⬥FLIR

Thermal imaging cameras
for security and surveillance applications

PTZ-35 MS │ PTZ-50 MS

High resolution thermal imaging and daylight camera system,
mounted or Pan/Tilt for security applications

PTZ-35 MS and PTZ-50 MS, from FLIR Systems, the world leader for thermal imaging systems

The PTZ-35 MS and PTZ-50 MS feature a high sensitivity long wave thermal imager, combined with a long range daylight/low light camera. Both cameras are integrated into a compact, sealed Pan/Tilt enclosure. The PTZ-35 MS and PTZ-50 MS provide crisp, clear thermal imagery in total darkness, light fog or smoke. They feature the same thermal imaging technology found in many of FLIR's most sophisticated security and surveillance systems. They include FLIR's advanced image processing techniques which deliver excellent contrast regardless of scene dynamics.

Unlike other night vision systems that require low amounts of light to generate an image, they need no light at all.

Crisp thermal images – 320 x 240 pixels
The PTZ-35 MS and PTZ-50 MS provide crisp, clear thermal imaging, 320 x 240 pixels. This allows the user to see more detail and detect more and smaller objects. Advanced internal camera software delivers a crisp image without the need for user adjustments. They provide high quality thermal imaging in any night- or daytime environmental conditions.

Daylight, low light and thermal imaging
Both 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 26x optical zoom. Electronic image stabilization helps to deliver a clear image at full zoom.

The PTZ-35 MS and PTZ-50 MS can be easily installed in existing CCTV networks.

Two versions

Different users have different needs. Therefore FLIR Systems markets the PTZ-cameras with different lenses. Longer lenses have a narrower field of view and give you the possibility to see targets which are further away. The thermal imager can be configured with narrow or wide angle lens, as needed, to meet most security and surveillance applications.

The PTZ-35 MS has a field of view of 20°. The PTZ-50 MS has a field of view of 14°. Both are extremely suited for short range threat detection in all circumstances. With the PTZ-50 MS you will be able to detect a man-sized target at a distance of practically 800m. A 2.3 m x 2.3 m object can be detected at a distance of more than 2km.

Easy-to-use, fast, precision "Pan/Tilt"

The PTZ-35 MS and PTZ-50 MS are installed on a small, robust Pan/Tilt mechanism. Intuitive joystick operation allows the user to see +/-200° horizontal and +/-60° vertically, offering superb situational awareness. No special training is required to use the PTZ thermal imaging cameras.

Small and lightweight

Very lightweight, both versions can be installed at any position. They can be mounted at an optimal observation point providing maximum field of view.

Designed for use in harsh environments

The PTZ-35 MS and PTZ-50 MS are extremely rugged systems. Their vital core is well protected, Mil-Std-810E and IP66 rated, against humidity and water. They both operate between -32°C and +55°C.

Multiple installation options

Various options exist to connect the PTZ-35 MS and PTZ-50 MS and integrate them in your existing CCTV infrastructure providing early detection and visibility 24/7 all the year round. They can be configured for stand alone use, as part of a network or in a hybrid configuration with local and network based control:

- *Analog configuration:*
  Simply connect the PTZ-35 MS or PTZ-50 MS over RS-232 or RS-422 to a remote control panel. PelcoD commands are used for common Pan/Tilt/Zoom functions. Two video cables can be connected to any existing multi-function display that accepts composite video. A graphical user interface is available.
- *TCP/IP configuration:*
  both thermal imaging systems can be integrated in any existing TCP/IP network and controlled over a PC. No need to put extra cables. Using this configuration, you can monitor all activity over the internet. Even when you are thousands of kilometers away. A graphical user interface is available for controlling the system.

Joystick display unit

Optionally, both the PTZ-35 MS and PTZ-50 MS can be equipped with a joystick display unit. It allows for full control of the system and displays video on an integrated 6.4" TFT display. It is extremely suited for portable applications.

Thermal imaging for security and surveillance applications

Thermal imaging cameras create a virtual security fence and are finding their way into many security and surveillance applications. Nuclear plants, petrochemical installations, warehouses, ports and airports, ... they all are vulnerable to theft, or even worse terrorist attacks, and can be protected by using thermal imaging cameras.

Terrorism, vandalism, and random violence threaten the safety of personnel and the integrity of public and private facilities. A comprehensive security program utilizing thermal imaging is the key to asset protection and risk mitigation. Thermal imaging exposes threats hidden in the darkness, concealed by adverse weather, and veiled by obscurants like dust, fog, and smoke.

Thermal imaging offers advantages over low light and daylight cameras in applications where lighting is impossible, too expensive or long range performance is required. For border security, port security, and critical infrastructure applications, thermal imaging has proven vital to threat detection initiatives. Even with the best daylight or lowlight cameras, there are many situations where a thermal imager outperforms all other sensors.

Thermal imaging cameras are a new weapon for intrusion detection. They detect intruders sooner, provide more time to react and protect people, assets, and infrastructures. They are operational 24 hours a day even in the darkest of nights, dense fog, snow, smoke, ... They monitor large areas over far distances.

PTZ-35 MS and PTZ-50 MS

Technical specifications

IMAGING PERFORMANCE

Thermal:

Detector type	Focal Plane Array (FPA), uncooled microbolometer 320 x 240 pixels
Spectral range	7.5 to 13μm
Field of view	PTZ-35 MS: 20° (H) x 15° (V) NTSC OR 20° (H) x 16° (V) PAL with 35 mm lens
	PTZ-50 MS: 14° (H) x 10° (V) NTSC OR 14° (H) x 11° (V) PAL with 50 mm lens
	Lenses are not interchangeable and must be specified at time of purchase.
Spatial resolution (IFOV)	PTZ-35 MS: 1.1 mrad - PTZ-50 MS: 0.8 mrad
Thermal sensitivity	85 mK at 25°C
Image frequency*	7.5Hz (NTSC) or 8.3 Hz (PAL)*
Focus	Fixed
Electronic zoom	2x
Image processing	Automatic Gain Control (AGC), Digital Detail Enhancement (DDE)

Visual:

Built-in digital video	Sony FCB EX-980S 26x High Telephoto Zoom Color Block Camera (NTSC)
	Sony FCB EX-980SP 26x High Telephoto Zoom Color Block Camera (PAL)
Effective pixels	Approx. 680,000 pixels (NTSC) - approx. 800,000 pixels (PAL)
Optical zoom	26x, 42° to 1.6° continuous
Electronic zoom	up to 12x

PAN - TILT

Az Range; Az velocity	+/- 200°, 1° - 160°/sec
El Range; El velocity	+/- 60°, 1°-80°/sec
Accuracy	1°, 2 sigma
Resolution	0.5°

SYSTEM FEATURES

Remote Control	RS-232 or RS-422, PelcoD selected commands
Automatic heater	Yes
Programmable search	PelcoD Pan/Tilt/Zoom presets
PelcoD compliance	Selected set of commands

IMAGE PRESENTATION

Video output	NTSC or PAL composite video
Connector types	Mil-C-32

POWER

Requirements	24 V DC
Consumption	<50 W nominal at 25°C

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range	-32°C to +55°C
Storage temperature range	-40°C to +85°C
Humidity	Rain
Sand/dust	Mil-Std-810E
Encapsulation	IP66
Shock	Mil-Std-810E
Vibration	Mil-Std-810E

PHYSICAL CHARACTERISTICS

Camera Weight	<5.0 kg
Camera Size (Diameter x Height)	30.5 cm x 22.9 cm
Shipping weight (camera + packaging)	9.6 kg
Shipping size (camera + packaging) (L x W x H)	36 cm x 51 cm x 34 cm
Mounting	1/4-20 or 4 hole pattern

INTERFACES

TCP/IP	Optional
RS-422	Optional: command and control
RS-232	Command and control

STANDARD PACKAGE

PTZ-35 MS or PTZ-50 MS, Hot Shoe with 12 m cable, break-out cable to standard connector, lab power supply, user interface, operator manual

* 30 Hz NTSC or 25 Hz PAL available. Subject to approval of the US Department of Commerce for use outside the USA.

PTZ-35 MS: range performance 35 mm lens

Man: 1.8 m x 0.5 m
- Detection approx. 560 m
- Recognition approx. 140 m
- Identification approx. 70 m

Object: 2.3 m x 2.3 m
- Detection approx. 1.6 km
- Recognition approx. 400 m
- Identification approx. 200 m
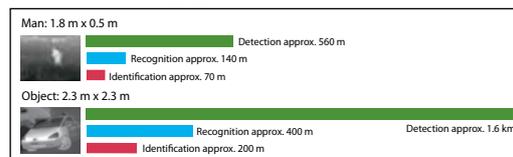
PTZ-50 MS: range performance 50 mm lens

Man: 1.8 m x 0.5 m
- Detection approx. 780 m
- Recognition approx. 200 m
- Identification approx. 100 m

Object: 2.3 m x 2.3 m
- Detection approx. 2.2 km
- Recognition approx. 580 m
- Identification approx. 290 m
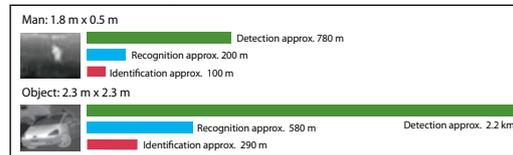
Actual range may vary depending on camera set-up, environmental conditions, user experience and type of monitor or display used.

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

Your local dealer:

Thermal camera with 35 or 50 mm lens

Pan/Tilt system

Low light camera

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