / “Video/Audio” / “Stream type” select “Sub Stream”, change the “Resolution to “320x240 or 640x480”, the Video Encoding to “MJPEG”.



1.3.2 Test options

To verify if the camera is set up correctly, open the web browser and enter the following string into the web browser address field:

http://	<IP-address>/	/ISAPI/Streaming/Channels/2/picture

If no picture is shown, please check out the section 1.3.1 in this manual.

1.3.3 SPC Configuration for Eventys IP Cameras

Required SPC settings to support Vanderbilt video encoder:

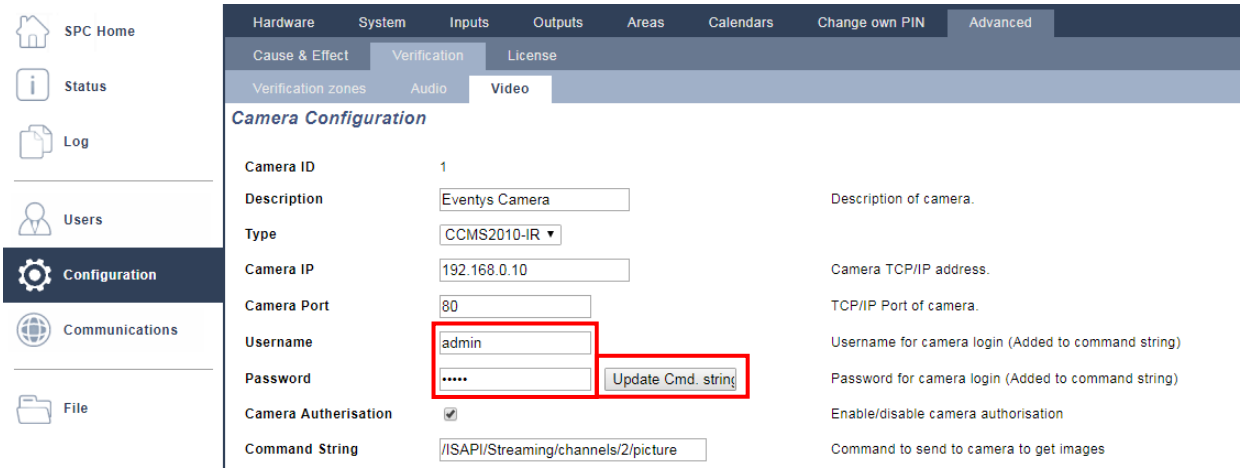
- Camera type: Generic
- Network: IP address of the Eventys camera
- Streaming port: 80
- Command string: /ISAPI/Streaming/Channels/2/picture

To configure these settings in SPC panel, please follow the instructions. (see below)

- Open the SPC webpage / enable Full Engineer mode / select “Configuration” / “Advanced” / “Verification” / “Video” / and add a new camera and enter the camera details (type, IP, port, authorization, etc.).

To adjust the above command string to your own Eventys camera:

- Enter the camera username and password in the corresponding fields
- Activate the “Camera Authorisation” tick-box.
- Update the string with the “Update Cmd. String” button
- Copy afterwards the command string into the Command string field.
- Save the new configuration.



1.4. Settings for 3rd party IP Cameras

1.4.1 Basic Configuration for 3rd party IP Camera streaming

Mandatory stream settings:

- Resolution: VGA (min. 320x240 - max. 640x480)
- Streaming codec: MJPEG / JPEG
- IP address: set to a free IP address in the same IP range as the SPC
- Streaming port: 80 (recommended)
- Command string: CGI support **(to be requested from the camera manufacturer**)

Example CGI-strings from 3rd party camera manufacturer:

Axis	/jpg/image.jpg
Vivotec	/cgi-bin/viewer/video.jpg?channel=2
HIK Vision	/ISAPI/Streaming/channels/102/picture
Dahua	/cgi-bin/snapshot.cgi?
Milesight	/snapshot.cgi?substream

Tab.3: cgi-strings for 3rd party cameras

Please note!

Please make sure, that the username/password is at the end of the CGI string, otherwise the browser will cache the username/password with the result, that the SPC panel does not get any image from the IP camera.

1.4.2 Test options

To verify if the camera is set up correctly, open the web browser and enter the following string into the web browser address field:

http://	<IP-address>/	"cgi-string"
		According to tab.3 / camera manufacturer

If no picture is shown, please check out the installer manual from the camera manufacture.
If you get a picture, please use this string for the camera integration into the SPC system.

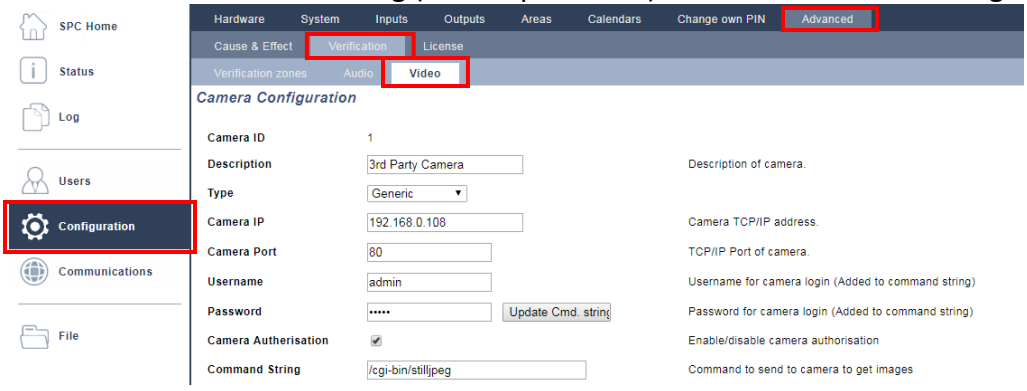
1.4.3 SPC Configuration for 3rd Party IP Cameras

Required SPC camera integration settings for 3rd party cameras:

- Camera type: Generic
- Network IP address in the same IP range as the SPC panel
- Streaming port Streaming port (defined in the camera)
- Command string: (see chapter. 1.4.1)

To configure the standard settings for 3rd party cameras in SPC panel, please follow the instructions. (See below)

- Open the SPC webpage / enable Full Engineer mode / select "Configuration" / "Advanced" / "Verification" / "Video" / add a new camera and enter the camera details (type, IP, port, authorisation, etc.).
- Fill in the CGI-string (see chapter 1.4.1) into the "Command String" field.



- Camera Authorisation
  - When disabled, the username and password are not added to the html string, therefore if the camera requires these, an image will not be captured. In this case click on the “Update Cmd.string” button next to Password and the username and password will be automatically entered at the end of the command string in the Command String box. Please note that this is base64 encoded. Some camera manufacturers no longer use base 64. Please check with camera manufacturer for this data.
  - When enabled, the username and password are automatically entered as part of the html header. In this case there is no need to add the username and password at the end of the command string. Please note that the username and password in base64 encoded in the html header. Some camera manufacturers no longer use base 64. Please check with camera manufacturer for this data.

- Camera compatibility with SPC.
  - Because of the details explained above, it is important to check with your camera manufacturer that base64 is supported in the camera firmware and whether the username and password is required in the HTML header or at the end of the CGI command string. If it is not supported, then that camera will not work with the SPC controller as an image capture is not obtainable.
  - In the next section of this document, Vanderbilt have put together a list of all cameras that are knowingly supported by the SPC system. Please check if your cameras are included in this list. It is critical that you verify the camera make, model and firmware version in the list.

2. Supported Cameras and Video Encoder

2.1. Vanderbilt/Siemens IP Cameras

Product	Latest FW tested	Remarks
CCMS2025	V.2635	
CFMS2025	V.2635	
CVMS2025-IR	V.2635	
CCMW1025	V.2635	
CFMW1025	V.2635	
CCIS1425	V.2635	
CFIS1425	V.2635	
CCID1445-DN18	V.2617	No PTZ support
CCID1445-DN28	V.2617	No PTZ support
CCID1445-DN36	V.2617	No PTZ support
CCMW3025	V0.1.41_SP18	
CFMW3025	V0.1.41_SP18	
CVMW3025-IR	V0.1.41_SP18	
CCMD3025-DN	V0.1.41_SP18	
CCPW3025-IR	V0.1.71	
CCPW5025-IR	V0.1.71	
CCMS2010-IR	S520160418NSA	
CMS2010-IRW	S520160418NSA	
CCIC1410-L	100d	
CCIC1410-LA	100d	
CCIC1410-LAW	100d	
CVMD4010-IR	100c	
CCMC1315-LP	X.1.1.29	
CCMS1315-LP	X.1.1.29	
CFMC1315-LP	X.1.1.29	
CCID1410-ST	X.1.1.29	No PTZ support
CVMW2010-IR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMW2010-VIR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CPMW4010-IR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMW4010-IR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMW4010-IRW	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CPMW4010-VIR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMW4010-VIR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMS2010-IR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMS2011-IR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMS2010-VIR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CPMS2010-IR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CPMS2010-VIR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMS1310-IR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CVMS1310-VIR	5.4.5 – 170308	Min. SPC FW 3.7.1 required
CCMD2010-OIRD	5.4.3 – 20170328	Min. SPC FW 3.7.1 required, No PTZ
CCMD2010-OIR	5.4.3 – 20170328	Min. SPC FW 3.7.1 required, No PTZ

Tab.1: Supported Vanderbilt/ Siemens IP Cameras (November 2017)

2.2. Vanderbilt/Siemens Video Encoder

Product	Latest FW tested	Remarks
CNE1000	0102b	
CNE0410	V1.2.0_160424	*Special settings, see chapter 1.2
CNE0810	V1.2.0_160424	*Special settings, see chapter 1.2
CNE1610	V1.2.0_160424	*Special settings, see chapter 1.2

Tab.2: Supported Vanderbilt/Siemens Video Encoder (November 2017)

2.3. Supported 3rd party IP Cameras

Product	FW tested	Command String	Camera Authorisation	Port	Camera Type
AXIS P1347	5.40.9.2	/jpg/image.jpg	Enabled	80	Generic
Vivotec CC9381-HV	0222g	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
Vivotec CD8371-HNVF2	1113b	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
Vivotec FD9166-HN	0222g	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
Vivotec FD9365-HTVL	0121d	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
Vivotec FE9380-HV	0222k	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
Vivotec IB9380-H	0100p	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
Vivotec IB9388-HT	0222g	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
Vivotec IB9391-EHT	0121d	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
Vivotec IT9380-H	0222g	/cgi-bin/viewer/video.jpg?channel=2	Enabled	80	Generic
HIK Vision DS-2CD2625FHW	V5.6.5 build 200316	/ISAPI/Streaming/channels/102/picture	Enabled	80	Generic
HIK Vision DS-2CD4A24FWD-IZS	V5.5.83 build 190218	/ISAPI/Streaming/channels/102/picture	Enabled	80	Generic
HIK Vision DS-2CD7126G0	V5.6.0 build 190428	/ISAPI/Streaming/channels/102/picture	Enabled	80	Generic
Dahua ** IPC-HDBW4421FP-AS	IPC-HX4X2X-Themis_Eng_P_Stream3_V2.620.0000002.1.T.171026	/cgi-bin/snapshot.cgi?	Enabled	80	Generic
Dahua ** IPC-HDBW8331EP-Z	IPC-HX8XXX-Eos_GerEng_P_Stream3_V2.420.0000.2.T.20171027	/cgi-bin/snapshot.cgi?	Enabled	80	Generic
Dahua ** IPC-HDBW5421EP-Z	IPC-HX5X2X-Themis_Eng_P_Stream3_V2.620.0000002.1.T.171026	/cgi-bin/snapshot.cgi?	Enabled	80	Generic
Milesught MS-C2973-PB	40.7.0.73-r8	/snapshot.cgi?substream	Disabled	80	

Tab.3: Supported 3rd party IP Cameras* (October 2016)

Remark:

This 3rd party camera list is generated based on customer's feedback, no guarantee for completeness and correctness!

** For Dahua cameras, special FW is required. Sub-Stream needs to be used for snapshot command in SPC.

It is important to understand that the SPC controller uses base64 encoding to capture a video image. The username and password are either encoded at the end of the cgi command string or in the html header. If any third-party camera does not support base 64 encoding, then this camera will not integrate with the SPC controller. Vanderbilt recommends checking the camera manufacturers latest datasheets for encoders used.

3. General information

The Common Gateway Interface (CGI) is a method to display dynamic contents on a web page. The CGI command enables a communication with the camera.

The SPC panel uses the CGI command to request an image from the IP camera.

String examples for Vanderbilt/Siemens Cameras:

- Standard strings (it is supported to add no user and password).

http:/	<ip-address>/	cgi-bin/	stilljpeg

or

http:/	<ip-address>/	cgi-bin/	jpeg

or

http:/	<ip-address>/	cgi-bin/	image

- The user and password must be at the end of the string (it is supported to add unencrypted user and password)!

http:/	<ip-address>/	cgi-bin/	stilljpeg?username=admin=&pwd=admin=

- The user and password must be at the end of the string (it is supported to add BASE64 encoding user and password).

http:/	<ip-address>/	cgi-bin/	stilljpeg?username=YWRtaW4=&pwd=YWRtaW4=

It is also possible to add:
- The image resolution to the string
- The channel number to the string
- The streaming port number to the string.

4. Warranty

The mentioned examples are the recommended settings. There are other configuration scenarios available, e.g. dual streaming required. For such scenarios, please consider possible limitations given from the different IP cameras.

Vanderbilt do not have the control over the development of 3rd party cameras, therefore no warranty for correctness of the documentation will be given at any time.

If you have further experience with other IP cameras or supplementary information, please feel free to contact our Technical Support department.

If you have any questions, please contact our Technical Competence Centre.

Contact details can be found on our website.