MegaIP™

Arecont Vision®
A COSTAR COMPANY

SurroundVideo® Omni IP Megapixel Cameras

12 or 20 Megapixel (MP) H.264 All-in-One Omni-Directional User-Configurable Multi-Sensor
True Day/Night Indoor/Outdoor Dome IP Cameras with Enhanced WDR™ (Wide Dynamic Range) Models



Delivering revolutionary flexibility, Arecont Vision SurroundVideo® Omni multi-sensor, multi-megapixel cameras provide ample resolution to zoom-in for details in live and recorded video. With multiple imagers, each with a choice of an IR corrected lens, one SurroundVideo Omni can replace 4 standard cameras, requiring just a single installation with only one ethernet cable. SurroundVideo Omni cameras are available in total resolutions of 12 megapixel (MP) or 20MP. These all-in-one cameras maximize the field-of-view with wide-area video surveillance – saving installers time and end users money.

A unique track design allows the four individual sensor gimbals to be independently placed in nearly any configuration around a magnetic 70+ placement-point Omni track. In addition, the micro lenses on each gimbal can be interchanged for a customized field of view. Optional lenses can be selected from a choice of 2.1, 2.8, 4, 6, 8, 12 and 16mm. Some popular uses of SurroundVideo Omni cameras include surveillance coverage for intersections of hallways, or providing a 270° surveillance view at the corner of a building.

Regardless of time-of-day, this camera is ideal for applications with challenging lighting conditions. The series combines a day/night mechanical IR cut filter for the highest image quality at any time of day. For applications with bright or over saturated lighting conditions, optional Enhanced WDR™ wide dynamic range delivers up to 100dB at full resolution and is available on 12MP models. For applications with poor low lighting conditions, pixel binning increases the camera's low light performance by combining pixels so that more light can be collected.

SurroundVideo Omni 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.

Power can be supplied via a single Power-over-Ethernet compliant network cable or with power from a 12–48V DC/24V AC power supply.

The camera's interface allows for an intuitive, fast, and easy configuration; while the free AV IP Utility™ tool allows users to quickly configure multiple cameras at one time. SurroundVideo Omni is ONVIF Profile S (Open Network Video Interface Forum) compliant, providing interoperability between network video products regardless of manufacturer.



Omni-Directional Track with 4 Customizable Sensors



270° FOV Capable



Enhanced WDR™ Wide Dynamic Range on 12MP Models



True Day/Night with IR Cut Filter



Pixel Binning Mode



Dual Encoder H.264/MJPEG



Ultra Low Profile Design



Impact / Weather Resistant IK-10 and IP66 Rated

Series Features

- 12MP and 20MP Models
- Forensic Zooming – Zoom Live or After the Event While Recording Full Field-of-View in HD – Replace PTZ Devices
- Up to 4 Individual Camera Gimbals can be Independently Placed in Any Orientation Around a 360° Track with Extra Positions for Looking Straight Down
- Multiple Lens Options in a Single Camera Housing from 2.1mm up to 16mm
- Enhanced WDR™ up to 100dB at Full Resolution: See Clearly in Shaded and Bright Light Conditions Simultaneously on 12MP Models
- True Day/Night Functionality with Mechanical IR Cut Filter
- Binning Mode for Strong Low Light Performance
- Privacy Mask, Motion Detection, Flexible Cropping, Bit Rate Control, Multi-Streaming, and Multicasting
- Dual Encoder H.264/MJPEG
- Network Protocols Include IPv4, DHCP, and More
- PoE and Auxiliary Power: 12–48V DC/24V AC
- Ultra Discrete, Low-Profile Housing
- Outdoor Rated IP66 and IK-10 Impact-Resistant Housing
- Complete Mounting Options

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ONVIF S

Camera Imaging Specifications

Model		AV12176DN		AV20175DN	
Image Sensor (CMOS)		12MP (4 x 3MP)		20MP (4 x 5MP)	
Optical Format		1/3.2"		1/2.5"	
Pixel Pitch		2.2µm		2.2µm	
Minimum Illumination	Color (Day Mode)	0.5 Lux		0.3 Lux	
	Color Binning (Day Mode)	0.15 Lux		0.15 Lux	
	B/W (Night Mode)	0 Lux, IR sensitive		0 Lux, IR sensitive	
Full FOV Resolution		Total	8192 H x 1536 V	Total	10240 H x 1920 V
		Per Sensor	2048 H x 1536 V	Per Sensor	2560 H x 1920 V
1/4 Resolution		Total	4096 H x 768 V	Total	5120 H x 960 V
		Per Sensor	1024 H x 768 V	Per Sensor	1280 H x 960 V
Dynamic Range		Up to 100dB at Full Resolution		70.1dB	
Frame Rates*	At Max Resolution	5.2fps (8192x1536)		3.5fps (10240x1920)	
	1/4 Resolution	16.7fps (4096x768)		11fps (5120x960)	
	Binning Mode	17fps (4096x768)		13fps (5120x960)	
Lens (x4)	2.8mm Lens Option (-28 Models)	2.8mm, F1.8, H-FOV = 89°		2.8mm, F1.8, H-FOV = 113°	
	8mm Lens Option (-08 Models)	8mm, F1.6, H-FOV = 33°		8mm, F1.6, H-FOV = 42°	

SituationalPlus™

Model	Lens	View Angle	Distance to pixel density (ft.)(m)		
			30ppf (98ppm)	60ppf (197ppm)	90ppf (295ppm)
AV12176DN-28	MPM2.8A	89° (x4)	34' (10.4m)	15.5' (4.7m)	8' (2.4m)
AV12176DN-08	MPM8.0	33° (x4)	114.5' (34.9m)	56' (17.1m)	37.5' (11.4m)
AV20175DN-28	MPM2.8A	113° (x4)	27' (8.2m)	12' (3.7m)	5' (1.5m)
AV20175DN-08	MPM8.0	42° (x4)	114' (34.7m)	56' (17.1m)	36' (11.0m)

Programmability

Optics	M12 lens
Low Light Performance	Pixel Binning Mode
Picture-in-Picture	Simultaneous delivery of full field-of-view and zoomed images
Programmable Shutter Speed	Controls motion blur, 1ms–500ms
Motion Detection	Real-time, 1024 detection zones
Privacy Masking	Unlimited
MoonLight™ Mode	Extended exposure and noise cancellation
Flexible Cropping	Resolution windowing down to 1x1 pixel for JPEG and 2x2 pixels for H.264
Backlight Compensation	Auto multi-matrix white balance
Flicker Control	50/60Hz selectable
Wide Dynamic Range	Auto switch control adjustment between WDR and LDR modes (WDR models)
Noise Reduction	Low light noise filter control
Efficiency	Bit rate and bandwidth limitation control
	Bandwidth and storage savings by running at 1/4 resolution
Sharpness	Selectable enhancement level
Miscellaneous	Programmable resolution, brightness, saturation, gamma, tint
	Simultaneous delivery of full field-of-view and zoomed images
	Electronic pan, tilt, zoom (PTZ)
	Auto Exposure (AE) and Gain Control (AGC) > 120dB
	Programmable shutter speed to help control motion blur

Data Transmission

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

Compliance

Industry Standard	ONVIF Profile S conformant
Listings	UL (CB)
FCC Compliance	47 CFR 15 Class A
Environmental	RoHS, REACH, WEEE
Markings	(CE) EN 55022:2010 Class A, EN 55024:2010, EN 61000-3-2:2006+A1:2009+A2:2009, EN61000-3-3: 2008, EN60950-1:2006+A11:2009+A1:2010+A12:2011, (UL) IEC 60950-1 (ed. 2) and IEC 60950-22 (ed. 1)
CoO	Made in the USA

Environmental

Operating Temperature	-40°C (-40°F) to +50°C (122°F)
Humidity	0% to 90% (non-condensing)
Storage Temperature	-40°C (-40°F) to +60°C (140°F)

Electrical

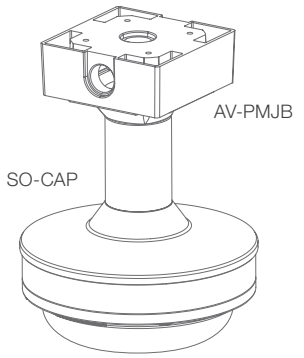
Alarm Input/Output	1 input/1 output
Power Over Ethernet	PoE 802.3af, Class 3
Auxiliary Power	12–48V DC, 24V AC
Power Consumption	14W max (auxiliary)

* Maximum with H.264 compression

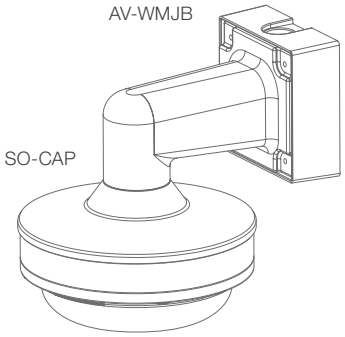
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Mechanical

Casing	Die-cast aluminum chassis with polycarbonate dome bubble	
	IP66 weather proof standard	
	Impact resistant, IK-10 rated	
Gimbal	Easily adjustable, 2-axis w/360° pan and 90° tilt	
Dimensions *(See Dimensions)*	**Unit**	Ø 7.7" (196mm) x 3.1" H (78.5mm)
	Bubble Only	Ø 6.7" (169.2mm) x 1.3" H (33.4mm)
	Packaged	8" W (203mm) x 8" L (203mm) x 4" H (102mm)
Weight	**Unit**	2.8lbs (1.27kg)
	Packaged	3.4lbs (1.54kg)

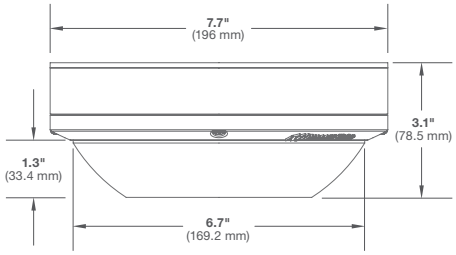


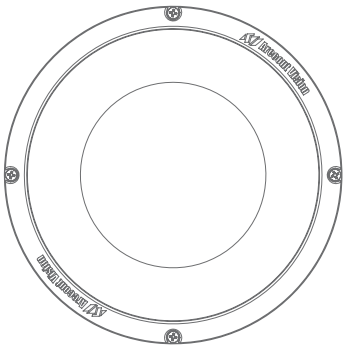
Ceiling Mount Configuration

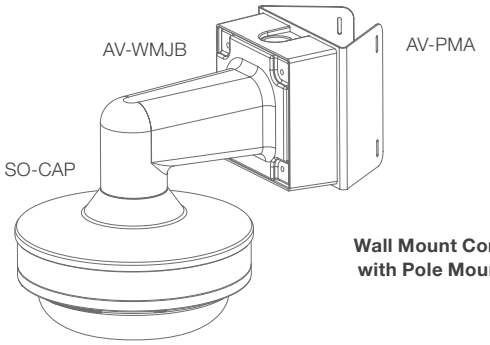


Wall Mount Configuration

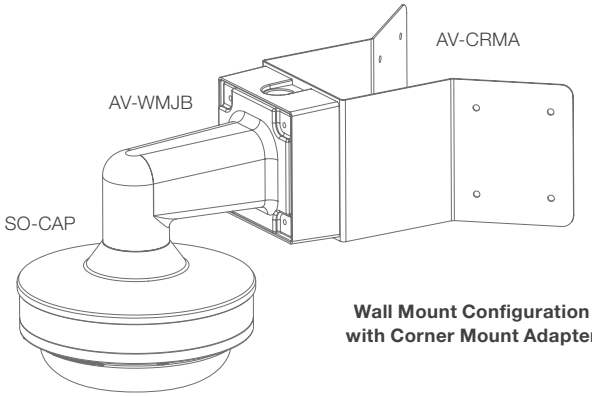
Dimensions





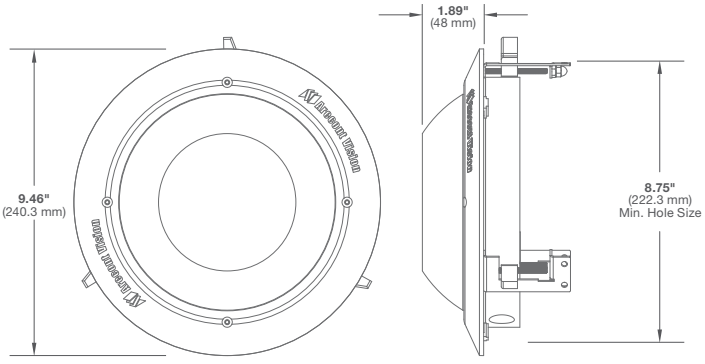


Wall Mount Configuration with Pole Mount Adapter



Wall Mount Configuration with Corner Mount Adapter

SO-FMA



Flush Mount Adapter

See Next Page for Ordering Information

SurroundVideo® Omni IP Megapixel Cameras

Ordering Information



Model Specific Features

Model	Resolution	Frame Rate*	Features	
AV12176DN	12MP	5.2fps	WDR	Binning
AV20175DN	20MP	3.5fps	-	Binning

* Maximum with H.264 compression

Model Numbers

12MP	AV12176DN-NL	WDR
	AV12176DN-28	WDR
	AV12176DN-08	WDR
20MP	AV20175DN-NL	
	AV20175DN-28	
	AV20175DN-08	

Options

-NL	No Lenses (User Configurable and Ordered Separately)
-28	Configured with 2.8mm Lenses[1]
-08	Configured with 8mm Lenses[2]

[1] Good option for a 270° Corner Mount configuration
[2] Good configuration option for a hallway intersection

Lens Options (Sold Separately)

Model	Focal Length	Horizontal Field of View	
		3MP WDR	5MP
MPM2.1	2.1mm	121°	-
MPM2.8A[3]	2.8mm	89°	113°
MPM4.0A	4mm	63°	80°
MPM6.0	6mm	43°	56°
MPM8.0[3]	8mm	33°	42°
MPM12.0A	12mm	22°	28°
MPM16.0	16mm	16°	20°

[3] MPM2.8A (2.8mm) is the default lens for "-28" models and MPM8.0 (8mm) is the default lens for "-08" models

Accessories (Sold Separately)

AV-CRMA	Corner Mount Adapter
AV-EBAR	Round Electrical Box Adapter Plate
AV-JBA[4]	Standard Junction Box
AV-PMA	Pole Mount Adapter
AV-PMJB	Pendant Mount Bracket with Standard Junction Box *(Fits Cap 1.5" NPT, Box Fits 3/4" NPT)*
AV-WMJB	Wall Mount Bracket with Standard Junction Box *(Fits Cap 1.5" NPT, Box Fits 3/4" NPT)*
SO-CAP	Mounting Cap for SurroundVideo® Omni Series[5]
SO-FMA	Flush Mount Adapter for SurroundVideo Omni Series[5]
SO-SSA	Sun Shield for SurroundVideo Omni Series[5]

[4] Replacement part for AV-PMJB and AV-WMJB
[5] SurroundVideo Omni and SurroundVideo Omni G2 only

Create Your Model (Example: **AV12176DN-28**)

Megapixel Resolution	Generation	Body Type	Compression	True Day/Night	Lens
AV	1	7[6]	5 = H.264 6 = H.264 + WDR[7]	DN = True Day/Night	28 = 2.8mm Lens 08 = 8mm Lens NL = No Lens
12 20					

[6] "7" represents SurroundVideo Omni product line
[7] WDR for AV12176 models only

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