

High Performance Infrared Cameras, Cores & Engines

MIRICLE 307K

Powered by Thermoteknix 640 x 480 VGA



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The MIRICLE infrared camera range, created by Thermoteknix, sets a new level of power, performance and flexibility for the full range of infrared applications. Resulting from more than 20 years' experience in thermography, MIRICLE cameras and cores deliver *more than just an image*.

Built in the world's smallest footprint, MIRICLE 307K cameras and cores are driven by Thermoteknix' ultra high performance 640 x 480 25 micron pitch long wave uncooled microbolometer detector engine, incorporating the very latest low power micro-electronics technology.

Thermoteknix MIRICLE 307K products provide the OEM builder with high performance thermal imaging in highly compact, lightweight, low power, rugged, modular designs. Powerful embedded software, a choice of analog video and digital video outputs and accessories put MIRICLE 307K ahead of the field. Available in a range of housings, configurations and options, MIRICLE 307K cameras and cores match flexibility with mechanical and electronic integration on a single platform. MIRICLE 307 camera systems are available for supply to global markets in a range of environmentally sealed housings or with interchangeable lens mounts for rapid lens changes in the field.

MIRICLE 307K Imaging

From surveillance to online process inspection, MIRICLE camera systems fit outstanding features and power into the smallest and most flexible packages. Multiple cameras can be gen locked for simultaneous frame mode and a range of digital interfaces and real time PC image processing software accessories, including LabView integration and Video over IP, offer boundless solutions.

For mission critical applications, MIRICLE camera 'Instant On' technology eliminates the time-to-image delay issue found in other thermal imaging cameras.

- Surveillance • Border security • Aerospace • Military • UAV • R & D • Scientific
- On-line process control •

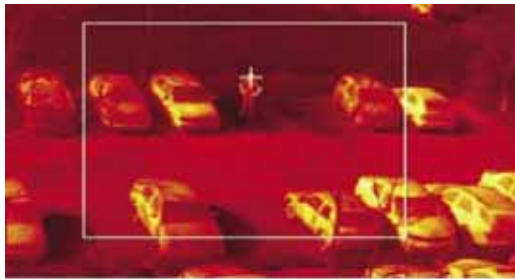


More than just an image.....



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PERFORMANCE MIRICLE 307K

FPA Detector	Alpha Silicon uncooled (TEC-less) microbolometer
Array size	640 x 480 (307,020 effective pixels)
Spectral band	7 - 14 μ m
Pixel pitch	25 μ m
Optical Fill	>80%
NETD	\leq 85 mK (f/1.0, 60Hz)
IFOV (Instantaneous Field of View)	0.78 mrad with standard 32mm f/1.0 lens
Standard Frame Rate	25/30 Hz
Output Video Format	Analog RS170/NTSC or CCIR/PAL
Dynamic Range	14 bit
Gain/Level Control	Auto or Manual
Time to image	< 2.5 second
Shutter	Micro-compact. Auto NUC
Power Input	3.3 - 5 V
Power Consumption	< 3.3 W
Environmental Properties	
Impact	25G IEC 68-2-29
Vibration	2G IEC 68-2-6
Operating ambient temperature	-15 - +50°C
Humidity (Operating/Storage)	5 - 95% non condensing (KS model 100%)
Size (including shutter assembly)	45 x 52 x 48 mm 1.8 x 2.0 x 1.9 inches
Weight (inc. detector)	95 g / 3.3 oz
Connector	Lemo/Miniature USB2/Ribbon cable depending on model
Optional Extras	
USB2 Output / LVDS Output / Genlock / LVDS De-Multiplexer Unit / LabView Interface / Pleora Video over IP Interface / External Motor Drive (focus) / Digital I/O interface / Customisation	

MIRICLE 307K camera systems are available in a choice of configuration and housings:



MIRICLE 307KS
 A screw flange front mount allows lens interchange and offers a choice of environmental sealing and ruggedization options including IP67 (NEMA 4), hermetic and space compliance



MIRICLE 307K
 MIRICLE cameras are available in custom configurations to suit integrator and third party development. Choice of shutter assemblies, mounts, casings, outputs and features

STANDARD SOFTWARE AND OPTIONAL PACKAGES

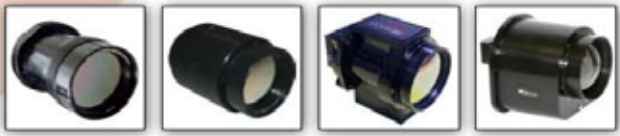
MIRICLE Essentials Software (RS232 PC) is included with all units	Functions: Freeze frame/live Black hot/White hot Flip video: Left/Right, Up/Down
OPTIONAL PACKAGES	Analog video output format RS170 or CCIR software selectable
MIRICLE Extras Software	Functions: Analog video output format RS170 or CCIR software selectable
Software Control	Black hot/White hot Flip video: Left/Right, Up/Down Manual or Auto configurable NUC Zoom x2 x4 x8 x16 around centre or selectable point
Gain Modes	Manual with Brightness & Contrast sliders or Multiple Autogain Modes: Optional USB2 Display (Windows XP or later) Real time display image window AVI Save
Colour Palettes	10

MIRICLE CONTROL SDK ENGINEERING DEVELOPMENT KIT
 Engineering development technical support with drivers, source code and sample software
 MIRICLE diagnostic and debugging development software
 MIRICLE customization and configuration software

OPTIONAL ACCESSORIES
 ThermoGRAM[®] USB Digital Image Processing Software
 ThermoGRAM PRO USB Real Time Digital Image Capture & Analysis Software
 MIRICLE LVDS De-Multiplexer Unit
 LabView™ Interface Unit
 Pleora Video over IP Unit

LENSES
 Choice of multi-element Germanium lenses with electronic focus and mount options:

Focal Length	Aperture	IFOV	HFoV	VFoV	Diag
32mm	f/1.0	0.78 mrad	28.1°	21.2°	34.7°
50mm	f/1.0	0.50 mrad	18.2°	13.7°	22.6°
75mm	f/1.0	0.33 mrad	12.2°	9.1°	15.2°
150mm	f/1.0	0.17 mrad	6.1°	4.6°	7.6°
60/180mm Lens:					
60mm setting -	f/1.4	0.42 mrad	15.2°	11.4°	18.9°
180mm setting -	f/1.4	0.14 mrad	5.1°	3.8°	6.4°



A range of spectral transmission filters are available
 Infrared detectors and cameras are subject to UK DTI export control and may require an export licence

Not all features present on all models. Specifications subject to change. MIRICLE and ThermoGRAM are registered trademarks of Thermoteknix Systems Ltd. Printed on an environmentally friendly 100% chlorine free pulp



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