Arecont Vision

AV2100M (2 Megapixel Color Camera)
AV2100-AI (2 Megapixel Color Auto Iris Camera)
AV2100DN (2 Megapixel Day/Night Camera)

Architect & Engineering Specifications

PART 1 - NOT USED

PART 2 - PRODUCTS

2.01   Megapixel camera

   A.   Functional Description

      1.   The AV2100 series camera is an MJPEG encoding, 2.0 Megapixel resolution, IP addressable camera, designed to deliver full motion high definition progressive scan digital video across local area networks. The AV2100 is a high sensitivity, PoE (IEEE 802.3af) compliant camera with color, Day/Night, DC auto iris configurations. Built with Arecont Vision's proprietary massively-parallel MegaVideo® technology, the AV2100 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.

   B.   Detailed Specifications

      1.   The camera shall utilize a high sensitivity 2 Megapixel CMOS sensor with 1/2" optical format.

      2.   The camera shall support MJPEG encoding format.

      3.   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).

      4.   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.

      5.   The camera shall feature streaming of the full field of view (FOV) and simultaneous multiple regions of interest (ROI) for forensic zooming.

      6.   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).

      7.   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.)

8. The camera shall provide 21 levels of compression quality for optimal viewing and archiving.

9. The camera shall support a minimum TFTP and HTTP network protocols.

10. The cameras shall feature precision motion detection with a minimum of 64 detection zones

11. 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.

12. The camera shall incorporate necessary algorithms and circuits to detect motion in low light with clarity.

13. The camera shall support a minimum illumination of 0.1 Lux @ F1.4 in color mode.

14. The camera shall support an IR sensitive minimum illumination of 0 Lux in B/W mode (D/N version only)

15. The camera's primary power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard.

16. The camera shall have the alternative option to be powered from between a 15V DC up to 48V DC power source providing at least 3W of power.

17. The camera shall support a DC auto-iris lens when equipped with the auto-iris feature (AI version only). Megapixel resolution optics are recommended.

18. 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.

19. The camera shall be utilized for indoor use but can be used in outdoor applications with an appropriate enclosure.

20. The camera's operating ambient temperature is 0ºC (32ºF) to 50ºC (122ºF).

21. The camera shall be FCC Part 15, Class A, CE and RoHS compliant

22. 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	2 megapixel CMOS image sensor
	1/2" optical format
	Bayer mosaic RGB filter
Active Pixel Count	1600(H) x 1200(V) pixel array
Minimum illumination	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

1600x1200 (HxW) 2 megapixel

800x600 (HxW) 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

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Compression type   Motion JPEG

21 levels of quality

Transmission protocols   TFTP, HTTP

100 Base-T Ethernet Network Interface

Data rate up to 55Mbps

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 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

Optional DC AI connection (AV2100 - AI)

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 A

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 AV2100M, two megapixel color camera

2. The camera shall be Arecont Vision model AV2100-AI, two megapixel color auto iris camera

3. The camera shall be Arecont Vision model AV2100DN, two 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.