

# MegaBall® G2 IP Megapixel Cameras

1.2, 1080p, 3, and 5 Megapixel (MP) H.264 All-in-One Motorized P-Iris or Panomorph Lens True Day/Night Indoor IP Cameras with SNAPstream™ (Smart Noise Adaptation and Processing), Enhanced WDR™ (Wide Dynamic Range), STELLAR™ (Spatio Temporal Low Light Architecture), and Adjustable IR Models



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 low-light color images without IR, 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.

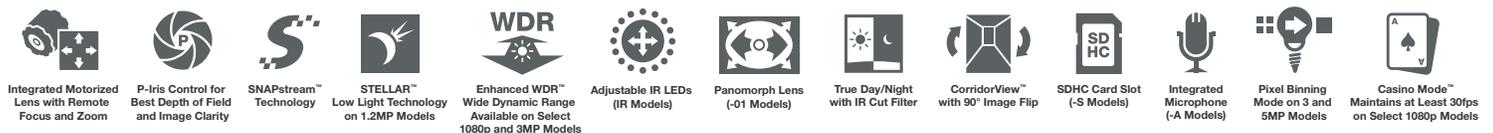
MegaBall G2 IR models are integrated with an Adjustable Infrared Illuminator, providing clear images in extreme, low-light scenes. Infrared camera models offer the ability to manually adjust the IR's level of intensity, providing the

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 (PoE) compliant network cable connection or with power from a 12-48V DC/24V AC power supply.

The MegaBall G2 is ONVIF Profile S (Open Network Video Interface Forum) compliant, providing interoperability between network video products regardless of manufacturer.



## Series Features

- 1.2, 1080p, 3, or 5MP Models
- Remote Focus/Zoom Motorized P-Iris Lens
- P-Iris Control to Get Best Depth of Field and Image Clarity
- SNAPstream™ Capability to Reduce Bandwidth without Impacting Image Quality
- STELLAR™ (Spatio Temporal Low Light Architecture) on 1.2MP Models
- True Day/Night Functionality with Mechanical IR Cut Filter
- Binning Mode for Strong Low Light Performance on 3MP and 5MP Cameras
- Enhanced WDR™ up to 100dB at Full Resolution: See Clearly in Shaded and Bright Light Conditions Simultaneously on Select 1080p and 3MP Models
- Casino Mode™ Maintains 30fps or Higher Required by Gaming Industry Regulations (Select 1080p Models)
- CorridorView™ Allows 90° Image Rotation for Better Coverage in Hallways and Corridors
- Privacy Mask, Motion Detection, Flexible Cropping, Bit Rate Control, Multi-Streaming, Multicasting, Forensic Zooming, and Non-Integer Scaling
- Dual Encoder H.264/MJPEG
- Network Protocols Include HTTPS†, 802.1x, IPv6, QoS, DHCP, and More
- Tamper-Resistant Housing
- Installer Friendly Cable Management, 3-Axis Adjustment, In-Ceiling and Surface Mount Options
- All-in-One H.264 PoE Solution with Auxiliary Power: 12–48V DC/24V AC
- Adjustable IR Illumination with Variable Illumination Ensures that IR Light is Evenly Disbursed up to 50ft (15m) for Scenes with Low or No Ambient Light (IR Models)
- Integrated Panomorph Solution for 180° and 360° Fields of View (-01 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

† HTTPS is for “-S” models only and cannot be used with STELLAR or audio functionality



Optional Manual ImmerVision Enables® Panomorph Lens (01-D-LG model)

Camera Imaging Specifications

Model	AV1245		AV2245		AV2246		AV3245		AV3246		AV5245		
	PMIR	PM	PMIR	PM	PMIR	PM	PMIR	PM	PMIR	PM	PMIR	PM	O1-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	0.2 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)	0.002 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 Scaling Resolution Chart on page 3)	-		Yes		Yes		Yes		Yes				Yes
Adjustable IR	Yes	-	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	-	30fps (1280 x 1024)		30fps (1280 x 1024)		30fps (1920 x 1080) 30fps (1280 x 1024)		30fps (1920 x 1080) 30fps (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) 21fps (800 x 600) 21fps (960 x 540) 21fps (640 x 512)				34fps (1296 x 972) 46fps (1024 x 768) 64fps (960 x 540)
Lens	Motorized Lens	2.8–8.5mm, F1.2, RF, RZ, P-iris, H-FOV = 102°–34°	2.8–8.5mm, F1.2, RF, RZ, P-iris, H-FOV = 88°–30°		2.8–8.5mm, F1.2, RF, RZ, P-iris, H-FOV = 88°–30°		2.8–8.5mm, F1.2, RF, RZ, P-iris, H-FOV = 94°–32°		2.8–8.5mm, F1.2, RF, RZ, P-iris, H-FOV = 94°–32°			3.3–8.5mm, F1.2, RF, RZ, P-iris, H-FOV = 95°–41°	-
	Manual Panomorph ImmerVision Enables®	-	-		-		-		-			-	0.98mm (Short Axis) 1.12mm (Long Axis) F2.0, H-FOV = 182° A8TRT Lens

\*\*\* STELLAR™ Model † Maximum with H.264 compression

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	102°–34°	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	88°–30°	120' (36.6m)	34' (10.4m)	58' (17.7m)	15' (4.6m)	38' (11.6m)	8' (2.4m)
AV2246PM	2.8–8.5mm	88°–30°	120' (36.6m)	34' (10.4m)	58' (17.7m)	15' (4.6m)	38' (11.6m)	8' (2.4m)
AV3245PM	2.8–8.5mm	94°–32°	120' (36.6m)	31' (9.4m)	59' (18.0m)	13.5' (4.1m)	39' (11.9m)	7' (2.1m)
AV3246PM	2.8–8.5mm	94°–32°	120' (36.6m)	31' (9.4m)	59' (18.0m)	13.5' (4.1m)	39' (11.9m)	7' (2.1m)
AV5245PM	3.3–8.5mm	95°–41°	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)
Low-Light Performance	STELLAR 1.2MP models
	Pixel Binning Mode 3MP and 5MP models
	Adjustable IR IR models - beam angle and LED intensity manually changeable
Programmable Shutter Speed	Controls motion blur, 1ms–500ms
Motion Detection	Real-time, 1024 detection zones
Privacy Masking	Unlimited
Casino Mode™	Maintains 30fps or higher (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	5Hz–255Hz adjustable
Image Rotation	CorridorView™ (90°, 180°, and 270° image rotation)
Scaling	Non-integer scaling down to 128x96 (See Scaling Resolution Chart on page 3)

(Programmability Cont.)

Wide Dynamic Range	Auto adjustment between WDR and LDR modes (WDR models)
Efficiency	SNAPstream™ (Smart Noise Adaptation and Processing)
	Bit rate and bandwidth limitation control
Sharpness	Selectable enhancement level
Miscellaneous	Programmable resolution, brightness, saturation, gamma, tint
	Electronic pan, tilt, zoom (PTZ)
Password	16-digit ASCII character password

Data Transmission

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

† HTTPS is for "-S" models only and cannot be used with STELLAR or audio functionality

## Compliance

<b>Industry Standard</b>	ONVIF Profile S conformant
<b>Listings</b>	UL (CB)
<b>FCC Compliance</b>	47 CFR 15 Class A
<b>Environmental</b>	RoHS, REACH, WEEE
<b>Markings</b>	(CE) EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3, EN60950

## Environmental

<b>Operating Temperature</b>	-5°C (23°F) to +50°C (122°F)
<b>Humidity</b>	0% to 90% (non-condensing)
<b>Storage Temperature</b>	-20°C (-4°F) to +60°C (140°F)

## General Electrical

<b>Alarm Input</b>	General purpose opto-coupled (except PMIR models)
<b>Alarm Output</b>	General purpose opto-coupled
<b>Power Over Ethernet</b>	PoE 802.3af, Class 3 Total PoE solution (no external power requirement)
<b>Auxiliary Power</b>	12-48V DC, 24V AC

## Max Power Consumption (Watts DC Power)

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

## IR Illuminator (PMIR Models)

<b>LEDs</b>	12 pcs 850nm LEDs with Adjustable IR
<b>Projection Distance</b>	50ft (15m) max
<b>Projection Angle</b>	60° and 80°

## Audio Electrical (-A Models Only)

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

## Mechanical

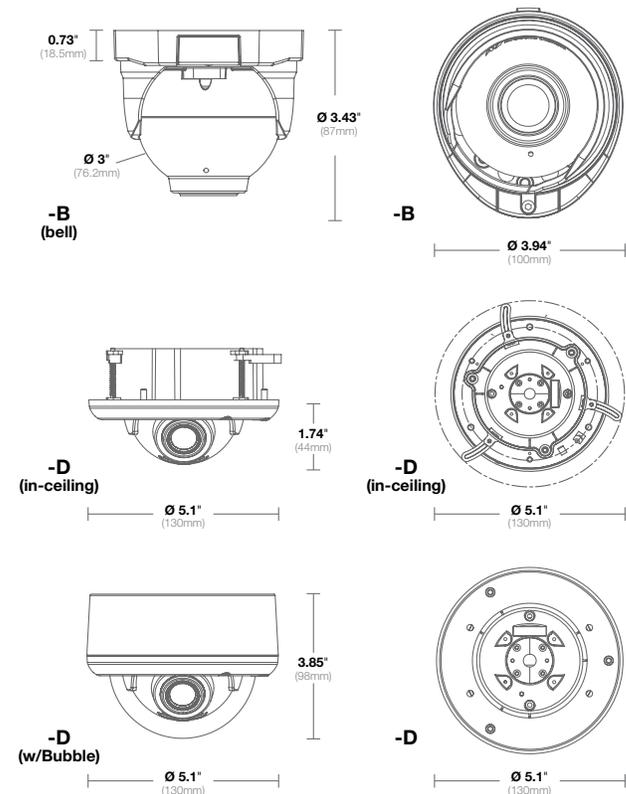
<b>Casing</b>	<b>-B</b>	Surface mount with die-cast aluminum housing	
	<b>-D</b>	Plastic surface/in-ceiling dome with acrylic bubble	
<b>Gimbal</b>	Easy 3-axis camera adjustment with 360° pan, 90° tilt and 360° z-axis		
<b>Dimensions</b> <i>(See Dimensions)</i>	<b>-B (bell)</b>	Ø 3.93" (100mm) x 3.24" H (87mm)	
	<b>-D (in-ceiling)</b>	Ø 5.1" (130mm) x 1.74" H (44mm)	
	<b>-D (surface w/ bubble)</b>	Ø 5.1" (130mm) x 3.85" H (98mm)	
<b>Weight</b>		<b>Camera Unit</b>	<b>Packaged</b>
	<b>-B</b>	1.15lbs (0.52kg)	1.65lbs (0.75kg)
	<b>-D</b>	1.15lbs (0.52kg)	1.7lbs (0.77kg)
<b>Dome Color</b>	Light gray dome		

## Scaling Resolution Chart<sup>§</sup>

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

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

## Dimensions



See Next Page for Ordering Information



### Model Specific Features

Model	Resolution	Frame Rate <sup>1</sup>	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

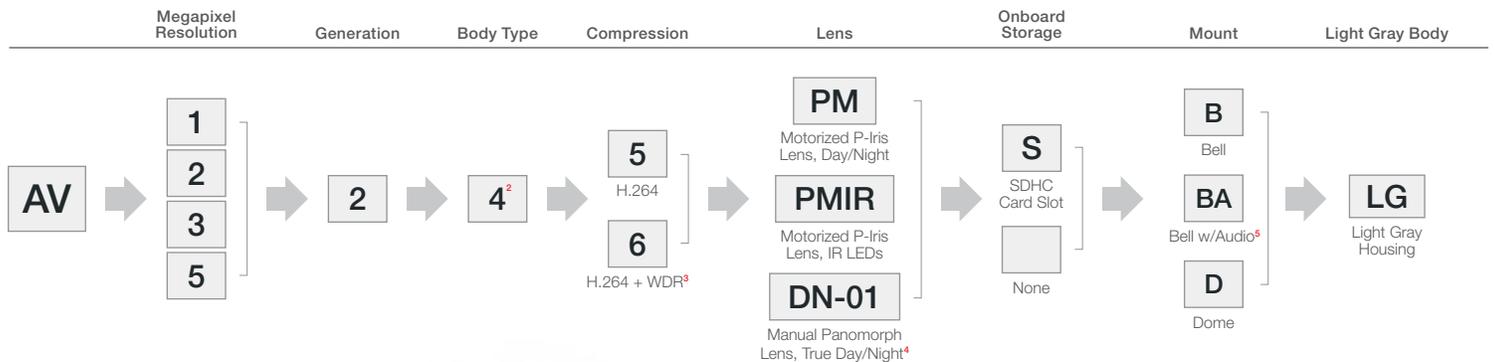
### Build-to-Order Options

-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, Non-Integer Scaling, HTTPS <sup>†</sup>
-01	Manual Panomorph Lens, True Day/Night

### Configurations



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



### Model Numbers

<b>1.2MP</b>	AV1245PMIR-SB-LG	STELLAR
<b>1080p</b>	AV2245PM-D-LG	
	AV2245PM-B-LG	
	AV2245PMIR-SB-LG	
	AV2245PMIR-SBA-LG	Audio
	AV2246PM-D-LG	WDR
	AV2246PM-B-LG	WDR
<b>3MP</b>	AV3245PM-D-LG	
	AV3245PM-B-LG	
	AV3245PMIR-SB	
	AV3246PM-D-LG	WDR
	AV3246PM-B-LG	WDR
	AV3246PMIR-SB-LG	WDR
<b>5MP</b>	AV5245PM-D-LG	
	AV5245PM-B-LG	
	AV5245PMIR-SB-LG	
	AV5245PMIR-SBA-LG	Audio
	AV5245DN-01-D-LG	Panomorph

### Accessories

AV-EBAR	Round Electrical Box Adapter Plate
<i>Bell Mount (-B Models)</i>	
MB2-JBA	Junction Box for MegaBall Series "Bell" Style Cameras
<i>Dome Mount (-D Models)</i>	
AV-CRMA	Corner Mount Adapter
AV-EBAS	Square Electrical Box Adapter Plate (Compatible with AV-SWMJB)
AV-PMA	Pole Mount Adapter
AV-SPMJB	Small Pendant Mount Bracket with Junction Box (1/2" NPT Standard)
AV-SWMJB	Small Wall Mount Bracket with Junction Box (1/2" NPT Standard)