

Hardware Specifications

Working voltage	12V ~ 16V
Input voltage	3S ~ 4S
Output voltage	5V (connect with PWM)
Dynamic current	500mA @ 12V
Idle current	400mA @ 12V
Power consumption	≤ 6W
Working environment temp.	-20°C ~ +60°C
Output	micro HDMI(HD output 1080P 60fps) / IP / SDI

Local-storage	SD card (Up to 128G, class 10, FAT32 or ex FAT format)
Control method	PWM / TTL / S.BUS

Gimbal Spec

Pitch/Tilt	±90°
Roll	±85°
Yaw/Pan	±170° / ±360°*N (IP / SDI output)
Vibration angle	Pitch/Roll: ±0.01°, Yaw : ±0.01°
One-key to center	√

Camera spec

Imager Sensor	SONY 1/2.8" "Exmor R" CMOS
Picture quality	Full HD 1080 (1920*1080)
Effective pixel	2.13MP
Lens optical zoom	30x, F=4.3~129mm
Digital zoom	12x (360x with optical zoom)
Min object distance	10mm(wide end) to 1200mm(tele end). Default 300mm
Horizontal viewing angle	1080p mode: 63.7°(wide end) ~ 2.3°(tele end)
720p mode:	63.7°(wide end) ~ 2.3°(tele end)
SD:	47.8°(wide end) ~ 1.7°(tele end)
Sync system	Internal
S/N ratio	more than 50dB
Min illumination	Color 0.01lux@F1.6
Exposure control	Auto, Manual, Priority mode(shutter priority & iris priority), Bright, EV compensation, Slow AE

Gain	Auto/Manual 0dB to 50.0dB(0 to 28 steps + 2 setep/ total 15 steps)
	Max.Gain Limit 10.7 dB to 50.0dB (6 to 28 steps + 2 step/ total 12 steps)
White balance	Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto/Outdoor Auto), One-push, Manual

Shutter speed	1/1s to 1/10,000s, 22 steps
Backlight compensation	Yes
Aperture control	16 steps
Defog	Yes
OSD	Yes
Fotoformate	JPEG
Videoformate	MP4

Camera Object Tracking

Update rate of deviation pixel	50Hz
Output delay of deviation pixel	<15ms
Minimum object contrast	5%
SNR	4
Minimum object size	16*16 pixel
Maximum object size	160*160 pixel
Tracking speed	±32 pixel/frame
Object memory time	100 frames (4s)

The mean square root values of pulse noise < 0.5 pixel

Thermal Imager Spec

Lens size	25mm
Horizontal FOV	24.6°
Vertical FOV	18.5°
Diagonal FOV	30.4°
Detective Distance (Man: 1.8x0.5m)	735 meters
Recognize Distance (Man: 1.8x0.5m)	184 meters
Verified Distance (Man: 1.8x0.5m)	92 meters
Detective Distance (Car: 4.2x1.8m)	2255 meters
Recognize Distance (Car: 4.2x1.8m)	564 meters
Verified Distance (Car: 4.2x1.8m)	282 meters
Working mode	Uncooled long wave (8μm~14μm) thermal imager
Detector pixel	640*480
Pixel size	17μm
Focusing method	Athermal prime lens
Emissivity correction	0.01~1
NETD	≤50mK (@25°C)
MRTD	≤650mK (@characteristic frequency)
Image enhancement	Auto adjust image brightness and contrast ratio
Color palette	White, iron red, pseudo color
Auto Non-uniform correction	Yes (no shutter)
Digital zoom	1x ~ 4x (up to 6x)
Sync correct time	Yes
Thermometry type	Temperature bar (psudo color display) max temp, min temp, FOV center temp (Optional)

Temperature warning	0°C~100°C
Thermal Imager Object Tracking	
Update rate of deviation pixel	25Hz
Output delay of deviation pixel	<3ms
Minimum object size	16*16 pixel
Maximum object size	128*128 pixel
Tracking speed	±32 pixel/frame
Object memory time	100 frames (4s)

Packing Information

N.W.	1230g / 1276g(SDI output)
Product meas.	127.6*164.5*173.5mm
Accessories	1pc gimbal camera device, 16pcs screws, 4pcs copper cylinders, 12pcs damping balls, 4pcs damping boards, 1pc USB to TTL cable / High quality plastic box with foam cushion