

AV12186DN 12 Megapixel WDR Panoramic H.264 Day/Night Camera

Bid-Spec

1.0 Description

The AV12186DN SurroundVideo® series network camera is WDR (wide dynamic range), dual encoder (H.264 & MJPEG), 12 Megapixel resolution, 180 degree panoramic Day/Night IP camera, designed to provide an all-in-one solution with integrated four 3 megapixel WDR sensors, four 5.4mm M12 lenses, IK-10 vandal resistant dome and housing, rated IP66 for water and dust protection.

The AV12186DN is a PoE (IEEE 802.3af) compliant Day/Night camera, featuring WDR switch control, PSIA compliance, privacy masking, extended motion detection and flexible cropping.

Built with Arecont Vision's proprietary massively-parallel MegaVideo® technology, the AV12186DN 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.

2.0 Bid Specification

- The camera shall utilize a high sensitivity four 3 Megapixel WDR CMOS sensors with 1/3.2" optical format.
- The camera shall integrate four 5.4mm M12 megapixel IR corrected lenses, 1/3.2", F2.0, Horizontal Field of View of 46.5°.
- The camera shall have die-cast aluminum chassis with IK-10 vandal resistant dome. Entire enclosure to be rated minimum IP66 for water and dust protection.
- The camera shall have a 2-axis easily adjustable gimbal with 360° pan and 90° tilt for easy and accurate positioning.
- The camera shall be able to use the following options:
MD-WMT2 – Wall Mount, MD-CMT – Pendant Mount, MD-CRMA – Corner Mount Adapter, MD-PMA – Pole Mount Adapter, MD-FMA – Flush Mount Adapter, SV-EBA – Electrical Box Adapter, SV-JBA – Junction Box Adapter.
- The camera shall have +/-5° Digital Vertical Alignment to adjust images.
- The camera shall have dual standard compression support with simultaneous streaming of both H.264 and MJPEG formats.
- The camera shall be H.264 (MPEG4, Part 10) compliant.
- The camera is fully compatible with PSIA industry standard and passes conformance tests.
- 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 wide dynamic range up to 100 dB.
- 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 zones. 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 have Real Time Streaming Protocol (RTSP) support allowing for compatibility with media players such as Apple QuickTime, VLC Player and others.

- The camera shall be able to be cropped to any resolution divisible by 2 and maintain H.264 compression.
- The camera shall output at a maximum resolution of 8192(H) x 1536(V) pixels at a maximum frame rate of 5.2 frames per second (FPS) across all four sensors.
- The camera's maximum frame rate shall be 16.7 FPS across all four sensors at the maximum resolution of 2048(H) x 1536(V) per sensor.
- It shall be possible to program the camera in binning mode to output variety of lower resolution images and increased frame rate: i.e. 4096(H) x 768(V) pixels (1/4 resolution) at 16.7 FPS.
- The camera combined four images shall provide for 180 degree horizontal field of view.
- 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'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 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 HTTP1.0, HTTP1.1, RTSP, RTP over TCP, RTP over UDP and TFTP network protocols.
- The camera shall support both unicast and multicast communication protocol.
- 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 support a minimum illumination of 0.5 Lux @ F2.0 in color non-binning mode and 0.25 Lux @ F2.0 in color binning mode.
- The camera shall support an IR sensitive minimum illumination of 0.025 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.
- The camera shall have an alternative option to be powered from a 12V DC to 48V DC or 24V AC power supply. The power required for the camera from DC/AC supply is not to exceed 14W.
- The camera shall be utilized for indoor and outdoor applications.
- The camera's stable image temperature is 0°C (32 °F) to +50°C (122°F) and storage temperature -30°C (-22 °F) to +60°C (140 °F).
- The camera shall be compliant with the Class A limits of Title 47, Part 15, FCC Rules and Regulations.
- The camera shall be compliant with the latest amendments of the following European Standards: EN55022 (Class A 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 2011/65/EU.
- The camera shall be compliant with REACH Directive 1907/2006/EC.
- The camera shall be compliant with FTC "Made in USA" Standard.
- The camera shall bear CE Mark and be UL Listed.
- The camera shall have dimensions of: 4.9"H (126 mm) x 5.5" dia. (140 mm) weighing 2.8 lbs (1.27 kg). Packaged weight 3.4 lbs (1.54 kg), dimensions 7.5"W (190mm) x 6"H (150mm) x 8"L (200mm)

Quick-Spec

3.0 Minimum Performance Specification

Megapixel camera must meet the following operating requirements

Operational

| | |
|----------------------|---|
| Imaging | Four 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-binning): 0.5 Lux @ F2.0 Color (binning): 0.25 Lux @ F2.0 Day/Night: 0.025 Lux, IR sensitive (with additional IR light source) |
| Dynamic range | up to 100 dB |
| Maximum SNR | 51 dB |

Full Field of View (FOV) Resolutions

8192x1536 (HxW) 12MP

4096x768 (HxW) 3MP (1/4 resolution)

Data Transmission

Data rate: bit rate control from 100Kbps to 10Mbps

Video frame rate (up to):

5.2FPS @ 8192x1536

16.7FPS @ 2048x1536

Video frame rate in binning mode up to:

16.7FPS @ 4096x768

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 (Unicast/Multicast), TFTP

100 Base-T Ethernet Network Interface

Multi-streaming: 8 non-identical streams (2 active connections to the camera with output from 4 sensors)

Programmability

Privacy mask

Binning Mode

Flexible cropping (Resolution windowing down to 1x1 pixels for JPEG and 2x2 pixels for H.264)

*/-5% Digital Vertical Alignment to adjust vertical alignment

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

Bit Rate and Bandwidth Limit Control

On-camera real-time motion detection and privacy mask with up to 1024 detection zones

Auto multi-matrix white balance

50/60Hz selectable flicker control

Electronic pan, tilt, zoom (PTZ)

Electronic image flip - 180 degree rotation

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: 11W max

Auxiliary Power 12-48V DC, 24VAC

Power consumption: PoE – Class 3; DC - 14W max

Mechanical

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

Die-cast aluminum chassis with 5.5" vandal resistant polycarbonate IK-10 rated dome bubble.

Dimensions(H x Dia) 4.9"H (176 mm) x 5.5" dia. (175 mm) Weight: 2.8 lbs (1.27kg)

Environmental

Operating temperature -30°C (-22 °F) to +50°C (122 °F)

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

Storage temperature -30°C (-4 °F) to +60°C (140 °F)

Humidity 0% to 90% (non-condensing)

Product Compliance

UL Listed (CB Scheme)

CE Mark

EU Directives: 2004/108/EC (EMC Directive); 2006/95/EC (Low Voltage Directive) and underlying standards

2011/65/EU RoHS 2 Directive

1907/2006/EC REACH Directive

WEEE Directive 2002/96/EC

Title 47 Part 15; (47 CFR 15) Subpart B Class A

Industry Standard

PSIA compliant

IK-10 vandal-resistant Dome (EN60529)

IP66 dust and water ingress protection (EN62262)

Housing Accessories:

MD-WMT2 – Wall Mount,
MD-CMT – Pendant Mount,
MD-CRMA – Corner Mount Adapter,
MD-PMA – Pole Mount Adapter,
MD-FMA – Flush Mount Adapter
SV-EBA – Electrical Box Adapter,
SV-JBA – Junction Box Adapter.

Optics:

5.4mm, 1/3.2", F2.0, IR Corrected, Horizontal FOV=46.5°+/-0.8°

Related Documentation

AV User Manual

AV12186DN Network Camera Specification

4.0 Warranty

Minimum 3 Year parts and labor

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