Esprit Compact Bispectral PTZ

2 MP   QVGA   VGA

Mission-critical industries require highly-reliable security in installations that are often located in demanding and remote environments. They must ensure round-the-clock security for their wide perimeters, necessitating robust video security systems that can flawlessly operate in all environmental, lighting and weather conditions. Get a complete picture of the landscape with the Esprit Compact Bispectral that combines a visual and a thermal camera into a single device. The visual camera recognizes and identifies a target, while the thermal camera achieves greater detection accuracy, even in adverse weather and lighting conditions. Both cameras are perfectly aligned with the movements of the PTZ, providing an efficient 360-degree solution to safeguard perimeters and borders, critical infrastructures, traffic management, railway and beyond.

Features

Visual Camera
Get clear images in most weather and lighting conditions with 2 MP resolution, Low Light Performance and true Wide Dynamic Range. See afar in great detail with long-range zoom.

Easy Installation
Simplify installation and maintenance processes by installing only one camera instead of two. The compact design of this camera facilitates its installation, particularly in remote areas.

Superior Detection
Never miss a single detail with a camera that provides a thermal and a visual vision for better decision-making and reduced false alarm rates.

H.264 and H.265, Smart Compression
Retain high image quality and optimize compression levels to minimize bandwidth and storage needs.

Thermal Camera
Detect heat signatures from a long distance with various resolutions, including QVGA and VGA, and choose from a variety of field of view options to cover wide areas.

Pelco Smart Analytics
Enhance object detection and classification and leverage your PTZ's full potential with auto-tracking for quicker, decisive responses.

Rugged For Tough Conditions
Safe in extreme temperatures from -40°C to 60°C (-40°F to 140°F), plus IP66/67/68 weather rating and IK10 impact rating for maximum durability.

ONVIF® Compliant
ONVIF Profile S, T, G, and M conformance for easy integration with any third-party VMS.

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Specifications

Thermal - Image Performance	QVGA	VGA
Image Sensor	320 x 256 Uncooled VOx Microbolometer	640 x 512 Uncooled VOx Microbolometer
Pixel Pitch	12µm	
Spectral Range	8µm to 14µm	
Aspect Ratio	5:4	
Image Rate	Up to 30 fps (-1 models up to 8.6 fps)	
Dynamic Range	-40°C to 225°C (-40°F to 437°F) [may vary based on operating temperature]	
Resolution Scaling	320 x 256, can be scaled up to 640 x 512	640 x 512, can be scaled down to 320 x 256
3D Noise Reduction Filter	Yes	
Sensitivity	NETD ≤50 mK (NETD ≤40 mK when Frame Averager feature is enabled)	
Thermal Palettes*	White Hot, Black Hot, Rainbow, RainHC, IronBow, Lava, Artic, GlowBow, GradedFire	
Image Uniformity Optimization	Automatic Flat Field Correction (FFC) - Thermal and Temporal	

*Pelco Smart Analytics powered by Motorola Solutions.

Thermal - Lens	QVGA		VGA	
Lens	6.3 mm	18 mm	8.7 mm	24.4 mm
Horizontal field of view	34°	12°	50°	18°
Vertical field of view	27.2°	9.6°	37.5°	13.5°
F-number	F/1.01	F/1.04	F/1.01	F/1.00
Personal (detection / recognition / identification)	131m / 33m / 20m	381m / 95m / 59m	172m / 43m / 26m	505m / 126m / 78m
Car (detection / recognition / identification)	608m / 152m / 94m	1753m / 438m / 270m	867m / 217m / 133m	2506m / 627m / 386m

Visible - Image Performance	2.0 MP
Image Sensor	1/2.8" progressive scan CMOS
Active Pixels (H x V)	1937 (H) × 1097 (V)
Imaging Area (H x V)	5.568 mm (H) × 3.132 mm (V); 0.219 ″ (H) × 0.123 ″ (V)
Minimum Illumination	0.03 lux (F/1.6) in color mode; 0.02 lux (F/1.6) in monochrome
Dynamic Range	120 dB
Image Rate	Up to 60 fps
Aspect Ratio (Resolution Scaling)	Down to (16:9) 384×216 or (5:4) 320×256
Signal Noise (S/N) Ratio	More than 50 dB
Lens	4.25 to 170 mm, F/1.6 − F/4.95, autofocus
Angle of View	Horizontal	66.35° - 1.9°
	Vertical	39.99° − 1.11°
Zoom	Up to 40x
3D Noise Reduction Filter	Yes

Visible - Image Control	2.0 MP
Motion Detection	Pixel motion: Selectable sensitivity and threshold. Classified object detection
Electronic Shutter Control	Automatic, Manual (1/1 to 1/10,000 sec)
Iris Control	Automatic, Open, Closed

Visible - Image Control	2.0 MP
Day/Night Control	Automatic, Manual
Flicker Control	60 Hz, 50 Hz
White Balance	Automatic, Manual
Backlight Compensation	On/Off
Privacy Zones	3D, up to 64 zones
Digital Zoom	12X
Electronic Image Stabilization	Yes
Digital Defog	Adjustable/Off

Common - Image Control	
Video Compression	H.264 and H.265 Pelco Smart Compression, Motion JPEG
Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG
Presets	500 named presets
Tours	10 named tours

Network	
Network	100BASE-TX
Cabling Type	CAT5e/CAT6 shielded (STP) Ethernet cable is required to fully comply with EMC regulatory standards
Connector	RJ-45
ONVIF	ONVIF compliance Profile G, Profile M, Profile S, and Profile T (www.onvif.org)
Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication. Signed and encrypted firmware. FIPS 140-2 Level 3 (NXP TPM).
Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv3, ICMP, DHCP, Zeroconf, HSTS, NTCIP
Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP, SRTP
Device Management Protocols	SNMP v2c, SNMP v3

Peripherals	
Audio Input/Output	None
External I/O Terminals	2 Alarm In, 2 Alarm Out
Onboard Storage	MicroSD/microSDHC/microSDXC slot – video speed class card required. Class V10 or better recommended.

Mechanical	
Dimensions (Ø×H)	Ø240 mm × 406 mm; Ø9.45" × 16.0"
Weight	7.4 kg; 16.3 lb
Glass Window	6 mm thick (0.24")
Germanium Window	• Thick: 1.5mm (0.06in) • Scratch-resistant treatment (Hard Carbon Coating - DLC) • Antireflection treatment • Spectral range: from 7.5µm up to 14µm • Medium transmittance (from 7.5µm up to 11.5µm): 91.2% • Medium transmittance (from 11.5µm up to 14µm): 80.9%
Body	Aluminum and technopolymer
Housing	Pendant and pedestal mount
Finish	Epoxy-polyester powder painted, close to RAL9002
Tilt	Upright: -90° to +90°; Inverted: -40° to +90° Up to 250°/second
Pan	360°, endless, up to 250°/second

Electrical

Power Consumption		71 W max with 24 VDC aux power supply or 90 W PoE, 100 VA with 24 VAC aux power. UL rating as specified on the product label = 5A max
Power Source	External Power	•24 VDC, 24 VAC 50/60 Hz •57 VDC PoE++, 71 W max
	PoE	90 W compatible with standard IEEE 802.3bt Class 8
Power Connector		2-wire terminal block, 18 AWG to 13 AWG
RTC Battery Backup		None

Environmental

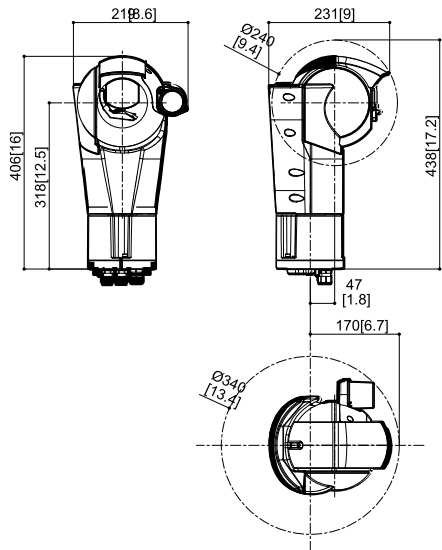|	
Operating Temperature	Continuous functioning: from -40°C (-40°F) up to +60°C (140°F).
Storage Temperature	-40 °C to +70 °C (-40 °F to 158 °F)
Humidity	5% - 95% non-condensing
Housing Climate Control	Built-in heater and fan
Cold Start	Up to 120 minute startup delay at temperature lower than -10 °C (14 °F)
Wind Resistance	Sustained 230 km/h (143 mph)

Certifications

Certifications/Directives	UL, cUL, CE, UKCA, ROHS, RCM, KC (BIS, NOM, pending)
Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1
Environmental and Performance	UL/CSA/IEC/EN 62368-1 for outdoor enclosures, IEC 62262 IK10 Impact Rating (enclosure only), IEC 60529 IP66, IP67, IP68 Weather Rating, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-30, Type 4X and 6P, Salt Spray ASTM B117, ISO 14993, MIL-STD-810-H (Method 501.7, 502.7, 503.7, 506.7, 509.7, 510.7, 521.4), MIL-STD 167-1A
Electromagnetic Emissions	FCC Part 15 Subpart B Class A, IC ICES-003 Class A, EN 55032 Class A, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3, EN 50121-4
Electromagnetic Immunity	EN 55035, EN 50130-4, EN 50121-4
Warranty	5-year limited warranty. Extended warranty not available.
Railway Applications	Compliance to railway application standard: EN50121-4

Outline Dimensions

Esprit Compact Bispectral Camera

[X.XX]	INCHES
X.X	MM

Ordering Information

PTZ Cameras

Part Number	Visible					Thermal		
	MP	WDR	Lightcatcher Technology	Analytics At Home Position	Lens, Zoom	Sensor	HFOV, FL	Framerate
ESCE1-2X40V9-RLU-1	✓	✓	✓	✓	4.25 – 170 mm, 40x	VGA 640X512	50°, 8.7 mm	9Hz
ESCE1-2X40V24-RLU-1	✓	✓	✓	✓	4.25 – 170 mm, 40x	VGA 640X512	18°, 24 mm	9Hz
ESCE1-2X40Q6-RLU-1	✓	✓	✓	✓	4.25 – 170 mm, 40x	QVGA 320X256	34°, 6.3 mm	9Hz
ESCE1-2X40Q18-RLU-1	✓	✓	✓	✓	4.25 – 170 mm, 40x	QVGA 320X256	12°, 18 mm	9Hz
ESCE1-2X40V9-RLU	✓	✓	✓	✓	4.25 – 170 mm, 40x	VGA 640X512	50°, 8.7 mm	30Hz
ESCE1-2X40V24-RLU	✓	✓	✓	✓	4.25 – 170 mm, 40x	VGA 640X512	18°, 24 mm	30Hz
ESCE1-2X40Q6-RLU	✓	✓	✓	✓	4.25 – 170 mm, 40x	QVGA 320X256	34°, 6.3 mm	30Hz
ESCE1-2X40Q18-RLU	✓	✓	✓	✓	4.25 – 170 mm, 40x	QVGA 320X256	12°, 18 mm	30Hz

PTZ Camera Accessories

Accessory	Description
UEBWAA	Wall bracket for Esprit Compact Bispectral
UEBP0AA	Parapet bracket for Esprit Compact Bispectral
UEBP4AA	Parapet bracket with quick connector RJ45 + four poles
UEBP7AA	Parapet bracket with quick connector RJ45 + seven poles
UEAP	Pole adaptor, stainless steel AISI 316L
UEAC	Corner adaptor, stainless steel AISI 316L
UEAW	Counter-plate, stainless steel AISI 316L
WASPT0V5L5M00	Washer 5l, 5m, 230Vac-24Vac-120Vac
WASPT0V23L11M00	Washer 23l, 11m, 230Vac-24Vac-120Vac
WASPT1V23L30M00	Washer 23l, 30m, water float, 230Vac
WASPT3V23L30M00	Washer 23l, 30m, water float, 120Vac
COMB100A	Comm. box, w PS & Switch, 220-230Vac
COMB200A	Comm. box, w PS & Switch, 24Vac
COMB300A	Comm. box, w PS & Switch, 120-127Vac
SURGEPR	Lightning surge prot. for Ethernet line

Support

Learn more and find additional documentation at pelco.com or email support@pelco.com for specific product support.

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