Arecont Vision

AV5245PM-W   **5 Megapixel H.264 Color IP MegaBall® 2 camera with Wall Mount and Remote Zoom, Remote Focus and P-Iris Lens**

AV5245PM-D   **5 Megapixel H.264 Color IP MegaBall® 2 Dome Camera with Remote Zoom, Remote Focus and P-Iris Lens**

AV5245PM-D-LG   **5 Megapixel H.264 Color IP MegaBall® 2 Dome Camera with Remote Zoom, Remote Focus, P-Iris Lens and Light Gray Bezel/Can**

AV5245DN-01-W   **5 Megapixel H.264 Color IP MegaBall® 2 camera with Wall Mount and Immervision Panomorph Lens**

AV5245DN-01-WA   **5 Megapixel H.264 Color IP MegaBall® 2 camera with Wall Mount and Immervision panomorph Lens and Audio**

AV5245DN-01-D   **5 Megapixel H.264 Color IP MegaBall® 2 Dome Camera with Immervision panomorph Lens**

AV5245DN-01-DA   **5 Megapixel H.264 Color IP MegaBall® 2 Dome Camera with Immervision panomorph Lens and Audio**

AV5245DN-D-LG   **5 Megapixel H.264 Color IP MegaBall® 2 Dome Camera with Immervision panomorph Lens and Light Gray Bezel/Can**

AV5245DN-DA-LG   **5 Megapixel H.264 Color IP MegaBall® 2 Dome Camera with Immervision panomorph Lens, Audio and Light Gray Bezel/Can**

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.

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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.

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:

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

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2.2   General

The AV5245 MegaBall® 2 series network camera is part of Arecont Vision's full line of H.264 MegaBall® cameras. This fully-compliant implementation of H.264 (MPEG-4, Part 10) provides full 2592 x 1944 megapixel resolution at full video frame rates of 14 frames per second (fps). The AV5245PM camera line provides an all-in-one indoor 3" ball shape solution with integrated 5 megapixel camera, remote focus, remote zoom, P-iris IR corrected lens and wall mount or dome enclosure options. The AV5245DN-01 camera embeds manual panomorph lens with an ImmerVision Enables® system offers 180° and 360° views to eliminate blind spots and achieve total visual coverage. With Immervison Enbable softwares, AV5245DN-01 records and playbacks the entire event to 180° and 360° views and provide pan, tilt and zoom into any specific area within any view settings.

With the features of PSIA conformance, binning mode, privacy masking, extended motion detection and flexible cropping, the AV5245 is a high sensitivity, PoE (IEEE 802.3af) compliant day/night camera. Built with Arecont Vision's massively-parallel MegaVideo® processing technology, this camera offers more than 16-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 3.4-10mm, Φ14mm mount, megapixel IR corrected vari-focal lens with 1/2.5" optical format, F1.4 and horizontal field of view of 102°-35°. (PM models)
- The camera shall have and integrated 0.98mm(short axis) / 1.12mm(long axis), M12 mount, megapixel IR corrected lens with 1/2.8" optical format, F2.0 and horizontal field of view of 182°. (DN-01 models)
- 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 either have wall mount (-W model) or dome mount (-D models).
- The camera shall embedded in-ceiling mount. (-D models)
- The camera color shall be black but with light grey dome option. i.e. bezel and can are light grey but ball and liner are black. (-LG model only)

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 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 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 2592(H) x 1944(V) pixels at a maximum frame rate of 14 frames per second (FPS).
- It shall be possible to program the camera to output a variety of lower resolution images, i.e. 2048(H) x 1536(V) pixels at 21 FPS.
- 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. 1296(H) x 972(V) pixels at 34FPS, or 1024(H) x 768(V) pixels at 46 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

2.5 Video

Video frame rate (up to):
        14fps @ 2592x1944
        21fps @ 2048x1536
        29fps @ 1920x1080
        41fps @ 1280x1024
Video frame rate in binned mode (up to):
        34fps @ 1286x972
        46fps @ 1024x768
        64fps @ 860x540

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:
        AV5245PM models: PoE – Class 3: 6.8 Watts max (Auxiliary DC Power)
        AV5245DN-01 models: PoE – Class 3: 5.7 Watts max (Auxiliary DC Power)

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

2.9 Environmental
Operating temperature: -5˚C (23 °F) to +50˚C (122 °F)
Stable image temperature 0˚C (32 °F) to +50˚C (122 °F)
Storage temperature -20˚C (-4 °F) to +60˚C (140 °F)
Humidity 0% to 90% (non-condensing)

2.10 Minimum Illumination
Color (Day Mode): 0.3 Lux @ F1.4
Color Binning (Day Mode): 0.15 Lux @ F1.4
B/W (Night Mode): 0 Lux, IR sensitive (with additional IR light source)

2.11 Packaging
Unit Dimensions:
        -W model: Ø 3" (76.2mm) x 6.15" H (156.2mm) / Weight: 1.2lbs (0.54kg)
        -D model, in-ceiling: Ø 5.1" (130mm) x 1.74" H (44mm)
        -D model, surface w/ bubble: Ø 5.1" (130mm) x 3.85" H (98mm) / Weight: 1.2lbs (0.54kg)

Packaged Dimensions:
        - W model: (H x W x L) 8.5" (217mm) x 5.67" (144mm) x 5.3" (135mm)   Weight: 2.0 lbs (0.9kg)
        - D model: (H x W x L) 6.3" (160mm) x 6.3" (160mm) x 6.85" (174mm)   Weight: 1.9 lbs (0.86kg)

2.12 Compatible Accessories
D4S-WMT-B   Black Wall mount with 3/4" NPT standard
D4S-CMT-B   Black Ceiling mount with 3/4" NPT standard
D4S-WMT   Light Gray Wall mount with 3/4" NPT standard
D4S-CMT   Light Gray Ceiling mount with 3/4" NPT standard
SV-EBA   Electrical box adapter
SV-JBA   Junction box adapter

2.13 Related Documents
AV MegaBall® 2 Datasheet
AV MegaBall® 2 Installation Manual