

To push the boundaries of sensing and transform
the way people connect with the world around them.

 enquiry@sensormicro.com



 www.sensormicro.com

Version No.: 20250902 REV1 Specifications are subject to change without prior notice.



INFRARED DETECTORS, MODULES & CAMERA CORES



SensorMicro, Sense More

COMPANY PROFILE

SensorMicro was founded with a simple but powerful belief:

Innovation should serve real-world needs.

Backed by Guide Infrared, the world leader in infrared industry, SensorMicro's confidence comes from over three decades of experience Guide has gained. We exist to empower people and systems to see beyond the surface – into the patterns, the problems, and the possibilities that lie beneath.

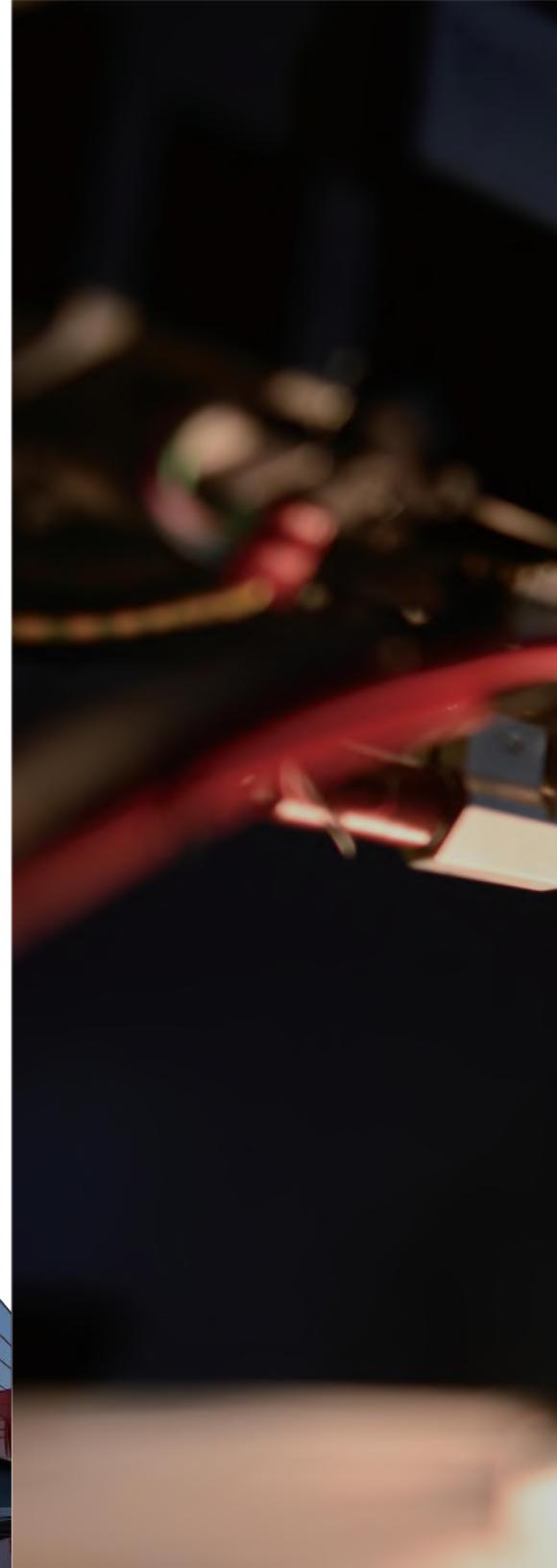
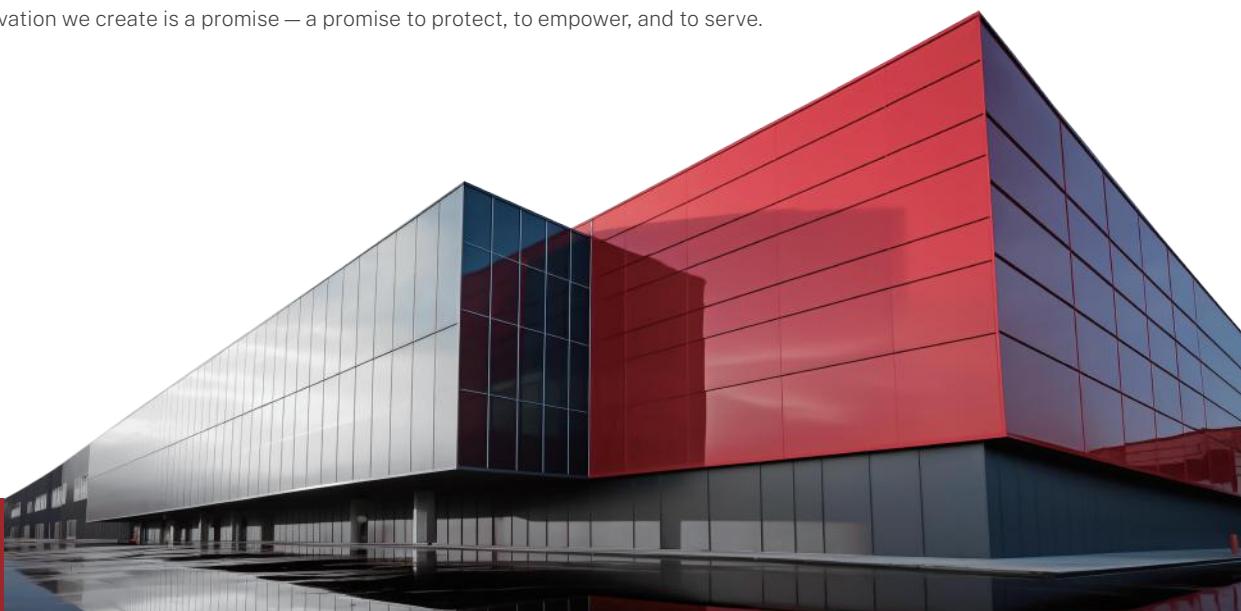
By turning invisible heat into visible truth, we help industries make smarter decisions, protect what matters most, and navigate complexity with clarity.

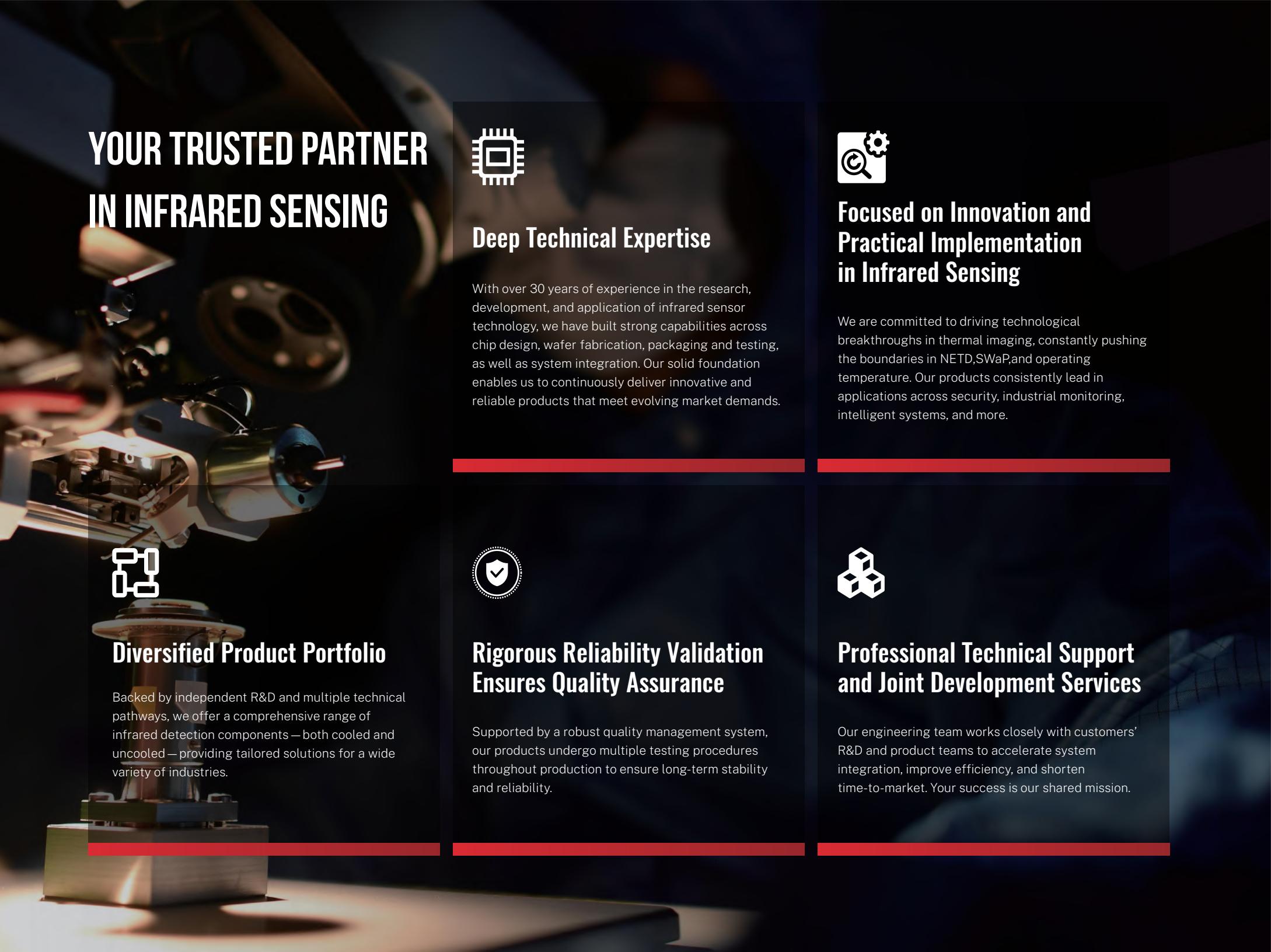
Heeding to our insistence on being self-made and customer-first has become a sure recipe for SensorMicro's momentum. As our business spans much of the globe, we've charged ahead on all fronts – from security, firefighting, industrial inspection, medical care, and machine vision, to environmental monitoring and key aspects of carbon neutrality – helping partners unlock the full potential of intelligent infrared sensing, and connecting the dots of life.

We are more than an infrared technology company.

We are a community of people committed to building a sustainable, ethical, and human-centered future.

Every pixel of innovation we create is a promise — a promise to protect, to empower, and to serve.



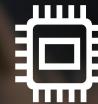


YOUR TRUSTED PARTNER IN INFRARED SENSING



Diversified Product Portfolio

Backed by independent R&D and multiple technical pathways, we offer a comprehensive range of infrared detection components – both cooled and uncooled – providing tailored solutions for a wide variety of industries.



Deep Technical Expertise

With over 30 years of experience in the research, development, and application of infrared sensor technology, we have built strong capabilities across chip design, wafer fabrication, packaging and testing, as well as system integration. Our solid foundation enables us to continuously deliver innovative and reliable products that meet evolving market demands.



Focused on Innovation and Practical Implementation in Infrared Sensing

We are committed to driving technological breakthroughs in thermal imaging, constantly pushing the boundaries in NETD, SWaP, and operating temperature. Our products consistently lead in applications across security, industrial monitoring, intelligent systems, and more.



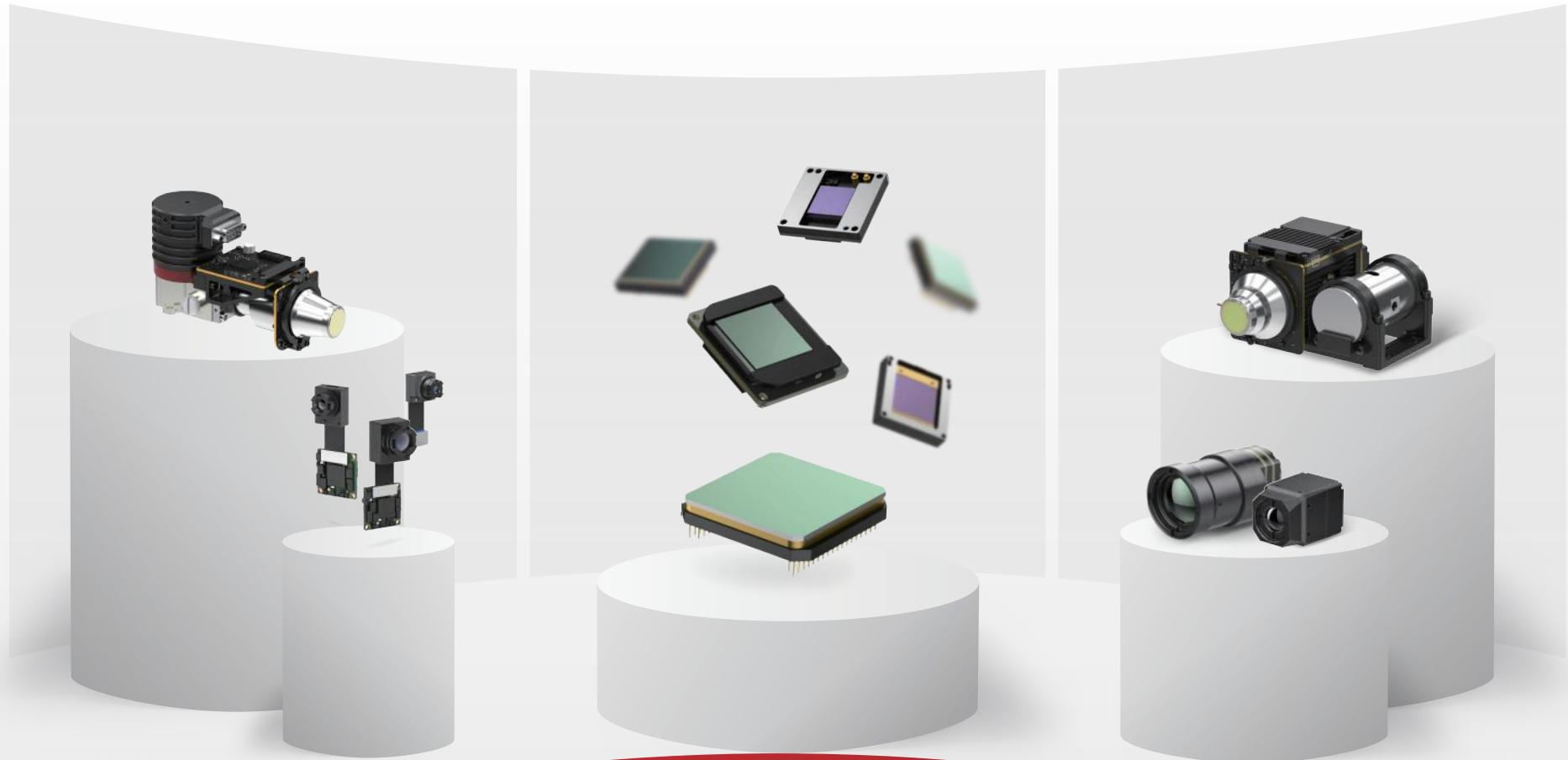
Rigorous Reliability Validation Ensures Quality Assurance

Supported by a robust quality management system, our products undergo multiple testing procedures throughout production to ensure long-term stability and reliability.



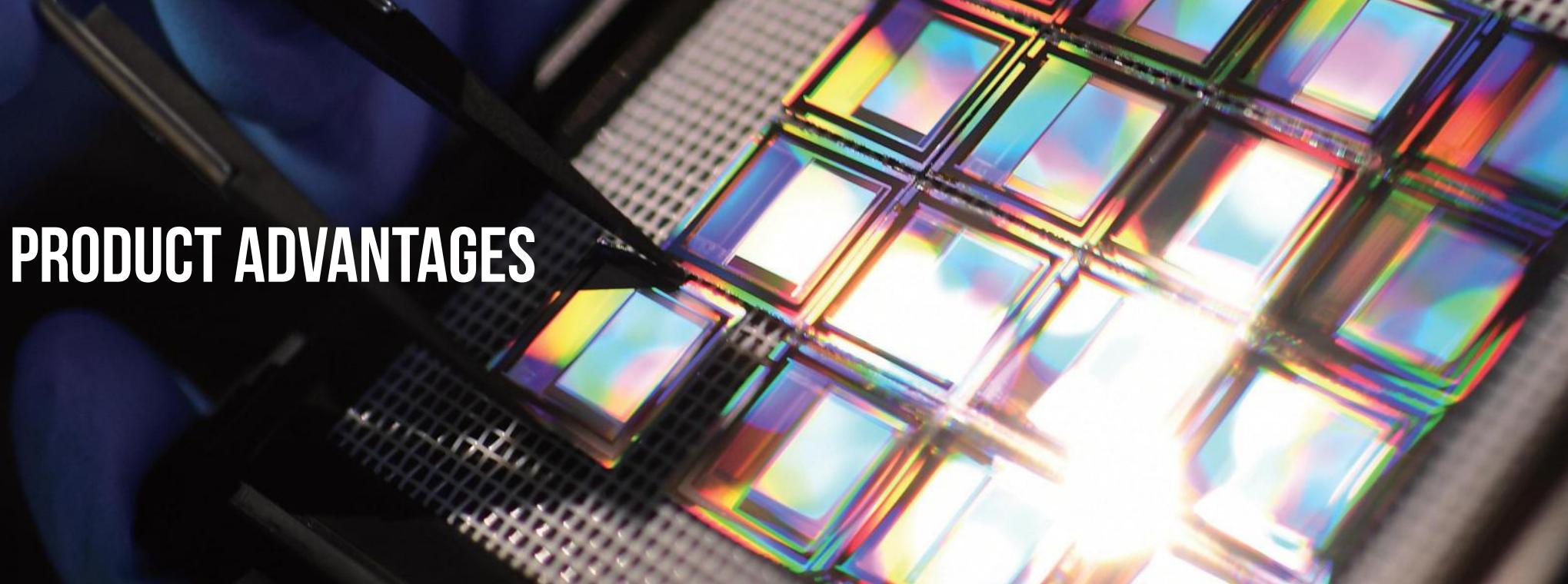
Professional Technical Support and Joint Development Services

Our engineering team works closely with customers' R&D and product teams to accelerate system integration, improve efficiency, and shorten time-to-market. Your success is our shared mission.



To harness the power of infrared sensing technology to transform industries worldwide,
enabling smarter decisions, safer environments, and a more connected future.

PRODUCT ADVANTAGES



Diverse Product Portfolio

A wide range of product formats including infrared detectors, camera cores, and modules to meet various integration requirements.



Rich Product Variety

Multiple array resolutions, pixel sizes, wavebands, and lens options combinations provide greater flexibility for diverse applications.



Outstanding Performance

Clear imaging, compact size, low power consumption, high sensitivity, and strong reliability—designed to perform under a wide range of environmental challenges.

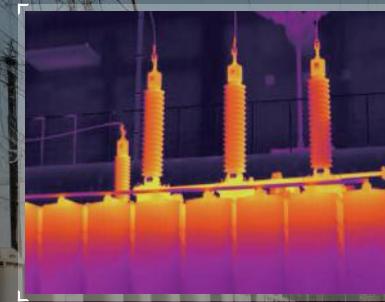


Easy Integration

Multiple interface options make integration straightforward and enable rapid development across multiple application fields.



SECURITY



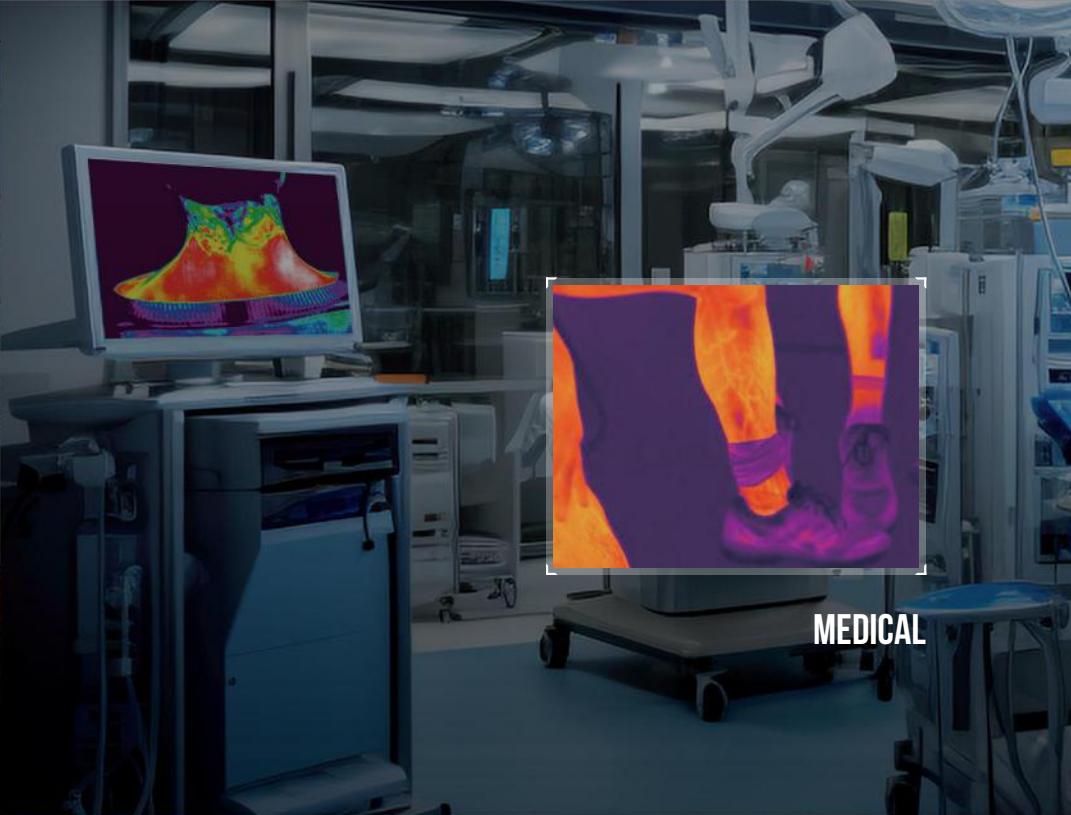
INDUSTRIAL



ADAS



OUTDOORS



DETECTOR

Uncooled	GSTW	08
	GSTC	10
Cooled	CM	12
	CH	14
	CS	16

MODULE

Uncooled	TIMO	18
	MINI	20
	iMC	22
Cooled	EYAS GM	24
	EYAS GH	26
	EYAS GL	28

CAMERA CORE

Uncooled	COIN	30
	iSE	32
	iHA	34
	iTL	36
	MICO	38
Cooled	GAVIN GCM	40
	GAVIN GCH	42
	GAVIN GCL	44

GSTW Series

Uncooled Infrared Detector



Industrial
Inspection



Security
Monitoring



Medical
Diagnosis



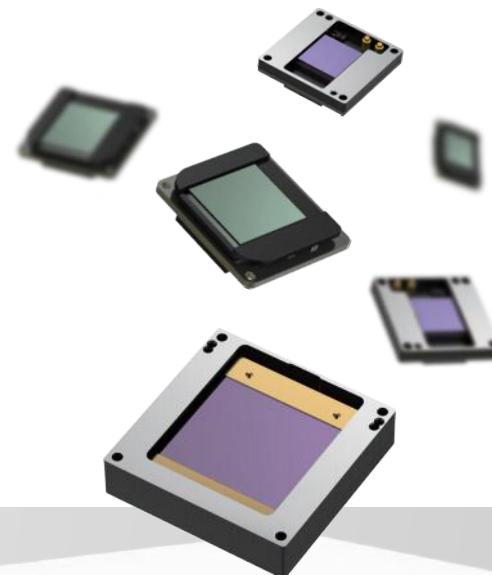
Consumer
Electronics



ADAS



UAV



The GSTW series uncooled infrared detector adopts advanced Wafer-Level Packaging (WLP) technology, enabling a more streamlined manufacturing process, smaller size, and lower costs. These features make it especially suitable for cost-sensitive, high-volume production. Optimized for applications with stringent Size, Weight, Power, Price, and Performance (SWaP³) requirements, the GSTW series can be seamlessly integrated into a wide range of uncooled infrared modules, camera cores, and thermal imaging devices. It covers infrared imaging solutions from consumer to industrial markets.



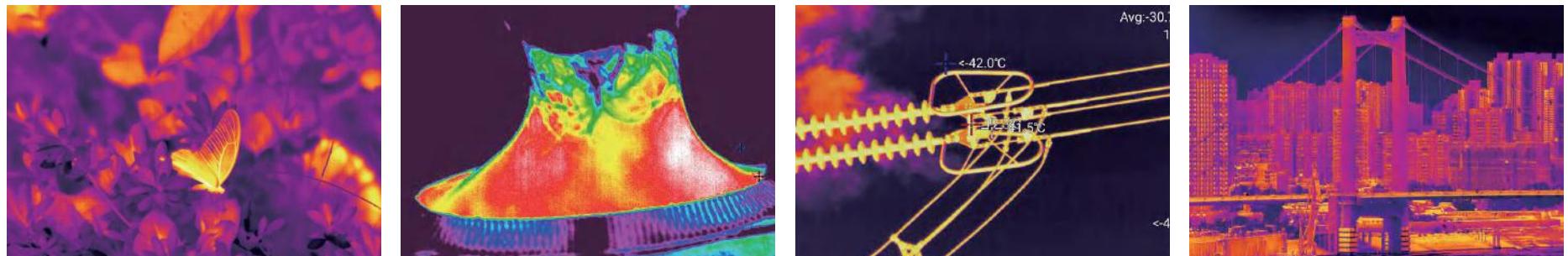
Wafer-Level Packaging for Cost-Effective Integration

- Compact and lightweight, easy to integrate into space-constrained devices
- Low power consumption, enabling extended operation in portable applications
- Optimized for mass production, offering cost advantages for large-scale deployment



Comprehensive Product Range

- Module products available in 120×90 and 256×192 resolutions
- Detectors support 400×300, 640×512, and 1280×1024 resolutions



Model	GST412W	GST417W	GST612W	GST1212W
Resolution		400×300		640×512
Sensitive Material			VOx	
Pixel Size	12μm	17μm		12μm
Spectral Response			8-14μm	
NETD			< 40mK	
Output Signal			Built-in 14 bits ADC	
Thermal Response Time			< 12ms	
Max. Frame Rate			50Hz	
Power Consumption	< 110mW	< 180mW	< 150mW	< 400mW
Size(mm)	17.3×17.3	18×16	17.3 ×17.3	27.8×27.8
Weight(g)	< 2		< 2.5	<10
Operating Temperature			-40°C ~ +85°C	

GSTC Series

Uncooled Infrared Detector

 Industrial Inspection

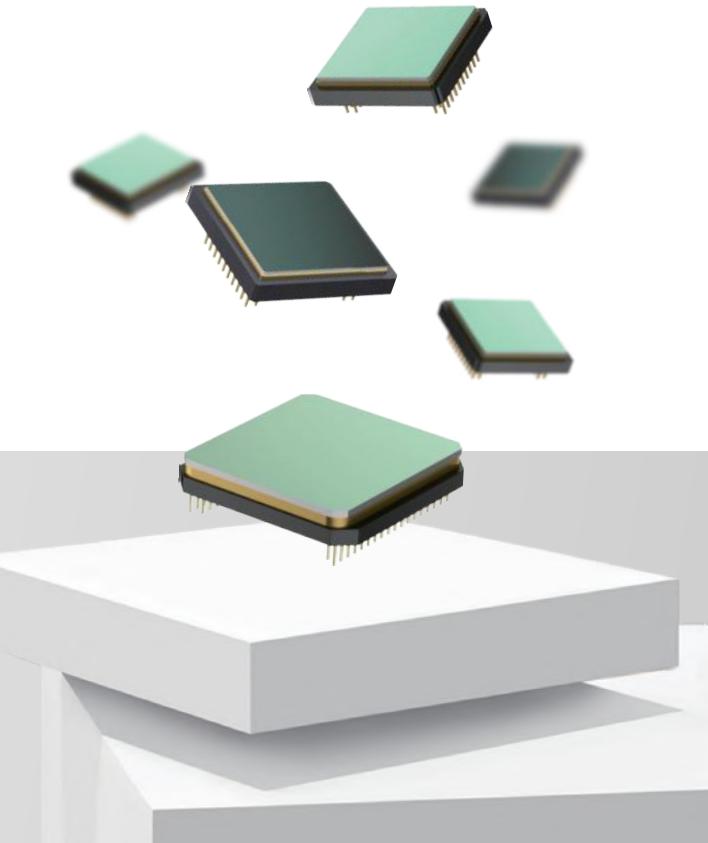
 Medical Diagnosis

 Security Monitoring

 Consumer Electronics

 ADAS

 UAV



The GSTC series uncooled infrared detector is built using VO_x (Vanadium Oxide) sensitive materials and adopts ceramic packaging technology, significantly enhancing detection sensitivity and overall performance. It excels in identifying temperature anomalies, ensuring safety, and improving operational efficiency, making it an ideal solution for high-reliability and high-performance thermal imaging. The GSTC series infrared detector is well-suited for a wide range of applications, including industrial inspection, smart security, personal vision, and fire and rescue. Whether integrated into industrial monitoring equipment, security enhancement modules, or auxiliary firefighting systems, the GSTC series serves as a preferred component for thermal imaging integration.



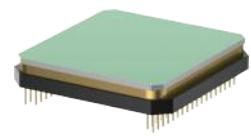
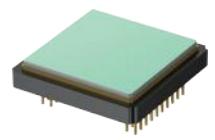
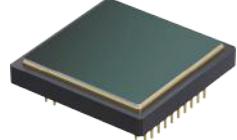
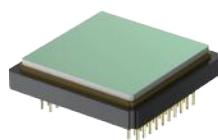
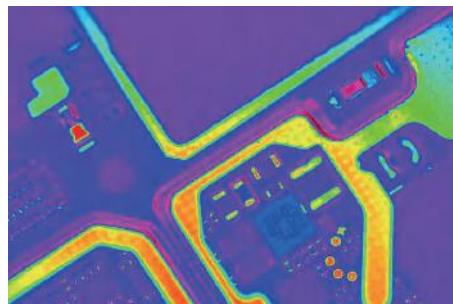
Ceramic Packaging, High Cost-Performance

- TEC-free operation for compact and lightweight experience
- High sensitivity and clear imaging at lower price



Mainstream Formats

- Covers mainstream resolutions: 400×300, 640×512, and 1280×1024
- Pixel size options: 12µm and 17µm



Model	GST412C	GST417C	GST612C	GST1212C
Resolution	400×300		640×512	1280×1024
Sensitive Material		VOx		
Pixel Size	12μm	17μm		12μm
Spectral Response		8-14μm		
NETD	< 35mK	< 30mK		< 35mK
Output Signal		Built-in 14 bits ADC		
Thermal Response Time			<12ms	
Max. Frame Rate			50Hz	
Power Consumption	< 150mW	< 180mW	< 150mW	< 400mW
Size(mm)	18.5×18.5×3.78 (Without Pin)	18.5×18.5×3.8 (Without Pin)	18.5×18.5× 3.78 (Without Pin)	31×31×5.1 (Without Pin)
Weight(g)		< 4.5		<15
Operating Temperature			-40°C ~ +85°C	



CM Series MWIR Cooled Infrared Detector

Based on mercury cadmium telluride (HgCdTe) material, the CM series MWIR cooled infrared detector supports both standard mid-wave (3.7–4.8 μ m) and broadband mid-wave (cut-on \leq 2.5 μ m, cut-off \geq 4.8 μ m) spectral ranges. Equipped with a high-performance cryocooler, it delivers outstanding thermal sensitivity and superior imaging quality. The series supports multiple resolutions and pixel sizes, making it ideal for mid-to high-end thermal imaging applications that demand long-range detection, high contrast, and wide dynamic range.



Aerospace



Border and
Coastal Defense



Environmental
Monitoring



Long-range
Monitoring



Comprehensive Specifications & Stable Mass Supply



- Mainstream resolutions: 640 \times 512, 1280 \times 1024
- Wide range of pixel size: 7.5/10/12/15/25 μ m
- Reliable mass production with excellent consistency and stable supply



Flexible Configuration to Meet Diverse Needs

- Customizable in wavelength, F-number, and mounting interface
- Multiple cryocoolers available for selection



Model	C615WM	C615M	C625M	C1215M	C1212M	C1210M	C1207M				
Sensitive Material	MCT										
Resolution	640x512			1280x1024							
Pixel Size	15μm		25μm	15μm	12μm	10μm	7.5μm				
Spectral Response	Cut-on: ≤2.5μm, Cut-off: ≥4.8μm (50% Response)	3.7±0.2μm ~ 4.8±0.2μm									
Typical NETD	16mK(F2) 18mK(F4)	10mK(F2)	18mK(F2)	18mK(F2/F4)	20mK(F2/F4)	25mK(F2/F4)					
CRYOCOOLER	RS058	RS058/RS046/LS734	RS079	RS079G	RS058/LS734	RS058	RS046				
Max. Frame Rate	120Hz		180Hz	100Hz							
Effective Pixel Rate	≥99.76%		≥99.5%								
Response Non-uniformity	≤8%										
Operating Temperature	-45°C~+71°C										
Cooling Time (23°C)	≤6min	≤6min(RS058) ≤5min30s(RS046) ≤4min (LS734)	≤7min	≤7min	≤6min(RS058) ≤4min(LS734)	≤6min	≤5min30s				
Max. Power Consumption (71°C)	≤12W	≤12W(RS058) ≤11W(RS046) ≤45W(LS734)	≤20W	≤30W	≤17W(RS058) ≤45W(LS734)	≤17W	≤15W				
Steady Power Consumption (23°C)	≤6W	≤6W(RS058) ≤5W(RS046) ≤10W(LS734)	≤15W	≤13W	≤7W(RS058) ≤10W(LS734)	≤7W	≤6.5W				
Size(mm)	145×58.5×71	RS058: 145×58.5×71 RS046: 120×46.5×81.5 Compressor: φ46×122 Dewar (Model LS734): φ40×114	148×59×78	154×59×78	RS058: 149×58.5×71 Compressor: φ46×122 Dewar(Model LS734): φ55×119	143.5×58.5×71	120×46.5×81.5				
Weight(g)	≤600	≤600(RS058) ≤350(RS046) ≤1200(LS734)	≤650	≤730	≤600(RS058) ≤1200(LS734)	≤600	≤350				



CH Series HOT Cooled Infrared Detector

The CH series High Operating Temperature (HOT) cooled MWIR infrared detector is based on Type-II superlattice (T2SL) technology. It can raise the focal plane operating temperature up to 150/160 K without compromising performance, enabling SWaP³ advantages — small size, lightweight, low power consumption, high performance, and cost efficiency. This design meets the growing demand for high reliability and low maintenance costs in advanced thermal imaging applications.



Aerospace



Border and
Coastal Defense



Environmental
Monitoring



Long-range
Monitoring



Optimized SWaP³ Empowered by HOT Technology

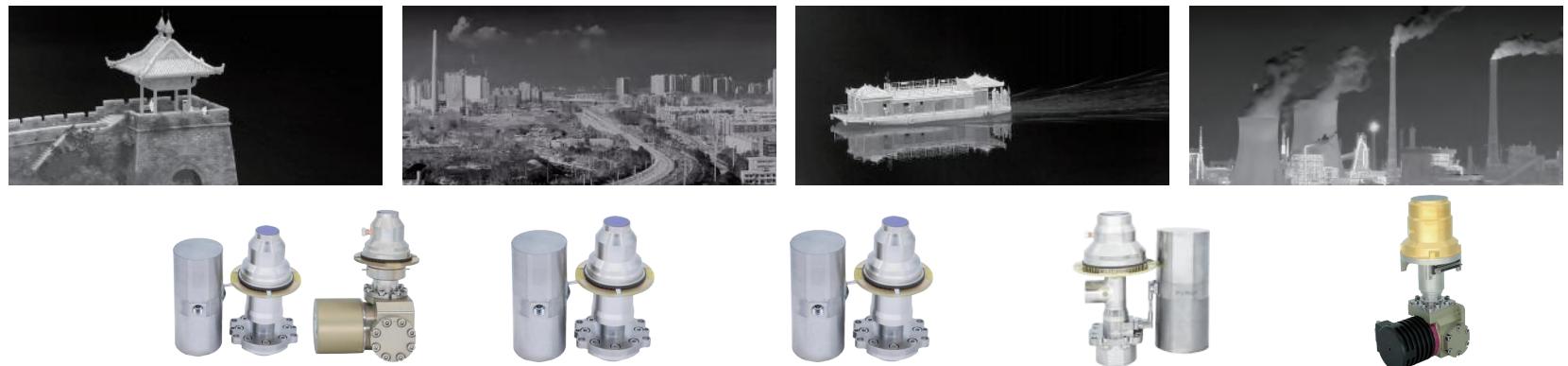


- Operating temperature raised to 160K
- Flexible system layout
- Lightweight (235g), low power consumption (as low as 3W), and fast cool-down time (as short as 2.5 minutes)

Complete and Proven Product



- Full coverage of mainstream resolutions: 640×512, 1024×768, 1280×1024, and 2560×2048
- Covers 15µm/10µm/7.5µm pixel size
- 2560×2048/10µm ultra-large FPA
- Exceptional uniformity, stability, and reliability



Model	C615H	C1010H	C1207H	C1210H	C2510H
Sensitive Material			T2SL		
Resolution	640x512	1024x768		1280x1024	2560x2048
Pixel Size	15µm	10µm	7.5µm		10µm
Spectral Response			3.7±0.2µm ~ 4.8±0.2µm		
Typical NETD	20mK(F2/F4)	20mK(F2) 25mK(F4)	35mK	20mK(F2) 25mK(F4)	20mK(F2)
Max. Frame Rate			100Hz		
Effective Pixel Rate	≥99.76%			≥99.5%	
Response Non-uniformity			≤8%		
Operating Temperature			-45°C~+71°C		
CRYOCOOLER	LS711H/RS028		LS711H	LS713	RS079G
Cooling Time(23°C)	≤3min(LS711H) ≤2.5min(RS028)		≤3min		≤8min
Max. Power Consumption(71°C)		≤12W		≤20W	≤35W
Steady Power Consumption(23°C)	≤3W(LS711H) ≤3.5W(RS028)		≤3W		≤8W
Size(mm)	Cryocooler: φ26×55.8(LS711H) Dewar: 33×37.5×70(LS711H) 86×43×57(RS028)		Cryocooler: φ26×55.8 Dewar: 33×37.5×70	Cryocooler: φ33.5×72.5 Dewar: 34×34×86	86×164×64
Weight(g)	≤235(LS711H) ≤250(RS028)		≤235	≤355	≤750



CS Series LWIR Cooled Infrared Detector

CS series LWIR cooled detector is based on Type-II Superlattice (T2SL) material, which is specifically engineered for long-wave infrared (LWIR) detection. It features an integrated high reliable Dewar and cryocooler assembly, delivering high quantum efficiency, high frame rate, excellent sensitivity, low noise, and superior non-uniformity performance. This series is ideal for target detection in harsh environments with dust, reflective interference, and other complex conditions.



Aerospace



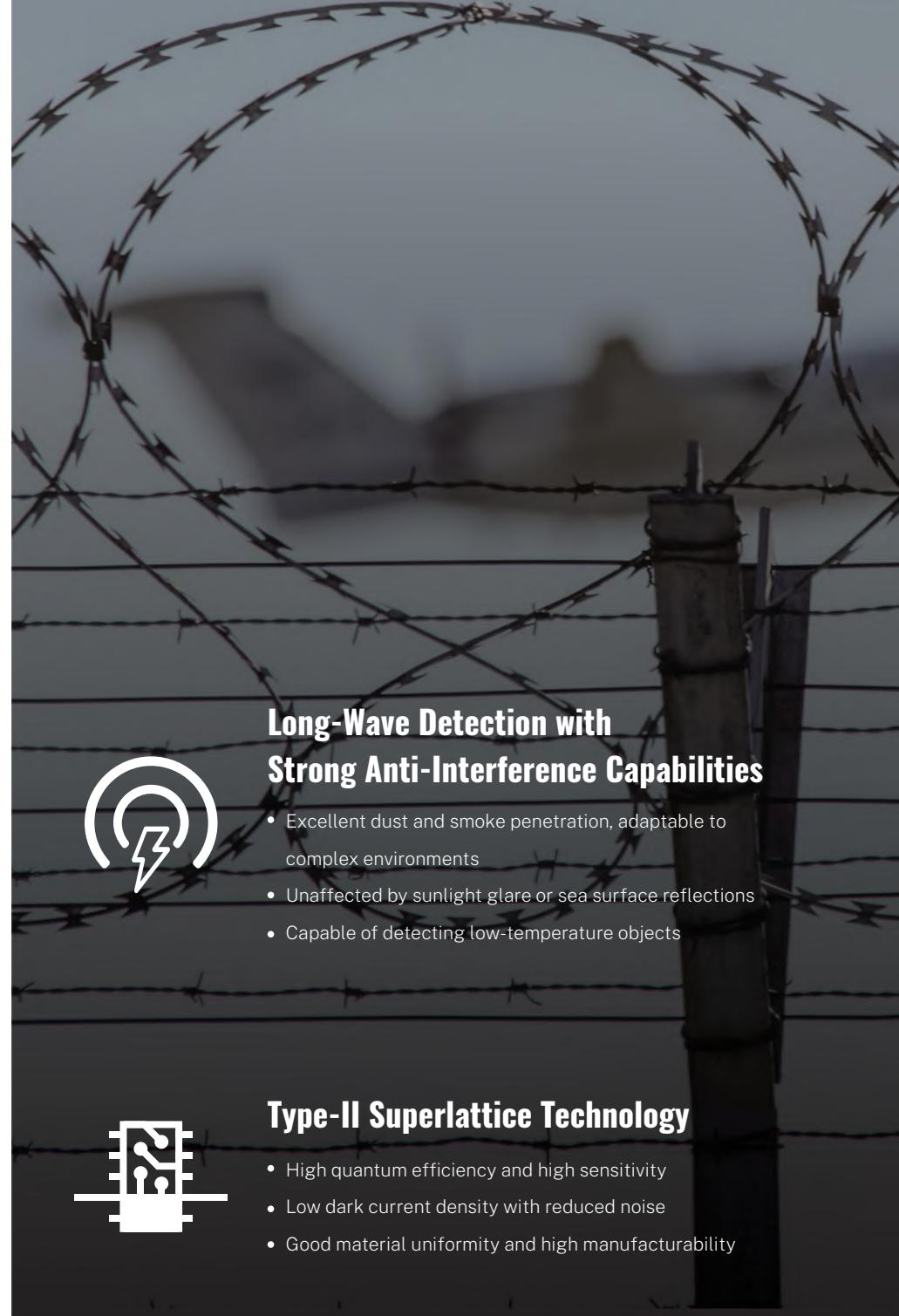
Environmental
Monitoring



Border and
Coastal Defense



Long-range
Monitoring



Long-Wave Detection with Strong Anti-Interference Capabilities



- Excellent dust and smoke penetration, adaptable to complex environments
- Unaffected by sunlight glare or sea surface reflections
- Capable of detecting low-temperature objects



Type-II Superlattice Technology

- High quantum efficiency and high sensitivity
- Low dark current density with reduced noise
- Good material uniformity and high manufacturability



Model	C615S	C625S	C1210S
Sensitive Material		T2SL	
Resolution	640x512		1280x1024
Pixel Size	15 μ m	25 μ m	10 μ m
Spectral Response	7.7 \pm 0.2 μ m ~ 9.4 \pm 0.3 μ m		
Typical NETD	25mK(F2 ITR) 22mK(F2 Interlace & binning)	20mK(F2)	35mK(F2)
Max. Frame Rate	220Hz	180Hz	100Hz
Effective Pixel Rate	\geq 99.5%		
Response Non-uniformity	\leq 8%		
Operating Temperature	-45°C~+71°C		
CRYOCOOLER	RS058F	RS079	RS079G
Cooling Time(23°C)	\leq 5min30s	\leq 7min	\leq 5min
Max. Power Consumption(71°C)	\leq 20W	\leq 25W	\leq 30W
Steady Power Consumption(23°C)	\leq 8W	\leq 15W	\leq 10W
Size(mm)	148x58.5x71	148x59x78	154x59x78
Weight(g)	\leq 570	\leq 650	

TIMO Series Uncooled Infrared Miniature Module

Designed for consumer market, TIMO series uncooled infrared miniature module features a self-developed 12μm wafer-level detector, along with a wafer-level optical lens and micro-electromagnetic valve shutter, enabling precise temperature data and heat distribution capture for specific target areas or points. With its ultra-compact design and ultra-low power consumption, TIMO can be seamlessly embedded into IoT devices, smart wearables, mobile devices, and other applications where size and energy efficiency are critical. The cost-saving and high-performance module comes as an inclusive solution of infrared sensing.

Ultra-compact Infrared Sensing Units for Multi-industry Applications



IoT



Consumer Electronics



Instruments and Meters



Smart Devices



Security Monitoring



Night Observation



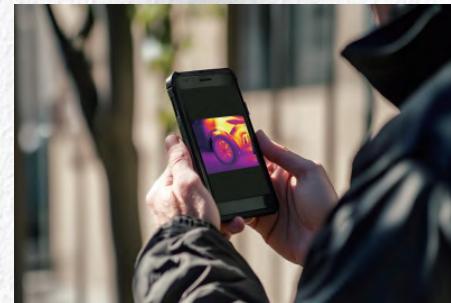
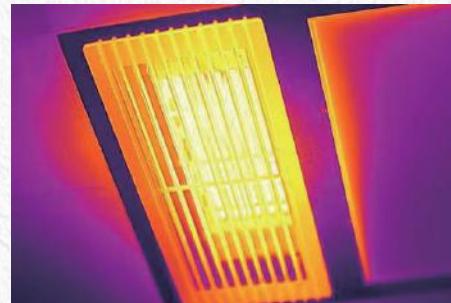
Low-cost Ultra-miniature Module with Ultimate SWaP Optimization

- Wafer-level packaged detector + wafer-level optics + micro-electromagnetic valve shutter
- The smallest infrared thermal module, enabling minimal thermal imaging functionality with maximum cost efficiency
- Compact size, lightweight, and low power consumption, ideal for integration into miniature devices



Rich Features, Efficient Integration

- Offers multiple lens options, including wide-angle and telephoto, to meet diverse application needs
- TIMO112 Supports SPI image interface, compatible with various embedded platforms
- TIMO212 Supports DVP image interface, compatible with various embedded platforms

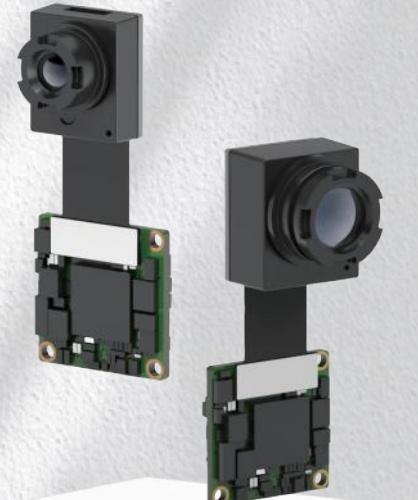


Model	TIMO112		TIMO212						
Resolution	120×90		256×192						
Pixel Size	12 μ m			8~14 μ m					
Spectral Response	8~14 μ m			Focus Free					
Focus Mode	Focus Free								
Lens(HFOV/FL)	50°/ 1.6mm	17.5°/ 10mm	25°/ 7mm	56°/ 3.2mm	90°/ 2.1mm				
Weight(g)	1.8	5.1±0.4	4.4±0.4	2±0.2	4.8±0.4				
Size(mm: without FPC)	12.6×12.6×8.8	16×14×18	16×14×14.6	14×12×9.8	16×14×15.6				
Number of PINs	40PIN								
Output Data	14bit Raw								
Frame Rate	25Hz	Thermography: 25Hz, Imaging: ≤50Hz							
Temperature Measurement Range	-20°C~+550°C (-20°C~+150°C +100°C~+550°C)								
Temperature Measurement Accuracy	Greater of ±2°C / ±2%								
Operating Temperature	-40°C~+70°C								
Humidity	5%~85%								
Storage Temperature	-45°C~+85°C								
Certification	RoHS 2.0/Reach								

Mini212 Uncooled Infrared Miniature Module

The Mini212 uncooled infrared miniature module is built on SensorMicro's self-developed TIM0212 infrared Module. The addition of an infrared ISP processing board enables direct output of temperature matrices and thermal images, significantly reducing the development workload for customers. Featuring compact size, low power consumption, and cost efficiency, it supports multiple field-of-view configurations and integrates a universal control interface, enabling broad applicability across industries.

Bring Thermal Imaging Technology into Emerging Fields



IoT



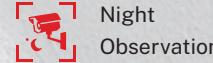
Machine Vision



Industrial vision



Security Monitoring



Night Observation



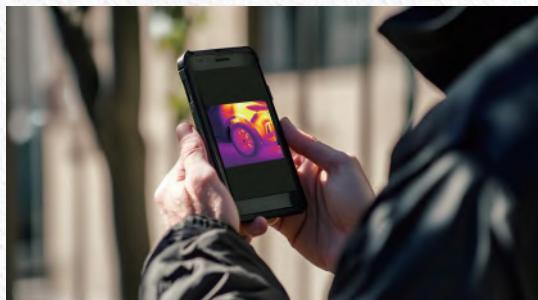
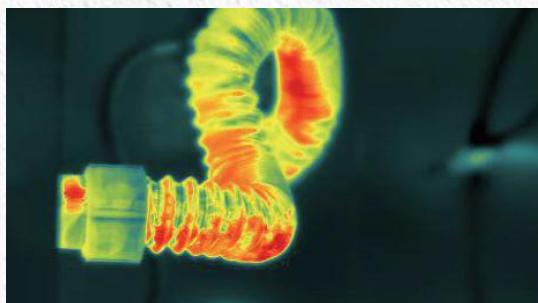
Miniature Module with Direct Thermal Imaging Output

- Equipped with a self-developed $256 \times 192 / 12 \mu\text{m}$ wafer-level infrared detector, offering significant cost advantages
- Ultra-compact structural design: only $17 \times 17\text{mm}$ (PCBA) in size, weighing just 4g – ideal for space-constrained applications
- Integrated ISP processing board and next-gen image algorithms deliver clear thermal images directly, ensuring strong versatility



Rich Features, Efficient Integration

- High-precision temperature measurement with accuracy up to $\pm 2^\circ\text{C}$; supports spot, area, and full-frame measurement
- Multiple field-of-view lens options available to meet various observation requirements
- Offers USB2.0 / DVP / BT.656 / LVDS / MIPI and other digital video output interfaces, fully compatible with industry-standard interfaces



Model	Mini212G2			
Resolution	256×192			
Pixel Size	12 μ m			
Spectral Response	8~14 μ m			
Typical NETD	\leq 50mK			
Output Data	14bit Raw			
Frame Rate	Thermography: 25Hz, Imaging: \leq 50Hz			
Focus Mode	Focus Free			
Lens(HFOV/FL)	17.5°/10mm	25°/7mm	56°/3.2mm	90°/2.1mm
Weight(g)	7.1	6.4	4	6.8
PCBA Size(mm)	17×17			
Digital Video Interface	USB2.0 / MIPI / DVP / BT.656 / LVDS			
Analog Video Interface	CVBS(PAL/NTSC)			
Operating Voltage	3.3V \pm 0.1V			
Typical Power Consumption	330mW			
Temperature Measurement Range	-20°C~+550°C(-20°C~+150°C +100°C~+550°C)			
Temperature Measurement Accuracy	Greater of \pm 2°C / \pm 2%			
Operating Temperature	-40°C~+70°C			
Humidity	5%~85%			
Storage Temperature	-45°C~+85°C			
Certification	RoHS 2.0/Reach			

iMC Series Uncooled Infrared Miniature Module

The iMC series miniature infrared module is built on the self-developed TIMO module, targeting mobile terminal applications. Paired with a dedicated app, it outputs both images and temperature matrices directly, requiring no temperature calibration, making development effortless. The iMC ultra-compact module is a cost-effective and less power-hungry offering. Equipped with universal control interfaces, it simplifies the integration and development process, reducing the technical barrier of integrators to infrared thermal imaging technology.

Infrared Solution Designed for Mobile Devices



AIoT



Security Monitoring



Machine Vision



Night Observation



Industrial vision



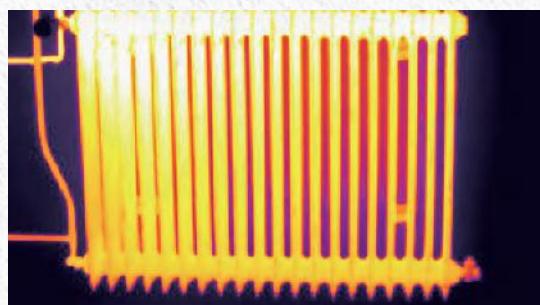
Portable and Cost-Effective

- Equipped with a self-developed wafer-level infrared detector, offering significant cost advantages
- Ultra-compact design, ideal for mobile and portable devices
- Paired with a dedicated app to output thermal images and temperature matrices directly, ensuring efficient and reliable performance



Mainstream Interfaces, Easy Development

- Provides standard and widely compatible USB 2.0 digital video output interface for flexible and convenient integration
- Factory-calibrated temperature data, eliminating the need for customers to invest in additional temperature measurement development, simplifying the process and saving effort



Model	iMC112	iMC212
Resolution	120×90	256×192
Pixel Size	12 μ m	8~14 μ m
Spectral Response		
NETD	\leq 50mK	
Output Data	14bit Raw	
Frame Rate	25Hz	
Focus Mode		Focus Free
Lens(HFOV / FL)	50°/1.6mm	56°/ 3.2mm
Digital Video Interface		USB2.0
Operating Voltage		3.3V \pm 0.1V
Typical Power Consumption	150mW	300mW
Temperature Measurement Range		-20°C~+550°C(-20°C~+150°C +100°C~+550°C)
Temperature Measurement Accuracy		Greater of \pm 2°C / \pm 2%
Operating Temperature		-20°C~+60°C
Humidity		5%~85%
Storage Temperature		-45°C~+85°C
Certification		CE / FCC / RoHS

EYAS GM Series Cooled MWIR Cooled Infrared AD Module



Aerospace



Border and
Coastal Defense

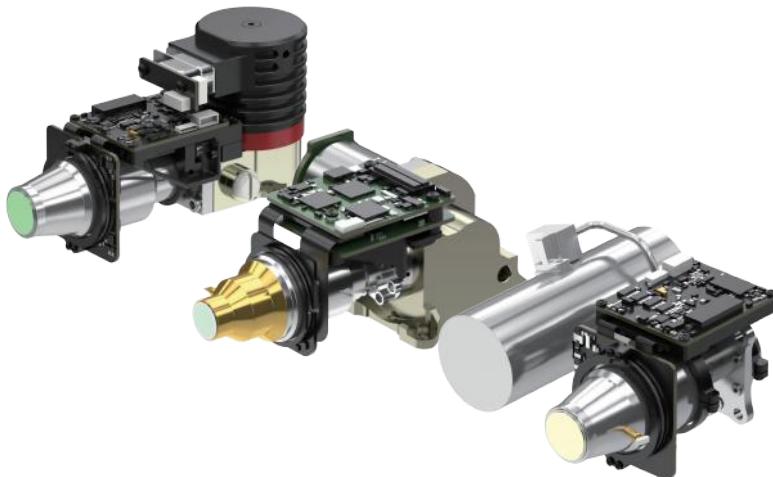


Environmental
Monitoring



Long-range
Monitoring

The EYAS GM series MWIR cooled AD module consists of a high-performance MWIR cooled infrared detector integrated with an analog-to-digital (AD) conversion board. The module converts the analog output signals from the cooled detectors into digital video streams, while also providing the drive power and control timing signals. The module enables OEM to rapidly evaluate and validate infrared detectors. By simplifying the integration process from cooled detector to system, it significantly shortens time-to-market.



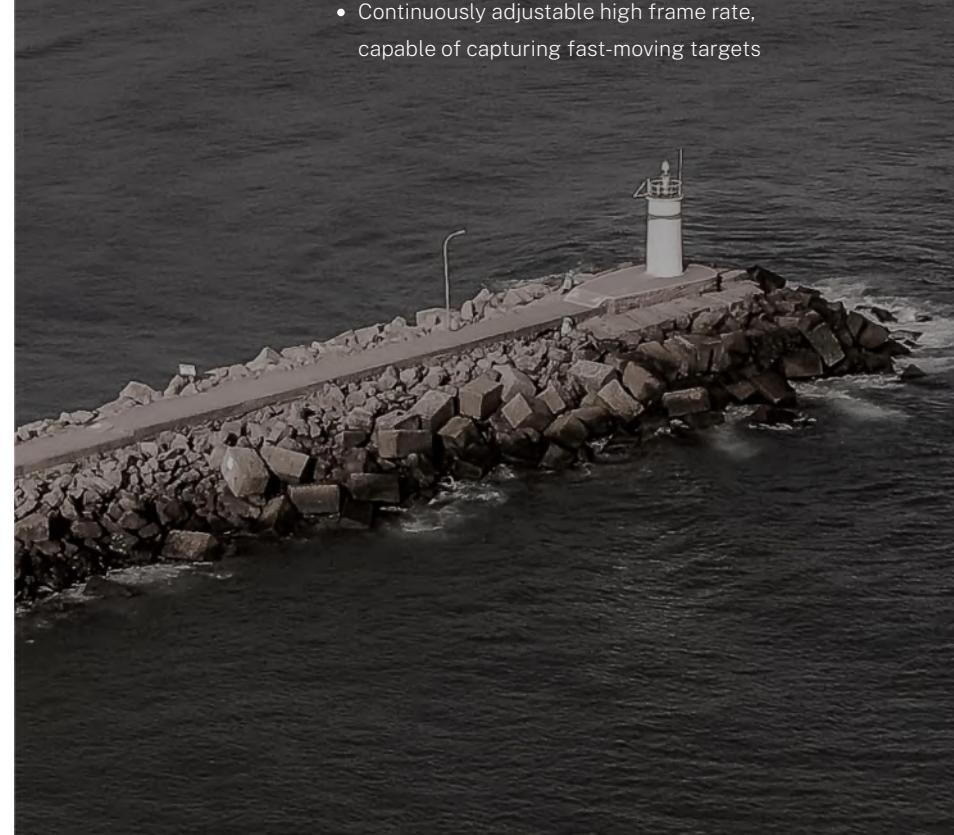
Analog-to-Digital Conversion, Accelerated Development



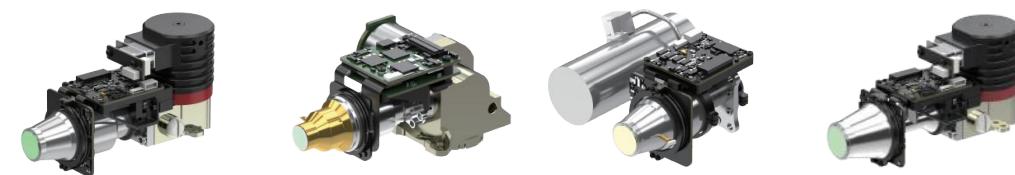
- Based on high-performance mid-wave cooled infrared detectors, integrated with AD circuit for analog-to-digital conversion
- Supports full array specifications
- Integrated design with dimensions consistent with the detector



Excellent Performance, Easy Integration



- Cameralink interface outputs 16-bit raw data, with serial port control
- Continuously adjustable high frame rate, capable of capturing fast-moving targets



Model	EYAS G615MA	EYAS G615MB	EYAS G615ME	EYAS G1212MA			
Resolution	640×512		1280×1024				
Pixel Size	15μm		12μm				
Spectral Response	3.7μm±0.2μm ~ 4.8μm±0.2μm						
IR Detector NETD (23°C)	16mK(F2) 18mK(F4)	20mK(F4) 25mK(F5.5)	16mK(F2) 18mK(F4)	18mK(F2/F4)			
Frame Rate	1~120Hz,adjustable	1~100Hz,adjustable					
Working Mode	Snapshot; ITR/IWR Modes; Anti-blooming; Windows Mode						
Standard External Interface	60pin: 37201-SM060-032W1R01; 5pin: A1257WR-S-5P-LCP						
Digital Video	16 bit CameraLink(CameraLink Base mode)			16 bit CameraLink (CameraLink DualBase mode)			
External Sync	CC1: External frame synchronous						
Communication	CameraLink UART(Default)/ RS232(customizable) Baud rate: 9600bps(Default)						
Power Supply	AD Board: 5V Cryocooler: 24V	AD Board: 5V Cryocooler: 12V	AD Board: 5V Cryocooler: 24V				
Steady Power (23°C)	≤8.5W		≤14W	≤12W			
Cooling Time (23°C)	≤6min30s	≤5min30s	≤6min30s	≤7min			
Size(mm)	142×59×78	122×86×60	110×105×60	148×59×80			
Weight(g)	≤650	≤400	≤590	≤630			
Operating Temperature	-40°C ~ +71°C						

EYAS GH Series

MWIR HOT Cooled Infrared AD Module



Aerospace



Border and
Coastal Defense

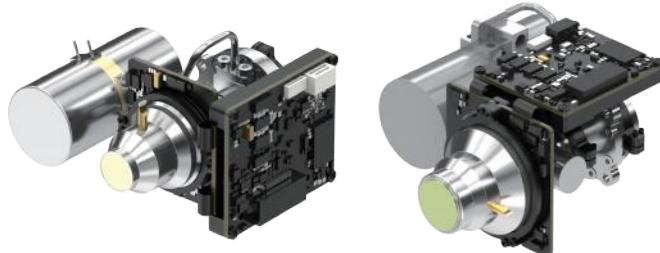


Environmental
Monitoring



Long-range
Monitoring

The EYAS GH series MWIR HOT cooled infrared AD module consists of a MWIR HOT cooled infrared detector integrated with an analog-to-digital (AD) board. The module converts the analog output signals from the cooled detector into digital video streams, while also providing the drive power and control timing signals. The module can help OEM quickly evaluate and validate infrared detectors, streamlining the system integration process and significantly accelerating development pipelines. Compared to conventional MWIR cooled AD modules, HOT (FPA Operating temperature up to 150K) modules boast optimized Size, Weight, and Power (SWaP) and reliability, empowering lightweight applications that require high stability.



Analog-to-Digital Conversion, Accelerated Development

- Based on high-performance High Operating Temperature (HOT) MWIR cooled infrared detectors, combined with AD circuit for analog-to-digital conversion
- Supports multiple array specifications
- Integrated design with dimensions consistent with the detector



HOT Technology, SWaP Optimization

- Focal plane operating temperature raised to 150K
- Minimum size≤72×87×51mm, minimum power consumption ≤4.5W, cooling time ≤3 minutes



Outstanding Performance, Easy Integration

- Cameralink interface outputs 16-bit raw data, with serial port control
- Continuously adjustable high frame rate, capable of capturing high-speed moving targets



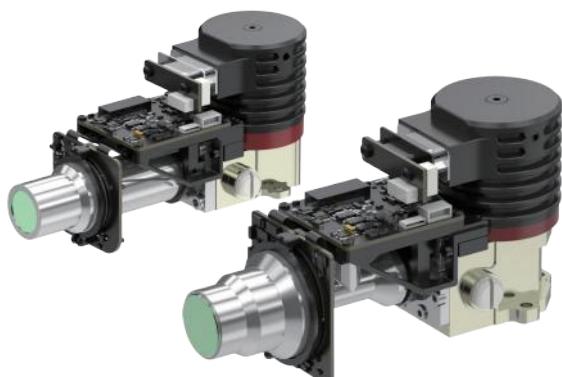
Model	EYAS G615HMG	EYAS G1010HMG	EYAS G1210HMF
Resolution	640×512	1024×768	1280×1024
Pixel Size	15 μ m	10 μ m	
Spectral Response		3.7 μ m±0.2 μ m ~ 4.8 μ m±0.2 μ m	
IR Detector NETD(23°C)	20mK(F4)	20mK(F2) 25mK(F4)	
Frame Rate	1~120Hz,adjustable	1~100Hz,adjustable(50Hz by default)	
Working Mode		Snapshot; ITR/IWR Modes; Anti-blooming; Windows Mode	
Standard External Interface		60pin: 37201-SM060-032W1R01 ; 5pin: A1257WR-S-5P-LCP	
Digital Video	16 bit CameraLink (CameraLink Base mode)		16 bit CameraLink (CameraLink DualBase mode)
External Sync		CC1: External frame synchronous	
Communication		CameraLink UART(Default)/ RS232(customizable) Baud rate: 9600bps(Default)	
Power Supply		AD Board: 5V ; Cryocooler: 12V	
Steady Power (23°C)	≤4.5W		≤6W
Cooling Time(23°C)		≤3min	
Size(mm)	72×87×51		102×87×57
Weight(g)	≤250		≤390
Operating Temperature		-40°C ~ +71°C	

EYAS GL Series

LWIR Cooled Infrared AD Module



The EYAS GL series LWIR cooled AD module consists of MWIR a cooled infrared detector integrated with an analog-to-digital (AD) conversion board. The module converts the analog output signals from the cooled detectors into digital video streams, while also providing the drive power and control timing signals. It can help OEM quickly evaluate and validate infrared detectors, streamlining the system integration process and significantly accelerating development pipelines. Compared with mid-wave AD modules, long-wave infrared offers stronger penetration and anti-interference capabilities, making it suitable for high-reliability applications under complex conditions.



Analog-to-Digital Conversion, Accelerated Development

- Based on high-performance long-wave cooled infrared detectors, integrated with AD circuit for analog-to-digital conversion
- Integrated design with dimensions consistent with the detector



Long-Wave Detection with Strong Anti-Interference Capability



- Strong penetration through dust and sand, suitable for complex environments
- Not affected by reflections from the sun and sea surfaces
- Capable of detecting low-temperature objects



Excellent Performance, Easy Integration



- Cameralink interface outputs 16-bit raw data, with serial port control
- Continuously adjustable high frame rate, capable of capturing high-speed moving targets



Model	EYAS G615LA	EYAS G1210LC
Resolution	640×512	1280×1024
Pixel Size	15 μ m	10 μ m
Spectral Response	7.7 μ m \pm 0.2 μ m ~ 9.4 μ m \pm 0.3 μ m	
Typical NETD(23°C)	25mK(F2)	35mK(F2)
Frame Rate	1~ 200Hz, adjustable	1~100Hz, adjustable
Working Mode	Snapshot Mode ITR, ITR+Interlace Anti-halo Function Windows Mode	Snapshot ITR Mode Anti-blooming Windows Mode
Standard External Interface	60pin: 37201-SM060-032W1R01 5pin: A1257WR-S-5P-LCP	
Digital Video	16 bit CameraLink(CameraLink Base mode)	16 bit CameraLink(CameraLink DualBase mode)
External Sync	CC1: External frame synchronous	
Communication	CameraLink UART(Default) / RS232(customizable) Baud rate: 9600bps(Default)	
Power Supply	AD Board: 5V Cryocooler: 24V	
Steady Power(23°C)	≤12W	≤13W
Cooling Time(23°C)	≤7min30s	≤6min
Size(mm)	145×60×78	148×59×82
Weight(g)	≤590	≤680
Operating Temperature	-40°C ~ +71°C	

COIN Series

Uncooled Infrared Camera Core

The COIN series uncooled infrared camera core features a self-developed wafer-level packaged detector combined with advanced image processing algorithms, offering clear imaging, low power consumption, and a compact design. These advantages make it highly adaptable to diverse applications such as security surveillance, intelligent driving, industrial inspection, and AIoT terminals. The full product line supports mainstream communication protocols and industry-standard interfaces. It includes both imaging and thermography versions, with resolution options of 384×288, 640×512, and 1280×1024, meeting different infrared sensing requirements.



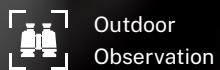
Industrial
Vision



Firefighting
and Rescue



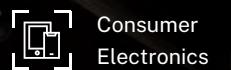
Security
Surveillance



Outdoor
Observation



Machine
Vision



Consumer
Electronics



Comprehensive Features, Cost-Effective

- Developed based on wafer-level packaged detectors
- Integrated with multiple advanced image processing algorithms to enhance image quality
- Optional temperature measurement function with accuracy up to $\pm 2^\circ\text{C}$ or $\pm 2\%$



Flexible Configuration, Easy Integration

- Multiple optical lens options available to meet various application needs
- Supports multiple output modes including USB 2.0, DVP, and LVDS
- Outputs RAW/YUV image data, with serial port control





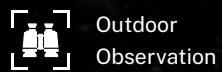
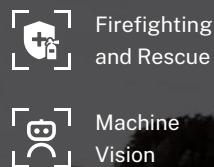
Model	COIN417G3/R	COIN612G2/R	COIN1212/R
Resolution	384×288	640×512	1280×1024
Pixel Size	17 μ m	12 μ m	
Spectral Response		8~14 μ m	
Typical NETD	\leq 30mK/F1.0/25°C	\leq 30mK/F1.0/25°C	\leq 40mK/F1.0/25°C
Frame Rate	25/30/50Hz	Imaging: 25/30/50Hz Thermography: 25/30Hz	25/30Hz
Analog Video	PAL/NTSC		/
Digital Video Interface	DVP8 / DVP16 / USB2.0 / BT.656 / LVDS		DVP16/BT.1120
Operating Voltage	4.5V-5.5V		
Typical Power Consumption	0.55W		0.95W
Operating Temperature		-40°C~70°C	
Temperature Measurement Range (Thermography Version)		-20°C~+150°C, 0~+550°C, Customizable	
Temperature Measurement Accuracy(Thermography Version)	Greater of \pm 2°C / \pm 2%	\leq 25mm Lens: \pm 2°C or \pm 2% (whichever is greater) 35mm Lens: \pm 5°C or \pm 5% (whichever is greater)	Greater of \pm 2°C/ \pm 2%
Bare Core Size(mm)	25.4×25.4×16.6	25.4×25.4×15.8	25.4×25.4×19.3
Weight(Bare core)		14 \pm 2g	
Optical Lens	Fixed Focus Athermal: Imaging: 4.8mm/7mm/9.1mm/ 13mm/19mm/25mm/35mm Thermography: 4.8mm/7mm/ 9.1mm/13mm/19mm/25mm	Fixed Focus Athermal: Imaging: 4.8mm/7mm/9.1mm/13mm/ 19mm/25mm/35mm/50mm/70mm Thermography: 4.8mm/7mm/9.1mm/ 13mm/19mm/25m/35mm	Fixed Focus Athermal: Imaging: 14mm/19mm/ 24mm/35mm/50mm/100mm Thermography: 14mm/19mm/24mm/35mm
Extension Components	USB3.0 / USB2.0 / VPC / USB2.0&VPC		USB3.0



iSE Series

Shutterless Uncooled Infrared Camera Core

Based on our self-developed high-performance ceramic detector, the iSE series shutterless uncooled infrared camera core eliminates the need for shutter calibration, effectively resolving issues of stuttering and noise during observation. To meet diverse user needs, the iSE series camera core supports shutterless algorithms, picture-in-picture, customizable OSD, sleep mode, electronic zoom, and other features. It also offers a variety of video interfaces and lenses for easy integration. The overall size of the powerful infrared camera core is less than 25.4×25.4×22.7mm, with a bare module weight under 26g, delivering exceptional performance even under limited space and strict load conditions.



High Reliability, High Added Value



- The iSE series infrared camera cores are developed based on ceramic-packaged detectors, offering good value.
- Shutterless design ensures no stuttering and silent operation
- Supports super-resolution algorithms, picture-in-picture, customizable OSD, direct display driving, external button control, and other extended functions

Rich Configuration, Flexible Integration



- Multiple optical lens options to meet diverse application requirements
- Supports a wide range of extension components and functional interfaces, facilitating easy secondary development for customers



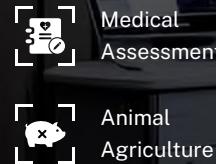


Model	iSE412	iSE612	iSE1212		
Resolution	384×288	640×512	1280×1024		
Pixel Size		12 μ m			
Spectral Response		8 μ m ~14 μ m			
Typical NETD		\leq 30mK			
Digital Frame Rate	50Hz		25/30/50Hz		
Digital Video	YUV420 / YUV422 / RGB888 / RAW				
shutterless		Supported			
Digital Zoom		1x/2x/4x/8x			
Digital Video Interface	DVP8 / BT.656 / DVP16 / BT.1120 / USB2.0 / MIPI-DSI-4LANE		DVP16 / BT.1120 / USB3.0 / MIPI-DSI-4LANE		
Extension Components	USB2.0 / SDI / HDMI / GIGE / Cameralink / VPC / MIPI-CSI-2LANE		USB3.0 / SDI / HDMI / GIGE / Cameralink / VPC / MIPI-CSI-2LANE		
Supply Voltage		2.7V~5.3V			
Typical Power Consumption	0.8W@50Hz@23 \pm 3°C		1.2W@50Hz@23 \pm 3°C		
Bare Core Size(mm)	25.4×25.4×22.7	φ36×24.3	25.4×25.4×22.7		
Weight(Bare core)	26 \pm 1.5g	28 \pm 1.5g	26 \pm 1.5g		
Bare Core Size(mm)	38×39×28	68×69×30.2			
Optical Lens	Fixed Focus Athermal: 4.9mm/9.1mm/ 13.4mm/19mm	Fixed Focus Athermal: 25mm/35mm	Fixed Focus Athermal: 25mm/35mm/50mm/ 70mm/100mm Manual Focus: 25mm/35mm/50mm Motorized Lens: 75mm/100mm/150mm Continuous Zoom: 15~75mm/20~100mm/ 28~90mm/30~150mm/ 30~180mm/25~225mm	Fixed Focus Athermal: 14mm/19mm/ 25mm/35mm	Fixed Focus Athermal: 50mm/100mm Motorized Lens: 75mm/100mm/150mm Continuous Zoom: 15~100mm/25~75mm/ 28~90mm/30~180mm/ 25~225mm/30~300mm
Impact	Half Sine Wave, 30g/11ms, Impact Direction X Axis, 3 times	1500g@0.4ms	Half Sine Wave, 30g/11ms, Impact Direction X Axis, 3 times	1500g@0.4ms	Half Sine Wave, 30g/11ms, Impact Direction X Axis, 3 times
Operating Temperature			-40°C ~ +70°C		
Storage Temperature			-45°C ~ +85°C		

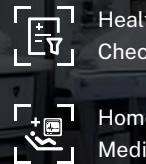
iHA417W

Medical-use Infrared Camera Core

iHA417W is equipped with a 384×288/17μm uncooled infrared detector and an optical lens, specially designed for non-contact biological temperature measurement. It achieves high accuracy up to $\pm 0.5^{\circ}\text{C}$, clearly displaying the surface temperature distribution of the target biological body and detecting subtle temperature variations. The iHA417W offers advantages such as radiation-free, real-time responsive, and easy-to-integrate, making it a powerful tool from medical assessment to health care.



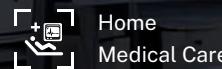
Medical Assessment



Health Checkup



Animal Agriculture



Home Medical Care



Designed for Biological Thermography

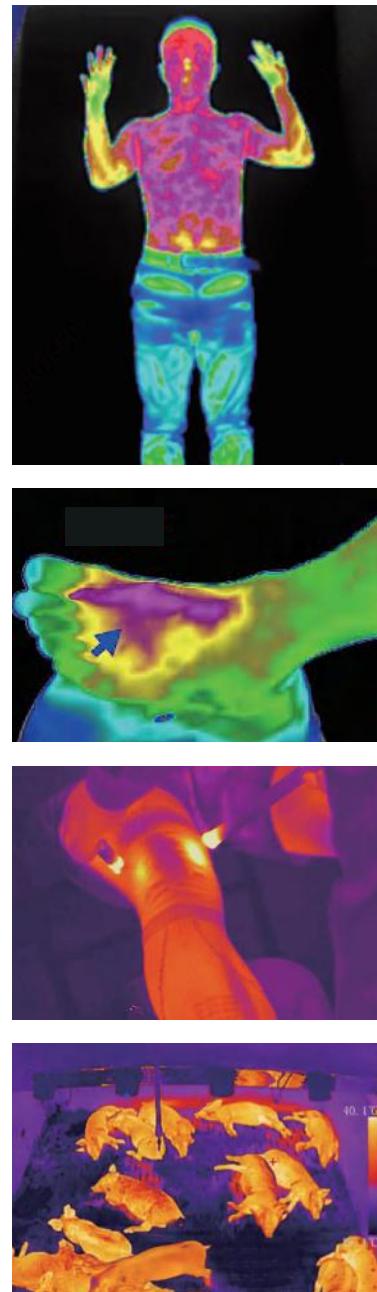
- Specifically engineered for non-contact biological temperature measurement
- Delivers high measurement accuracy up to $\pm 0.5^{\circ}\text{C}$



Compact & Lightweight — Easy to Integrate

- Ultra-compact size as small as 25.4×25.4×37.7mm (including lens), weighing only 38g
- Standard Type-C interface supports power supply, data transmission, and control in one
- SDKs available for Windows, Android, and Linux platforms, simplifying video stream parsing and grayscale-to-temperature conversion



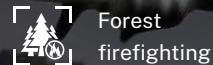


Model	iHA417W
Resolution	384×288
Pixel Size	17 μ m
Spectral Response	8~14 μ m
Typical NETD	< 50mK
Frame Rate	25Hz
Digital Video	RAW/YUV
Image Processing	NUC / 3DNR / DNS / DRC / EE / SFFC
Communication	USB2.0
Operating Voltage	5 \pm 0.5V
Typical Power Consumption	0.85W
Operating Temperature	-10°C ~ +50°C
Temperature Measurement Range	+15°C ~ +50°C
Temperature Measurement Accuracy	\pm 0.5°C (after 2-minute warm-up, ambient 23 \pm 3°C, target 32~42°C)
Measurement Distance	a. 0.5m, depth of field: 0.4m~0.6m; b. 0.8m and 2m, the temperature measurement distance can be switched by the host computer or serial port command, depth of field: 0.8m~ ∞ m
Size(mm)	25.4×25.4×37.7 (with 7mm lens) 25.4×25.4×37.7 (with 9.1mm lens)
Weight(g)	38.5 \pm 3 (with 7mm lens) 38 \pm 3 (with 9.1mm lens)
Lens Options	Fixed Focus Athermal: 7mm/9.1mm

iTL612PRO

Ultra-miniature Infrared Camera Core

iTL612PRO Series integrates a 640×512/12μm wafer-level infrared detector, paired with a high-performance signal processing circuit and advanced image processing algorithms for exceptional imaging quality. The series offers both imaging and thermography versions, supporting real-time temperature monitoring. With a compact structure and ultra-lightweight design, and equipped with multiple SDK solutions, it is ideally suited for application scenarios with stringent requirements on thermal module load capacity, system integration, and iterative development.



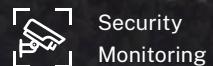
Forest
firefighting



Power
Maintenance



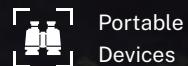
Photovoltaic
Inspection



Security
Monitoring



Wearable
Devices

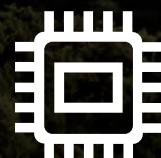


Portable
Devices



Ultra-Lightweight, Seamless Integration

- Dimensions: only 17.3 × 17.3 × 23.4 mm (with 9.1 mm lens)
- Weight as low as 13.7 g, power consumption down to 0.5W, perfect for compact platforms
- Optional temperature measurement function with accuracy up to ±2°C



Effortless Development, Worry-Free Integration

- Multiple optical lens options available to suit various application scenarios
- Supports a wide range of image output interfaces: DVP8 / LVDS / MIPI / USB2.0 / BT.656
- Outputs in RAW / YUV / Matrix-TEMP formats with convenient serial port control



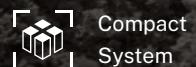


Model	iTL612PRO	iTL612R PRO
Resolution		640×512
Pixel Size		12μm
Spectral Response		8μm ~14μm
Typical NETD		≤40mK
Digital Frame Rate		25/30/50Hz
Image Algorithm		NUC / 3DNR / DNS / DRC / EE
Communication Interface		RS232-TTL / USB2.0
Digital Video Interface		DVP8 / LVDS / MIPI / USB2.0 / BT.656
Supply Voltage		4.2-5.5V
Typical Power Consumption		0.5W
Operating Temperature		-10°C~+50°C
Temperature Measurement Range	\	-20°C~150°C, 0°C~550°C; Support Customization and Expansion
Temperature Measurement Accuracy	\	Fixed focus 9.1/13mm: greater of ±2°C or ±2%, @23°C±3°C, 5m; Fixed focus 25/45mm: greater of ±2°C or ±2%, @23°C±3°C, 10m
Partial Temperature Measurement	\	Support output maximum, minimum and average value of temperature measurement areas
SDK	\	Android/Windows/Linux SDK; Achieve Video Stream Analysis
Size(with lens)		17.3×17.3×23.4 (9.1mm lens) 17.3×17.3×30.2 (13mm lens) 17.3×17.3×38 (25mm lens) 17.3×17.3×54 (45mm lens)
Weight (with Lens)		13.7±0.5g (9.1mm lens) 20±0.5g (13mm lens) 27.3±0.5g (25mm lens) 51±0.5g (45mm lens)
Optical Lens	Fixed Focus Athermal: 9.1/13/25/45mm	Fixed Focus Athermal: 9.1/13/25/45mm

MICO Series

Ultra-compact Infrared Camera Core

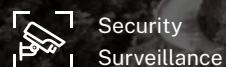
The MICO series ultra-compact infrared camera core is primarily composed of a wafer-level infrared detector, a dedicated image processing board, and structural components. The camera core transmits analog video or digital video to the back-end platform, significantly shortening the integration and development cycle. It is designed to meet diverse application requirements with ease.



Compact System



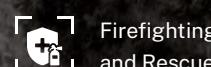
Industrial Vision



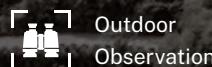
Security Surveillance



Consumer Electronics



Firefighting and Rescue



Outdoor Observation



Machine Vision



Cost-Effective, Ultra-Miniature Integration

- WLP + dedicated lens and ASIC chip enable a smaller footprint and more economical solution
- Dimensions: only 22.2 × 22.2 mm (excluding lens), weight as low as 16g, and power consumption only 550mW



Simple Development, Fast Integration

- Native analog or digital video output, supporting CVBS/USB/MIPI, reducing development complexity
- Modular structure for easy integration





Model	MIC0212	MIC0412	MIC0612
Resolution	256×192	384×288	640×512
Pixel Size		12 μ m	
NETD		\leq 30mK/F1.0/25°C	
Spectral Response		8~14 μ m	
Focus/F#	10mm/F1.0-FF		4.8/9.1/13mm
Analog Video		PAL(default) / NTSC	
Digital Video		USB / MIPI	
Image Algorithm		NUC / 3D / 2D / DRC / EE / SFFC	
Standard External Interface		3PIN (A1251-WV-S-3P) / 9PIN (A1251-WV-S-9P) / 26PIN (DF56C-26S-0.3V-51)	
Video Interface		CVBS (3PIN) / USB (9PIN) / MIPI (26PIN)	
Supply Voltage		DC:5V~24V	
Steady Power Consumption	\leq 550mW@5V, 23 \pm 3°C		\leq 680mW@5V, 23 \pm 3°C
Size(mm)	22.2×22.2×28.4		22.2×22.2×27.2
Weight(g)	16 \pm 2		30.3 \pm 2
Operating Temperature		-40°C ~ +70°C	
Storage Temperature		-45°C ~ +85°C	
Impact		Half Sine Wave, 40g/11ms, 3 Axis, 6 Direction	
Certification		RoHS2.0/Reach	





GAVIN GCM series

MWIR Cooled Infrared Camera Core



Aerospace



Border and
Coastal Defense



Environmental
Monitoring



Long-range
Monitoring

Equipped with a self-developed MCT detector, the GAVIN GCM series MWIR cooled infrared camera core supports both standard mid-wave (3.7–4.8 μ m) and broadband mid-wave (cut-on \leq 2.5 μ m, cut-off \geq 4.8 μ m) operating ranges, delivering enhanced infrared detection capability and greater application adaptability. Equipped with advanced AI-powered image processing algorithms, the GAVIN GCM series offers a comprehensive range of specifications with high consistency and stable mass supply, meeting the demands of large-scale industrial applications. Even in complete darkness or harsh weather conditions, it delivers clear thermal images and accurate detection of both distant threats and close-range details. Ideal for security, surveillance, and monitoring scenarios, the GAVIN GCM series infrared camera core provides reliable technological support across diverse environments.



Powerful Performance, Outstanding Image Quality

- Developed with high-performance HgCdTe (MCT) cooled mid-wave infrared detectors, meeting long-range detection requirements
- Enhanced imaging clarity through combined algorithms such as DRC, 2D/3D noise reduction, and EE edge enhancement for sharper imaging
- Resolution options ranging from 640×512 up to 1280×1024 for versatile and high-precision applications



Rich Interfaces, Easy Integration

- Supports a variety of extension components for convenient integration
- Multiple video interfaces including Cameralink, USB3.0, GigE, HDMI, SDI, MIPI, and fiber optic
- Outputs RAW and YUV image data formats



Model	GAVIN GC615WMA	GAVIN GC615MA	GAVIN GC615MB	GAVIN GC625MC	GAVIN GC1210MA	GAVIN GC1212MA
Sensitive Material	MCT					
Resolution	640x512				1280x1024	
Pixel Size	15μm		25μm		10μm	12μm
Spectral Response	Cut-on: ≤2.5μm, Cut-off: ≥4.8μm (50% Response)	3.7μm±0.2μm~4.8μm±0.2μm				
IR Detector NETD(23°C)	16mK(F2) 18mK(F4)		20mK(F4) 25mK(F5.5)	10mK(F2)	20mK(F2/F4)	18mK(F2/F4)
Frame Rate	50/100Hz				50Hz	
Image Algorithm	DRC, 2D/3D Image Noise Reduction, EE					
Analog Video	PAL/NTSC					/
Digital Video	Standard:DVP/LVDS/USB2.0@50Hz Option:Cameralink / USB3.0 / GigE / SDI / HDMI / MIPI / Single-mode Optical Fiber / Multi-mode Optical Fiber				Standard: DVP Option: Cameralink / USB3.0 / GigE / SDI / HDMI / MIPI / Single-mode Optical Fiber / Multi-mode Optical Fiber	
Communication	Standard: USB2.0/LV-TTL			Option: RS422/CAN/USB3.0/GigE		
Steady Power Consumption(23°C)	≤10W			≤18W	≤14W	≤11W
Cooling Time(23°C)	≤8min			≤9min		≤8min
Operating Temperature	-40°C~ +71°C					
Size(mm)	142×58.5×80		120×84×60	148×59×81	145×61×82	149×58.5×80
Weight(g)	≤680		≤440	≤730	≤680	
Optical Lens	55mm/F2	Fixed focus: 25mm/F2 Continuous zoom: 30~240mm/F4 15~300mm/F4 45~450mm/F4 35~690mm/F4 32~730mm/F4	Fixed focus: 25mm/F2 Continuous zoom: 15~300mm/F4 23~450mm/F4	40mm/F2	Fixed focus: 15mm/F2 Continuous zoom: 15~300mm/F4 30~500mm/F4	Fixed focus: 19mm/F2 Continuous zoom: 60~360mm/F4 37.5~750mm/F4 100~1100mm/F4



GAVIN GCH Series

HOT Cooled Infrared Camera Core



Aerospace



Border and
Coastal Defense



Environmental
Monitoring



Long-range
Monitoring

The GAVIN GCH series MWIR cooled camera core integrate high-operating-temperature (HOT) an infrared detector with next-generation image processing algorithms. While consistently delivering high-quality images, the series achieves outstanding SWaP optimization—offering a compact, lightweight, and low-power solution. Designed for ease of development, the core supports multiple digital video interfaces, which is ideal for miniaturized systems which have strict demand on size, energy efficiency, and long-range detection.



HOT-enabled: Smaller and Clearer

- Developed with high-performance high-operating-temperature (HOT) mid-wave cooled infrared detectors, creating a compact long-distance detection platform
- Integrated next-generation image algorithms including DRC, 2D/3D noise reduction, and EE edge enhancement for clearer imaging
- SWaP optimized with dimensions as small as 71×55×84mm, lightweight at 350g, and low power consumption down to 7W

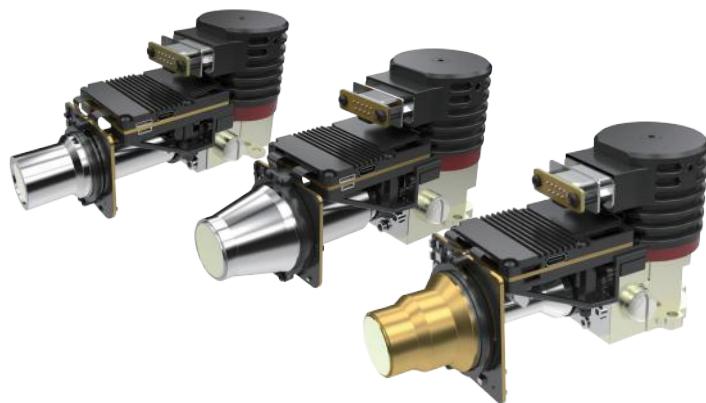


Rich Interfaces, Easy Integration

- Supports Cameralink, USB3.0, GigE, HDMI, SDI, MIPI, and fiber optic image interfaces
- Outputs RAW and YUV image data



Model	GAVIN GC615HMG	GAVIN GC1010HMG	GAVIN GC1207HMG	GAVIN GC1210HMF		
Sensitive Material	T2SL					
Resolution	640x512	1024x768	1280x1024			
Pixel Size	15 μ m	10 μ m	7.5 μ m	10 μ m		
Spectral Response	$3.7\mu\text{m}\pm0.2\mu\text{m}$ ~ $4.8\mu\text{m}\pm0.2\mu\text{m}$					
IR Detector NETD(23°C)	20mK(F4)	20mK(F2) 25mK(F4)	35mK(F4)	20mK(F2) 25mK(F4)		
Frame Rate	50Hz(F4) / 30Hz(F5.5)	50Hz		50Hz(F2) / 30Hz(F4)		
Image Algorithm	DRC, 2D/3D Image Noise Reduction, EE					
Analog Video	PAL / NTSC		/			
Digital Video	Standard: DVP / LVDS / USB2.0 Option: Cameralink / USB3.0 / GigE / SDI / HDMI / MIPI / Single-mode Optical Fiber / Multi-mode Optical Fiber		Standard: DVP Option: Cameralink / USB3.0 / GigE / SDI / HDMI / MIPI / Single-mode Optical Fiber / Multi-mode Optical Fiber			
Communication	Standard: USB2.0/LV-TTL ; Option: RS422/CAN/USB3.0/GigE					
Steady Power Consumption(23°C)	$\leq 3.5\text{min}$	$\leq 4\text{min}$				
Cooling Time(23°C)	$\leq 7\text{W}$	$\leq 8\text{W}$				
Operating Temperature	$-40\text{--}71^\circ\text{C}$					
Size(mm)	71x55x84	87x94x54.5	71x55x84	101x101x54		
Weight(g)	≤ 350	≤ 460	≤ 360	≤ 570		
Optical Lens	Fixed focus: 25mm/F2 Continuous zoom: 18~275mm/F5.5 90~1100mm/F5.5 15~300mm/F4 23~450mm/F4	Fixed focus: 25mm/F2	Fixed focus: 25mm/F2 Continuous zoom: 15~300mm/F4 23~450mm/F4	Fixed focus: 15mm/F2 Continuous zoom: 15~300mm/F4 30~500mm/F4		



GAVIN GCL Series

LWIR Cooled Infrared Camera Core



Aerospace



Border and
Coastal Defense



Environmental
Monitoring



Long-range
Monitoring

The GAVIN GCL series LWIR cooled infrared camera core integrates a Type-II Superlattice (T2SL) long-wave infrared (LWIR) cooled detector. It balances high sensitivity with wide field-of-view performance to meet demanding surveillance needs. Enhanced by advanced image processing algorithms, the GAVIN GCL infrared camera core delivers stable and sharp imaging even in harsh environments such as sandstorms, strong sunlight glare, or low-contrast scenes, making it ideal for long-range target detection and recognition. The series supports multiple mainstream video interfaces, ensuring ease of development and flexible system integration, which is an optimal solution for high-performance LWIR imaging applications.



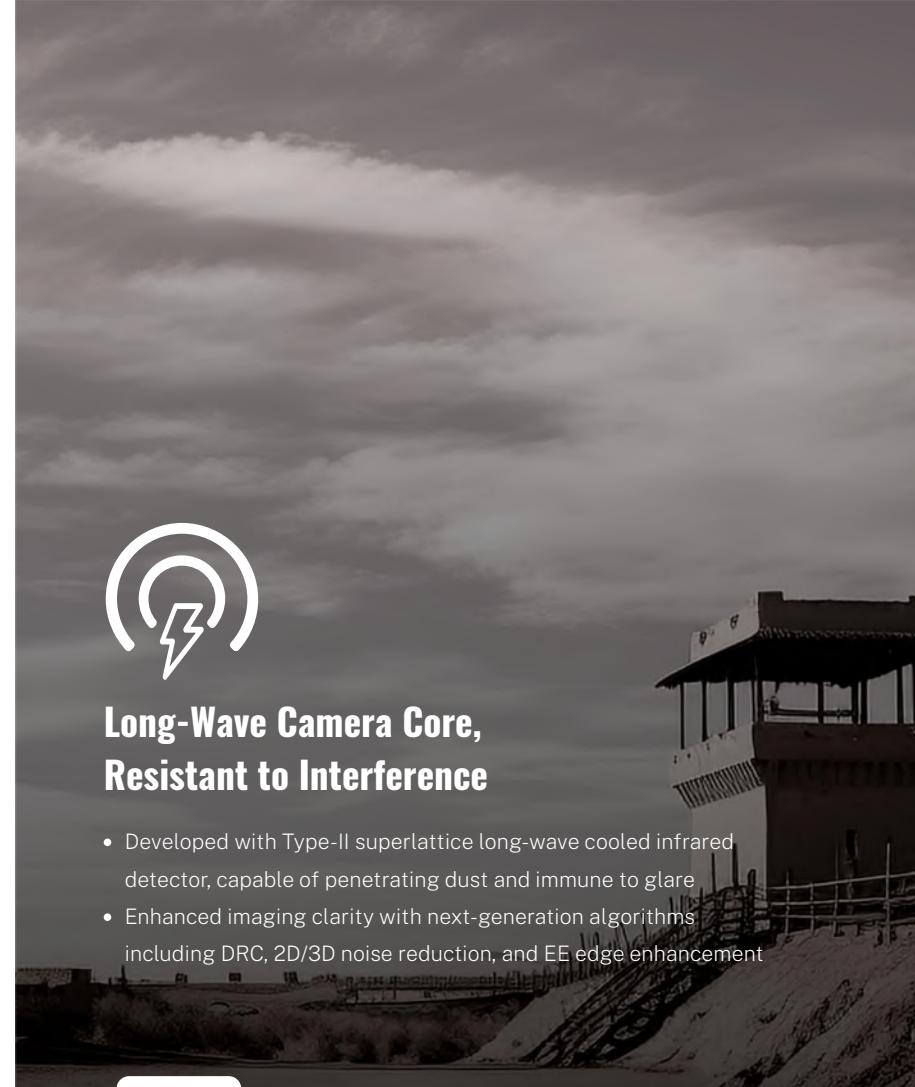
Long-Wave Camera Core, Resistant to Interference

- Developed with Type-II superlattice long-wave cooled infrared detector, capable of penetrating dust and immune to glare
- Enhanced imaging clarity with next-generation algorithms including DRC, 2D/3D noise reduction, and EE edge enhancement



Cost-Effective, Ultra-Miniature Integration

- Cameralink / USB3.0 / GigE / HDMI / SDI / MIPI / Fiber optic image interfaces
- RAW / YUV image data output





Model	GAVIN GC615LA	GAVIN GC625LC	GAVIN GC1210LC
Sensitive Material	T2SL		
Resolution	640x512		1280x1024
Pixel Size	15μm	25μm	10μm
Spectral Response	7.7μm±0.2μm-9.4μm±0.3μm		
IR Detector NETD(23°C)	25mK (F2)	20mK (F2)	35mK (F2)
Frame Rate	50/100/200Hz	100/200Hz	50Hz
Image Algorithm	DRC, 2D/3D Image Noise Reduction, EE Enhancement		
Digital Video	Standard: DVP Option: Camerlink / USB3.0 / GigE / SDI / HDMI / MIPI / Single-mode Optical Fiber / Multi-mode Optical Fiber		
Communication	Standard: USB2.0/LV-TTL; Option: RS422/CAN/USB3.0/GigE		
Steady Power Consumption(23°C)	11W	18W	15W
Cooling Time(23°C)	8min	9min	8min
Operating Temperature	-40°C~+71°C		
Size(mm)	145×58.5×77	148×59×81	148×59×82
Weight(g)	≤650	≤730	≤730
Optical Lens	Fixed focus: 25mm/F2 Continuous zoom: 30~300mm/F2	55mm/F2	Fixed focus: 45mm/F2 Continuous zoom: 30~300mm/F2