**AV2146DN-04-W** 1080p Full HD WDR H.264 Day/Night IP MegaBall™ camera with

Wall Mount and 4mm Lens

**AV2146DN-04-D** 1080p Full HD WDR H.264 Day/Night IP MegaBall™ Dome camera with 4mm Lens

**AV2146DN-04-D-LG** 1080p Full HD WDR H.264 Day/Night IP MegaBall™ Dome

camera with 4mm Lens and Light Gray Bezel/Can

**AV2146DN-3310-W**  1080p Full HD WDR H.264 Day/Night IP MegaBall™

camera with Wall Mount and 3.3-10mm Lens

**AV2146DN-3310-D**  1080p Full HD WDR H.264 Day/Night IP MegaBall™ Dome

camera with 3.3-10mm Lens

**AV2146DN-3310-D-LG** 1080p Full HD WDR H.264 Day/Night IP MegaBall™ Dome

camera with 3.3-10mm Lens and Light Gray Bezel/Can

***Bid-Spec***

1. **Description**

The AV2146 MegaBall™full HD 1080p WDR 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 1920 x 1080 megapixel resolution at full video frame rates of 30 frames per second (fps). The AV2146 dome camera line provides an all-in-one indoor 3" ball shape solution with integrated 1080p WDR full HD camera, 4mm or 3.3-10mm IR corrected lens options. With the features of PSIA and ONVIF conformance, privacy masking, extended motion detection and flexible cropping, the AV2146 is a high sensitivity, PoE (IEEE 802.3af) compliant, day/night light gray dome 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.

1. **Bid Specification**

* The camera shall utilize a high sensitivity 2.07-megapixel effective WDR CMOS sensor with 1/3.2” optical format.
* The camera shall have an integrated 4mm with M12 mount, megapixel, IR corrected, fixed focal lens with 1/2.5" optical format, F1.6 and horizontal field-of-view of 63°. (-04 version only)
* The camera shall have an integrated 3.3-10mm with Ф14mm mount, megapixel, IR corrected, varifocal lens with 1/2.5" optical format, F1.6 and horizontal field-of-view of 73°- 26° at 3.3mm and 10mm. (-3310 version only)
* The camera ball and liner should be black and bezel and should be light grey.
* 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 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 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 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 output at a maximum resolution of 1920(H) x 1080(V) pixels at a maximum frame rate of 30(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 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 100 Mbps 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/TCP, RTP/UDP (Unicast/Multicast), HTTP1.0, HTTP1.1, DHCP, 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, 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, and electronic image rotation by 180°.
* The camera shall incorporate necessary algorithms and circuits to detect motion in low-light with clarity.
* The camera shall support a minimum illumination of 0.3 Lux in color mode.
* The camera shall support an IR sensitive minimum illumination of 0 Lux in black and white (B/W) mode with an additional IR light source.
* The camera’s primary power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af class II standard.
* The camera shall have the alternative option to be powered by a power source from between 12V DC up to 48V DC or 24V AC and require a maximum of 6W of power.
* The camera shall be utilized for indoor use only.
* The camera’s operating ambient temperature is -5˚C (23 °F) to 50ºC (122ºF); stable image temperature is 0˚C (32 °F) to +50˚C (122 °F); storage temperature -20˚C (-4 °F) to +60˚C (140 °F).
* The camera shall be compliant with EMI and EMC 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 2002/95/EC.
* 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 UL listed and CE mark.
* The camera shall have WEEE.
* The camera shall have dimensions of:
  + ɸ 3” (76.2mm) x 5.76” (146.2mm) H (-04-W models)
  + ɸ 3” (76.2mm) x 6.15” (156.2mm) H (-3310-W models)
  + ɸ 5.1” (130mm) x 1.74” (44mm) H (-D models in-ceiling)
  + ɸ 5.1” (130mm) x 3.85” (98mm) H (-D models, surface with bubble)
* The camera shall weigh 1.2lb (0.58kg).

#### Quick-Spec

1. **Minimum Performance Specification**

Megapixel camera must meet the following operating requirements

**Operational**

Imaging 2.07 megapixel effective CMOS image sensor

1/3.2” optical format

Progressive scan

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

Minimum illumination Color: 0.3 Lux @ F1.6

Day/Night: 0 Lux, IR sensitive

Dynamic range up to 100 dB

Maximum SNR 49 dB

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

1920x1080 (HxW) 1080p

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 JPEG up to the maximum resolution of the camera. Example resolutions include but not limit 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

41fps @ 1280x1024

Compression type

H.264 (MPEG4, Part 10)

Motion JPEG

21 levels of quality

Network protocols

RTSP, RTP over TCP, RTP over UDP, HTTP1.0, HTTP1.1, DHCP, TFTP

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

Bit rate and bandwidth limitation control

Shutter Speed: 1ms–500ms

Backlight compensation and auto multi-matrix white balance

On-camera motion detection and privacy mask w/1024 detection zones

50/60Hz selectable flicker control

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

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

**Electrical**

General purpose opto-coupled input and output

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

Auxiliary power 12–48V DC, 24V AC

Power consumption: PoE Class II, 6.0 Watts maximum DC power

**Mechanical**

Casing:

• Die-cast aluminum 3" metal ball and bracket (–W models)

• Plastic surface/in-ceiling dome w/polycarbonate bubble (–D models)

Embedded in-ceiling mount (–D Models)

External lens adjustment for zoom, focus and iris (–3310 models)

Easy 3-axis camera adjustment w/360° pan, 90° tilt and 360° z-axis

Total Unit Dimensions:

• Ø 3” (76.2mm) x 5.76" H (146.2mm) (–04 models)

• Ø 3” (76.2mm) x 6.15" H (156.2mm) (–3310 models)

• Ø 5.1” (130mm) x 1.74" H (44mm) (–D models in-ceiling)

• Ø 5.1” (130mm) x 3.85" H (98mm) (–D models, surface w/bubble)

Weight: 1.2lbs (0.58kg)

**Color :**

• Standard color: Black

• -LG : Light Gray Dome

**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)

**Compliance Information**

• Class A FCC, Part 15; EN55022 Class A, RoHS, REACH, EN55024, EN61000-3-2, EN61000-3-3, EN60950

• CE Mark, UL Listed

• WEEE

**Industry Standard**

PSIA and ONVIF Conformance

**Lenses:**

4mm, F1.6, 1/2.5” H-FOV: 63° (–04 models)

3.3–10mm, F1.6, 1/2.5” H-FOV: 73°–26° (–3310 models)

**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 |

**Related Documentation**

AV2146 Camera Specification

Installation Manual

**4.0 Model Numbers**

The camera shall be Arecont Vision model AV2146DN-04-W, 1080p full HD WDR H.264 day/night IP MegaBall™ camera with 4mm Lens and wall mount.

The camera shall be Arecont Vision model AV2146DN-04-D, 1080p full HD WDR H.264 day/night IP MegaBall™ dome camera with 4mm Lens.

The camera shall be Arecont Vision model AV2146DN-04-D-LG, 1080p full HD WDR H.264 day/night IP MegaBall™ dome camera with 4mm Lens and light gray bezel and can.

The camera shall be Arecont Vision model AV2146DN-3310-W, 1080p full HD WDR H.264 day/night IP MegaBall™ camera with 3.3-10mm Lens and wall mount.

The camera shall be Arecont Vision model AV2146DN-3310-D, 1080p full HD WDR H.264 day/night IP MegaBall™ dome camera with 3.3-10mm Lens.

The camera shall be Arecont Vision model AV2146DN-3310-D-LG, 1080p full HD WDR H.264 day/night IP MegaBall™ dome camera with 3.3-10mm Lens and light gray bezel and can.

**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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