



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.

Key points

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

SUPPORT INFORMATION

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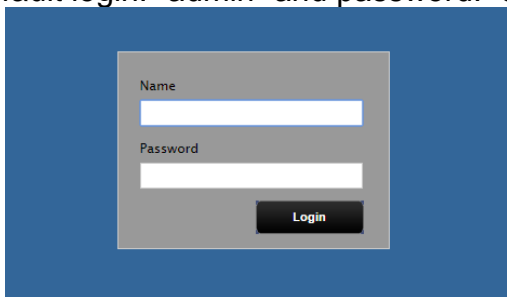
1. IP Camera Configuration

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.

Stream 1	
Image Mode	JPEG
Resolution	VGA
Frame Rate	5 fps
Compression Ratio	Standard
Quality Value	50 (3 ~ 90)

Stream 2	
Image Mode	MPEG4
Resolution	VGA
Frame Rate	5 fps
Rate control mode	<input type="radio"/> Variable bitrate <input checked="" type="radio"/> Constant bitrate
Compression Ratio	Standard
Quality Value	16 (1 ~ 31)
Bit Rate	2M
GOP	10 (1 ~ 10)

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- 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).

The screenshot shows the configuration page for CFMW1025. The 'Configuration' menu is expanded to 'Network Settings', which is further expanded to 'Port'. The 'Port' section contains a table with three rows: Stream 1, Stream 2, and Stream 3. The 'Stream 1' row has a text input field containing '80' and a tooltip that says '(Enter a value between 1 and 65535.)'. The 'Stream 2' row has a text input field containing '81' and a tooltip that says '(Enter a value between 1 and 65535.)'. The 'Stream 3' row has a text input field containing '82' and a tooltip that says '(Enter a value between 1 and 65535.)'. The 'Network' section above shows 'Mode' set to 'Manual' with IP address '192.168.3.81', Subnet Mask '255.255.255.0', and Default Gateway '192.168.3.1'. The 'IPv6 Address Configuration' section shows 'IPv6' set to 'OFF'.

1.1.2 Test options

To verify if the camera is supported from the SPC panel, open the web browser and enter the following string into the web browser address field:

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

The screenshot shows the SPC web interface. The 'Configuration' menu is expanded to 'Advanced', which is further expanded to 'Verification', which is further expanded to 'Video'. The 'Camera Configuration' section is visible, showing a table with columns for Camera ID, Description, Type, Camera IP, and Camera Port. The 'Camera ID' is '2', the 'Description' is 'CCIS1425', the 'Type' is 'Siemens CCIC1410', the 'Camera IP' is '192.168.3.16', and the 'Camera Port' is '80'. The 'Configuration' menu is highlighted in red.

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 supported from the SPC panel, open the web browser and enter the following string into the web browser address field:

http://	<IP-address>/	"cgi-string"
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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).

Hardware	System	Inputs	Outputs	Areas	Calendars	Change own PIN	Advanced
Cause & Effect	Verification	License					
Verification zones	Audio	Video					

Camera Configuration

Camera ID	1	
Description	CNE 1000	Description of camera.
Type	CMFC1315	
Camera IP	192.168.0.10	Camera TCP/IP address.
Camera Port	80	TCP/IP Port of camera.
Username	admin	Username for camera login (Added to command string)
Password	Password for camera login (Added to command string)
Camera Authorisation	<input type="checkbox"/>	Enable/disable camera authorisation
Command String	/cgi-bin/stilljpeg	Command to send to camera to get images

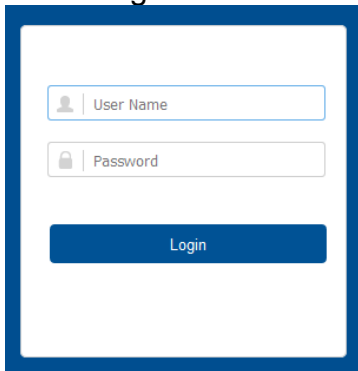
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1.3. Settings for Eventys IP Cameras

1.3.1 Basic Configuration for Eventys Camera streaming

Mandatory stream settings:

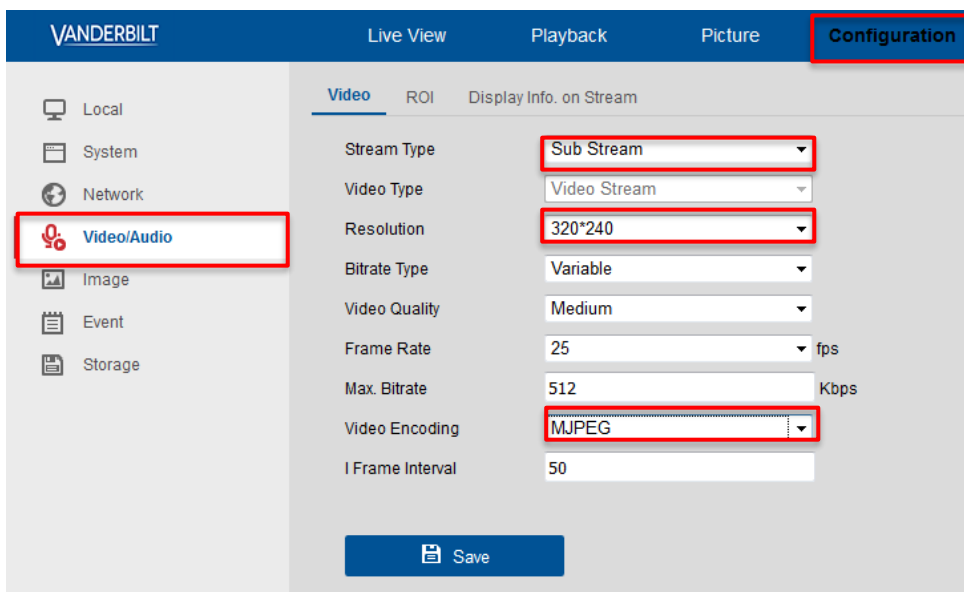
- Resolution (sub-stream): VGA (min. 320x240 - max. 640x480)
 - Streaming codec: MJPEG / JPEG
 - IP address: set to a free IP address in the same IP range as the SPC 80 (recommended)
 - Streaming port: 80 (recommended)
- Open the web browser, enter the IP-address from the camera and log in. (Standard login: “admin” and password: “admin”)



The image shows a login interface with a white background and a blue border. At the top left is a user icon. Below it are two input fields: 'User Name' and 'Password'. At the bottom is a blue 'Login' button.

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”.



The screenshot shows the 'VANDERBILT' web interface. The top navigation bar includes 'Live View', 'Playback', 'Picture', and 'Configuration' (highlighted with a red box). The left sidebar has 'Local', 'System', 'Network', 'Video/Audio' (highlighted with a red box), 'Image', 'Event', and 'Storage'. The main content area is titled 'Video' and shows settings for 'Sub Stream' (Stream Type), 'Video Stream' (Video Type), '320*240' (Resolution), 'Variable' (Bitrate Type), 'Medium' (Video Quality), '25' (Frame Rate), '512' (Max. Bitrate), 'MJPEG' (Video Encoding), and '50' (I Frame Interval). A 'Save' button is at the bottom.

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1.3.2 Test options

To verify if the camera is supported from the SPC panel, open the web browser and enter the following string into the web browser address field:

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

The screenshot shows the SPC Configuration interface. On the left is a navigation menu with options: SPC Home, Status, Log, Users, Configuration (selected), Communications, and File. The main content area is titled 'Camera Configuration' and has tabs for Hardware, System, Inputs, Outputs, Areas, Calendars, Change own PIN, and Advanced. Under the 'Advanced' tab, there are sub-tabs for Cause & Effect, Verification, and License. The 'Verification' sub-tab is active, and within it, the 'Video' sub-tab is selected. The configuration fields are as follows:

Camera ID	1	
Description	Eventys Camera	Description of camera.
Type	CCMS2010-IR	
Camera IP	192.168.0.10	Camera TCP/IP address.
Camera Port	80	TCP/IP Port of camera.
Username	admin	Username for camera login (Added to command string)
Password	****	Password for camera login (Added to command string)
Camera Authorisation	<input checked="" type="checkbox"/>	Enable/disable camera authorisation
Command String	/ISAPI/Streaming/channels/2/picture	Command to send to camera to get images

The 'Username' and 'Password' fields, along with the 'Update Cmd. string' button, are highlighted with red boxes in the original image.

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 by the camera manufacturer)**

Example CGI-strings from 3rd party camera manufacturer:

Axis	/jpg/image.jpg
Mobotix	/cgi-bin/image.jpg?size=320x240
Samsung	/stw-cgi/video.cgi?msubmenu=snapshot&action=view&ProfileID=3
SONY	onshotimage.jpg?username=YWRtaW4=&pwd=YWRtaW4=
Dahua	/cgi-bin/snapshot.cgi?

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 supported from the SPC panel, open the web browser and enter the following string into the web browser address field:

http://	<IP-address>/	<div style="border: 1px solid black; padding: 5px; text-align: center;"> "cgi-string" </div> <p style="text-align: center; margin-top: 5px;">According to tab.3 / camera manufacturer</p>
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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)

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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.

The screenshot displays the SPC web interface. On the left sidebar, the 'Configuration' menu item is highlighted with a red box. The top navigation bar shows the 'Advanced' tab selected, also highlighted with a red box. Below the navigation bar, the 'Verification' and 'Video' sub-tabs are highlighted with red boxes. The main content area is titled 'Camera Configuration' and contains the following fields:

Camera ID	1	
Description	3rd Party Camera	Description of camera.
Type	Generic	
Camera IP	192.168.0.108	Camera TCP/IP address.
Camera Port	80	TCP/IP Port of camera.
Username	admin	Username for camera login (Added to command string)
Password	Password for camera login (Added to command string)
Camera Authentication	<input checked="" type="checkbox"/>	Enable/disable camera authorisation
Command String	/cgi-bin/stilljpeg	Command to send to camera to get images

SUPPORT INFORMATION

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	Port	Type
AXIS P1347	5.40.9.2	/jpg/image.jpg	80	Generic
Vivotek IP71XX	—	/ipderkamera/cgi-bin/viewer/video.jpg?user=test&pwd=password	80	Generic
Vivotek TC5332	—	/ipderkamera/cgi-bin/viewer/video.jpg?user=test&pwd=password	80	Generic
Foscam FI8910W	—	/ipderkamera/snapshot.cgi?user=test&pwd=password	80	Generic
ACTi ACM-3311	—	/cgi-bin/encoder?USER=Admin&PWD=123456&SNAPSHOT	80	Generic
Dahua ** IPC-HDBW4421FP-AS		/cgi-bin/snapshot.cgi?	80	Generic
Dahua ** IPC-HDBW8331EP-Z		/cgi-bin/snapshot.cgi?	80	Generic
Dahua ** IPC-HDBW5421EP-Z		/cgi-bin/snapshot.cgi?	80	Generic

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

Remark:

* This list is generated based on customer's feedback, no guarantee for completeness and correctness!

** For Dahua cameras special FW was installed. Sub-Stream needs to be used for snapshot command in SPC.

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
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or

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

http://	<ip-address>/	cgi-bin/	image
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- 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=
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- The user and password must be at the end of the string (it is supported to add BASE64 encrypted user and password).

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