**AV2456DN-F** 1080p full HD WDR H.264 Day/Night IP Flush In-Ceiling MicroDome™ Camera with 2.8mm Lens and Integrated Microphone

***Bid-Spec***

1. **Description**

The AV2456DN-F MicroDome™ 1080p WDR full HD network camera is part of Arecont Vision’s full line of H.264 MicroDome™cameras. This fully-compliant implementation of H.264 (MPEG-4, Part 10) provides full 1920 x 1080 megapixel resolution at full video frame rates of 30 frames per second (fps). The AV2456DN-F camera provides an all-in-one indoor flush, in-ceiling mount solution with an integrated 1080p full HD WDR camera and a 2.8mm IR corrected lens. With the features of PSIA and ONVIF conformance, privacy masking, extended motion detection and flexible cropping, the AV2456DN-F is a high sensitive, PoE (IEEE 802.3af) compliant camera with a true day/night IR cut filter. Built with Arecont Vision’s 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.

1. **Bid Specification**
* The camera shall utilize a high sensitivity 3-megapixel CMOS sensor with 1/3.2” optical format.
* The camera shall have an 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 83°.
* 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 industry-standards and pass conformance tests.
* The camera shall have privacy masking, the ability to select multiple regions of an arbitrary shape to block the video.
* The camera shall have an integrated microphone.
* The camera shall have an extended motion detection grid, a higher-granularity grid of 1080 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, quality and compression format).
* 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.
* The camera shall output at a maximum resolution of 1920(H) x 1080(V) pixels at a maximum frame rate of 30fps.
* 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 be equipped with a 100Mbps LAN connector.
* 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 support at minimum RTSP, RTP over TCP, RTP over UDP (Unicast/Multicast), HTTP1.0, HTTP1.1, DHCP, 802.1x and TFTP network 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 feature automatic exposure, automatic multi-matrix white balance, shutter speed control, 5 to 255 Hz adjustable 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, and electronic image rotation by 180°.
* The camera has SNAPstream™, which is smart noise adaptation and processing.
* The camera shall have CorridorView™ (90°, 180°, and 270° image rotation).
* The camera shall incorporate necessary algorithms and circuits to detect motion in low-light with clarity.
* The camera shall auto adjustment between WDR and LDR modes.
* The camera shall have a dynamic range of up to 100db at full resolution.
* 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’s power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard and provide at least 5.1W of power.
* The camera shall be utilized for indoor use only.
* The camera shall be compliant with EMI, EMC and safety requirements, following European Standards EN55022 (Class A limits), EN55024 (IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11), EN61000-3-2 and EN61000-3-3, EN60950-1.
* The camera shall be compliant with RoHS Directive 2011/65/EU.
* The camera shall be compliant with REACH Directive EC1907/2006.
* The camera shall be compliant with FTC "Made in USA" standard.
* The camera shall have CE mark and be UL listed.
* The camera shall have installed dimensions of:
	+ ɸ 2” (52mm) Bubble (ɸ 4” (100mm) Cover) x 1.5” (38mm) H
* The camera shall weigh 1.2lb (0.58kg).

 Quick-Spec

1. **Minimum Performance Specification**

Megapixel camera must meet the following operating requirements

**Operational**

Imaging 3-megapixel CMOS image sensor

Optical format: 1/3.2”

Active Pixel Count 1920(H) x 1080(V) pixel array

Minimum illumination Day/Night: 0.02 Lux, IR sensitive

Dynamic range up to 100 dB

Maximum SNR 49 dB

**Full Field-of-View (FOV) Resolutions**

1920x1080 (HxW) 1.3 megapixel

960x540 (HxW) 1/4 resolution

**Cropped Field-of-View Resolutions**

Flexible Cropping: Crop to any resolution that is divisible by 2 pixels in H.264 and 1 pixel in MJPEG up to the maximum resolution of the camera. Example resolutions include but are not limited to the following:

1920x1080 HDTV-1080p

1600x1200 2 MP

1280x1024 1.3 MP

1280x720 HDTV - 720p

1024x768 XGA

800x600 SVGA

704x570 PAL

704x480 NTSC

640x480 VGA

**Data Transmission**

Video frame rate up to

30fps @ 1920x1080

30fps @ 1280x1024

Compression type

H.264 (MPEG-4, Part 10)

Motion JPEG (MJPEG)

21 levels of quality

Transmission protocols

RTSP, RTP/TCP, RTP/UDP (Unicast/Multicast), HTTP1.0, HTTP1.1, DHCP, TFTP and 802.1x

100 Base-T Ethernet Network Interface

Multi-streaming: 8 non-identical streams

**Programmability**

Auto adjustment between WDR and LDR modes

Flexible cropping and low-light noise filter control

Shutter Speed: 1ms – 500ms

Backlight compensation and multi-matrix white balance

On-camera motion detection and privacy mask w/1080 detection zones

5 to 255 Hz adjustable flicker control

Electronic pan, tilt, zoom (PTZ) and image flip – 180° rotation

MoonLight™ mode – extended exposure and proprietary noise cancellation

Programmable resolution, brightness, saturation, gamma, sharpness and tint

Bitrate and bandwidth limitation control

**Electrical**

General purpose opto-coupled input and output

Power over Ethernet (PoE): PoE 802.3af for camera

Power consumption: 5.1 Watts maximum

**Mechanical**

Casing:

• Die-cast aluminum case w/ plastic bracket

• Polycarbonate bubble with die-cast aluminum cover

In-ceiling mount using spring arm retention

Easy 2-axis camera adjustment w/359° pan and 90° tilt

Total Unit Dimensions:

• ɸ 2” (52mm) Bubble (ɸ 4” (100mm) Cover) x 1.5” (38mm) H Installed (3” H total)

Weight: 1.2lbs (0.58kg)

**Environmental**

Operating temperature -5˚C (23 °F) to +50˚C (122 °F)

Storage temperature -20˚C (-4 °F) to +60˚C (140 °F)

Humidity 0% to 90% (non-condensing)

**Compliance Information**

Class A FCC, Part 15; EN55022 Class A, EN55024, EN61000-3-2 and EN61000-3-3, EN60950-1

RoHS, REACH, CE Mark, UL Listed

**Industry Standard**

PSIA and ONVIF Conformance

**Lenses:**

2.8mm, F1.8, H-FOV: 83°

**Related Documentation**

AV2456DN-F Camera Specification

Installation Manual

**4.0 Model Numbers**

The camera shall be Arecont Vision model AV2456DN-F, 1080p full HD H.264 day/night IP MicroDome™ camera with integrated microphone and 2.8mm lens.

**5.0 Warranty**

Limited 3-Year Parts and Labor

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



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