Spectra® IV SE Series Dome Systems
PREMIER INTEGRATED DOME SYSTEM

Product Features

- 2 Autofocus, High Resolution Integrated Camera/Optics Packages; Multiple Back Box Models
- Day/Night, 540 TVL, 128X Wide Dynamic Range (WDR), Motion Detection, and Electronic Image Stabilization (SD436 Series)
- Day/Night, 540 TVL, 128X Wide Dynamic Range (WDR), and Motion Detection (SD429 Series)
- Auto tracking
- Window Blanking
- Camera Title Overlay, 20 User-Definable Characters
- Horizontal and Zone Blanking
- On-Screen Compass and Tilt Display
- Password Protection
- Low Lux Noise Reduction
- Built-in Surge and Limited Lightning Protection

IN-CEILING MODEL
SD436-F0

PENDANT MODEL
SD429-PG-0

- Sure Focus
- Integrated Passive Unshielded Twisted Pair (UTP) Circuit
- Internal Scheduling Clock
- Ability to Add IP Network Capability by Purchasing Optional TXB-N Module

Modularity

Spectra® IV SE was designed with ease of installation and ease of maintenance in mind. Each dome system consists of three components: a back box, a dome drive, and a lower dome. These three system components are interchangeable with other Spectra IV SE dome systems, making retrofitting and application adjustments simple. Also, dome drives and lower domes can be removed and replaced reducing maintenance time.

Back Box

Spectra IV SE back box options include the following models: environmental in-ceiling (ideal for outdoor soffits), indoor in-ceiling, indoor surface mount, and standard and environmental pendant. The Spectra IV SE Series can also be ordered with heavy-duty, pressurized, and stainless steel back box options (refer to the appropriate product specification sheets for more information). Each back box model features built-in **back box memory** to store camera and location-specific dome settings, including labels, presets, patterns, and zones. A **passive UTP circuit** is located on the door assembly for convenient video transmission through twisted pair wire. For added flexibility, Pelco fiber modules can also be attached to the door assembly for transmission over single-mode or multimode fiber.

Dome Drive

The Spectra IV SE dome drive's unique **integrated optics package** incorporates many advanced features that allow the system to produce high quality video in the most difficult environments. All cameras in Spectra IV SE dome drives feature **LowLight**™ technology allowing the cameras to compensate for scenes where minimal light is present. Both the 29X and the 36X cameras feature built-in motion detection and advanced **128X WDR** that enables the system to compensate for scenes where dramatic contrasts in lighting are present. The 36X day/night camera **electronic image stabilization** digitally reduces blurring of the camera image due to vibration caused by external sources, such as wind and traffic. **Auto sharpness** enhances picture detail by increasing the aperture gain of the camera and sharpening the edges in the picture.

Lower Dome

Special consideration was taken when designing the Spectra IV SE lower dome bubble to ensure that an optimal optical relationship between the lens and bubble was achieved, providing crystal clear video at long focal lengths.

Dome Systems

Spectra IV SE dome systems feature many software enhancements that increase performance and make configuration and operation easy. An **internal scheduling clock** allows for the scheduling of presets and patterns. **Window blanking** enables a user to configure up to eight, four-sided, user-defined privacy areas. **Password protection** prevents unauthorized users from changing the system settings. Configurable **on-screen compass and tilt display** provides positioning information when needed. Intuitive multilingual on-screen menus can be displayed in English, Spanish, Portuguese, Italian, French, German, Russian, Polish, Turkish, and Czech.

Spectra IV SE's variable speed capabilities range from a smooth, fast pan motion of 400 degrees per second to a smooth "creep" speed of 0.1 degree per second. The system is capable of continuous 360 degrees rotation and has an **"auto flip"** feature that allows the dome to rotate 180 degrees and reposition itself for uninterrupted viewing of any subject that passes directly beneath the dome.

In addition, with the optional Pelco TXB-N module, you can add IP network capability at any time to a Spectra IV dome system without losing analog viewing and control. By snapping the TXB-N module into the back box, you can stream network video to a Web browser, Endura®, Digital Sentry®, or third-party software recording solution allowing integration into virtually any IP-based system.

TECHNICAL SPECIFICATIONS

CAMERA/OPTICS

	Day/Night (36X)	Day/Night (29X)
Signal Format	NTSC **(DD436)** PAL **(DD436-X)**	NTSC **(DD429)** PAL **(DD429-X)**
Scanning System	2:1 Interlace	2:1 Interlace

Image Sensor
  Effective Pixels
    NTSC
    PAL
	1/4-inch EXview HAD™
	
	768 (H) X 494 (V)
	752 (H) X 582 (V)
		1/4-inch EXview HAD
		
		768 (H) X 494 (V)
		752 (H) X 582 (V)

Horizontal Resolution
  NTSC
  PAL
	>540 TV Lines
	>540 TV Lines
		>540 TV Lines
		>540 TV Lines

Lens	f/1.4 (focal length, 3.3 ~ 119 mm)	f/1.4 (focal length, 3.4 ~ 98.6 mm)
Zoom	36X optical, 12X digital	29X optical, 12X digital
Zoom Speed (optical range)	3.2/4.6/6.6 seconds	3.2/4.6/6.6 seconds

Horizontal
  Angle of view
  Focus
	57.2° at 3.3 mm wide zoom;
	1.7° at 119 mm telephoto zoom
	Automatic with manual override
		55.8° at 3.4 mm wide zoom;
		1.7° at 98.6 mm telephoto zoom
		Automatic with manual override

Maximum Sensitivity at 35 IRE
  NTSC/EIA
 	
  PAL/CCIR
	0.55 lux at 1/60 sec **(color)**
	0.018 lux at 1/2 sec **(color)**
	0.0048 lux at 1/2 sec **(B-W)**
	
	0.45 lux at 1/50 sec **(color)**
	0.015 lux at 1/1.5 sec **(color)**
	0.004 lux at 1/1.5 sec **(B-W)**
		0.55 lux at 1/60 sec **(color)**
		0.018 lux at 1/2 sec **(color)**
		0.0048 lux at 1/2 sec **(B-W)**
		
		0.45 lux at 1/50 sec **(color)**
		0.015 lux at 1/1.5 sec **(color)**
		0.004 lux at 1/1.5 sec **(B-W)**

Sync System	Internal/AC line lock, phase adjustable using remote control, V-Sync	Internal/AC line lock, phase adjustable using remote control, V-Sync
White Balance	Automatic with manual override	Automatic with manual override

Shutter Speed
  NTSC
  PAL
	Automatic (electronic iris)/Manual
	1/2 ~ 1/30,000
	1/1.5 ~ 1/30,000
		Automatic (electronic iris)/Manual
		1/2 ~ 1/30,000
		1/1.5 ~ 1/30,000

Iris Control	Automatic iris control with manual override	Automatic iris control with manual override
Gain Control	Automatic/OFF	Automatic/OFF
Video Output	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms
Video Signal-to-Noise	>50 dB	>50 dB
Wide Dynamic Range	128X	128X
Electronic Image Stabilization	Integrated/Selectable	—
Auto Sharpness	Integrated/Selectable	Integrated/Selectable

TECHNICAL SPECIFICATIONS

DOME DRIVE FEATURES

- 256 Presets
- ±0.1° Preset Accuracy
- Electronic Image Stabilization (36X model)
- Image Enhancement (36X model)
- Multilingual Menus (English, Spanish, Portuguese, Italian, French, German, Russian, Polish, Turkish, and Czech)
- RJ-45 Data Port for Software Update and Setup
- On-Screen Compass, Tilt, and Zoom Display
- 400°/sec Pan Preset Speed and 200°/sec Tilt Preset Speed
- Rotating Discreet Liner with Sealed Fixed Bubble
- Window Blanking: Up to 8, Four-Sided, User-Defined Shapes
- 8 Zones (configurable in size) Can Be Labeled with up to 20 Characters Each or Set to Output Blank Video
- 7 Alarm Inputs
- 1 Auxiliary (Form C) Relay Output and 1 Open Collector Auxiliary Output (can be alternately configured to operate upon alarm)
- Configurable Locations of Labels and On-Screen Displays
- Action on Alarm: Alarms Can Be Individually Configured for 3 Priority Levels, to Initiate a Stored Pattern, or to Go to an Associated Preset When Received

- Resume After Alarm: Allows the Dome to Return to a Previously Configured State After Alarm Acknowledgement or to its Previous Position Before Alarm
- Multiple Park and Power-Up Action
- Patterns: Up to 8, On-Screen, User-Defined Configurable Patterns; Includes Pan, Tilt, Zoom, and Preset Functions
- Proportional Pan/Tilt: Continually Decreases Pan/Tilt Speeds in Proportion to Depth of Zoom
- Variable Scan Speed: Scan Speed Can Be Configurable Between 1 to 40°/sec
- Pan Motion Allows 0.1 to 150°/sec Pan Speed
- Configurable Limit Stops for Auto/Random/Frame Scan Modes
- Autosensing Protocol (Coaxitron®, RS-422 Pelco P and Pelco D, Sensormatic®, Vicon®); Accepts Other Control Protocols with Optional Translator Card
- Digital Position and Zoom Control and Feedback through Pelco D Protocol
- Built-in Menu System for Setup of Configurable Functions
- "Auto Flip" Rotates Dome 180° at Bottom of Tilt Travel
- Configurable Zoom Speeds
- Low Lux Noise Reduction (reduces noise in low light)

WINDOW BLANKING

Window blanking allows a user to configure up to eight, four-sided, user-defined areas that cannot be viewed by the operator of the dome system. A blanked area will move with pan and tilt functions and automatically adjust in size as the lens zooms telephoto and wide.

BEFORE

AFTER

WIDE DYNAMIC RANGE

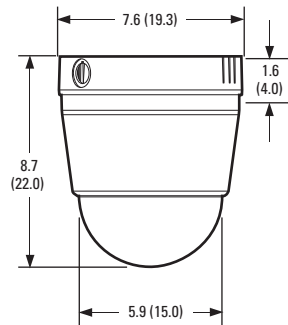The WDR setting balances the brightest and darkest sections of a scene to produce a picture that provides more detail.
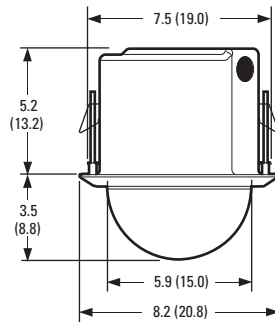

BEFORE

AFTER

BACK BOX FEATURES
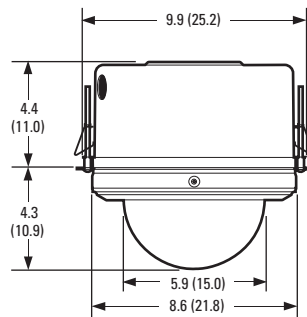
7.6 (19.3)
1.6 (4.0)
8.7 (22.0)
5.9 (15.0)

Surface Mount (Indoor)

- Built-in Memory Stores Camera/Dome Settings
- Available in Black or White Finish
- Quick Disconnect to Dome Drive
- Injection-Molded Plastic
- Integrated Passive UTP

7.5 (19.0)
5.2 (13.2)
3.5 (8.8)
5.9 (15.0)
8.2 (20.8)

In-Ceiling (Indoor)

- Built-in Memory Stores Camera/Dome Settings
- Single Back Box for Suspended or Hard Ceiling Applications
- Requires 5.25-Inch Space Above Ceiling and 3.25 Inches Below
- Minimum Ceiling Thickness 0.5-Inch; Maximum 1.75 Inches
- Quick Disconnect to Dome Drive
- Aluminum Construction
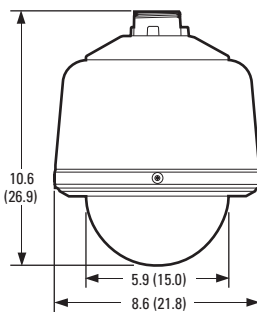- Suitable for Use in Environmental Air Handling Spaces
- Integrated Passive UTP

9.9 (25.2)
4.4 (11.0)
4.3 (10.9)
5.9 (15.0)
8.6 (21.8)

Environmental In-Ceiling

- Built-in Memory Stores Camera/Dome Settings
- Single Back Box for Hard Ceiling Applications
- Requires 4.4-Inch Space Above Ceiling and 4.3 Inches Below
- Includes Heater and Fan
- Minimum Ceiling Thickness 0.5-Inch; Maximum 1.75 Inches
- Quick Disconnect to Dome Drive
- Aluminum Construction
- Integrated Passive UTP

10.6 (26.9)
5.9 (15.0)
8.6 (21.8)

(ENVIRONMENTAL DOME WITH SUN SHROUD SHOWN)

Standard and Environmental Pendant

- Standard and Environmental Models
- Built-in Memory Stores Camera/Dome Settings
- Standard Pendant Available in Black or Gray Finish; Environmental Pendant Gray Finish Only
- Quick Disconnect to Dome Drive
- Aluminum Construction
- Environmental Model Includes Sun Shield, Fan, and Heater
- Integrated Passive UTP

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

Note: The Spectra IV SE Series can be ordered with heavy-duty, pressurized, and stainless steel back box options. Refer to the appropriate product specification sheets for more information.

MECHANICAL *(Dome Drive Only)*

Pan Movement	360° continuous pan rotation
Vertical Tilt	Unobstructed +2° to −92°
Manual Pan/Tilt Speeds	
Pan	0.1° to 80°/sec manual operation, 150°/sec Turbo
Tilt	0.1° to 40°/sec manual operation
Preset Speeds	
Pan	400°/sec
Tilt	200°/sec
	For variable-speed operation, an appropriate controller is required (with nonvariable speed control, Spectra IV SE pan/tilt speed is 20°/sec)

ELECTRICAL

Input Voltage	18 to 32 VAC; 24 VAC nominal
	22 to 27 VDC; 24 VDC nominal
Input Power	
24 VAC	23 VA nominal (without heater); 73 VA nominal (with heater)
24 VDC	0.7 A nominal (without heater); 3 A nominal (with heater)
Fuse	1.25 A
Auxiliary Outputs	2
Alarm Inputs	7

CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- FCC, Class B
- UL/cUL Listed
- C-Tick
- S Mark for Argentina
- Meets NEMA Type 4X, IP66 when installed properly (BB4-F-E, BB4-PB, BB4-PG, and BB4-PG-E)
- Meets NEMA Type 1, IP40 (BB4-SMW, BB4-SMB, and BB4-F)
- U.S. Patents 5,931,432; 6,793,415 B2; 6,802,656 B2; 6,821,222 B2; 7,161,615 B2

GENERAL

Construction		
Back Box		
Surface Mount	Plastic	
In-Ceiling	Aluminum	
Pendant	Aluminum	
Dome Drive	Aluminum, thermo plastic	
Bubble	Acrylic	
Light Attenuation		
Smoked	f/0.5 light loss	
Clear	Zero light loss	
Cable Entry (Back Box)		
In-Ceiling and		
Surface Mount	0.75-inch conduit fitting	
Pendant	Through 1.5-inch NPT pendant mount	

Weight (approximate)	Unit	Shipping
Back Box		
Surface Mount	0.7 lb (0.32 kg)	2 lb (0.90 kg)
In-Ceiling	1.5 lb (0.68 kg)	2 lb (0.90 kg)
Environmental In-Ceiling	2.1 lb (0.95 kg)	3 lb (1.36 kg)
Standard Pendant	2.4 lb (1.09 kg)	4 lb (1.81 kg)
Environmental Pendant	3.5 lb (1.59 kg)	5 lb (2.27 kg)
Dome Drive	3.3 lb (1.48 kg)	5 lb (2.27 kg)
Lower Dome		
Surface Mount	0.4 lb (0.18 kg)	1 lb (0.45 kg)
In-Ceiling	0.2 lb (0.09 kg)	1 lb (0.45 kg)
Pendant and Environmental In-Ceiling	0.6 lb (0.27 kg)	2 lb (0.90 kg)

Environment	
Surface Mount	Indoor
In-Ceiling	Indoor
Environmental In-Ceiling Pendant, Standard and Environmental	Outdoor
	Indoor/outdoor
Operating Temperature	
Surface Mount and Indoor In-Ceiling	0° to 50°C (32° to 122°F)
Standard Pendant	(Assumes no wind chill factor)
Maximum	45°C (113°F) absolute maximum; 35°C (95°F) sustained maximum
Minimum	−4°C (25°F) sustained minimum
Environmental In-Ceiling and Environmental Pendant	(Assumes no wind chill factor)
Maximum	60°C (140°F) absolute maximum; 50°C (122°F) sustained maximum
Minimum	−51°C (−60°F) absolute minimum; prevents icing at sustained minimum of −45°C (−50°F); de-ices 2.5 mm (0.1 inch) within 3 hours after power-up
TS2	−34° to 74°C (−29.2° to 165°F)
	Per NEMA TS2, para. 2.1.5.1, using fig. 2.1 test profile
Effective Projected Area (EPA)	52.07 square cm (20.5 square inches), without mount
	(47 square inches), with IWM Series mount

RELATED PRODUCTS

OPTIONAL ACCESSORIES

DD5-FM	Fixed camera mount adapter. Interchangeable with all Spectra IV dome drives.
IPS-CABLE	Remote monitor cable and software kit consisting of the Spectra IV remote monitor interface cable and necessary software for use with a PC. Refer to *www.pelco.com* for a list of compatible devices.
IPS-RDPE-2*	Remote data port. 24 VAC, wall/pole mount video/data breakout box. Allows ground-level control/configuration and software upgrades when used with the IPS-CABLE.
TXB Series*	Translator boards for AD™ Manchester, Hernis, Bosch® (Philips, Burle), TASS, and NTCIP protocols.
TXB-N Series*	Network-based communication module that allows you to control and monitor Spectra IV dome systems over an IP network (in-ceiling and pendant models only). When TXB-N is installed in the camera's back box, the camera system supports Web and Endura connectivity, and open architecture connectivity to third-party software. TXB-N allows simultaneous access to the camera from both an analog and IP-based control point.
FS85011A*	Fiber transmitter sends 1 unidirectional composite video channel and 1 bidirectional data channel over 1 multimode or single-mode fiber optical cable.
LD5F-2†	Flush in-ceiling lower dome with chrome bubble (f/2.0 light loss).
LD5F-3†	Flush in-ceiling lower dome with gold bubble (f/2.0 light loss).
LD53PB-2†	Pendant lower dome with black trim and chrome bubble (f/2.0 light loss).
LD53PB-3†	Pendant lower dome with black trim and gold bubble (f/2.0 light loss).

*If TXB or FS85011A boards are installed, remote upload of system software will not be possible.

† Not recommended for outdoor use due to possible light reflections.

RELATED PRODUCTS

RECOMMENDED MOUNTS

Surface Mount Domes

PASMB	Pendant adapter for surface mount dome, black
SD53SM-P	2' x 2' drop ceiling panel for BB4-SMW and BB4T-SMW series back boxes; replaces 2' x 2' ceiling tile; aluminum construction

In-Ceiling Domes

SD5-P	2' x 2' drop ceiling panel, aluminum construction; replaces 2' x 2' ceiling tile
SCA1	Support rails for BB4-F; for use in ceiling tile applications

Pendant Domes

BB5-PCA-BK*	Pendant conduit adapter, black
BB5-PCA-GY*	Pendant conduit adapter, gray
IWM Series	Wall mount, with or without integral 24 VAC, 100 VA transformer; black or gray finish; can be adapted for corner, parapet, or pole applications
MRCA	Ceiling mount, black
PP4348	Parapet roof mount
PP350/PP351	Parapet wall/roof mount
SWM Series	Compact wall mount, black or gray finish; can be adapted for corner or pole applications

*Not suitable for use with heavy-duty, pressurized, or stainless steel Spectra domes.

RECOMMENDED POWER SUPPLIES

MCS Series	Indoor, 24 VAC power supply
WCS Series	Outdoor, 24 VAC power supply

Refer to individual power supply specifications for more information.

SYSTEM AND COMPONENT MODELS

SYSTEM MODEL NUMBERS

Type	Back Box Color	Lower Dome	36X Day/Night (NTSC)	36X Day/Night (PAL)	29X Day/Night (NTSC)	29X Day/Night (PAL)
Surface Mount	White	Smoked	SD436-SMW-0	SD436-SMW-0-X	SD429-SMW-0	SD429-SMW-0-X
		Clear	SD436-SMW-1	SD436-SMW-1-X	SD429-SMW-1	SD429-SMW-1-X
	Black	Smoked	SD436-SMB-0	SD436-SMB-0-X	SD429-SMB-0	SD429-SMB-0-X
		Clear	SD436-SMB-1	SD436-SMB-1-X	SD429-SMB-1	SD429-SMB-1-X
In-Ceiling, Indoor	Black	Smoked	SD436-F0	SD436-F0-X	SD429-F0	SD429-F0-X
		Clear	SD436-F1	SD436-F1-X	SD429-F1	SD429-F1-X
In-Ceiling, Environmental*	Black	Smoked	SD436-F-E0	SD436-F-E0-X	SD429-F-E0	SD429-F-E0-X
		Clear	SD436-F-E1	SD436-F-E1-X	SD429-F-E1	SD429-F-E1-X
Pendant, Standard	Black	Smoked	SD436-PB-0	SD436-PB-0-X	SD429-PB-0	SD429-PB-0-X
		Clear	SD436-PB-1	SD436-PB-1-X	SD429-PB-1	SD429-PB-1-X
	Light Gray	Smoked	SD436-PG-0	SD436-PG-0-X	SD429-PG-0	SD429-PG-0-X
		Clear	SD436-PG-1	SD436-PG-1-X	SD429-PG-1	SD429-PG-1-X
Pendant, Environmental*	Light Gray	Smoked	SD436-PG-E0	SD436-PG-E0-X	SD429-PG-E0	SD429-PG-E0-X
		Clear	SD436-PG-E1	SD436-PG-E1-X	SD429-PG-E1	SD429-PG-E1-X

COMPONENT MODEL NUMBERS

Back Box		Dome Drive		Lower Dome†	
BB4-SMB	Surface mount, black	DD429	Day/Night (NTSC) camera (29X)	LD53SMB-0	Smoked, surface, black
BB4-SMW	Surface mount, white	DD429-X	Day/Night (PAL) camera (29X)	LD53SMB-1	Clear, surface, black
BB4-F	In-ceiling, black	DD436	Day/Night (NTSC) camera (36X)	LD53SMW-0	Smoked, surface, white
BB4-F-E	In-ceiling, black, environmental	DD436-X	Day/Night (PAL) camera (36X)	LD53SMW-1	Clear, surface, white
BB4-PB	Pendant mount, black, standard	DD5-FM	Removable, fixed mount bracket only (camera and	LDHQF-0	Smoked, in-ceiling
BB4-PG	Pendant mount, gray, standard		lens not included); interchangeable with all	LDHQF-1	Clear, in-ceiling
BB4-PG-E	Pendant mount, gray, environmental		Spectra IV dome drives	LDHQPB-0	Smoked, pendant, black
				LDHQPB-1	Clear, pendant, black

Notes:
To order a fixed mount dome system, refer to the component models above and select one each of the following options: back box (BB4-F), dome drive (DD5-FM), plus choice of lower dome (LDHQF-0, LDHQF-1).

For environmental applications, you must order an environmental back box (BB4-F-E or BB4-PG-E).

DD5-FM accepts camera and lens combinations including a BNC connector up to 12.70 x 6.99 x 6.99 cm (5.00" D x 2.75" W x 2.75" H).

*Environmental dome systems include a heater and a fan, and the environmental pendant also includes a sun shield.
†Use the pendant lower domes with the environmental in-ceiling and environmental pendant back boxes.

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo - www.P65Warnings.ca.gov.
⚠ **AVERTISSEMENT:** Cancer et Troubles de l'appareil reproducteur - www.P65Warnings.ca.gov.