

Z-9A-SWI_Ver3.0.0

Quad-light Multi-sensor Pod



Synopsis

The Z-9A equips with a high-accuracy 3-axis pod, a 2.07M pixels 120x hybrid zoom camera and a long-wave thermal camera, which can provide visual and infrared images simultaneously. Combined with the laser lighting module and starlight level night vision function, the Z-9A can provide a clear visual light image even in complete dark environments. Thanks to the laser range finder, the Z-9A can provide the location of a target and the distance to it that improves working efficiency.

The Z-9A can be mounted tool-lessly onto unmanned aerial vehicles with its quick-release port. It is able to be applied on multiple industries such as firefighting, forest police, public security, search & rescue and environment protection.

Characteristics

- Carries a 120x hybrid zoom (30x optical zoom) camera, a 25mm focal length thermal camera, an 1800m laser range finder and 2 laser lighting modules.
- 3-axis mechanical stabilized structure which is able to spin continually around its yaw axis.
- With the Dual-IMU complementary algorithms with IMU temperature control and carrier AHRS fusion, the Z-9A provides a stabilization accuracy at $\pm 0.01^\circ$.
- Image supports shooting point coordinate EXIF save.
- Support remote screen projection and docking command platform.
- Can be mounted tool-lessly onto unmanned aerial vehicles with its quick-release port.

Specifications

Item		Parameters		
General	Dimensions	173 x 144 x 206mm		
	Weight	1110g		
	Operating Voltage	20~53V		
	Power	16.5W (AVG, ranging & lighting off) 60W (Stall, ranging & lighting on)		
	Protection Rating	IP43		
Gimbal	Angular Vibration Range	±0.01°		
	Maximum Controllable Speed	Pitch: ±200° /s, Yaw: ±200° /s		
	Controllable Range	Pitch: -120° ~ +60°, Yaw: ±360° constantly		
Zoom Camera	Image Sensor	1/2.8" CMOS; Effective Pixels: 2.07M		
	Lens	Focal Length: 4.7~141mm HFOV: 60° ~ 2.3° VFOV: 36.9° ~ 1.3° DFOV: 68.4° ~ 2.6°		
	Optical Zoom Rate	30x		
	Equivalent Digital Zoom Rate	4x		
	Min Illumination	Night Vision off: 0.05Lux / F1.6 Night Vision on: 0.005Lux / F1.6		
	S/N	≥55dB (AGC off, Weight on)		
	Object Detective Distance	EN62676-4:2015	Person ^[1] : 2128.2m Vehicle ^[2] : 2797.1m	
		Johnson Criteria	Person: 24310.3m Vehicle: 74551.7m	
	Object Identification Distance	EN62676-4:2015	Person: 425.6m Vehicle: 559.4m	
		Johnson Criteria	Person: 6077.6m Vehicle: 18637.9m	
	Object Verified Distance	EN62676-4:2015	Person: 212.8m Vehicle: 279.7m	
		Johnson Criteria	Person: 3038.8m Vehicle: 9319.0m	

[1] Person: 1.8 x 0.5m

[2] Vehicle: 4.2 x 1.8m

Item		Parameters	
Thermal Camera	Thermal Sensor	Uncooled VOx Microbolometer	
	Lens	Focal Length: 25mm HFOV: 17.5° VFOV: 14° DFOV: 22.3°	
	Resolution	640 x 512	
	Pixel Pitch	12μm	
	Spectral Band	8~14μm	
	Sensitivity (NETD)	<50mk(@25°C, f#=1.0)	
	Temperature Measurement Range	Class1: -20~150°C Class2: 0~550°C	
	Temperature Measurement Accuracy	±3°C or ±3% of the reading (take the greater) @ ambient temperature -20~60°C	
	Object Detective Distance	Johnson Criteria	Person: 1041.7m Vehicle: 3194.4m
	Object Identification Distance		Person: 260.4m Vehicle: 798.6m
	Object Verified Distance		Person: 130.2m Vehicle: 399.3m
Laser Range Finder	Wavelength	905nm	
	Measuring Range	5-1800m (φ12m vertical surface with 20% reflectivity)	
	Measuring Accuracy	±0.3m(< 300m) / ±1.0m(> 300m)	
	Beam Angle	2.5mrad	
	Measuring Method	Pulse	
	Max Laser Power	< 1mW	
	Laser Safety	Class 1M (IEC 60825-1: 2014)	
Laser Lighting Module	Wavelength	850±10nm	
	Laser Power	0.8W x2	
	Beam Angle	8° + 30°	
	Effective Illumination Distance	≤200m	
	Laser Safety	Class 3B (IEC 60825-1:2014)	

Item		Parameters
Image & Video	Output Video Resolution	1080P@30fps
	Store Video Resolution	1080P@30fps
	Image Resolution	1920 x 1080
	Stream Encode Format	H.264, H.264H, H.265
	Stream Network Protocol	ONVIF, GB/T28181, HTTP, RTSP, TCP, UDP, RTP
	Supported SD Card	Supports a TF card with a capacity of up to 256GB
Environment	Operating Temperature	-20°C ~ 60°C
	Storage Temperature	-20°C ~ 70°C
	Operating Humidity	≤85%RH (Non-condensing)