

# SurroundVideo® G5 IP Megapixel Cameras

5, 12, or 20 Megapixel (MP) H.264 All-in-One 180° Panoramic Motorized P-iris Lens True Day/Night Indoor/Outdoor Dome IP Cameras with SNAPstream™ (Smart Noise Adaptation and Processing), Enhanced WDR™ (Wide Dynamic Range), and STELLAR™ (Spatio Temporal Low Light Architecture) Models



The SurroundVideo® G5 multi-sensor, multi-megapixel dome camera pushes the boundaries of next generation technology, providing users with four (4) integrated, remote focus P-iris lenses for an incredible 180° panoramic experience in a single indoor/outdoor housing. SurroundVideo G5 cameras provide an all-in-one solution for capturing wide area video surveillance while maximizing the field-of-view and reducing the total number of cameras required.

The SurroundVideo G5 multi-megapixel camera series delivers 5-, 12-, or 20-megapixel (MP) resolutions. For added flexibility, users can view the camera's four (4) sensors individually or as a smooth transition of all images blended together for a full 180° panoramic view. The camera is factory aligned with a slight image overlap to ensure you never miss a thing. For an optimal image, each sensor can be individually adjusted for the best exposure ratio per sensor (AV12586PM model).

The series combines a day/night mechanical IR cut filter for the highest image quality at any time of day. The SurroundVideo G5 camera features four (4) factory-installed Remote Focus P-iris lenses, ensuring the best possible depth of field and image clarity for precise performance from each individual sensor. Once

mounted, the operator can quickly focus the camera remotely, eliminating the need to adjust the camera on-site. No more hassle individually installing multiple cameras to cover a wide area, manually focusing lenses, or risk missing critical information from a 180° scene.

For challenging low-light applications, the 5MP STELLAR™, "Spatio Temporal Low Light Architecture" model offers best-in-class light sensitivity capturing details in extreme low-light. All SurroundVideo G5 models feature SNAPstream™ (Smart Noise Adaptation and Processing) technology to reduce bandwidth without impacting image quality. Enhanced WDR™ wide dynamic range produces clear images in harsh lighting conditions (AV12586PM model).

SurroundVideo G5 is designed for demanding environments. Subjected and certified to rigorous dust and water tests, the IP66 rating, and its extended operating temperature range make it ideal for outdoor applications. The IK-10 rated, rugged dome housing is perfect for deterring vandals since it can withstand the equivalent of 55 kg (120 lbs) of force. The SurroundVideo G5 is ONVIF Profile S (Open Network Video Interface Forum) compliant, providing interoperability between network video products regardless of manufacturer.



180° Panoramic

SNAPstream™  
TechnologyTrue Day/Night  
with IR Cut FilterDual Encoder  
H.264/MJPEGIntegrated  
Motorized Lenses  
with Remote FocusP-Iris Control for  
Best Depth of Field  
and Image ClaritySTELLAR™  
Low Light Technology  
on 5MP ModelsEnhanced WDR™  
Wide Dynamic Range  
on Select 12MP ModelsPixel Binning Mode  
on 12 and 20MP  
ModelsImpact / Weather  
Resistant IK-10  
and IP66 Rated

## Series Features

- 5, 12, and 20MP Models
- Four (4) Integrated Motorized P-iris Lenses with Remote Focus
- Forensic Zooming – Zoom Live or After the Event While Recording Full Field-of-View in HD – Replace PTZ Devices
- SNAPstream™ Capability to Reduce Bandwidth without Impacting Image Quality
- Enhanced WDR™ up to 100dB at Full Resolution: See Clearly in Shaded and Bright Light Conditions Simultaneously on Select 12MP Models
- STELLAR™ Reduces Motion Blur, Noise and Storage Requirements, While Enhancing Contrast and Allowing Color Imaging in Near Complete Darkness on 5MP Models
- True Day/Night Functionality with Mechanical IR Cut Filter
- Binning Mode for Strong Low Light Performance on 12MP and 20MP Cameras
- Privacy Mask, Motion Detection, Flexible Cropping, Bit Rate Control, Multi-Streaming, and Multicasting
- Individual or Seamless Situational Awareness
- Dual Encoder H.264/MJPEG
- Network Protocols Include 802.1x, IPv4, DHCP, and More
- PoE and Auxiliary Power: 18–48V DC, 24V AC
- Easily Adjustable 2-Axis Camera Gimbal with 360° Pan and 90° Tilt
- +/- 5° Electrical Vertical Alignment to Locate Each Sensor Position
- Outdoor Rated IP66 and IK-10 Impact-Resistant Housing
- Complete Mounting Options

## Camera Imaging Specifications

Model	AV5585PM**		AV12585PM		AV12586PM		AV20585PM	
<b>Image Sensor (CMOS)</b>	5MP (4 x 1.2MP)		12MP (4 x 3MP)		12MP (4 x 3MP)		20MP (4 x 5MP)	
<b>H-FOV</b>	180°		180°		180°		180°	
<b>Optical Format</b>	1/3"		1/3"		1/3.2"		1/2.5"	
<b>Pixel Pitch</b>	3.75µm		2.2µm		2.2µm		2.2µm	
<b>Minimum Illumination</b>	Color (Day Mode)	0.02 Lux	0.2 Lux	0.2 Lux	0.2 Lux	0.2 Lux	0.3 Lux	
	Color Binning (Day Mode)	-	0.1 Lux	0.1 Lux	0.1 Lux	0.1 Lux	0.15 Lux	
	B/W (Night Mode)	0.002 Lux, IR sensitive	0.02 Lux, IR sensitive	0.02 Lux, IR sensitive	0.02 Lux, IR sensitive	0.02 Lux, IR sensitive	0.02 Lux, IR sensitive	
<b>Full FOV Resolution</b>	Total	5120 H x 960 V	Total	8192 H x 1536 V	Total	8192 H x 1536 V	Total	10240 H x 1920 V
	Per Sensor	1280 H x 960 V	Per Sensor	2048 H x 1536 V	Per Sensor	2048 H x 1536 V	Per Sensor	2560 H x 1920 V
<b>1/4 Resolution</b>	Total	2560 H x 480 V	Total	4096 H x 768 V	Total	4096 H x 768 V	Total	5120 H x 960 V
	Per Sensor	640 H x 480 V	Per Sensor	1024 H x 768 V	Per Sensor	1024 H x 768 V	Per Sensor	1280 H x 960 V
<b>Dynamic Range</b>	83.5dB		69.5dB		WDR up to 100dB		70.1dB	
<b>Frame Rates*</b>	At Max Resolution	12fps (5120 x 960)	10fps (8192 x 1080)	10fps (8192 x 1080)	10fps (8192 x 1080)	7fps (10240 x 1920)		
	1/4 Resolution	30fps (2560 x 480)	14fps (4096 x 768)	14fps (4096 x 768)	14fps (4096 x 768)	10fps (5120 x 960)		
	Binning Mode	-	29fps (4096 x 768)	14fps (4096 x 768)	14fps (4096 x 768)	24fps (5120 x 960)		
<b>Lens (x4)</b>	Remote Focus, P-Iris	5.6mm, F1.2, IR corrected, CS-mount	5.3mm, F1.2, IR corrected, CS-mount	5.3mm, F1.2, IR corrected, CS-mount	5.3mm, F1.2, IR corrected, CS-mount	6.7mm, F1.2, IR corrected, CS-mount		
	H-FOV	47°	47°	47°	47°	47°		

\* Maximum with H.264 compression \*\* STELLAR™ Model

## SituationalPlus™

Model	Lens	View Angle	Distance to pixel density (ft.)(m)		
			30ppf (98ppm)	60ppf (197ppm)	90ppf (295ppm)
AV5585PM	Integrated R/F, P-iris	47° (x4)	47' (14.3m)	21.5' (6.6m)	11' (3.4m)
AV12585PM	Integrated R/F, P-iris	47° (x4)	78' (23.8m)	37.5' (11.4m)	23.5' (7.2m)
AV20585PM	Integrated R/F, P-iris	47° (x4)	99' (30.2m)	48' (14.6m)	30.5' (9.3m)

## Programmability

<b>Optics</b>	Remote focus and P-iris control
<b>Low Light Performance</b>	<b>STELLAR</b> 5MP models
	<b>Pixel Binning Mode</b> 12MP and 20MP models
<b>Picture-in-Picture</b>	Simultaneous delivery of full field-of-view and zoomed images
<b>Programmable Shutter Speed</b>	Controls motion blur
<b>Motion Detection</b>	On-camera real-time, 1024 detection zones (per sensor)
<b>Privacy Masking</b>	Real-time, 1024 detection zones (per sensor)
<b>Flexible Cropping</b>	Resolution windowing down to 1x1 pixel for JPEG and 2x2 pixels for H.264
<b>Backlight Compensation</b>	Yes
<b>Flicker Control</b>	5Hz–255Hz adjustable
<b>Sensor Position</b>	+/-5° Digital Vertical Alignment to adjust images
<b>Image Rotation</b>	180° image flip
<b>Wide Dynamic Range</b>	Auto switch control adjustment between WDR and LDR modes (AV12586PM)
<b>Efficiency</b>	SNAPstream™ (Smart Noise Adaptation and Processing)
	Bit rate and bandwidth limitation control
	Bandwidth and storage savings by running at 1/4 resolution
<b>Sharpness</b>	Selectable enhancement level
<b>Miscellaneous</b>	Programmable resolution, brightness, saturation, gamma, tint
	Electronic pan, tilt, zoom (PTZ)

## Data Transmission

<b>Compression Type</b>	H.264 (MPEG-4, Part 10)/Motion JPEG 21 levels of quality
<b>Network Protocols</b>	HTTP, IPv4, 802.1x, RTSP, RTP/TCR, RTP/UDP, TFTP, DHCP
<b>Network Interface</b>	100Base-T Ethernet
<b>Multi-Streaming</b>	8 non-identical streams (2 per sensor)

## Compliance

<b>Industry Standard</b>	ONVIF Profile S conformant
<b>Listings</b>	UL (CB)
<b>FCC Compliance</b>	47 CFR 15 Class A
<b>Environmental</b>	RoHS, REACH, WEEE
<b>Markings</b>	(CE) EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3, EN60950-1, IK-10 (EN62262), IP66 (EN60529)
<b>CoO</b>	Made in the USA

## Environmental

<b>Operating Temperature</b>	-40°C (-40°F) to +50°C (122°F) w/heater
	0°C (32°F) to +50°C (122°F) w/o heater
<b>Humidity</b>	0% to 90% (non-condensing)
<b>Storage Temperature</b>	-40°C (-40°F) to +60°C (140°F)
<b>Motorized Lens Operating Temperature</b>	-20°C (-4°F) to +50°C (122°F)

## Electrical

<b>Alarm Input/Output</b>	General purpose opto-coupled, 1 input/1 output
<b>Power Over Ethernet</b>	PoE 802.3af, Class 3
<b>Auxiliary Power</b>	18–48V DC, 24V AC

## Max Power Consumption (Watts DC power)

Model	AV5585PM	AV12585PM	AV12586PM	AV20585PM
<b>Max Power</b>	10W	11.2W	14.4W	13.9W

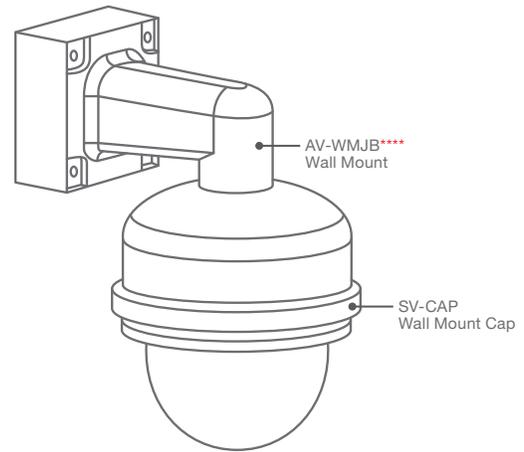
## Heater Electrical

<b>Voltage Input</b>	12–35V DC / 24V AC (separate power required) <sup>***</sup>
<b>Power Consumption</b>	11W (max DC power) / 13W (max AC power)
<b>Switch On/Off</b>	On: 17°C (62.6°F), Off: 30°C (86°F)

## Mechanical

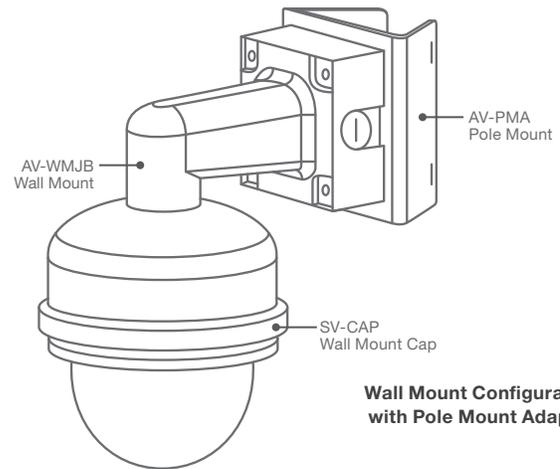
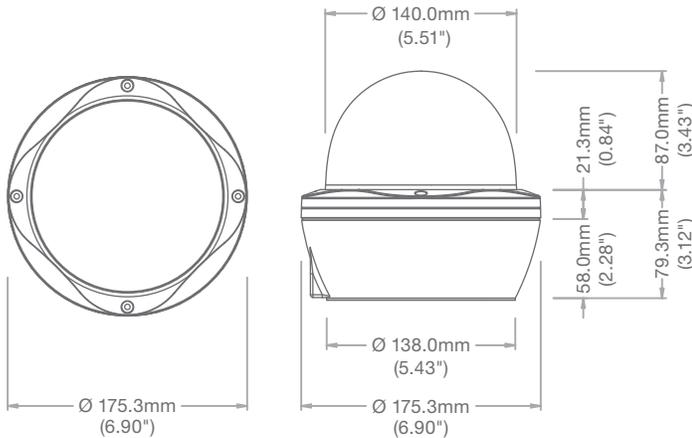
<b>Casing</b>	Die-cast aluminum chassis with 5.5" (140mm) polycarbonate dome bubble	
	IP66 weather proof standard	
	Impact resistant, IK-10 rated	
<b>Gimbal</b>	Easily adjustable, 2-axis w/360° pan and 90° tilt	
<b>Dimensions</b> <small>(See Dimensions)</small>	<b>Unit</b>	Ø 6.9" (175mm) x 6.55" H (166mm)
	<b>Bubble Only</b>	Ø 5.5" (140mm) x 3.4" H (87mm)
	<b>Packaged</b>	8.5" W (215mm) x 8.5" L (215mm) x 8.5" H (215mm)
<b>Weight</b>	<b>Unit</b>	3.54lbs (1.6kg)
	<b>Packaged</b>	4.37lbs (1.98kg)

(Mounting Options Cont.)



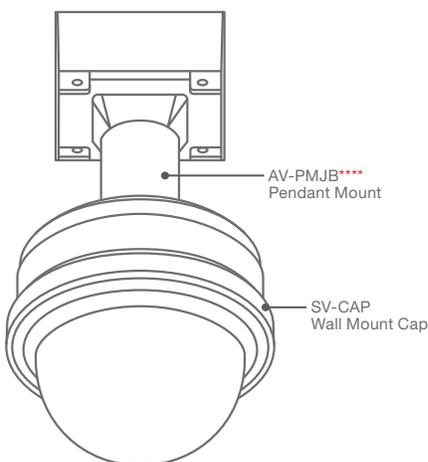
**Wall Mount Configuration**

## Dimensions

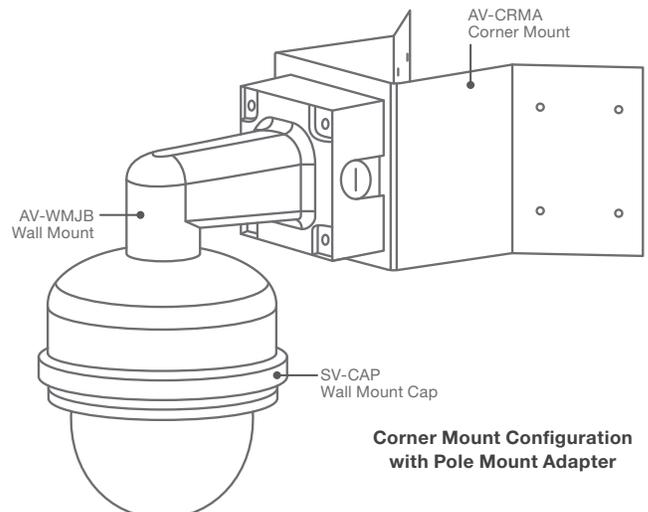


**Wall Mount Configuration with Pole Mount Adapter**

## Mounting Options



**Ceiling Mount Configuration**



**Corner Mount Configuration with Pole Mount Adapter**

<sup>\*\*\*</sup> Products shipped before 6/1/16 will only support 10V to 35V DC

<sup>\*\*\*\*</sup> Includes Standard Junction Box

See Next Page for Ordering Information



### Accessories (Sold Separately)

<b>AV-CRMA</b>	Corner Mount Adapter
<b>AV-EBAR</b>	Round Electrical Box Adapter Plate
<b>AV-EBAS</b>	Square Electrical Box Adapter Plate
<b>AV-JBA<sup>1</sup></b>	Standard Junction Box
<b>AV-PMA</b>	Pole Mount Adapter
<b>AV-PMJB</b>	Pendant Mount Bracket with Standard Junction Box <i>(Fits Cap 1.5" NPT, Box Fits 3/4" NPT)</i>
<b>AV-WMJB</b>	Wall Mount Bracket with Standard Junction Box <i>(Fits Cap 1.5" NPT, Box Fits 3/4" NPT)</i>
<b>SV-CAP</b>	Mounting Cap for SurroundVideo® G5
<b>SV-FMA</b>	Flush Mount Adapter for SurroundVideo G5

<sup>1</sup> Replacement part for AV-PMJB and AV-WMJB

### Model Specific Features

Model	Resolution	Configuration	Frame Rate <sup>*</sup>	Features	
<b>AV5585PM</b>	5MP (1.2MP x 4)	180° Panoramic	12fps	-	STELLAR™
<b>AV12585PM</b>	12MP (3MP x 4)	180° Panoramic	10fps	-	Binning
<b>AV12586PM</b>	12MP (3MP x 4)	180° Panoramic	10fps	WDR	Binning
<b>AV20585PM</b>	20MP (5MP x 4)	180° Panoramic	7fps	-	Binning

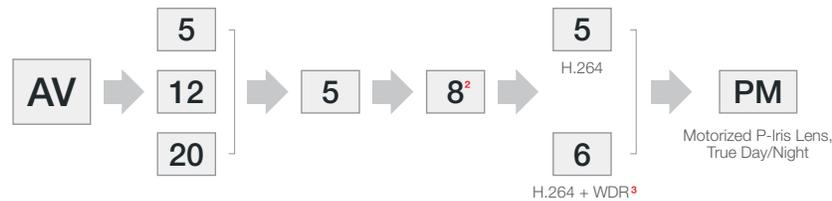
### Configuration



180° Panoramic

### Create Your Model (Example: AV12586PM)

Megapixel Resolution      Generation      Body Type      Compression      Lens



<sup>2</sup> "8" represents SurroundVideo product line

<sup>3</sup> WDR for AV12586 models only

<sup>\*</sup> Maximum with H.264 compression