

# SpeedDome Ultra 8E

## Programmable Dome Camera



### Features That Make a Difference:

- Motion detection provides the ability to trigger multiple user-specified actions with motion tracking capabilities
- Two powerful series (22x and 35x optical zoom) let you choose the dome that's right for your application
- Powerful 35x optical zoom (ADSDU8E35) features 540 TVL and other advanced features for superior images
- Improved privacy zones and patterns
- Additional number of third party protocols
- Continuous autofocus provides the clearest images during full range of motion
- Advanced on-screen display with titles provides the detail you need
- Supports SensorNet, RS-422, AD-UTC, Manchester and select manufacturers' protocols<sup>1</sup>
- Supports NTCIP protocol, designed specifically for the transportation market
- 35x series offers Day/Night, Digital Slow Shutter (DSS) and Wide Dynamic Range (WDR) functionality to provide the flexibility to monitor any type of environment
- 35x series offers Electronic Image Stabilization (EIS) to reduce image blurriness when the mounted camera experiences movement

### SpeedDome Ultra 8E (35x series)

The 35x series offers the highest performance with 540 TVL, 35x optical zoom, WDR, Day/Night, DSS and EIS. The Day/Night and DSS features allow you to clearly see images in scenes as dim as 0.00041 lux. EIS reduces the vibration so the image can be viewed properly, and very useful when the dome is installed in places that subject it to shaking or moving, such as a pole next to a highway. These features combine to make the SpeedDome Ultra 8E series an ideal solution for outdoor applications requiring high resolution images whether up close, far away or for indoor applications requiring the best picture possible, such as in casinos or retail establishments.

### SpeedDome Ultra 8E (22x series)

The 22x series delivers excellent color images in scenes as dim as .02 lux. Zoom ability consists of 22x optical and 11x digital zoom for 242x total zoom. The 22x offers the same advanced features as the 35x series, and is well-suited for indoor applications that require clarity, color, and detail in well lit or low lighting conditions.

### Superior Video Images

SpeedDome Ultra 8E features powerful zoom capabilities with either 420x total zoom (35x optical zoom with 12x digital magnifier) or 242x total zoom (22x optical zoom with 11x digital magnifier).

The 35x series includes some of the industry's most powerful features including the innovative WDR capability which compensates for very bright and dark conditions within the same scene. For low light applications, a removable infrared (IR) cut filter provides effective viewing in lighting conditions as low as .00041 lux in black and white mode.

The 35x series also includes the innovative EIS feature which reduces the effects of vibration. This feature is especially useful when the dome is installed in places that subject it to shaking or moving, such as a pole next to a highway.

Both the 22x and 35x series allow you to further compensate for low lighting conditions using DSS technology that allows the CCD imager to accumulate more light. Additional image adjustments include automatic gain control (AGC) and white balance.



(1) Compatibility with other manufacturers is based upon known current protocols and controllers at time of test. However, compatibility may be affected if other manufacturers make changes to their products.

# Features

## Advanced Control and Positioning

SpeedDome Ultra 8E supports up to 96 preset positions<sup>2</sup> with user-defined titles and 16 preset sequences with a 10 minute dwell time for the ultimate in viewing flexibility. Sixteen patterns are supported and a preprogrammed default spiral pan pattern (“apple peel”) covers the entire viewing area. Each pattern can store up to 99 PTZ commands. Using the Freeze Frame feature before moving to a preset minimizes hard drive usage when video is digitally recorded.

The 35x includes motion detection and tracking capabilities. A specified area of interest can be tracked within an 8x8 grid matrix. When the dome detects motion within that block, it will follow the moving object to keep it in view. Frame noise reduction has been decreased significantly.

Alarms can be processed internally by the dome, externally by the controller or by both the dome and the controller. Each of the dome’s alarm inputs can automatically call a preset or run a pattern when the alarm is activated.

To ensure key areas of a facility are continually monitored, an inactive or unattended dome can be configured to return to “home position” after it performs a pre-defined preset, sequence or pattern. When the dome tilts to its lower limits, an innovative automatic proportional flip feature automatically turns the dome 180°. Alternatively, you can manually flip the dome from the keyboard.

To protect sensitive areas, you can program up to 32 privacy zones of different sizes. These privacy zones automatically change size proportionally when zooming in or out. Each privacy zone functions independently, dependent upon size and location of the zone, having more control over accurate placement. In addition, the Ultra 8E provides control of patterns through a menu entry, for easier command of the PTZ functions. Higher resolution and improved patterns allow for improved accuracy when maneuvering and controlling the camera.

Zoom adjusted programming (ZAP) automatically adjusts pan and tilt speeds in proportion to zoom position, even at maximum magnification.

In addition to SensorNet, Manchester, AD-UTC, NTCIP, and RS-422 protocols, the dome can be controlled via other select manufacturers’ protocols<sup>3</sup> such as Pelco® P, Coaxitron, Panasonic® UTC, Vicon® RS-422, and Bosch® Biphase, making it a perfect choice for customers wanting to replace older PTZs. Additional third party protocols include Pelco D and Pelco Coaxitron UTC.

## Powerful On-Screen Display

SpeedDome Ultra 8E generates helpful on-screen text including dome, preset, pattern, alarm and area names as well as direction indicators. These indicators show the direction the dome is currently pointing and the direction in which it is moving. For example, you can assign up to sixteen areas of various sizes to identify boundaries within different areas. In addition, the direction indicators display the dome’s azimuth (degree of tilt).

On-screen text indicates zoom, focus, and iris status. All information is user-definable and can be turned on or off. When turned on, text can be set to appear either solid or translucent. This ensures that the text is always visible without blocking important parts of the image.

On-screen text supports six languages: English, French, Italian, Spanish, German and Portuguese.

## Powerful Configuration and Maintenance

A convenient DirectSet feature provides fast access to all of your most frequently used dome features when used with a suitably equipped controller<sup>4</sup>. To ensure the integrity of your security settings, password protection prevents unauthorized use of the on-screen menus.

The following daisy chain configurations of control wiring are supported:

- RS-422: 10 domes over a maximum distance of 1 km (3000 ft) on two 22 AWG shielded twisted pairs (STP)
- For SensorNet: 32 devices over a maximum distance of 1 km (3000 ft) on one 22 AWG UTP
- For Manchester: 3 domes over a maximum distance of 1500 m (5000 ft) on one 18 AWG STP
- For AD-UTC: Maximum distance per dome is 700 m (2300 ft) on 20 AWG RG59U cable. (Note-This distance is for AD-UTC data only. See cable manufacturer’s specifications for video capabilities).

Sensing of 50/60 Hz lines is automatic and does not require manual adjustment. The fully isolated power supply helps eliminate ground loops. Surge protection is provided for video, code, alarms and power connections.

To ensure you have ample time to schedule maintenance, the dome maintains statistics on how long it has been on, duration of pan/tilt/zoom movements, number of presets selected and other usage information.

(2) Controller dependent, see Preset Table for details.

(3) Compatibility with other manufacturers is based upon known current protocols and controllers at time of test. However, compatibility may be affected if other manufacturers make changes to their products.

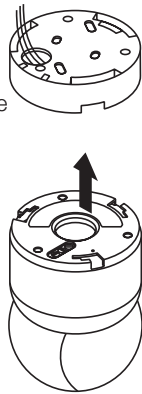
(4) A Matrix keyboard or a controller from which users can call DirectSet commands.

# Features

In the event that a camera needs to be changed, the new SpeedDome Ultra 8E I/O base now retains preset and pattern information so a user does not have to spend time reprogramming.

## Ease of Installation

The dome incorporates an innovative twist lock release from the mounting base for easy installation and servicing. Power, communication and video cables (or composite cable) are connected at one time to an I/O PC board in the mounting base so the assembly is simply twist-locked onto the base. Service and maintenance are easy and can be accomplished without a ladder or lift via the installation/removal tool. The I/O board mounting base supports four alarm inputs and four alarm outputs (indoor only) as well as power and communication LEDs.



## Dome Kits

SpeedDome Ultra 8E domes can be ordered as pre-configured kits. A kit includes a camera module, base, mount and housing. Bubbles may be included as noted. Refer to the following chart for a description of the models included with each Dome Kit.

## Model Numbers

### Housing /Eyeball Assembly without Mounting Base

ADSDU8E35N . . . . .	35x NTSC (black camera body)
ADSDU8E35WN . . . . .	35x NTSC (white camera body)
ADSDU8E35P . . . . .	35x PAL (black camera body)
ADSDU8E35WP . . . . .	35x PAL (white camera body)
ADSDU8E22N . . . . .	22x NTSC (black camera body)
ADSDU8E22WN . . . . .	22x NTSC (white camera body)
ADSDU8E22P . . . . .	22x PAL (black camera body)
ADSDU8E22WP . . . . .	22x PAL (white camera body)

### Mounting Base without Housing/Eyeball Assembly

ADSDUIOB . . . . .	I/O Board Base (black base)
ADSDUIOBW . . . . .	I/O Board Base (white base)

### Housing/Eyeball Assembly with Mounting Base

ADSDU8E35ION . . . . .	35x NTSC (black assembly and base)
ADSDU8E35WION . . . . .	35x NTSC (white assembly and base)
ADSDU8E35IOP . . . . .	35x PAL (black assembly and base)
ADSDU8E35WIOP . . . . .	35x PAL (white assembly and base)
ADSDU8E22ION . . . . .	22x NTSC (black assembly and base)
ADSDU8E22WION . . . . .	22x NTSC (white assembly and base)
ADSDU8E22IOP . . . . .	22x PAL (black assembly and base)
ADSDU8E22WIOP . . . . .	22x PAL (white assembly and base)

## Options

### Optional Bubbles for RHIUTH Top Hat Mount

ADSDUCLR . . . . .	Clear Bubble (f0)
RUSLV . . . . .	Silver Bubble (f2.0)
ADSDUSMK . . . . .	Smoked Bubble (f1.0)
RUGLD . . . . .	Gold Bubble (f1.0)

### Bubble Specifications

Bubble diameter . . . . .	176 mm (6.93 in)
Bubble depth . . . . .	86.5 mm (3.4 in)
Bubble weight . . . . .	0.13 kg (4.4 oz) with trim ring

Mount or Housing Type		Kit Includes	35x Series		22x Series	
			NTSC	PAL	NTSC	PAL
	Indoor hard ceiling w/ no bubble	SpeedDome Ultra 8E, RHIUTH and RHIUHC	ADSDU8E35IHN	ADSDU8E35IHP	ADSDU8E22IHN	ADSDU8E22IHP
	w/ smoked bubble	includes above and ADSDUSMK	ADSDU8E35IHSN	ADSDU8E35IHSP	ADSDU8E22IHSN	ADSDU8E22IHSP
	Indoor 2' x 2' drop ceiling w/ no bubble	SpeedDome Ultra 8E and RHIU2X2M	ADSDU8E35I2X2N	ADSDU8E35I2X2P	ADSDU8E22I2X2N	ADSDU8E22I2X2P
	w/ smoked bubble	includes above and ADSDUSMK	ADSDU8E35I2X2SN	ADSDU8E35I2X2SP	ADSDU8E22I2X2SN	ADSDU8E22I2X2SP
	Outdoor housing	SpeedDome Ultra 8E and ADSDUHOC	ADSDU8E35OPCN	ADSDU8E35OPCP	ADSDU8E22OPCN	ADSDU8E22OPCP
	Outdoor housing w/ long wall mount and end cap assembly	includes above and RHOLW	ADSDU8E35OPCWN	ADSDU8E35OPCWP	ADSDU8E22OPCWN	ADSDU8E22OPCWP

## Number of Presets

Controller or Matrix Switcher	Protocol	Number of Presets
ADTT16E	SensorNet / RS-422*	96 /4
MegaPower LT	AD-UTC / SensorNet	96 /96
MegaPower 48 Plus	SensorNet / Manchester / RS-422	96 /64 /96
MegaPower 3200	Manchester** / RS-422***	64 /60
Intellex Digital Video Management Systems	SensorNet**** / RS-422****	96 /96
Third Party interfaces	RS-485/RS-422	96

\*Using SensorNet to RS-422 converter (model number RCSN422)  
 \*\*Using Manchester code distributor (model number AD2091)  
 \*\*\*Using RS-422 code distributor (model number AD2083-02C)  
 \*\*\*\*Requires USB to RS-422 adaptor  
 \*\*\*\*\*Using USB CCTV Control Module (Model number ADACSNET)

	35x Series	22x Series
<b>Camera</b>		
Horizontal Resolution	540 lines	470 lines
Imager	Interline transfer 1/4-inch CCD array	Interline transfer 1/4-inch CCD array
Scanning System	2:1 interlaced	2:1 interlaced
Wide Dynamic Range, EIS, Day/Night	Yes	No
Video Output	1.0 Vp-p, 75 composite	1.0 Vp-p, 75 composite
S/N Ratio	>50 dB (typical)	>50 dB (typical)
Minimum Illumination (20IRE, AGC)	0.24 lux (Color); 0.028 lux (Color with 1/4 sec open shutter) 0.021 lux (B/W IR Mode); 0.00041 lux (B/W IR Mode with 1/2 sec open shutter)	0.3 lux (Color) 0.02 lux (Color with 1/4 sec open shutter)
White Balance	Through the Lens (TTL) Automatic; Tracing White Balance (ATW)	Through the Lens (TTL) Automatic Tracing White Balance (ATW)
NTSC (PAL)	NTSC (PAL)	NTSC (PAL)
Effective Pixels (H x V)	768 x 494 (752 x 582)	768 x 494 (752 x 582)
Scanning (lines/fields/frames)	525 /60 /30 (625 /50 /25)	525 /60 /30 (625 /50 /25)
Horizontal (kHz)	15.734 (15.625)	15.734 (15.625)
Vertical (Hz)	59.9 (50)	59.9 (50)
Shutter Speed (Auto/Manual)	1/2 - 1/30,000 (1/1.5 - 1/30,000)	1/2 - 1/30,000 (1/1.5 - 1/30,000)
<b>Lens</b>		
Aperture (Aspherical Design)	f1.4	f1.6
Focal Length	3.4 to 119 mm	4 to 88 mm
Wide Angle (field of view)	3.4 mm/55.8 (H) x 41.8 (V)	4mm/47.3 (H) x 35.2 (V)
Telephoto (field of view)	119 mm/1.7 (H) x 1.3 (V)	88 mm/2.2 (H) x 1.05 (V)
Total/Optical/Digital Zoom	420x/35x/12x	242x/22x/12x

## Common Specifications for SpeedDome Ultra 8E

### Operational

Manual Pan/Tilt . . . . . 0.25°-100° per second (based on Zoom Manual position)  
 Preset Pan/Tilt Speed . . . . . 360° per second, maximum (Pan) and 220° per second, maximum (Tilt)  
 Pan Travel . . . . . 360° continuous  
 Tilt Travel . . . . . 110°  
 Pan/Tilt Accuracy . . . . . ± 0.5°  
 Zoom/Focus Accuracy . . . . . ± 0.5%  
 Programmable Patterns/Sequences/  
 Areas/Privacy Zones . . . . . 16/16/16/8  
 Direction Indicators . . . . . Yes  
 Auto Synchronizations . . . . . Line-Locked with Remote V-phase adjustment or Internal with Built-in sync generator

### Address Range

RS-422/RS-485 . . . . . 1-99  
 Manchester . . . . . 1-64  
 SensorNet . . . . . 1-255  
 AD-UTC . . . . . Based on number of inputs  
 Alarm Inputs with I/O  
 Board (indoor only) . . . . . 4 dry contacts/3.5 mA sink  
 Alarm Outputs with I/O  
 Board (indoor only) . . . . . 3 open collector drivers at 12 VDC, 40mA  
 Menu Languages . . . . . English, French, German, Italian, Spanish, Portuguese

### Electrical

Input Voltage . . . . . 18 to 30 VAC, 50/60 Hz Class 2 LPS  
 Design Tolerance . . . . . 16 to 36 VAC, 50/60 Hz  
 Power . . . . . 11 watts  
 Power On  
 In-Rush Current . . . . . 1.5 amps  
 Allowable Drop-Out . . . . . 100 µsec

Surge Protection . . . . . Low-capacitance Zener suppressor of 6.5 V, 1500 watts Isolation transformer coupled, 2000 Vrms; PTC resettable fuse protects transformer; 9.8V/1A, 500 watts, 8/20 µsec impulse  
 RS-422/RS-485 . . . . . 10kA impulse rated gas tube  
 Alarm Input/Aux Outputs . . . . . TVS rated at 9.8V/1A, 500 watts, 8/20 µsec impulse  
 Power Line . . . . . TVS rated at 9.8V/1A, 500 watts, 8/20 µsec impulse TVS rated at 60 V, 250 A, 1.5 joules, 8/20 µsec impulse

### Mechanical

Height (includes base) . . . . . 205 mm (8.0 in)  
 Diameter . . . . . 120 mm (4.7 in)  
 Housing & Eyeball Weight . . . . . 1.09 kg (2.40 lbs)  
 Base (with I/O Board) . . . . . 0.16 kg (0.35 lbs)  
 Weight

### Environmental

Operating Temperature . . . . . -10° to 50°C (14° to 122°F)  
 Humidity . . . . . 0 to 95% RH (noncondensing)  
 Storage Temperature . . . . . -20° to 65°C (-4° to 149°F)

### Regulatory VP SDU

Emissions . . . . . FCC: 47 CFR Part 15 Subpart B Class A  
 CE: EN55022 Class B  
 CE: EN61000-3-2; 3-3  
 AS/NZS 3548, Class A  
 CISPR22  
 ICES-003  
 Immunity . . . . . CE: EN50130-4  
 UL 1950  
 Safety . . . . . UL 1950  
 CSA 22.2 No. 950  
 EN60950-1  
 IEC60950-1

## Related Products



Intellex



HDVR



ADTVR

## Approvals

