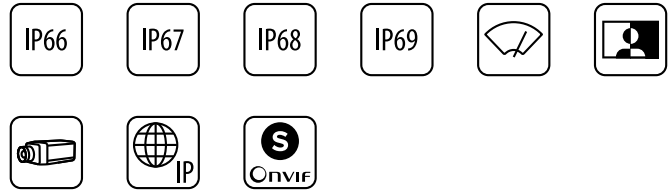# NXPTZT

PTZ CAMERA DUAL VISION, DAY/NIGHT AND THERMAL, FOR ONSHORE/OFFSHORE,

MARINE AND INDUSTRIAL AREAS

IP66　IP67　IP68　IP69

NXPTZT

NXPTZT

DESCRIPTION

This model features real-time dual vision, integrating a Day/Night colour module and a thermal imaging camera, for security applications in most corrosive industrial and offshore/onshore marine environments and even in total darkness, through fog, rain, heavy smoke or for long-distance surveillance.

NXPTZT requires minimum maintenance and is completely resistant to rust and corrosion, thanks to the maximum precision of the manufacturing processes and quality of the stainless steel AISI316L micro-shot peened in silicon and electropolished.

All models are available in Analogue or IP version.

The flexible operator control of pan/tilt/zoom functions allows the video transmission over the local area network (LAN) or over the Internet with H.264/AVC compression, compatible with ONVIF Profile S.

The Videotec's PTZ ASSISTANT plug-in software supports any VMS with the control of all special functions such as wiper and washer pump.

An equally noteworthy point is that the IP66/IP67/IP68 ratings guarantee the complete protection against harsh weather and immersion in up to 1 metre of water for 2 hours. Moreover the IP69 rating allows the device to be cleaned with high pressure and high temperature water jets.

The NXPTZT is always supplied with integrated wiper; wide choice of tanks with washer pump available with different capacities and delivery heights.

The NXPTZ series products are Lloyd's Register Type Approval System Test Specification Number 1 certified and therefore can be used in Marine and Offshore applications for environmental categories ENV1, ENV2, ENV3 and ENV5.

CERTIFICATIONS

MAIN FEATURES

In stainless steel AISI 316L, micro-shot peened in silicon and electro-polished

Dual independent video output

Thermal camera:

- Sensor: Uncooled microbolometer (VOx)
- Lenses: 9mm, 13mm, 19mm, 25mm, 35mm, 50mm
- Resolution 336x256 or 640x512

Day/Night camera:

- True Progressive Scan
- High resolution: up to 550 TV Lines
- Advanced image stabiliser (Stable Zoom Mode)
- Day/Night (Auto ICR: automatic removal of IR filter)

Up to 2 simultaneous video streams for each camera (IP-based version)

Variable speed: from 0.1°/s up to 100°/s Pan and Tilt

Position accuracy: 0.02°

Pre-wired multipolar cable (3m (118in))

Integrated wiper

Total control of the auxiliary functions through the Videotec PTZ ASSISTANT (IP-based version)

Operating temperature: from -40°C (-40°F) up to +60°C (140°F)

Protection degree: IP66, IP67, IP68, IP69

Marine Certification: Lloyd's Register Marine Type Approval

Options:

- IP-based control, H.264/AVC and JPEG, 25fps, Full D1 (compatible with ONVIF protocol, Profile S)

TECHNICAL DATA

GENERAL

Dynamic positioning control system

16-character string for zone and preset titling

Maximum number of presets: 250

Functions: Autopan, Preset, Patrol, Tour (maximum 3), Autoflip

MECHANICAL

AISI 316L stainless steel construction

External surfaces micro-shot peened in silicon and electro-polished

Pre-wired multipolar cable (3m (118in))

Horizontal rotation: 360°, continuous rotation

Vertical rotation: from -90° up to +90°

Horizontal speed (variable): from 0.1°/s up to 100°/s

Tilt speed (variable): from 0.1°/s up to 100°/s

Accuracy of preset positions: 0.02°

Integrated wiper

Unit weight: 24kg (53lb)

HOUSING'S WINDOW

Glass window extra clear
- Thick: 6mm (0.24in)

Germanium window
- Thick: 1.5mm (0,06in)
- External treatment: antiscratch (Hard Carbon Coating - DLC), antireflection
- Internal treatment: antireflection
- 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%

ELECTRICAL

Supply voltage/Current consumption:
- 230Vac, 0.5A max, 50/60Hz
- 24Vac, 5A max, 50/60Hz
- 120Vac, 1A max, 50/60Hz

Power consumption:
- 120W
- 30W, P&T static, heating switched off

NETWORK

Connector (only for the IP versions of the product):
- RJ45, 10BASE-T/100BASE-T

SERIAL COMMUNICATIONS

Configuration through OSM

2 half-duplex serial RS-485 interfaces or full-duplex RS-422

Firmware updating from console in remote mode (PELCO D, VIDEOTEC MACRO)

Up to 999 units, addressable by means of dip-switches

Serial communication protocol: AMERICAN DYNAMICS, ERNITEC, PANASONIC, PELCO D, VIDEOTEC MACRO

I/O INTERFACE

I/O alarm board:
- Alarm inputs: 5
- Relay outputs: 2 (1A, 30Vac/60Vdc max)

VIDEO

Analog version
- 2 video outputs, 75 Ohm, 1Vpp (PAL/NTSC)

IP version:

Video encoder
- Communication protocol: ONVIF, Profile S
- Device configuration: TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, NTP, DHCP, WS-DISCOVERY, QoS, IGMP (Multicast)
- Streaming: RTSP, RTCP, RTP/IPv4
- Video compression: H.264/AVC, MJPEG
- Independent video streams: 2
- Image resolution: from Full D1 (720x576 for PAL, 720x480 for NTSC) to 352x240 in 18 steps
- Web Server

ENVIRONMENT

For installation indoors and outdoors

Operating temperature: from -40°C (-40°F) up to +60°C (140°F)

Surge immunity: up to 2kV line to line, up to 4kV line to earth (Class 4)

CERTIFICATIONS

Electrical safety (CE): EN60950-1, IEC60950-1

Electromagnetic compatibility (CE): EN50130-4, EN55032 (Class A), EN61000-6-4, FCC Part 15 (Class A)

Outdoor installation (CE): EN60950-22, IEC 60950-22

IP protection degree: EN60529
- IP66/IP67/IP68/IP69

UL certification: cULus Listed (TYPE 4X, only for 24Vac versions)

EAC certification

Lloyd's Register Marine Type Approval (Install the product at a distance of at least 24m (78.7ft) from the VHF antennas, the 24Vac and 120Vac versions require a filter accessory FM1010)
- Test Specification Number 1:2015 (ENV1, ENV2, ENV3, ENV5)

ACCESSORIES

WASPT0V5L5M00	Water tank 5l (1 gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac
WASPT0V23L5M00	Water tank 23l (6 gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac
WASPT0V23L11M00	Water tank 23l (6 gal), pump with delivery up to 11m (36ft) with water floating, IN 230Vac-24Vac-120Vac
WASPT1V23L30M00	Water tank 23l (6 gal), pump with delivery up to 30m (98ft) with water floating, IN 230Vac
WASPT3V23L30M00	Water tank 23l (6 gal), pump with delivery up to 30m (98ft) with water floating, IN 120Vac
WASNX1V10L20M00	Tank 10l with integrated manual pump controlled by solenoid valve, delivery head up to 20m (66ft) max, IN 230Vac
WASNX2V10L20M00	Tank 10l with integrated manual pump controlled by solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac
WASNX3V10L20M00	Tank 10l with integrated manual pump controlled by solenoid valve, delivery head up to 20m (66ft) max, IN 120Vac
FM1010	EMC filter for Marine certification

BRACKETS AND ADAPTORS

NXPTZWB	AISI 316L stainless steel wall bracket
NXPTZTW	AISI 316L stainless steel parapet or ceiling mounting bracket
NXPTZCOL	AISI 316L stainless steel pole adapter module
NXPTZCW	AISI 316L stainless steel corner adapter module

PACKAGE

Model Number	Weight	Dimensions (WxHxL)	Master carton
NXPTZT1PVW0X00A	28.5kg (63lb)	54x31x49cm (21x12x19in)	-

ANALOGUE CAMERAS (DAY/NIGHT)

	Day/Night 36x	
	PAL	NTSC
Optical zoom	36x	
Wide Dynamic Range (ON, OFF, Auto)	✓	
True progressive SCAN	✓	
Digital image stabilisation	✓	
White balance	Auto, ATW, Indoor, Outdoor (Fix/Auto), Sodium Vapor Lamp (Fix/Auto), Manual	
High horizontal resolution	Up to 550 TV Lines	
Day/Night (Auto ICR)	✓	
Image Sensor	1/4" EXView HAD CCD	
Number of effective Pixels	~ 440000 pixel	~ 380000 pixel
Min. Lighting Colour (IR-Cut Filter = OFF) (Interlace Mode)	1.4Lux / 1/50s 0.1 Lux / 1/3s	1.4Lux / 1/60s 0.1 Lux / 1/4s
Min. Lighting B/W (Interlace Mode)	0.01 Lux / 1/3s	0.01 Lux / 1/4s
"Shutter Time" automatic increase to improve the night surveillance	✓	
S/N ratio	More than 50dB	
AE control	Automatic, Shutter priority, Diaphragm priority, Brightness priority and Manual	
Back light compensation	On/Off	
Spherical masking (3D) of Privacy zones with automatic upgrade	✓	
Privacy Zone Masking	On/Off (24 positions)	
Maximum number of masking blocks to be displayed	8	
Resolution of masking blocks	160x120 HxV	
Masking	Up to 15 different masking types: 14 colour types or mosaic	
Focusing system	Auto (Sensitivity: Normal, Low), Trigger PTZ, Manual	
"Smart" lens control	Automatic Lens Reset	
High Zoom and Wide Horizontal Field of View Capability	✓	
Optical zoom	36x, f=3.4 (wide) to 122.4mm (tele) / F1.6 to F4.5	
Digital Zoom	12x (432x with optical zoom)	
Horizontal field of view	57.8 degrees (wide) to 1.7 degrees (tele)	
Minimum object distance	10mm (0.4in) (wide) to 1500mm (59.1in) (tele)	
Shutter speed	1/1 ÷ 1/10000s	

THERMAL CAMERAS (RESOLUTION 336X256)

	Lens 9mm		Lens 13mm		Lens 19mm	
	PAL	NTSC	PAL	NTSC	PAL	NTSC
Image sensor	Uncooled VOx microbolometer		Uncooled VOx microbolometer		Uncooled VOx microbolometer	
Interpolated resolution	640x512	640x480	640x512	640x480	640x512	640x480
Pixel dimensions	17µm		17µm		17µm	
Spectral response - long wave infrared (LWIR)	from 7.5µm to 13.5µm		from 7.5µm to 13.5µm		from 7.5µm to 13.5µm	
Internal shutter (only for sensor compensation)	Video stop < 1sec.		Video stop < 1sec.		Video stop < 1sec.	
Digital Detail Enhancement (DDE)	✓		✓		✓	
Digital Zoom	2x, 4x		2x, 4x		2x, 4x	
Image updating frequency	8.3fps	7.5fps	8.3fps	7.5fps	8.3fps	7.5fps
Image updating high frequency	25fps	30fps	25fps	30fps	25fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)		-40°C ÷ +160°C (-40°F ÷ +320°F)		-40°C ÷ +160°C (-40°F ÷ +320°F)	
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)		-40°C ÷ +550°C (-40°F ÷ +1022°F)		-40°C ÷ +550°C (-40°F ÷ +1022°F)	
Horizontal field of view	35°		25°		17°	
Vertical field of view	27°		19°		13°	
F-number	F/1.25		F/1.25		F/1.25	
Thermal sensitivity (NEdT)	< 50mK to f/1.0		< 50mK to f/1.0		< 50mK to f/1.0	
Person (detection / recognition / identification)	285m / 71m / 36m (935ft / 233ft / 118ft)		440m / 112m / 56m (1443ft / 2368ft / 183ft)		640m / 160m / 80m (2099ft / 524ft / 262ft)	
Auto (detection / recognition / identification)	880m / 220m / 108m (2887ft / 722ft / 354ft)		1340m / 340m / 170m (4396ft / 1115ft / 557ft)		1950m / 500m / 250m (6397ft / 1640ft 820/ ft)	

THERMAL CAMERAS (RESOLUTION 336X256)

	Lens 25mm		Lens 35mm		Lens 50mm	
	PAL	NTSC	PAL	NTSC	PAL	NTSC
Image sensor	Uncooled VOx microbolometer		Uncooled VOx microbolometer		Uncooled VOx microbolometer	
Interpolated resolution	640x512	640x480	640x512	640x480	640x512	640x480
Pixel dimensions	17µm		17µm		17µm	
Spectral response - long wave infrared (LWIR)	from 7.5µm to 13.5µm		from 7.5µm to 13.5µm		from 7.5µm to 13.5µm	
Internal shutter (only for sensor compensation)	Video stop < 1sec.		Video stop < 1sec.		Video stop < 1sec.	
Digital Detail Enhancement (DDE)	✓		✓		✓	
Digital Zoom	2x, 4x		2x, 4x		2x, 4x	
Image updating frequency	8.3fps	7.5fps	8.3fps	7.5fps	8.3fps	7.5fps
Image updating high frequency	25fps	30fps	25fps	30fps	25fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)		-40°C ÷ +160°C (-40°F ÷ +320°F)		-40°C ÷ +160°C (-40°F ÷ +320°F)	
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)		-40°C ÷ +550°C (-40°F ÷ +1022°F)		-40°C ÷ +550°C (-40°F ÷ +1022°F)	
Horizontal field of view	13°		9,3°		6,5°	
Vertical field of view	10°		7,1°		5°	
F-number	F/1.1		F/1.2		F/1.2	
Thermal sensitivity (NEdT)	< 50mK to f/1.0		< 50mK to f/1.0		< 50mK to f/1.0	
Person (detection / recognition / identification)	930m / 230m / 116m (3051ft / 754ft / 380ft)		1280m / 320m / 160m (4199ft / 1049ft / 525ft)		1700m / 430m / 215m (5577ft / 1410ft / 715ft)	
Auto (detection / recognition / identification)	2800m / 710m / 360m (9186ft / 2329ft / 1181ft)		3850m / 950m / 295m (12631ft / 3116ft / 967ft)		5100m / 1320m / 660m (16732ft / 4330ft / 2165ft)	

THERMAL CAMERAS (RESOLUTION 640X512)

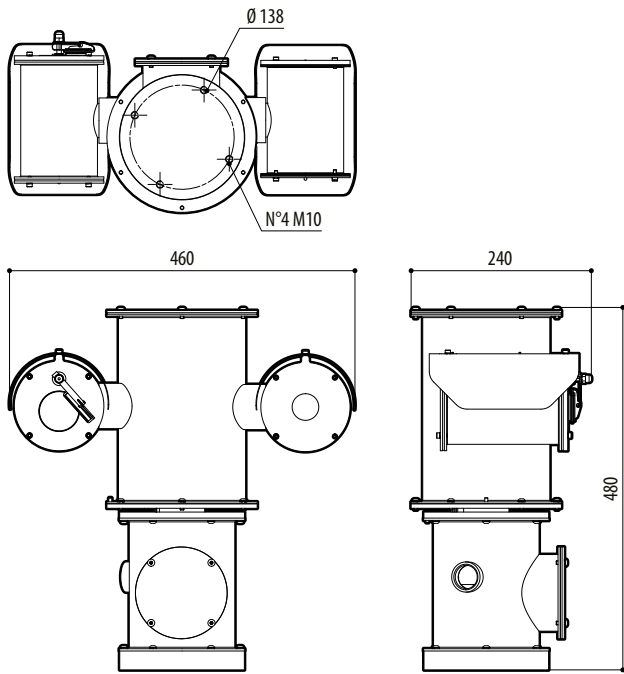|	Lens 9mm		Lens 13mm		Lens 19mm	
	PAL	NTSC	PAL	NTSC	PAL	NTSC
Image sensor	Uncooled VOx microbolometer		Uncooled VOx microbolometer		Uncooled VOx microbolometer	
Resolution	640x512	640x480	640x512	640x480	640x512	640x480
Pixel dimensions	17μm		17μm		17μm	
Spectral response - long wave infrared (LWIR)	from 7.5μm to 13.5μm		from 7.5μm to 13.5μm		from 7.5μm to 13.5μm	
Internal shutter (only for sensor compensation)	Video stop < 1sec.		Video stop < 1sec.		Video stop < 1sec.	
Digital Detail Enhancement (DDE)	✓		✓		✓	
Digital Zoom	2x, 4x, 8x		2x, 4x, 8x		2x, 4x, 8x	
Image updating frequency	8.3fps	7.5fps	8.3fps	7.5fps	8.3fps	7.5fps
Image updating high frequency	25fps	30fps	25fps	30fps	25fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)		-40°C ÷ +160°C (-40°F ÷ +320°F)		-40°C ÷ +160°C (-40°F ÷ +320°F)	
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)		-40°C ÷ +550°C (-40°F ÷ +1022°F)		-40°C ÷ +550°C (-40°F ÷ +1022°F)	
Horizontal field of view	69°		45°		32°	
Vertical field of view	56°		37°		26°	
F-number	F/1.4		F/1.25		F/1.25	
Thermal sensitivity (NEdT)	< 50mK to f/1.0		< 50mK to f/1.0		< 50mK to f/1.0	
Person (detection / recognition / identification)	250m / 63m / 31m (820ft / 207ft / 102ft)		390m / 95m / 47m (1280ft / 312ft / 154ft)		570m / 144m / 72m (1870 / 472 / 236ft)	
Auto (detection / recognition / identification)	720m / 175m /88m (2362 / 574 / 289ft)		1080m / 275m / 140m (3543ft / 902ft / 459ft)		1550m / 400m / 200m (5085ft / 1312ft / 656ft)	

THERMAL CAMERAS (RESOLUTION 640X512)

	Lens 25mm		Lens 35mm		Lens 50mm	
	PAL	NTSC	PAL	NTSC	PAL	NTSC
Image sensor	Uncooled VOx microbolometer		Uncooled VOx microbolometer		Uncooled VOx microbolometer	
Resolution	640x512	640x480	640x512	640x480	640x512	640x480
Pixel dimensions	17μm		17μm		17μm	
Spectral response - long wave infrared (LWIR)	from 7.5μm to 13.5μm		from 7.5μm to 13.5μm		from 7.5μm to 13.5μm	
Internal shutter (only for sensor compensation)	Video stop < 1sec.		Video stop < 1sec.		Video stop < 1sec.	
Digital Detail Enhancement (DDE)	✓		✓		✓	
Digital Zoom	2x, 4x, 8x		2x, 4x, 8x		2x, 4x, 8x	
Image updating frequency	8.3fps	7.5fps	8.3fps	7.5fps	8.3fps	7.5fps
Image updating high frequency	25fps	30fps	25fps	30fps	25fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)		-40°C ÷ +160°C (-40°F ÷ +320°F)		-40°C ÷ +160°C (-40°F ÷ +320°F)	
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)		-40°C ÷ +550°C (-40°F ÷ +1022°F)		-40°C ÷ +550°C (-40°F ÷ +1022°F)	
Horizontal field of view	25°		18°		12.4°	
Vertical field of view	20°		14°		9.9°	
F-number	F/1.1		F/1.2		F/1.2	
Thermal sensitivity (NEdT)	< 50mK to f/1.0		< 50mK to f/1.0		< 50mK to f/1.0	
Person (detection / recognition / identification)	820m / 210m / 104m (2690ft / 689ft / 341ft)		1140m / 280m / 142m (3740ft / 919ft / 466ft)		1500m / 380m / 190m (4921ft / 1247ft / 623ft)	
Auto (detection / recognition / identification)	2200m / 580m / 290m (7218ft / 1903ft / 951ft)		3000m / 800m / 200m (9843ft / 2625ft / 656ft)		3900m / 1060m / 540m (12795ft / 3478ft / 1772)	

NXPTZT - CONFIGURATION OPTIONS

		Voltage		Day/Night camera		Thermal camera				Video Output		Frequency
NXPTZT	**1**	230Vac	**P**	Day/Night camera 36x optical zoom lens, PAL	**A**	Thermal camera 35mm - 336x256	**W**	With wiper	**0**	**0** Analog	**00A**	**-** 7.5-8.3Hz
	2	24Vac	**N**	Day/Night camera 36x optical zoom lens, NTSC	**B**	Thermal camera 25mm - 336x256				**Z** IP H.264/AVC, Protocol ONVIF Profile S		**H** 25-30Hz
	3	120Vac			**C**	Thermal camera 9mm - 336x256						
					D	Thermal camera 35mm - 640x512						
					E	Thermal camera 25mm - 640x512						
					F	Thermal camera 13mm - 336x256						
					G	Thermal camera 13mm - 640x512						
					H	Thermal camera 9mm - 640x512						
					U	Thermal camera 19mm - 640x512						
					V	Thermal camera 19mm - 336x256						
					Y	Thermal camera 50mm - 336x256						
					W	Thermal camera 50mm - 640x512						

Not all combinations are possible.

TECHNICAL DRAWINGS

The dimensions of the drawings are in millimetres.

Ø 138

N°4 M10

460

240

480

NXPTZT