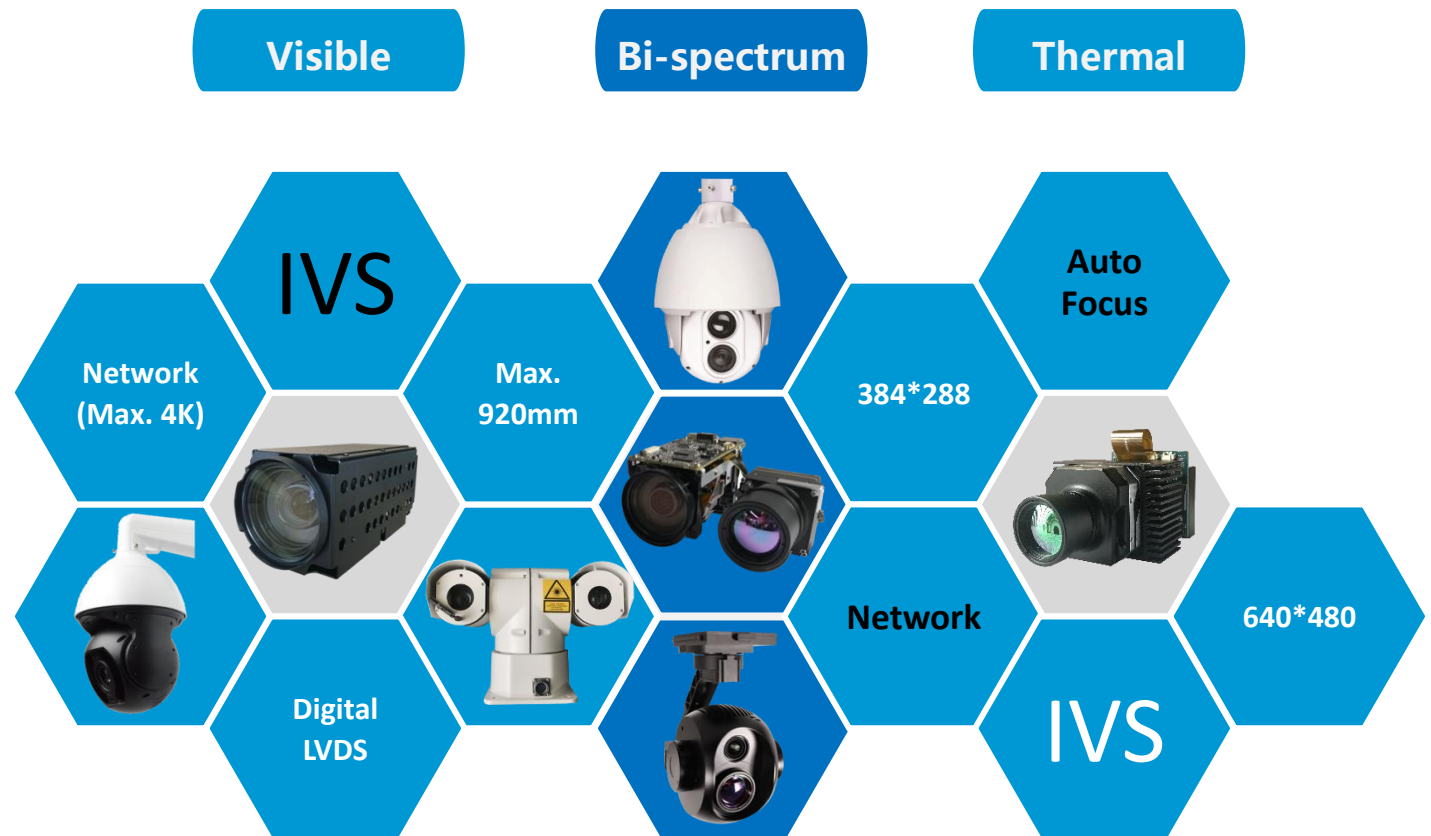


# Savgood | ZOOM CAMERA MODULE



## Why We Are

### ■ Current Long Range Zoom Camera Solution

Most of Long Range Zoom solutions are using Normal box camera and Motorized Lens.



- With 1000mm Len, but **Crazy price**
- **Not Stable**
- Low efficiency Auto Focus
- Image Quality will be worse
- Difficult to debug

- With 48x Zoom  
But only **Max. 275mm Lens**
- Low CMOS



- Very **Big**
- Very **difficult to Assemble**



## Introduction

**Savgood Technology** - Zoom Camera Modules manufacturer.

To solve the current issues of Long Range Zoom cameras solution, based on SONY's popular, high image quality and ultra starlight Exmor/Exmor R CMOS Sensor, we are focus on **Ultra LONG RANGE ZOOM** camera modules, and have successfully designed & developed many kinds of Zoom Camera Modules, for example, 4Mp 88x Zoom (10.5~920mm), 2Mp 86x Zoom (10~860mm), 2Mp 90x Zoom (6~540mm), 2Mp/4K/8Mp 50x Zoom (6~300mm).

They can support our own fast & accurate excellent Auto Focus algorithm, Defog and IVS (Intelligent Video Surveillance) functions.

We also have special Zoom Cameras: 3Mp Global Shutter, 2Mp Dual Output and Thermal + Visible Bi-spectrum Hybrid Zoom Camera

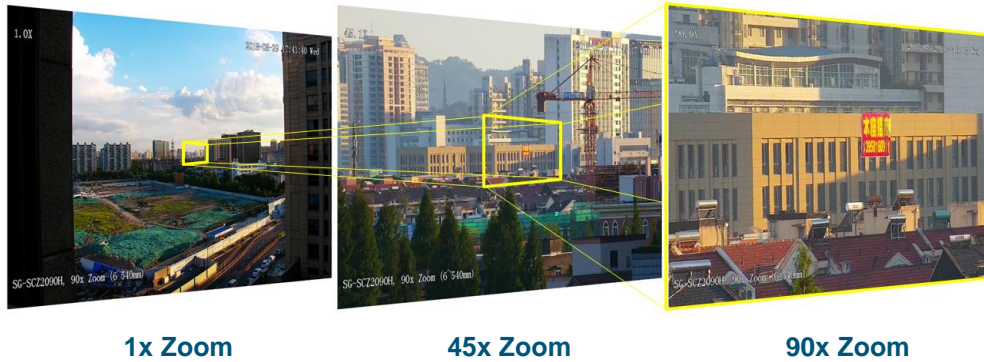
They have been used in various areas products, PTZ Dome, Tribrid PTZ Camera, Drone Payloads, Video Conference Cameras and so on.



## Highlight Features

- Sony Exmor / Exmor RS COMS Sensor
- Max. 4K/8MP (30fps/25fps), Full-HD (1080/60p) Resolution
- Support Electronic Image Stabilization
- Ultra LONG Range Zoom, Max. 88x Optical Zoom(10.5~920mm)

High Performance Zoom Video Quality, lossless Video Image on Max. Zoom.



### ■ Optical Defog

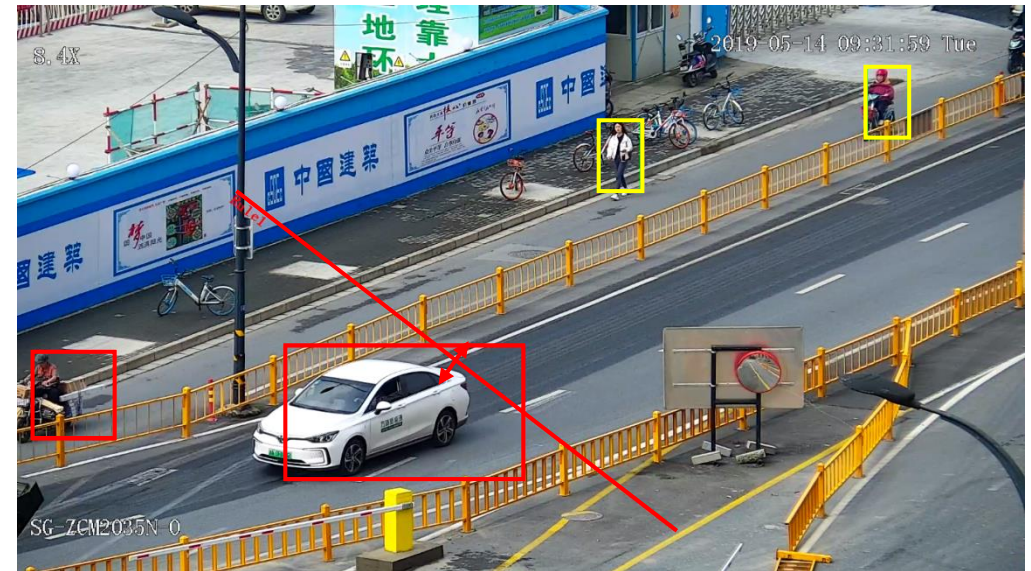
Support Software Electronic Defog and Hardware Optical Defog simultaneously. The Optical Defog is achieved by ICR Filter, will have better Defog performance on some special environment. Optical Defog only can support on Black & White mode.



- Compatible with SONY VISCA and Pelco D Protocol
- Excellent Auto Focus & video image processing algorithms
- All kinds of Information Overlay, PTZ Data, Text, Picture and GPS info.
- Face Detection (in Developing)
- IVS (Intelligent Video Surveillance)

Support total 9 IVS Rules: Tripwire, Cross Fence Detection, Intrusion, Abandoned Object, Fast-Moving, Parking Detection, Missing Object, Crowd Gathering Estimation, Loitering Detection.

Will trigger to Record, relay out, Send email and Snapshot on IVS Alarm.



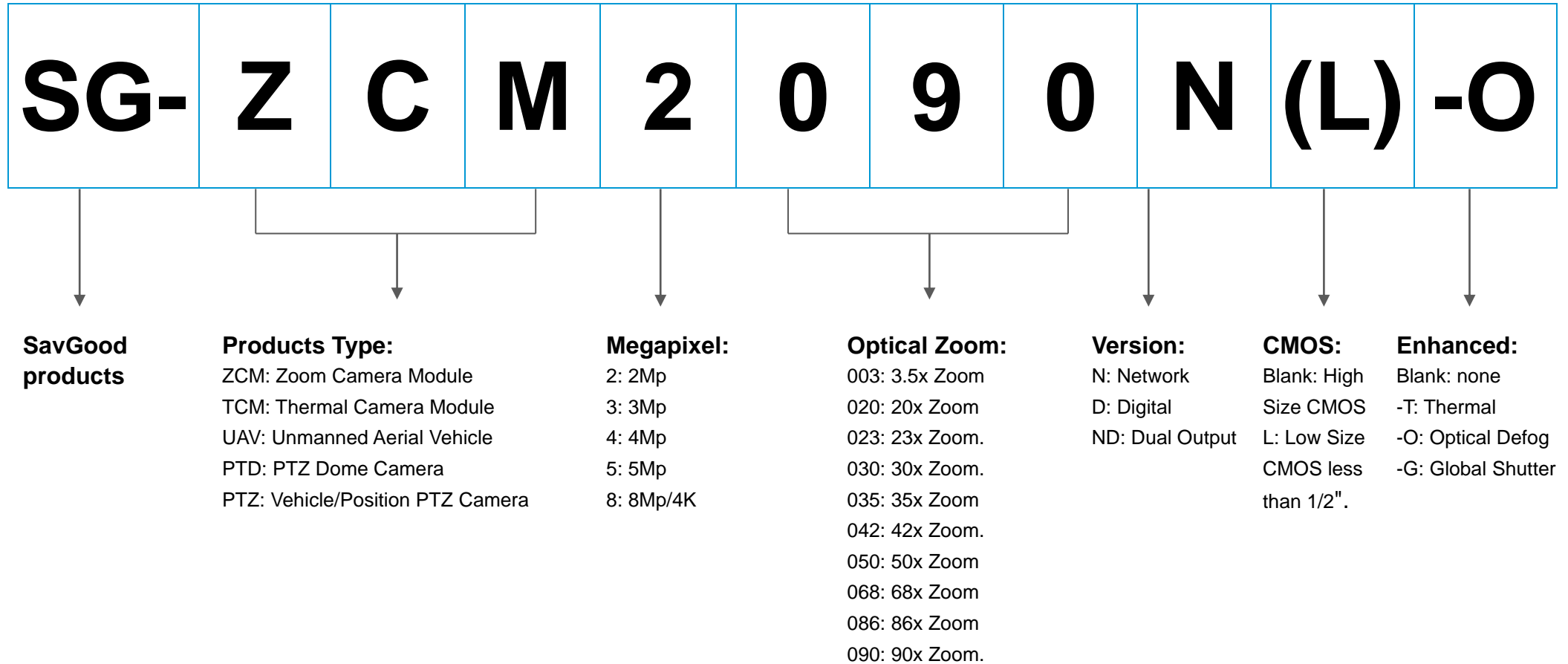
### ■ OEM/ODM Service

We could provide OEM/ODM service to built-in your LOGO, and local languages.

# OEM/ODM

## Model Name Coding Rule

Please check the model name coding rule as below:



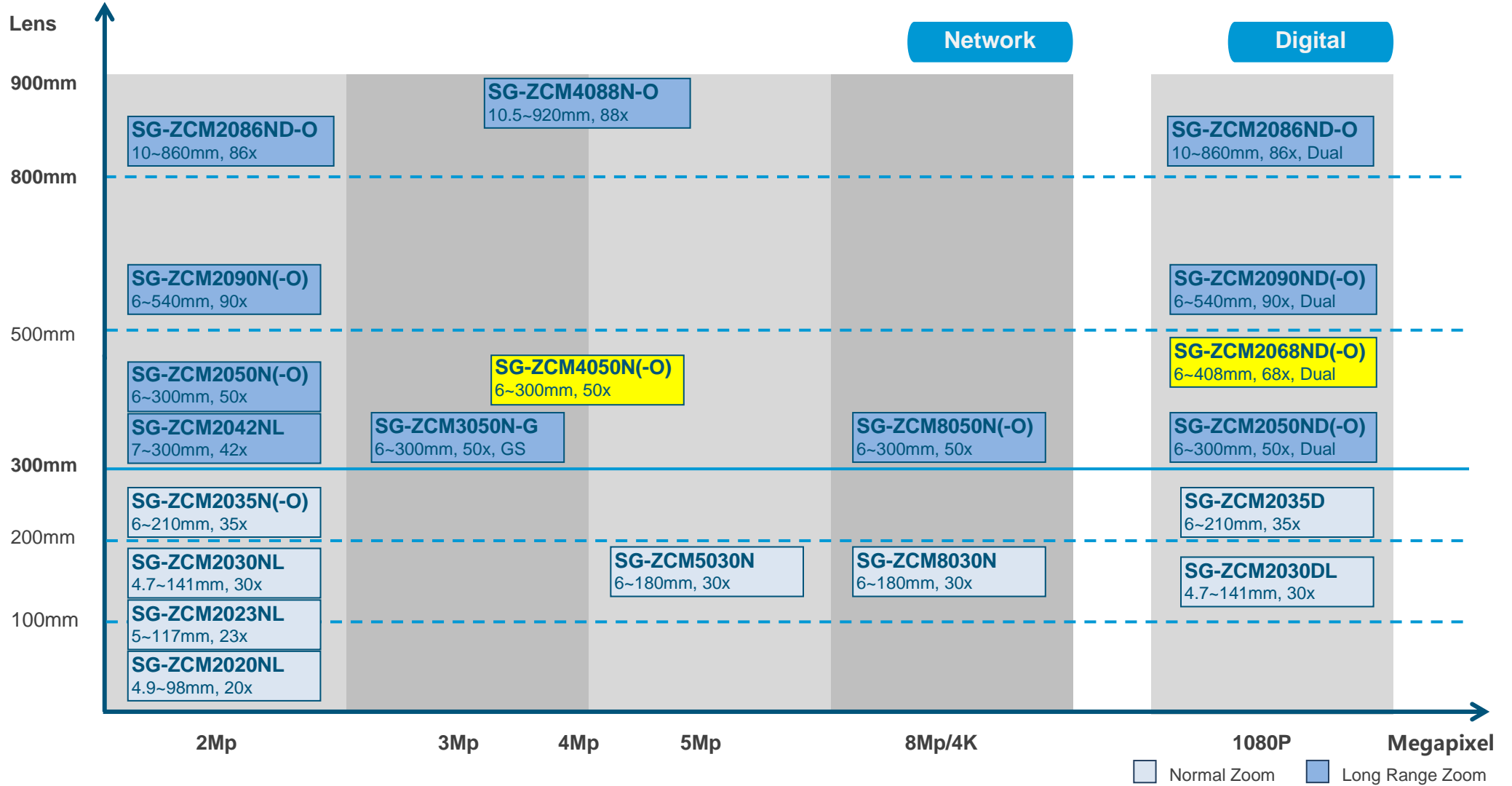
### Notice:

These high-end Zoom Camera Modules can support **Optical Defog** for option (non for default version), if you want Optical Defog function, please tell us when you place the order:

**SG-ZCM2086ND-O, SG-ZCM4088N-O, SG-ZCM8050N-O, SG-ZCM2090N-O, SG-ZCM2050N-O, SG-ZCM2035N-O**

# Products Map



Please check products map:

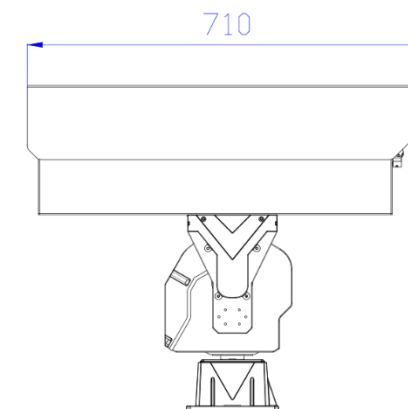
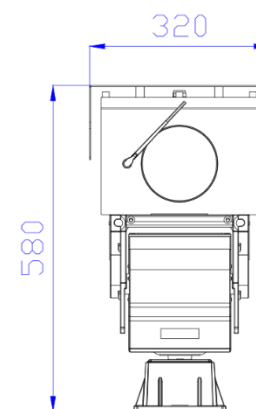


Zoom Time Available:



# Ultra Long Range Zoom



<b>Network</b>			
<b>Model</b>		<b>SG-ZCM2086ND-O</b>	<b>SG-ZCM4088N-O</b>
<b>Spec</b>		86x 2Mp Network, Dual	88x 4Mp Network
<b>Feature</b>		Long Range Zoom, <b>LVDS</b>	Long Range Zoom
<b>Sensor</b>	Image Sensor	1/1.9" CMOS	1/1.8" CMOS
	Effective Pixels	2.13 Megapixel	4.53 Megapixel
	Max. Resolution	1945(H)×1225(V)	2688(H)×1520(V)
<b>Lens</b>	Focal Length	10~ <b>860mm</b>	10.5~ <b>920mm</b>
	Optical Zoom	86x	88x
	Aperture	F2.0~F6.8	F2.1~F6.8
	Angle of View	42°~0.44°	38°~0.4°
<b>Resolution</b>		Network/LVDS: 60fps@1080P	4Mp: 60/50fps(2560x1440)
<b>Communication Interface</b>		4PIN Network interface, 6PIN Series Port interface.	
<b>Communication Protocol</b>		2x RS232; Compatible with SONY VISCA and Pelco Protocol	
<b>Min. Illumination</b>		Color: 0.02Lux/F2.0	Color: 0.02Lux/F2.1
<b>Day/Night</b>		Night: 750nm Defog ICR	Night: 750nm Defog ICR
<b>Defog</b>		Electronic / Optical Defog	
<b>Video Network</b>	Compression	H.265/H.264H/H.264B	
	Storage	Support TF card, Max up to 128GB	
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP	
<b>EIS</b>		ON/OFF	
<b>White Balance</b>		Auto/Manual/ATW/Indoor/Outdoor/Outdoor Auto etc.	
<b>3D/2D Noise Reduction</b>		Auto/Manual	
<b>Focus Mode</b>		Auto/Manual/Semi-automatic	
<b>Digital Zoom</b>		4x Digital Zoom	4x Digital Zoom
<b>Operating Conditions</b>		-30°C~+65°C / 20% to 80%RH	
<b>Power Supply</b>		DC 12V±15% (Recommend: 12V)	
<b>Dimensions(L*W*H)</b>		395mm*145mm*150mm	395mm*145mm*150mm
<b>Weight</b>		5.6kg	5.6kg



## Pan Tilt Housing:

- > Turbine Worm Drive
- > P/T Range: Pan: 360°, Endless; Tilt: -60°~40°
- > P/T Speed: Pan: 0.01°~60°/S; Tilt 0.01°~30°/S
- > Preset Precision: ±0.1°
- > IP66 Waterproof
- > Support Wiper

## Long Range Zoom





Network						
<b>Model</b>	<b>Spec</b>	<b>SG-ZCM2090N(-O)</b> 90x 2Mp Network	<b>SG-ZCM2050N(-O)</b> 50x 2Mp Network	<b>SG-ZCM2042NL</b> 42x 2Mp Network	<b>SG-ZCM4050N(-O)</b> 50x 4Mp Network	<b>SG-ZCM8050N(-O)</b> 50x 8Mp Network
Feature		Long Range Zoom	Long Range Zoom/Starlight	Long Range Zoom/Starlight	Long Range Zoom/Starlight	Long Range Zoom, 4K
Sensor	Image Sensor	1/1.8" CMOS	1/1.9" CMOS	1/2.8" COMS	1/1.8" CMOS	1/1.8" CMOS
	Effective Pixels	8.42 Megapixel	2.13 Megapixel	2.13 Megapixel	4.53 Megapixel	8.42 Megapixel
	Max. Resolution	1945(H)×1225(V)	1945(H)×1225(V)	1945(H)×1225(V)	2688(H)×1520(V)	3840(H)×2160 (V)
Lens	Focal Length	6~540mm	6~300mm	7~300mm	6~300mm	6~300mm
	Optical Zoom	90x	50x	42x	50x	50x
	Aperture	F1.4~F4.8	F1.4~F4.5	F1.6~F6.0	F1.4~F4.5	F1.4~F4.5
	Angle of View	59°~0.8°	58.4°~1.4°	42°~1.2°	62°~1.6°	59°~1.8°
Resolution		2Mp: 60fps/50fps/30fps/25fps(1920x1080)		30fps/25fps(1920x1080)	4Mp: 60/50fps (2560x1440)	4K: 30fps/25fps(3840x2160)
Communication Interface		4PIN Network interface, 6PIN Series Port interface.				
Communication Protocol		2x RS232; Compatible with SONY VISCA and Pelco Protocol				
Min. Illumination		Color: 0.1Lux/F1.4	Color: 0.001Lux/F1.4	Color: 0.005Lux/F1.6	Color: 0.005Lux/F1.4	Color: 0.1Lux/F1.4
Day/Night		Night: 750nm Defog ICR	Night: 750nm Defog ICR	Auto/Manual	Night: 750nm Defog ICR	Night: 750nm Defog ICR
Defog		Electronic (Optical Defog)	Electronic (Optical Defog)	Electronic Defog	Electronic (Optical Defog)	Electronic (Optical Defog)
Video Network	Compression	H.265/H.264H/H.264B				
	Storage	Support TF card, Max up to 128GB				
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP				
EIS		N/A	ON/OFF	ON/OFF	ON/OFF	ON/OFF
White Balance		Auto/Manual/ATW/Indoor/Outdoor/Outdoor Auto/Sodium lamp Auto/Sodium lamp				
3D/2D Noise Reduction		Auto/Manual				
Focus Mode		Auto/Manual/Semi-automatic				
Digital Zoom		N/A	4x Digital Zoom			
Operating Conditions		-30°C~+65°C / 20% to 80%RH				
Power Supply		DC 12V±15% (Recommend: 12V)				
Dimensions(L*W*H)		175mm*72mm*77mm	175mm*72mm*77mm	145mm*54mm*64mm	175mm*72mm*77mm	175mm*72mm*77mm
Weight		900g	900g	600g	900g	900g





## Normal Range Zoom

Network						
Spec	Model	<b>SG-ZCM2020NL</b> 20x 2Mp Network	<b>SG-ZCM2023/30NL</b> 23x/30x 2Mp Network	<b>SG-ZCM2035N(-O)</b> 35x 2Mp Network	<b>SG-ZCM5030N</b> 30x 5Mp Network	<b>SG-ZCM8030N</b> 30x 8Mp Network
Feature		Economic	Starlight	Ultra Starlight	High Megapixel / 5Mp	High Megapixel / 4K
Sensor	Image Sensor	1/2.8" CMOS	1/2.8" CMOS	1/1.9" CMOS	1/1.8" CMOS	1/1.7" CMOS
	Effective Pixels	2.16 Megapixel	2.13 Megapixel	2.13 Megapixel	6.44 Megapixel	12.40 Megapixel
	Max. Resolution	1920(H)×1080(V)	1945(H)×1225(V)	1945(H)×1225(V)	3096(H)×2080(V)	4072(H)×3046(V)
Lens	Focal Length	4.9~98mm	5~117mm / 4.7~141mm	6~210mm	6~180mm	6~180mm
	Optical Zoom	20x	23x/30x	35x	30x	30x
	Aperture	F1.4~F2.7	F1.5~F3.5 / F1.4~F4.5	F1.5~F4.8	F1.5~F4.3	F1.5~F4.3
	Angle of View	52°~2.9°	58°~2.8° / 61°~2.3°	61°~2.0°	61°~2.3°	63°~2.5°
Resolution		30fps/25fps@1080P	30fps/25fps@1080P	30fps/25fps@1080P	30fps/25fps@2560*1920	30fps/25fps@3840*2160
Communication Interface		4PIN Network interface, 6PIN Series Port interface.				
Communication Protocol		2x RS232; Compatible with SONY VISCA and Pelco Protocol				
Min. Illumination		Color: 0.05Lux/F1.5	Color: 0.005Lux/F1.5	Color: 0.001Lux/F1.5	Color: 0.05Lux/F1.5	Color: 0.1Lux/F1.5
Day/Night		Auto/Manual	Auto/Manual	Night: 750nm Defog ICR	Auto/Manual	Auto/Manual
Defog		Electronic Defog	Electronic Defog	Electronic (Optical Defog)	Electronic Defog	Electronic Defog
Video Network	Compression	H.265/H.264H/H.264B				
	Storage	Support TF card, Max up to 128GB				
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP				
EIS		Electronic Image Stabilization (ON/OFF)				
White Balance		Auto/Manual/ATW/Indoor/Outdoor/Outdoor Auto/Sodium lamp Auto/Sodium lamp				
3D/2D Noise Reduction		Auto/Manual				
Focus Mode		Auto/Manual/Semi-automatic				
Digital Zoom		4x Digital Zoom				
Operating Conditions		-30°C~+65°C / 20% to 80%RH				
Power Supply		DC 12V±15% (Recommend: 12V)				
Dimensions(L*W*H)		90mm*50mm*55mm	96mm*52mm*58mm	126mm*54mm*68mm	126mm*54mm*68mm	126mm*54mm*68mm
Weight		108g	290g	410g	410g	405g






## Special Long Range Zoom

Global Shutter Dual Output					
<b>Model</b>	<b>SG-ZCM3050N-G</b>	<b>SG-ZCM2090ND(-O)</b>	<b>SG-ZCM2068ND(-O)</b>	<b>SG-ZCM2050ND(-O)</b>	
<b>Spec</b>	50x 3Mp Network, GS	90x 2Mp Network/Digital, Dual	68x 2Mp Network/Digital, Dual	50x 2Mp Network/Digital, Dual	
<b>Feature</b>	Long Range Zoom, <b>Global Shutter</b>	Long Range Zoom, <b>LVDS</b>	Long Range Zoom/Starlight, <b>LVDS</b>	Long Range Zoom/Starlight, <b>LVDS</b>	
Sensor	Image Sensor	1/1.8" CMOS	1/1.8" CMOS	1/1.8" CMOS	1/1.9" CMOS
	Effective Pixels	3.19 Megapixel	8.42 Megapixel	4.53 Megapixel	2.13 Megapixel
	Max. Resolution	2064(H)×1544(V)	1945(H)×1225(V)	2688(H)×1520(V)	1945(H)×1225(V)
Lens	Focal Length	6~300mm	6~540mm	6~408mm	6~300mm
	Optical Zoom	50x	90x	68x	50x
	Aperture	F1.4~F4.5	F1.4~F4.8	F1.4~F4.6	F1.4~F4.5
	Angle of View	60°~1.8°	59°~0.8°	58°~1.4°	58.4°~1.4°
<b>Resolution</b>	3Mp: 50/55fps@3Mp(2048×1536)	<b>(Network)</b> 2Mp: 50/60fps@2Mp(1920×1080) / <b>(LVDS)</b> 50/60fps@2Mp(1920×1080)			
<b>Communication Interface</b>	4PIN Network, 6PIN Series interface	4PIN Network interface, 6PIN Series Port interface. / 30 PIN LVDS Interface			
<b>Communication Protocol</b>	2x RS232; Compatible with SONY VISCA and Pelco Protocol				
<b>Min. Illumination</b>	Color: 0.002Lux/F1.4	Color: 0.1Lux/F1.4	Color: 0.005Lux/F1.4	Color: 0.001Lux/F1.4	
<b>Day/Night</b>	Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual	
<b>Defog</b>	Electronic	Electronic(Optical Defog)	Electronic(Optical Defog)	Electronic(Optical Defog)	
Video Network	Compression	H.265/H.264H/H.264B			
	Storage	Support TF card, Max up to 128GB			
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP			
<b>EIS</b>	ON/OFF	N/A	N/A	ON/OFF	
<b>White Balance</b>	Auto/Manual/ATW/Indoor/Outdoor/Outdoor Auto/Sodium lamp Auto/Sodium lamp				
<b>3D/2D Noise Reduction</b>	Auto/Manual				
<b>Focus Mode</b>	Auto/Manual/Semi-automatic				
<b>Digital Zoom</b>	4x Digital Zoom	N/A	N/A	4x Digital Zoom	
<b>Operating Conditions</b>	-30°C~+65°C / 20% to 80%RH				
<b>Power Supply</b>	DC 12V±15% (Recommend: 12V)				
<b>Dimensions(L*W*H)</b>	175mm*72mm*77mm	175mm*72mm*77mm	175mm*72mm*77mm	175mm*72mm*77mm	
<b>Weight</b>	900g	900g	900g	900g	






## Normal Range Zoom

Digital (LVDS)			
<b>Spec</b>	<b>Model</b>	<b>SG-ZCM2035D</b> 35x 2Mp Digital	<b>SG-ZCM2030DL</b> 30x 2Mp Digital
<b>Feature</b>		Starlight, <b>LVDS</b>	Starlight, <b>LVDS</b>
<b>Sensor</b>	Image Sensor	1/1.9" CMOS	1/2.8" CMOS
	Effective Pixels	2.13 Megapixel	2.13 Megapixel
	Max. Resolution	1945(H)×1225(V)	1945(H)×1225(V)
<b>Lens</b>	Focal Length	6~210mm	4.7~141mm
	Optical Zoom	35x	30x
	Aperture	F1.5~F4.8	F1.5~F4.0
	Angle of View	61°~2.0°	60.5°~2.3°
<b>Resolution</b>		25/30fps@1080P, 50/60fps@1080P	25/30fps@1080P, 50/60fps@1080P
<b>Communication Interface</b>		30PIN LVDS (SONY 6300)	
<b>Communication Protocol</b>		RS232(SONY VISCA)	
<b>Min. Illumination</b>		Color: 0.001Lux/F1.5	Color: 0.001Lux/F1.5
<b>Day/Night</b>		Auto/Manual	Auto/Manual
<b>Defog</b>		Electronic Defog	Electronic Defog
<b>Video Network</b>		N/A	N/A
<b>EIS</b>		Electronic Image Stabilization (ON/OFF)	
<b>White Balance</b>		Auto/Manual/ATW/Indoor/Outdoor/Outdoor Auto/Sodium lamp Auto/Sodium lamp	
<b>3D/2D Noise Reduction</b>		Auto/Manual	
<b>Focus Mode</b>		Auto/Manual/Semi-automatic	
<b>Digital Zoom</b>		4x Digital Zoom	
<b>Operating Conditions</b>		-30°C~+65°C / 20% to 80%RH	
<b>Power Supply</b>		DC 12V±15% (Recommend: 12V)	
<b>Power Consumption</b>		Static: 4W; Sports: 5W	Static: 3.5W, Sports: 4.5W
<b>Dimensions(L*W*H)</b>		126mm*54mm*68mm	96mm*52mm*58mm
<b>Weight</b>		408g	300g






# PTZ Dome Camera

Network						
Model		<b>SG-PTD2030NL</b> 30x 2Mp Network, Tracking	<b>SG-PTD2035N</b> 35x 2Mp Network, Tracking	<b>SG-PTD2042NL</b> 42x 2Mp Network, Tracking	<b>SG-PTD5030NL</b> 30x 5Mp Network, Tracking	<b>SG-PTD8030N</b> 30x 8Mp Network, Tracking
Sensor	Image Sensor	1/2.8" CMOS	1/1.9" CMOS	1/2.8" CMOS	1/1.8" CMOS	1/1.7" CMOS
	Effective Pixels	2.13 Megapixel	2.13 Megapixel	2.13 Megapixel	6.44 Megapixel	12.40 Megapixel
Lens	Focal Length	4.7~141mm, 30x Zoom	6~210mm, 35x Zoom	7~300mm, 42x Zoom	6~180mm, 30x Zoom	6~180mm, 30x Zoom
	Aperture	F1.4~F4.5	F1.5~F4.8	F1.6~F6.0	F1.5~F4.3	F1.5~F4.3
	Angle of View	61°~2.3°	61°~2.0°	42°~1.2°	61°~2.3°	63°~2.5°
Resolution		30fps/25fps@1080P	30fps/25fps@1080P	30fps/25fps@1080P	30fps/25fps@2560*1920	30fps/25fps@3840*2160
Min. Illumination		Color: 0.005Lux/F1.5	Color: 0.001Lux/F1.5	Color: 0.005Lux/F1.6	Color: 0.05Lux/F1.5	Color: 0.1Lux/F1.5
Day/Night		Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual
IR Distance		200m	200m	200m	200m	200m
Video Network	Compression	H.265/H.264H/H.264B				
	Streams	3 Streams				
	Storage	Support TF card, Max up to 128GB				
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP				
Functions		Support EIS, ROI(4 Area), Electronic Defog, 2D/3D Noise Reduction. White Balance				
Focus Mode		Auto/Manual/Semi-automatic				
Digital Zoom		4x Digital Zoom				
Pan/Tilt		Pan: 360°; Tilt: -10°-90°				
Preset Speed		Pan: 180°/s; Tilt: 80°/s				
Audio I/O, Alarm I/O		Support				
IVS Functions		Support Tripwire, Cross Fence Detection, Intrusion, Abandoned Object, Fast-Moving, Parking Detection, Missing Object etc.				
Protection Level		IP66; TVS 6000V Lightning Protection, surge prevention				
Operating Conditions		-20°C~+60°C / 20% to 80%RH				
Power Supply		DC 12V±15% (Recommend: 12V), POE+				
Dimensions(L*W*H)		Φ 237mm×335mm	Φ 237mm×335mm	Φ 237mm×335mm	Φ 237mm×335mm	Φ 237mm×335mm
Weight		6kg	6kg	6kg	6kg	6kg

# Vehicle PTZ Camera

Laser IR						
Model		<b>SG-PTZ2030NL-LR3</b> 30x 2Mp Network	<b>SG-PTZ2035N-LR6</b> 35x 2Mp Network	<b>SG-PTZ2042NL-LR8</b> 42x 2Mp Network	<b>SG-PTZ2050N-LR8</b> 50x 2Mp Network	<b>SG-PTZ2090N-LR10</b> 90x 2Mp Network
Sensor	Image Sensor	1/2.8" CMOS	1/1.9" CMOS	1/2.8" CMOS	1/1.9" CMOS	1/1.8" CMOS
	Effective Pixels	2.13 Megapixel	2.13 Megapixel	2.13 Megapixel	2.13 Megapixel	8.42 Megapixel
Lens	Focal Length	4.7~141mm, 30x Zoom	6~210mm, 35x Zoom	7~300mm, 42x Zoom	6~300mm, 50x Zoom	6~540mm, 90x Zoom
	Aperture	F1.4~F4.5	F1.5~F4.8	F1.6~F6.0	F1.4~F4.5	F1.4~F4.8
	Angle of View	61°~2.3°	61°~2.0°	42°~1.2°	58.4°~1.4°	59°~0.8°
Resolution		30fps/25fps@1080P	30fps/25fps@1080P	30fps/25fps@1080P	60fps/50fps@1080P	60fps/50fps@1080P
Min. Illumination		Color: 0.005Lux/F1.5	Color: 0.001Lux/F1.5	Color: 0.005Lux/F1.6	Color: 0.001Lux/F1.4	Color: 0.1Lux/F1.4
Day/Night		Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual
IR Distance		Up to 500m	Up to 800m	Up to 1000m	Up to 1000m	Up to 1200m
Video	Compression	H.265/H.264H/H.264B				
	Streams	3 Streams				
Network	Storage	Support TF card, Max up to 128GB				
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP				
Functions		ROI(4 Area), Electronic Defog, 2D/3D Noise Reduction. White Balance				
Focus Mode		Auto/Manual/Semi-automatic				
Digital Zoom		4x Digital Zoom				N/A
Pan/Tilt		Pan: 360°, Endless; Tilt: -84°~84°				
Preset Speed		Adjustable, pan: 0°~60°/s; Tilt: 0°~40°/s;				
Audio I/O, Alarm I/O		Support				
IVS Functions		Support Tripwire, Cross Fence Detection, Intrusion, Abandoned Object, Fast-Moving, Parking Detection, Missing Object etc.				
Protection Level		IP66; TVS 4000V Lightning Protection, surge prevention				
Operating Conditions		-30°C~+60°C / 20% to 80%RH				
Power Supply		DC24~36V±15% / AC24V				
Dimensions(L*W*H)		240mm*370mm*245mm	240mm*370mm*245mm	260mm*387mm*265mm	260mm*387mm*265mm	260mm*387mm*265mm
Weight		13kg	13kg	16.7kg	16.7kg	16.7kg




# Hybrid PTZ Camera

EO-IR						
Model		<b>SG-PTZ2050N-6T75</b> 50x Zoom, 75mm	<b>SG-PTZ2050N-6T100</b> 50x Zoom, 100mm	<b>SG-PTZ2050N-6T150</b> 50x Zoom, 150mm	<b>SG-PTZ2035N-6T30135</b> 35x Zoom, 30~135mm	<b>SG-PTZ2050N-6T30150</b> 50x Zoom, 30~150mm
Thermal Module	Resolution	640 x 512	640 x 512	640 x 512	640 x 512	640 x 512
	Pixel Pitch	17 μ m	17 μ m	17 μ m	17 μ m	17 μ m
	Focal Length	75mm Motor Lens, F1.0	100mm Motor Lens, F1.2	150mm Motor Lens, F1.2	30~135mm Motorized, F1.2	30~150mm Motorized, F1.2
	Main Stream	50Hz: 25fps(640x512)	50Hz: 25fps(640x512)	50Hz: 25fps(640x512)	50Hz: 25fps(640x512)	50Hz: 25fps(640x512)
Visible Module	Image Sensor	1/1.9" CMOS	1/1.9" CMOS	1/1.9" CMOS	1/1.9" CMOS	1/1.9" CMOS
	Effective Pixels	2.13 Megapixel	2.13 Megapixel	2.13 Megapixel	2.13 Megapixel	2.13 Megapixel
	Focal Length	6~300mm, 50x Zoom	6~300mm, 50x Zoom	6~300mm, 50x Zoom	6~210mm, 35x Zoom	6~300mm, 50x Zoom
	Aperture	F1.4~F4.5	F1.4~F4.5	F1.4~F4.5	F1.5~F4.8	F1.4~F4.5
	Angle of View	58.4°~1.4°	58.4°~1.4°	58.4°~1.4°	61°~2.0°	58.4°~1.4°
	Resolution	60fps/50fps@1080P	60fps/50fps@1080P	60fps/50fps@1080P	60fps/50fps@1080P	60fps/50fps@1080P
	Min. Illumination	Color: 0.001Lux/F1.4	Color: 0.001Lux/F1.4	Color: 0.001Lux/F1.4	Color: 0.001Lux/F1.5	Color: 0.001Lux/F1.4
Video	Compression	H.265/H.264H/H.264B				
	Streams	3 Streams				
Network	Storage	Support TF card, Max up to 128GB				
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP				
Functions	ROI(4 Area), Electronic (Optical) Defog, 2D/3D Noise Reduction. White Balance					
Pan/Tilt	Pan: 360°, Endless; Tilt: -90°~90°					
Preset Speed	Pan: 0.01°~100°/s; Tilt: 0.01°~60°/s					
Audio I/O, Alarm I/O	Support					
IVS Functions	Both visible camera and thermal camera can support IVS functions.					
Protection Level	IP66; Electrostatic 7000 volts, surge 6000 volts, differential 3000 volts					
Operating Conditions	-40°C~+60°C / 0~0%RH					
Power Supply	DC48V					
Dimensions(L*W*H)	738mm*360mm*468mm	738mm*360mm*468mm	738mm*360mm*468mm	738mm*360mm*468mm	738mm*360mm*468mm	738mm*360mm*468mm
Weight	50kg	50kg	60kg	60kg	60kg	60kg

# Drone Payloads

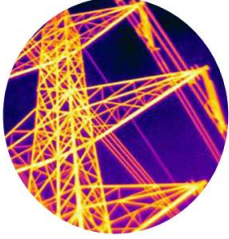

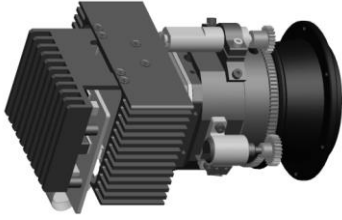
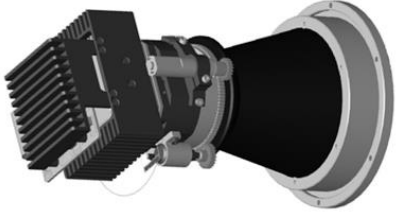
					
Model		SG-UAV2035N	SG-UAV5030N	SG-UAV8030N	SG-UAV8003NL
Spec		35x 2Mp Network	30x 5Mp Network	30x 8Mp Network	3.5x 8Mp Network
Sensor	Image Sensor	1/1.8" CMOS	1/1.8" CMOS	1/1.7" CMOS	1/2.3" CMOS
	Effective Pixels	Approx. 2.13 Megapixel	Approx. 6.44 Megapixel	Approx. 12.40 Megapixel	Approx. 12.35 Megapixel
	Max. Resolution	1945(H)x1225(V)	3096(H)x2080(V)	4000(H)x3000 (V)	4152(H)x3062(V)
Lens	Focal Length	6mm~210mm	6mm~180mm	6mm~180mm	3.85mm~13.4mm
	Optical Zoom	35x	30x	30x	3.5x
	Aperture	F1.5~F4.8	F1.5~F4.3	F1.5~F4.3	F2.4~F5.0
	Angle of View	61°~2.0°	61°~2.3°	63°~2.5°	82°~25°
Resolution		25fps@2Mp(1920x1080)	25fps@5Mp(2560x1920)	25fps@8Mp(3840x2160)	25fps@8Mp(3840x2160)
Min. Illumination		Color: 0.001Lux/F1.5	Color: 0.05Lux/F1.5	Color: 0.1Lux/F1.5	Color: 0.2Lux/F2.4
Defog		Electronic /Optical Defog	Electronic Defog	Electronic Defog	Electronic Defog
Video Network	Compression	H.265/H.264H/H.264B			
	Storage	Support TF card, Max up to 128GB			
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP			
EIS		Electronic Image Stabilization (ON/OFF)			
Digital Zoom		4x Digital Zoom			
One Key to 1x Image		Support			
Gimbal	Precision	±0.008°			
	Controllable Range	Pitch: +70°~90°, Yaw: ±160°			
	Mechanical Range	Pitch: +75°~-100°, Yaw: ±175°, Roll:+90°~-50°			
	Max. Control Speed	Pitch: ±120°/s, Yaw: ±180°/s			
	Auto-tracking	Support			
Dimensions(L*W*H)		175mm*100mm*162mm	175mm*100mm*162mm	175mm*100mm*162mm	96mm*79mm*120mm
Weight		842g	842g	842g	275g

## Bi-spectrum Payloads

			
<b>Model</b>		<b>SG-UAV2030NL-T25</b>	<b>SG-UAV8003NL-T25</b>
<b>Spec</b>		30x 2Mp Visible + 640*480 Thermal Network	3.5x 8Mp Visible + 640*480 Thermal Network
<b>Thermal Module</b>	Resolution	640 x 480	
	Pixel Pitch	17 μm	
	Focal Length	25mm, F1.0	
	Sensitivity	≤60mk@300k	
	Main Stream	50Hz: 25fps(640x480)	
<b>Visible Module</b>	Image Sensor	1/2.8" CMOS	1/2.3" CMOS
	Effective Pixels	Approx. 2.13 Megapixel, 1920(H)×1080(V)	Approx. 12.35 Megapixel, 4152(H)×3062(V)
	Focal Length	4.7mm~141mm, 30x Optical Zoom, 4x Digital Zoom	3.85mm~13.4mm, 3.5x Optical Zoom, 4x Digital Zoom
	Aperture/Angle	F1.5~F4.0 / 60.5°~2.3°	F2.4~F5.0 / 82°~25°
	Resolution	25fps@2Mp(1920x1080)	25fps@8Mp(3840x2160)
	Min. Illumination	Color: 0.005Lux/F1.5	Color: 0.2Lux/F2.4
<b>Video Network</b>	Compression	H.265/H.264H/H.264B	
	Storage	Support TF card, Max up to 128GB	
	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP	
<b>Others</b>		Support Defog, Electronic Image Stabilization(EIS)	
<b>One Key to 1x Image</b>		Support	
<b>Gimbal</b>	Precision	±0.008°	
	Controllable Range	Pitch: +70°~-90°, Yaw: ±160°	
	Mechanical Range	Pitch: +75°~-100°, Yaw: ±175°, Roll:+90°~-50°	
	Max. Control Speed	Pitch: ±120°/s, Yaw: ±180°/s	
	Auto-tracking	Support	
<b>Dimensions(L*W*H)</b>		136mm*96mm*155mm	136mm*96mm*155mm
<b>Weight</b>		920g	768g



# Thermal Camera Module

								
Spec		Model	SG-TCM03N-X 384x288 Core	SG-TCM06N-X 640x480 Core	SG-TCM03N-M40 384x288 Core	SG-TCM06N-M40 640x480 Core	SG-TCM03N-M75 384x288 Core	SG-TCM06N-M75 640x480 Core
Sensor	Image Sensor	Uncooled Microbolometer FPA(Amorphous silicon)		Uncooled Microbolometer FPA(Amorphous silicon)		Uncooled Microbolometer FPA(Amorphous silicon)		
	Resolution	384 x 288	640 x 480	384 x 288	640 x 480	384 x 288	640 x 480	
	Pixel Size	17 μm		17 μm		17 μm		
	Spectral Range	8~14 μm		8~14 μm		8~14 μm		
Lens	Focal Length	9mm, 13mm, 15mm, 19mm, 25mm		40mm		75mm		
	F Value	1.0		1.0		1.0		
	Focus	Athermalized Lens, Focus Free.		Motor Lens, Support Auto Focus		Motor Lens, Support Auto Focus		
Video	Compression	H.265/H.264/H.264H						
	Storage	TF card, up to 128G						
Network	Protocol	Onvif, GB28181, HTTP, RTSP, RTP, TCP, UDP						
	Smart Alarm	Motion Detection, Cover Alarm, Storage Full Alarm						
Resolution		25fps@384x288	25fps@640x480	25fps@384x288	25fps@640x480	25fps@384x288	25fps@640x480	
<b>IVS Functions</b>		<b>Support kinds of intelligent functions: Tripwire, Cross Fence Detection, Intrusion, Loitering Detection.</b>						
Power Supply		DC 12V ± 15% (Recommend: 12V)						
Operating Conditions		(-20°C~+60°C/20% to 80%RH)						
Storage Conditions		(-40°C~+65°C/20% to 95%RH)						
Dimensions(L*W*H)		113mm*68mm*50mm (Included fixed Lens)		124mm*68mm*68mm (Included 40mm Lens)		179mm*101mm*101mm (Included 75mm Lens)		
Weight		Approx. 200g (Included fixed Lens)		Approx. 415g (Included 40mm Lens)		Approx. - g (Included 75mm Lens)		

- **Imported Thermal Core**
- **Network** Thermal Camera, Athermalized or **Auto Focus** Lens.
- **Same Web GUI to Visible Zoom Camera Modules.**
- **Supposion, Loitering Detection.)**
- **OEM Optional**, Motorized Lens are also available.

## Bi-spectrum Module

### ■ Thermal + Visible Bi-spectrum Hybrid EO-IR



SG-PTD2030NL-6T25

SG-ZCM2030NL-T25



### Features

- > 1 Channel Thermal and Visible Video complex stream.
- > One single Main Control Chip, more stable than double IP version products.
- > Smart tracking on both Thermal camera (Night) and Visible camera (Day)
- > Support various OSD information overlay.

### Visible Camera

- > 1/2.8" Sony Exmor CMOS Sensor.
- > Powerful 30x optical zoom (4.7~141mm Len).
- > Max. 2Mp(1920x1080) Resolution

### Thermal Camera

- > Uncooled Microbolometer FPA (Amorphous silicon)
- > 640x480 Resolution, high sensitivity sensor
- > 17um Pixel pitch.
- > 25mm Fixed Thermal Lens (19mm Optional)

## Accessories

### SG-AB101

#### Alarm Board

#### Convert RS232 output to RS485

- > Alarm In/Out
- > Audio In/Out.
- > Support RS485, RS232.

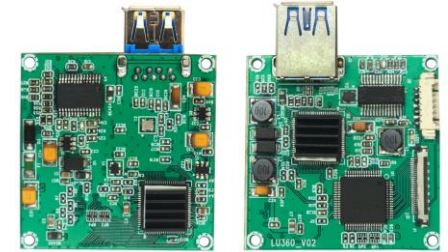


### SG-TB01-USB

#### USB Tail Board

#### Convert LVDS to USB 3.0

- > USB 3.0 Output.
- > 1080P50/60, 720P50/60/25/30
- > Zoom Control
- > Support RS232



### SG-TB01-3SDI

#### HD-SDI Tail Board

#### Convert LVDS to 3G-SDI /HDMI/CBVS.

- > HD-SDI, HDMI, CVBS Output.
- > 1080P50/60, 720P50, CVBSP50/60
- > Support Zoom, Focus Control,
- > Support RS485, Pelco D/P, RS232



### Laser Illuminator

#### Infrared Laser Illuminator working with Modules.

- > 808nm, 940nm Optional.
- > 300m, 500m, 800m, 1000m and more.
- > Synchronous with the camera
- > Easy installation
- > OEM is available



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**Savgood**

\* Design and specification are subject to change without notice.