

<b>AV3146DN-04-W</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Camera with Wall Mount and 4mm Lens
<b>AV3146DN-04-D</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Dome Camera with 4mm Lens
<b>AV3146DN-04-D-LG</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Dome Camera with 4mm Lens and Light Gray Bezel/Can
<b>AV3146DN-3310-W</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Camera with Wall Mount and 3.3-10mm Lens
<b>AV3146DN-3310-WA</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Camera with Wall Mount and 3.3-10mm Lens and Audio
<b>AV3146DN-3310-D</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Dome Camera with 3.3-10mm Lens
<b>AV3146DN-3310-DA</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Dome Camera with 3.3-10mm Lens and Audio
<b>AV3146DN-3310-D-LG</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Dome Camera with 3.3-10mm Lens, Audio and Light Gray Bezel/Can
<b>AV3146DN-3310-DA-LG</b>	3-Megapixel WDR H.264 Day/Night IP MegaBall™ Dome Camera with 3.3-10mm Lens, Audio and Light Gray Bezel/Can

## ***Bid-Spec***

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### **1.0 Description**

The AV3146 MegaBall™ 3-megapixel 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 2048 (H) x 1536 (V) megapixel resolution at full video frame rates of 21 frames per second (fps). The AV3146 camera line provides an all-in-one indoor 3" ball shape solution with integrated 3-megapixel WDR camera, 4mm or 3.3-10mm IR corrected lens, wall mount or dome enclosure options. With the features of PSIA and ONVIF conformance, privacy masking, extended motion detection and flexible cropping, the AV3146 is a high sensitivity, PoE (IEEE 802.3af) compliant, day/night camera with audio and light gray dome options. Built with Arecont Vision's massively-parallel MegaVideo® processing technology, this camera offers more than 10-times the resolution of standard resolution IP cameras with the ability to output full real-time frame rates and deliver high-quality megapixel imaging.

### **2.0 Bid Specification**

- The camera shall utilize a high sensitivity 3-megapixel effective 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 68°. (-04 version only)
- The camera shall have an integrated 3.3-10mm with 14mm mount, megapixel, IR corrected, varifocal lens with 1/2.5" optical format, F1.6 and horizontal field-of-view of 78°- 28° at 3.3mm and 10mm. (-3310 version only)
- The camera shall has two-way streaming audio with G.711PCM 8kHz compression and integrated microphone and line output (-A version only)
- 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 version only)
- 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 have multi-streaming support of up to 8 non-identical concurrent streams (different frame rate, bitrate, resolution, quality and compression format).
- The camera shall output at a maximum resolution of 2048(H) x 1536(V) pixels at a maximum frame rate of 21 frames per second (FPS).
- 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. i.e. 1600(H) x 1200(V) pixels at 31 FPS, or 1920(H) x 1080(V) pixels at 30 FPS.
- It shall be possible to program the camera in binned mode to output a variety of lower resolution image, i.e. 1024(H) x 768(V) pixels at 21 FPS, or 800(H) x 600(V) pixels at 27 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 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/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 non-binned mode and 0.15 Lux in color binned 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 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 50°C (122°F); 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 2011/96/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:

- 3" (76.2mm) x 5.76" (146.2mm) H (-04-W models)
- 3" (76.2mm) x 6.15" (156.2mm) H (-3310-W models)
- 5.1" (130mm) x 1.74" (44mm) H (-D models in-ceiling)
- 5.1" (130mm) x 3.85" (98mm) H (-D models, surface with bubble)
- The camera shall weigh 1.2lb (0.58kg).

## Quick-Spec \_\_\_\_\_

### **3.0 Minimum Performance Specification**

Megapixel camera must meet the following operating requirements

#### **Operational**

Imaging	3 megapixel CMOS image sensor 1/3.2" optical format Progressive scan
Active Pixel Count	2048(H) x 1536(V) pixel array
Minimum illumination	Color (non-binning): 0.3 Lux @ F1.6 Color (binning): 0.15 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**

2048x1536 (HxW) 3 megapixel

1024x768 (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:

1920x1200 WUXGA

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

21fps @ 2048x1536

31fps @ 1600x1200

30fps @ 1920x1080

41fps @ 1280x1024

## Video frame in binning mode up to

21fps @ 1024x768

27fps @ 800x600

31fps @ 960x540

32fps @ 640x512

## 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

Binning mode

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

**Audio (-A models only)**

Streaming: Two-way

Compression: G.711PCM 8kHz

Input/output: Integrated microphone and line output

**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)

External lens adjustment for focus (-04 models)

Easy 3-axis camera adjustment with 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: 68° (-04 models)

3.3–10mm, F1.6, 1/2.5", H-FOV: 78°–28° (-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**

AV3146 Camera Specification

#### **4.0 Model Numbers**

The camera shall be Arecont Vision model AV3146DN-04-W, 3-Megapixel WDR H.264 day/night IP MegaBall™ camera with wall mount and 4mm lens.

The camera shall be Arecont Vision model AV3146DN-04-D, 3-Megapixel WDR H.264 day/night IP MegaBall™ dome camera with 4mm lens.

The camera shall be Arecont Vision model AV3146DN-04-D-LG, 3-Megapixel 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 AV3146DN-3310-W, 3-Megapixel WDR H.264 day/night IP MegaBall™ camera with wall mount and 3.3-10mm lens.

The camera shall be Arecont Vision model AV3146DN-3310-WA, 3-Megapixel WDR H.264 day/night IP MegaBall™ camera with wall mount and 3.3-10mm lens and audio.

The camera shall be Arecont Vision model AV3146DN-3310-D, 3-Megapixel WDR H.264 day/night IP MegaBall™ dome camera with 3.3-10mm lens.

The camera shall be Arecont Vision model AV3146DN-3310-DA, 3-Megapixel WDR H.264 day/night IP MegaBall™ dome camera with 3.3-10mm lens and audio.

The camera shall be Arecont Vision model AV3146DN-3310-D-LG, 3-Megapixel WDR H.264 day/night IP MegaBall™ dome camera with 3.3-10mm lens and light gray bezel and can.

The camera shall be Arecont Vision model AV3146DN-3310-DA-LG, 3-Megapixel WDR H.264 day/night IP MegaBall™ dome camera with 3.3-10mm lens, audio 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.*