**AV4656DN-08 MICRODOME DUO, 4 MEGAPIXEL WDR, REMOTE FOCUS & DAY/NIGHT H.264/MJPEG, 2 X 1920X1080, 2 X 8.0MM MP LENS, SURFACE MOUNT, INDOOR/OUTDOOR, IP66, IK-10, POE**

**AV4656DN-28 MICRODOME DUO, 4 MEGAPIXEL WDR, REMOTE FOCUS & DAY/NIGHT H.264/MJPEG, 2 X 1920X1080, 2 X 2.8MM MP LENS, SURFACE MOUNT, INDOOR/OUTDOOR, IP66, IK-10, POE**

**AV4656DN-NL MICRODOME DUO, 4 MEGAPIXEL WDR, REMOTE FOCUS & DAY/NIGHT H.264/MJPEG, 2 X 1920X1080, NO LENS, SURFACE MOUNT, INDOOR/OUTDOOR, IP66, IK-10, POE**

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.

**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:

2014/30/EU (EMC Directive);

2014/35/EU (Low Voltage Directive);

2011/65/EU (RoHS Directive)

 1907/2006/EC (REACH Directive)

 2012/19/EU (WEEE Directive)

1. European EMC Standards to which conformity is declared:

 EN 55022:2010 Class A

 EN 55024:2010

 EN 61000-3-2: 2014

 EN 61000-3-3: 2013

 EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

 

1. FCC Standard Compliance:

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

1. Video Compression Technology

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

1. Mechanical Standards:

EN 60529:1991+A1:2004+A2:2013 - IP66 dust/water Ingress protection rating

EN 62262:2002 – IK-10 impact rating

1. Networking Standard:

IEEE 802.3af-2003 PoE Standard, Class 3

 IPv4, HTTPS, 802.1x

1. Interoperability Standard

ONVIF Profile S and PSIA compliant

1. Country of Origin

FTC “Made in USA” standard compliant

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



## Part 2 Products

**2.1 Manufacturer**

**Arecont Vision, LLC**

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**Glendale, CA 91205**

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 **877-226-3728**

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**2.2 General**

The AV4656DN Microdome Duo® series network camera is dual encoder (H.264 & MJPEG), 4 megapixel resolution, mechanical true Day/Night IP camera, designed to provide an all-in-one solution with two integrated 2-Megapixel CMOS sensors, two remote focus modules, two IR corrected lensesIK-10 vandal resistant dome and housing, rated IP66 for water and dust protection, to use camera for indoor and outdoor applications. The AV4656DN is a PoE (IEEE 802.3af) compliant camera, featuring PSIA compliance, privacy masking, extended motion detection and flexible cropping.

Built with Arecont Vision’s proprietary massively-parallel MegaVideo® technology, the AV4656DN has the ability to output multiple image formats allowing simultaneous viewing of the full resolution field of view and regions of interest for high definition forensic zooming.

Binning technique improves low-light performance, increases sensitivity and produces better SNR by combining and averaging pixels. This camera offers over ten times the resolution of standard-resolution IP cameras with the ability to output full real time frame rates.

With the features of SNAPstream™ to reduce bandwidth without impacting image quality, binning technique improves low-light performance, increases sensitivity and produces better SNR by combining and averaging pixels. This camera offers over 28 times the resolution of standard-resolution IP cameras with the ability to output full real time frame rates.

**2.3 Hardware**

* The camera shall have three configurations: AV4656DN-28 (2x 2.8mm M12 lenses), AV4656DN-08 (2x 8.0mm M12 lenses), AV4656DN-NL (no lenses, ordered separately).
* Lens options shall include the following IR corrected, M12 lenses : 2.1mm, 2.8mm, 4.0mm, 6.0mm, 8.0mm, 12.0mm, 16.0mm.
* The camera shall utilize two high sensitivity 2-megapixel CMOS sensors with 1/3.2” optical format, 2.2um x 2.2um pixel size, progressive scan and active Pixel Count: 3840(H) x 1080(V) pixel array.
* The camera shall integrate two 2.8mm M12 megapixel IR corrected lenses, 1/3.2”, F1.8, Horizontal Field of View of 83°. (AV4656DN-28)
* The camera shall integrate two 8.0mm M12 megapixel IR corrected lenses, 1/3.2”, F1.6, Horizontal Field of View of 30°. (AV4656DN-08)
* 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 two 3-axis easily adjustable gimbals with 359˚ pan and 90˚ tilt for easy and accurate positioning.
* The camera shall have an integrated Remote Focus module.
* Alarm Input/Output: General purpose opto-coupled, 1 Input/1 Output.

**2.4 Imaging**

* The camera shall combine two image sensors for a user configurable field of view.
* The camera shall have dual standard compression support with simultaneous streaming of both H.264 and MJPEG formats.
* Each sensor of 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 automatic exposure, automatic multi-matrix white balance, shutter speed control, 50/60Hz selectable flicker control, programmable brightness, saturation, gamma, sharpness, windowing and decimation, simultaneous delivery of full-field view and zoomed images at video frame rate, instantaneous electronic zoom, pan and tilt.
* The Camera shall have CorridorView™ (90°, 180°, and 270° image rotation).
* The camera shall have multi-streaming support of up to 8 non-identical concurrent streams (different frame rate, bitrate, resolution, quality and compression format).
* The camera shall have wide dynamic range up to 100dB.
* 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. This feature shall support RTP, HTTP and TFTP protocols, as well as the on-camera web interface.
* The camera shall output at a maximum resolution of 3840(H) x 1080(V) pixels at a maximum frame rate of 15fps.
* The camera shall auto adjustment between WDR and LDR modes.
* 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.
* It shall be possible to program the camera in binning mode to output lower resolution images: i.e. 1920(H) x 590(V) pixels (1/4 full resolution) at 24FPS.
* The camera shall have flexible cropping with any resolution multiple of 2 for H.264, any image width multiple of 64 for JPEG full resolution, any image width multiple of 128 for JPEG half resolution (no restriction on image height for JPEG).
* The camera shall be able to save bandwidth & storage by running at 1/4 full resolution, allows for bit rate and bandwidth limitation 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 be fully conformant with PSIA and ONVIF industry-standards and pass conformance tests.

**2.5 Video**

Video frame rate (up to):

 15FPS @ 3840 x 1080

Video frame rate in cropped mode up to:

 24FPS @ 1920 x 590

**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 at minimum RTSP, RTP over TCP, RTP over UDP (Unicast/Multicast), HTTP1.0, HTTP1.1, DHCP, TFTP, QoS, IPv4 network protocols.
* 100 Base-T Ethernet Network Interface.
* Multi-streaming: 8 non-identical streams (4 active connections to each sensor).

**2.7 Electrical**

* General purpose opto-coupled 1 input and 1 output
* Power over Ethernet (PoE): PoE 802.3af for camera
* Power Consumption: PoE – Class 3
* AV4656DN: 7.9Watts DC Power maximum PoE Class 3

**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)
* Stable image temperature 0˚C (32 °F) to +50˚C (122 °F)
* Storage temperature -40˚C (-4 °F) to +60˚C (140 °F)
* Humidity 0% to 90% (non-condensing)

**2.10 Illumination**

Color (Day Mode): 0.2 Lux

B/W (Night Mode): 0.02 Lux, IR sensitive

**2.11 Packaging**

Total Packaged Dimensions:

4.9" W (124mm) x 7" L (178mm) x 3.9" H (99mm), Weight of 2.4lbs (1.1kg)

**2.12 Compatible Lenses**

MPM2.1 2.1mm M12-mount, Fixed iris, IR corrected

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

**2.13 Compatible Accessories**

MDD-CMT PENDANT MOUNT FOR MICRODOME DUO

MDD-FMA FLUSH MOUNT ADAPTER FOR MICRODOME DUO

MDD-WMT WALL MOUNT FOR MICRODOME DUO

**2.14 Related Documents**

MicroDome Duo® Datasheet

MicroDome Duo® Installation Manual

**2.15 Warranty**

Limited 3-Year Parts and Labor

*Arecont Vision reserves the right to change products or specifications without notice.*



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