

NXPTZT

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



MAIN FEATURES

Electropolished AISI 316L stainless steel

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)

OPTIONS

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

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.

These positioning units guarantee long-term performance and low maintenance thanks to the maximum care in the construction processes and the best quality AISI316L, passivated 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.

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



NXPTZT

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
Electropolished and silicon micro shot peened external surfaces
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 (0.2in)
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, VIDEOTECH MACRO)
Up to 999 units, addressable by means of dip-switches
Serial communication protocol: AMERICAN DYNAMICS, ERNITEC, PANASONIC, PELCO D, VIDEOTECH MACRO

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
Electromagnetic compatibility (CE): EN50130-4, EN55022 (Class A), EN61000-6-3, FCC Part 15 (Class A)
Outdoor installation (CE): EN60950-22, IEC 60950-22
IP protection degree: EN60529
• IP66/IP68/IP69
UL certification: cULus Listed (TYPE 4X, only for 24Vac versions)
EAC certification

ACCESSORIES

| | |
|-----------------|---|
| WASPTOV5L5M00 | Water tank 5l (1 gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac |
| WASPTOV23L5M00 | Water tank 23l (6 gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac |
| WASPTOV23L11M00 | 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 |

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) | - |

| 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 | Q Day/Night camera 28x optical zoom lens, PAL | C Thermal camera 9mm - 336x256 | | | | | | |
| | | M Day/Night camera 28x optical zoom lens, NTSC | 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 | | | | | | |

| ANALOGUE CAMERAS (DAY/NIGHT) | | | | |
|---|---|----------------------------------|---|------------------------------------|
| | Day/Night 36x | | Day/Night 28x High sensitivity | |
| | PAL | NTSC | PAL | NTSC |
| Optical zoom | 36x | | 28x | |
| 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 | | Auto, ATW, Indoor, Outdoor (Fix/Auto), Sodium Vapor Lamp (Fix/Auto), Manual | |
| High horizontal resolution | Up to 550 TV Lines | | Up to 550 TV Lines | |
| Day/Night (Auto ICR) | ✓ | | ✓ | |
| Image Sensor | 1/4" EXView HAD CCD | | 1/4" Super HAD CCD II | |
| Number of effective Pixels | ~ 440000 pixel | ~ 380000 pixel | ~ 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 | 0.25Lux / 1/50s 0.16 Lux / 1/3s | 0.25Lux / 1/60s 0.16 Lux / 1/4s |
| Min. Lighting B/W (Interlace Mode) | 0.01 Lux / 1/3s | 0.01 Lux / 1/4s | 0.0015 Lux / 1/3s | 0.0015 Lux / 1/4s |
| "Shutter Time" automatic increase to improve the night surveillance | ✓ | | ✓ | |
| S/N ratio | More than 50dB | | More than 50dB | |
| AE control | Automatic, Shutter priority, Diaphragm priority, Brightness priority and Manual | | Automatic, Shutter priority, Diaphragm priority, Brightness priority and Manual | |
| Back light compensation | On/Off | | On/Off | |
| Spherical masking (3D) of Privacy zones with automatic upgrade | ✓ | | ✓ | |
| Privacy Zone Masking | On/Off (24 positions) | | On/Off (24 positions) | |
| Maximum number of masking blocks to be displayed | 8 | | 8 | |
| Resolution of masking blocks | 160x120 HxV | | 160x120 HxV | |
| Masking | Up to 15 different masking types: 14 colour types or mosaic | | Up to 15 different masking types: 14 colour types or mosaic | |
| Focusing system | Auto (Sensitivity: Normal, Low), Trigger PTZ, Manual | | Auto (Sensitivity: Normal, Low), Trigger PTZ, Manual | |
| "Smart" lens control | Automatic Lens Reset | | 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 | | 28x, f=3.5 (wide) to 98mm (tele) / F1.35 to F3.7 | |
| Digital Zoom | 12x (432x with optical zoom) | | 12x (336x with optical zoom) | |
| Angle of view (A) | 57.8 degrees (wide) to 1.7 degrees (tele) | | 55.8 degrees (wide) to 2.1 degrees (tele) | |
| Minimum object distance | 10mm (0.4in) (wide) to 1500mm (59.1in) (tele) | | 10mm (0.4in) (wide) to 1500mm (59.1in) (tele) | |
| Electronic Iris Speed | 1/1 ÷ 1/10000s | | 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 (NEΔT) | < 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 (NEΔT) | < 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)

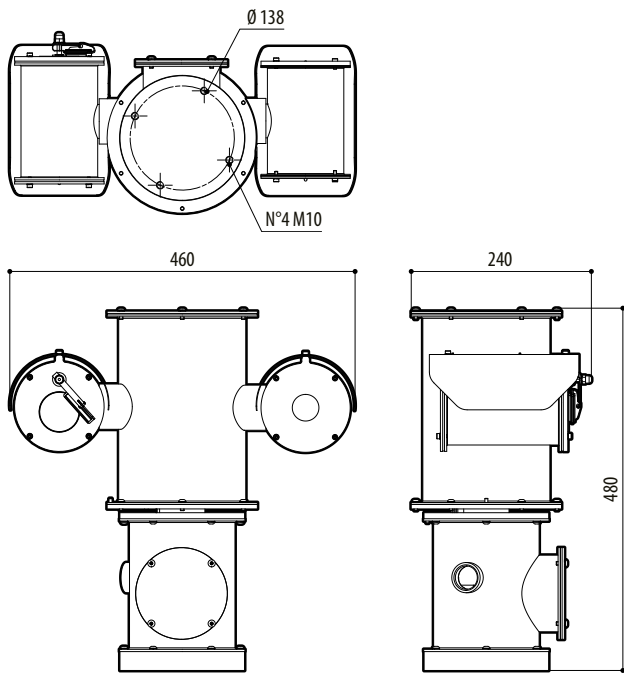
| | Lens 9mm | | Lens 13mm | | Lens 19mm | |
|---|--|---------|--|---------|---|---------|
| | PAL | NTSC | PAL | NTSC | PAL | NTSC |
| Image sensor | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | |
| Resolution | 640x512 | 640x480 | 640x512 | 640x480 | 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 (NEΔT) | < 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 (NEΔT) | < 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) | |

TECHNICAL DRAWINGS

The dimensions of the drawings are in millimetres.



NXPTZT