**Micro**Bullet®

**AV3325DNIR**

**3MP MicroBullet, 2048x1536, 21fps, MJPEG/H.264, SNAPstream, IR LED Array, Day/Night, 2.8-8mm Remote Focus, Remote Zoom, 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**

##  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

 Designed in USA and “Made in China”

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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**2.2 General**

The AV3325DNIR MicroBullet® Day/Night 3MP network camera is part of Arecont Vision’s full line of H.264 MicroBullet 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 21 frames per second (fps). The AV3325DNIR camera provides an all-in-one indoor flush, in-ceiling mount solution with an integrated 3-megapixel camera and a remote focus module with a 2.8-8mm IR corrected lens. With the features of PSIA and ONVIF conformance, unlimited privacy masking, extended motion detection and flexible cropping, the AV3325DNIR is a high sensitive, PoE (IEEE 802.3af) compliant camera with a true day/night IR cut filter. Built with Arecont Vision® massively-parallel MegaVideo® processing technology, this camera offers more than 4-times the resolution of standard resolution IP cameras with the ability to output full real-time frame rates and deliver high-quality megapixel imaging.

**2.3 Hardware**

* The camera shall utilize a high sensitivity 3-Megapixel effective CMOS sensor with 1/3.” 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 2.8-8mm megapixel, IR corrected, fixed focal lens with 1/2.5" optical format, F/1.6 and horizontal field-of-view of 100°- 49°.
* The camera’s power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard.
* The MicroBullet shall have a die-cast aluminum, cylindrical (Bullet-style) housing which is IP66 weather proof standard and IK-10 Impact resistant.
* The camera shall have a 3-axis easily adjustable bracket with 360° pan, 90° tilt and 180° rotation for easy and accurate positioning.

**2.4 Imaging**

* The camera shall have dual standard compression support with simultaneous streaming of both H.264 and MJPEG formats.
* The camera shall be fully conformant with PSIA and ONVIF Profile S industry-standards and pass conformance tests.
* The camera shall have unlimited privacy masking, the ability to select multiple regions of an arbitrary shape to block the video.
* The camera shall have an extended motion detection grid, a higher-granularity grid of 1024 distinct motion detection. The 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 have multi-streaming support of up to 8 non-identical concurrent streams (different frame rate, bitrate, resolution, and quality and compression format).
* The camera shall have dynamic range up to 69.5dB and a maximum SNR of 44 dB.
* The camera shall be able to be cropped to any resolution divisible by 2 and maintain H.264 compression. It shall be possible to crop the camera to output a variety of lower resolution images such as 1920(H) x 1080(V) at 30fps or 1280(H) x 1024(V) at 30fps.
* The camera shall output at a maximum resolution of 2048(H) x 1536(V) pixels at a maximum frame rate of 21fps.
* The camera shall feature streaming of the full field-of-view (FOV) and simultaneous multiple regions of interest (ROI) for forensic zooming.
* The camera’s shutter speed shall be 1ms - 500ms.
* The camera shall provide 21 levels of compression quality for optimal viewing and archiving.
* 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 feature automatic exposure, custom white balance, shutter speed control, adjustable 5 to 255Hz selectable flicker control, programmable brightness, saturation, gamma, selectable enhancement sharpness level, windowing and decimation, simultaneous delivery of full-field view and zoomed images at video frame rate, instantaneous electronic zoom, pan and tilt, and electronic image rotation by 90, 180° and 270°.
* The camera shall have low light noise filter control and bit rate and bandwidth limitation control.
* The camera shall incorporate necessary algorithms and circuits to detect motion in low-light with clarity.
* The camera shall support an IR sensitive minimum illumination of 0.02 Lux in black and white (B/W) mode with an additional IR light source.
* The camera shall have flexible cropping with resolution windowing down to 1x1 pixel for JPEG and 2x2 pixels for H.264.
* The camera has SNAPstream™, which is smart noise adaptation and processing.
* The camera shall have bandwidth and storage savings by running at ¼ resolutions.
* The camera shall have CorridorView™ (90°, 180°, and 270° image rotation).
* The MicroBullet IR boasts 850 LEDs with a projection distance of 50ft (15m) and a projection angle of either 60° or 75°.

**2.5 Video**

Video frame rate (up to):

 21 FPS @ 2048(H) x 1536(V)

Cropped :

 30 FPS @ 1920(H) x 1080(V)

30 FPS @ 1280(H) x 1024(V)

Binning :

 46 FPS @ 1024(H) x 768(V)

 64 FPS @ 960(H) x 540(V)

**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, DHCP, QoS, 802.1x, IPv4 and IPv6.
* 100 Base-T Ethernet Network Interface.
* Multi-streaming: 8 non-identical streams.

**2.7 Electrical**

Power over Ethernet (PoE): PoE 802.3af for camera, Class 3

Power Consumption: 6.5 watts max

**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 Illumination**

Color (Day Mode): 0.2 Lux

Color Binning (Day Mode): 0.1 Lux

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

**2.11 Packaging**

Total Unit Dimensions:

Unit 2.8" H (71.5mm) x 3.39" W (86mm) x 6.8" D (172.8mm) and weight of 1.01lbs (0.46kg)

Packaged 7.9" L (200mm) x 5.3" W (135mm) x 4.7" H (120mm) and weight of 1.32lbs (0.60kg)

**2.12 Compatible Accessories**

MCD-EBA Round Electrical Box Adapter

AV-EBAS Square Electrical Box Adapter

MCB-JBA Junction Box Adapter for MicroBullet

MCB-JBAS Square Junction Box Adapter Plate for MicroBullet

**2.13 Related Documents**

MicroBullet Datasheet

MicroBullet Installation Manual

**2.14 Warranty**

Limited 3-Year Parts and Labor

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



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