

MegaBall[®] G2 IP Megapixel Cameras

1.2–5MP H.264 All-in-One Motorized P-Iris or Panomorph Lens True Day/Night Indoor IP Adjustable IR Cameras with WDR (Wide Dynamic Range) and STELLAR™ (Spatio Temporal Low Light Architecture) Models



Optional Manual ImmerVision Enables[®] Panomorph Lens (01-D-LG)**

The MegaBall G2 megapixel camera series fuses optimum performance with outstanding aesthetics. These stylish indoor cameras feature a choice of 1.2-, 1080p-, 3-, or 5-megapixel (MP) resolution options. Regardless of time-of-day, this camera is ideal for applications with challenging lighting conditions. The series combines a day/night mechanical IR cut filter with an integrated P-iris lens for precise, optimal image quality. For applications with poor lighting conditions optional wide dynamic range is available on some 1080p and 3MP models.

For challenging low-light applications, the 1.2MP STELLAR™, “Spatio Temporal Low Light Architecture” model offers best-in-class light sensitivity capturing details in near complete darkness. For additional low light capabilities Binning Mode is available on 3MP and 5MP camera models.

MegaBall G2 IR models are integrated with an Adjustable Infrared Illuminator, providing clear images in extreme, low-light scenes. Infrared camera models offer the ability to manually adjust the IR's level of intensity, providing the flexibility to ensure the scene is illuminated uniformly. For applications that

require the camera to be mounted in close proximity to the target, an optional manual lens with an ImmerVision Enables[®] panomorph system offers 180° and 360° views (5MP models).

The camera offers advanced streaming capabilities and is designed on an efficient H.264 encoding platform capable of delivering high quality video without straining the network.

The SD card slot supports up to 32GB of storage capacity for convenient onboard storage. The camera's power can be supplied via a Power-over-Ethernet compliant network cable connection or with power from a 12-48V DC/24V AC power supply.

The camera's interface allows for an intuitive, fast, and easy configuration; while the Free AV IP Utility tool allows users to quickly configure multiple cameras at one time. The MegaBall G2 is ONVIF Profile S (Open Network Video Interface Forum) and PSIA (Physical Security Interoperability Alliance) compliant, providing interoperability between network video products regardless of manufacturer.

| | | | | | | | | | | | |
|--|--|---|---|--------------------------------|-----------------------------|-----------------------------------|-----------------------------------|----------------------------|-----------------------------------|--|--|
| | | | | | | | | | | | |
| Integrated Motorized Lens with Remote Focus and Zoom | P-Iris Control for Best Depth of Field and Image Clarity | STELLAR™ Low Light Technology on 1.2MP Models | Wide Dynamic Range Available on Some 1080p and 3MP Models | Adjustable IR LEDs (IR Models) | Panomorph Lens (-01 Models) | True Day/Night with IR Cut Filter | CorridorView™ with 90° Image Flip | SDHC Card Slot (-S Models) | Integrated Microphone (-A Models) | Pixel Binning Mode on 3 and 5MP Models | Casino Mode™ Maintains at Least 30fps on AV2245 Models |

Series Features

- Remote Focus/Zoom
- P-Iris Lens for Best Depth of Field and Image Clarity
- CorridorView™ Allows 90° Image Rotation for Better Coverage in Hallways and Corridors
- True Day/Night Functionality with Mechanical IR Cut Filter
- Tamper-Resistant Housing
- Installer Friendly Cable Management, 3-Axis Adjustment, In-Ceiling and Surface Mount Options
- PoE and Auxiliary Power: 12–48V DC/24V AC
- Dual Encoder H.264/MJPEG
- Privacy Mask, Motion Detection, Flexible Cropping, Bit Rate Control, Multi-Streaming, Forensic Zooming and Non-Integer Scaling

Model Dependent Features

- Choice of resolution (1.2-, 1080p-, 3-, or 5MP options)
- STELLAR™ (Spatio Temporal Low Light Architecture) on 1.2MP Models
- True WDR up to 100dB at Full Resolution (Some 1080p and 3MP Models)
- Adjustable IR illumination up to 15m (50ft) for scenes with low or no ambient lighting (IR Models)
- Integrated Panomorph Solution for 180° and 360° Fields of View (-01 Models)
- Casino Mode™ Continuous 30fps Frame Rate Required by Gaming Industry Regulations (AV2245 Models)
- Binning Mode for Strong Low Light Performance on 3MP and 5MP Resolutions
- Variable illumination ensures that IR light is evenly disbursed (IR Models)
- Integrated Microphone and Audio Out (-A Models Only)
- SDHC Card Slot for Onboard Storage (-S Models)

* Junction box sold separately

** Dome models can be configured with or without a dome bubble

Camera Imaging Specifications

| Model | AV1245 | | AV2245 | | AV2246 | | AV3245 | | AV3246 | | AV5245 | | |
|-----------------------------|---------------------------------------|----|--|----|---|----|---|----|---|----|---|------------------|---|
| | PMIR | PM | PMIR | PM | PMIR | PM | PMIR | PM | PMIR | PM | PMIR | 01-D (Panomorph) | |
| Image Sensor | 1.2MP* | | 2.07MP | | 2.07MP | | 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) | | 0.02 Lux | | 0.1 Lux | | 0.3 Lux | | 0.1 Lux | | 0.3 Lux | | 0.3 Lux |
| | Color Binning (Day Mode) | | - | | - | | - | | 0.05 Lux | | 0.15 Lux | | 0.15 Lux |
| | B/W (Night Mode) | | 0.002 Lux, 0 Lux, IR sensitive | | 0 Lux, IR sensitive | | 0 Lux, IR sensitive | | 0 Lux, IR sensitive | | 0 Lux, IR sensitive | | 0 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 | - | | Yes | | Yes | | Yes | | Yes | | Yes | | |
| Adjustable IR | Yes | | - Yes | | - Yes | | - Yes | | - Yes | | - Yes - | | |
| Dynamic Range | 83.5dB | | 69.5dB | | WDR up to 100dB | | 69.5dB | | WDR up to 100dB | | 70.1dB | | |
| Maximum SNR | 54dB | | 44dB | | 49dB | | 44dB | | 49dB | | 45dB | | |
| Frame Rates | At Max Resolution | | 37fps (1280 x 960) | | 30fps (1920 x 1080) | | 30fps (1920 x 1080) | | 21fps (2048 x 1536) | | 21fps (2048 x 1536) | | 14fps (2592 x 1944) |
| | Cropped | | - | | 42fps (1280 x 1024) | | 41fps (1280 x 1024) | | 29fps (1920 x 1080) 41fps (1280 x 1024) | | 30fps (1920 x 1080) 41fps (1280 x 1024) | | 21fps (2048 x 1536) 29fps (1920 x 1080) 41fps (1280 x 1024) |
| | Binning Mode | | - | | - | | - | | 46fps (1024 x 768) 64fps (960 x 540) | | 21fps (1024 x 768) 27fps (800 x 600) 31fps (960 x 540) 32fps (640 x 512) | | 34fps (1296 x 972) 46fps (1024 x 768) 64fps (960 x 540) |
| Lens | Motorized Lens | | 2.8-8.5mm, F1.2, RZ, RF, P-iris, HFOV=102-34 | | 2.8-8.5mm, F1.2, RZ, RF, P-iris, HFOV=88-30 | | 2.8-8.5mm, F1.2, RZ, RF, P-iris, HFOV=88-30 | | 2.8-8.5mm, F1.2, RZ, RF, P-iris, HFOV=94-32 | | 2.8-8.5mm, F1.2, RZ, RF, P-iris, HFOV=94-32 | | 3.3-8.5mm, F1.2, RZ, RF, P-iris, HFOV=95-41 |
| | Manual Panomorph ImmerVision Enables® | | - | | - | | - | | - | | - | | 0.98mm (Short Axis) 1.12mm (Long Axis) F2.0, H-FOV = 182° A8TRT Lens |

* STELLAR™ Model

SituationalPlus™

| Model | Lens | View Angle | Distance to pixel density (ft.)(m) | | | | | |
|----------|-----------|------------|------------------------------------|-------------|-------------|----------------------------|---------------|----------------------------|
| | | | 30ppf-T | 30ppf-W | 60ppf-T | 60ppf-W | 90ppf-T | 90ppf-W |
| AV1245PM | 2.8-8.5mm | 34° – 102° | 68' (20.7m) | 12' (3.7m) | 33' (10.1m) | N/A Less than 1' (0.3m) | 20' (6.1m) | N/A Less than 1' (0.3m) |
| AV2245PM | 2.8-8.5mm | 30° – 88° | 120' (36.6m) | 34' (10.4m) | 58' (17.7m) | 15' (4.6m) | 38' (11.6m) | 8' (2.4m) |
| AV2246PM | 2.8-8.5mm | 30° – 88° | 120' (36.6m) | 34' (10.4m) | 58' (17.7m) | 15' (4.6m) | 38' (11.6m) | 8' (2.4m) |
| AV3245PM | 2.8-8.5mm | 32° – 94° | 120' (36.6m) | 31' (9.4m) | 59' (18.0m) | 13.5' (4.1m) | 39' (11.9m) | 7' (2.1m) |
| AV3246PM | 2.8-8.5mm | 32° – 94° | 120' (36.6m) | 31' (9.4m) | 59' (18.0m) | 13.5' (4.1m) | 39' (11.9m) | 7' (2.1m) |
| AV5245PM | 3.3-8.5mm | 41° – 95° | 115' (35.1m) | 38' (11.6m) | 57' (17.4m) | 17.5' (5.3m) | 37.5' (11.4m) | 10' (3.0m) |

Programmability

| | | |
|-----------------------------------|---|--|
| Optics | Remote focus, remote zoom and P-iris control (PM models) | |
| | Adjustable IR (IR Models) | Beam angle and LED intensity manually changeable |
| | Pixel Binning Mode (3MP and 5MP) | |
| Programmable Shutter Speed | Controls motion blur | |
| Motion Detection | Real-time, Privacy mask, 1024 detection zones | |
| Casino Mode™ | Maintains 30fps (AV2245 model) | |
| Flexible Cropping | Resolution windowing down to 1x1 pixel for JPEG and 2x2 pixels for H.264 | |
| Backlight Compensation | Auto multi-matrix white balance | |
| Flicker Control | 50/60Hz selectable | |
| Image Rotation | 180° image flip or CorridorView™ (90°, 180° and 270° image rotation) on -S models | |
| Scaling | Non-integer scaling down to 128x96 <i>(See Scaling Resolution Chart on page 3)</i> | |
| Wide Dynamic Range | Auto adjustment between WDR and LDR modes (WDR models) | |
| Noise Reduction | Low light noise filter control | |
| Efficiency | Bit rate and bandwidth limitation control | |
| Sharpness | Selectable enhancement level | |
| Miscellaneous | Programmable resolution, brightness, saturation, gamma, tint | |

Data Transmission

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

Compliance

| | |
|--------------------------|--|
| Industry Standard | ONVIF Profile S and PSIA Conformant |
| Listings | UL (CB) |
| FCC Compliance | 47 CFR 15 Class A |
| Environmental | RoHS, REACH, WEEE |
| Markings | (CE) EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3, EN60950 |

Environmental

| | |
|------------------------------|-------------------------------|
| Operating temperature | -5°C (-23°F) to +50°C (122°F) |
| Humidity | 0% to 90% (non-condensing) |
| Storage temperature | -20°C (-4°F) to +60°C (140°F) |

General Electrical

| | |
|----------------------------|--|
| Alarm Input | General purpose opto-coupled (Except PMIR) |
| Alarm Output | General purpose opto-coupled (Except 01-DA)* |
| Power Over Ethernet | PoE 802.3af, Class 3 Total PoE Solution (No external power requirement) |
| Auxiliary Power | 12-48V DC, 24V AC |

* No alarm trigger available via the alarm output.

Max Power Consumption (Watts DC Power)

| Model Number | PM | PMIR | 01-D (Panomorph) |
|-----------------|-------|-------|------------------|
| AV1245 | - | 8.2 W | - |
| AV2245 / AV3245 | 6.7 W | 8.1 W | - |
| AV2246 / AV3246 | 7.8 W | 9.4 W | - |
| AV5245 | 7.1 W | 8.7 W | 5.7 W |

IR Illuminator (PMIR Models)

| | |
|----------------------------|---|
| LEDs | 12 pcs 850nm Adjustable LEDs with Adjustable IR |
| Projection Distance | 50ft (15m) max |
| Projection Angle | 60° and 80° |

Audio Electrical (-A models only)

| | |
|---------------------|-------------------------------------|
| Streaming | Two-way |
| Compression | G.711 PCM 8 kHz |
| Input/Output | Integrated microphone / line output |

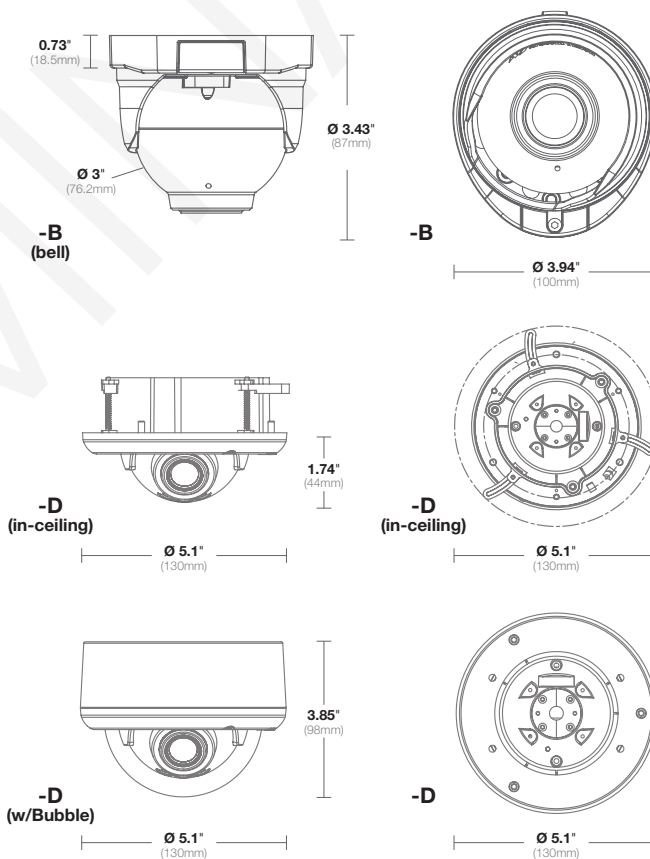
Scaling Resolution Chart

| Scaled Resolution | H | V | 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 |

Mechanical

| | | | |
|--|---|---|-----------------|
| Casing | -B | Surface mount with die-cast aluminum housing | |
| | -D | Plastic surface/in-ceiling dome with acrylic bubble | |
| Gimbal | Easy 3-axis camera adjustment with 360° pan, 90° tilt and 360° z-axis | | |
| Dimensions <i>(See Dimensions)</i> | -B (bell) | Ø 3.93" (100mm) x 3.24" H (87mm) | |
| | -D (in-ceiling) | Ø 5.1" (130mm) x 1.74" H (44mm) | |
| | -D (surface w/ bubble) | Ø 5.1" (130mm) x 3.85" H (98mm) | |
| Weight | | Camera Unit | Packaged |
| | -B | 1.2lbs (0.54kg) | 1.6lbs (0.7kg) |
| | -D | 1.2lbs (0.54kg) | 1.9lbs (0.86kg) |
| Dome Color | Light Gray Dome | | |

Dimensions



Optional Compatible Accessories

| | | |
|-----------|-----------------|--|
| -B | MB2-JBA | Light gray junction box adapter for MegaBall G2 Bell Mount |
| -D | AV-EBA | Light gray electrical box adapter |
| | AV-JBA | Light gray junction box adapter |
| | AV-SPMJB | Light gray ceiling mount with 3/4" NPT standard |
| | AV-SWMJB | Light gray wall mount with 3/4" NPT standard |

Ordering Information



Model Specific Features

| Model | Resolution | Frame Rate | Features | | |
|--------|------------|------------|----------|--------------|----------|
| AV1245 | 1.2MP | 37fps | - | - | STELLAR™ |
| AV2245 | 1080p | 30fps | - | Casino Mode™ | - |
| AV2246 | 1080p | 30fps | WDR | - | - |
| AV3245 | 3MP | 21fps | - | - | Binning |
| AV3246 | 3MP | 21fps | WDR | - | Binning |
| AV5245 | 5MP | 14fps | - | - | Binning |

Build-to-Order Options

| | |
|------|---|
| -A | Audio |
| -B | Bell Mount |
| -D | Dome or Recessed Dome Model |
| -LG | Light Gray Dome |
| PM | Remote Zoom, Remote Focus, P-iris, True Day/Night |
| PMIR | Wide Angle Lens w/ Remote Focus/Zoom, P-Iris, True Day/Night, IR LEDs |
| -S | SDHC Card Slot, CorridorView™ w/ 90° Image Flip, Non-Integer Scaling |
| -01 | Manual Panomorph Lens, True Day/Night |

Model Numbers

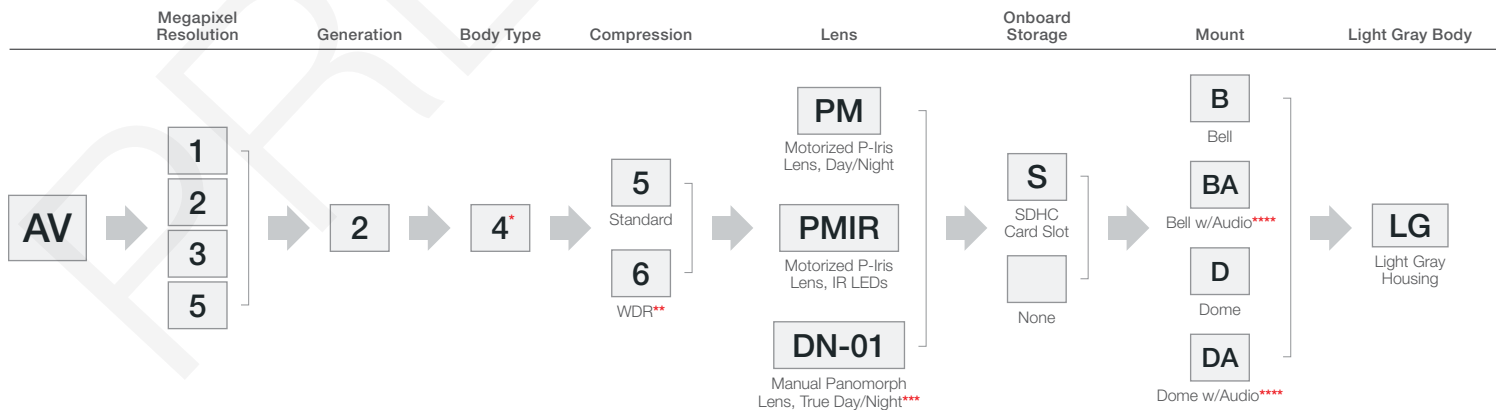
| | | |
|--------------|-------------------|-----------|
| 1.2MP | AV1245PMIR-SB-LG | STELLAR |
| 1080p | AV2245PM-D-LG | |
| | AV2245PM-B-LG | |
| | AV2245PMIR-SB-LG | |
| | AV2245PMIR-SBA-LG | |
| | AV2246PM-D-LG | WDR |
| | AV2246PM-B-LG | WDR |
| | AV2246PMIR-SB-LG | WDR |
| 3MP | AV3245PM-D-LG | |
| | AV3245PM-B-LG | |
| | AV3245PMIR-SB | |
| | AV3246PM-D-LG | WDR |
| | AV3246PM-B-LG | WDR |
| | AV3246PMIR-SB-LG | WDR |
| | AV3246PMIR-SBA-LG | WDR |
| 5MP | AV5245PM-D-LG | |
| | AV5245PM-B-LG | |
| | AV5245PMIR-SB-LG | |
| | AV5245PMIR-SBA-LG | |
| | AV5245DN-01-D-LG | Panomorph |
| | AV5245DN-01-DA-LG | Panomorph |

Configurations



¹ Can be configured as a surface mount or flush mount

Create Your Model (Example: AV5245PMIR-SBA-LG)



* "4" Represents MegaBall product line—which are then defined by "B" or "D" for body style
 ** WDR for AV2246 and AV3246 models only
 *** Manual Panomorph Lens only available for 5MP models
 **** Audio only available on some models