



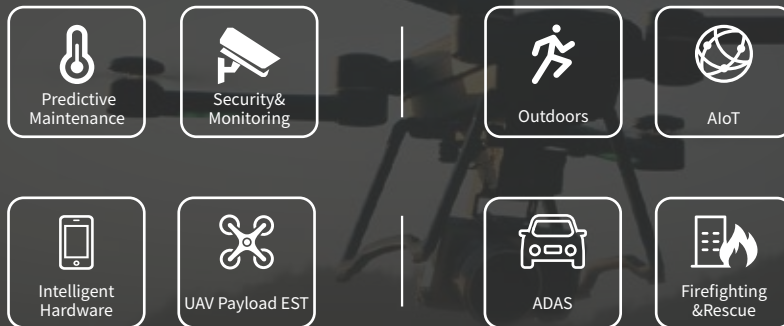
# COIN Series WLP+ASIC Uncooled Thermal Modules

A New Method of **Lightweight** IR Products



Coin612/R Coin417/R Coin412/R Coin212/R

COIN series uncooled thermal module integrates the wafer-level package detector produced by GST, ASIC chip for imaging processing, micro-motion electromagnetic threshold shutter and general optical interface. It is beneficial to OEM customers for secondary development and suitable for the development and integration of thermal imager in various applications.



## ✓ “Minimum size and weight”

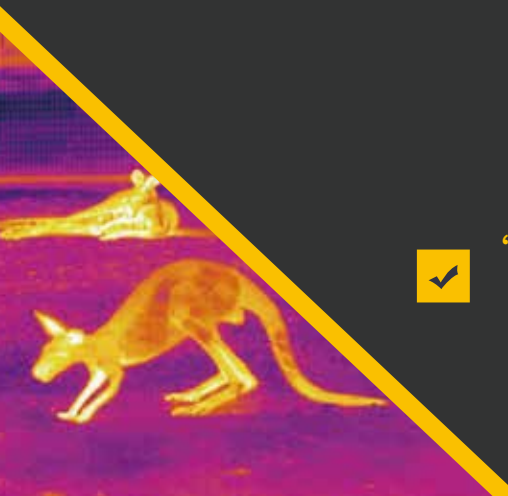
- Dimension 20mm\*20mm\*10.4mm, Weight <8g.

## ✓ “Sharp image presentation”

- NETD < 40mK;
- NUC, IDE, AGC intelligent algorithm.

## ✓ “Fast integration”

- DVP/LVDS interface, raw/YUV image data output, serial port control.



| Model                           | COIN212/R  | COIN412/R  | COIN612/R | COIN417/R                                |
|---------------------------------|--|--|-----------|--|
| <b>IR Detector Performance</b>  |  |  |           |  |
| Resolution                      | 256×192  | 400×300  | 640×512   | 400×300                                  |
| Pixel Pitch                     | 12μm   | 12μm   | 12μm      | 17μm                                     |
| Spectral Range                  | 8~14μm   |  |           |  |
| NETD                            | < 40mK   |  |           |  |
| <b>Image Processing</b>         |  |  |           |  |
| Frame Rate                      | Support 9Hz/25Hz/30Hz/50Hz/60Hz  |  |           |  |
| Start-up Time                   | < 3S   |  |           |  |
| Analog Video                    | PAL/NTSC   |  |           |  |
| Digital Video                   | Y16/YUV/BT656  |  |           |  |
| Dimming                         | Linear/Histogram/Mixed three modes   |  |           |  |
| Digital Zoom                    | 1~8X continual zoom, step size 1/8   |  |           |  |
| Image Display                   | Black hot/White hot/Pseudo color   |  |           |  |
| Image Direction                 | Horizontally/Vertically/Diagonally Flip  |  |           |  |
| Image Algorithm                 | Non-uniformity Correction (NUC);Auto Gain Control (AGC);Intelligent Detail Enhancement (IDE);Digital noise reduction (DNR) |  |           |  |
| <b>Electrical Specification</b> |  |  |           |  |
| Standard External Interface     | 30pin_HRS  | 50pin_HRS  |           |  |
| Communication Mode              | RS232-TTL, 115200bps   |  |           |  |
| Supply Voltage                  | 3.5~5.5V   |  |           |  |
| Consumption                     | <0.3W  | <0.75W   |           |  |
| <b>Temperature Measurement</b>  |  |  |           |  |
| Operating Temperature Range     | -10°C~50°C   |  |           |  |
| Temperature Measurement Range   | -20°C~150°C, 100°C~550°C   |  |           |  |
| Temperature Accuracy            | ±3°C or ±3%  |  |           |  |
| SDK                             | Support ARM/windows/linux SDK, full screen thermography  |  |           |  |
| <b>Physical Characteristic</b>  |  |  |           |  |
| Dimension(mm)                   | 20X20X10.4 (with lens)   | 25.4X25.4X14.1 (with shutter)  |           | 25.4X25.4X14.1 (with shutter)            |
| Weight                          | 7.5g±0.5g (with lens)  | Module:13g±0.5g (with shutter)<br>Module+8.8mm Lens:22.4g±0.5g<br>Module+13mm Lens:41g±0.5g<br>Module+19mm Lens:43.9g±0.5g |           | 13g±0.5g (without lens)                  |
| <b>Environmental</b>            |  |  |           |  |
| Operation Temperature           | -40°C ~ +70°C  |  |           |  |
| Storage Temperature             | -45°C ~ +85°C  |  |           |  |
| Humidity                        | 5%~95%, non-condensing   |  |           |  |
| Vibration                       | Random Vibration 5.35grms, 3 axis  |  |           |  |
| Shock                           | Half-sine wave, 40g/11ms, 3 axis 6 direction   |  |           |  |
| <b>Optics</b>                   |  |  |           |  |
| Optional lens                   | Fixed focus athermal:3.2mm   | Fixed focus athermal:8.8mm/<br>13mm/19mm   |           | Fixed focus athermal:9.7mm/<br>15mm/19mm |