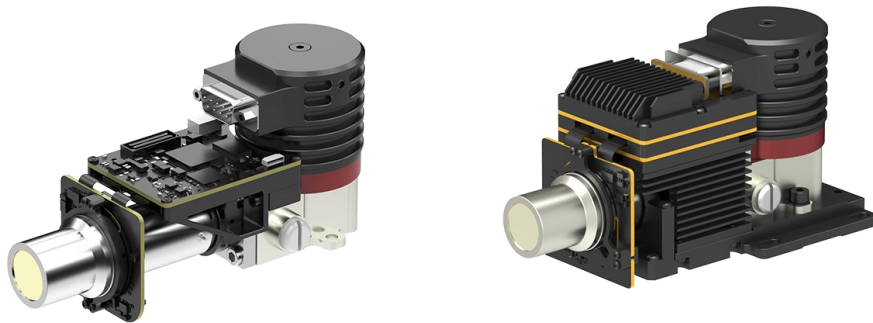


# Cooled Thermal Modules

## STEYAS / STGAVIN LWIR Series



**2022 V1**

For customized projects please Contact us:

[info@simtrum.com](mailto:info@simtrum.com)

## STEYAS Series Cooled Infrared AD Module

Equipped with a high-performance signal processing circuit, STEYAS series cooled AD module is applicable to all MCT&T2SL cooled infrared offered by SIMTRUM. The standard cameralink interface could output 16 bits of raw data. It is easy for OEM customers for rapid secondary development, which could shorten the development period of modules and complete products based on cooled infrared detectors.

### ✓ Adopt high performance cooled infrared detector

- High sensitivity with best NETD<9mK

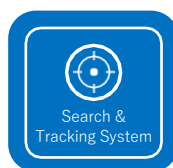
### ✓ Easy to develop & integrate

- Cameralink interface output 16bit raw data, serial port control.
- Integrated structure and dimensions are consistent with a detector.
- 5V single-supply.

### ✓ Designed for specific applications

- Output frame frequency is adjustable @ 1~200Hz..

## Applications



## STEYAS615L 640X512 Cooled AD Module

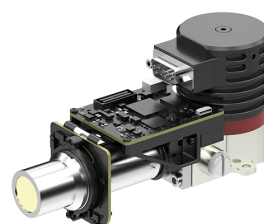
STEYAS series cooled AD modules have the pre-amplifier function to convert the analog signal from cooled IR detectors into a digital video stream output. It is available with different resolution formats and different wavebands. STEYAS615L is a member of STEYAS family with a 640x512/15 $\mu$ m LWIR cooled detector and RS058 cryocooler integrated.

### Features

- High thermal sensitivity with typical NETD  $\leq 18\text{mk}$
- Cameralink interface output 16bit raw data, serial port control
- The integrated structure that has consistent dimension with the detector
- 5V single-supply
- Output frame frequency is adjustable at 1~100Hz

### Application

- Hand-Held Reconnaissance System
- Remote Monitoring System
- Search & Tracking System
- Flight Vision Enhancement System (EVS)
- Multi-Sensor Payload
- Gas Detection



## Specifications

Model	STEYAS615L
<b>IR Detector Performance</b>	
Resolution	640x512
Pixel Pitch	15 $\mu\text{m}$
Cryocooler	RS058
Spectral Range	7.7 $\mu\text{m}$ ~9.5 $\mu\text{m}$ LW
Cooling Time (25°C)	$\leq 5.5\text{min}$
Optimal NETD (20°C)	$\leq 25\text{mK}$
<b>Working Mode</b>	
Frame Rate	1~160Hz Adjustable
Working Mode	Snapshot; ITR & Interlace Binning Integration Mode; Windows Mode; Anti-blooming
<b>Electrical Specification</b>	
Standard External Interface	QSH 60 pin
Digital Video	Cameralink: Output 16bit Raw Data
External Sync	CC1: INT/Frame External Sync; CC2: MC External Sync
Communication	Cameralink Serial Port: TFG+/-, TC+/-; 9600bps
Power Supply	1 Channel Imaging Panel: 5V 1 Channel Cryocooler: 24V
Stable Power Consumption	9W
Dimension (mm)	148x58.5x71
Weight	$\leq 680\text{g}$
Working Temperature	-40°C ~ +60°C
Vibration Magnitude	Vibration: GJB Vehicle-mounted High Speed Transport Shock: Half-sine Wave, 40g 11 ms, 3 Axis 6 Direction 3 Times Each

## STGAVIN Series Cooled Thermal Module

STGAVIN series cooled thermal module utilizes GST MCT & T2SL cooled IR detectors and integrates various image processing algorithms to output clear infrared images in total darkness or bad weather conditions. It can detect and recognize risks and threats at a long distance while presenting more target details at a short distance.

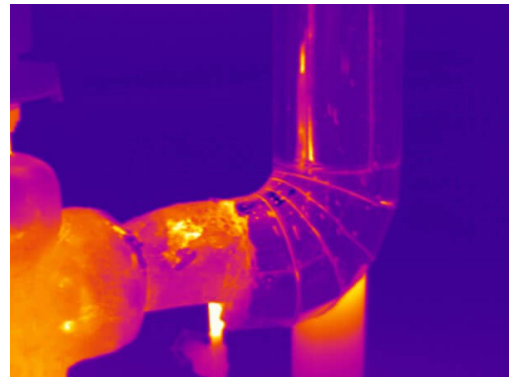
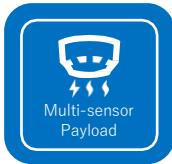
### ✓ Meet the needs of long-range detection

- High sensitivity with best NETD<9mK
- Long range detection, aircraft can be detected at 60km away;
- Wide field of view, resolution up to 1280x1024.

### ✓ Easy integration into the system

- DVP/Cameralink interface, raw/YUV image output.
- A variety of continuous optical zoom lenses are available.

## Applications



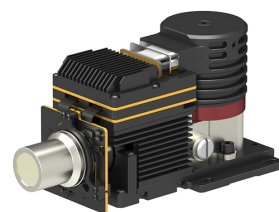
## STGAVIN615L 640X512 Cooled Thermal Module

STGAVIN series is the standard cooled infrared module offered by SIMTRUM. It is available with different resolution formats, different wavebands, and also different continuous optical lens options. STGAVIN615L is one of the STGAVIN series with a 640x512/15µm LWIR cooled detector and RS058 cryocooler inside.

Various image processing algorithms are already embedded in the STGAVIN615L electronics to output clear infrared images in total darkness or bad weather conditions. It can detect and recognize risks and threats at a long distance while presenting more target details at a short distance.

### Features

- Meet the needs of long-range detection
- High sensitivity
- Long-range detection
- Easy integration into the System
- DVP/Cameralink interface, RAW/YUV image output
- A Variety of continuous optical zoom lenses are available



## Specifications

Model	STGAVIN615L
<b>IR Detector Performance</b>	
Resolution	640x512
Pixel Pitch	15µm
Cryocooler	RS058
Spectral Range	7.7µm~9.5µm LW
Cooling Time(20°C)	≤7min
NETD (20°C)	≤25mK
<b>Image Processing</b>	
Frame Rate	50Hz/100Hz
Dimming Mode	Linear/Histogram/Mixed
Digital Zoom	×1/×2/×4
Image Direction	Horizontally/Vertically/Diagonally Flip
Image Algorithm	NUC/AGC/IDE
<b>Electrical Specification</b>	
Standard External Interface	J30JZ 25pin
Analog Video	PAL
Digital Video	16bit RAW/YUV: 16bit DVP/Cameralink Output
External Sync	Frame External Sync: RS422 Level
Communication	RS422, 115200bps
Power Supply	20~28VDC
Stable Power Consumption	14W
Dimension (mm)	155×67×80
Weight	≤900g
Operation Temperature	-40°C ~ +60°C
Vibration Magnitude	Vibration: GJB Vehicle-mounted High Speed Transport Shock: Half-sine Wave, 40g 11 ms, 3 Axis 6 Direction 3 Times Each
<b>Optical Lens</b>	
Optional Lens	Fixed Zoom: 25mm/F2