Cooled Thermal Modules

STEYAS / STGAVIN MWIR Series

2022 V1

For customized projects please Contact us:

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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

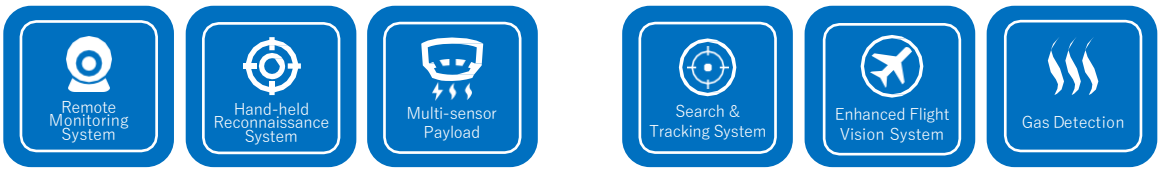
✓ Easy to develop & integrate

- 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



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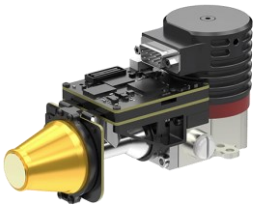
STEYAS1212 MegaPixels 1280x1024 Cooled AD Module

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. STEYAS1212 is a member of STEYAS family with a large array 1280x1024/12μm MWIR cooled detector and cryocooler integrated.

Features

- High thermal sensitivity with typical NETD ≤18mk
- 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	STGAVIN1212
IR Detector Performance	
Resolution	1280x1024
Pixel Pitch	12μm
Cryocooler	RS058F
Spectral Range	3.7μm ~ 4.8μm MW
Cooling Time (25°C)	≤6min
Optimal NETD (20°C)	≤20mK
Working Mode	
Frame Rate	1~100Hz adjustable
Working Mode	Snapshot; ITR/IWR Integration Mode; Windows Mode; Anti-blooming
Electrical Specification	
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)	149×58.5×71
Weight	≤680g
Working Temperature	-40°C to 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

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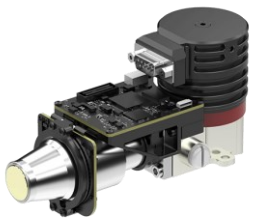
STEYAS615A 640x512 Cooled AD Module

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. STEYAS615A is a member of STEYAS family with a 640X512/15μm MWIR cooled detector and RS058 cryocooler integrated.

Features

- High thermal sensitivity with typical NETD ≤17mk
- 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 1~120Hz



Application

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

Specifications

Model	STEYAS615A
IR Detector Performance	
Resolution	640x512
Pixel Pitch	15μm
Cryocooler	RS058
Spectral Range	3.7μm ~ 4.8μm MW
Cooling Time (25°C)	≤6min
Optimal NETD (20°C)	≤17mK
Working Mode	
Frame Rate	1~120Hz Adjustable
Working Mode	Snapshot; ITR/IWR Integration Mode; Windows Mode; Anti-blooming
Electrical Specification	
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	7W
Dimension (mm)	147×58.5×71
Weight	≤680g
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

STEYAS615B 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. STEYAS615A is a member of STEYAS family with a 640X512/15μm MWIR infrared detector and RS046 cryocooler integrated.

Features

- High thermal sensitivity with typical NETD ≤18mk
- 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 1~50Hz

Application

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

Specifications

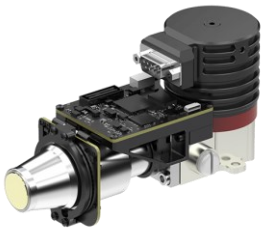
Model	STEYAS615B
IR Detector Performance	
Resolution	640x512
Pixel Pitch	15μm
Cryocooler	RS046
Spectral Range	3.7μm ~ 4.8μm MW
Cooling Time (25°C)	≤5.5min
Optimal NETD (20°C)	≤18mK
Working Mode	
Frame Rate	1~50Hz Adjustable
Working Mode	Snapshot; ITR/IWR Integration Mode; Windows Mode; Anti-blooming
Electrical Specification	
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: 12V
Stable Power Consumption	8W
Dimension (mm)	122×88×59
Weight	≤400g
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

STEYAS330 320x256 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. STEYAS is a member of STEYAS family with a 320x256/30μm MWIR detector and RS058 dewar cooler integrated.

Features

- High thermal sensitivity with typical NETD ≤18mk
- 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 1~50Hz



Application

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

Specifications

Model	STEYAS330
IR Detector Performance	
Resolution	320x256
Pixel Pitch	30μm
Cryocooler	RS058
Spectral Range	3.7μm ~ 4.8μm MW
Cooling Time (25°C)	≤6min
Optimal NETD (20°C)	≤9mK
Working Mode	
Frame Rate	1~200Hz Adjustable
Working Mode	Snapshot; ITR/IWR Integration Mode; Windows Mode; Anti-blooming
Electrical Specification	
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	7W
Dimension (mm)	142×58.5×71
Weight	≤680g
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

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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.

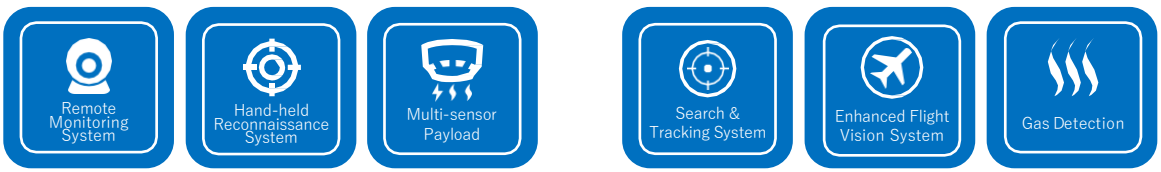
✓ Meet the needs of long-range detection

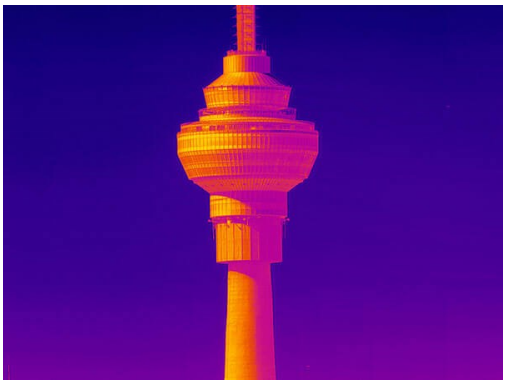
- High sensitivity with best NETD<9mK
- Long range detection, aircraft can be detected at 60km away;
- Wide field of view, resolution up to 1280x1024.

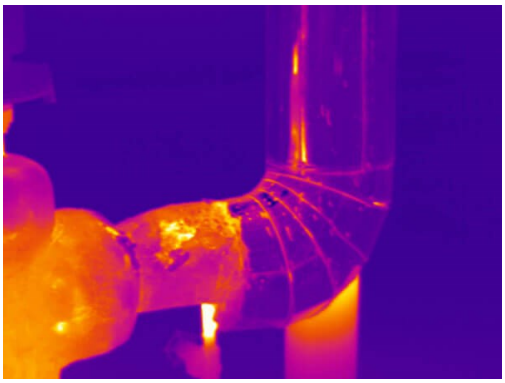
✓ Easy integration into the system

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

Applications







STGAVIN1212 MegaPixels 1280x1024 Cooled Thermal Module

STGAVIN series is the standard cooled infrared module offed by SIMTRUM. It is available with different resolution formats, different wavebands, and also different continuous optical lens options. STGAVIN1212 high-resolution thermal camera module is one of the STGAVIN series with a large array 1280x1024/12μm MWIR detector and detector dewar cooler (DDC) inside.

Various image processing algorithms are already embedded in the STGAVIN1212 electronics to output clear infrared images in the total darkness or bad weather conditions. It can detect and recognize risks and threats at long distance while present more target details at short distance.

Features

- 1280X1024 high definition for wider FOV and longer distance
- 12μmpixel size for better spatial resolution
- Good uniformity, effective pixel rate > 99.5%
- High sensitivity, NETD ≤20mK
- Support Cameralink interface, RAW/YUV image data output
- Various continuous zoom optical configurations are optional

Specifications

Model	STGAVIN1212
IR Detector Performance	
Resolution	1280x1024
Pixel Pitch	12μm
Cryocooler	RS058F
Spectral Range	3.7μm ~ 4.8μm MW
Cooling Time(20°C)	≤8min
NETD (20°C)	≤20mK
Image Processing	
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
Electrical Specification	
Standard External Interface	J30JZ 25pin; HDMI Special Output Interface
Analog Video	/
Digital Video	HDMI Output: YUVCameralink Output: 16bit RAW/YUV
External Sync	Frame External Sync: RS422 Level
Communication	RS422, 115200bps
Power Supply	24V±1V
Stable Power Consumption	16W
Dimension (mm)	165x86x107
Weight	≤1600g
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
Optical Lens	
Optional Lens	Continuous Zoom: 37.5~750mm/F4 Fixed Zoom: 19mm/F2; 40mm/F2; 240mm/F2

STGAVIN615A 640X512 Cooled Thermal Module

STGAVIN series is the standard cooled infrared module offed by SIMTRUM. It is available with different resolution formats, different wavebands, and also different continuous optical lens options. STGAVIN615A is one of the STGAVIN series with a 640x512/15μm MWIR cooled detector and RS058 cryocooler inside.

Various image processing algorithms are already embedded in the STGAVIN615A 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	STGAVIN615A
IR Detector Performance	
Resolution	640x512
Pixel Pitch	15μm
Cryocooler	RS058
Spectral Range	3.7μm ~ 4.8μm MW
Cooling Time(20°C)	≤7min
NETD (20°C)	≤15mK
Image Processing	
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
Electrical Specification	
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	12W
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
Optical Lens	
Optional Lens	Continuous Zoom 30~240mm/F4 15~300mm/F4 21~420mm/F4 35~690mm/F4

STGAVIN615B 640X512 Cooled Thermal Module

STGAVIN series is the standard cooled infrared module offed by SIMTRUM. It is available with different resolution formats, different wavebands, and also different continuous optical lens options. STGAVIN615B is one of the STGAVIN series with a 640x512/15μm MWIR cooled detector and RS046 cryocooler inside.

Various image processing algorithms are already embedded in the STGAVIN615B 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	STGAVIN615B
IR Detector Performance	
Resolution	640x512
Pixel Pitch	15μm
Cryocooler	RS046
Spectral Range	3.7μm ~ 4.8μm MW
Cooling Time(20°C)	≤7min
NETD (20°C)	≤20mK
Image Processing	
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
Electrical Specification	
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	12W
Dimension (mm)	125×92×67
Weight	≤650g
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
Optical Lens	
Optional Lens	Continuous Zoom 60~240mm/F4 15~300mm/F4 21~420mm/F4 35~690mm/F4

STGAVIN330 320X256 Cooled Thermal Module

STGAVIN series is the standard cooled infrared module offed by SIMTRUM. It is available with different resolution formats, different wavebands, and also different continuous optical lens options. STGAVIN330 is one of the STGAVIN series with a 320X256/30μm MWIR cooled detector and RS058 cryocooler inside.

Various image processing algorithms are already embedded in the STGAVIN330 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	STGAVIN330
IR Detector Performance	
Resolution	320x256
Pixel Pitch	30μm
Cryocooler	RS058
Spectral Range	3.7μm ~ 4.8μm MW
Cooling Time(20°C)	≤7min
NETD (20°C)	≤10mK
Image Processing	
Frame Rate	50Hz/100Hz/200Hz
Dimming Mode	Linear/Histogram/Mixed
Digital Zoom	×1/×2/×4
Image Direction	Horizontally/Vertically/Diagonally Flip
Image Algorithm	NUC/AGC/IDE
Electrical Specification	
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	12W
Dimension (mm)	150×67×80
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
Optical Lens	
Optional Lens	Continuous Zoom 30~240mm/F4 15~300mm/F4 21~420mm/F4 35~690mm/F4

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