**AV3116DN v1 3 Megapixel WDR Compact H.264 Day/Night Camera**

***Bid-Spec***

1. **Description**

The AV3116 compact series camera is WDR (wide dynamic range), dual encoder (H.264 & MJPEG), 3.0 Megapixel resolution, IP addressable camera, designed to deliver full motion high definition progressive scan digital video across local area networks in a compact package. With the features of WDR switch control, PSIA and ONVIF compliance, privacy masking, extended motion detection and flexible cropping, the AV3116 is a high sensitivity, PoE (IEEE 802.3af) compliant Day/Night camera. Built with Arecont Vision’s proprietary massively-parallel MegaVideo® technology, the AV3116 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. This camera offers over ten times the resolution of standard resolution IP cameras with the ability to output full real time frame rates.

1. **Bid Specification**
* The camera shall utilize a high sensitivity 3 Megapixel WDR CMOS sensor with 1/3.2” optical format.
* The camera shall have dual standard compression support with simultaneous streaming of both H.264 and MJPEG formats.
* The camera is fully compatible with PSIA and ONVIF industry standard and passes conformance tests.
* The camera shall have privacy masking, the ability to select multiple regions of an arbitrary shape to block the video. This feature will support both 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. User can select between 64 zone based motion detection and extended motion detection to provide backward compatibility with the existing Video Management System (VMS) integration. This feature will support both HTTP and TFTP protocols, as well as the on-camera web interface.
* The camera shall be able to be cropped to any resolution divisible by 2 and maintain H.264 compression.
* 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 output at a maximum resolution of 2048(H) x 1536(V) pixels at a maximum frame rate of 21 frames per second (FPS).
* It shall be possible to program the camera to output a variety of lower resolution images, i.e. 1920(H) x 1080(V) pixels at 31 FPS.
* 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. 1024(H) x 768(V) pixels at 21 FPS, or 860(H) x 540(V) pixels at 31 FPS.
* The camera’s shutter speed shall be 1ms - 500ms.
* The camera shall feature streaming of the full field of view (FOV) and simultaneous multiple regions of interest (ROI) for forensic zooming.
* The camera shall be equipped with a 100 Mbps LAN connector.
* The camera shall use Arecont Vision’s recommended lenses to avoid purple fringing issue with high-contrast boundary areas.
* The camera shall provide 21 levels of compression quality for optimal viewing and archiving.
* The camera shall support a minimum HTTP1.0, HTTP1.1, RTSP, RTP over TCP, RTP over UDP and TFTP network protocols.
* 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.
* 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 @ F1.2 in color non-binned mode and 0.15 Lux @ F1.2 in color binned mode.
* The camera shall support an IR sensitive minimum illumination of 0 Lux in B/W mode with additional IR light source.
* The camera’s primary power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard and provide at least 5.43 W of power.
* The camera shall have the alternative option to be powered by 12V DC to 48V DC or 24V AC power source.
* 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 of the housing.
* The camera shall be utilized for indoor use but can be used in outdoor applications with mounted in an appropriate enclosure.
* The camera’s operating ambient temperature is -5˚C (23 °F) to +50˚C (122 °F); stable image temperature is 0˚C (32 °F) to +50˚C (122 °F); storage temperature -20˚C (-4 °F) to +60˚C (140 °F).
* The camera shall be compliant with the Class B limits of Title 47, Part 15, Subpart B FCC Rules and Regulations.
* The camera shall be compliant with EMI and EMC requirements, following European Standards EN55022 (Class B limits), EN55024 (IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11), EN61000-3-2 and EN61000-3-3, EN60950-1
* The camera shall be compliant with RoHS Directive 2002/95/EC.
* The camera shall be compliant with REACH Directive EC1907/2006.
* The camera shall be compliant with FTC "Made in USA" Standard.
* The camera shall be CE Mark and UL listed.
* The camera shall have dimensions of: 3” (76mm) W x 2.5” (63.5mm) H x 1.25” (31.7mm) D weighing 5.8oz (164g) without lens.

#### Quick-Spec

1. **Minimum Performance Specification**

Megapixel camera must meet the following operating requirements

**Operational**

Imaging 3 megapixel CMOS image sensor

1/3.2” optical format

Progressive Scan

Active Pixel Count 2048(H) x 1536(V) pixel array

Minimum illumination Color (non-binned): 0.3 Lux @ F1.4

Color (binned): 0.15 Lux @ F1.4

Day/Night: 0 Lux, IR sensitive (with additional IR light source)

Dynamic range up to 100 dB

Maximum SNR 49 dB

**Full Field of View (FOV) Resolutions**

2048x1536 (HxW) 3 megapixel

1024x768 (HxW) 1/4 resolution

**Cropped Field of View Resolutions**

Flexible Cropping: Crop to any resolution that is divisible by 2 pixel in H.264 and 1 pixel in JPEG up to the maximum resolution of the camera. Example resolutions include but not limit to the following.

1920x1200 WUXGA

1920x1080 HDTV-1080p

1600x1200 2 MP

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

21fps @ 2048x1536

27fps @ 1600x1200

31fps @ 1920x1080

32fps @ 1280x1024

Video frame in binned mode up to

21fps @ 1024x768

27fps @ 800x600

31fps @ 860x540

32fps @ 640x512

Compression type

H.264 (MPEG4, Part 10)

Motion JPEG

21 levels of quality

Transmission protocols

HTTP1.0, HTTP1.1, RTSP, TRP over TCP, RTP over UDP, TFTP

100 Base-T Ethernet Network Interface

Multi-streaming: 8 non-identical streams

**Programmability**

Privacy mask

Binned Mode

Flexible cropping

Wide dynamic range switch control

Low light noise filter control

Bit Rate and Bandwidth Limitation Control

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

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

Power consumption 5.43 Watts maximum

Auxiliary Power 12-48V DC, 24VAC

**Mechanical**

Dimensions(H x W x D)……….3”W (76 mm) x 2.5”H (63.5 mm) x 1.25”D (31.7mm) (w/o lens)

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

Lens.……………………………C/CS lens mount

**Environmental**

Operating temperature -5˚C (23 °F) to +50˚C (122 °F)

Stable image 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)

**Compliance Information**

**Compliance:**

Class B FCC, Part 15; EN55022 Class B, EN55024, EN61000-3-2 and EN61000-3-3, EN60950-1

RoHS, REACH, CE Mark and UL Listed

**Industry Standard**

PSIA and ONVIF compliance

**Housing Accessories:**

HSG2 Outdoor Environmental Housing w/Heater/Blower

**Lenses:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Manufacturer | Model Number | Focal Length | Format | F # | H-FOV @ Wide | H-FOV @ Tele |
| Computar |  T3Z0312CS-MPIR  |  3-8mm | 1/3” | 1.2 | 85° | 33° |
| Computar |  AG3Z3112CS-MPIR   |  3.1-8mm | 1/2.7" | 1.2 | 81.2° | 33° |
| Computar |  A4Z1214CS-MPIR |  12.5-50mm | 1/2.7” | 1.4 | 20° | 5.3° |
| Fujinon |  YV2.7x2.2SR4A-2   |  2.2-6mm | 1/2.7” | 1.3 | 113° | 43° |
| Fujinon |  YV2.8x2.8SR4A-2   |  2.8-8mm | 1/2.7” | 1.3 | 93° | 33° |
| Tamron |  M13VM288IR |  2.8-8mm | 1/3” | 1.2 | 92° | 24° |

**Related Documentation**

AV User Manual

AV3116 Network Camera Specification

**4.0 Model Numbers**

The camera shall be Arecont Vision model AV3116DNv1, 3MP WDR Compact H.264 Day/night Camera

**5.0 Warranty**

Minimum 3 Year parts and labor

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



[www.megapixelvideo.com](http://www.megapixelvideo.com) info@arecontvision.com © 2005 Arecont Vision