

# **Arecont Vision**

**AV3105 (3 Megapixel Color Camera)**  
**AV3105-AI (3 Megapixel Color Auto Iris Camera)**  
**AV3105DN (3 Megapixel Day/Night Camera)**

## **Architect & Engineering Specifications**

Version 083010



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## PART 1 - NOT USED

## PART 2 - PRODUCTS

## 2.01 Megapixel camera

## A. Functional Description

1. The AV3105 series camera is a 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. The AV3105 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 AV3105 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 ten 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 3 Megapixel CMOS sensor with 1/2" optical format.
2. The camera shall be H.264 (MPEG4,Part 10) compliant
3. The camera shall have dual standard compression support with simultaneous streaming of both H.264 and MJPEG formats.
4. 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).
5. The camera's bit rate control shall be selectable from 100 Kbps to 10 Mbps for each independent stream.
6. 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.
7. The cameras H.264 implementation shall maintain full real time video frame rates.

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8. The camera shall output at a maximum resolution of 2048(H) x 1536(V) pixels at a maximum frame rate of 15 frames per second (FPS).
9. 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, or 1600(H) x 1200(V) pixels at 24 FPS.
10. The camera shall feature streaming of the full field of view (FOV) and simultaneous multiple regions of interest (ROI) for forensic zooming.
11. 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).
12. 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.)
13. The camera shall provide 21 levels of compression quality for optimal viewing and archiving.
14. The camera shall support a minimum TFTP, HTTP, RTSP, RTP over TCP and RTP over UDP network protocols
15. The cameras shall feature precision motion detection with a minimum of 64 detection zones
16. 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.
17. The camera shall incorporate necessary algorithms and circuits to detect motion in low light with clarity.
18. The camera shall support a minimum illumination of 0.2 Lux @ F1.4 in color mode.
19. The camera shall support an IR sensitive minimum illumination of 0 Lux in B/W mode (D/N version only)
20. The camera's primary power source shall be Power over Ethernet (PoE) complying with the IEEE 802.3af standard.

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21. The camera shall have the alternative option to be powered from between a 12V DC up to 48V DC or 24V AC power source providing at least 4.5W of power.
22. The camera shall support a DC auto-iris lens when equipped with the auto-iris feature (AI version only). Megapixel resolution optics recommended.
23. 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.
24. The camera shall be utilized for indoor use but can be used in outdoor applications with an appropriate enclosure.
25. The camera's operating ambient temperature is 0°C (32°F) to 50°C (122°F).
26. The camera shall be FCC Part 15, Class A, CE, and RoHS compliant
27. 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	3 megapixel CMOS image sensor 1/2" optical format Bayer mosaic RGB filter
Active Pixel Count	2048(H) x 1536(V) pixel array
Minimum illumination	Color: 0.2 Lux @ F1.4 Day/Night: 0 Lux, IR sensitive
Dynamic range	61 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**

1920x1200 WUXGA  
1920x1080 HDTV-1080p  
1600x1200 2 MP  
1280x1024 1.3 MP  
1280x720 HDTV - 720p  
1024x768 XGA  
800x600 SVGA

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704x570 PAL

704x480 NTSC

640x480 VGA

352x288 CIF

320x240 SIF

**Data Transmission**

Video frame rate up to 15fps @ 2048x1536

20fps @ 1920x1200

22fps @ 1920x1080

24fps @ 1600x1200

32fps @ 1280x1024

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

100Base-T Ethernet Network Interface

Data rate bit rate control from 100 Kbps to 10 Mbps

unthrottled data rate up to 55 Mbps

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

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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 12 V – 48 V DC  
AC input: auxiliary 24 V AC  
Power consumption 4.5 Watts maximum  
Optional DC AI connection (AV3105 - 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

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**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. AV1305, AV2105, AV3105, AV5105 Network Camera Specification

**D. Model Numbers**

1. The camera shall be Arecont Vision model AV3105, three megapixel color camera
2. The camera shall be Arecont Vision model AV3105-AI, three megapixel color auto iris camera
3. The camera shall be Arecont Vision model AV3105DN, three 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.*