

Arecont Vision

AV3130M (3/1.3 Megapixel Dual Sensor Day/Night Camera)

Architect & Engineering Specifications

Version 083010



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PART 1 - NOT USED

PART 2 - PRODUCTS

2.01 Megapixel camera

A. Functional Description

1. The AV3130 camera is an MJPEG encoding, 3/1.3 Megapixel resolution, dual sensor, IP addressable day/night camera, designed to deliver full motion high definition progressive scan digital video across local area networks. The AV3130 has a high sensitivity, is PoE (IEEE 802.3af) compliant, and has a DC auto iris option. Built with Arecont Vision's proprietary massively-parallel MegaVideo® technology, the AV3100 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 ten times the resolution of standard resolution IP cameras with the ability to output full real time frame rates.

B. Detailed Specifications

1. The camera shall be a dual sensor camera.
2. The camera shall utilize a high sensitivity 3 Megapixel CMOS color sensor and a 1.3 Megapixel CMOS B/W sensor each with 1/2" optical format.
3. The camera shall support two lenses, one for each imager. Each lens to have a maximum diameter of 1.5 inches.
4. The camera shall support MJPEG encoding format.
5. The camera shall output at a maximum resolution of 2048(H) x 1536(V) pixels at a maximum frame rate of 15 frames per second (FPS).
6. It shall be possible to program the camera to output a variety of lower resolution images. For example 1280(H) x 1024(V) pixels at 32 FPS, or 1600(H) x 1200(V) pixels at 24 FPS.
7. The camera shall feature streaming of the full field of view (FOV) and multiple regions of interest (ROI) for forensic zooming.
8. The camera shall be equipped with a 100 Mbps LAN connector and can deliver image data at a maximum data rate of up to 55 Megabits per second (55 Mbps).

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9. The camera shall use a wide variety of C/CS mount 1/2" lenses. (Note that some CS lenses and all C-mount lenses may require an adaptor ring. Megapixel quality lenses are the preferred choice for our entire camera line.)
10. The camera shall provide 21 levels of compression quality for optimal viewing and archiving.
11. The camera shall support a minimum TFTP and HTTP network protocols.
12. The cameras shall feature precision motion detection with a minimum of 64 detection zones
13. 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.
14. The camera shall incorporate necessary algorithms and circuits to detect motion in low light with clarity.
15. The camera shall support a minimum illumination of 0.2 Lux @ F1.4 in color mode.
16. The camera shall support an IR sensitive minimum illumination of 0 Lux in B/W mode
17. The camera's primary power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard.
18. The camera shall have the alternative option to be powered from between a 15V DC up to 48V DC power source providing at least 3 Watts of power.
19. This camera shall feature a durable aluminum housing that minimizes fire hazards. Camera should be mounted using a 1/4" x 20 threaded hole at the bottom or top of the housing.
20. The camera shall be utilized for indoor use but can be used in outdoor applications with an appropriate enclosure.
21. The camera's operating ambient temperature is 0°C (32°F) to 50°C (122°F).
22. The camera shall be FCC Part 15, Class B, CE and RoHS compliant
23. The camera shall have dimensions of: 3" (76mm)W x 2.5" (63.5mm) H x 2.25" (57mm)D weighing 8.6oz (243g) without lens.

C. Technical Description

1. The Megapixel Camera shall meet the following minimum requirements:

Operational

Imaging	3 megapixel CMOS image sensor 1/2" optical format Bayer mosaic RGB filter
Active Pixel Count	Color sensor: 2048(H) x 1536(V) pixel array B/W sensor: 1280(H) x 1024(V) pixel array
Minimum illumination	Color sensor: 0.2 Lux @ F1.4 B/W sensor: 0 Lux, IR sensitive
Dynamic range	61 dB
Maximum SNR	49 dB

Full Field of View (FOV) Resolutions

2048x1536 (HxW) 3 megapixel
1024x768 (HxW) 1/4 resolution
1280x1024 (HxW) 1.3 megapixel
640x480 (HxW) 1/4 resolution

Cropped Field of View Resolutions

1920x1200 WUXGA
1920x1080 HDTV-1080p
1600x1200 2 MP
1280x1024 1.3 MP

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1280x720 HDTV - 720p

1024x768 XGA

800x600 SVGA

704x570 PAL

704x480 NTSC

640x480 VGA

352x288 CIF

320x240 SIF

Data Transmission

Video frame rate up to 15fps @ 2048x1536

20fps @ 1920x1200

22fps @ 1920x1080

24fps @ 1600x1200

32fps @ 1280x1024

Compression type Motion JPEG

21 levels of quality

TFTP and HTTP image transmission protocols

100Base-T Ethernet Network Interface

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

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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 speeds to minimize motion blur

MoonLight™ mode - extended exposure and 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 15V-48V DC

Power consumption 3 Watts maximum

Mechanical

Dimensions(H x W x D) 3"W (76 mm) x 2.5"H (63.5 mm) x 2.25"D
(57mm) (w/o lens)

Weight 8.6 oz (243 grams) (w/o lens)

Lens C/CS lens mount

Environmental

Operating 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)

Regulatory

FCC, Class B

CE and RoHS compliant

Related Documentation

- a. AV User Manual
- b. AV Software Developer Kit Manual
- c. AV1300, AV2100, AV3100, AV3130, AV5100 Network Camera Specification

D. Model Numbers

1. The camera shall be Arecont Vision model AV3130M, dual sensor 3/1.3 megapixel day night camera

E. Warranty

1. Minimum 1 Year parts and labor

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