

# AV8185 8 Megapixel 180 Degree Panoramic Camera

## *Bid-Spec*

---

### **1.0 Description**

The AV8185 series camera is a dual encoder (H.264 & MJPEG), 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 AV8185 has a high sensitivity, and is PoE (IEEE 802.3af) compliant. Built with Arecont Vision's proprietary massively-parallel multi-sensor SurroundVideo® technology, the AV8185 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 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 camera's 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 per sensor for a total resolution of 6400(H) x 1200(V) across all for sensors
- The camera's 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 camera's 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 camera's 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, HTTP, RTSP, RTP/TCP and RTP/UDP 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 a 12V DC up to 48V DC or 24V AC power source providing at least 9 W 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 0°C (32°F) to 50°C (122°F)
- The camera shall be FCC Part 15, Class A, 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)

## Quick-Spec

---

### 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

1600(H) x 1200(V)	2 megapixel
800(H) x 600(V)	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

##### Data rate

bit rate control from 100Kbps to 10Mbps  
bit rate control available for full view, multi view, and archive  
unthrottled bandwidth up to 55Mbps

##### Video frame rate up to:

88fps @ 800x600  
22fps @ 1600x1200  
5.5fps @ 6400x1200

##### Compression type

H.264 (MPEG4, Part 10)  
Motion JPEG

21 levels of quality  
TFTP, HTTP, RTSP, RTP/TCP, RTP/UDP image transmission protocols  
100 Base-T Ethernet Network Interface  
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 per sensor  
Programmable 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  
AC input: auxiliary 24V AC  
Power consumption 9 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 A  
CE and RoHS compliant

**Related Documentation**

1. AV User Manual
2. AV Software Developer Kit Manual
3. AV8185 & AV8365 Network Camera Specification

**4.0 Model Numbers**

The camera shall be Arecont Vision model AV8185, 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.*