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| AV20185CO | 20 Megapixel H.264 Color 180° Panoramic IP Camera |
| AV20185DN | 20 Megapixel H.264 Day/Night 180° Panoramic IP Camera w/ Heater & Blower |
| AV20185CO-HB | 20 Megapixel H.264 Color 180° Panoramic IP Camera w/ Heater & Blower |
| AV20185DN-HB | 20 Megapixel H.264 Day/Night 180° Panoramic IP Camera w/ Heater & Blower |

Bid-Spec _____

1.0 Description

The AV20185 SurroundVideo® series network camera is a dual encoder (H.264 & MJPEG), 20 Megapixel resolution, IP addressable 180 degree panoramic Day/Night IP camera. The AV20185 SurroundVideo® camera line provides an all-in-one solution with integrated four high sensitivity 5 megapixel sensors, 6.2mm lens, vandal resistant dome enclosure with rated IP66 for water and dust protection, and optional heater/blower. Using MegaVideo® technology, these cameras offer bandwidth and storage efficiency of up to 10X on average over traditional megapixel counterparts

The AV20185 is a PoE (IEEE 802.3af) compliant camera with Color, Day/Night and optional heater & blower configurations. Built with Arecont Vision's proprietary massively-parallel MegaVideo® technology, the AV20185 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. Binning technique improves low-light performance, increases sensitivity and produces better SNR by combining and averaging pixels.

2.0 Bid Specification

- The camera shall utilize four high sensitivity 5 Megapixel CMOS sensors each with 1/2.5" optical format.
- The camera shall integrate four 6.2mm megapixel IR corrected lenses, 1/2.5", F1.8, Horizontal Field of View of 47°.
- The camera shall have vandal resistant dome enclosure with rated IP66 for water and dust protection.
- The camera shall have a 2-axis easily adjustable gimbal with 360° pan 90° tilt for easy and accurate positioning.
- The camera shall contain both hard ceiling mount and surface mount and with optional pendant mount, SV-CMT, wall mount, SV-WMT, flush mount adapter, SV-FMA, electrical box adapter, MV-EBA or SV-EBA, pole mount adapter, MD-PMA, corner mount adapter, MD-CRMA, and junction box adapter, SV-JBA.
- The camera shall have a +/- 5° vertical alignment to locate the vertical angle of each sensor.
- 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's bit rate control shall be selectable from 100 Kbps to 10 Mbps for each independent stream.

- The camera shall have privacy mask, the ability to select multiple regions of an arbitrary shape to block the video. This feature will be supported both in HTTP and TFTP protocols, as well as the on-camera web interface.
- The camera shall have extended motion detection grid, a higher granularity grid of 1024 distinct motion detection zones in contrast to 64 zones supported earlier. User can select between the old 64 zone based motion detection and new extended motion detection to provide backward compatibility with the existing NVR integration. This feature will be supported both in HTTP and TFTP, as well as the on-camera web interface.
- The camera shall have Real Time Streaming Protocol (RTSP) support allowing for compatibility with media players such as Apple QuickTime, VLC Player and others.
- The cameras H.264 implementation shall maintain full video frame rates.
- The camera shall output at a maximum resolution of 2560(H) x 1920(V) pixels per sensor for a total resolution of 10240(H) x 1920(V) 3.5 frames per second across all four sensors.
- The cameras maximum frame rate shall be 11 frames per second across all four sensors at the maximum resolution of 2560(H) x 1920(V) per sensor.
- It shall be possible to program the camera at binned mode to output a variety of lower resolution image and increase frame rate, i.e. 5120(H) x 960(V) pixels at 13 FPS, or 1280(H) x 960(V) pixels at 27 FPS.
- The cameras overall imaging shall provide a 180 degree horizontal 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 HTTP, RTSP, RTP over TCP, RTP over UDP and TFTP 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 0.3 Lux @ F1.8 in day mode and 0.15 lux @ F1.8 in binned mode. (Color version only)
- The camera shall support a minimum illumination of 0.3 Lux @ F1.8 in day mode and 0.15 lux @ F1.8 in binned mode and 0 Lux @ F1.8 in night mode. (Day/Night version)
- 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.
- The camera shall be utilized for indoor and outdoor applications.
- The camera's operating ambient temperature is -40°C (-40°F) to +50°C (122°F) with heater and 0°C (32 °F) to +50°C (122°F) without heater.
- The camera's stable image temperature is 0°C (32 °F) to +50°C (122°F) and storage temperature -40°C (-40 °F) to +60°C (140 °F).
- The camera shall be FCC Part 15, Class A, CE and RoHS compliant.
- The camera shall be UL listed.
- The camera shall have dimensions of: 6.9"H (176 mm) x 6.8" dia. (175 mm) weighing 2lbs (0.91kg).
- The camera shall have die-cast aluminum chassis with 5.5" vandal resistant polycarbonate dome bubble with IK10 rated.

Quick-Spec

3.0 Minimum Performance Specification

Megapixel camera must meet the following operating requirements

Operational

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| Imaging | Four 5 megapixel CMOS image sensors 1/2.5" optical format Bayer mosaic RGB filter |
| Active Pixel Count | 2560(H) x 1920(V) pixel array per sensor 10240(H) x 1920(V) pixels across all four sensors |
| Minimum illumination | Color (non-binned): 0.3 Lux @ F1.8 Color (binned): 0.15 Lux @ F1.8 Day/Night: 0 Lux, IR sensitive (D/N version only) |
| Dynamic range | 70.1 dB |
| Maximum SNR | 44.1 dB |

Full Field of View (FOV) Resolutions per Sensor

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| 10240(H) x 1920(V)=2560(H) x4 x 1920(V) | 20 megapixel |
| 5120(H)x960(V)=1280(H) x4 x 960(V) | 5 megapixel 1/4 resolution |

Data Transmission

Data rate

bit rate control from 100Kbps to 10Mbps

Video frame rate up to:

3.5fps @ 10240x1920

4.2fps @ 10240x1600

11fps @ 2560x1920

11fps @ 2560x1600

Video frame rate in binned mode up to:

13fps @ 5120x960

27fps @ 1280x960

Compression type

H.264 (MPEG4, Part 10)

Motion JPEG

21 levels of quality

TFTP, HTTP, RTSP, RTP over TCP, RTP over UDP image transmission protocols

100 Base-T Ethernet Network Interface

Multi-streaming: 8 non-identical streams

Programmability

Binned Mode

Privacy mask

+/- 5° Electrical Vertical Alignment to adjust sensor angle

Auto Exposure (AE) and Gain Control (AGC) >120dB

On-camera real-time motion detection with 1024 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 1x1 pixels for JPEG and 2x2 pixels for H.264

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

2-axis easily adjustable gimbal with 360° pan 90° tilt

Hard ceiling mount and surface mount embedded

Die-cast aluminum chassis with 5.5" vandal resistant polycarbonate dome bubble with IK10 rated

Dimensions(H x Dia) 6.9"H (176 mm) x 6.8" dia. (175 mm)

Weight 2 lbs (0.91kg)

Environmental

IP66 weatherproofing standard

Operating temperature

 No Heater: 0°C (32 °F) to +50°C (122°F)

 With Heater: -40°C (-40 °F) to +50°C (122°F)

Stable image temperature 0°C (32 °F) to +50°C (122°F)

Storage temperature -40°C (-40 °F) to +60°C (140 °F).

Humidity 0% to 90% (non condensing)

Heater & Blower Electrical

Voltage Input: 12V to 20V DC/24VAC (separate power required)

Power Output: 11W Max (DC12V); 13W Max (AC24V)

Heater Switch: On: 17C° (62.6 °F), Off: 30 °C (86 °F)

Blower Switch: On: 10C° (50°F), Off: 15 °C (59 °F)

Blower Switch: On: 50C° (122 °F), Off: 45 °C (113°F)

Regulatory Approvals / Listings

FCC, Class A

CE and RoHS compliant

UL Listed

Accessories

SV-WMT: Wall Mount

SV-PMT: Pendant Mount

SV-FMA: Flush Mount

MD-PMA: Pole Mount

MD-CRMA: Corner Mount

MV-EBA: Electrical Box Adaptor

SV-EBA: Electrical Box Adapter

SV-JBA: Junction Box Adapter

Optics:

3.5mm, F1.8, Horizontal FOV=96°

Related Documentation

AV20185 & AV20365 Network Camera Specification

SurroundVideo® Installation Manual

4.0 Model Numbers

The camera shall be Arecont Vision model AV20185CO, 20 Megapixel H.264 Color 180°Panoramic IP Camera

The camera shall be Arecont Vision model AV20185CO-HB, 20 Megapixel H.264 Color 180°Panoramic IP Camera w/ Heater & Blower

The camera shall be Arecont Vision model AV20185DN, 20 Megapixel H.264 Day/Night 180°Panoramic IP Camera

The camera shall be Arecont Vision model AV20185DN-HB, 20 Megapixel H.264 Day/Night 180°Panoramic IP Camera w/ Heater & Blower

5.0 Warranty

Minimum 1 Year parts and labor

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