**AV5455DN-S**  **5 Megapixel H.264 IP MicroDome® camera**

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](http://www.csinet.org/masterformat).

Manufacturer is responsible for the accuracy of the technical data included in this specification.

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**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.

## Certifications and Standards

1. 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)

1. 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



1. FCC Standard Compliance:

Title 47, Part 15 (47 CFR 15) Subpart B Class A

1. Mechanical Standards:

ANSI/IEC 60529-2004 - IP66 dust/water Ingress protection rating

ANSI/IEC 62262- IK-10 vandal resistant dome

1. Video Compression Technology

H.264 MPEG-4, Part 10 ISO/IEC 14496-10 AVC

1. Networking Standard:

IEEE 802.3af-2003 PoE Standard, Class 3

IPv4

1. Interoperability Standard

PSIA compliant

1. Country of Origin

FTC “Made in USA” standard compliant

## Part 2 Products

**2.1 Manufacturer**

**Arecont Vision, LLC**

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**Glendale, CA 91205**

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**2.2 General**

The AV5455DN-S MicroDome® 5MP series network camera is part of Arecont Vision’s full line of H.264 MegaView® cameras. This fully compliant implementation of H.264 (MPEG 4, Part 10) provides 2592x1944 megapixel resolution at full video frame rates of 14 frames per second (fps). The AV5455DN-S camera line provides an all-in-one solution with integrated 5MP full HD camera, IR corrected lens, mechanical true day/night IR cut filter, and IK-10 vandal resistant aluminum dome enclosure with IP66 weatherproofing standard.

With the features of PSIA compliance, pixel binning, privacy mask, extended motion detection and flexible cropping, the AV5455DN-S is a high sensitivity, PoE (IEEE 802.3af) compliant true Day/Night camera. Built with Arecont Vision’s massively-parallel MegaVideo® processing technology, this camera offers more than 6-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 indoor applications.

**2.3 Hardware**

* The camera shall utilize a high sensitivity 5 Megapixel CMOS sensor with 1/2.5” optical format, 2.2um x 2.2um pixel size, progressive scan and Active Pixel Count: 2592(H) x 1944(V) pixel array.
* The camera shall have and integrated 2.8mm, M12 Mount, megapixel IR corrected fixed-focal lens with 1/2.5" optical format, F1.8 and Horizontal Field of View of 89°.
* The camera shall have a 2-axis easily adjustable gimbal with 359˚ pan and 90˚ tilt for easy and accurate positioning.
* The camera shall have an IK-10 rated vandal resistant dome enclosure with IP66 weatherproofing standard.
* The camera’s power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard.
* 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 5 to 255 Hz adjustable 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 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 dynamic range up to 69dB and a maximum SNR of 49dB.
* 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 1944 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 video frame rates.
* The camera shall output at a maximum resolution of 2592(H) x 1944(V) pixels up to frame rate of 14 frames per second (FPS).
* It shall be possible to program the camera to output a variety of lower resolution image and increase frame rate, i.e. 1280(H) x 1024(V) pixels at 41 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 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
* The camera shall support a programmable binned mode to output a variety of lower resolution image and increase frame rate, e.g. 1296(H) x 972(V) pixels at 34 FPS, 1024(H) x 768(V) pixels at 46 FPS, or 860(H) x 540(V) pixels at 64 FPS.
* The camera has SNAPstream™, which is smart noise adaptation and processing.
* The camera shall have CorridorView™ (90°, 180°, and 270° image rotation).

**2.5 Video**

Video frame rate (up to):

14fps @ 2592x1944

16fps @ 2560x1600

21fps @ 2048x1536

29fps @ 1920x1080

31fps @ 1600x1200

41fps @ 1280x1024

In Binned Mode up to:

34fps @ 1296x972

41fps @ 1280x800

46fps @ 1024x768

64fps @ 800x600

64fps @ 860x540

64fps @ 640x512

**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 and 802.1x
* 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: 5.59 Watts max (Auxiliary DC power)

**2.8 Networking**

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

**2.9 Environmental**

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

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

Humidity 0% to 90% (non-condensing)

**2.10 Minimum Illumination**

Color (Day Mode): 0.3 Lux

Color Binning (Day Mode): 0.15 Lux

B/W (Night Mode): 0.03 Lux, IR sensitive

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**2.11 Packaging**

Unit Dimensions: ɸ 4” (100mm) x 3.1” H (78.5mm), Weight: 0.95lbs (0.43kg)

Packaged Dimensions: 5.6" W (142mm) x 5.6" L (142mm) x 3.5" H (90mm), Weight: 1.3lbs (0.6kg)

**2.12 Compatible Accessories**

|  |  |
| --- | --- |
| MCD-WMT | Wall Mount with Junction Box |
| MCD-CMT | Pendant Mount with Junction Box |

MCD-EBA Electrical Box Adapter Plate

MCD-CRMT Corner Mount Adapter For MicroDome®

MCD-4S Electrical Box Adapter Cover For MicroDome® (Fits Common 4S Junction Box)

MCD-JBAS Square Junction Box Adapter Plate

AV-CRMA Corner Mount Adapter

AV-PMA Pole Mount Adapter

**2.13 Compatible Lenses**

MPM2.8A2.8mm M12-mount, Fixed iris, IR corrected

MPM4.0A 4mm M12-mount, Fixed iris, IR corrected

MPM6.0 6mm M12-mount, Fixed iris, IR corrected

MPM8.0 8mm M12-mount; Fixed iris, IR corrected

MPM12.0A 12mm M12-mount, Fixed iris, IR corrected

MPM16.0 16mm M12-mount, Fixed iris, IR corrected

**2.14 Related Documents**

AV MicroDome® Datasheet

AV MicroDome® Installation Manual

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