AV8180 8 Megapixel 180 Degree Panoramic Camera

Bid-Spec

1.0 Description

The AV8180 series camera is an MJPEG encoding, 8 Megapixel resolution, IP addressable 180 degree panoramic camera. It is designed to deliver full motion high definition progressive scan digital video across local area networks. The AV8180 has a high sensitivity, and is PoE (IEEE 802.3af) compliant. Built with Arecont Vision's proprietary massively-parallel multi-sensor SurroundVideo® technology, the AV8180 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 per sensor or 25 times the field of view across the entire panorama compared to standard resolution IP cameras.

2.0 Bid Specification

- The camera shall utilize four high sensitivity 2 Megapixel CMOS sensors each with 1/2" optical format.
- The camera shall support MJPEG encoding format.
- The camera shall output at a maximum resolution of 1600(H) x 1200(V) pixels per sensor for a total resolution of 6400(H) x 1200(V) across all for sensors.
- The cameras maximum frame rate shall be 22 frames per second across all four sensors at the maximum resolution of 1600(H) x 1200(V) per sensor.
- The cameras maximum frame rate shall be 88 frames per second across all four sensors at the maximum resolution of 800(H) x 600(V) per sensor.
- The camera shall use four 8mm lenses that shall be pre-mounted on the camera.
- The cameras overall imaging shall provide a 180 degree field of view.
- The camera shall feature streaming of the full field of view (FOV) and 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 a 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 and HTTP network protocols.
- Each sensor of the camera shall feature automatic exposure, automatic multi-matrix white balance, shutter speed control, programmable brightness, saturation, gamma and sharpness.
- The camera shall also feature selectable 50/60 Hz flicker control, 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 0.2 Lux @ F2.0 in color mode.
- 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 power source providing at least 7.8W of power.
- This camera shall feature a durable aluminum housing that minimizes fire hazards.
- The camera should be mounted using a customized interior dome, exterior dome or recessed mounting kit.
- The camera's operating ambient temperature is 0ºC (32ºF) to 50ºC (122ºF).
- The camera shall be FCC Part 15, Class B, CE and RoHS compliant
- The camera shall have dimensions of: 6.49"H (164.8 mm) x 6.0" dia. (152.4 mm) weighing 4lbs (1815g).

3.0 Minimum Performance Specification

Megapixel camera must meet the following operating requirements

Operational

Imaging	Four 2 megapixel CMOS image sensors 1/2" optical format Bayer mosaic RGB filter
Active Pixel Count	1600(H) x 1200(V) pixel array per sensor 6400(H) x 1200(V) pixels across all four sensors
Minimum illumination	Color: 0.2 Lux @ F2.0
Dynamic range	61 dB
Maximum SNR	50 dB

Full Field of View (FOV) Resolutions per Sensor
1600x1200 (HxW) 2 megapixel
800x600 (HxW) 1/4 resolution

Cropped Field of View Resolutions per Sensor
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:
- 88fps @ 800x600
- 22fps @ 1600x1200
- 5.5fps @ 6400x1200

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
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 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 12V-48V DC
Power consumption 7.8 Watts maximum

Mechanical
Dimensions(H x W x D)…….6.49”H (164.8 mm) x 6.0” dia. (152.4 mm)
Weight……..4 lbs (1815g)
Lens…… C lens mount – Four 8mm lenses included

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
1. AV User Manual
2. AV Software Developer Kit Manual
3. AV8180 & AV8360 Network Camera Specification

4.0 Model Numbers
The camera shall be Arecont Vision model AV8180, 8 megapixel 180 degree panoramic camera

5.0 Warranty
Minimum 1 Year parts and labor

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