

AV2155	2 Megapixel Color Camera with Integrated 4.5-10mm Lens
AV2155DN	2 Megapixel Day/Night Camera with Integrated 4.5-10mm Lens
AV2155-16	2 Megapixel Color Camera with Integrated 8-16mm Lens
AV2155DN-16	2 Megapixel Day/Night Camera with Integrated 8-16mm Lens

Bid-Spec _____

1.0 Description

The AV2155 MegaDome™ series network camera is part of Arecont Vision's full line of H.264 megapixel cameras. This fully compliant implementation of H.264 (MPEG 4, Part 10) provides full 1600 x 1200 megapixel resolution at full video frame rates of 24fps. The MegaDome™ camera line provides an all-in-one solution with integrated megapixel camera, lens, and vandal resistant dome enclosure. Using MegaVideo® technology, these cameras offer bandwidth and storage efficiency of up to 10X on average over traditional megapixel counterparts

The AV2155 is a high sensitivity, PoE (IEEE 802.3af) compliant camera with color and Day/Night configurations. Built with Arecont Vision's proprietary massively-parallel MegaVideo® technology, the AV2155 has the ability to output multiple image formats allowing the simultaneous viewing of the full resolution field of view and regions of interest for high definition forensic zooming. This camera offers over six times the resolution of standard resolution IP cameras with the ability to output full real time frame rates.

2.0 Bid Specification

- The camera shall utilize a high sensitivity 2 Megapixel CMOS sensor with 1/2" optical format
- The camera shall have and integrated 4.5-10mm megapixel IR corrected varifocal lens with 1/2" optical format, F1.8. (AV2355 and AV2355DN only)
- The camera shall have and integrated 8-16mm megapixel IR corrected varifocal lens with 1/2" optical format, F1.8. (AV2355-16 and AV2355DN-16 only)
- The camera shall have a dome enclosure complying with IP66 weatherproofing standards
- The camera shall dome chassis shall be vandal resistant constructed of aluminum with a 4" polycarbonate dome bubble
- The camera shall have a 3-axis gimbal with 360° pan 90° tilt and 180° Z-rotation for easy and accurate positioning
- The camera shall be surface mount with optional pendant mount or wall mount
- The camera shall be H.264 (MPEG4, Part 10) compliant
- The camera shall have dual standard compression support with simultaneous streaming of both H.264 and MJPEG formats
- 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 have bit rate control for full view, multi view and archiving
- The camera's bit rate control shall be selectable from 100 Kbps to 10 Mbps for each independent stream
- The camera shall have Real Time Streaming Protocol (RTSP) support allowing for compatibility with media players such as Windows Media Player, Apple QuickTime, VLC Player and others
- The cameras H.264 implementation shall maintain full real time video frame rates
- The camera shall output at a maximum resolution of 1600(H) x 1200(V) pixels at a maximum frame rate of 24 frames per second (FPS)
- It shall be possible to program the camera to output a variety of lower resolution images. i.e. 1280(H) x 1024(V) pixels at 32 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 and can deliver image data at an unthrottled maximum data rate of up to 55 Megabits per second (55 Mbps)
- The camera shall provide 21 levels of compression quality for optimal viewing and archiving
- The camera shall support a minimum TFTP, HTTP, RTSP, RTP/TCP and RTP/UDP network protocols
- The cameras shall feature precision motion detection with a minimum of 64 detection zones
- 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 degrees
- The camera shall incorporate necessary algorithms and circuits to detect motion in low light with clarity
- The camera shall support a minimum illumination of 0.1 Lux @ F1.4 in color mode
- The camera shall support an IR sensitive minimum illumination of 0 Lux in B/W mode (DN version only)
- The camera's primary power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard
- The camera shall have the alternative option to be powered from between a 12V DC up to 48V DC or 24V AC power source providing at least 5W of power.
- The camera's operating ambient temperature shall be -30°C (-22°F) to 50°C (122°F) for warm start conditions
- The camera shall be FCC Part 15, Class A, CE and RoHS compliant
- The camera shall have total unit dimensions of Ø5.5 x 4.9 H (in), Bubble only: Ø4.0 x 2.4 H (in)
- The camera shall have a total unit weight of: 2.0 lbs (0.91 kg)

Quick-Spec

3.0 Minimum Performance Specification

Megapixel camera must meet the following operating requirements

Imaging

- 2 megapixel CMOS image sensor
- 1600(H) x 1200(V) pixel array
- 1/2" optical format
- 4.2 µm pixel pitch
- Bayer mosaic RGB filter
- Minimum illumination of:
 - Color: 0.1 Lux @ F1.4
 - Day/Night: 0 Lux, IR sensitive
- Dynamic range 61 dB
- Maximum SNR 50 dB

Full Field of View (FOV) Resolutions

- 1600(H)x1200(V) 2 megapixel
- 800(H)x600(V) 1/4 resolution

Cropped Field of View Resolutions

- 1280x1024 1.3 MP
- 1280x720 HDTV-720p
- 1024x768 XGA
- 800x600 SVGA
- 704x570 PAL
- 704x480 NTSC
- 640x480 VGA
- 352x288 CIF
- 320x240 SIF

Data Transmission

- Video frame rate up to:
 - 24fps @ 1600x1200
 - 32fps @ 1280x1024
- Compression type
 - H.264 (MPEG4, Part 10)
 - Motion JPEG
 - 21 levels of quality
- TFTP, HTTP, RTSP, RTP/TCP, RTP/UDP image transmission protocols
- 100Base-T Ethernet Network Interface
- Data rate
 - bit rate control available for full view, multi view, and archive
 - bit rate control from 100 Kbps to 10 Mbps
 - unthrottled data rate up to 55 Mbps
- Multi-streaming: 8 non-identical streams

Programmability

- Auto Exposure (AE) and Gain Control (AGC) >120dB
- On-camera real-time motion detection with 64 detection zones
- Auto backlight compensation
- Auto multi-matrix white balance
- 50/60Hz selectable flicker control
- Electronic pan, tilt, zoom (PTZ)
- Electronic image flip - 180 degree rotation
- Resolution windowing down to 32x32 pixels window
- Programmable shutter speed to help control motion blur
- MoonLight™ mode - extended exposure for enhanced low light performance
- Proprietary noise cancellation
- Programmable resolution, brightness, saturation, gamma, sharpness, tint
- Picture-in-Picture: simultaneous delivery of full field of view and zoomed images
- Bandwidth & storage savings by running at 1/4 resolution

Electrical

- General purpose opto-coupled input and output
- Power over Ethernet (PoE): PoE 802.3af
- DC input: auxiliary 12 V – 48 V DC
- AC input: auxiliary 24 V AC
- Power consumption 5 Watts maximum

Regulatory Approvals

- FCC, Class A
- CE and RoHS compliant

Environmental

- IP66 weatherproofing standard
- Operating temperature
 - Warm Start: -30°C (-22 °F) to +50°C (122 °F)
 - Cold Start: 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)

Mechanical

- 3-axis camera gimbal with 360° pan 90° tilt and 180° Z-rotation
- Die-cast aluminum chassis with 4" polycarbonate dome bubble
- Total unit dimensions: Ø5.5 x 4.9 H (in), Bubble only: Ø4.0 x 2.4 H (in)
- Total unit dimensions: Ø140.3 x 124.6 H (mm), Bubble only: Ø102 x 61.8 H (mm)
- 2.0 lbs (0.91 kg)

Lens

- Integrated 4.5-10mm megapixel IR corrected varifocal lens with 1/2" optical format, F1.8. (AV2155 and AV2155DN only)
- Integrated 8-16mm megapixel IR corrected varifocal lens with 1/2" optical format, F1.8. (AV2155-16 and AV2155DN-16 only)

MegaDome™ Accessories

MD-WMT: Wall Mount
MD-PMT: Pendant Mount
MD-PMA: Pole Mount
MD-CRMA: Corner Mount
MD-FMA: Flush Mount
MD-EBA: Electrical Box Adaptor

Related Documentation

1. AV User Manual
2. AV Software Developer Kit Manual
3. AV1355, AV2155, AV3155, AV5155 Network Camera Specification

4.0 Model Numbers

- The camera shall be Arecont Vision model AV2155, 2 megapixel color camera integrated 4.5-10mm IR corrected varifocal lens
- The camera shall be Arecont Vision model AV2155DN, 2 megapixel Day/Night camera integrated 4.5-10mm IR corrected varifocal lens
- The camera shall be Arecont Vision model AV2155-16, 2 megapixel color camera integrated 8-16mm IR corrected varifocal lens
- The camera shall be Arecont Vision model AV2155DN-16, 2 megapixel Day/Night camera integrated 8-16mm IR corrected varifocal lens

5.0 Warranty

Minimum 1 Year parts and labor

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