

AV3255AM-H	3 Megapixel H.264 Day/Night IP MegaDome® 2 Camera w/ Remote Zoom, Remote Focus, Auto Iris and Heater
AV3255PMIR-SH	3 Megapixel H.264 Day/Night IP MegaDome® 2 Camera w/ Remote Zoom, Remote Focus, P-Iris, IR LEDs, SDHC Card and Heater
AV3255PMIR-SH	3 Megapixel H.264 Day/Night IP MegaDome® 2 Camera w/ Telephoto Remote Zoom, Remote Focus, P-Iris, SDHC Card, IR LEDs and Heater
AV3255DN-H	3 Megapixel H.264 Day/Night IP MegaDome® 2 Camera w/ 3.4-10.5mm Manual Lens and Heater

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:
 - 2004/108/EC (EMC Directive);
 - 2006/95/EC (Low Voltage Directive);
 - 2011/65/EU (RoHS Directive)
 - 1907/2006/EC (REACH Directive)
 - 2002/96/EC (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
 - EN60950-1:2006+A11:2009+A1:2010+A12:2011



- c) UL Listing
CB Test Report (IEC 60950-1 (ed. 2) and IEC 60950-22 (ed. 1))



- d) FCC Standard Compliance:
Title 47, Part 15 (47 CFR 15) Subpart B Class A
- e) Mechanical Standards:
ANSI/IEC 60529-2004 - IP66 dust/water Ingress protection rating
EN62262:2002 – IK-10 impact rating
- f) Video Compression Technology
H.264 MPEG-4, Part 10 ISO/IEC 14496-10 AVC
- g) Networking Standard:
IEEE 802.3af-2003 PoE Standard, Class 3
IPv4
- h) Interoperability Standard
PSIA compliant
- i) Country of Origin
FTC “Made in USA” standard compliant

Part 2 Products

2.1 Manufacturer

Arecont Vision, LLC
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2.2 General

The AV3255 MegaDome® 2 series network camera is part of Arecont Vision’s full line of H.264 MegaDome® series cameras. This fully compliant implementation of H.264 (MPEG 4, Part 10) provides full 2048 x 1536 megapixel resolution at full video frame rates of 21fps. The AV3255 camera line provides an all-in-one solution with integrated 3 megapixel camera, remote focus, remote zoom, auto iris lens (AM model) or P-Iris (PM model), 3-9mm (AM model), 2.8-8mm (PM models) or 8-22mm (PMT model) lens options, SDHC card (-S model), IP66 water/dust ingress rating and vandal resistant dome enclosure IK-10 rating; the AV3255DN camera line provides an all-in-one solution with integrated 3.4-10.5mm manual lens.

With the features of CorridorView™ for 90°, 180° and 270° image rotation(-S models), scaling (-S model), binned mode, PSIA conformance, privacy masking, extended motion detection and flexible cropping, the AV3255 is a high sensitivity, PoE (IEEE 802.3af) compliant camera with optional heater, IR LEDs and manual lens configurations. Built with Arecont Vision's massively-parallel MegaVideo® processing technology, this camera offers more than ten times the resolution of standard resolution IP cameras with the ability to output full real-time frame rates and deliver the high quality megapixel imaging for both indoor and outdoor applications.

2.3 Hardware

- The camera shall utilize a high sensitivity 5 megapixel effective CMOS sensor with 1/2.5" optical format, 2.2um x 2.2um pixel size, progressive scan and Active Pixel Count: 2048(H) x 1536(V) pixel array.
- The camera shall have an integrated 3.6-9mm, Φ14mm mount, megapixel IR corrected vari-focal lens with 1/2.5" optical format, F1.8 and horizontal field of view of 76°-25°. (AM models)
- The camera shall have and integrated 2.8-8mm, Φ14mm mount, megapixel IR corrected vari-focal lens with 1/2.7" optical format, F1.2 and horizontal field of view of 94°-34°. (PM models)The camera shall have and integrated 8-22mm, Φ14mm mount, megapixel IR corrected vari-focal lens with 1/2.7" optical format, F1.6 and horizontal field of view of 29°-12°. (PMTIR)
- The camera shall have an integrated 3.4-10.5mm, CS mount, megapixel IR corrected vari-focal lens with 1/2.5" optical format, F1.6 and horizontal field of view of 73°-28°. (DN models)
- 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, 90° tilt and 180° Z-rotation for easy and accurate positioning.
- The camera shall contain an IR LED board with 24 pcs 850nm IR LEDs, 50 feet (15 meter) IR distance, 40° IR angle without any external power input. (PMIR model).
- The camera shall contain an IR LED board with 24 pcs 850nm IR LEDs, 120 feet (36 meter) IR distance, 30° IR angle without any external power input. (PMTIR model).
- The camera's power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard to support IR illuminator, heater and camera.
- The camera shall have an auxiliary power input, AC24V and DC12-48V, to support IR illuminator and camera.
- The camera shall have SDHC card slot for onboard storage up to 32GB, class 10 and UHS-1. (-S models).
- 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 selectable 50/60 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 CorridorView™ with 90°, 180° and 270° image rotation options (-S models)
- The camera shall have multi-streaming support of up to 8 non-identical concurrent streams (different frame rate, bit rate, resolution, quality, and compression format).
- The camera shall have wide dynamic range up to 70.1dB and a maximum SNR of 44.1dB
- The camera shall have privacy masking, the ability to select multiple regions of an arbitrary shape to block the video.

- The camera shall have Real Time Streaming Protocol (RTSP) support allowing for compatibility with media players such as Apple QuickTime, VLC Player and others.
- 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 cameras H.264 implementation shall maintain full real time video frame rates.
- The camera shall output at a maximum resolution of 2048(H) x 1536(V) pixels up to 21 frames per second (FPS).
- It shall be possible to program the camera to output a variety of lower resolution images, i.e. 1920(H) x 1080(V) pixels at 29 FPS.
- It shall be possible to program the camera at binned mode to output a variety of lower resolution image and increase frame rate, i.e. 1024(H) x 768(V) pixels at 46 FPS, or 960(H) x 540(V) pixels at 64 FPS.
- 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. (-S models)
- 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

2.5 Video

Video frame rate (up to):

21fps @ 2048x1536

29fps @ 1920x1080

41fps @ 1280x1024

Video frame rate in binned mode (up to):

46fps @ 1024x768

64fps @ 860x540

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.
- The camera shall support both unicast and multicast communication protocol.
- The camera shall support RTSP, RTP over TCP, RTP over UDP (Unicast/Multicast), HTTP1.0, HTTP1.1, TFTP
- 100 Base-T Ethernet Network Interface
- Multi-streaming: 8 non-identical streams

2.7 Electrical

General purpose opto-coupled input and output

Power over Ethernet (PoE): PoE 802.3af

Auxiliary Power 12-48V DC, 24VAC

Power consumption: PoE – Class 3;

10.3 Watts maximum for DN-H Model

9.7 Watts maximum for AM Model

12.4 Watts maximum for PMIR-SH Model

14.4 Watts maximum for PMTIR-SH Model

2.8 IR Illuminator (-IR Model)

24 pcs 850nm LEDs / 50ft (15m) IR distance (max) / 40° IR angle (PMIR Model)

24 pcs 850nm LEDs / 120ft (36m) IR distance (max) / 30° IR angle (PMTIR Model)

Total PoE Solution (No external power requirement)

2.9 Heater Electrical

Power Output: 2.28 W Max

Switch: On: 4°C (32.9 °F), Off: 6.5 °C (43.7 °F)

Total PoE Solution: No external power requirement

2.10 Networking

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

2.11 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)

Stable image temperature 0°C (32 °F) to +50°C (122 °F)

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

Humidity 0% to 90% (non-condensing)

2.12 Minimum Illumination

Color (Day Mode): 0.3 Lux @ F1.2

Color Binning (Day Mode): 0.15 Lux @ F1.2

B/W (Night Mode): 0 Lux, IR sensitive (with additional IR light source)

2.13 Packaging

Unit Dimensions (H x Dia) 4.9"H (125 mm) x 5.5" dia. (140 mm) Weight: 2.25 lbs (1.02 kg)

Packaged Dimensions (H x W x L) 6" (150mm) x 7.5" (190mm) x 8" (200mm) Weight: 2.8 lbs (1.27kg)

2.14 Compatible Accessories

MD-WMT2 – Wall Mount

MD-CMT – Pendant Mount

MD-FMA – Flush Mount Adapter

MD-CAP – Wall Mount and Cap Accessory

MD-EBA – Electrical Box Adapter

MD-JBA – Junction Box Adapter

MD-2HK – Heater Kit

AV-CRMA – Corner Mount Adapter

AV-PMA – Pole Mount Adapter

SV-EBA – Electrical Box Adapter

SV-JBA – Junction Box Adapter

2.15 Related Documents

AV MegaDome® 2 Datasheet

AV MegaDome® 2 Installation Manual