IR Thermal Imaging Camera 640

Technical Features

- Shutterless thermal technology
- Compact Size 38x38x20.5mm
- Light weight <40g
- Time to image <3s
- Advanced WDR image processing
- Continuous digital zoom
- Adjustable crosshair
- Multiple lens available
- User-defined symbology supported
- Auto-focus supported
- IPC & TNV expansion boards supported
- -40~ +75℃ operating temp range supported

Typical Application

- **Security**
- **Vehicle System**
- **Secondary Development**

Description

Our thermal imaging cores 640 are with shutterless technology, high sensitivity, and continuous digital zoom and WDR image processing to offer high quality thermal imagery performance. And multiple infrared lens and expansion board's options are available to enhance their functions for integrators.

IR Thermal Imaging Camera 640 have been increased electronics to offer low power consumption of thermal system integrations. Their common mechanical & electrical compatibility is between different thermal cores formats for thermal integrators, and make them well-suited for thermal applications and thermal integrations, such as unmanned aerial vehicles, handheld thermal imagers, thermal night vision systems, driving vision enhancement, thermal imaging sights, security and surveillance, and more.

Technical Parameters

Detector Data	
Detector Type	Uncooled Microbolometer, Vox detector
IR resolution	640 x 480 pixels
Pixel pitch	17μm
Spectral range	8~14μm
Frequency	50Hz
Image Presentation	
Non uniformity calibration	Shutterless technology
Thermal sensitivity(NETD)	<40mK @ f/1.0 IR lens
Time to image	<5s
Digital zoom	Continuous zoom(80~400); 2x, 4x (via RS232 command controlled)
Core control	Image mode(AGC), digital zoom, false color or monochrome thermal video, contrast, brightness, sharpness, denoise, zero cross, system settings
Image mode	Auto FG, Auto BG, Manual
User-defined Symbology	Supported
Crosshair	Two or more, adjustable
Video output	False color Analog video & digital video (BT.656)
Physical Data	
Weight (w/o lens & cover)	＜40g
Size (w/o lens & cover)	38 x 38 x 20.5 mm
Mounting	10 M2 X 4 on rear of core frame UNC ¼”-20(optional accessory)
Environment Data	
Operating temperature	-40℃～+60℃ -40℃～+75℃ (customized, optional)
Storage temperature	-50℃～+70℃
Shock	650g; 11msec shock pulse(all axes)
Vibration	5.6g 3axes, 8hours each
Humidity	5% ~ 95% Non-condensing
Packing Includes	
Standard	Thermal imaging core, serial Interface cable, manual CD, warranty card
Option	IR lens
Interface & Expansion board	

	50-pin standard board|20-pin expansion board
Primary Electrical Connector	50-pin|20-pin output
Control port	UART|RS232 LVCMOS +2.5V~3.3V
Working Voltage Range	VDC: +2.3V ~ 6.0V (typical working voltage +3.7V)
Power dissipation	< 1.1W
Analog video output	PAL(standard)
Digital video output	BT.656(standard), (optional for LVDS or CMOS)
	IPC board(optional)
Size	38 x 38 mm
Controlled	Web (UART optional)
Working voltage range	12VDC
Communication	ONVIF
Video output	H.264 & Analog
Procurement request	With the specified MiniHawk series together
	Advanced TNV board (optional)
Size	38 x 38 mm
Working voltage range	VDC: +2.3~6.0V | 6-36V
Video output	2 Analog video, BT.656 digital video
Keypad(Menu), battery, OLED	Yes
Control	RS232 (RS422|RS485 optional)
Storage	Built-in 8GB(standard)(up to 128G optional)
Data transmission	USB
Supported(optional)	Auto-focus , Wi-Fi , Laser rangefinder
Procurement request	With the specified MiniHawk series together
	TNV Board (optional)
Size	38 x 38 mm
Working voltage range	VDC: +2.3~6.0V | 6-36V
Video output	2 Analog video, BT.656 digital video
Keypad(Menu), battery, OLED	Yes
Control	RS232 (RS422|RS485 optional)
Storage	N/A
Data transmission	N/A
Supported(optional)	Auto-focus
Procurement request	With the specified MiniHawk series together

IR Thermal Imaging Camera S640 (Shutter)

Technical Features

- Compact Size 38x38x28.5mm
- Light weight <60g
- Time to image <3s
- Advanced WDR dynamic image processing
- Continuous digital zoom
- Adjustable crosshair
- User-defined symbology supported
- Multiple infrared lens optional
- IPC & TNV expansion boards optional

Typical Application

- **Security**
- **Vehicle System**
- **Secondary Development**

Description

Our IR thermal imaging camera S640 are with high sensitivity, continuous digital zoom and WDR image processing to offer high quality thermal image video. And multiple infrared lens and expansion board's options are available to enhance their functions.

IR Thermal Imaging Camera S640 provide common mechanical & electrical compatibility between different thermal cores formats for thermal integrators, make them well-suited for thermal applications and thermal integrations, such as unmanned aerial vehicles, handheld thermal imagers, thermal night vision systems, driving vision enhancement, thermal imaging sights, security and surveillance, and more.

Technical Parameters

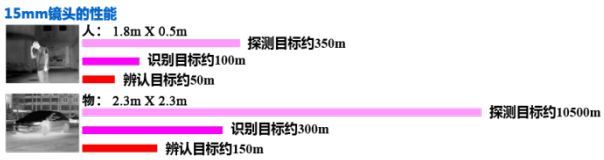
Detector Data	
Detector Type	Uncooled Microbolometer, Vox detector
IR resolution	640 x 480 pixels
Pixel pitch	17μm
Spectral range	8~14μm
Frequency	50Hz
Image Presentation	
FFC duration	<0.5s
NUC calibration	Auto | Manual, NUC interval time adjustable
Thermal sensitivity(NETD)	<40mK @f/1.0 IR lens
Time to image	<3s
Digital zoom	Continuous digital zoom(80~400); 2x, 4x (via RS232 command controlled)
Image control	Image mode(AGC), digital zoom, false color or monochrome thermal video, contrast, brightness, sharpness, denoise, zero cross, system settings
Image mode	Auto FG, Auto BG, Manual
User-defined Symbology	Supported
Crosshair	Two, adjustable
Video output	False color Analog video & digital video (BT.656)
Physical Data	
Weight (w/o lens & cover)	＜60g
Size (w/o lens & cover)	38 x 38 x 28.5 mm
Mounting	8 M2 X 4 on rear of core frame UNC ¼”-20(optional accessory)
Environment Data	
Operating temperature	-40℃～+60℃
Storage temperature	-50℃～+70℃
Shock	650g; 11msec shock pulse(all axes)
Vibration	5.6g 3axes, 8hours each
Temperature shock(5°/min)	Yes
Humidity	5% ~ 95% Non-condensing
Packing Includes	
Standard	Thermal imaging core, serial Interface cable, manual CD, warranty card
Option	IR lens
Interface & Expansion board	
	50-pin standard board|20-pin expansion board

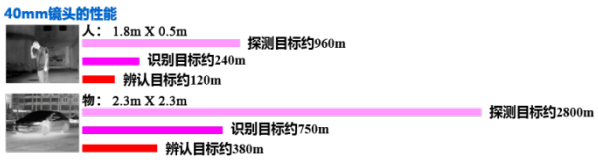
Primary Electrical Connector	50-pin|20-pin output
Control port	UART|RS232 LVCMOS +2.5V~3.3V
Working Voltage Range	VDC: +2.3V ~ 6.0V (typical working voltage +3.7V)
Power dissipation	< 1.1W
Analog video output	PAL(standard)
Digital video output	BT.656(standard), (optional for LVDS or CMOS)
	IPC board(optional)
Size	38 x 38 mm
Controlled	Web (UART optional)
Working voltage range	12VDC
Communication	ONVIF
Video output	H.264 & Analog
Procurement request	With the specified MiniHawk series together
	Advanced TNV board (optional)
Size	38 x 38 mm
Working voltage range	VDC: +2.3~6.0V | 6-36V
Video output	2 Analog video, BT.656 digital video
Keypad(Menu), battery, OLED	Yes
Control	RS232 (RS422|RS485 optional)
Storage	Built-in 8GB(standard)(up to 128G optional)
Data transmission	USB
Supported(optional)	Auto-focus , Wi-Fi , Laser rangefinder
Procurement request	With the specified MiniHawk series together
	TNV Board (optional)
Size	38 x 38 mm
Working voltage range	VDC: +2.3~6.0V | 6-36V
Video output	2 Analog video, BT.656 digital video
Keypad(Menu), battery, OLED	Yes
Control	RS232 (RS422|RS485 optional)
Storage	N/A
Data transmission	N/A
Supported(optional)	Auto-focus
Procurement request	With the specified MiniHawk series together

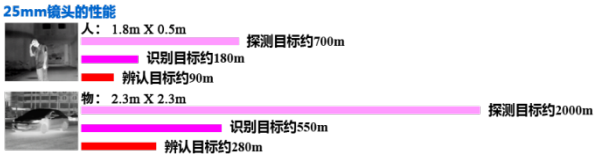
Lens specification

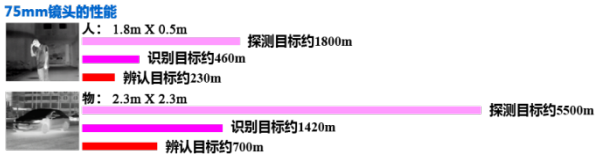
Focal length	15mm	25mm	40mm	75mm
FOV（H x V）	35x27	22x16	14x10	7x5
Min-Dist.（m）	1	1	1	2
F#	1.0	1.0	1.0	1.0

Note：The lens must be specified at the factory and cannot be replaced by yourself.









Order Information

xx 384 S P P I

- **Temp.**
  - C = -20~+60℃
  - I = -40~+60℃
  - E = -40~+85℃
- **Digital Format**
  - P = Parallel
  - L = LVDS
- **Analog format**
  - P = PAL
  - N = NTSC
- **Shutter**
  - S = Shutter
  - blank = No Shutter
- **Resolution**
  - 384 = 384*288;
- **Series Code**

[2] 320 = 320*240; 384 = 384*288; 640 = 640*480; 1280 = 1280*1024;