AV3456DN-F 3-megapixel WDR H.264 Day/Night IP Flush In-Ceiling MicroDome™ Camera with 4mm Lens and Integrated Microphone

Bid-Spec

1.0 Description

The AV3456DN-F MicroDome™ 3-megapixel WDR 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 2048 x 1536 megapixel resolution at full video frame rates of 21 frames per second (fps). The AV3456DN-F camera provides an all-in-one indoor flush, in-ceiling mount solution with an integrated 3-megapixel WDR camera and a 4mm IR corrected lens. With the features of PSIA and ONVIF conformance, privacy masking, extended motion detection and flexible cropping, the AV3456DN-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.

2.0 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 4mm M12 mount, megapixel, IR corrected, fixed focal lens with 1/2.5" optical format, F1.6 and horizontal field-of-view of 90°.
- 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 1536 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 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 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, 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, 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 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 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'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, 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:
  - ϕ 2" (52mm) Bubble (ϕ 4" (100mm) Cover) x 1.5" (38mm) H
- 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 Optical format: 1/3.2"
Active Pixel Count	2048(H) x 1536(V) pixel array
Minimum illumination	Day/Night: 0 Lux, IR sensitive
Dynamic range	up to 100 dB
Maximum SNR	49 dB

Full Field-of-View (FOV) Resolutions
2048x1536 (HxW) 1.3 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 MJPEG up to the maximum resolution of the camera. Example resolutions include but are not limited 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

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

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/1536 detection zones
50/60Hz selectable 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:

- ϕ 2” (52mm) Bubble (ϕ 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)

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, EN55024, EN61000-3-2 and EN61000-3-3, EN60950-1
RoHS, REACH, CE Mark, UL Listed

Industry Standard
PSIA and ONVIF Conformance

Lenses:
4mm, F1.6, H-FOV: 90°

Related Documentation
AV3456DN-F Camera Specification
Installation Manual

4.0 Model Numbers

The camera shall be Arecont Vision model AV3456DN-F, 3-megapixel H.264 day/night IP MicroDome™ camera with integrated microphone and 4mm lens.

5.0 Warranty

Limited 3-Year Parts and Labor

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