

AV08ZMD-400 4K 8.3-Megapixel H.264 IP MegaDome ® 4K camera with 4.4-10mm Remote Zoom, Remote Focus and P-Iris Lens, SDHC Card and IR LEDs

This A&E specification is written according to Construction Specifications Institute (CSI) 3-Part Format, based on MasterFormat™ (2009 Edition) and The Project Resource Manual – CSI Manual of Practice. www.csinet.org/masterformat.
Manufacturer is responsible for the accuracy of the technical data included in this specification.

Division 28 – Electric Safety and Security
Section 28.23.29 – Video Surveillance – Remote Devices and Sensors

Part 1 General

1.1 General Requirements

The camera shall be of manufacturer's official product line, designed for continuous commercial or industrial use. The camera shall be based on standard parts and components and utilize proven technology using open and published protocols.

All camera installation, configuration, setup, programming and all related work shall be performed by electronic technicians thoroughly trained in the installation and service of the equipment provided and in complete compliance with all local codes and regulations.

All equipment provided shall be backed by a three-year manufacturer warranty.

1.2 Certifications and Standards

- a) European Community Directives:
 - 2014/30/EC (EMC Directive);
 - 2014/35/EU (Low Voltage Directive);
 - 2011/65/EU (RoHS Directive)
 - 1907/2006/EC (REACH Directive)
 - 2012/19/EU (WEEE Directive)

- b) European EMC Standards to which conformity is declared:
 - 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



- c) FCC Standard Compliance:
 - Title 47, Part 15 (47 CFR 15) Subpart B Class A

- d) Video Compression Technology
 - H.264 MPEG-4, Part 10 ISO/IEC 14496-10 AVC

- e) Networking Standard:
IEEE 802.3af-2003 PoE Standard, Class 3
IPv4
HTTPS
802.1x
- f) Interoperability Standard
ONVIF Profile S and PSIA compliant
- g) Country of Origin
FTC “Made in USA” standard compliant

Part 2 Products

2.1 Manufacturer

Arecont Vision, LLC
425 E. Colorado St. #700
Glendale, CA 91205
Phone: 818-937-0700
877-226-3728
Fax: 818-937-0464
www.arecontvision.com

2.2 General

The AV08ZMD-400 4K 8-Megapixel/1080p MegaDome® 4K dual mode network camera is the new generation of Arecont Vision’s full line of H.264 MegaDome® cameras. This fully compliant implementation of H.264 (MPEG-4, Part 10) provides full 3840 x 2160 megapixel resolution at full video frame rates of 30 frames per second (fps) at 8-megapixel and 60fps in 1080p binned mode. The AV08ZMD-400 camera line provides an all-in-one solution with integrated 8-megapixel day/night camera, remote focus, remote zoom, P-Iris, 4.4-10mm lens, SDHC card, IP66 water/dust ingress rating and vandal resistant dome enclosure IK-10 rating.

MegaDome® 4K performs exceptionally well in very low-light thanks to NightView™, making it capable of covering areas where very little light is present. With the features of SNAPstream™ to reduce bandwidth without impacting image quality, scaling, binned mode, privacy masking, extended motion detection and flexible cropping, the AV08ZMD-400 is a high sensitivity, Power over Ethernet (PoE - IEEE 802.3af) compliant camera. Built with Arecont Vision’s massively-parallel MegaVideo® processing technology, this camera offers more than 27-times the resolution of standard resolution IP cameras with the ability to output full real-time frame rates and deliver high-quality megapixel imaging for both indoor and outdoor applications.

2.3 Hardware

- The camera shall utilize a high sensitivity 12 megapixel CMOS sensor with 1/1.7” optical format, 1.85um x 1.85um pixel size, progressive scan and Active Pixel Count: 3840(H) x 2160(V) pixel array.
- The camera shall have and integrated 4.4-10mm, Φ19mm mount, megapixel IR corrected vari-focal lens with 1/1.7” optical format, F1.2 and horizontal field of view of 96°-43°.
- The camera shall have die-cast aluminum chassis with IK-10 vandal resistant dome. Entire enclosure to be rated minimum IP66 for water and dust protection.
- The camera shall have a 3-axis gimbal with 360° pan, 75° tilt and 180° Z-rotation for easy and accurate positioning.
- The camera shall have Beam Angle and LED intensity that is manually changeable.

- The camera shall have 12 pcs 850nm Adjustable LEDs with Adjustable IR.
- The camera shall have 50ft (15m) max of projection distance.
- The camera shall have 60 degrees and 80 degrees projection angle.
- The camera's power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard to support IR illuminator and camera.
- The camera shall have an auxiliary power input, 12-24 VDC, to support IR illuminator and camera.
- The camera shall have SDHC card slot for onboard storage up to 32GB, class 10 and UHS-1.
- The camera shall be utilized for indoor and outdoor applications.

2.4 Imaging

- The camera shall have dual standard compression support with simultaneous streaming of both H.264 and MJPEG formats.
- The camera shall feature automatic exposure, automatic multi-matrix white balance, shutter speed control to minimize motion blur, programmable resolution, brightness, saturation, gamma, sharpness and tint.
- The camera's shutter speed shall be 1ms - 500ms.
- The camera shall feature adjustable 5 to 255 Hz flicker control, windowing, simultaneous delivery of full-field view and zoomed images at video frame rate, instantaneous electronic zoom, pan and tilt, and electronic image rotation by 180 degrees
- The camera shall have WDR (wide dynamic range) up to 70.7 dB and a maximum SNR of 40.1 dB.
- The camera shall have privacy masking, the ability to select multiple regions of an arbitrary shape to block the video.
- The camera shall have extended motion detection grid, a higher granularity grid of 1024 distinct motion detection zones. User can select between 64 zone based motion detection and extended motion detection to provide backward compatibility with the existing Video Management System (VMS) integration.
- The camera shall feature streaming of the full field of view (FOV) and simultaneous multiple regions of interest (ROI) for forensic zooming.
- The camera shall provide 21 levels of compression quality for optimal viewing and archiving.
- The camera's H.264 implementation shall maintain full real time video frame rates.
- The camera shall output at a maximum resolution of 3840(H) x 2160 (V) pixels up to 30fps
- It shall be possible to program the camera at binning mode to improve low light performance and output a variety of lower resolution image, i.e. 1920 (H) x 1080 (V) pixels at 60fps.
- The camera shall provide flexible cropping (Resolution windowing down to 1x1 pixels for JPEG and 2x2 pixels for H.264)
- The camera shall be able to save bandwidth & storage by running at 1/4 full resolution
- The camera shall be able to have below scaled resolutions: 720p, XGA, DVGA (16:9), DVGA (3:2), SVGA, D1 (PAL), 4CIF (NTSC), VGA, 2CIF (PAL), HVGA (4:3), 2CIF (NTSC), HVGA (8:3), HVGA (3:2), HVGA (16:9), CIF (PAL), CIF (NTSC), QVGA (SIF), QCIF (PAL), QCIF (NTSC) and SQCIF.
- The camera shall have an Auto Exposure (AE), Gain Control (AGC), Bit Rate and Bandwidth Limit Control
- The camera shall feature MoonLight™ mode - extended exposure and noise cancellation
- The camera shall be able to support Picture-in-Picture: simultaneous delivery of full field of view and zoomed images
- This camera shall have SNAPstream™ (Smart Noise Adaptation and Processing) capability to reduce bandwidth without impacting image quality.
- This camera shall have strong low light performance with NightView™ and binning mode.

2.5 Video

Video frame rate (up to):

30fps (3840 x 2160)

Video frame rate in binned mode (up to):

60fps (1920 x 1080)

Scaled Resolution:

Scaled Resolution	H	V	Pixel Count	Notes
720p	1280	720	921600	
XVGA	1024	768	786432	ipad 2/ipad mini
DVGA (16:9)	1136	640	727040	iphone 5
DVGA (3:2)	960	640	614400	iphone 4S
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	

2.6 Protocols

- The camera shall have Real Time Streaming Protocol (RTSP) support allowing for compatibility with media players such as Apple QuickTime, VLC Player and others.
- RTP multicast is triggered by a HTTP command. (See API document on website)
- The camera shall support RTSP, RTP over TCP, RTP over UDP (Unicast/Multicast), HTTP1.0, HTTP1.1, TFTP, DHCP, HTTPS, 802.1x and IPv4.
- 100/1000 Base-T Ethernet Network Interface
- Multi-streaming: 4 non-identical streams (different frame rate, bit rate, resolution, quality, and compression format).

2.7 Electrical

General purpose opto-coupled input and output

Power over Ethernet (PoE): PoE 802.3af

Auxiliary Power 12-24 VDC

Power consumption: PoE – Class 3;

2.8 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)

2.9 Networking

The camera shall be equipped with a 100 Mbps LAN connector.

2.10 Environmental

Operating temperature: -40°C (-40°F) to +50°C (122°F)

Motorized lens operating temperature -10°C (14°F) to +50°C (122 °F)

Storage temperature -40°C (-40°F) to +60°C (140 °F)

Humidity 0% to 90% (non-condensing)

2.11 Minimum Illumination

Color (Day Mode): 0.03 Lux

Color Binning (Day Mode): 0.015 Lux

B/W (Night Mode): 0.003 Lux, IR sensitive

2.12 Packaging

Unit Dimensions (H x Dia) 5.04”H (128.03 mm) x 5.77” dia. (146.65 mm) Weight: 2.25 lbs (1.02 kg)

Packaged Dimensions (H x W x L) 5.8” (147.32mm) x 6.6” (167.64mm) x 6.6” (167.64mm) Weight: 3.45 lbs (1.56kg)

2.13 Compatible Accessories

AV-CRMA	Corner Mount Adapter
AV-JBA	Junction Box Adapter
AV-PMA	Pole Mount Adapter
AV-PMJB	Pendant Mount
AV-WMJB	Wall Mount Bracket
MD-CAP	Wall Mount and Cap Accessory
MD-JBA	Round Junction Box Adapter

2.15 Related Documents

AV MegaDome[®] 4K Datasheet

AV MegaDome[®] 4K Installation Manual