# **Surround**Video® Omni G2 IP Megapixel Cameras

12 or 20 Megapixel (MP) H.264 All-in-One Remote Focus Omni-Directional User-Configurable Multi-Sensor True Day/Night Indoor/Outdoor Dome IP Cameras with SNAPstream™ (Smart Noise Adaptation and Processing) and Enhanced WDR™ (Wide Dynamic Range) Models



The SurroundVideo Omni G2, next generation multi-sensor, multi-megapixel camera was built to withstand evolving customer change-requirements. The unique, future-proof platform of the SurroundVideo Omni G2 provides organizations of all sizes the flexibility to deploy a security system that truly matches their video surveillance needs now; and again if requirements change in the future. With its ground-breaking flexibility such as the ability to easily move each of the four sensors around the magnetic 70+ placement-point Omni track, the 3-axis gimbals for an increased range of motion when positioning the sensors, and the ability to interchange the remote focus modular lenses for a customized field of view, the SurroundVideo Omni G2 provides customers with the confidence in a future-proof investment. The SurroundVideo Omni G2 changes when you do.

The SurroundVideo Omni G2 multi-megapixel camera series features a choice of 12- or 20-megapixel resolution options. These cameras provide an all-in-one solution for capturing wide area video surveillance while maximizing the field-of-view and reducing the total number of cameras required saving installers time and end users money.

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 for the highest image quality at any time of day. For applications with bright or over saturated lighting conditions, optional Enhanced WDR™ wide dynamic range delivers up to 100dB at full resolution and is available on select 12MP models. For applications with poor low lighting conditions, Binning Mode increases the camera's low light

performance by combining pixels so that more light can be collected.

Once mounted, the operator can quickly focus and position the camera remotely, eliminating the need to adjust the camera on-site. No more hassle individually installing multiple cameras to cover a wide area, manually focusing lenses, or risk missing critical information.

SurroundVideo Omni G2 is designed for demanding environments. Subjected and certified to rigorous dust and water tests, the IP66 rating, and its extended operating temperature range make it ideal for outdoor applications. The IK-10 rated, rugged dome housing is perfect for deterring vandals since it can withstand the equivalent of 55 kg (120 lbs) of force.

SurroundVideo Omni G2 models feature SNAPstream™ (Smart Noise Adaptation and Processing) technology to reduce bandwidth without impacting image quality. 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. Power can be supplied via a single Power-over-Ethernet compliant network cable or with power from a 18–48V 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. SurroundVideo Omni G2 is ONVIF Profile S (Open Network Video Interface Forum) compliant, providing interoperability between network video products regardless of manufacturer.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Interchangeable Lenses with Remote Focus Module | Omni-Directional Track with 4 Customizable Sensors | SNAPstream™ Technology | 270° FOV Capable | Enhanced WDR™ Wide Dynamic Range on Select 12MP Models | True Day/Night with IR Cut Filter | Pixel Binning Mode | Ultra Low Profile Design | 3-Axis Gimbal | Impact / Weather Resistant IK-10 and IP66 Rated |

## Series Features

- 12MP and 20MP Models
- Remote Focus
- Forensic Zooming – Zoom Live or After the Event While Recording Full Field-of-View in HD – Replace PTZ Devices
- 3-Axis Gimbal – Up to 4 Individual Camera Gimbals can be Independently Placed in Any Orientation Around a 360° Track with Extra Positions for Looking Straight Down
- Multiple Lens Options in a Single Camera Housing from 2.1mm up to 16mm
- SNAPstream™ Capability to Reduce Bandwidth without Impacting Image Quality
- Enhanced WDR™ up to 100dB at Full Resolution: See Clearly in Shaded and Bright Light Conditions Simultaneously on Select 12MP Models

- True Day/Night Functionality with Mechanical IR Cut Filter
- Binning Mode for Strong Low Light Performance
- Privacy Mask, Motion Detection, Flexible Cropping, Bit Rate Control, Multi-Streaming, and Multicasting
- Dual Encoder H.264/MJPEG
- Network Protocols Include 802.1x, IPv4, DHCP, and More
- PoE and Auxiliary Power: 18–48V DC/24V AC
- Ultra Discrete, Low-Profile Housing
- Outdoor Rated IP66 and IK-10 Impact-Resistant Housing
- Complete Mounting Options

## Camera Imaging Specifications

| Model | | AV12275DN | | AV12276DN | | AV20275DN | |
|---|---|---|---|---|---|---|---|
| **Image Sensor (CMOS)** | | 12MP (4 x 3MP) | | 12MP (4 x 3MP) | | 20MP (4 x 5MP) | |
| **Optical Format** | | 1/3" | | 1/3.2" | | 1/2.5" | |
| **Pixel Pitch** | | 2.2µm | | 2.2µm | | 2.2µm | |
| **Minimum Illumination** | Color (Day Mode) | 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) | 0.02 Lux, IR sensitive | | 0.02 Lux, IR sensitive | | 0.03 Lux, IR sensitive | |
| **Full FOV Resolution** | | Total | 8192 H x 1536 V | Total | 8192 H x 1536 V | Total | 10240 H x 1920 V |
| | | Per Sensor | 2048 H x 1536 V | Per Sensor | 2048 H x 1536 V | Per Sensor | 2560 H x 1920 V |
| **1/4 Resolution** | | Total | 4096 H x 768 V | Total | 4096 H x 768 V | Total | 5120 H x 960 V |
| | | Per Sensor | 1024 H x 768 V | Per Sensor | 1024 H x 768 V | Per Sensor | 1280 H x 960 V |
| **Dynamic Range** | | 69.5dB | | WDR up to 100dB | | 70.1dB | |
| **Frame Rates*** | At Max Resolution | 10fps (8192x1536) | | 10fps (8192x1536) | | 7fps (10240x1920) | |
| | 1/4 Resolution | 14fps (4096x768) | | 14fps (4096x768) | | 10fps (5120x960) | |
| | Binning Mode | 29fps (4096x768) | | 14fps (4096x768) | | 24fps (5120x960) | |
| **Lens (x4)** | 2.8mm Lens Option (-28 Models) | 2.8mm, F1.8, H-FOV = 89° | | 2.8mm, F1.8, H-FOV = 89° | | 2.8mm, F1.6, H-FOV = 113° | |
| | 8mm Lens Option (-08 Models) | 8mm, F1.6, H-FOV = 33° | | 8mm, F1.6, H-FOV = 33° | | 8mm, F1.6, H-FOV = 42° | |

## Situational<span style="color:red">Plus</span>™

| Model | Lens | View Angle | Distance to pixel density (ft.)(m) | | |
|---|---|---|---|---|---|
| | | | 30ppf (98ppm) | 60ppf (197ppm) | 90ppf (295ppm) |
| **AV12275DN-28** | MPM2.8A | 89° (x4) | 34' (10.4m) | 15.5' (4.7m) | 8' (2.4m) |
| **AV12275DN-08** | MPM8.0 | 33° (x4) | 114.5' (34.9m) | 56' (17.1m) | 37.5' (11.4m) |
| **AV12276DN-28** | MPM2.8A | 89° (x4) | 34' (10.4m) | 15.5' (4.7m) | 8' (2.4m) |
| **AV12276DN-08** | MPM8.0 | 33° (x4) | 114.5' (34.9m) | 56' (17.1m) | 37.5' (11.4m) |
| **AV20275DN-28** | MPM2.8A | 113° (x4) | 27' (8.2m) | 12' (3.7m) | 5' (1.5m) |
| **AV20275DN-08** | MPM8.0 | 42° (x4) | 114' (34.7m) | 56' (17.1m) | 36' (11.0m) |

## Programmability

| | |
|---|---|
| **Optics** | M12 lens and remote focus module |
| **Low Light Performance** | Pixel Binning Mode |
| **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 |
| **MoonLight™ Mode** | Extended exposure and noise cancellation |
| **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 |
| **Wide Dynamic Range** | Auto switch control adjustment between WDR and LDR modes (WDR models) |
| **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 |

*(Programmability Cont.)*

| | |
|---|---|
| **Miscellaneous** | Programmable resolution, brightness, saturation, gamma, tint |
| | Simultaneous delivery of full field-of-view and zoomed images |
| | Electronic pan, tilt, zoom (PTZ) |
| | Auto Exposure (AE) and Gain Control (AGC) > 120dB |
| | Programmable shutter speed to help control motion blur |

## Data Transmission

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

## Compliance

| | |
|---|---|
| **Industry Standard** | ONVIF Profile S conformant |
| **Listings** | UL (CB) |
| **FCC Compliance** | 47 CFR 15 Class A |
| **Environmental** | RoHS, REACH, WEEE |
| **Markings** | (CE) EN 55022:2010 Class A, EN 55024:2010, EN 61000-3-2:2006+A1:2009+A2:2009, EN61000-3-3: 2008, EN60950-1:2006+A11:2009+A1:2010+A12:2011, (UL) IEC 60950-1 (ed. 2) and IEC 60950-22 (ed. 1) |
| **CoO** | Made in the USA |

## Environmental

| | |
|---|---|
| **Operating Temperature** | -40°C (-40°F) to +50°C (122°F) |
| **Humidity** | 0% to 90% (non-condensing) |
| **Storage Temperature** | -40°C (-40°F) to +60°C (140°F) |

**\*** Maximum with H.264 compression

## Electrical

| | |
|---|---|
| **Alarm Input/Output** | 1 input / 1 output |
| **Power Over Ethernet** | PoE 802.3af, Class 3 |
| **Auxiliary Power** | 18–48V DC, 24V AC |
| **Power Consumption** | 14W max (auxiliary) |

## Mechanical

| | | |
|---|---|---|
| **Casing** | | Die-cast aluminum chassis with polycarbonate dome bubble |
| | | IP66 weather proof standard |
| | | Impact resistant, IK-10 rated |
| **Gimbal** | | Easily adjustable, 3-axis w/360° pan, 90° tilt, and 360° z-axis |
| **Dimensions** *(See Dimensions)* | **Unit** | Ø 7.7" (196mm) x 3.1" H (78.5mm) |
| | **Bubble Only** | Ø 6.7" (169.2mm) x 1.3" H (33.4mm) |
| | **Packaged** | 8" W (203mm) x 8" L (203mm) x 4" H (102mm) |
| **Weight** | **Unit** | 2.8lbs (1.27kg) |
| | **Packaged** | 3.4lbs (1.54kg) |

## Dimensions
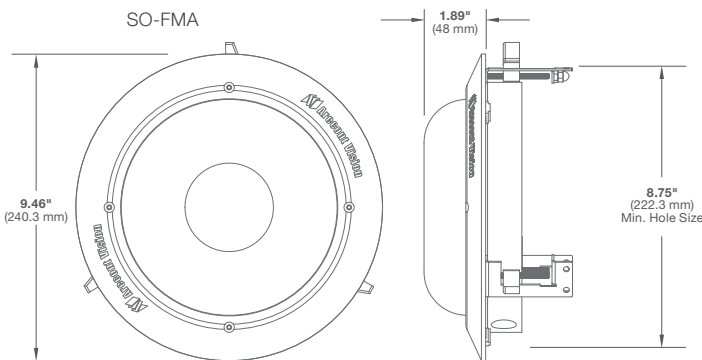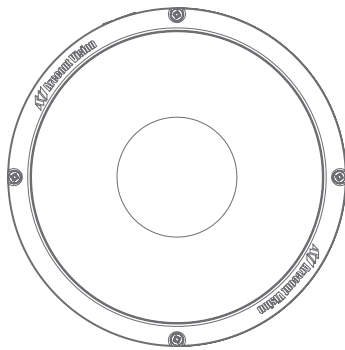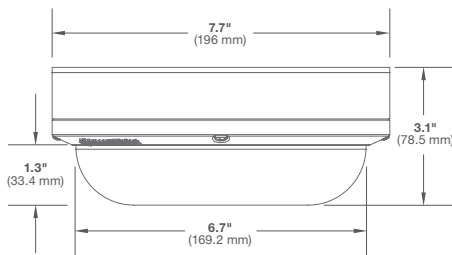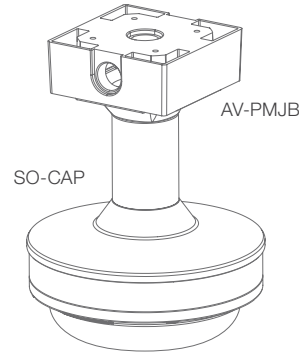




**Ceiling Mount Configuration**
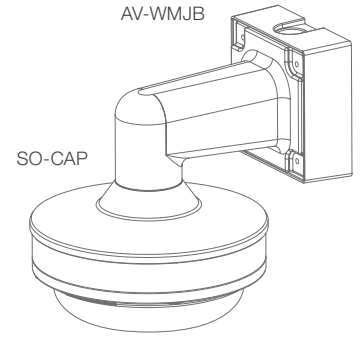
**Wall Mount Configuration**
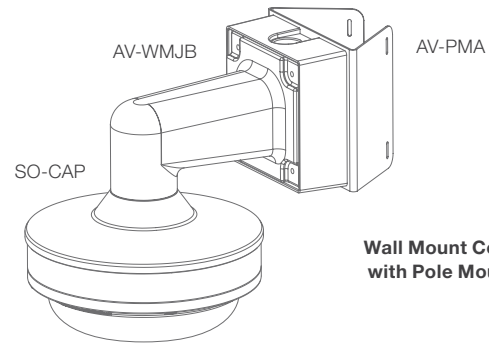


**Wall Mount Configuration with Pole Mount Adapter**
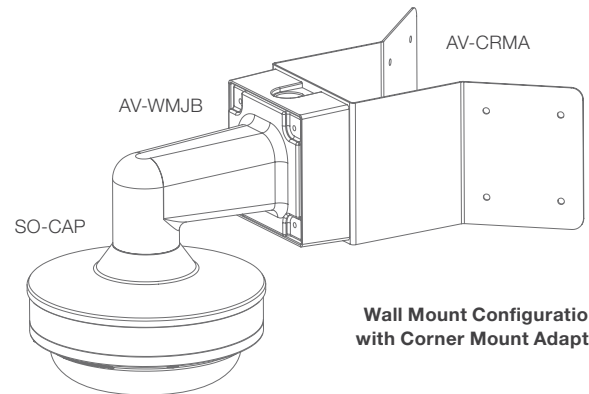


**Wall Mount Configuration with Corner Mount Adapter**



**Flush Mount Adapter**

*See Next Page for Ordering Information*

## Options

| | |
|---|---|
| **-NL** | No Lenses (User Configurable and Ordered Separately) |
| **-28** | Configured with 2.8mm Lenses[1] |
| **-08** | Configured with 8mm Lenses[2] |

[1] Good option for a 270° Corner Mount configuration
[2] Good configuration option for a hallway intersection

## Lens Options (Sold Separately)

| Model | Focal Length | Horizontal Field of View | | |
|---|---|---|---|---|
| | | **3MP** | **3MP WDR** | **5MP** |
| **MPM2.1** | 2.1mm | 121° | 121° | - |
| **MPM2.8A**[3] | 2.8mm | 89° | 89° | 113° |
| **MPM4.0A** | 4mm | 63° | 63° | 80° |
| **MPM6.0** | 6mm | 43° | 43° | 56° |
| **MPM8.0**[3] | 8mm | 33° | 33° | 42° |
| **MPM12.0A** | 12mm | 22° | 22° | 28° |
| **MPM16.0** | 16mm | 16° | 16° | 20° |

[3] MPM2.8A (2.8mm) is the default lens for "-28" models and MPM8.0 (8mm) is the default lens for "-08" models

## Model Specific Features

| Model | Resolution | Frame Rate* | Features | |
|---|---|---|---|---|
| **AV12275DN** | 12MP | 10fps | - | Binning |
| **AV12276DN** | 12MP | 10fps | WDR | Binning |
| **AV20275DN** | 20MP | 7fps | - | Binning |

\* Maximum with H.264 compression

## Model Numbers

| 12MP | |
|---|---|
| | AV12275DN-NL |
| | AV12275DN-28 |
| | AV12275DN-08 |
| | AV12276DN-NL `WDR` |
| | AV12276DN-28 `WDR` |
| | AV12276DN-08 `WDR` |

| 20MP | |
|---|---|
| | AV20275DN-NL |
| | AV20275DN-28 |
| | AV20275DN-08 |

## Accessories (Sold Separately)

| | |
|---|---|
| **AV-CRMA** | Corner Mount Adapter |
| **AV-EBAR** | Round Electrical Box Adapter Plate |
| **AV-JBA**[4] | Standard Junction Box |
| **AV-PMA** | Pole Mount Adapter |
| **AV-PMJB** | Pendant Mount Bracket with Standard Junction Box *(Fits Cap 1.5" NPT, Box Fits 3/4" NPT)* |
| **AV-WMJB** | Wall Mount Bracket with Standard Junction Box *(Fits Cap 1.5" NPT, Box Fits 3/4" NPT)* |
| **SO-CAP** | Mounting Cap for SurroundVideo® Omni Series[5] |
| **SO-FMA** | Flush Mount Adapter for SurroundVideo Omni Series[5] |
| **SO-SSA** | Sun Shield for SurroundVideo Omni Series[5] |

[4] Replacement part for AV-PMJB and AV-WMJB
[5] SurroundVideo Omni and SurroundVideo Omni G2 only

## Create Your Model   (Example: **AV12276DN-28**)

| Megapixel Resolution | Generation | Body Type | Compression | True Day/Night | Lens |
|---|---|---|---|---|---|

AV → [ 12 / 20 ] → 2 → 7[6] → [ 5 H.264 / 6 H.264 + WDR[7] ] → DN (True Day/Night) → [ 28 (2.8mm Lens) / 08 (8mm Lens) / NL (No Lens) ]
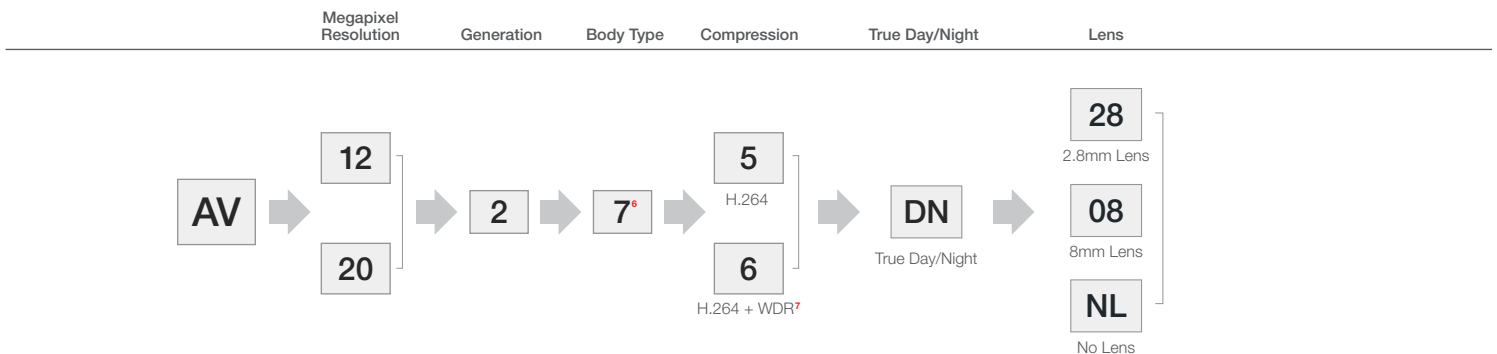
[6] "7" represents SurroundVideo Omni product line
[7] WDR for AV12276 models only

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