



# Spectra® IV SE Series Dome Systems

## PREMIER INTEGRATED DOME SYSTEM

### Product Features

- Autofocus, High Resolution Integrated Camera/Optics Package; Multiple Back Box Models
- Day/Night, 540 TVL, 128X Wide Dynamic Range, Motion Detection, and Electronic Image Stabilization
- Window Blanking
- Camera Title Overlay, 20 User-Definable Characters
- Horizontal and Zone Blanking
- On-Screen Compass and Tilt Display
- Password Protection
- Freeze Frame During Presets
- Built-in Surge and Limited Lightning Protection
- Integrated Passive UTP Circuit
- Internal Scheduling Clock

### 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, standard and environmental pendant, heavy-duty, pressurized, and stainless steel. 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, **540 TVL resolution**, video in the most difficult environments. A powerful **35X optical zoom** lens, with a complimenting **12X digital zoom**, brings distant objects into view. **LowLight™** and **day/night** technology allow the camera to compensate for scenes where minimal light is present. Advanced **128X wide dynamic range** enables the system to compensate for scenes where dramatic contrasts in lighting are present. **Electronic image stabilization** digitally reduces blurring of the camera image due to vibration caused by external sources such as wind and traffic.



SURFACE MOUNT MODEL



PENDANT MODEL

### Lower Dome

An important, but often overlooked, component of a high-speed dome system is the relationship between the dome bubble and the camera lens. 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 programming and operation easy. An **internal scheduling clock** allows for the scheduling of presets and patterns. **Window blanking** enables a user to program up to eight, four-sided, user-defined privacy areas. **Password protection** prevents unauthorized users from changing the system settings. Programmable **on-screen compass and tilt display** provides positioning information when needed. Intuitive multilanguage on-screen programming can be displayed in English, Spanish, Portuguese, Italian, French, German, Russian, Polish, Turkish, and Czechoslovakian.

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.

Optional diagnostic/installation tools (IPS-RMK and IPS-CABLE) allow the installer to view video, control PTZ, and perform system setup and software upgrades at the installation site.



C2448 / NEW 9-06

IP66



U.S. Patents 5,931,432; 6,793,415 B2; 6,802,656 B2; 6,821,222 B2

International Standards Organization Registered Firm; ISO 9001 Quality System



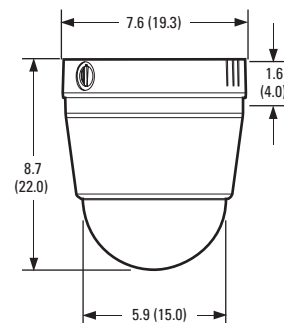
# TECHNICAL SPECIFICATIONS

## COMPONENT FEATURES

### Back Box and Lower Dome

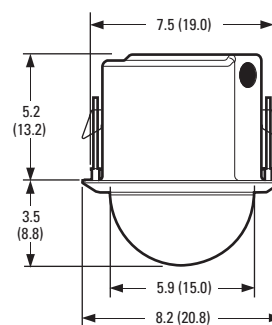
#### Surface Mount (Indoor)

- Built-in Memory Stores Camera/Dome Settings
- Available in Black or White Finish
- Installs Quickly and Easily to Any Type of Ceiling
- Quick Disconnect to Dome Drive
- Injection-Molded Plastic
- 5.9-Inch Acrylic Bubble
- Integrated Passive UTP



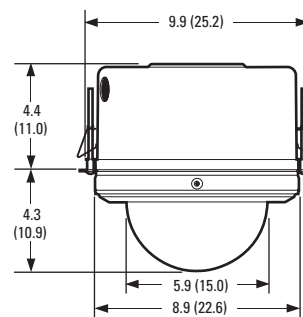
#### In-Ceiling (Indoor)

- 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
- 5.9-Inch Acrylic Bubble
- Minimum Ceiling Thickness 0.5-Inch; Maximum 1.75 Inches
- Quick Disconnect to Dome Drive
- Meets NEMA Type 1, IP40 Standards
- Aluminum Construction
- Suitable for Use in Environmental Air Handling Spaces
- Integrated Passive UTP



#### 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
- 5.9-Inch Acrylic Bubble
- Quick Disconnect to Dome Drive
- Meets NEMA Type 4X, IP66 Standards
- Aluminum Construction
- Integrated Passive UTP

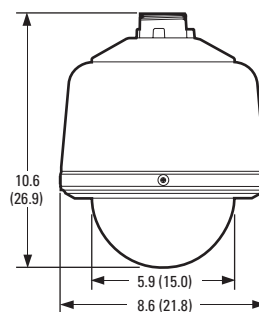


#### Standard and Environmental Pendant

- 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
- Meets NEMA Type 4X, IP66 Standards
- Aluminum Construction
- 5.9-Inch Acrylic Bubble
- Environmental Model Includes Sun Shield, Fan, and Heater
- Integrated Passive UTP



(ENVIRONMENTAL DOME WITH SUN SHROUD SHOWN)



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

# TECHNICAL SPECIFICATIONS

## Dome Drive

- 256 Presets
- $\pm 0.1^\circ$  Preset Accuracy
- Electronic Image Stabilization
- Multilanguage Menus (English, Spanish, Portuguese, Italian, French, German, Russian, Polish, Turkish, and Czechoslovakian)
- RJ-45 Data Port for Software Update and Setup
- On-Screen Compass, Tilt, and Zoom Display
- $400^\circ/\text{sec}$  Pan Preset Speed and  $200^\circ/\text{sec}$  Tilt Preset Speed
- Rotating Discreet Liner with Sealed Fixed Bubble
- Window Blanking – Up to Eight, Four-Sided, User-Defined Shapes
- Eight Zones (programmable in size) Can Be Labeled with Up to 20 Characters Each or Set to Output Blank Video
- Seven Alarm Inputs
- One Auxiliary (Form C) Relay Output and One Open Collector Auxiliary Output (can be alternately programmed to operate upon alarm)
- Programmable Locations of Labels and On-Screen Displays
- Action on Alarm – Alarms can be individually programmed for three 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 programmed state after alarm acknowledgement or to its previous position before alarm
- Patterns – Up to eight, on-screen, user-defined programmable patterns. Includes pan, tilt, zoom, and preset functions
- Proportional Pan and Tilt – Continually decreases pan and tilt speeds in proportion to depth of zoom
- Variable Scan Speed – Scan speed can be programmable between  $1\text{-}40^\circ/\text{sec}$
- Pan Motion Allows  $0.1\text{-}150^\circ/\text{sec}$  Pan Speed
- Programmable Limit Stops for Auto/Random/Frame Scan Modes
- Auto-sensing Protocol (Coaxitron<sup>®</sup>, RS-422 P and D); Accepts Competitive Control Protocol with Optional Translator Card
- Digital Position and Zoom Control and Feedback Via D Protocol
- Built-in Menu System for Setup of Programmable Functions
- "Auto Flip" Rotates Dome  $180^\circ$  at Bottom of Tilt Travel
- Programmable Zoom Speeds

## MECHANICAL (Dome Drive Only)

Pan Movement	$360^\circ$ continuous pan rotation
Vertical Tilt	Unobstructed $+2^\circ$ to $-92^\circ$
Manual Pan/Tilt Speeds	
Pan	$0.1^\circ\text{-}80^\circ/\text{sec}$ manual operation, $150^\circ/\text{sec}$ Turbo
Tilt	$0.1^\circ\text{-}40^\circ/\text{sec}$ manual operation
Preset Speeds	
Pan	$400^\circ/\text{sec}$
Tilt	$200^\circ/\text{sec}$
	For variable-speed operation an appropriate controller is required. (With non-variable speed control, Spectra IV SE pan/tilt speed is $20^\circ/\text{sec}$ )

## ELECTRICAL

Input Voltage	18-32 VAC; 24 VAC nominal 22-27 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

## GENERAL

Construction		
Back Box		
Surface Mount	Plastic	
In-Ceiling	Aluminum	
Pendant	Aluminum	
Dome Drive	Aluminum, thermo plastic	
Bubble	Acrylic	
Light Attenuation		
Smoked	$1/2$ F-stop light loss	
Clear	Zero light loss	
Chrome	2 F-stops light loss	
Gold	2 F-stops light loss	
Cable Entry (Back Box)		
In-Ceiling and	0.75-inch conduit fitting	
Surface Mount	Through 1.5-inch NPT pendant mount	
Pendant		
Weight (approximate)	<u>Unit</u>	<u>Shipping</u>
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)	4.9 lb (2.22 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	Outdoor	
Pendant, Standard		
and Environmental	Indoor/outdoor	
Operating Temperature		
Surface Mount and		
Indoor In-Ceiling	$32^\circ$ to $122^\circ\text{F}$ ( $0^\circ$ to $50^\circ\text{C}$ )	
Standard Pendant	(Assumes no wind chill factor)	
Maximum	$113^\circ\text{F}$ ( $45^\circ\text{C}$ ) absolute maximum; $95^\circ\text{F}$ ( $35^\circ\text{C}$ ) sustained maximum	
Minimum	$25^\circ\text{F}$ ( $-4^\circ\text{C}$ ) sustained minimum	
Environmental		
In-Ceiling and		
Environmental Pendant	(Assumes no wind chill factor)	
Maximum	$140^\circ\text{F}$ ( $60^\circ\text{C}$ ) absolute maximum; $122^\circ\text{F}$ ( $50^\circ\text{C}$ ) sustained maximum	
Minimum	$-60^\circ\text{F}$ ( $-51^\circ\text{C}$ ) absolute minimum; prevents icing at sustained minimum of $-50^\circ\text{F}$ ( $-45^\circ\text{C}$ ); de-ices 0.1 inch (2.5 mm) within 3 hours after power-up	
Effective Projected		
Area (EPA)	20.5 square inches (without mount)	67 square inches (with PP350/PP351 mount)

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- Complies with Argentina compliance requirements under Res. 92/98
- FCC, Class B
- U.S. Patents 5,931,432; 6,793,415 B2; 6,802,656 B2; 6,821,222 B2

Meets the following standards:

- NEMA Type 4X, IP66 when installed properly (BB4-F-E, BB4-PB, BB4-PG, and BB4-PG-E)
- NEMA Type 1, IP40 (BB4-SMW, BB4-SMB and BB4-F)

# TECHNICAL SPECIFICATIONS

## CAMERA/OPTICS

	Day/Night (35X)
Signal Format	NTSC ( <b>DD4CBW35</b> ) PAL ( <b>DD4CBW35-X</b> )
Scanning System	2:1 Interlace
Image Sensor	1/4-inch EXview HAD™
Effective Pixels	768 (H) X 494 (V) PAL 752 (H) X 582 (V)
Horizontal Resolution	NTSC >540 TV Lines PAL >540 TV Lines
Lens	F1.4 (f = 3.4~119 mm optical)
Zoom	35X optical, 12X digital
Zoom Speed (optical range)	3.2/4.6/6.6 seconds
Horizontal Angle of view	55.8° at 3.4 mm wide zoom; 1.7° at 119 mm telephoto zoom
Focus	Automatic with manual override
Maximum Sensitivity @35 IRE NTSC/EIA	0.55 lux at 1/60 sec ( <b>color</b> ) 0.063 lux at 1/4 sec ( <b>color</b> ) 0.00018 lux at 1/2 sec ( <b>B-W</b> )
PAL/CCIR	0.50 lux at 1/50 sec ( <b>color</b> ) 0.062 lux at 1/3 sec ( <b>color</b> ) 0.00014 lux at 1/1.5 sec ( <b>B-W</b> )
Sync System	Internal/AC line lock, phase adjustable via remote control, V-Sync
White Balance	Automatic with manual override
Shutter Speed	Automatic (electronic iris)/Manual
NTSC	1/2 ~1/30,000
PAL	1/1.5 ~1/30,000
Iris Control	Automatic Iris Control with manual override
Gain Control	Automatic/OFF
Video Output	1 Vp-p, 75 ohms
Video Signal to Noise	>50 dB
Wide Dynamic Range	128X
Electronic Image Stabilization	Integrated

### WINDOW BLANKING

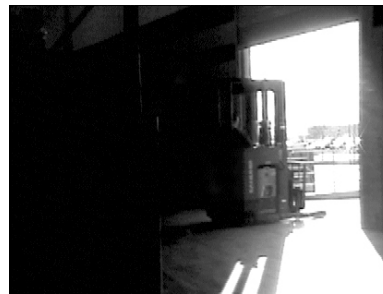
Window blanking allows a user to program up to eight, four-sided, user-defined areas that cannot be viewed by the operator of the dome system. A blanked area will move with pan and tilt functions and automatically adjust in size as the lens zooms telephoto and wide.



BEFORE



AFTER



BEFORE



AFTER

### WIDE DYNAMIC RANGE

The Wide Dynamic Range (WDR) setting balances the brightest and darkest sections of a scene to produce a picture that provides more detail. The range from the darkest to the brightest sections of the scene is 128X more when WDR is ON than when OFF.

# TECHNICAL SPECIFICATIONS

## OPTIONAL ACCESSORIES

DD5-FM	Fixed camera mount adapter. Interchangeable with all Spectra IV dome drives.
IPS-RMK	Remote monitor kit. Stand-alone kit consisting of a 5.6-inch TFT-LCD monitor, Palm™ OS compatible handheld, cables and carrying case. Allows viewing of camera video, local PTZ control, system setup, and system software upgrades at any installed dome.
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 (Windows® 95, 98, Me, 2000), Palm™ OS compatible handheld or iPaq™ Series Pocket PC. See <a href="http://www.pelco.com">www.pelco.com</a> 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/programming and Spectra IV OS software upgrades when used with the IPS-RMK or IPS-CABLE.
TXB Series*	Translator boards for AD Manchester, Bosch (Philips, Burle), Sensormatic, Vicon, and NTCIP protocols.
FS85011*	Fiber transmitter sends one unidirectional composite video channel and one bidirectional data channel over one multimode or single-mode fiber optical cable.

\*If TXB or FS85011 boards are installed, remote upload of system software will not be possible.



**IPS-RMK REMOTE MONITOR KIT**

## 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

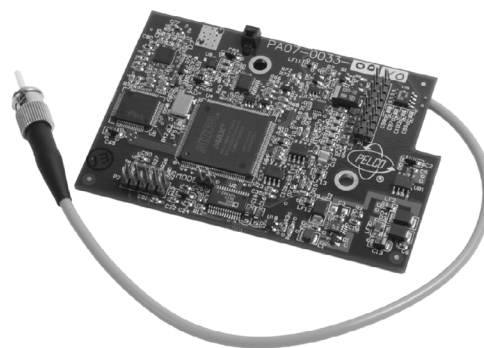
BB5-PCA-BK**	Pendant conduit adapter, black
BB5-PCA-GY**	Pendant conduit adapter, gray
IWM Series	Wall mount, with or without integral 24 VAC, 100 VA transformer. Black or gray finish. Can be adapted for corner, parapet or pole applications.
MRCA	Ceiling mount, black
MRWA	Wall mount, black
PP4348	Parapet 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
MCS*E Series	Indoor, 24 VAC power supply
WCS Series	Outdoor, 24 VAC power supply

Refer to individual power supply specifications for more information.



**FS85011 FIBER MODULE**

# SYSTEM MODELS AND RELATED PRODUCTS

## SYSTEM MODEL NUMBERS

Type	Back Box Color	Lower Dome	35X Day/Night*
Surface Mount	White	Smoked	SD435-SMW-0
		Clear	SD435-SMW-1
		Chrome	SD435-SMW-2
		Gold	SD435-SMW-3
	Black	Smoked	SD435-SMB-0
		Clear	SD435-SMB-1
		Chrome	SD435-SMB-2
		Gold	SD435-SMB-3
In-Ceiling, Indoor	Black	Smoked	SD435-F0
		Clear	SD435-F1
		Chrome	SD435-F2
		Gold	SD435-F3
In-Ceiling, Environmental**	Black	Smoked	SD435-F-E0
		Clear	SD435-F-E1
Pendant, Standard	Black	Smoked	SD435-PB-0
		Clear	SD435-PB-1
		Chrome	SD435-PB-2
		Gold	SD435-PB-3
	Lt. Gray	Smoked	SD435-PG-0
		Clear	SD435-PG-1
		Chrome	SD435-PG-2
		Gold	SD435-PG-3
Pendant, Environmental**	Lt. Gray	Smoked	SD435-PG-E0
		Clear	SD435-PG-E1

\*For PAL and CCIR models add "-X" suffix to part number. (Example: SD435-SMW-0-X)

\*\*Environmental dome systems include a heater, fan, and the environmental pendant also includes a sun shield.

## COMPONENT MODEL NUMBERS

Back Box	Dome Drive	Lower Dome***
BB4-SMB Surface mount, black	DD4CBW35 Day/Night (NTSC) camera (35X)	LD53SMB-0 Smoked, surface, black
BB4-SMW Surface mount, white	DD4CBW35-X Day/Night (PAL) camera (35X)	LD53SMB-1 Clear, surface, black
BB4-F In-ceiling, black	DD5-FM Removable, fixed mount bracket only (camera and lens not included). Interchangeable with all Spectra III dome drives.	LD53SMB-2 Chrome, surface, black
BB4-F-E In-ceiling, black, environmental		LD53SMB-3 Gold, surface, black
BB4-PB Pendant mount, black, standard		LD53SMW-0 Smoked, surface, white
BB4-PG Pendant mount, gray, standard		LD53SMW-1 Clear, surface, white
BB4-PG-E Pendant mount, gray, environmental		LD53SMW-2 Chrome, surface, white
		LD53SMW-3 Gold, surface, white
		LD5F-0 Smoked, in-ceiling
		LD5F-1 Clear, in-ceiling
		LD5F-2 Chrome, in-ceiling
		LD5F-3 Gold, in-ceiling
		LD53PB-0 Smoked, pendant, black
		LD53PB-1 Clear, pendant, black
		LD53PB-2 Chrome, pendant, black****
		LD53PB-3 Gold, pendant, black****

**Notes:**  
To order a fixed mount dome system refer to the component models above and select one each of the following: back box (BB4-F), dome drive (DD5-FM), plus choice of lower dome (LD5F-0, LD5F-1, LD5F-2 or LD5F-3).  
For environmental applications, you must order an environmental back box (BB4-F-E) or (BB4-PG-E).  
DD5-FM is ideal for use with Pelco's CCC1380/CCC1390/MCC1380 Series cameras with selected Pelco lenses.

\*\*\*Use the pendant lower domes with the environmental in-ceiling and environmental pendant back boxes.

\*\*\*\*Not recommended for outdoor use due to possible light reflections.



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