Configuring Video Parameters

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This chapter describes how to configure the Cisco Analog Video Gateway video ports and video profiles. The Cisco Analog Video Gateway command-line interface (CLI) commands are used to add a new video profile or, if a video profile already exists, allow you to modify existing video profiles.

Whenever possible, configuration and management of the Cisco Analog Video Gateway module should be configured using the Video Surveillance Operations Manager (VSOM) graphical user interface.

This chapter covers the following topics:

Configuring Video Ports

The Cisco Analog Video Gateway consists of 16 video ports, which correspond to the 16 physical ports on the video service module.

Use the **video port** command to configure Cisco Analog Video Gateway port profile.

Restrictions

Only video ports 0 and 1 can be configured as either input or output ports. Video ports 2 through 15 are input ports.

Note The **brightness**, **contrast**, **hue**, **saturation**, and **sharpness** CLI command options are applicable only to *in* or *input* direction. When direction is changed from *out* or *output* to *in*, **brightness**, **contrast**, **hue**, **saturation**, and **sharpness** values change to their default values.

SUMMARY STEPS

1. **configure terminal**
2. **video port** *portnum*
3. Video port command options:

Note Valid for version 1.2 and later.

- [**brightness** | **contrast** | **default** | **description** | **direction** | **hue** | **saturation** | **sharpness** | **state**]

Note Valid only for versions 1.0 and 1.1.

- [**brightness** | **contrast** | **default** | **description** | **direction** | **hue** | **maxresolution** | **saturation** | **sharpness** | **state**]

4. **end**
5. **exit**
6. **show video port** *portnum*
   or
   show video port summary

DETAILED STEPS

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.

Step 2	**video port** *portnum*
	
	Example:
	`Router# VSE-Module(config)> video port 0`
	`Modifying existing port`
	`VSE-Module(config-port)>`
		Enters video port configuration mode.
		
		portnum: Identifier for the video port integer value in the range of 0 to 15.

	Command or Action	Purpose

Step 3	**Note** The following command options are valid for version 1.2 and later:
	
	[**brightness** | **contrast** | **default** | **description** | **direction** | **hue** | **saturation** | **sharpness** | **state**]
	
	Note The following command options are only valid for versions 1.0 and 1.1:
	
	[**brightness** | **contrast** | **default** | **description** | **direction** | **hue** | **maxresolution** | **saturation** | **sharpness** | **state**]
	
	Example:
	`VSE-Module(config)> video port 0`
	`Modifying existing port`
	`VSE-Module(config-port)> brightness 100`
	`VSE-Module(config-port)> contrast 80`
	`VSE-Module(config-port)> description "video port 0 config"`
	`VSE-Module(config-port)> direction out`
	`VSE-Module(config-port)> hue 50`
	`VSE-Module(config-port)> saturation 45`
	`VSE-Module(config-port)> sharpness 2`
	`VSE-Module(config-port)> state enabled`
	`VSE-Module(config-port)> end`
	`VSE-Module(config)> exit`
	`VSE-Module >`
		Configures a specific video port profile parameters.
		
		brightness: Video brightness integer value in the range of –128 to 127.
		
		Default: 0
		
		contrast: Video contrast integer value in the range of –128 to 127.
		
		Default: 0
		
		default: Video port default value. Use the **no** form of this command to revert to the default values.
		
		description: Video port description text in quotes. Up to 80 text characters allowed.
		
		Default: " "
		
		direction: Video port direction:
		• in: input direction
		• out: output direction
		
		Default: input direction
		
		hue: Video hue integer value in the range of –128 to 127.
		
		Default: 0
		
		maxresolution:
		
		Note This command is only valid for versions 1.0 and 1.1.
		
		Maximum height and width of the frame in Common Intermediate Format (CIF).
		• CIF: 352 x 240 for NTSC; 352 x288 for PAL.
		• 2CIF: 704 x 240 for NTSC; 704 x 288 for PAL. This option is available only in 1.1 and later versions.
		• 4CIF: 704 x480 for NTSC; 704 x 576 for PAL.
		
		Default: 4CIF.
		
		saturation: Video saturation integer value in the range of –128 to 127.
		
		Default: 0
		
		sharpness: Video sharpness in the integer value range of 0 to 3.
		
		Default: 0
		
		state: Operational state of the video port: enabled or disabled.
		
		Default: enabled

Step 4	**end** **Example:** `VSE-Module(config-port)> end`	Exits video port configuration.

	Command or Action	Purpose
Step 5	**exit** **Example:** `VSE-Module(config)> exit`	Exits global configuration mode.

Step 6	**show video port** *portnum*
	or
	show video port summary
	
	Example:
	`VSE-Module> show video port 0`
	or
	`VSE-Module> show video port summary`
		Displays the port configuration of a specific port number or a summary of the video ports.

Examples

Use the **show video port** *portnum* command to view the status of a specific video port. For example:

```
vse-module> show video port 0
description "Video port initial config"
state enabled
direction in
maxResolution 4cif
brightness 100
contrast 80
hue 75
saturation 110
sharpness 2
```

Use the **show video port summary** command to view the status of the video ports. For example:

```
vse-module> show video port summary
port   state   dir mxRes brightness contrast hue   saturation sharpness
=====================================================================
 0     ena     out   -         -        -        -        -        -
 1     ena     out   -         -        -        -        -        -
 2     ena     in   4cif       0        0        0        0        0
 3     ena     in   4cif       0        0        0        0        0
 4     ena     in   4cif       0        0        0        0        0
 5     ena     in   4cif       0        0        0        0        0
 6     ena     in   4cif       0        0        0        0        0
 7     ena     in   4cif       0        0        0        0        0
 8     ena     in   4cif       0        0        0        0        0
 9     ena     in   4cif       0        0        0        0        0
 10    ena     in   4cif       0        0        0        0        0
 11    ena     in   4cif       0        0        0        0        0
 12    ena     in   4cif       0        0        0        0        0
 13    ena     in   4cif       0        0        0        0        0
 14    ena     in   4cif       0        0        0        0        0
 15    ena     in   4cif       0        0        0        0        0
vse-module>
```

Configuring Video Profiles

The Cisco Analog Video Gateway provides analog video gateway profiles to external video recorders, browsers, viewers, and players. The video profiles must be configured in the following order:

1. Video codec
2. Video motion region
3. Video motion detection
4. Video codec, motion region, and motion detection profiles must all be associated with a video stream profile

Use the procedures in following sections to configure video profiles:

- Video Codec Profile, page 33
- Video Motion Region Profile, page 38
- Video Motion Detection Profile, page 40
- Video Stream Profile, page 42

Video Codec Profile

A video codec profile can be assigned to multiple video ports. Use the **video codec-profile** command to configure a video codec profile.

SUMMARY STEPS

1. **configure terminal**
2. **video codec-profile** *tag*
3. [**bitrate** | **codec** | **default** | **deinterlace** | **description** | **format** | **framerate** | **gopsize** | **maxbitrate** | **qualityfactor** | **resolution** | **skipfactor** | **state**]
4. **end**
5. **exit**
6. **show video codec** *tag*
   or
   show video codec-profile user-configured summary
   or
   show video codec-profile dynamically-generated summary

DETAILED STEPS

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.

Step 2	**video codec-profile** *tag*
	
	Example:
	`VSE-Module(config)> video codec codec000`
	`Modifying existing codec`
	`VSE-Module(config-codec-profile)>`
		Enters the video codec profile configuration mode.
		tag: Identifier for the video codec profile in the range of codec000 to codec999.

Step 3	[**bitrate** | **codec** | **default** | **deinterlace** |**description** | **format** | **framerate** | **gopsize** | **maxbitrate** | **qualityfactor** | **resolution** | **skipfactor** | **state**]
	
	Example:
	`VSE-Module(config)> video codec codec000`
	`Modifying existing codec`
	`VSE-Module(config-codec-profile)> bitrate cbr`
	`VSE-Module(config-codec-profile)> codec mpeg4`
	`VSE-Module(config-codec-profile)> deinterlace enable`
	`VSE-Module(config-codec-profile)> desription "video codec profile 0 config"`
	`VSE-Module(config-codec-profile)> format ntsc`
	`VSE-Module(config-codec-profile)> framerate 30`
	`VSE-Module(config-codec-profile)> gopsize 50`
	`VSE-Module(config-codec-profile)> maxbitrate 170`
	`VSE-Module(config-codec-profile)> qualityfaxtor 50`
	`VSE-Module(config-codec-profile)> resolution 4cif`
	`VSE-Module(config-codec-profile)> skipfactor 150`
	`VSE-Module(config-codec-profile)> enabled`
	`VSE-Module(config-codec-profile)> end`
	`VSE-Module(config)> exit`
	`VSE-Module >`
		Configures specific video codec profile parameters.
		bitrate: Video codec profile bit rate:
		• vbr: Variable bit rate (VBR).
		• cbr: Constant bit rate (CBR).
		MJPEG accepts only VBR. H.264 and MPEG4 accept both VBR and CBR.
		An error message appears if CBR is selected for MJPEG.
		Default: CBR.
		codec: Video codec profile type:
		• h264: H.264.
		• mjpeg: MJPEG.
		• mpeg4: MPEG4.
		Default: mpeg4.
		default: Use the video codec profile default values. Use the **no** form of this command to revert to the default values.
		description: Video codec profile text description, in quotes. Up to 80 text characters are allowed.
		deinterlace: Enables or disables deinterlace mode. This option is available only in 1.1 and later versions.
		Default: enabled
		format: Video codec video format:
		• ntsc: NTSC (National Television Standards Committee).
		• pal: PAL (Phase Alternating Line).

Command or Action	Purpose
	framerate: Video codec profile frame rate number that defines how many frames 1 second (fps) of video or audio contains: • NTSC: 30 to 0.1. • PAL: 25 to 0.0833 (up to 6 decimal places). For example, a frame rate of 0.01 means 1 frame every 100 seconds. Default: 10. **gopsize**: Video codec profile group-of-picture (GOP) size. Integer value in the range of 0 to 600 for MPEG4 and H.264 only. Default: 20. **maxbitrate**: Video codec profile maximum bit rate in kbps. Not applicable to MJPEG. • MPEG4: Integer value range of 168 to 2000 • H.264: Integer value in the range of 168 to 3000 Default: 768 for both MPEG4 and H.264 codec types **qualityfactor**: Video codec profile quality factor. Applicable only to MJPEG codec. Integer value in the range of 0 to 100. Default: 70. **resolution**: Video Codec profile resolution in CIF: • 4cif • 2cif (This option available only in 1.1 and later versions.) • cif Default: 4cif. **skipfactor**: Video codec profile skip factor (also called the skip rate). Integer value in the range of 1 to 300. See "Supported Skip Factor" section on page 36. Default: 3 **state**: Operational state of the video codec profile: enabled or disabled. Default: enabled.
Step 4 `end` **Example:** `VSE-Module(config-codec-profile)> end`	Exits video codec-profile configuration mode.

	Command or Action	Purpose
Step 5	**exit** **Example:** `VSE-Module(config)> exit`	Exits global configuration mode.
Step 6	**show video codec** *tag* or **show video codec-profile user-configured summary** or **show video codec-profile dynamically-generated summary** **Example:** `VSE-Module> show video port summary`	Displays the video codec profile parameters for a specified codec profile, for dynamically generated codec profiles, and for user-configured codec profiles.

Supported Skip Factor

The skip factor reduces the frame rate in the video stream (frame skip ration) to reduce bandwidth when the full frame rate is not needed. The skip factor is defined by the following formulas for NTSC an PAL:

Frame Rate * Skip Factor = NTSC (30)

Frame Rate * Skip Factor = PAL (25)

The Cisco Analog Video Gateway module supports only the following specific skip rate factors:

- For NTSC, the supported skip factors are:

  30/1, 30/2, 30/3, and 30/4

- For PAL, the supported skip factors are:

  25/6, 25/10, and 25/15

If a skip factor falls outside those supported by the Cisco Analog Video Gateway, the closest supported skip factor is used. Table 7 shows a subset of possible frame rate/skip factor values for NTSC and PAL in the range of 1 to 300.

Table 7 Subset of Possible NTSC (30) and PAL (25) Frame Rate/Skip Factor Values

Skip Factor	NTSC Frame Rate = 30/Skip Factor	PAL Frame Rate = 25/Skip Factor
1	30	25
2	15	12.5
3	10	8.333333
4	7.5	6.25
5	6	5
6	5	4.166666
7	4.285714	3.57
8	3.75	3.125
10	3	2.5

Table 7 Subset of Possible NTSC (30) and PAL (25) Frame Rate/Skip Factor Values (continued)

Skip Factor	NTSC Frame Rate = 30/Skip Factor	PAL Frame Rate = 25/Skip Factor
12	—	2.083333
15	2	—
25	—	1
30	1	—
50	—	0.5
60	0.5	—
250	—	0.1
300	0.1	—

Examples

The following example shows the video codec-profile codec000 parameters:

```
VSE-Module> show video codec-profile codec000
description "video codec profile 0 config"
state enabled
codec mpeg4
format ntsc
frameRate 0.2
skipFactor 150
resolution 4cif
bitRate cbr
maxBitRate 170
gopSize 50
```

The following example shows a user-configured codec profile summary:

```
VSE-Module> show video codec-profile user-configured summary
tag     state codec format frameRate bitRate  mxBR gopSize QF  SF  resolution deinterlace
================================================================================================
codec000 ena   mpeg4 ntsc   0.2       cbr     170  50      -   150 4cif
codec001 ena   mpeg4 ntsc   5         cbr     1000 15      -   6   cif
codec002 ena   mpeg4 ntsc   5         cbr     1000 15      -   6   cif
codec003 ena   mpeg4 pal    5         cbr     1000 15      -   5   cif
codec004 ena   mpeg4 ntsc   5         cbr     1000 15      -   6   cif
codec005 ena   mpeg4 ntsc   5         cbr     1000 15      -   6   cif
codec006 ena   mpeg4 ntsc   5         cbr     1000 15      -   6   cif
codec007 ena   mpeg4 ntsc   5         cbr     1000 15      -   6   cif
codec008 ena   h264  ntsc   5         cbr     1000 15      -   6   cif
codec009 ena   h264  ntsc   5         cbr     1000 15      -   6   cif
codec010 ena   h264  ntsc   3         cbr     1000 15      -   10  4cif
codec011 ena   h264  ntsc   5         cbr     1000 15      -   6   cif
codec012 ena   h264  ntsc   5         cbr     1000 15      -   6   cif
codec013 ena   h264  ntsc   5         cbr     1000 15      -   6   cif
codec014 ena   h264  ntsc   5         cbr     1000 15      -   6   cif
codec015 ena   h264  ntsc   5         cbr     1000 15      -   6   cif
codec020 ena   mpeg4 ntsc   10        cbr     384  20      -   3   cif
codec099 ena   mpeg4 ntsc   5         cbr     1000 15      -   6   cif
codec100 ena   mjpeg ntsc   5         vbr     -    -       50  6   cif
codec200 ena   mjpeg ntsc   5         vbr     -    -       80  6   cif
codec999 ena   mpeg4 ntsc   5         cbr     1000 15      -   6   cif
codec030 ena   mjpeg ntsc   30        vbr     -    -       100 1   cif
httpx    ena   mjpeg ntsc   5         vbr     384  30       70 2   cif      enabled
```

Video Motion Region Profile

A video motion region profile can be assigned to multiple video ports. Use the **video motion-region** command to configure a video motion region profile. A video motion region defines an area in a video frame and assigns a numberical value to the region to identify it. A video motion region is defined by coordinates as a percentage in the integer range of 0 to 100:

- Lower-right X-coordinate
- Lower-right Y-coordinate
- Upper-left X-coordinate
- Upper-left Y-coordinate

The Cisco Analog Video Gateway currently supports 8 motion regions per video stream.

SUMMARY STEPS

1. **configure terminal**
2. **video motion-region** *tag*
3. [**default | description | lowerrightcoordx | lowerrightcoordy | state | threshold | upperleftcoordx | upperleftcoordy**]
4. **end**
5. **exit**
6. **show video motion-region** *tag*
   or
   show video motion-region summary

DETAILED STEPS

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.

Step 2	**video motion-region** *tag*
	
	Example:
	`VSE-Module(config)> video motion-region mr000`
	`Adding new motion`
	`VSE-Module(config-motion-region)>`
		Enters video motion region configuration mode.
		
		tag: Video motion region identifier in the range of mr000 to mr999.

	Command or Action	Purpose

Step 3	[**default** | **description** | **lowerrightcoordx** | **lowerrightcoordy** | **state** | **threshold** | **upperleftcoordx** | **upperleftcoordy**]
	
	Example:
	`VSE-Module(config)> video motion-region mr000`
	`Adding new motion`
	`VSE-Module(config-motion-region)> description "video motion region 0 config"`
	`VSE-Module(config-motion-region)> lowerrightcoordx 25`
	`VSE-Module(config-motion-region)> lowerrightcoordy 50`
	`VSE-Module(config-motion-region)> upperleftcoordx 40`
	`VSE-Module(config-motion-region)> upperleftcoordy 60`
	`VSE-Module(config-motion-region)> state enabled`
	`VSE-Module(config-motion-region)> threshold 20`
		Configures video motion region profile parameters.
		
		default: Video motion region default values. Use the **no** form of this command to revert to the default values.
		
		description: Video motion region text description in quotes. Up to 80 text characters are allowed.
		
		lowerrightcoordx: Video motion region lower-right X-coordinate. Integer percentage in the range of 0 to 100.
		
		Default: 0.
		
		lowerrightcoordy: Video motion region lower-right Y-coordinate. Integer percentage in the range of 0 to 100.
		
		Default: 0.
		
		state: Operational state of the video motion region: enabled or disabled.
		
		Default: enabled.
		
		threshold: Video motion region threshold. Integer value in the range of 1 to 100. The Motion Detection algorithm is most sensitive when **threshold** is set to 1, and is least sensitive when it is set to 100.
		
		Default: 10.
		
		upperleftcoordx: Video motion region upper-left X-coordinate. Integer percentage in the range of 0 to 100.
		
		Default: 0.
		
		upperleftcoordy: Video motion region upper-left Y-coordinate. Integer percentage in the of range 0 to 100.
		
		Default: 0.

Step 4	**end** **Example:** `VSE-Module(config-motion-region)> end`	Exits video motion region configuration mode.
Step 5	**exit** **Example:** `VSE-Module(config)> exit`	Exits global configuration mode.
Step 6	**show video motion-region** *tag* or **show video motion-region summary** **Example:** `VSE-Module> show video motion-region mr111`	Displays video motion region for a specific region.

Examples

The following example displays the specific video motion-region mr000 parameters:

```
VSE-Module> show video motion-region mr000
description "video motion region 0 config"
state enabled
upperLeftCoordx 20
upperLeftCoordy 30
lowerRightCoordx 25
lowerRightCoordy 50
threshold 10
```

The following example displays the video motion-region summary:

```
VSE-Module> show video motion-region summary
 tag   state  upper-x   lower-x   upper-y   lower-y  threshold
=============================================================
mr000  ena     20        25        30        50        10
```

Video Motion Detection Profile

Video motion detection defines activity in a scene by analyzing image data and differences in a series of images. Video region alarm programming allows you to define areas of a screen where you want to detect any visual changes.

After motion is detected in a region predefined by a coordinate system, events can be triggered. The video motion region profile is identified using a tag identifier (see "Video Motion Region Profile" section on page 38).

A video motion detection profile can then be assigned to multiple video ports. Use the **video motion-detection** command to configure a video motion detection profile.

SUMMARY STEPS

1. **configure terminal**
2. **video motion-detection** *tag*
3. [**default** | **description** | **motion-region-tag** | **state**]
4. **end**
5. **exit**
6. **show video motion-detection** *tag*
   or
   show video motion detection summary

DETAILED STEPS

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.

Step 2	**video motion-detection** *tag*
	
	Example:
	`VSE-Module(config)> video motion-detection md000`
	`Adding new motion`
	`VSE-Module(config-motion-detection)>`
		Enters video motion detection mode.
		
		tag: Identifier for motion detection parameters in the range of md000 to md999.

Step 3	[**default** | **description** | **motion-region-tag** | **state**]
	
	Example:
	`VSE-Module(config)> video motion-detection md000`
	`Adding new motion`
	`VSE-Module(config-motion-detection)> description "video motion detection md000 config"`
	`VSE-Module(config-motion-detection)> motion-region-tag 10 mr000`
	`VSE-Module(config-motion-detection)> state enabled`
	`VSE-Module(config-motion-detection)> end`
	`VSE-Module(config)> exit`
	`VSE-Module >`
	`VSE-Module(config)> video stream-profile stream000`
	`Adding new stream`
	`VSE-Module(config-stream-profile)> codecprofiletag codec000`
		Configures video motion detection profile parameters.
		
		default: Use the video motion detection default values. Use the **no** form of this command to revert to the default values.
		
		description: Video motion detection text description in quotes. Up to 80 text characters are allowed.
		
		motion-region-tag: Video motion region tag number (integer value in the range of 0 to 7).
		
		Note The motion detection region tag cannot be assigned until the video motion region profile has been configured. If the video motion region profile has not been configured, the error message "The specified video motion region tag has not been configured" appears. See "Video Motion Region Profile" section on page 38 to define a viedo motion region profile.
		
		state: Operational state of the video motion detection: enabled or disabled.
		
		Default: enabled.

Step 4	**end** **Example:** `VSE-Module(config-motion-detection)> end`	Exits video motion detection configuration mode.
Step 5	**exit** **Example:** `VSE-Module(config)> exit`	Exits global configuration mode.
Step 6	**show video motion-detection** *tag* or **show video motion-detection summary** **Example:** `VSE-Module> show video motion-detection md000`	Displays the video motion detection profile for a specified motion detection tag or a motion detection summary for all configured motion detection tags.

Examples

The following example shows output from the **show video motion-detection** command configuration for a specific tag:

```
VSE-Module> show video motion-detection md000
description "video motion detection md000 config"
state enabled
motion-region-tag 5 mr000
```

The following example displays the show video motion detection summary:

```
VSE-Module> show video motion-detection summary
tag md000
state enabled
```

Video Stream Profile

A video stream profile can be assigned to multiple video ports. Use the **video stream-profile** command to configure a video stream profile.

Note With the exception of motion detection configurations, when the video stream is initiated based on a profile, any changes to the corresponding codec or port configurations have no effect on the video stream already in progress. Any changes to motion detection configurations will have an immediate effect on the video stream already in progress.

SUMMARY STEPS

1. **configure terminal**
2. **video stream-profile** *tag*
3. [**codecprofiletag | default | description | motiondetectiontag | packetization-mode | portnum | state**]
4. **end**
5. **exit**
6. **show video stream-profile** *tag*
   or
   show video stream-profile dynamically-generated summary
   or
   show video stream-profile user-configured summary

DETAILED STEPS

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.

Step 2	**video stream-profile** *tag*
	
	Example:
	`VSE-Module(config)> video stream-profile stream000`
	`Adding new stream`
	`VSE-Module(config-stream-profile)>`
		Enters video stream profile configuration mode.
		• *tag*: Video stream profile identifier in the range of stream000 to strean999.

Step 3	[**codecprofiletag** | **default** | **description** | **motiondetectiontag** | **packetization-mode** | **portnum** | **state**]
	
	Example:
	`VSE-Module(config)> video stream-profile stream000`
	`Adding new stream`
	`VSE-Module(config-stream-profile)> codecprofiletag codec000`
	`VSE-Module(config-stream-profile)> description "sample video stream profile 1"`
	`VSE-Module(config-stream-profile)> end`
	`VSE-Module(config > exit`
	`VSE-Module >`
	`VSE-Module(config)> video stream-profile stream111`
	`Modifying existing stream`
	`VSE-Module(config-stream-profile)> motiondetectiontag md111`
	`VSE-Module(config-stream-profile)> no default`
	`VSE-Module(config-stream-profile)> packetization-mode h264 RTP`
	`VSE-Module(config-stream-profile)> portnum 0`
	`VSE-Module(config-stream-profile)> state enabled`
	`VSE-Module(config-stream-profile)> end`
	`VSE-Module(config)> exit`
	`VSE-Module >`
		Configures parameters for a video stream profile.
		codecprofiletag: Identifier for the video codec profile to be used with the video stream profile. String value in the range of codec000 to codec999.
		default: Video stream profile default values for the video codec profile. Use the **no** form of this command to revert to the default values.
		description: Video stream profile text description in quotes. Up to 80 text characters are allowed.
		motiondetectiontag: The identifier for the video-codec motion detection used with the video stream profile. String value in the range of md000–md999.
		packetization-mode: Video stream profile applicable only to H.264 RTP packetization mode (RFC-3984):
		• non-interleaved mode
		• single-network abstraction layer (NAL) unit mode
		Default: non-interleaved.
		Exits video stream profile configuration mode.
		portnum: The port number used for the video stream profile. Integer value in the range of 0 to 15.
		Default: 0.
		Note The video stream profile must be attached to a port number; otherwise, port 0 is used as the default port.
		state: Operational state of the video stream profile: enabled or disabled.
		Default: enabled.

Step 4	**end** **Example:** `VSE-Module(config-video-stream-profile)> end`	Exits video stream profile configuration mode.

	Command or Action	Purpose
Step 5	**exit** **Example:** `VSE-Module(config)> exit`	Exits global configuration mode.
Step 6	**show video stream-profile** *tag* or **show video stream-profile dynamically-generated summary** or **show video stream-profile user-configured summary** **Example:** `VSE-Module> show video stream-profile stream000`	Displays video stream profile for a specific stream.

Examples

The following example shows the specific video stream profile stream000 parameters:

```
VSE-Module> show video stream-profile stream000
description "video stream profile 0"
state enabled
portNum 0
codecProfileTag codec000
packetization-mode N/A
motionDetectionTag md000
```

The following example shows user-configured video stream profile parameters:

```
VSE-Module> show video stream-profile user-configured summary
   tag    state CPTag    MDTag portNum RTCPInactive RTCPBye RTCPTimer ICMPUn ICMPtimer PKmode
=============================================================================================================
stream000 ena   codec000 md000 0       dis          dis     25        dis    5         N/A
stream001 ena   codec001 -     3       sys          sys     25        sys    5         N/A
stream002 ena   codec002 -     4       sys          sys     25        sys    5         N/A
stream003 ena   codec003 -     5       sys          sys     25        sys    5         N/A
stream004 ena   codec004 -     6       sys          sys     25        sys    5         N/A
stream005 ena   codec005 -     7       sys          sys     25        sys    5         N/A
stream006 ena   codec006 -     9       sys          sys     25        sys    5         N/A
stream007 ena   codec007 -     9       sys          sys     25        sys    5         N/A
stream008 ena   codec008 -     5       sys          sys     25        sys    5         non-interleaved
stream009 ena   codec009 -     5       sys          sys     25        sys    5         non-interleaved
stream010 ena   codec010 -     2       sys          sys     25        sys    5         non-interleaved
stream011 ena   codec011 -     5       sys          sys     25        sys    5         non-interleaved
stream012 ena   codec012 -     5       sys          sys     25        sys    5         non-interleaved
stream013 ena   codec013 -     5       sys          sys     25        sys    5         non-interleaved
stream014 ena   codec014 -     5       sys          sys     25        sys    5         non-interleaved
stream015 ena   codec015 -     5       sys          sys     25        sys    5         non-interleaved
stream099 ena   codec099 -     2       sys          sys     25        sys    5         N/A
stream100 ena   codec100 -     5       sys          sys     25        sys    5         N/A
stream200 ena   codec200 -     5       sys          sys     25        sys    5         N/A
stream300 ena   codec200 -     6       sys          sys     25        sys    5         N/A
stream444 ena   codec000 -     14      sys          sys     25        sys    5         N/A
stream999 ena   codec999 -     7       sys          sys     25        sys    5         N/A
stream020 ena   codec020 -     2       sys          sys     25        sys    5         N/A
stream030 ena   codec030 -     3       sys          sys     25        sys    5         N/A
```

Configuring Video Cross-Connect Loopback

The video cross-connect loopback diagnostic command transmits a signal that is returned to the sending port after passing through all or a portion of a network or circuit. The returned signal is compared with the transmitted signal to evaluate the integrity of the equipment or transmission path. The video cross-connect loopback test mode is persistent across the Cisco Analog Video Gateway encoder reload.

Use the **video xconn-lpbk** command to configure and enable the Cisco Analog Video Gateway cross connect test mode.

SUMMARY STEPS

1. **configure terminal**
2. **video xconn-lpbk-conn** *0–1*
3. [**default** | **description** | **inport** | **state**]
4. **end**
5. **exit**
6. **show video xconn-lpbk-conn summary**
   or
   show video xconn-lpbk-conn *0–1*

DETAILED STEPS

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.

Step 2	**video xconn-lpbk-conn** *0–1*
	`(config-xconn-lpbk-conn)#`
	
	Example:
	`VSE-Module(config)> video xconn-lpbk-conn 1`
	`VSE-Module(config-xconn-lpbk-conn)#`
		Enters video cross-connect loopback configuration mode.
		• *0–1*: Video cross-connect loopback connection identifier in the range of 0 to 1.

	Command or Action	Purpose

Step 3	[**default** | **description** | **Inport** | **state**]
	
	Example:
	`VSE-Module(config)> video config-xconn-lpbk-conn conn0`
	`VSE-Module(config-xconn-lpbk-conn)> description " video connection 0"`
	`VSE-Module(config-xconn-lpbk-conn) end`
	`VSE-Module(config > exit`
	`VSE-Module >`
	`VSE-Module(config)> video config-xconn-lpbk-conn conn0`
	`VSE-Module(config-xconn-lpbk-conn)> no`
	`VSE-Module(config-xconn-lpbk-conn)> inport 0`
	`VSE-Module(config-xconn-lpbk-conn)> state enabled`
	`VSE-Module(config-xconn-lpbk-conn)>end`
	`VSE-Module(config)> exit`
	`VSE-Module >`
		Configures parameters for a video cross-connect loopback.
		default: Video cross-connect loopback default values. Use the **no** form of this command to revert to the default values.
		description: Video stream profile text description in quotes. Up to 80 text characters are allowed.
		inport: Sets the video cross-connect loopback to import.
		state: Operational state of the video cross-connect loopback mode: enabled or disabled.
		Default: enabled.

Step 4	**exit**
	
	Example:
	`VSE-Module(config-xconn-lpbk-conn)>end`
	`VSE-Module(config)>`
		Exits video cross-connect loopback configuration mode.

Step 5	**exit**
	
	Example:
	`VSE-Module(config)> exit`
	`VSE-Module>`
		Exits global configuration mode.

Step 6	**show video xconn-lpbk-conn summary** or **show video xconn-lpbk-conn** *0–1* **Example:** `VSE-Module> show video xconn-lpbk-conn 0`	Displays video cross-connect loopback summary or for a specific connection.

Examples

The following example shows the specific video cross-connect loopback connection parameters:

```
VSE-Module> show video xconn-lpbk-conn 0

description "video connection 0"
state enabled
import 2
outport 0
```

The following example shows a summary of video cross-connect loopback connection parameters:

```
VSE-Module> show video xconn-lpbk-conn summary

xconn-lpbk-conn     state      inport       outport
```

```
=====================================================
conn0                ena         1             0
conn1                ena         1             0
```