

## EMCam 4350



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**Revision Record**

**MANUAL,EMCam 4350 | Part #1788206, Rev. B**

<b>Revision</b>	<b>Description</b>	<b>Date</b>
A	Initial Release	June, 2024
B	Removed PN errors	October, 2024

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## 1. GENERAL

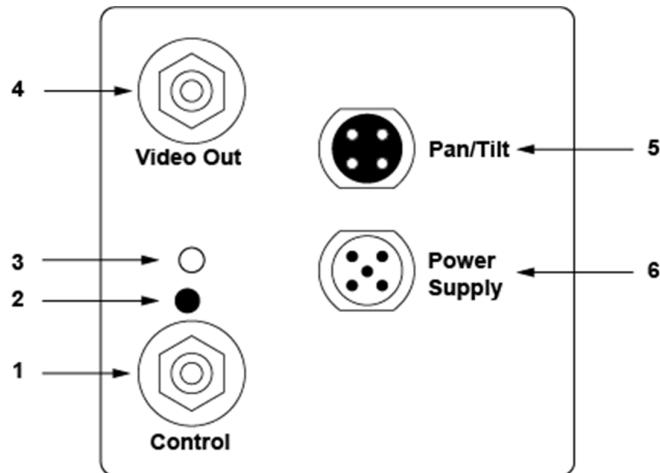
The EMCam 4350 series cameras are designed for operation in EMC critical areas. They are shielded up to 200 V/m at a resolution of 2 megapixels and can be operated remotely.

## 2. DEVICE CONNECTIONS

### 2.1 Remote Control

The EMCam 4350 series camera are controlled by Pelco-D commands sent over RS485 from the camera or a joystick.

### 2.2 Local Control



1. Control: Fiber Optic Connector (ST); control signal input

2. Configure Button:

Short press: Show HD-format via blink code once. See *Checking HD-format Setting*.

Long press: Entering HD-format settings. See chapter *Changing HD-format Setting*.

3. LED: Power/Camera ON indicator

Slow steady flash: Power is applied, no control signal at camera, camera is switched off

Rapid steady flash: Error with camera, please contact distributor

On: Camera is switched on and working

Blink code (special mode): setting up HD-format, see *Setting HD Format*.

4. Video Out: Fiber optic connector (ST); video signal output

5. Pan/Tilt Connection (5 pin Socket)

6. Power Supply (5 pin plug for connecting the mains unit)

Connector Camera	Connected With:
Video Out	Video In of the controller
Control	Control of the controller
5 Pin Plug	Supply Camera of the power supply
4 Pin Socket	Pan/Tilt Unit

### 3. INSTALLATION

The standard mounting plate of the camera allows the camera to mount onto the pan/tilt unit.

When you are not using our system accessories, please be sure that this components are fitting to our specifications. In particular the tripod and the wall bracket should be constructed to take up the load of the camera.

During the installation of the system please ensure a professional installation of all electrical and fiber optic components.

#### CAUTION

- Do not fold the fiber optic cables.
- Avoid a bending a radius smaller than 10 centimeters (3.94 inches).
- Do not step on the cables or place anything on top of the cables.
- Do not run over the cables with vehicles or equipment.

### 4. SETTING HD FORMAT

There are two HD-video output formats: 1080/25p and 1080/30p. “p” means progressive video.

Normally the format 1080/25p is used with 50Hz mains frequency (similar to PAL at analogue video signals), 1080/30p is used with 60 Hz mains frequency (similar to NTSC at analogue video signals). Image may flicker when the mains frequency differs from the vertical line frequency at the camera.

#### 4.1 Checking HD-format Setting

With a short push at the configure switch (6) the actual used HD format is shown with the LED (5) at the rear side of the camera. The led outputs a flash code. To determine the setting, count the flash impulses:

1. 1080/25p
2. 1080/30p
3. 1080/50p
4. 1080/60p

#### 4.2 Changing HD-format Setting

1. Press the configure switch for 6 seconds.

In setup-mode, the blink-code is shown permanently. Each short push of the switch changes the output mode to the other HD format.

2. To save the setting, press the configure switch again for 6 seconds, the led then lights 1 second before turning off.
3. Release the switch. The saved HD-format is shown once more. Setup procedure is now complete. The steady LED light indicates normal operation.



- The camera cannot be controlled (P/T, Zoom, Focus) in setup-mode
- The setup mode can also be activated in standby mode (no fiber connected). In this case, it takes approximately 25 seconds until the flash code is shown because the camera must internally power up before settings can be changed.
- Even with the fiber connected, no picture appears if “Camera On” at the controller side is not activated.
- We recommend entering enter setup-mode while camera is working normally.

## 5. TECHNICAL SPECIFICATIONS

### 5.1 Camera EMCam 4350-002 through -007

Video Signal System		1080/25p, 1080/30p, 1080/50p, 1080/60p, switchable, according to SMPTE 292M
Resolution		1920 x 1080 pixel
S / N Ratio		>50dB (AGC off)
Minimum Object Illumination		0.5 lux (color mode), 0.1 lux (b/w)
White Balance		Automatic White Balance
Focal Length		4.3 ~ 129.0 mm
Aperture Ratio		F1.6 (wide) ~ F4.7 (tele)
Min. Object Distance		10 cm
Operation Mode	Iris	Automatic
	Zoom	Motorized
	Focus	Motorized
Angle of View	Horizontal	58.9° ~ 2.11°
Pan/Tilt		RS485 / PELCO-D
Video Link		Digital, 1310 nm
Command Link		Digital, 850nm
Glass Fiber		50/125 µm Glass Fiber with ST Patches
Operating Environment		0° up to +50° C (32° to 122° F)
Operating Humidity		20 up to 80 % RH
External Dimensions		120 mm (4.72 in) x 80 mm (3.15 in) x 80 mm (3.15 in)
Case		Aluminum Chromated, 4mm
Weight		Approx. 800g
RF - Immunity		200V/m to 18 GHz

**Note:** The EMCam 4350 does not support "long exposure." (See controller manual.)

### 5.2 Peripheral Equipment

#### Required

- Power Supply: 1763223
- Controller (zoom, focus, Pan/Tilt)
- Fiber optic cables: variable lengths ST/FSMA connector
- Monitor: HDMI, SDI

#### Optional

- Remotely controlled Pan/Tilt
- Tripods and wall mounts
- Controller with recording or external DVR

## 6. PIN ASSIGNMENT

The camera is connected to the Pan/Tilt unit via a 4 line cable (M12-A).

4-Pin Receptacle to Pan/Tilt (female)	
PIN	Color
1 D+	Brown
2 D-	White
3 D_GND	Blue
4 12V	Black

The camera is connected to the power supply via a 5 line cable (M12-A).

5-pin Receptacle to Power Supply (male)	
PIN	Color
1 12V-DC	Brown
2 12V-DC	White
3 GND	Blue
4 GND	Black
5 AUX	Grey

## 7. REPLACEMENT PARTS

Part Description	Part Number
HD Camera, CAM6 ECP Series	1763230
Power Supply, 115-230V	1763223
Motor, Pan/Tilt, Remote Control	1763231
Tripod, Wooden, CAM6 Series	1763232
Fiber Optic Cable, 20M, Simplex	1763225
Fiber Optic Cable, 20M, Duplex	1763234
Wall Bracket, 70cm, Ferrite Mount	1763235
Intercom, Audio SAT	1763236
HD Controller, 1 CH, w/Joystick	1763233
HD Controller, 1CH, w/Joystick, w/Audio	1792096
HD Controller, 2CH, w/Joystick	1763237
HD Controller, 2CH, w/Audio	1791305

Not all parts are available on all systems.