



## Summary of Smart Streaming on H.265 IP Cameras

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### Applied to

GV-BL2702 / 4702 / 4713 / 5713	Firmware V1.11 or later
GV-BL3700 / 5700	Firmware V1.03 or later
GV-BL8714	Firmware V1.0 or later
GV-BX2600-FD / 2700-FD / 4700-FD / 8700 / 8700-FD	Firmware V1.0 or later
GV-BX2700 / 4700-E	Firmware V1.04 or later
GV-BX4700 / 5700	Firmware V1.02 or later
GV-BX12201	Firmware V1.02 or later
GV-EBD4700	Firmware V1.0 or later
GV-EBL2702	Firmware V1.00 or later
GV-EBL4702	Firmware V1.08 or later
GV-EBL4711	Firmware V1.11 or later
GV-EDR2700	Firmware V1.00 or later
GV-EDR4700	Firmware V1.05 or later
GV-EFD2700	Firmware V1.00 or later
GV-EFD4700	Firmware V1.04 or later
GV-EFER3700 / EFER3700-W	Firmware V1.08 or later
GV-FER5700	Firmware V1.02 or later
GV-FER5701	Firmware V1.23 or later
GV-FER12203	Firmware V1.02 or later
GV-FER12700	Firmware V1.0 or later
GV-MD8710 / 8710-FD	Firmware V1.0 or later
GV-MFD2700 / 4700	Firmware V1.06 or later
GV-PPTZ14021-FE / 14031-FE	Firmware V1.01 or later
GV-VD2702 / 2712	Firmware V1.05 or later
GV-VD3700 / 5700	Firmware V1.03 or later
GV-VD4702 / 5702	Firmware V1.08 or later
GV-VD4711 / 5711	Firmware V1.04 or later
GV-VD4712	Firmware V1.11 or later

Smart streaming requires either GV-DVR / NVR V8.7.0 or GV-VMS V16.10.3, or later versions.



## Summary

The feature of **Smart Streaming** is introduced in the camera models above. It is listed under **Video Settings, Video and Motion** on the Web Interface of the camera.

<input checked="" type="radio"/> Smart Streaming	Static Scene	Good ▼	Maximal Bit Rate	8 ▼ Mbps
	Dynamic Scene	Good ▼	Maximal Bit Rate	12 ▼ Mbps
	Bitrate Reduction Level <input type="text" value="300"/> Range: (36 ~ 300). * The bigger the lower bitrate			

**Smart Streaming** reduces bitrates in static scenes, significantly **maximizing bandwidth and lowering file size**. The **Bitrate Reduction Level** indicates the degree of bitrates decreased, which by default is 300. The bigger the value, the more bitrates can be reduced in static scenes, thus saving the recording size.

Having said that, there is no need to be concerned about the video quality: **Smart Streaming** guarantees users both the minimized bitrates and equally excellent video images. You can choose the image quality for **Static Scene** and **Dynamic Scene** among one of the 5 standards: **Standard, Fair, Good, Great** and **Excellent**. You can select one of the bitrates from the drop-down list of **Maximal Bit Rate** to limit the bitrate and optimize the bandwidth.





## Test Result

The table below marks how bitrates are substantially saved when **Smart Streaming** is enabled for 2 MP / 3 MP / 4 MP / 5 MP IP cameras. As a newer and more advanced compression standard, H.265 codec demonstrates better bitrate values over H.264 codec.

Codec	Smart Streaming	Static Scene (Office)		Dynamic Scene (Office)		Static Scene (Low Lux+IR)		Dynamic Scene (Low Lux+IR)	
		VBR-Good (Mbits)	Bitrates Saved (%)	VBR-Good (Mbits)	Bitrates Saved (%)	VBR-Good (Mbits)	Bitrates Saved (%)	VBR-Good (Mbits)	Bitrates Saved (%)
<b>2 MP Camera</b>									
H.265	On	<b>0.53</b>	<b>69%</b>	<b>2.14</b>	<b>2.3%</b>	<b>0.15</b>	<b>60.5%</b>	<b>0.85</b>	<b>2.8%</b>
	Off	1.71		2.19		0.38		0.9	
H.264	On	0.88	<b>59%</b>	2.52	<b>6%</b>	0.21	<b>49%</b>	0.85	<b>5.6%</b>
	Off	2.12		2.68		0.41		0.9	
<b>3 MP Camera</b>									
H.265	On	<b>0.84</b>	<b>68.2%</b>	<b>3.11</b>	<b>8.8%</b>	<b>0.83</b>	<b>45%</b>	<b>2.11</b>	<b>2.3%</b>
	Off	2.64		3.41		1.51		2.16	
H.264	On	1.04	<b>65%</b>	3.56	<b>9.6%</b>	0.9	<b>48%</b>	2.15	<b>2.3%</b>
	Off	2.95		3.94		1.72		2.2	
<b>4 MP Camera</b>									
H.265	On	<b>1.11</b>	<b>55%</b>	<b>2.9</b>	<b>11.3%</b>	<b>0.6</b>	<b>52.4%</b>	<b>2.04</b>	<b>6.8%</b>
	Off	2.45		3.27		1.26		2.19	
H.264	On	1.32	<b>49%</b>	3.64	<b>14%</b>	0.61	<b>56.1%</b>	2.77	<b>4.2%</b>
	Off	2.57		4.23		1.93		2.89	
<b>5 MP Camera</b>									
H.265	On	<b>1.45</b>	<b>63.1%</b>	<b>3.45</b>	<b>20.1%</b>	<b>0.86</b>	<b>44.5%</b>	<b>1.66</b>	<b>6.7%</b>
	Off	3.93		4.32		1.55		1.78	
H.264	On	1.93	<b>55.1%</b>	3.78	<b>19.1%</b>	0.62	<b>52%</b>	1.75	<b>7.4%</b>
	Off	4.3		4.67		1.69		1.89	



**GV-VD3700**

<p><b>Static Scene at office</b> <b>(65-68.2% saved in bitrates )</b></p>	<p><b>Dynamic Scene at office</b> <b>(8.8-9.6% saved in bitrates )</b></p>
 A high-angle, wide shot of an office cubicle area. The scene is static, showing several desks with computers, office chairs, and cubicle walls. The lighting is consistent throughout the scene.	 The same office cubicle area as in the static scene, but with a person walking through the cubicles from left to right, creating a dynamic scene.

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**Note:** The test is conducted under the following conditions:

1. Video Quality: Good
  2. Default Maximum Bitrate of VBR: 8 Mbits (for 2 MP models) and 12 Mbits (for 3, 4 and 5 MP models)
  3. Shutter: Auto
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