12 Megapixel

Arecont Vision®
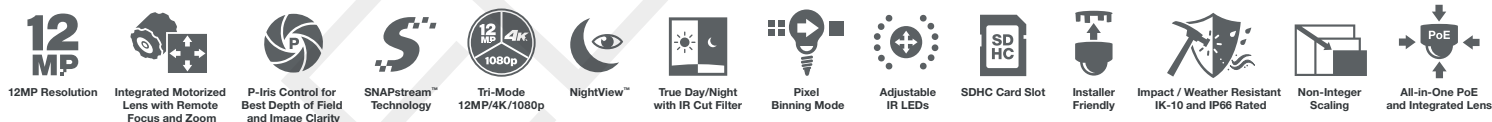
Leading the Way in Megapixel Video™

MegaDome® UltraHD IP Megapixel Camera

12 Megapixel (MP) H.264 Motorized P-Iris Lens True Day/Night Indoor/Outdoor Dome IP Camera with SNAPstream™ (Smart Noise Adaptation and Processing), NightView™, WDR (Wide Dynamic Range), and IR LEDs

The 12MP/4K/1080p MegaDome® UltraHD "tri-mode" network camera is part of the new generation of Arecont Vision's MegaDome cameras. This fully compliant implementation of H.264 (MPEG-4, Part 10) provides full 4000 x 3000 megapixel resolution at video frame rates of 20 frames per second (fps)[†] at 12MP, 30fps[†] while in 4K (8.3MP), and 60fps[†] while in 1080p (2.1MP). The MegaDome UltraHD camera series provides an all-in-one solution with integrated 12MP day/night camera, remote focus, remote zoom, P-Iris, 4.4–10mm lens, SDHC card, in an installer-friendly IP66 water/dust ingress rated housing, and vandal resistant, IK-10 rated dome enclosure.

Features include SNAPstream™ (Smart Noise Adaptation and Processing) to reduce bandwidth without impacting image quality, NightView™ and binning mode for strong low light performance, non-integer scaling, privacy masking, extended motion detection, flexible cropping, forensic zooming, multicasting and Power over Ethernet (PoE - IEEE 802.3af). Built with Arecont Vision massively-parallel MegaVideo® processing technology, the camera series offers more than 27-times the resolution of standard resolution IP cameras. It offers the ability to output full real-time frame rates and deliver high-quality megapixel imaging for both indoor and outdoor applications.

12MP Resolution	**Integrated Motorized Lens with Remote Focus and Zoom**	**P-Iris Control for Best Depth of Field and Image Clarity**	**SNAPstream™ Technology**	**Tri-Mode 12MP/4K/1080p**	**NightView™**	**True Day/Night with IR Cut Filter**	**Pixel Binning Mode**	**Adjustable IR LEDs**	**SDHC Card Slot**	**Installer Friendly**	**Impact / Weather Resistant IK-10 and IP66 Rated**	**Non-Integer Scaling**	**All-in-One PoE and Integrated Lens**

Series Features

- 12 Megapixel at 20fps[†]
- 12MP/4K/1080p Tri-Mode with 4K at 30fps and 1080p at 60fps[†]
- SNAPstream™ Capability to Reduce Bandwidth without Impacting Image Quality
- Remote Focus/Zoom P-Iris Lens
- P-Iris Control to Get Best Depth of Field and Image Clarity
- WDR: See Clearly in Shaded and Bright Light Conditions Simultaneously
- NightView™ and Binning Mode for Strong Low Light Performance
- True Day/Night Functionality with Mechanical IR Cut Filter
- Dual Encoder H.264/MJPEG

- Privacy Mask, Motion Detection, Flexible Cropping, Bit Rate Control, Multi-Streaming, Multicasting, Forensic Zooming, and Non-Integer Scaling
- Network Protocols Include SNMP, HTTPS, 802.1x, IPv4, DHCP, and More
- IR LEDs with Adjustable Beam Angle and LED Intensity
- SDHC Card Slot for Onboard Storage (SD Card Sold Separately)
- Total PoE Solution (No External Power Required for IR LEDs) with Auxiliary Power: 12–24V DC
- Outdoor Rated IP66 and IK-10 Impact-Resistant Housing
- Easily Adjustable 3-Axis Gimbal

[†] Maximum with H.264 compression

Camera Imaging Specifications

Model		AV12ZMD-401
Image Sensor (CMOS)		12MP
Optical Format		1/1.7"
Pixel Pitch		1.85μm
Minimum Illumination	Color (Day Mode)	0.03 Lux
	Color Binning (Day Mode)	0.015 Lux
	B/W (Night Mode)	0.003 Lux, IR sensitive
Full FOV Resolution		4000 H x 3000 V
1/4 Resolution		2000 H x 1500 V
Scaling (See Scaling Resolution Chart Below)		Yes
Dynamic Range		70.7dB (WDR)
Maximum SNR		40.1dB
Frame Rates†	At Maximum Resolution	20fps (4000 x 3000)
	4K Resolution (2/3rds Resolution)	30fps (3840 x 2160)
	Binning Mode (1/4th Resolution)	40fps (2000 x 1500)
	1080p Resolution (1/6th Resolution)	60fps (1920 x 1080)
Lens		4.4–10mm Integrated, 1/1.7", F/1.2, H-FOV = 99°–45° (H-FOV = 96°–43° at 4K or 1080p Resolution)

SituationalPlus™

Model	Lens	View Angle	Distance to pixel density (ft.)(m)					
			30ppf-T (100ppm)	30ppf-W (100ppm)	60ppf-T (200ppm)	60ppf-W (200ppm)	90ppf-T (300ppm)	90ppf-W (300ppm)
AV12ZMD-401	4.4–10mm	45°–99°	160' (48.8m)	56' (17.1m)	60' (18.3m)	27.5' (8.4m)	54.5' (16.6m)	17.5' (5.3m)

Scaling Resolution Chart*

Scaled Resolution	Horizontal	Vertical	Pixel Count
720p	1280	720	921600
XVGA	1024	768	786432
DVGA (16:9)	1136	640	727040
DVGA (3:2)	960	640	614400
SVGA	800	600	480000
D1 (PAL)	720	576	414720
4CIF (PAL)	704	576	405504
D1 (NTSC)	720	480	345600
4CIF (NTSC)	704	480	337920
VGA	640	480	307200
2CIF (PAL)	704	288	202752
HVGA (4:3)	480	360	172800
2CIF (NTSC)	704	240	168960
HVGA (8:3)	640	240	153600
HVGA (3:2)	480	320	153600
HVGA (16:9)	480	272	130560
CIF (PAL)	352	288	101376
CIF (NTSC)	352	240	84480
QVGA (SIF)	320	240	76800
QCIF (PAL)	176	144	25344
QCIF (NTSC)	176	120	21120
SQCIF	128	96	12288

* All scaled resolutions are available on all cameras that support scaling

Programmability

Optics	Remote focus, remote zoom, P-iris
Low Light Performance	NightView™ technology
	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
Scaling	Non-integer scaling down to 128x96
Casino Mode™	Maintains 30fps or higher† (4K and 1080p modes only)
Flexible Cropping	Resolution windowing down to 1x1 pixel for JPEG and 2x2 pixels for H.264
Backlight Compensation	Multi-matrix white balance
Flicker Control	5Hz–255Hz adjustable
Image Rotation	180° image flip
Noise Reduction	Low light noise filter control
Efficiency	SNAPstream™ (Smart Noise Adaptation and Processing)
	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
	Electronic pan, tilt, zoom (PTZ)

† Maximum with H.264 compression

Data Transmission

Compression Type	H.264 MPEG-4, Part 10 ISO/IEC 14496-10 AVC
	21 levels of quality
Network Protocols	RTSP, RTP/TCP, RTP/UDP, HTTP1.0, HTTP1.1, TFTP, DHCP, SNMP, HTTPS, IPv4, 802.1x
Network Interface	100/1000 Base-T Ethernet
Multi-Streaming	4 non-identical streams

Compliance

Listings	**UL CB Scheme**: IEC 60950-1(Ed.2), IEC 60950-1(Ed.2); Am.1, IEC 60950-1(Ed.2); Am.2, IEC 60950-22(Ed.1)
FCC Compliance	Title 47, Part 15 (47 CFR 15) Subpart B Class A
Environmental	REACH 1907/2006/EC, WEEE 2012/19/EU
Markings	**CE:** 2014/30/EU (EMC Directive), 2014/35/EU (Low Voltage Directive), 2011/65/EU (RoHS Directive) EN 55022:2010 Class A, EN 55024:2010, EN 61000-3-2:2006+A1:2009+A2:2009, EN61000-3-3: 2008 EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013
Networking Standard	IEEE 802.3af-2003 PoE Standard, Class 3, IPv4, HTTPS, 802.1x
Mechanical	IK-10 (EN62262), IP66 (EN60529)
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	General purpose opto-coupled, 1 input / 1 output
Power Over Ethernet	PoE 802.3af, Class 3
Auxiliary Power	12–24V DC
Power Consumption	12.4W / 14.1W (IR on)

Mechanical

Casing		Die-cast aluminum chassis with 4" polycarbonate dome bubble
		IP66 weather proof standard
		Impact resistant, IK-10 rated
Gimbal		Easily adjustable 3-axis camera gimbal w/360° pan, 77° tilt (w/ full field of view from mounting surface), and 180° z-axis
Dimensions *(See Dimensions)*	Unit	Ø 5.77" (146.7mm) x 5" H (128mm)
	Packaged	6" H (150mm) x 7.5" W (190mm) x 8" L (200mm)
Weight	Unit	2.25lbs (1.02kg)
	Packaged	2.8lbs (1.27kg)
On Board Storage		SDHC slot up to 32GB (card not included)

IR Illuminator

12 pcs 850nm LEDs with Adjustable IR / 50ft (15m) IR distance (max) / 60° and 80° IR angle
Total PoE solution (no external power requirement)

Dimensions

3/4" NPT

1.19" (30.2mm)

2.68" (68mm)

5.04" (128mm)

Ø 5.77" (Ø 146.7mm)

Ø 5.77" (Ø 146.7mm)

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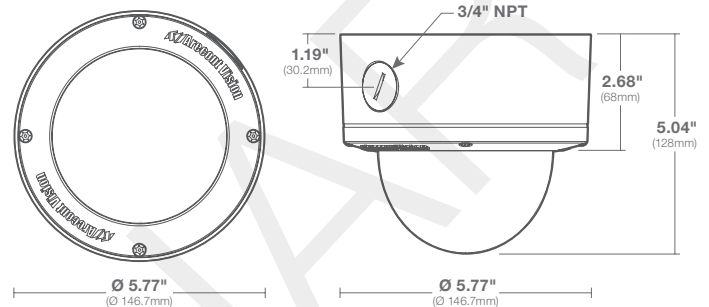
Ordering Information

Accessories

AV-CRMA	Corner Mount Adapter
AV-FMA	Flush Mount Adapter
AV-JBA	Standard Junction Box
AV-PMA	Pole Mount Adapter
AV-PMJB	Pendant Mount with Junction Box *(Fits Cap 1.5" NPT, Box Fits 3/4" NPT)*
AV-WMJB	Wall Mount Bracket with Junction Box *(Fits Cap 1.5" NPT, Box Fits 3/4" NPT)*
MD-CAP	Mounting Cap for MegaDome® Series and SurroundVideo® G5 Mini
MD-JBA	Junction Box Adapter for MegaDome Series and SurroundVideo G5 Mini

Model Numbers

12MP	AV12ZMD-401

Create Your Model (Example: AV12ZMD-401)

	Megapixel Resolution	Generation	Body Type	Compression
AV	12	Z[1]	MD[2]	401

[1] "Z" represents the platform
[2] "MD" represents MegaDome product line

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