**Arecont Vision®**

Leading the Way in Megapixel Video™

# **Mega**Video® Flex IP Megapixel Cameras

1.2, 1080p, 3, and 5 Megapixel (MP) H.264 Remote Focus True Day/Night Indoor Tethered IP Camera with SNAPstream™ (Smart Noise Adaptation and Processing), WDR (Wide Dynamic Range), and NightView™ Models, and Optional IR LEDs

Optional
IR LED Units*

Sensor Unit

Main Unit

* Sold separately

The MegaVideo® Flex camera series offers a cost-effective security solution for installations that require a discrete, flexible, and compact design. Due to its small size, the MegaVideo Flex easily fits into a wide range of spaces. These indoor cameras feature a choice of 1.2MP, 1080p, 3MP, and 5MP resolution options.

Regardless of time-of-day, this true day/night camera is ideal for applications with variable lighting conditions. For challenging low-light applications, the MegaVideo Flex 1.2MP model features NightView™, making it capable of covering areas where very little light is present. Applications with bright or over saturated lighting conditions can be overcome with the optional wide dynamic range feature (available on select models).

The MegaVideo Flex is comprised of the camera sensor, metal mounting bracket, USB cable, and the main camera unit. Installing the MegaVideo Flex is simple. The camera can be surface mounted via the supplied mounting bracket or flush mounted in a ceiling or wall with the two (2) fastening nuts. No additional mounting accessories are required. For added flexibility, the USB cable allows the camera to be mounted in one area while the main camera unit is mounted up to 40ft (12m) away. Each camera includes both a white and a black trim ring so it easily blends into the environment.

For easy identification of events or intruders in low-light applications, the main unit features two (2) USB ports to combine optional infrared illumination (sold separately). Each IR illuminator includes six (6) infrared 850nm LEDs providing up to 50ft (15m) of night vision.

These cameras are enhanced with the added convenience of remote focus to facilitate ease of set-up and future adjustments, reducing time spent at the job-site. The ability to interchange the lenses, makes the flexibility of this camera unsurpassed. Lens options include: 2.1mm, 2.8mm, 4mm, 6mm, 8mm, 12mm, and 16mm.

The MegaVideo Flex camera series offers advanced streaming capabilities and is designed on an efficient H.264 encoding platform to deliver high quality video without straining the network. Power can be supplied via a single Power-over-Ethernet compliant network cable or via a 12–48V DC/24V AC power supply. The camera's interface allows for an intuitive, fast, and easy configuration. The AV IP Utility tool allows users to quickly configure multiple cameras at one time when required.

| Interchangeable Lenses with Remote Focus Module | Ultra Low Profile Design | Tethered Camera | SNAPstream™ Technology | NightView™ on 1.2MP Models | Wide Dynamic Range Available on Select 1080p and 3MP Models | True Day/Night with Mechanical IR Cut Filter | Impact Resistant IK-10 Rated | Water Resistant from Front | Vibration and Shock Resistant | CorridorView™ with 90° Image Flip | SDHC Card Slot | Non-Integer Scaling | Pixel Binning Mode on 3 and 5MP Models | Optional IR LEDs |

## Series Features

- 1.2, 1080p, 3, or 5MP Models
- Camera Sensor and Main Unit can be Connected with a High Quality USB Cable up to 40ft (12m) in Length
- SNAPstream™ (Smart Noise Adaptation and Processing) Capability to Reduce Bandwidth without Impacting Image Quality
- Strong Low Light Performance with NightView™ for 1.2MP Models and Binning Mode for 3MP and 5MP Models
- True Day/Night Functionality with Mechanical IR Cut Filter
- True WDR up to 100dB at Full Resolution Available on Select 1080p and 3MP Models
- CorridorView™ Allows 90° Image Rotation for Better Coverage in Hallways and Corridors
- Dual Encoder H.264/MJPEG

- Remote Focus Module
- Privacy Mask, Motion Detection, Flexible Cropping, Bit Rate Control, Multi-Streaming, Multicasting, Forensic Zooming, and Non-Integer Scaling
- Multiple Lens Options Available (Sold Separately)
- Network Protocols Include 802.1x, IPv6, QoS, DHCP, and More
- All-in-One Total Power Over Ethernet (PoE) Solution
- Ultra Low Profile Design / Small Size
- Optional IR LEDs (Connect a Maximum of Two)
- Onboard Storage (SD Card Sold Separately)
- IK-10 Impact-Resistant Housing
- Water Resistant from Front of Sensor and IR Units
- Vibration and Shock Resistant (EN61373)

ONVIF | S

## Camera Imaging Specifications

| Model | | AV1195DN | AV2195DN | AV2196DN | AV3195DN | AV3196DN | AV5195DN |
|---|---|---|---|---|---|---|---|
| Image Sensor (CMOS) | | 1.2MP | 1080p (2.1MP) | 1080p (2.1MP) | 3MP | 3MP | 5MP |
| Optical Format | | 1/3" | 1/3" | 1/3.2" | 1/3" | 1/3.2" | 1/2.5" |
| Pixel Pitch | | 3.75µm | 2.2µm | 2.2µm | 2.2µm | 2.2µm | 2.2µm |
| Minimum Illumination | Color (Day Mode) | 0.03 Lux | 0.2 Lux | 0.2 Lux | 0.2 Lux | 0.2 Lux | 0.3 Lux |
| | Color Binning (Day Mode) | - | - | - | 0.1 Lux | 0.1 Lux | 0.15 Lux |
| | B/W (Night Mode) | 0.003 Lux, IR sensitive | 0.02 Lux, IR sensitive | 0.02 Lux, IR sensitive | 0.02 Lux, IR sensitive | 0.02 Lux, IR sensitive | 0.03 Lux, IR sensitive |
| Full FOV Resolution | | 1280 H x 960 V | 1920 H x 1080 V | 1920 H x 1080 V | 2048 H x 1536 V | 2048 H x 1536 V | 2592 H x 1944 V |
| 1/4 Resolution | | 640 H x 480 V | 960 H x 540 V | 960 H x 540 V | 1024 H x 768 V | 1024 H x 768 V | 1296 H x 972 V |
| Scaling (See Chart on Page 4) | | - | Yes | Yes | Yes | Yes | Yes |
| Dynamic Range | | 83.5dB | 69.5dB | WDR up to 100dB | 69.5dB | WDR up to 100dB | 70.1dB |
| Frame Rates† | At Max Res. | 37fps (1280 x 960) | 30fps (1920 x 1080) | 30fps (1920 x 1080) | 21fps (2048 x 1536) | 21fps (2048 x 1536) | 11fps (2592 x 1944) |
| | Cropped | - | 30fps (1280 x 1024) | 30fps (1280 x 1024) | 30fps (1920 x 1080) 30fps (1280 x 1024) | 21fps (1920 x 1080) 21fps (1280 x 1024) | 16fps (2048 x 1536) 24fps (1920 x 1080) 33fps (1280 x 1024) |
| | Binning Mode | - | - | - | 42fps (1024 x 768) 59fps (960 x 540) | 21fps (1024 x 768) 21fps (800 x 600) 21fps (960 x 540) 21fps (640 x 512) | 27fps (1296 x 972) 37fps (1024 x 768) 48fps (960 x 540) |
| Lens** | Fixed Iris | MPM2.8A 2.8mm, 1/2.5", F/1.8, IR corrected, M12-mount | | | | | |
| | H-FOV | 95° | 83° | 83° | 89° | 89° | 113° |

## SituationalPlus™

| Model | Lens | View Angle | Distance to pixel density (ft.)(m) | | |
|---|---|---|---|---|---|
| | | | 30ppf (100ppm) | 60ppf (200ppm) | 90ppf (300ppm) |
| AV1195DN | MPM2.1 | 130° | > 1' (0.3m) | > 1' (0.3m) | > 1' (0.3m) |
| | MPM2.8A** | 95° | 19' (5.8m) | 9.5' (2.9m) | 6' (1.8m) |
| | MPM4.0A | 67° | 32' (9.8m) | 16' (4.9m) | 10.5' (3.2m) |
| | MPM6.0 | 46° | 49.5' (15.1m) | 25' (7.6m) | 16' (4.9m) |
| | MPM8.0 | 35° | 65.5' (20m) | 34' (10.4m) | 22' (6.7m) |
| | MPM12.0A | 23° | 105' (32m) | 50' (15.2m) | 35' (10.7m) |
| | MPM16.0 | 17° | 145' (44.2m) | 70' (21.3m) | 47' (14.3m) |
| AV2195DN | MPM2.1 | 113° | 17.5' (5.3m) | > 1' (0.3m) | > 1' (0.3m) |
| | MPM2.8A** | 83° | 35' (10.7m) | 16.5' (5m) | 9' (2.7m) |
| | MPM4.0A | 59° | 55' (16.8m) | 27' (8.2m) | 17' (5.2m) |
| | MPM6.0 | 40° | 85' (25.9m) | 43' (13.1m) | 28' (8.5m) |
| | MPM8.0 | 30° | 120' (36.6m) | 59' (18m) | 39' (11.9m) |
| | MPM12.0A | 20° | 180' (54.9m) | 90' (27.4m) | 60' (18.3m) |
| | MPM16.0 | 15° | 240' (73.2m) | 122' (37.2m) | 81' (24.7m) |
| AV2196DN | MPM2.1 | 113° | 17.5' (5.3m) | > 1' (0.3m) | > 1' (0.3m) |
| | MPM2.8A** | 83° | 35' (10.7m) | 16.5' (5m) | 9' (2.7m) |
| | MPM4.0A | 59° | 55' (16.8m) | 27' (8.2m) | 17' (5.2m) |
| | MPM6.0 | 40° | 85' (25.9m) | 43' (13.1m) | 28' (8.5m) |
| | MPM8.0 | 30° | 120' (36.6m) | 59' (18m) | 39' (11.9m) |
| | MPM12.0A | 20° | 180' (54.9m) | 90' (27.4m) | 60' (18.3m) |
| | MPM16.0 | 15° | 240' (73.2m) | 122' (37.2m) | 81' (24.7m) |
| AV3195DN | MPM2.1 | 121° | 15' (4.6m) | > 1' (0.3m) | > 1' (0.3m) |
| | MPM2.8A** | 89° | 34' (10.4m) | 15.5' (4.7m) | 8' (2.4m) |
| | MPM4.0A | 63° | 55' (16.8m) | 26.5' (8.1m) | 16.5' (5m) |
| | MPM6.0 | 43° | 86' (26.2m) | 42.5' (13m) | 27.5' (8.4m) |
| | MPM8.0 | 33° | 114.5' (34.9m) | 56' (17.1m) | 37.5' (11.4m) |
| | MPM12.0A | 22° | 174.5' (53.2m) | 87' (26.5m) | 58' (17.7m) |
| | MPM16.0 | 16° | 243' (74.1m) | 121' (36.9m) | 81' (24.7m) |
| AV3196DN | MPM2.1 | 121° | 15' (4.6m) | > 1' (0.3m) | > 1' (0.3m) |
| | MPM2.8A** | 89° | 34' (10.4m) | 15.5' (4.7m) | 8' (2.4m) |
| | MPM4.0A | 63° | 55' (16.8m) | 26.5' (8.1m) | 16.5' (5m) |
| | MPM6.0 | 43° | 86' (26.2m) | 42.5' (13m) | 27.5' (8.4m) |
| | MPM8.0 | 33° | 114.5' (34.9m) | 56' (17.1m) | 37.5' (11.4m) |
| | MPM12.0A | 22° | 174.5' (53.2m) | 87' (26.5m) | 58' (17.7m) |
| | MPM16.0 | 16° | 243' (74.1m) | 121' (36.9m) | 81' (24.7m) |
| AV5195DN | MPM2.1*** | - | - | - | - |
| | MPM2.8A** | 113° | 27' (8.2m) | 12' (3.7m) | 5' (1.5m) |
| | MPM4.0A | 80° | 51' (15.5m) | 24.5' (7.5m) | 15' (4.6m) |
| | MPM6.0 | 56° | 80' (24.4m) | 40' (12.2m) | 26' (7.9m) |
| | MPM8.0 | 42° | 114' (34.7m) | 56' (17.1m) | 36' (11m) |
| | MPM12.0A | 28° | 175' (53.3m) | 86' (26.2m) | 57' (17.4m) |
| | MPM16.0 | 20° | 245' (74.7m) | 122' (37.2m) | 81' (24.7m) |

## Programmability

| | |
|---|---|
| Optics | M12 lens and remote focus module |
| Low Light Performance | **NightView™** — 1.2MP models |
| | **Pixel Binning Mode** — 3MP and 5MP models |
| Picture-in-Picture | Simultaneous delivery of full field-of-view and zoomed images |
| Programmable Shutter Speed | Controls motion blur, 1ms–500ms |
| Motion Detection | Real-time, 1024 detection zones |
| Privacy Masking | Unlimited |
| Flexible Cropping | Resolution windowing down to 1x1 pixel for JPEG and 2x2 pixels for H.264 |
| Backlight Compensation | Custom white balance |
| Flicker Control | 5Hz–255Hz adjustable |
| Image Rotation | CorridorView™ (90°, 180° and 270° image rotation) |
| Wide Dynamic Range | Auto switch control adjustment between WDR and LDR modes (WDR models) |
| Noise Reduction | Low light noise filter control |
| Efficiency | SNAPstream™ (Smart Noise Adaptation and Processing) |
| | Bit rate and bandwidth limitation control |
| | Bandwidth and storage savings by running at 1/4 resolution |
| Sharpness | Selectable enhancement level |
| Miscellaneous | Programmable resolution, brightness, saturation, gamma, tint |
| | Electronic pan, tilt, zoom (PTZ) |

** MPM2.8A (2.8mm) is the default lens with the exception of "-NL" models
*** Lens not recommended for use with this resolution
† Maximum with H.264 compression

## Data Transmission

| | |
|---|---|
| **Compression Type** | H.264 (MPEG-4, Part 10)/Motion JPEG |
| | 21 levels of quality |
| **Network Protocols** | RTSP, RTP/TCP, RTP/UDP, HTTP, DHCP, TFTP, QoS, IPv4, IPv6, 802.1x |
| **Network Interface** | 100Base-T Ethernet |
| **Multi-Streaming** | 8 non-identical streams |

## Compliance

| | |
|---|---|
| **Industry Standard** | ONVIF Profile S conformant |
| **Listings** | **UL CB Scheme:** IEC 60950-1(Ed.2), IEC 60950-1(Ed.2); Am.1, IEC 60950-1(Ed.2); Am.2, IEC 60950-22(Ed.1)) |
| **FCC Compliance** | Title 47, Part 15 (47 CFR 15) Subpart B Class A |
| **Environmental** | REACH 1907/2006/EC, WEEE 2012/19/EU |
| **Markings** | **CE:** 2014/30/EU (EMC Directive), 2014/35/EU (Low Voltage Directive), 2011/65/EU (RoHS Directive) EN 55022:2010 Class A, EN 55024:2010, EN 61000-3-2:2006+A1:2009+A2:2009, EN61000-3-3: 2008 EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 |
| **Mechanical** | Shock and vibration (EN61373), IK-10 |
| **CoO** | Made in the USA |

## Environmental

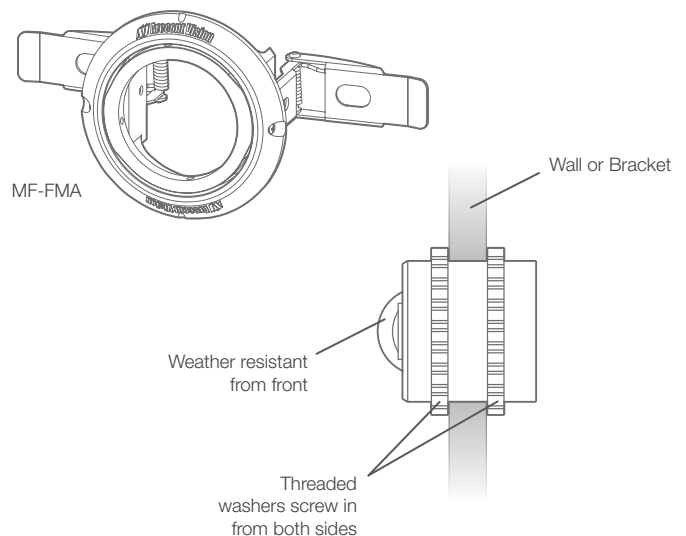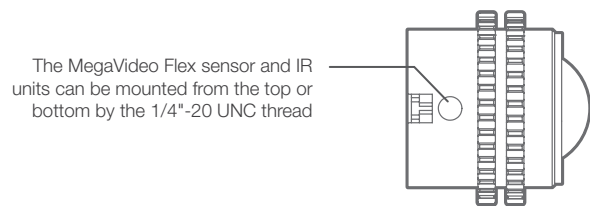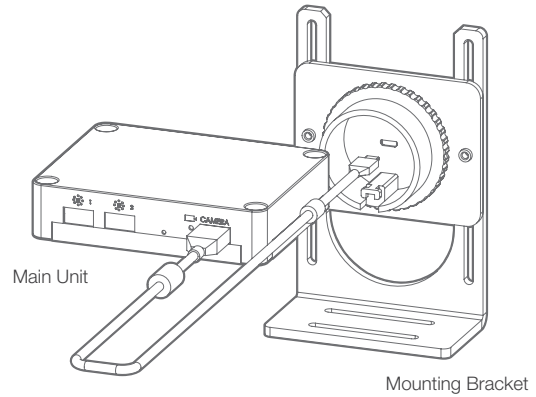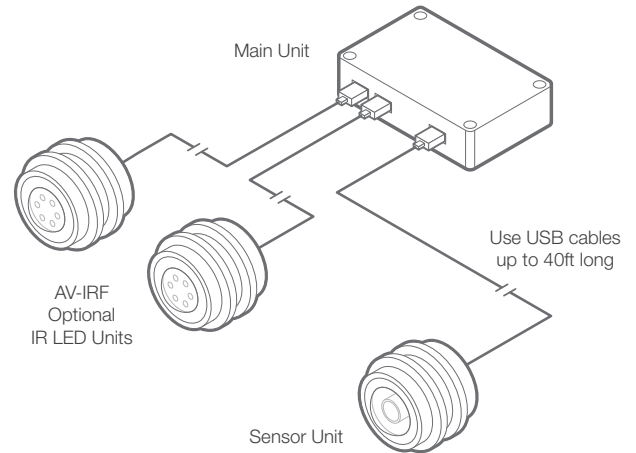| | |
|---|---|
| **Operating temperature** | -20°C (-4°F) to +50°C (122°F) |
| **Humidity** | 0% to 90% (non-condensing) |
| **Storage temperature** | -20°C (-4°F) to +60°C (140°F) |

## Electrical

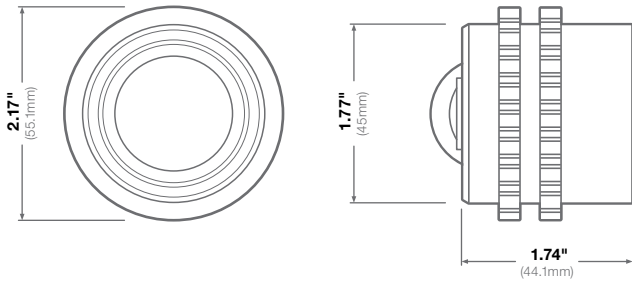| | |
|---|---|
| **Alarm Input/Output** | General purpose opto-coupled, 1 input / 1 output |
| **Power Over Ethernet** | PoE 802.3af, Class 3 |
| **Power Consumption** | 10.5 watts DC power max |
| | 14.2 watts DC power max (with two IR units on) |
| **Auxiliary Power** | 12–48V DC/24V AC (Barrel plug, 2.1mm I.D. x 5.5mm O.D. x 9.5mm) |

## Mechanical

| | | |
|---|---|---|
| **Casing** | Tamper-resistant housing, IK-10 impact-resistant | |
| | Weather resistant from front | |
| **Lens** | 2.8mm board mount (M12), fixed iris, F/2.0 (except -NL models) | |
| **Dimensions** *(See Dimensions)* | **Main Unit** | 0.94" H (24mm) x 3.23" W (82mm) x 4.09" L (104mm) |
| | **Sensor Unit** | Ø 1.77" (45mm) x 1.74" W (44.1mm) |
| | **Packaged** | 4.5" H (114mm) x 5.8" W (147mm) x 5.9" L (150mm) |
| **Weight** | **Unit** | 0.7lbs (0.3kg) |
| | **Packaged** | 1.3lbs (0.6kg) |
| **USB Cables** | 5' (1.5m) | |
| | 40' (12m) | |

## Quick Installation



Main Unit

AV-IRF Optional IR LED Units

Use USB cables up to 40ft long

Sensor Unit



Main Unit

Mounting Bracket

The MegaVideo Flex sensor and IR units can be mounted from the top or bottom by the 1/4"-20 UNC thread





MF-FMA

Wall or Bracket

Weather resistant from front

Threaded washers screw in from both sides

## Dimensions

### Sensor Unit



### Main Unit
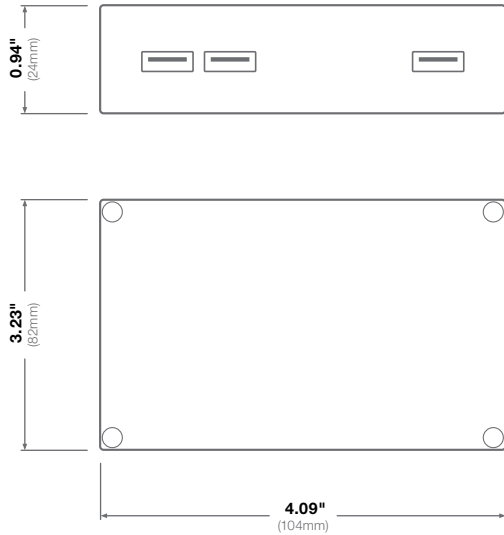


## Scaling Resolution Chart ‡

| Scaled Resolution | Horizontal | Vertical | Pixel Count |
|---|---|---|---|
| 720p | 1280 | 720 | 921600 |
| XVGA | 1024 | 768 | 786432 |
| DVGA (16:9) | 1136 | 640 | 727040 |
| DVGA (3:2) | 960 | 640 | 614400 |
| SVGA | 800 | 600 | 480000 |
| D1 (PAL) | 720 | 576 | 414720 |
| 4CIF (PAL) | 704 | 576 | 405504 |
| D1 (NTSC) | 720 | 480 | 345600 |
| 4CIF (NTSC) | 704 | 480 | 337920 |
| VGA | 640 | 480 | 307200 |
| 2CIF (PAL) | 704 | 288 | 202752 |
| HVGA (4:3) | 480 | 360 | 172800 |
| 2CIF (NTSC) | 704 | 240 | 168960 |
| HVGA (8:3) | 640 | 240 | 153600 |
| HVGA (3:2) | 480 | 320 | 153600 |
| HVGA (16:9) | 480 | 272 | 130560 |
| CIF (PAL) | 352 | 288 | 101376 |
| CIF (NTSC) | 352 | 240 | 84480 |
| QVGA (SIF) | 320 | 240 | 76800 |
| QCIF (PAL) | 176 | 144 | 25344 |
| QCIF (NTSC) | 176 | 120 | 21120 |
| SQCIF | 128 | 96 | 12288 |

‡ All scaled resolutions are available on all cameras that support scaling

*See Next Page for Ordering Information*

# Ordering Information



## Model Numbers[1]

| | | |
|---|---|---|
| **1.2MP** | AV1195DN | `NightView` |
| | AV1195DN-NL | `NightView` |
| **1080p** | AV2195DN | |
| | AV2195DN-NL | |
| | AV2196DN | `WDR` |
| | AV2196DN-NL | `WDR` |
| **3MP** | AV3195DN | |
| | AV3195DN-NL | |
| | AV3196DN | `WDR` |
| | AV3196DN-NL | `WDR` |
| **5MP** | AV5195DN | |
| | AV5195DN-NL | |

[1] All parts include a main unit, 40ft (12m) and 5ft (1.5m) USB 2.0 to micro USB 28/24 AWG, shielded twisted pair cable, and a mounting bracket

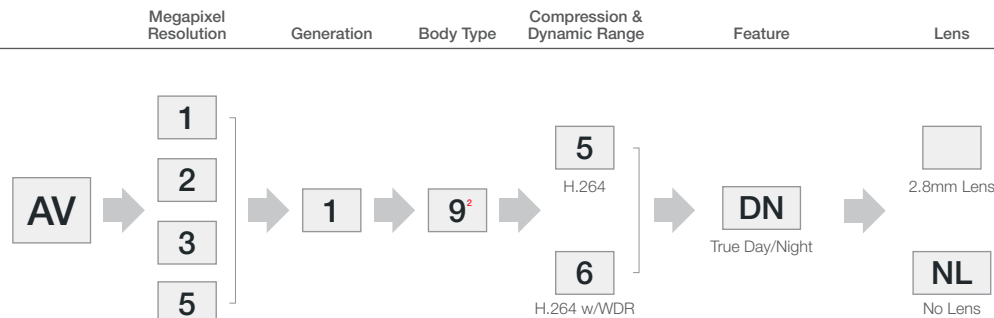## Model Specific Features

| Model | Resolution | Frame Rate[†] | Features | |
|---|---|---|---|---|
| **AV1195DN** | 1.2MP | 37fps | - | NightView™ |
| **AV2195DN** | 1080p | 30fps | - | - |
| **AV2196DN** | 1080p | 30fps | WDR | - |
| **AV3195DN** | 3MP | 21fps | - | Binning |
| **AV3196DN** | 3MP | 21fps | WDR | Binning |
| **AV5195DN** | 5MP | 12fps | - | Binning |

[†] Maximum with H.264 compression

## Accessories

| | |
|---|---|
| **AV-IRF** | Single IR illuminator includes 6 pcs 850nm LEDs / 40ft (15m) IR distance (max) / 80° IR angle, for use with MegaVideo Flex only |
| **MF-FMA** | In-ceiling flush mount for MegaVideo Flex |

## Lens Options (Sold Separately)

| Model | Focal Length | Horizontal Field of View | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1.2MP | 1080p | 1080p WDR | 3MP | 3MP WDR | 5MP |
| **MPM2.1** | 2.1mm | 130° | 113° | 113° | 121° | 121° | - |
| **MPM2.8A**\*\* | 2.8mm | 95° | 83° | 83° | 89° | 89° | 113° |
| **MPM4.0A** | 4mm | 67° | 59° | 59° | 63° | 63° | 80° |
| **MPM6.0** | 6mm | 46° | 40° | 40° | 43° | 43° | 56° |
| **MPM8.0** | 8mm | 35° | 30° | 30° | 33° | 33° | 42° |
| **MPM12.0A** | 12mm | 23° | 20° | 20° | 22° | 22° | 28° |
| **MPM16.0** | 16mm | 17° | 15° | 15° | 16° | 16° | 20° |

\*\* MPM2.8A (2.8mm) is the default lens with the exception of "-NL" models

## Create Your Model (Example: AV3196DN-NL)

| Megapixel Resolution | Generation | Body Type | Compression & Dynamic Range | Feature | Lens |
|---|---|---|---|---|---|

AV → 1 2 3 5 → 1 → 9[2] → 5 (H.264) / 6 (H.264 w/WDR) → DN (True Day/Night) → 2.8mm Lens / NL (No Lens)

[2] "9" represents the MegaVideo Flex product line

## Arecont Vision®

**Made in the USA**   CE c(UL)us

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