UVA Series

Uncooled thermal imaging core module

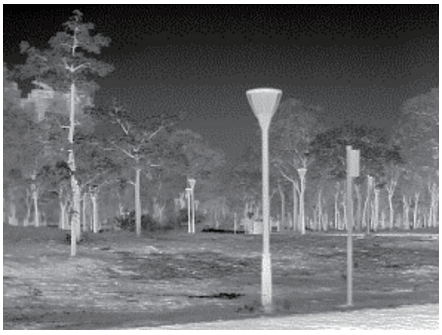
OPTOELECTRONIC SYSTEM | NIGHT VISION | SECURITY | CITY SAFETY

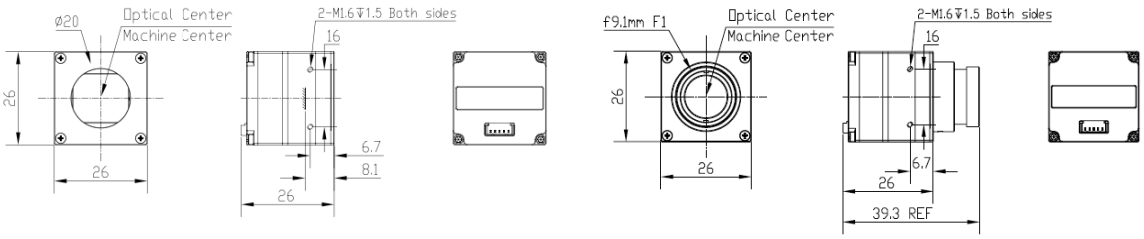
UVA Series uncooled thermal imaging core moduel is the thermal imaging solution specially designed for the city safty and family surveillance, the module is light weighted with multiple interfaces, secondary development and features are available for option, it can be used independently or integrated into the customer's system, and applied for various kinds of ourdoor/ indoor surveillance.

COMPACT DESIGN | FINE IMAGING QUALITY | LOW POWER CONSUMPTION | EASY TO INSTALL

UVA Series Uncooled thermal imaging core module

Model	UVA3/6-35C	UVA3/6-35D
Detector type	Uncooled Vox	
Resolution	384×288 / 640×512 @12μm	
Wavelength	8μm~14μm	
NETD	≤ 40mK@F1.0 25℃	
Frame Rate	50Hz	
Lens	4.6mm/9mm/13mm etc, can be customized	
Color Palette	Black hot/white hot/ others pseudo colors	
Video output	CVBS	AHD
Function	Crosshairs, Hot tracking, image setting, alarm output (optional)	
Electrical interface	Pow, Video, Uart	
Supply Voltage	5~28 V DC	
Rated power	≤ 1.2W	
Communication	TTL, Baut rate 115200	
Dimensions	28mm×28mm×27mm (W×H×L) (excl. lens)	
	26mm×26mm×27mm (W×H×L) (excl. lens) (optional)	
Weights	35g (excl. lens)	
Humidity	5%RH~95%RH, non-condensing	
Operating temperature	-40℃ ~+80℃	
Storage temperature	-45℃ ~+85℃	
Vibration	6.06g, random, at any direction	
Shock	80g@4ms, 3 axis/ 6 directions	
Altitude	12km	





1.7m×0.5m

4.6m×2.3m

Lens	FOV		Detecting distance	Recognition distance	Identification distance	Detecting distance	Recognition distance	Identification distance
	640×512	384×288						
f4.6mm F1	79.7° ×67.5°	53.2° ×41.2°	256 m	128 m	64 m	588 m	294 m	147 m
f9.1mm F1	45.7° ×37.3°	28.4° ×21.5°	506 m	253 m	126 m	1163 m	581 m	291 m
f13mm F1	32.9° ×26.5°	20.1° ×15.1°	722 m	361 m	181 m	1161 m	831 m	415 m
f19mm F1	22.8° ×18.3°	13.8° ×10.3°	1056 m	528 m	264 m	2428 m	1214	607 m
f25mm F1	17.4° ×14°	10.5° ×7.9°	1389 m	694 m	347 m	3194 m	1597 m	799 m
F35mm F1	12.5° ×10°	7.5° ×5.6°	1944 m	972 m	486 m	4472 m	2236 m	1118 m

UVB Series

Uncooled IR Imaging Module

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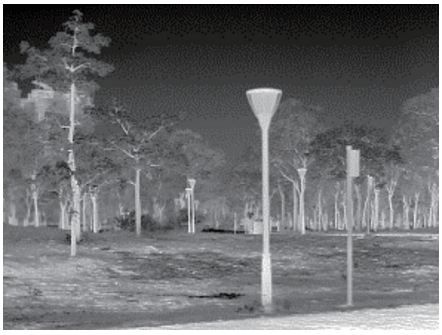
The **UVB** series of uncooled infrared thermal imaging modules offers two resolutions: 640×512 and 384×288. The entire series is developed using high-sensitivity 12μm VOx infrared detectors and image processing circuits, It features high performance, small size, light weight, low power consumption, and low cost, which can meet the application requirements of SWaP (Size, Weight and Power /Price).

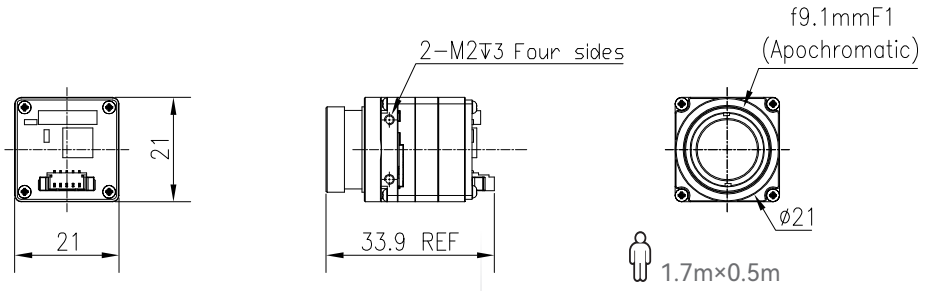
The entire **UVB** series adopts the latest infrared thermal image processing algorithms, resulting in delicate and clear image quality. Equipped with self-developed image processing circuits, it has strong expandability. At the same time, the **UVB** series modules can provide a variety of digital interfaces according to user needs (some can be customized), and can be flexibly connected to various intelligent processing platforms.

COMPACT DESIGN | FINE IMAGING QUALITY | LOW POWER CONSUMPTION | EASY TO INSTALL

UVB Series Uncooled IR Imaging Module

Model	UVB3	UVB6
Detector	Uncooled Vox	
Resolutions/pitch size	384×288@12μm	640×512@12μm
Spectral Range	8μm ~ 14μm	
NETD	≤ 40mK@F1.0 25℃	
Frame Rate	25/50Hz	
Thermal Time Constant	<12ms	
Lens Selection	4/7/9.1/13/15/19/25/35/50mm etc	
NUC Correction	Shutter Correction	
Brightness/Contrast Adjustment	Supported	
Digital Zoom	1.0~8.0× continuous zoom (step 0.1)	
Image Mirroring	Up/down/Left/right/Diagonal	
Polarity/Pseudo Color	White Hot/Black Hot/Multiple Pseudo Colors	
Analog Video	CVBS/AHD	
Digital Video	BT601/BT656/USB2.0/Cameralink/SDI	
Power Input	USB:5V； CVBS:5-24V	
Typical Power Consumption of USB Output	< 0.42W	< 0.7W
Communication Interface	UART	
Size (without lens)	21mm×21mm×26.2mm (W×H×L)	
Weight (excluding lens)	< 10g	< 15g
Humidity	5%RH ~ 95%RH, no condensation	
Working Temperature	-40℃ ~ +80℃	
Storage Temperature	-50℃ ~ +85℃	
Vibration	6.06g, random vibration, all axes	
Shock	80g@4ms, post-peak sawtooth wave, 3 axes and 6 directions	
Extensible Features	PIP, Crosshair, Hotspot Tracking, Lens Driving (Focusing, Zooming, Auto Focus)	





Lens	FOV		Detecting distance	Recognition distance	Identification distance	Detecting distance	Recognition distance	Identification distance
	640×512	384×288						
f4.6mm F1	79.7° ×67.5°	53.2° ×41.2°	256 m	128 m	64 m	588 m	294 m	147 m
f9.1mm F1	45.8° ×37.3°	28.4° ×21.5°	506 m	253 m	126 m	1163 m	581 m	291 m
f13mm F1	32.9° ×26.6°	20.1° ×15.1°	722 m	361 m	181 m	1161 m	831 m	415 m
f19mm F1	22.9° ×18.4°	13.8° ×10.4°	1056 m	528 m	264 m	2428 m	1214	607 m
f25mm F1	17.5° ×14°	10.5° ×7.9°	1389 m	694 m	347 m	3194 m	1597 m	799 m
F35mm F1	12.5° ×10°	7.5° ×5.7°	1944 m	972 m	486 m	4472 m	2236 m	1118 m

UVT Series

Uncooled thermal imaging core module

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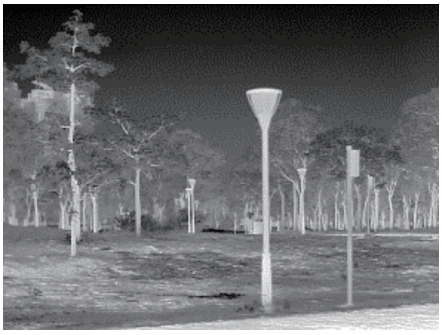
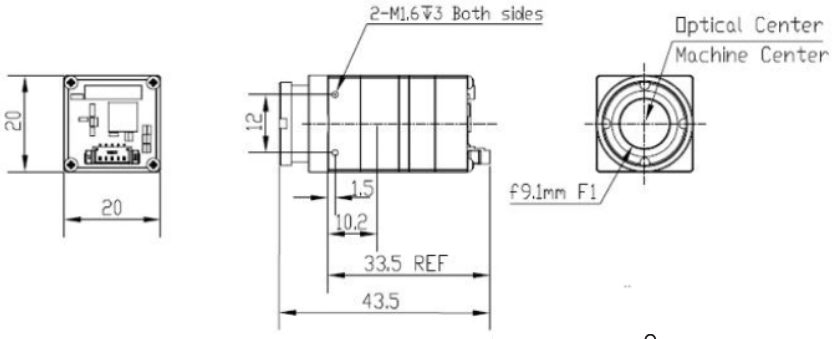
The UVT series uncooled infrared thermal imaging module is a compact thermal imaging product specifically designed for applications requiring a small form factor. This module incorporates the latest generation of uncooled IR detectors and image processing algorithms, delivering reliable performance with a wide range of interfaces. It features the advantages of small size, lightweight design, and low power consumption, making it suitable for broad applications in UAV EO/IR gimbals, security surveillance integration, outdoor thermal camera systems, and various custom development projects.

COMPACT DESIGN | FINE IMAGING QUALITY | LOW POWER CONSUMPTION | EASY TO INSTALL

UVT Series Uncooled thermal imaging core module

Model	UVT3	UVT6
Detector type	Uncooled Vox	
Resolution	384×288@12μm	640×512@12μm
Wavelength	8μm~14μm	
NETD	≤ 40mK@F1.0 25℃	
Frame Rate	50Hz	
Lens	4mm/9mm/13mm for option	
Color Palette	Black hot/White hot/ Pseudo color	
Video output	CVBS, USB2.0, BT656, LVDS, SDI, Multiple interface options available	
Function	Crosshairs, Hot tracking, image setting	
Electrical interface	Pow, Video, Uart	
Supply Voltage	5~28 V DC	
Rated power	≤ 1.2W	
Communication	TTL, Baut rate 115200	
Dimensions	20mm×20mm×33mm （W×H×L) (excl. lens)	
Weights	35g （excl. lens)	
Humidity	5%RH~95%RH, non-condensing	
Operating temperature	-40℃ ~+80℃	
Storage temperature	-45℃ ~+85℃	
Vibration	6.06g， random, at any direction	
Shock	80g@4ms, 3 axis/ 6 directions	
Altitude	12km	





1.7m×0.5m

4.6m×2.3m

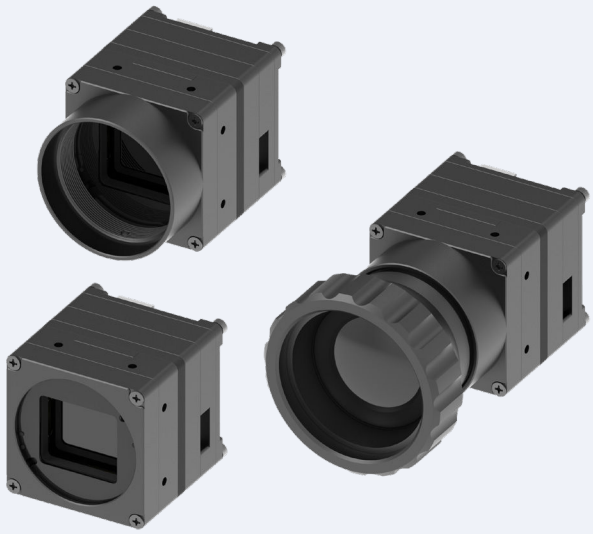
Lens	FOV		Detecting distance	Recognition distance	Identification distance	Detecting distance	Recognition distance	Identification distance
	640×512	384×288						
f4.6mm F1	79.7° ×67.5°	53.2° ×41.2°	256 m	128 m	64 m	588 m	294 m	147 m
f9.1mm F1	45.7° ×37.3°	28.4° ×21.5°	506 m	253 m	126 m	1163 m	581 m	291 m
f13mm F1	32.9° ×26.5°	20.1° ×15.1°	722 m	361 m	181 m	1161 m	831 m	415 m
f19mm F1	22.8° ×18.3°	13.8° ×10.3°	1056 m	528 m	264 m	2428 m	1214	607 m
f25mm F1	17.4° ×14°	10.5° ×7.9°	1389 m	694 m	347 m	3194 m	1597 m	799 m
F35mm F1	12.5° ×10°	7.5° ×5.6°	1944 m	972 m	486 m	4472 m	2236 m	1118 m

UVS Series

Uncooled thermal imaging core module

OPTOELECTRONIC SYSTEM | NIGHT VISION | SECURITY | CITY SAFETY

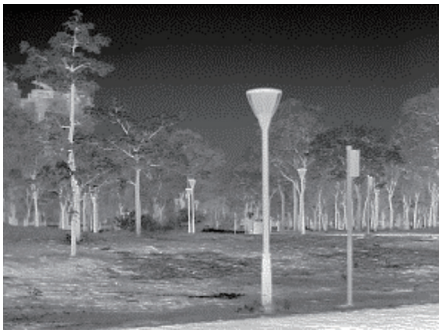
UVS Series uncooled thermal imaging core moduel is the thermal imaging solution specially designed for the city safty and family surveillance, the module is light weighted with multiple interfaces, secondary development and features are available for option, it can be used independently or integrated into the customer's system, and applied for various kinds of ourdoor/ indoor surveillance.

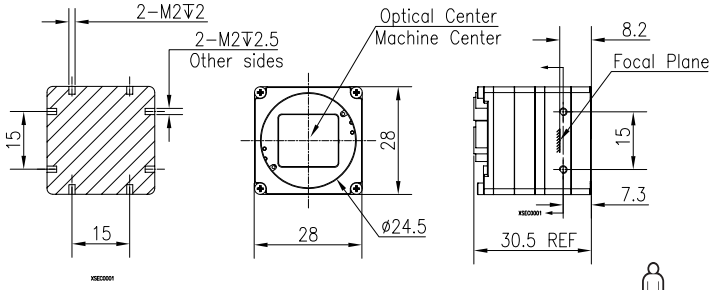


COMPACT DESIGN | FINE IMAGING QUALITY | LOW POWER CONSUMPTION | EASY TO INSTALL

UVS Series Uncooled thermal imaging core module

Model	UVS312/317	UVS612/617
Detector type	VOx / α-Si	
Resolution	384×288 / 640×512 @12μm	
Wavelength	8μm~14μm	
Pixel Pitch	12 μm / 17 μm	
NETD	≤ 40mK@F1.0 25℃	
Frame Rate	50Hz	
Lens	can be customized	
Color Palette	Black hot/white hot/ others pseudo colors	
Video output	Analog (standard): CCIR PAL	
	Digital (Optional): SDI, Camera Link, LVDS, BT601, BT656, BT1120, USB	
Function	Focusing, Zooming, Auto Focus, Crosshairs, Hot track, Alarm	
	Imaging Setting, Sunburn Proof	
Supply Voltage	5~28 V DC	
Rated power	Typical 1W	Typical 1.2W
Communication	Default: RS232; Optional: RS422, RS485, TTL	
Dimensions	28mm×28mm×30.5mm (W×H×L) (excl. lens)	
Humidity	5%RH~95%RH, non-condensing	
Operating temperature	-40℃ ~+80℃	
Storage temperature	-45℃ ~+85℃	
Vibration	6.06g, random, at any direction	
Shock	80g@4ms, 3 axis/ 6 directions	
Altitude	12km	





1.7m×0.5m

4.6m×2.3m

Lens	FOV		Detecting distance	Recognition distance	Detecting distance	Recognition distance
	640×512/12μm	384×288/12μm				
f50mm F1	8.8° x7°	5.3° x4.0°	2800m	1400m	6400m	3200m
f60mm F1	7.3° x5.9°	4.4° x3.3°	3400m	1700m	7800m	3900m
f75mm F1	5.9° x4.7°	3.5° x2.6°	4200m	2100m	9600m	4800m
f100mm F1	4.4° x3.5°	2.6° x2.0°	5600m	2800m	1300m	6400m
f150mm F1	2.9° x2.3°	1.8° x1.3°	8400m	4200m	20000m	9600m
f200mm F1	2.20° x1.76°	1.32° x0.99°	11200m	5600m	26000m	13000m
f300mm F1	1.47° x1.17°	0.88° x0.66°	16700m	8400m	39000m	20000m

UVR Series

Uncooled IR Imaging Module

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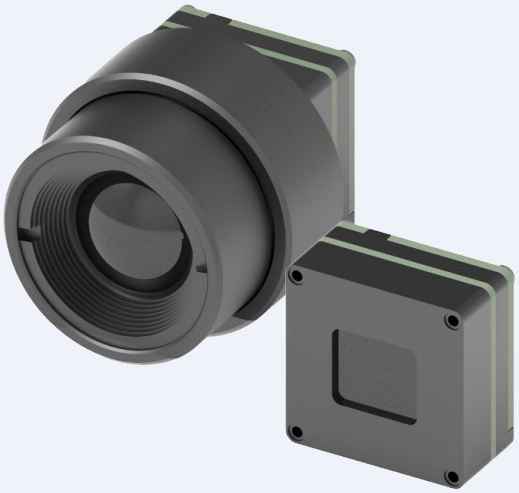
The UVR series of uncooled infrared thermal imaging modules offer three resolution options: 640×512, 384×288, and 256×192. The entire series employs high-frame-rate 12μm/WLP packaged VOx infrared detectors and high-performance infrared ISP chips. Characterized by high performance, compact size, lightweight design, low power consumption and cost-effectiveness, these thermal imaging modules meet the application requirements for SWaP (Size, Weight and Power/Price).

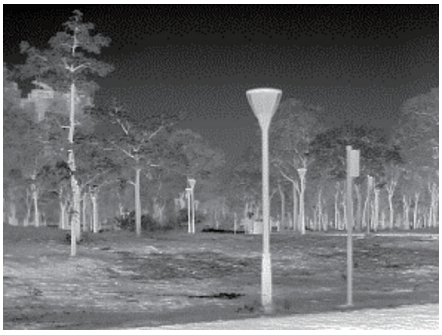
The entire UVR series is equipped with a shutterless algorithm for smooth, stutter-free operation and incorporates the latest thermal imaging processing algorithms to deliver exquisitely clear and detailed imagery. Additionally, these modules provide multiple digital interfaces (with customizable options available), enabling flexible integration with various intelligent processing platforms.

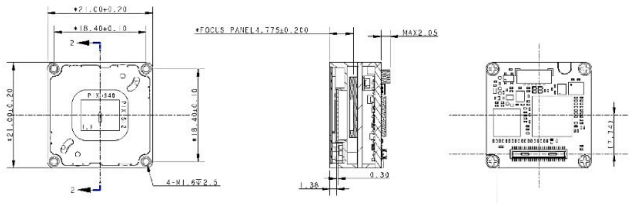


COMPACT DESIGN | FINE IMAGING QUALITY | LOW POWER CONSUMPTION | EASY TO INSTALL | SHUTTERLESS CORRECTION

UVR Series Uncooled IR Imaging Module

Model	UVR-256	UVR-384	UVR-640
IR Detector	VOx uncooled microbolometer		
Resolutions/pitch size	256×192@12μm	384×288@12μm	640×512@12μm
Spectral Range	8μm ~ 14μm		
NETD	≤ 40mK@F1.0 25℃		
Frequency	25/50Hz	30/60Hz	30/60Hz
Thermal Time Constant	<12ms		
Lens Options	4/5.3/9.1/13/15/19/25mm	4/7/9.1/13/19/25/35/50mm	
NUC Correction	Shutter/Shutter-less Algorithm Correction		
Brightness/Contrast Adjustment	0~100, optional		
Digital Zoom	1.0~8.0× Continuous (step size: 0.1)		
Image Mirroring	Vertical/Horizontal/Diagonal		
Polarity/Palette	White Hot/Black Hot/Various palettes supported		
Analog Video	PAL/NTSC		
Digital Video	DVP/BT656/USB2.0/MIPI		
Power Supply	5V DC		
Typical Power Consumption of USB Output	< 0.35W	< 0.42W	< 0.7W
Communication Interface	UART/I²C/USB2.0		
Size (without lens)	21mm×21mm×10.3mm (W×H×L)		
Weight (without lens)	< 7g		< 8.6g
Humidity	5%RH ~ 95%RH, non-condensing		
Working Temperature	-40℃ ~+80℃		
Storage Temperature	-50℃ ~+85℃		
Vibration	6.06g, random vibration, all axes		
Shock	80g, 4ms, final peak sawtooth wave, three axes and six directions		
Extensible Features	PIP, AHD/SDI/cameralink output, Crosshairs, Hot tracking, 25/50Hz rating, Lens driving (zooming, Electric and auto focusing)		





1.7m×0.5m

4.6m×2.3m

Lens	FOV		Detecting distance	Recognition distance	Identification distance	Detecting distance	Recognition distance	Identification distance
	640×512	384×288						
f4.6mm F1	79.7° ×67.5°	53.2° ×41.2°	256 m	128 m	64 m	588 m	294 m	147 m
f9.1mm F1	45.8° ×37.3°	28.4° ×21.5°	506 m	253 m	126 m	1163 m	581 m	291 m
f13mm F1	32.9° ×26.6°	20.1° ×15.1°	722 m	361 m	181 m	1161 m	831 m	415 m
f19mm F1	22.9° ×18.4°	13.8° ×10.4°	1056 m	528 m	264 m	2428 m	1214	607 m
f25mm F1	17.5° ×14°	10.5° ×7.9°	1389 m	694 m	347 m	3194 m	1597 m	799 m
F35mm F1	12.5° ×10°	7.5° ×5.7°	1944 m	972 m	486 m	4472 m	2236 m	1118 m

UVH Series

Uncooled IR Imaging Module

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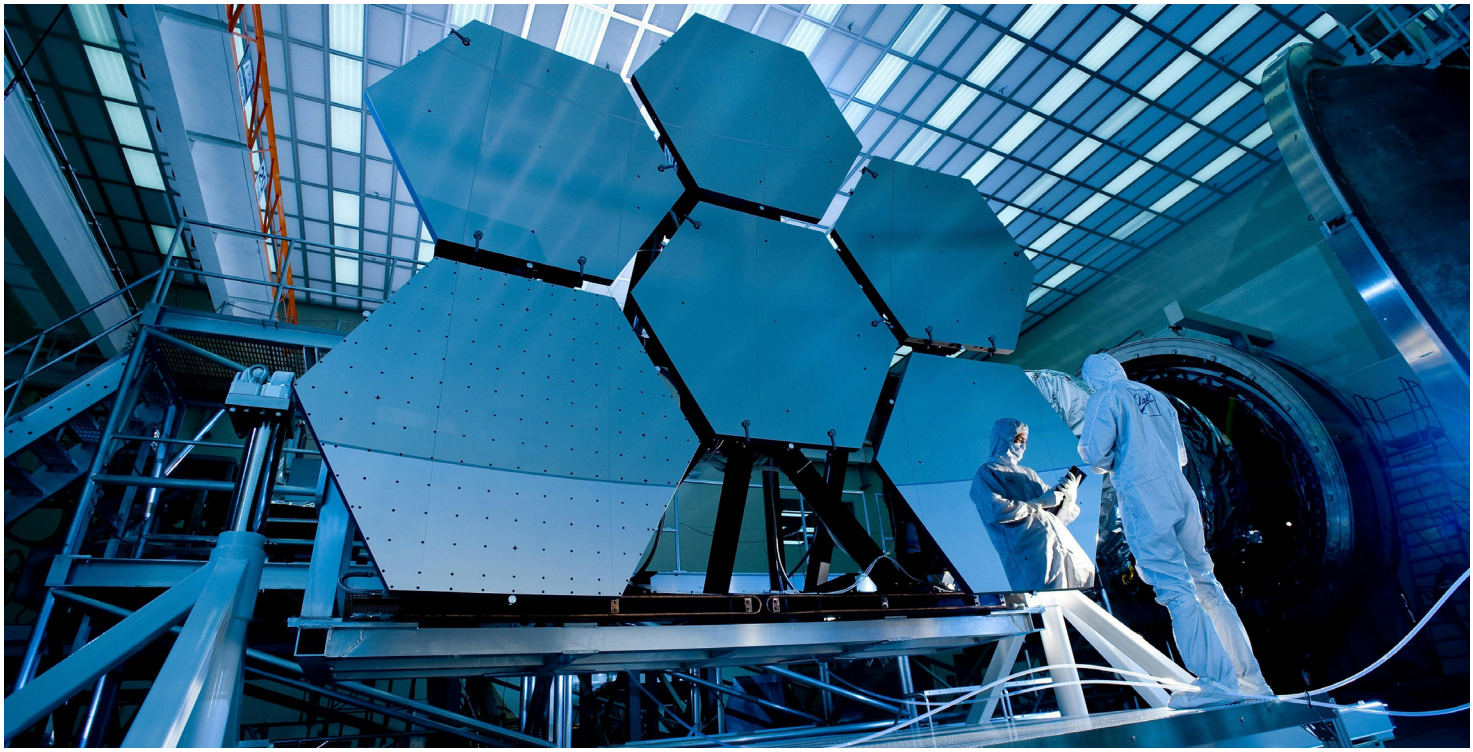
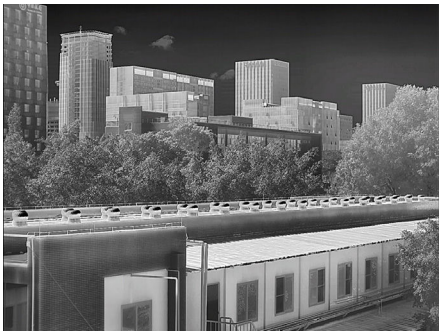
UVH Series Uncooled Thermal Imaging Core module is developedbased on 1280 x 1024 high resolution infrared detector, featuringsupreme high imaging quality and various of functions, it is reliableand stable which fits in different kinds of complex environments,meeting the demands of the users for high definition image, highframerate and detection in remote distance.

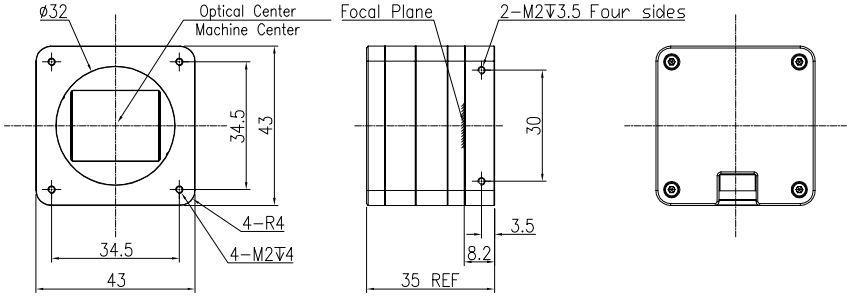
COMPACT DESIGN | FINE IMAGING QUALITY | LOW POWER CONSUMPTION | EASY TO INSTALL | SHUTTERLESS CORRECTION



UVH Series Uncooled IR Imaging Module

Model	UVH 12A
Detector	Uncooled VOx Microbolometer
Resolution	1280×1024
Pitch Size	12μm
Spectral Range	8 ~14μm
Frequency	30Hz / 50Hz
NETD	< 40mK (@25 ℃ , F/1.0, 30Hz)
Thermal Time Constant	< 12ms
Image Adjustment	Brightness/Contrast, DDE， DeNoise etc.
Polarity/Palette	White hot/Black hot/Various palettes supported
Digital Zoom	1~ 4×
HD Analog Video	AHD
Digital Video	BT1120/LVDS/SDI/Cameralink/USB3.0
Communication	RS422 (RS232, TTL optional)
Power Supply	DC9~24V, typical 12V
Power Consumption	≤ 3.5W(@25 ℃ stable)
Size (without lens)	≤ 44×44×39mm
Weight	< 120g
Working Temperature	-40℃ ~+70 ℃
Storage Temperature	-50 ℃ ~ +80℃
Humidity	0% ~ 90%RH
Vibration	6.06g, random vibration, all axes
Shock	80g @4ms, final peak sawtooth wave, 3 axes and 6 directions





1.7m×0.5m

4.6m×2.3m

Lens	FOV	Detecting distance	Recognition distance	Detecting distance	Recognition distance
	1280×1024/12μm				
f50mm F1	17.5° ×14°	2800m	1400m	6400m	3200m
f75mm F1	12.0° ×9.0°	4200m	2100m	9600m	4800m
f100mm F1	8.7° ×7.0°	5600m	2800m	1300m	6400m
f150mm F1	5.8° ×4.7°	8400m	4200m	20000m	9600m
f200mm F1	4.4° ×3.5°	11200m	5600m	26000m	13000m

UVE Series

Uncooled IR Imaging Module

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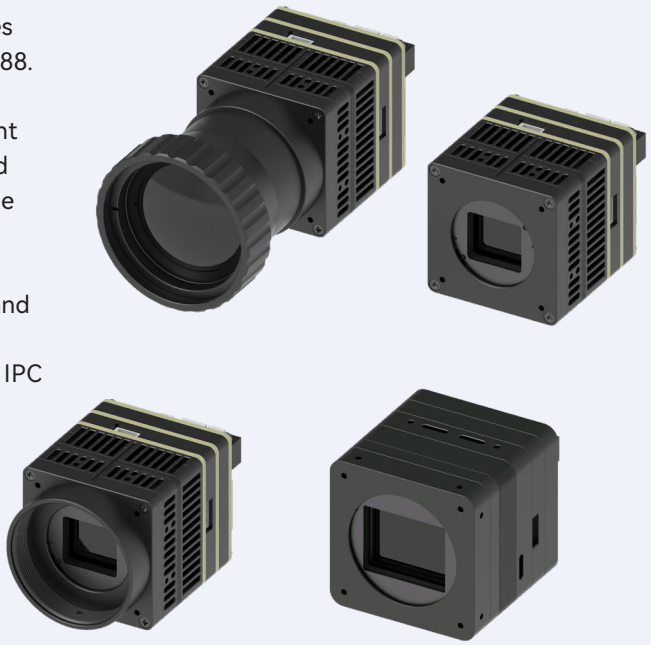
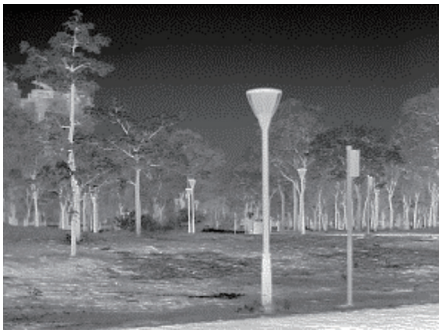
The UVE series uncooled infrared thermal imaging network modules are available in three resolutions: 1280×1024, 640×512, and 384×288. The entire series adopts high-refresh-rate 12μm VOx infrared detectors, featuring high performance, compact size, lightweight design, low power consumption, and cost-effectiveness. Equipped with the latest infrared thermal image processing algorithms, the modules deliver exquisite, clear, and smooth image quality. Additionally, the UVE series modules integrate an SOC processing chip, supporting various network protocols such as TCP/IP, HTTP, and RTSP, and enabling control over lenses and PTZ (pan-tilt-zoom) mechanisms. With an RJ45 connector, they are well-suited for IPC (IP camera) applications.

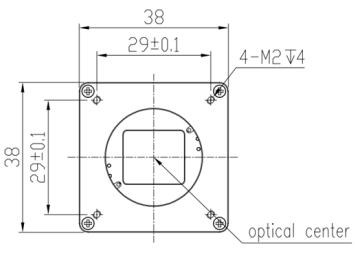


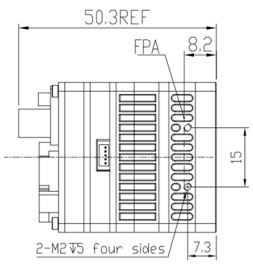
COMPACT DESIGN | FINE IMAGING QUALITY | LOW POWER CONSUMPTION | EASY TO INSTALL

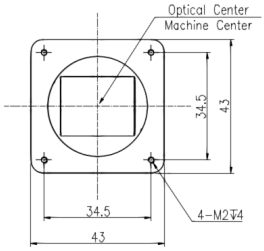
UVE Series Uncooled IR Imaging Module

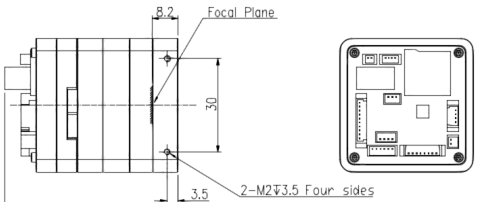
Model	UVE 384	UVE 640	UVE 1280
Detector	Uncooled VOx Microbolometer		
Resolution	384×288	640×512	1280 x1024
Pitch Size	12μm		
Spectral Range	8 ~14μm		
Frequency	50Hz		
NETD	< 40mK (@25℃ , F/1.0)		
Lens	Fixed focus/ Cont. focus		
Focus	Auto/ Motor		
Image	Brightness/contrast, Enhancement, Filter, NUC		
Polarity/Palette	White hot/Black hot/Various palettes available		
Digital zoom	1~4 x		
Functions	video recording; snapshot, linkage with PTZ ,alarm output		
Network protocol	TCP/IP,HTTP,,RTSP, etc.		
Interface	ONVIF、GB28181、SDK		
Browser	IE8+, Multiple languages		
Communication	Default TTL, RS485 reserved		
PELCO	Standard PELCO-D、PELCO-P PTZ protocol		
Network interface	ONVIF、GB28281		
Power	12V DC±10%		
Consumption @25℃	≤ 2.5W		
Size (excl. lens)	≤ 38×38×51mm		
Weight(excl.lens)	< 165g		
Working Temperature	-40℃ ~+70℃		
Storage Temperature	-45℃ ~+85℃		
Humidity	5% ~ 95%RH		











1.7m×0.5m

4.6m×2.3m

Lens	FOV		Detecting distance	Recognition distance	Identification distance	Detecting distance	Recognition distance	Identification distance
	640×512	384×288						
f4.6mm F1	79.7° ×67.5°	53.2° ×41.2°	256 m	128 m	64 m	588 m	294 m	147 m
f9.1mm F1	45.8° ×37.3°	28.4° ×21.5°	506 m	253 m	126 m	1163 m	581 m	291 m
f13mm F1	32.9° ×26.6°	20.1° ×15.1°	722 m	361 m	181 m	1161 m	831 m	415 m
f19mm F1	22.9° ×18.4°	13.8° ×10.4°	1056 m	528 m	264 m	2428 m	1214	607 m
f25mm F1	17.5° ×14°	10.5° ×7.9°	1389 m	694 m	347 m	3194 m	1597 m	799 m
F35mm F1	12.5° ×10°	7.5° ×5.7°	1944 m	972 m	486 m	4472 m	2236 m	1118 m