Arecont Vision®

Leading the Way in Megapixel Video™

SurroundVideo® Omni IP Megapixel Cameras

12MP WDR or 20MP H.264 All-in-One Omni-Directional User-Configurable Multi-Sensor True Day/Night Indoor/Outdoor Dome IP Cameras

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.

A unique track design allows four individual sensor gimbals to be independently placed in nearly any configuration. Popular uses of SurroundVideo Omni IP66 rated / IK-10 impact-resistant cameras are to cover the intersection of hallways or to provide a 270° view at the corner of a building.

SurroundVideo Omni cameras are available in total resolutions of 12 megapixels (MP) or 20 megapixels. Optional lenses can be selected from a choice of 2.1, 2.8, 4, 6, 8, 12 and 16mm. Wide Dynamic Rage (WDR) that delivers up to 100dB at full resolution is available in the 12MP model. H.264 compression reduces bandwidth and storage requirements, while delivering full frame rates and resolution, without sacrificing image quality.

Omni-Directional Track with 4 Customizable Sensors

270° FOV Capable

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 WDR and 20MP Models
- 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
- True Day/Night Functionality with Mechanical IR Cut Filter
- Forensic Zooming – Zoom Live or After the Event While Recording Full Field-of-View in HD – Replace PTZ Devices
- Privacy Mask, Motion Detection, Flexible Cropping, Bit Rate Control and Multi-Streaming
- Dual Encoder H.264/MJPEG
- 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
- True WDR up to 100dB at Full Resolution: See Clearly in Shaded and Bright Light Conditions Simultaneously
- Binning Mode for Strong Low Light Performance

ONVIF | S

Camera Specifications

Model		AV12176DN		AV20175DN	
Image Sensor		4 x 3MP CMOS		4 x 5MP CMOS	
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	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 = 40°	

Programmability

Optics	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)
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	RTSP, RTP/TCP, RTP/UDP, HTTP, DHCP, TFTP
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
Maximum Power Consumption	14 Watts Max (Aux)

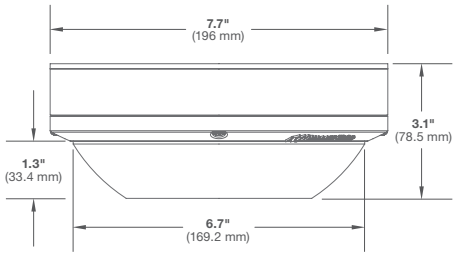
Mechanical

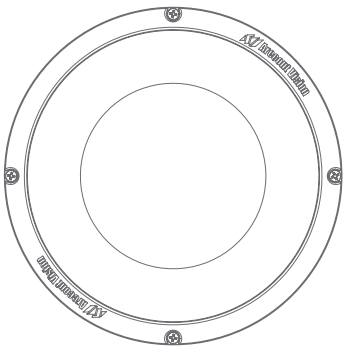
Casing	Die-cast aluminum chassis with polycarbonate dome bubble	
	IP66 weather proof standard	
	Impact resistant, IK-10 rated	
Gimbal	Easily adjustable, 2-axis w/360° pan and 90° tilt	
Dimensions *(See Dimensions)*	**Unit**	Ø 7.7" (196mm) x 3.1" H (78.5mm)
	Bubble Only	Ø 6.7" (169.2mm) x 1.3" H (33.4mm)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

Accessories (Sold Separately)

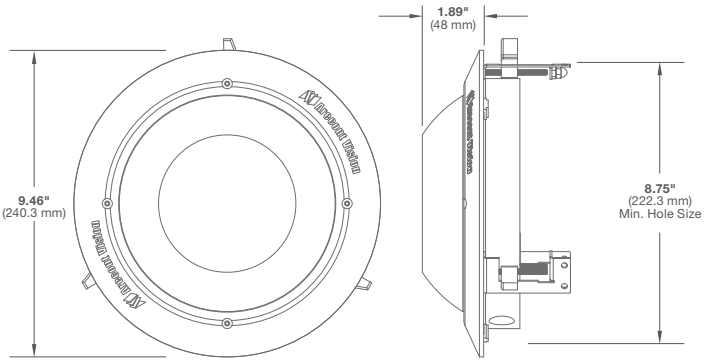
AV-CRMA	Corner Mount Adapter
AV-EBA	Electrical Box Adapter
AV-PMA	Pole Mount Adapter
AV-PMJB	Pendant Mount Bracket with Junction Box
AV-WMJB	Wall Mount Bracket with Junction Box
SO-CAP	Cap for SurroundVideo® Omni
SO-FMA	Flush Mount Adapter

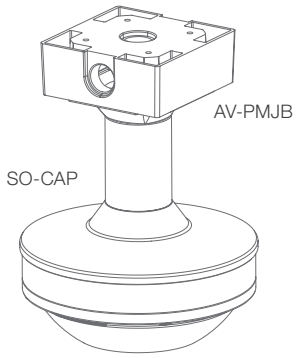
Dimensions



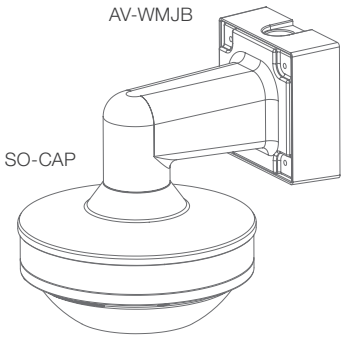


SO-FMA

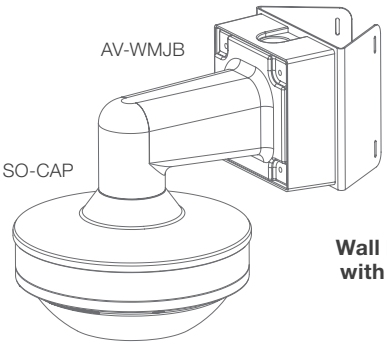




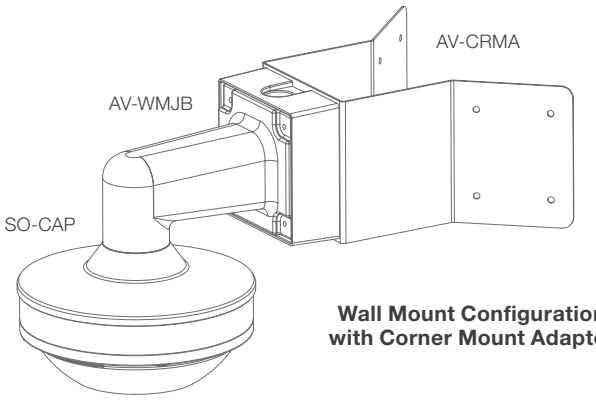
Ceiling Mount Configuration



Wall Mount Configuration



Wall Mount Configuration with Pole Mount Adapter



Wall Mount Configuration with Corner Mount Adapter

Ordering Information

Model Specific Features

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

Model Numbers

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

Options

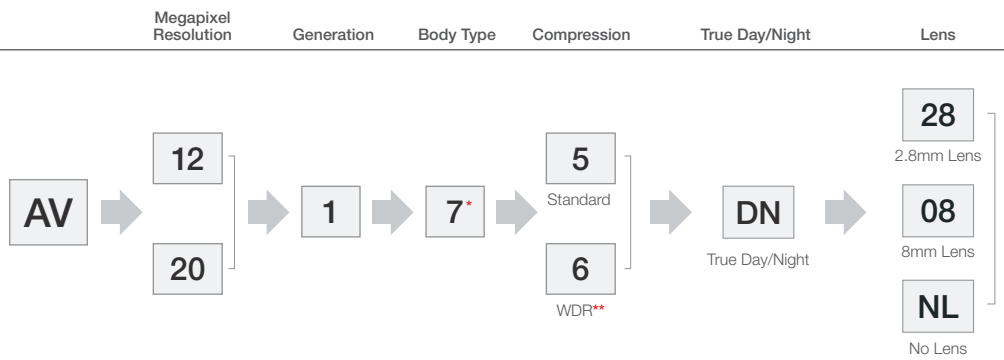
-NL	No Lenses (User Configurable and Ordered Separately)
-28	Configured with 2.8mm Lenses*
-08	Configured with 8mm Lenses**

* Good option for a 270° Corner Mount configuration
** Good configuration option for a hallway intersection

Lens Options

Manual Fixed Focal	MPM2.1 (2.1mm) Ordered Separately	3MP	
	MPM2.8A (2.8mm) Standard (-28 Models)	3MP	5MP
	MPM4.0A (4mm) Ordered Separately	3MP	5MP
	MPM6.0 (6mm) Ordered Separately	3MP	5MP
	MPM8.0 (8mm) Standard (-08 Models)	3MP	5MP
	MPM12.0A (12mm) Ordered Separately	3MP	5MP
	MPM16.0 (16mm) Ordered Separately	3MP	5MP

Create Your Model (Example: AV12176DN-28)



* "7" represents SurroundVideo Omni product line
** WDR for AV12176 models only

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