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AMERICAN DYNAMICS™

SpeedDome® Optima LT

PROGRAMMABLE DOME CAMERAS

SpeedDome Optima LT delivers the standard features of a programmable dome, but is priced comparably to a PTZ camera. This provides an alternative for customers who prefer the convenience and programmability of a dome, but previously considered domes to be price-prohibitive.

Choose from hard ceiling, pendant and 2X2 tile indoor mounting options. And because the dome contains all of the necessary install components, installation is a breeze – just 15 minutes from box to ceiling for the hard ceiling mount. The dome's power-on diagnostics and functional tests assist with fault isolation during install and service.

The dome accommodates RS-422, Manchester and SensorNet protocols, making it compatible with most American Dynamics controller or matrix switcher/controller systems.

The dome features a color camera with 22x optical zoom (11x digital) and 470 TV lines resolution, providing a quality, high-resolution picture. The dome also provides user-programmable presets and patterns.

FEATURES

- Color camera with up to 242x zoom (22x optical, 11x digital)
- 470 lines horizontal resolution
- Zoom adjusted programming
- Auto focus and auto iris
- Auto white balance
- Automatic gain control
- Line-lock
- Supports RS-422, Manchester and SensorNet protocols
- Unshielded Twisted Pair (UTP) wiring video transmission enabled as standard
- Up to 96 user-definable presets
- Three user-definable patterns
- Power-on functional tests
- LED diagnostics
- Easy to install and service
- Priced comparably to a PTZ, with more features and easier to install
- Stepper motors with micro-step control
- Selectable home position

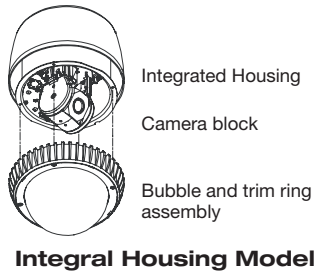
Front Page – letter spread-folded – Print 4/C

FEATURES

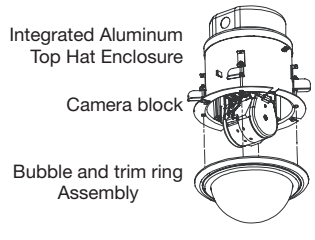
- Integral 22x optical zoom (11x digital) and 470 lines horizontal resolution provide a quality, high-resolution picture.
- Advanced third generation Digital Signal Processing (DSP) CCD camera delivers sharp, detailed images.
- Zoom Adjusted Program (ZAP) automatically adjusts pan and tilt speeds in proportion to zoom position, even at 22x magnification.
- Automatic white balance allows the camera to automatically adjust the white balance of the image, providing optimal image quality.
- The automatic focus provides clear images without the need for manual adjustments.
- The auto iris provides visible scenes without the user having to manually compensate for diverse lighting conditions.
- The dome supports up to 96 user-definable presets and three user-definable patterns.
- The dome incorporates an automatic flip feature. This feature enables the dome to automatically turn 180° when the camera tilts to its lower limits and stays in that position for a brief speed-proportional delay.
- Vertical sync phase adjustment is provided to help compensate for different phases of power when line-lock is enabled, making it ideal for single and multi-phase power installations.
- Surge protection.
- The dome contains a series of diagnostic LEDs for power, communication, network type and failure mode.
- The fully isolated power supply helps eliminate ground loops.
- Sensing of 50/60 Hz line is automatic and does not require manual adjustment.
- Allows daisy chain configuration of control wiring.
  - For SensorNet: 32 devices at a maximum distance of 1 km (3,000 ft) on one 22 AWG unshielded twisted pair (UTP).
  - For Manchester: 3 domes at a maximum distance of 1.5 km (5,000 ft) on one 18 AWG shielded twisted pair (STP).
  - For RS-422/RS-485: 10 domes at a maximum distance of 1 km (3,000 ft) on two 22 AWG shielded twisted pairs (STP).
- Selectable (on/off) home position.

Housing Options

The in-ceiling model is designed with swing-out tabs that grasp ceiling material, ensuring a secure and easy installation. The SpeedDome Optima LT is for indoor applications only.



Integral Housing Model



In-Ceiling Model

SPECIFICATIONS

Operational

Manual Pan/Tilt Speed ..... 1° to 50° per second (based on zoom position)
Preset Pan/Tilt Speed ..... 100° per second, maximum
Pan Travel ..... 360° continuous
Tilt Travel ..... > 90°
Pan/Tilt Accuracy ..... ± 0.5°
Zoom/Focus Accuracy ..... ± 0.5%
Optical Zoom 22X
Digital Zoom 11X
Bubble Density ..... Clear (f0.0) or smoked (f1.0)

	Programmable Presets		
Controller	**SensorNet**	**Manchester**	**RS-422**
ADTT16E	96	N/A	N/A
ADTT16E via RCSN422	N/A	N/A	4
MegaPower 48	96	64	96
MegaPower 168 via CCM	64	64	64
MegaPower 168 via AD2091	N/A	64	N/A
MegaPower 168 via AD2083-02B	N/A	N/A	16
MegaPower 1024 via AD2091	N/A	64	N/A
MegaPower 1024 via AD2083-02B	N/A	N/A	16
AD2150	N/A	64	N/A
AD2150 via AD2083-02B	N/A	N/A	16
VM96	Unlimited	N/A	Unlimited

Programmable Patterns 3
Auto Synchronization
- Line-Locked ..... Remote V-phase adjustment
- Internal ..... Built-in sync generator

Address Range
- Manchester ..... 1 to 64
- SensorNet ..... 1 to 255
- RS-422/RS-485 ..... 1 to 99

Electrical

Input Voltage ..... 24 to 30 VAC, Class 2 LPS
Design Tolerance ..... 16 to 36 VAC
Line Frequency ..... 50/60 Hz
Power Consumption
- Indoor ..... 21 watts maximum

Power-on In-rush current ..... 3 amps
Allowable Drop-out ..... 33 ms
Surge Protection
- Video ..... Low-capacitance Zener suppressor of 6.5 V, 1500 watts
- SensorNet/Manchester ..... Isolation transformer coupled, 2000 Vrms; PTC resettable fuse protects transformer; TVS rated at 5.6 V, 40 A, 0.1 joules; 10 kA impulse rated gas tube, 8/20 µsec impulse
- Power Line ..... TVS rated at 60 V, 250 A, 1.5 joules; 10 kA impulse rated gas tube, 8/20 µsec impulse
- RS-422/RS-485 ..... TVS rated at 5.6 V, 40 A, 0.1 joules; 10 kA impulse rated gas tube, 8/20 µsec impulse

Camera

Imager ..... Interline transfer 1/4 inch CCD array
Scanning System ..... 2:1 interlace
Video Output ..... 1.0 Vp-p, 75 Ω composite
S/N Ratio ..... 48 dB (typical)
Horizontal Resolution ..... 470 lines at center
Minimum Illumination ..... 1.5 lux (20 IRE, AGC on)
Gain Control ..... Automatic (AGC)
White Balance ..... Through the Lens (TTL) Automatic Tracing White Balance (ATW)

NTSC
- Pickup Device ..... 768 (H) x 494 (V) pixels
- Scanning ..... 525 lines, 60 fields, 30 frames
- Horizontal ..... 15.734 kHz
- Vertical ..... 59.9 Hz

PAL
- Pickup Devices ..... 752 (H) x 582 (V) pixels
- Scanning ..... 625 lines, 50 fields, 25 frames
- Horizontal ..... 15.625 kHz
- Vertical ..... 50 Hz

Lens

Design ..... Aspherical
Aperture f1.6
- 4 mm ..... 47.0° (H) x 35.2° (V)
- 88 mm ..... 4.0° (H) x 3.0° (V)

Focal Length ..... 4 to 88 mm

Field of View Formulas
- Horizontal View = (.8 x A)/B
- Vertical View = (.6 x A)/B
  - A = distance from camera in meters or feet
  - B = zoom power (e.g. 1-242x)

AMERICAN DYNAMICS SPEEDDOME OPTIMA LT PROGRAMMABLE DOME CAMERAS

Model Numbers

RASELHS* ..... Indoor Hard Ceiling LT, Smoked Bubble (NTSC)

RASELHS-1* ..... Indoor Hard Ceiling LT, Smoked Bubble (PAL)

RASELHC* ..... Indoor Hard Ceiling LT, Clear Bubble (NTSC)

RASELHC-1* ..... Indoor Hard Ceiling LT, Clear Bubble (PAL)

RASELPS ..... Indoor Pendant LT, Smoked Bubble (NTSC)

RASELPS-1 ..... Indoor Pendant LT, Smoked Bubble (PAL)

RASELPC ..... Indoor Pendant LT, Clear Bubble (NTSC)

RASELPC-1 ..... Indoor Pendant LT, Clear Bubble (PAL)

*Optional RH2X2 mount for 2x2 tile ceilings.

Mechanical

Dimensions (H x D)
In-Ceiling Model
- Total ..... 301 x 190.5 mm (11.9 x 7.5 in)
- Above Ceiling ..... 207.4 x 190.5 mm (8.2 x 7.5 in)
- Below Ceiling ..... 92.7 x 178 mm (3.65 x 7.0 in)
- Integral Housing Model ..... 303 x 243.5 mm (11.9 x 9.60 in)

Weight
- In-Ceiling Model ..... 2.5 kg (5.50 lbs)
- Integral Housing Model ..... 2.7 kg (6.10 lbs)

Environmental

Operating Temperature
- Indoor ..... -10° to 50° C (14° to 122° F)

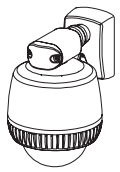
Humidity ..... 0 to 95% RH (non-condensing)
Storage Temperature ..... -20° to 65° C (-4° to 149° F)

Regulatory

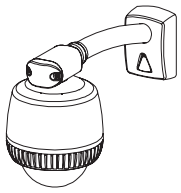
Emissions ..... FCC: 47 CFR Part 15, Subpart B Class A
CE: EN55022 Class B
CE: EN6100-3-2
CE: EN6100-3-3
AS/NZS 3548, Class A
CISPR22
ICES-003

Immunity ..... CE: EN50130-4
Safety ..... UL: UL1950
CUL: CSA 22.2 No. 950
CE: EN60950
IEC950

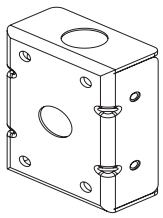
RHOSW
Indoor/Outdoor
Short wall mount
with end cap assembly



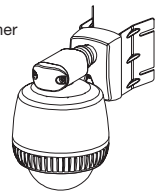
RHOLW
Indoor/Outdoor
Long wall mount
with end cap
assembly



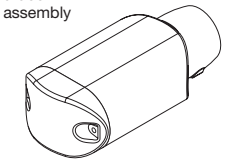
RHOWPA
Indoor/Outdoor Pole
strap adapter for
RHOSW and
RHOLW



RHOWCA
Indoor/Outdoor Corner
bracket adapter for
RHOSW and
RHOLW

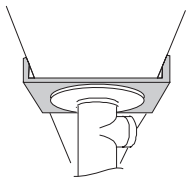


ROENDC
Indoor/Outdoor
End cap assembly
adapter

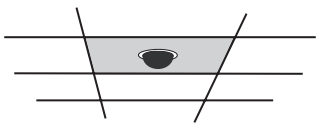


RHOPN
Indoor/Outdoor
pendant mount

RHIUIB
Indoor I-beam
clamp



RH2X2
Indoor 2' x 2'
Tile mount plate



Product specifications and availability subject to change without notice.
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