

Meerkat camera series

Unique both short and
long range tracking

Imagine the invisible

www.xenics.com


Xenics
Infrared Solutions



Imagine the invisible

▣ About Xenics

Xenics is a leading developer of innovative infrared detection solutions. We design, manufacture and sell infrared detectors and cameras, both linescan and 2-D, covering the infrared wavelength ranges from 0.4 to 14 micrometers. In addition, Xenics delivers tailor-made solutions produced according to customer-agreed specifications and planning. As a European vendor with a worldwide service and distributor network, we are strategically placed to serve global markets with highly innovative products drawing on a strong science and technology background.

Unique both short and long range tracking

Infrared technology is a modern and advanced method to detect and analyse phenomena, normally hidden for the human eye. Infrared imaging in all its facets, so not limited to infrared thermal imaging, is shaping up as a valuable tool to see, to measure and to understand what is there, even in total darkness.

🔗 Where do Xenics' infrared cameras add value to security applications?

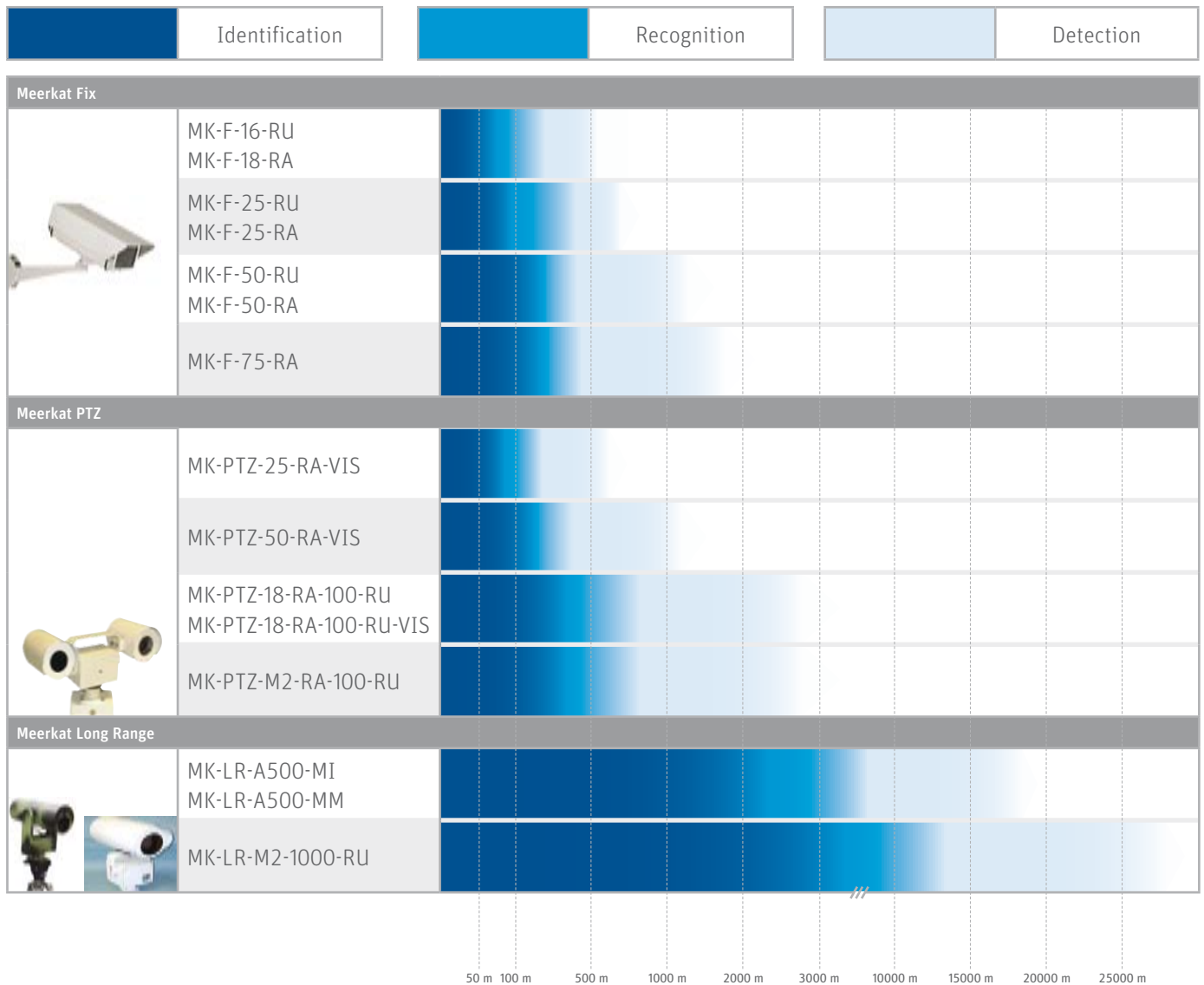
Our Short Wave Infrared (SWIR) cameras based on in-house InGaAs technology are perfectly suited for utilising the nightglow phenomenon. They can “see” objects with excellent clarity also in a moonless night. One of the advantages of our cameras is that the nightglow is emitted equally by the entire sky, and at all geographical latitudes. If required illumination sources (e.g. specific lasers), which are invisible for the human eye, can be applied to highlight and identify objects at very long distances.

To offer a product portfolio which covers the complete wavelength range, our cameras also make use of passive Long Wave Infrared (LWIR) technology. This technology offers the advantage to capture the temperature radiation of warm-blooded living creatures, humans as well as animals in total darkness.

🔗 The Meerkat camera series

The Meerkat camera series are high performance but cost-effective infrared camera solutions for demanding international security communities. The plug-and-play IR camera configurations cover all the regions of the infrared spectrum: Near-Infrared (NIR), Shortwave Infrared (SWIR), Midwave Infrared (MWIR), Longwave Infrared (LWIR, also called Thermal Infrared) and Very Longwave Infrared (VLWIR). With Xenics cameras you don't limit yourself or your application to just a part of the infrared spectrum.

Range chart



Designed for use in

- Surveillance
- Perimeter security
- Search & Rescue (SAR)
- Enhanced vision (EVS)

Top: Seeing through haze IR
Bottom: Seeing through haze visual



Surveillance

One of the most common applications of infrared imaging is surveillance. Armed Forces and law enforcement agencies nowadays deploy infrared imaging systems, replacing the night vision systems based on the vidicon tube technology. Depending on the specific goal of the infrared system (general surveillance, detection, recognition, identification) our reliable SWIR or LWIR cameras are perfectly suited to cover this task.

Perimeter security

Buildings, power plants, refineries, strategic facilities, military complexes, airports, harbours, correctional institutions and other sensitive objects or areas often have multiple of our infrared imaging cameras, serving as a safety barrier to detect and to identify potential threats and dangers, such as unauthorized entry or intrusion.

Meerkat Fix



- Meerkat Fix Raven
- Meerkat Fix Rufus

The Meerkat Fix is a lightweight, yet powerful surveillance and monitoring system with an uncooled SWIR InGaAs or LWIR thermal imager in an environmental sealed enclosure. The Meerkat Fix is easy to install and comes as a complete system with a generic Ethernet connection for a swift integration in a local area network (LAN) or security camera network. A robust mounting bracket for wall or pole installation is included.

The Meerkat Fix is available with various lenses for short, mid and long range detection, classification and identification.

Meerkat PTZ



- Meerkat PTZ Raven & CCD
- Meerkat PTZ Raven & Rufus
- Meerkat PTZ Raven 2FOV & Rufus

The Meerkat PTZ is a multi-sensor, highly flexible day/night camera system, especially designed for fix-mounted and mobile security platforms. The cost-efficient Meerkat PTZ is a ruggedized, fully marinated (IP-67) and sealed camera configuration with a precise and stable pan & tilt positioning mechanism. The pan & tilt can be operated with a joystick controller or via commercially available protocols like Pelco-D. The secure enclosures can contain a variety of infrared cameras and are field replaceable.

The Meerkat PTZ is available with a visual, NIR, SWIR, MWIR and LWIR camera, cooled and uncooled detectors, and with multiple lens configurations for different viewing ranges.

Meerkat LR



- Meerkat Long Range Rufus
- Meerkat Long Range Onca

For medium and long range, Xenics offers the Meerkat LR: an infrared camera configuration to meet the demands of the professional security market for a reliable, covert and powerful imaging system. The extreme zoom capabilities (100X) and the clear low light performance of the Meerkat LR make it perfectly suitable for a flexible, mobile observation platform for armed forces, law enforcement agencies, homeland security, private security and commercial perimeter surveillance companies.

Search & Rescue (SAR)

Under the worst weather conditions and mostly at night Search & Rescue (SAR) teams have to go out and search for victims or objects. Our infrared imaging and thermal imaging contribute to the efficiency and the overall result of the search. Our infrared cameras can be installed on mobile platforms such as vehicles and vessels, airborne platforms, and as fixed monitoring positions on roofs, posts and railings.

Top: Seeing through mist IR Bottom: Seeing through mist visual



Enhanced vision (EVS)

Enhanced vision is created by the combination of our infrared imaging cameras working in different wavelengths, thus improving the sight of the flight crew considerably. Unfavourable weather conditions such as snow, rain, sleet and fog can be penetrated when looking at different wavelengths. Potential hazards such as power lines, defective landing lights, unauthorized vehicles on the runways, etc. can be easily seen and identified when using enhanced vision.

Top: Seeing through smoke IR Bottom: Seeing through smoke visual



	Meerkat Fix Raven				Meerkat Fix Rufus			Meerkat Long Range Rufus	
	MK-F-18-RA	MK-F-25-RA	MK-F-50-RA	MK-F-75-RA	MK-F-16-RU	MK-F-25-RU	MK-F-50-RU	MK-LR-1000-RU	
Infrared Camera									
Detector type	Uncooled microbolometer a-Si				InGaAs			InGaAs	
Resolution	384 x 288				320 x 256			640 x 512	
Pitch	25 µm				20 µm			20 µm	
Spectral range	8 to 14 µm				0.9 to 1.7 µm			0.9 to 1.7 µm	
Focal length, f #	18 mm, f/1	25 mm, f/1	50 mm, f/1	75 mm, f/1	16 mm, f/1.4	25 mm, f/0.95	50 mm, f/0.95	up to 1000 mm	
Horizontal Field of View (HFOV)	30°	22°	11°	7,3°	23°	15°	7,5°	7°	0.73°
Vertical Field of View (VFOV)	23°	16,5°	8,25°	5,5°	19°	12°	6°	6°	0,59°
Spatial resolution (IFOV)	1.4 mRad	1 mRad	0.5 mRad	0.3 mRad	1.25 mRad	0.8 mRad	0.4 mRad	0.2 mRad	0.02 mRad
Thermal sensitivity	80 mK				-			-	
Image frequency	30 Hz NTSC, 25 Hz PAL, 50 Hz Ethernet				30 Hz NTSC, 25 Hz PAL, 50 Hz Ethernet			30 Hz NTSC, 25 Hz PAL, 25 Hz Ethernet	
Focus	fixed or manual				fixed or manual			Motorized	
Optical zoom	-				-			6x to 100x continuous	
Automatic Gain Control (AGC)	Yes				Yes			Yes	
Short Wave Illumination					- Optional -			- Optional -	
Source	-				LED or CW laser			CW Laser	
Wavelength	-				1470 nm			1470 nm	
Visual Camera									
Detector type	-				-			-	
Effective pixels	-				-			-	
Optical zoom	-				-			-	
PAN-TILT									
Az Range; Az velocity	-				-			270° range, 11°/sec	
El Range; El velocity	-				-			140° range, 11°/sec	
Accuracy	-				-			-	
Pelco D compliance	-				-			-	
Image presentation									
Video output	NTSC / PAL				NTSC / PAL			NTSC / PAL	
Digital Control	Ethernet (TCP-IP) (Optional)				Ethernet (TCP-IP) (Optional)			Ethernet (TCP-IP)	
Digital Output	Ethernet (TCP-IP) (Optional)				Ethernet (TCP-IP) (Optional)			Ethernet (TCP-IP)	
Connector types	RJ45 (Ethernet), HR10 (Power), HR10 (video)				RJ45 (Ethernet), HR10 (Power), HR10 (video)			RJ45 (Ethernet), HR10 (Power), HR10 (video)	
Power									
Requirements	12 V				12 V			12 V	
Consumption	3.6 W				4.8 W			4.8 W	
Environmental specifications									
Operating temperature range	-20°C to +50°C				-20°C to +50°C			-20°C to +50°C	
Storage temperature range	-50°C to +85°C				-50°C to +85°C			-50°C to +85°C	
Encapsulation	IP66 (EN 60529)				IP66 (EN 60529)			IP66 (EN 60529)	
Physical characteristics specifications									
Camera Weight	< 4 kg				< 4 kg			< 12.5 kg	
Camera Size	300 L x 86 W x 130 H mm				300 L x 86 W x 130 H mm			510 L x 250 W x 360 H mm	
Software									
Xeneth Basic	Included with Ethernet option				Included with Ethernet option			-	
Xeneth SDK	Included with Ethernet option				Included with Ethernet option			Yes	
Xeneth Advanced	Optional				Optional			Yes	
Video recording	Optional				Optional			Optional	

Meerkat Long Range Onca			Meerkat PTZ Raven & CCD		Meerkat PTZ Raven & Rufus		Meerkat PTZ Raven 2FOV & Rufus	
MK-LR-A500-MI	MK-LR-A500-MM		MK-PTZ-25-RA-VIS	MK-PTZ-50-RA-VIS	MK-PTZ-18-RA-100-RU	MK-PTZ-18-RA-100-RU-VIS	MK-PTZ-M2-RA-100-RU	
Insb	MCT		Uncooled microbolometer a-Si		Uncooled microbolometer a-Si	InGaAs	Uncooled microbolometer a-Si	InGaAs
640 x 512	640 x 512		384 x 288		384 x 288	640 x 512	384 x 288	640 x 512
15 µm	15 µm		25 µm		25 µm	20 µm	25 µm	20 µm
3 to 5 µm	3.7 to 4.8 µm		8 to 14 µm		8 to 14 µm	0.9 to 1.7 µm	8 to 14 µm	0.9 to 1.7 µm
50 m	200 m	500 m	25 mm, f/1	50 mm, f/1	18 mm, f/1	10 mm to 100 mm	24/120 mm	10 mm to 100 mm
11°	2.75°	1.1°	22°	11°	30°	7.3°	4.5°	7.3°
8.8°	2.2°	0.9°	16.5°	8.25°	23°	5.9°	3.5°	5.9°
0.3 mRad	0.075 mRad	0.03 mRad	1 mRad	0.5 mRad	2 mRad	0.2 mRad	2 mRad	0.2 mRad
20 mK	20 mK		80 mK		80 mK	-	80 mK	-
30 Hz NTSC, 25 Hz PAL, 100 Hz GigE			30 Hz NTSC, 25 Hz PAL, 50 Hz Ethernet		30 Hz NTSC, 25 Hz PAL, 25 Hz Ethernet		30 Hz NTSC, 25 Hz PAL, 25 Hz Ethernet	
Motorized			fixed or manual		fixed or manual	Motorized	Motorized	
-			-		-	10x continuous	-	
Yes			Yes		Yes		Yes	
-			-		- Optional -		- Optional -	
-			-		CW Laser		CW Laser	
-			-		1470 nm		1470 nm	
-			Sony CCD sensor		-	Sony CCD sensor	-	-
-			NTSC 412.000 / PAL 474.000		-	NTSC 412.000 / PAL 474.000	-	-
-			20x, 36° to 1.9° continuous		-	20x, 36° to 1.9° continuous	-	-
- Optional -								
360° continuous, 60°/sec			360° continuous, 60°/sec		360° continuous, 60°/sec (340° with illumination)		360° continuous, 60°/sec (340° with illumination)	
60° / -30°, 30°/sec			60° / -30°, 30°/sec		60° / -30°, 30°/sec		60° / -30°, 30°/sec	
< 0.175°			< 0.175°		< 0.175°		< 0.175°	
Yes			Yes		Yes		Yes	
NTSC / PAL			NTSC / PAL		NTSC / PAL		NTSC / PAL	
GigE / TCP-IP			Ethernet (TCP-IP)		Ethernet (TCP-IP)		Ethernet (TCP-IP)	
GigE / TCP-IP			Ethernet (TCP-IP)		Ethernet (TCP-IP)		Ethernet (TCP-IP)	
BNC (video), RJ45 (GigE), Lemo 1B.302 (power)			MILSPEC 15 PIN PT-02		MILSPEC 15 PIN PT-02		MILSPEC 15 PIN PT-02	
12 V			12 V		12 V		12 V	
40 W MAX			10 W		12 W		12 W	
-20°C to +50°C			-20°C to +50°C		-20°C to +50°C		-20°C to +50°C	
-50°C to +85°C			-50°C to +85°C		-50°C to +85°C		-50°C to +85°C	
IP66 (EN 60529)			IP66 (EN 60529)		IP66 (EN 60529)		IP66 (EN 60529)	
15 kg (PTZ not included)			11 kg		12.5 kg		13.5 kg	
650 L x 250 W x 250 H mm			300 L x 500 W x 200 H mm (no illumination)		300 L x 500 W x 200 H mm (no illumination)		300 L x 500 W x 200 H mm (no illumination)	
-			-		-		-	
Yes			Yes		Yes		Yes	
Yes			Yes		Yes		Yes	
Optional			Optional		Optional		Optional	

Information furnished by Xenics is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. This information supersedes all previously supplied information.

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