Infrared thermal Core/Night vision Core

◆ **Infrared thermal core（Cooled/uncooled）**

Resolution	384×288/640×512/1280×1024
Pixel	12μm/15μm/17μm/25μm

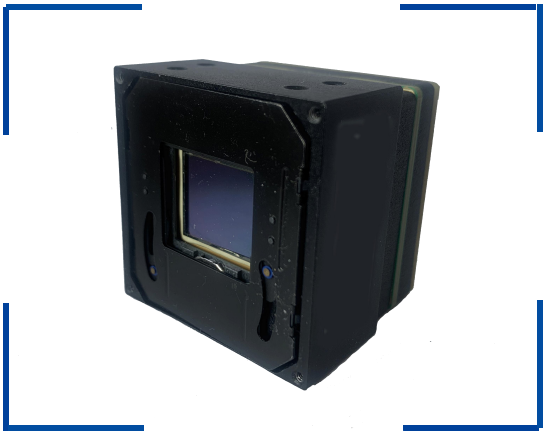
◆ **Night vision Core（Black and white/Color）**

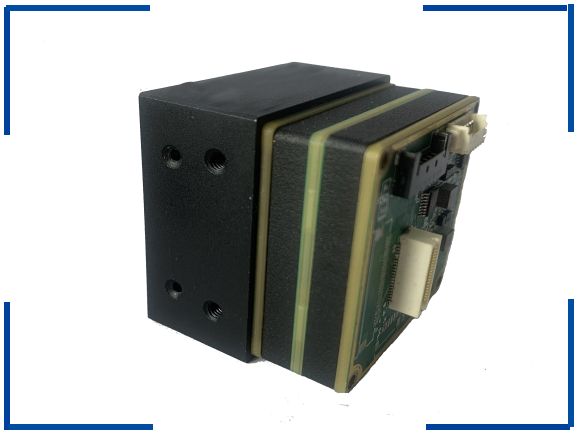
Resolution	800×600/1920×1080
Pixel	2.8μm/4μm/18μm

Ecor Tech Co.,Ltd.

www.usmartsensor.com

Infrared thermal Core





Resolution :384×288/640×512/1280×1024

MRTD（MRTD：200mK~450mK）

Image processing and detail enhancement algorithms based on scene adaptive are adopted

Communication Interface（Camera link，BT656，Lvds etc.）

Detector	Vox Uncooled detector
Resoltion	384×288/640×512
pixel	25μm/17μm
Spectral Response	8~14μm
TDP	≤1.8W
Power supply	DC 6V~15V
Start-up time	≤10s
Operation temperature	-40℃~+60℃
Storage Temperature	-50℃~+70℃
Impact	Impact speed 150g to 180g Frequency: 7Hz; pixel damage rate of focal plane ≤0.2% after impact; continuous bad point shall not appear in 1/2 center field of view
Vibration	6.06g
NETD	≤50m（@F/1,25℃）
Frame Rate	50 Hz
Video output	Camera link，BT656，Lvds.etc（Raw data and video data are optional）
Advantage	Image stability, rich details highlight without trailing; It performs well in special environments such as half-sky and extreme target temperature difference.
Main function	Manual correction

Infrared thermal Core

1280×1024 uncooled infrared movement components, using excellent image algorithms to ensure good performance in a variety of environments, analog output and Cameralink digital video output, can be widely used in seeker, vehicle, sight and other applications.

Detector	Vox Uncooled detector
Resoltion	1280×1024
pixel	12μm
Spectral Response	8~14μm
TDP	≤2.8W
Power supply	DC 12V
Start-up time	≤12s
Operation temperature	-40℃~+60℃
Storage Temperature	-45℃~+65℃
Impact	Vertical optical axis two directions, 100g, half sine wave, 11ms, 3 times in each direction
MRTD	≤400mK
NETD	≤50mK
Frame Rate	25Hz
Video output	camera link
Advantage	Image stability, rich details highlight without trailing; It performs well in special environments such as half-sky and extreme target temperature difference.
Main function	Manual correction

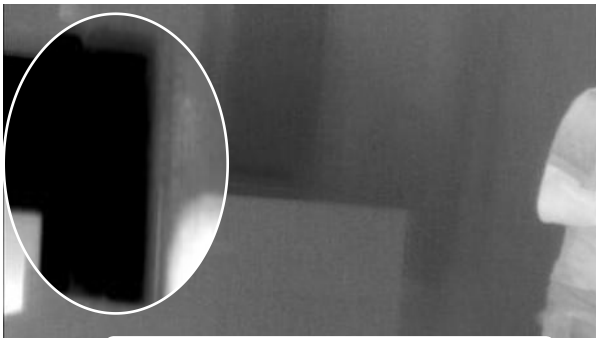
The Image Effects

Our products

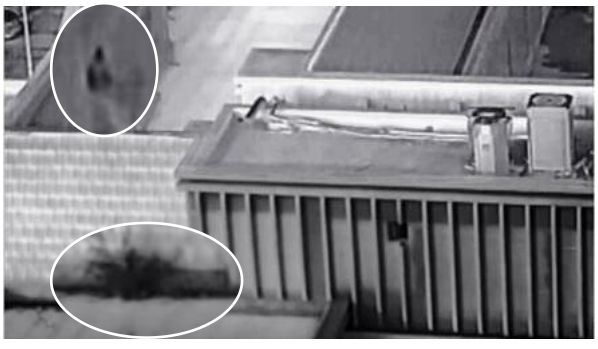
Other products

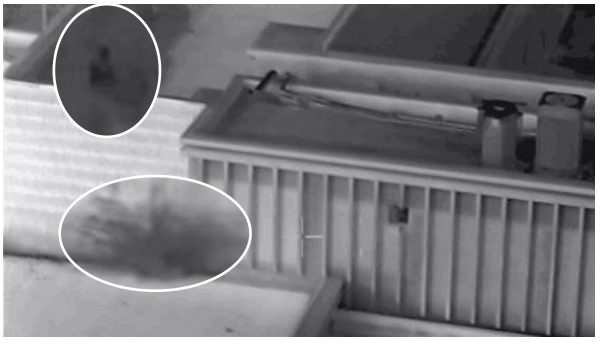
for an hour of image effect

Our products



Other products

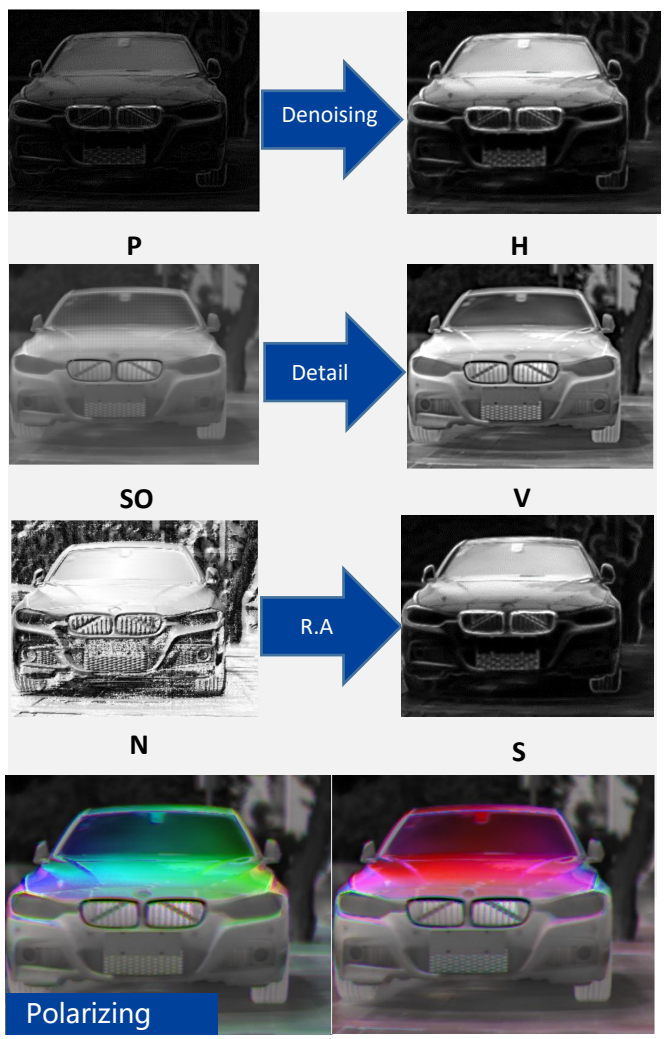




Uncooled polarized infrared thermal Core

Infrared polarization imaging technology can comprehensively obtain multi-dimensional characteristic information such as intensity, polarization and image of the target, effectively improve the contrast between the target and the background, highlight the details of the target, enhance the target recognition effect, effectively identify the infrared camouflage target under low contrast, distinguish the natural background and man-made targets.

Detector	Vox uncooled Detector
Resoltion	640×512
pixel	17μm
Spectral Response	8~14μm
TDP	≤1.8W
Power supply	DC6~15V
Start-up time	≤10s
Polarization mode	Integration
Polarization	0°，45°，90°，135°or 0°，45°，90°
Operation temperature	-40℃~+60℃
Storage Temperature	-50℃~+70℃
NETD	≤50mK（@F/1,25℃）
Frame Rate	50Hz
Video output	1 channel analog video output, PAL system; 1 channel digital video output, camera link
Communication mode	UART or RS232（UART LEV:3.3V）
Main function	Manual correction
Weight	≈95g



Mini Infrared thermal Core

384*288

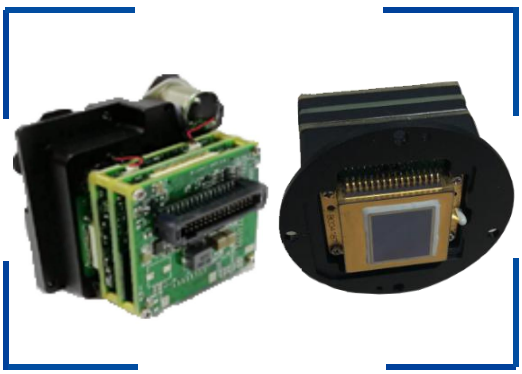
640*480

High resolution ultra-small block-less infrared movement components have two resolutions of 384×288 and 640×480, new block-less technology based on scene correction algorithm, product image is clear, low NETD and MRTD, low power consumption in the full temperature range (less than 1.0W@-40 to 60℃). Compact structure, small size (28mm×28mm×20.5mm), light weight (32g), strong environmental adaptability (high and low temperature, impact resistance), can meet diversified customer needs.

Real-time image noise reduction function, reduce image background noise, can adjust contrast/brightness, 2 times /4 times electronic amplification function, black/white/pseudo-color display, standard PAL system (75 Ω) one analog video output, one digital interface, standard RS232 serial port, manual replacement dead point function, Cursor display function. Infinite magnification, contour mode.

Detector	PICO Uncooled detector
Resoltion	384×288 / 640×480
Frame Rate	50Hz
TDP	≤1.0W @25℃
Power supply	DC5V～12V
Start-up time	≤4s
NETD	≤60mk (@F/1, 25℃)
Video output	1 channel analog video output, PAL system (with driver) 1 channel digital video output (BT656)
Communication mode	RS232

Sight infrared thermal Core

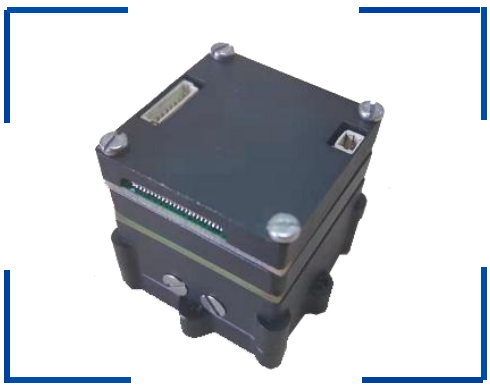


（ 384×288）） （ 640×512）

（ 640×512）

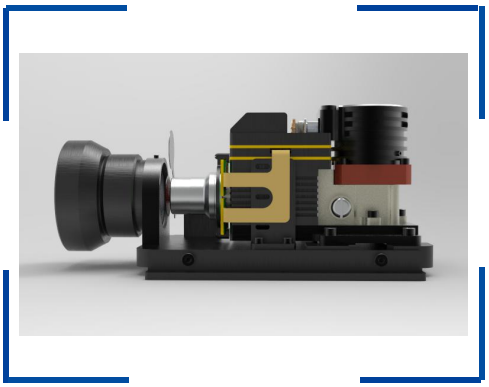
Detector	Vox Uncooled detector	Detector	Vox uncooled detector
Resoltion	384×288/640×512	Resoltion	640×512
Pixel	17μm/25μm	Pixel	12μm
NETD	≤60mK@25℃，F#1.0	NETD	≤50mk@25℃，F#1.0
Image model	Auto/Manual	Image model	Auto/Manual
MRTD	≤240mk	MRTD	≤400mk
Polarity	Black/white	Polarity	Black/white
video output	PAL	video output	PAL、CVBS
Pseudo color	Yes	Pseudo color	Yes
Size	38mm×38mm	Size	34mm×36mm
Power supply	5~8VDC	Power supply	5~9VDC
Digital zoom	1.0~4.0×	Digital zoom	1.0~4.0×
TDP	≤1.7W	TDP	≤1.2W
Manual correction	Yes	Manual correction	Yes
Operation temperature	-40℃~60℃	Operation temperature	-40℃~60℃
Storage Temperature	-50℃~70℃	Storage Temperature	-50℃~70℃
Menu	1.Type 87/04 partition selection function 2.Dual display of general ranging and aiming division 3.Display of battery quantity 4.Image 2X electronic amplification function 5.With gun calibration function 6.Set the zero position of the code disk.	Menu	1.Type 87/04 partition selection function 2.Dual display of general ranging and aiming division 3.Display of battery quantity 4.Image 2X electronic amplification function 5.With gun calibration function 6.Set the zero position of the code disk.

Infrared thermal Core



Detector	Vox Uncooled detector
Resoltion	384×288
Pixel	17μm
Spectral Response	8μm~14μm
Frame Rate	50Hz
Brightness, contrast	Adjustable
Digital zoom	2x/4x
Power supply	DC4.5V~16V
TDP	≤1.2W@25℃
Start-up time	≤10s
Analog video	PAL with driver
Digital video	Support 14bit original data, 19bit parallel transmission mode, (support YUV422, BT656 transmission format)
Weight	≤42.2g
Size	28mm×28mm×20.5mm
Operation temperature	-40℃ ~ +60℃
Storage Temperature	-50℃ ~ +70℃

MW IR Cooled Core



Using refrigerated medium wave 640*512 infrared focal plane detector, through the image processing algorithm to provide a clear infrared image under various environmental conditions, with digital and analog output, can be widely used in security monitoring, vehicle night vision, temperature monitoring and so on.

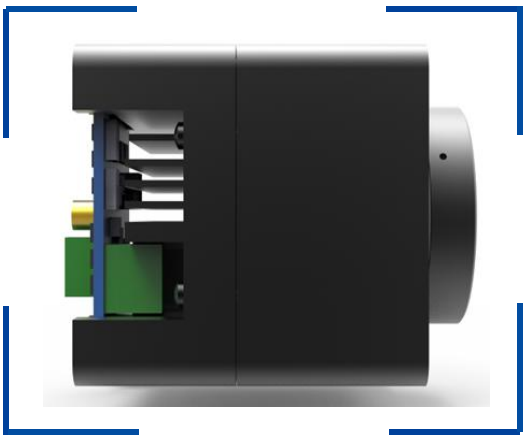
Detectot	MCT MW IR Cooled
Resoltion	640×512
Pixel	15μm
Spectral Response	3.7μm~4.8μm
NETD	≤25mK
MRTD	190mK(0.84cy/mrad)
Start-up time	≤10min(-40℃~+60℃)
Brightness, contrast	0-100
Reticle	Model , Color , Turn on/off
Polarity	Black/white
Mirror image	Horizontal, vertical, axisymmetric
Digital zoom	1X/2X/4X
DDE	0-5
Scene algorithm	Turn on/off
Image Correction	Turn on/off (Shadow elimination)
Non uniformity correction	Point/Switch
Histogram setting	Platform value, gray level threshold
Analog video	PAL-SD
Digital video	CameraLink
Communication mode	RS422
Power supply	12VDC
TDP	9.6W
Weigth	1.4kg
Size	165mm*192mm*92mm
Operation temperature	-40℃~+60℃
Storage Temperature	-45℃~+65℃

Low light driving assistance system

This product outputs SDI signal and links to the display screen of the vehicle, mainly helping the observation of the road at night and assisting the driver to drive normally in the dark light environment.

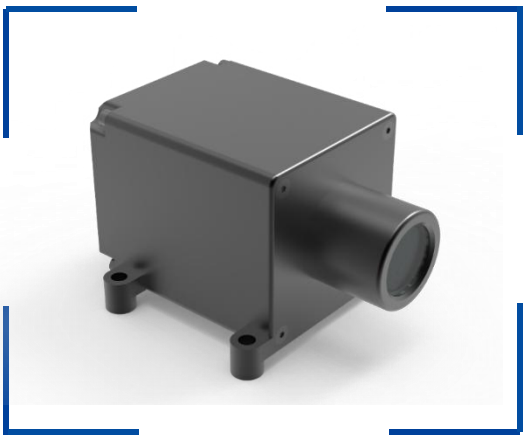
Detectot	Low light CMOS
Resoltion	1920（H）×1080（V）
Frame Rate	50Hz
Pixel	4μm
F/#	F1.0
Focal lenght	4mm
FoV	90°×48°
Sensitivity	1×10 -3Lux@F1.0,50Hz
video output	1 channel SDI Video signal
Communication mode	RS485
Power supply	DC5~12V
Operation time	> 168 hours
Weight	0.6kg
Size	≤60mm（W）×84mm（D）×71mm（H）
Operation temperature	-40℃~+60℃
Storage Temperature	-50℃~+80℃

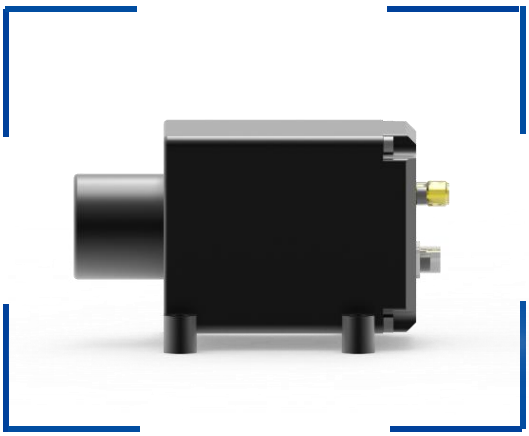
LLL night Vision Core



Fomat	1 inch
Resolution	800x600/1920x1280
Pixel	18μm/9.9μm
Low Lux	0.001lux/0.0001lux
Gain	Auto/Manual
Dynamic range	67dB
Start-up time	< 4S
Image formats	LVDS/SDI etc.
Synchronous mode	Internal / External synchronization
TDP	≤2W
Operation temperature	-40℃~55℃
Storage Temperature	-50℃~70℃
Manual correction	Yes
Menu	1.Type 87/04 partition selection function 2.Dual display of general ranging and aiming division 3.Display of battery quantity 4.Image 2X electronic amplification function 5.With gun calibration function 6.Set the zero position of the code disk.

LLL night Vision Core





Fomat	1/2.9 inch
Resolution	1920x1080
Pixel	2.8μm
Low Lux	0.005lux
Gain	Auto/Manual
Dynamic range	67dB
Start-up time	< 4S
Image formats	LVDS/SDI etc.
Synchronous mode	Internal / External synchronization
TDP	≤2W
Operation temperature	-40℃~55℃
Storage Temperature	-50℃~70℃
Manual correction	Yes
Menu	1.Type 87/04 partition selection function 2.Dual display of general ranging and aiming division 3.Display of battery quantity 4.Image 2X electronic amplification function 5.With gun calibration function 6.Set the zero position of the code disk.