



PT-SERIES

Network-Ready Pan-Tilt, Multi-Sensor Thermal Security Cameras

PT-Series thermal security cameras let you see intruders and other threats to your facility's security clearly in total darkness and in bad weather. The PT-Series precision pan/tilt mechanism gives operators accurate pointing control while providing fully programmable scan patterns, radar slew-to-cue, and slew-to-alarm functionality. Fully enabled for control and operation over digital and serial networks, PT-Series thermal cameras are available in 160 × 120, 320 × 240, and high-resolution 640 × 480 formats, providing up to sixteen times the image clarity and longer threat detection range performance than lower resolution thermal cameras. Multi-sensor configurations also include a day/night 36x zoom color CCD camera on the same pan/tilt package.

640
x
480

or

320
x
240

or

160
x
120

Crisp thermal images – choice of image quality

The user can choose for a version equipped with an uncooled Vanadium Oxide (VOx) microbolometer producing crisp images of 640 x 480 pixels. Users that do not need this image quality can choose for a 320 x 240 pixels version. Models with a 160 x 120 pixels detector are also available.

More pixels allow the user to see more detail and to detect more and smaller objects. Advanced internal camera software delivers a crisp image without the need for user adjustments. It provides high quality thermal imaging in any night- or daytime environmental conditions.



Precise Pan/Tilt mechanism

All PT-Series thermal imaging cameras are installed on a precision pan/tilt mechanism. It allows the user to rotate the camera 360° continuously and to tilt it +90° or -90°. This drastically increases situational awareness. The Pan/Tilt has 128 preset positions. Ideal if you want to scan an area continuously.



Radar Connection – “Slew to cue”

The PT-Series can be connected by the integrator to a radar system. If the radar detects an object, the PT-Series will automatically turn in the right direction and give you a visual image so that you can instantly see what the blip on the radar screen really means.



Daylight camera

All versions are equipped with a long range daylight/low light camera. The video output of the thermal imaging and daylight/low light camera are simultaneously available. The daylight camera offers an 36x optical zoom.



Digital Detail Enhancement

The PT-Series provide high contrast imagery optimized to get the most out of video analytics software. Digital Detail Enhancement ensures clear, properly contrasted thermal images in all weather conditions.



Excellent range performance

Equipped with a 100 mm lens, the PT-606 is designed for mid-range security and surveillance applications. The PT-606 has a 6° field of view. With the PT-606 you will be able to detect a man-sized target at a distance of over 2.4 km.



Easy to use

Equipped with an “athermal lens”, all PT-Series are able to maintain focus no matter what the environmental temperature is. There is no need for user adjustments.



Designed for use in harsh environments

The PT-Series are extremely rugged systems. Their vital core is well protected, IP66 requirements, against dust and water ingress.



Exchangeable camera cassettes

Exchangeable camera cassettes allow for quick upgrade or repair of sensors and optics. There is no need to send your camera back to the factory if you want to upgrade to better image quality or more range performance. This can easily be done in the field.



IP control

The PT-Series can be integrated in any existing TCP/IP network and controlled over a PC. No additional cables are required. Using this configuration, you can monitor all activity over the network, even when you are thousands of kilometers away.



Serial control interface

Simply connect the PT-Series over RS-232 or RS-422 to a remote control panel. Pelco D or Bosch commands are used for common functions. A video cable can be connected to any existing multi-function display that accepts composite video.



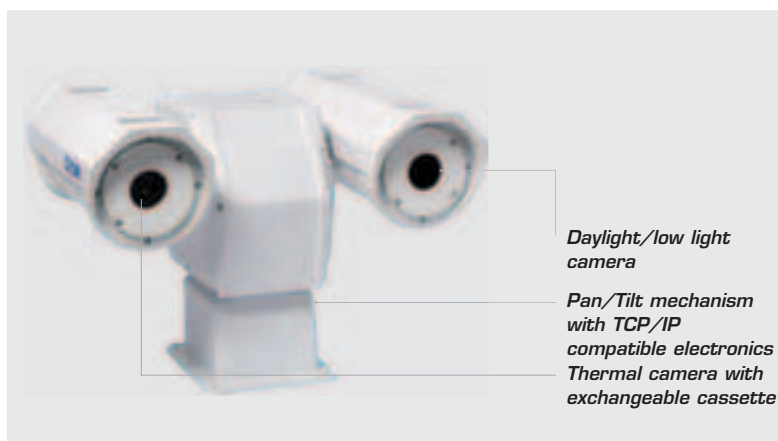
Video Streaming

Multiple channels of streaming digital video are available in H.264, MPEG-4, or M-JPEG formats. Simultaneous digital and composite video output is possible.



FLIR Sensors Manager

Each PT-Series camera comes with a single sensor copy of FLIR Sensors Manager. This intuitive software allows users to manage and control a PT-Series camera in a TCP/IP network.



Different lens options available

The following table gives an overview of the available PT-Series versions

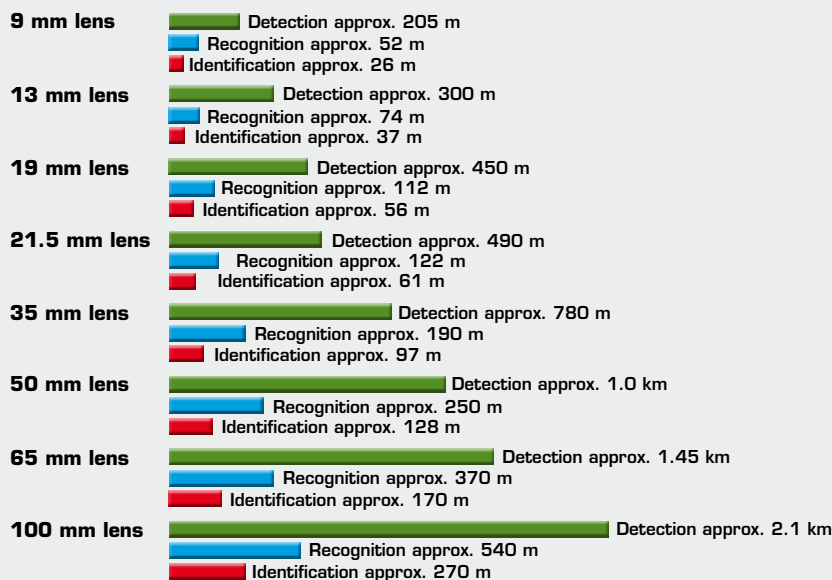
	Available lens options
160 x 120 pixels	PT-124: 9 mm lens – FOV: 24°(H) x 20°(V) PT-117: 13 mm lens – FOV: 17°(H) x 14°(V)
	PT-112: 19 mm lens – FOV: 12°(H) x 10°(V)
320 x 240 pixels	PT-348: 9 mm lens – FOV: 48°(H) x 39°(V) PT-334: 13 mm lens – FOV: 34°(H) x 28°(V) PT-324: 19 mm lens – FOV: 24°(H) x 19°(V) PT-313: 35 mm lens – FOV: 13°(H) x 10°(V) PT-307: 65 mm lens – FOV: 7°(H) x 5°(V) PT-304: 100 mm lens – FOV: 4.6°(H) x 3.7°(V)
640 x 480 pixels	PT-645: 13 mm lens – FOV: 45°(H) x 37°(V) PT-625: 25 mm lens – FOV: 25°(H) x 20°(V) PT-618: 35 mm lens – FOV: 18°(H) x 14°(V) PT-612: 50 mm lens – FOV: 12°(H) x 10°(V) PT-610: 65 mm lens – FOV: 10°(H) x 8°(V) PT-606: 100 mm lens – FOV: 6.2°(H) x 5°(V)

RANGE PERFORMANCES

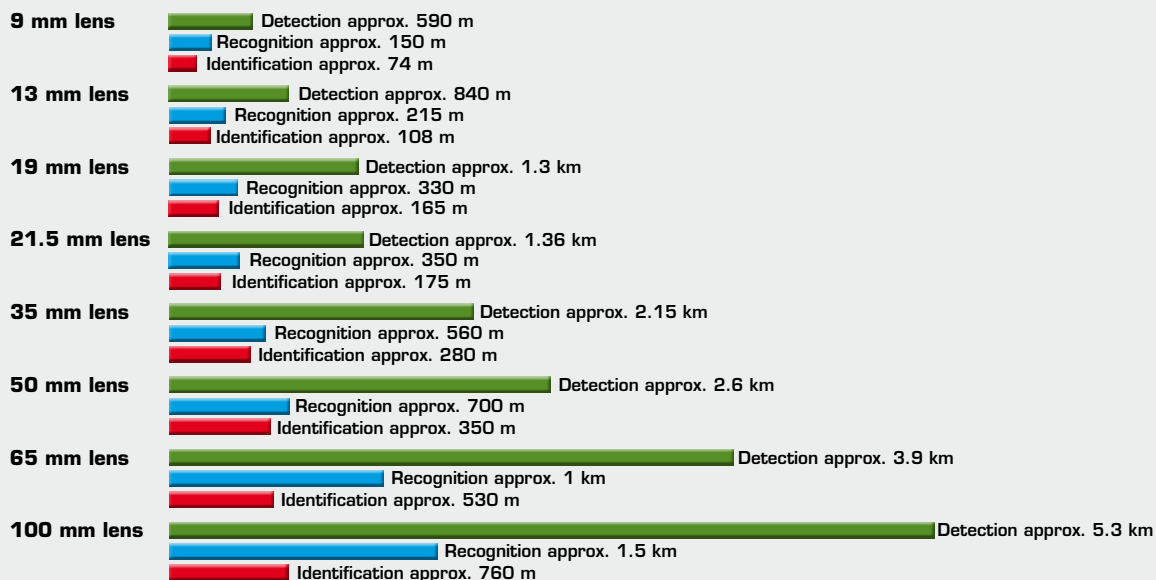
Range performances for SR-, F-, PT-, and outdoor D-Series



Detection, Recognition, Identification of Human Target



Detection, Recognition, Identification of Vehicle with 2.3m critical dimension



Actual range may vary depending on camera set-up, environmental conditions, user experience and type of monitor or display used.

Assumptions:

50 % probability of achieving objective at specified distance given 2°C temperature difference and 0.85 / km atmospheric attenuation factor.

PT-SERIES

Technical specifications



PT-Series: general specifications

IMAGING PERFORMANCE		POWER	
Thermal:		Requirements	24 VAC (20-30 VAC) 24 VDC (21-30 VDC)
Detector type	Focal Plane Array (FPA), uncooled Vanadium Oxide microbolometer	Consumption	24 VAC: 40 VA nominal, 172 VA max w/heater 24 VDC: 30 W nominal, 162 W max w/heater
Spectral range	7.5 to 13µm	ENVIRONMENTAL SPECIFICATION	
Thermal sensitivity	85 mK at 25°C	Operating temperature range	-40°C to +55°C
Image frequency	25 Hz or 8.3 Hz	Storage temperature range	-50°C to +85°C
Focus	Focus free, athermal lens	Encapsulation	IP66
Image processing	Automatic Gain Control (AGC), Digital Detail Enhancement (DDE)	Shock	IEC 60068-2-27
Visual:		Vibration	Mil-Std-810F
Built-in digital video	1/4" Exview HAD CCD	PHYSICAL CHARACTERISTICS	
Effective pixels	380.000	Camera Weight	16.4 kg
Standard lens performance	FOV: 57.8° (H) to 1.7° (H) f=3.4mm (wide) to 122.4 mm (tele), F1.6 to F4.5	Camera Size (L x W x H)	348 mm x 467 mm x 326 mm
Optical zoom	36x	Shipping weight (camera + packaging)	20.5 kg
Electronic zoom	12x	Shipping size (camera + packaging)	599 mm x 542 mm x 340 mm (L x W x H)
PAN- TILT		INTERFACES	
Az Range; Az velocity	360° continuous, 0.1 to 70°/sec max.	TCP/IP	Yes
EI Range; EI velocity	+/- 90°, 0.1 to 30°/sec. Max.	RS-485	Yes
Programmable presets	128	RS-422	Yes
SYSTEM FEATURES		RS-232	Yes
Automatic heater	Clears ice from windows	Pelco D	Yes
IMAGE PRESENTATION		Bosch	Yes
Video output	PAL thermal and visible - NTSC thermal and visible	STANDARD PACKAGE	
Video over Ethernet	Two independent channels for each camera (4 total) of streaming MPEG-4, H.264, or M-JPEG	Thermal imaging camera, operator manual	

PT-Series: version specific specifications

SENSOR RESOLUTION	160 X 120	320 X 240	640 X 480
Name/Focal length/ Field of view	PT-124: 9 mm lens – FOV: 24°(H) x 20°(V) PT-117: 13 mm lens – FOV: 17°(H) x 14°(V) PT-112: 19 mm lens – FOV: 12°(H) x 10°(V)	PT-348: 9 mm lens - FOV: 48°(H) x 39°(V) PT-334: 13 mm lens - FOV: 34°(H) x 28°(V) PT-324: 19 mm lens - FOV: 24°(H) x 19°(V) PT-313: 35 mm lens - FOV: 13°(H) x 10°(V) PT-307: 65 mm lens - FOV: 7°(H) x 5°(V) PT-304: 100 mm lens - FOV: 4.6°(H) x 3.7°(V)	PT-641: 21.5 mm lens – FOV: 41°(H) x 33° (V) PT-626: 35 mm lens – FOV: 26° (H) x 21°(V)
Electronic zoom	2x	2x and 4x	2x and 4x

Specifications are subject to change without notice.
Sizes and weights are indicative.

ACCESSORIES

PT-Series



PT-Series wall mount

Can be used to mount a PT-Series network-ready Multi-Sensor against a wall.



PT-Series pole mount adapter

Adapts the PT-Series wall mount for installation on a pole.



PT-Series adapter plate

Can be used to mount a PT-Series network-ready Multi-Sensor to a wide variety of existing mounts.



PT-Series pedestal mount

Mount to install a PT-Series network-ready Multi-Sensor. Typically used on a flat horizontal surface such as a wall or the top of a pole.



PT-Series power supply

Power supply to power a PT-Series network-ready thermal imaging camera.



Hard transport case for PT-Series thermal imaging camera

Rugged, watertight plastic shipping case. Holds all items securely. The case can be locked with padlocks and features a breather valve to prevent pressure build-up in airplane cargo holds.



Nexus Console Joystick

Joystick to control the PT-Series

SR/PTZ-35x140MS



Wheeled shipping case for the SR/PTZ-35x140MS (and breakout cable)

Rugged, watertight plastic shipping case. Holds all items securely. The case can be locked with padlocks and features a breather valve to prevent pressure build-up in airplane cargo holds.



Wheeled shipping case for the SR/PTZ-35x140MS accessories (40' cable, power supply, laptop, etc)

Rugged, watertight plastic shipping case. Holds all items securely. The case can be locked with padlocks and features a breather valve to prevent pressure build-up in airplane cargo holds.



Cable (extension)

40" extension cable to connect the PTZ/SR-35x140 MS to the break-out box.



24VAC Power Supply

Power supply for the PTZ/SR-35x140 MS.



Nexus Console Joystick

Joystick to control the PTZ-35x140 MS.