Guide Sensmart PS Series High Performance Thermal Camera User Manual

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Introduction

The Guide PS Series high-performance thermal camera is designed to make the inspection, maintenance and troubleshooting work easier, faster and more accurate. It adopts a new generation of uncooled IR focal-plane detectors, which provides sharper thermal images and higher measurement accuracy. With its rotatable lens and screen structure, up to 13 million pixels visible light camera module, high precision rangefinder, and supplemented by some professional functions such as AI recognition naming, intelligent area measurement, flexible emissivity settings by areas, super-resolution reconstruction, strive to meet the needs of every thermography experts.

Features and Benefits

- With a new generation of focus motor and professional laser rangefinder, 1-touch autofocus in 0.4 second
- Upgraded visible light camera, flagship model up to 13 million pixels, supports infrared and visual imaging dual-channel video recording
- Support AI voice recognition, text photo recognition and typing, convenient for customizing the image name
- Optional lenses are available such as macro/wide-angle/Medium telephoto lens/ telephoto lens, support automatic calibration, easy to replace
- Support cloud services, upload local images to the cloud at any time, for remote analysis and problem feedback
- -40°C ~ 2000°C ultra-wide temperature range, support automatic switching, suitable for more application scenarios.

Application

- Electric Utilities Inspections
- Oil and Gas Maintenance
- Building Inspections
- Research and Development

Specifications

Model	PS400	PS600	PS610	PS800
Imaging and optics				
Detector type	VOx			
Infrared resolution	384 × 288@17μm	640 × 480@17μm		1024 × 768@12μm
Super resolutiontechnology	Yes, Upgrade to 768 × 576	Yes, upgrade to 1280 × 960		Yes, Upgrade to 2048 × 1536
Wavelength range	7.5 to 14μm			
Focal length	15 mm	25 mm		28 mm
Field of view	25° × 19°			
Minimum object distance	0.15 m	0.3 m		
D:S	885:1	1470:1		2325:1
NETD	≤45 mK	≤40 mK	≤30 mK	
Infrared frame rate	30 Hz / 9 Hz			25 Hz / 9 Hz
Focusing mode	Electric / Manual			
Digital zoom	1.1x to 10x	1.1x to 35x		
Shot recognition	Auto / Manual			
Measurement and analysis				
Measurement range	Support auto-switching: -40°C to 150°C, 100°C to 800°C, Optional 700°C to 2000°C (High temperature lens is required)			
Measurement accuracy	±2°C or ±2%, whichever is greater		±1°C or ±1%, whichever is greater	
Analyzed target	Spot × 12, Line × 12, Area × 12	Spot × 16, Line × 16, Area× 16	Spot × 20, Line × 20, Area × 20	Spot × 30, Line × 30, Area × 30
Tracking / Alarm	Full screen maximum, minimum and average temperature tracking; The maximum, minimum and average temperature tracking of analyzed target; full screen temperature threshold alarm (image and voice)			
Isothermals	Available			

Temperature measuringparameters	Emissivity, reflected temperature, target distance, humidity, atmospheric transmittance, optical transmittance		
Image display			
Display screen	5’’ LCD		
Eyepiece	1, 280 × 960 LCOS screen		
Digital camera	8 MP	13 MP	
Image mode	IR, VIS, MIF and PIP		
Image adjustment	Automatic, semi-automatic, manual		
Color palettes	White Hot, Iron Red, Arctic, Rainbow 2, Hot Iron, Rainbow 1, Fulgurite, Medical, Customized	White Hot, Iron Red, Arctic, Rainbow 2, Hot Iron, Rainbow 1, Fulgurite, Medical, Tint, Black Hot, Customized	White Hot, Iron Red, Arctic, Rainbow 2, Hot Iron, Rainbow 1,Fulgurite, Medical, Tint, Black Hot, Blue Hot, Sepia, Customized
Storage and transmission			
Storage media	Local storage (64 GB) and SD card (64 GB and up to 128 GB)		
Image storage format	JPG with temp info		
Video storage withouttemperature information	Mp4 format can be used to record audio synchronously		
Video storage withtemperature information	Irgd for temperature analysis		
External interface	Type-C, DC (12V) , SD card slot, Network port, Micro HDMI, UNC ¼”-20 (Tripod mounting)		
Laser	630~670nm, Class 2 laser, 1mW, indicating the measured target and laser ranging		
Audio	Recording and playback through microphones and speakers respectively		
WIFI	Yes, it can be connected to the mobile terminal for image and real-time video transmission		
GPS	Available		
Bluetooth	Available		
4G / 5G	4G module (optional)		

Power system		
Battery type	Lithium-ion rechargeable battery	
Battery working time	≥4 hours	≥3 hours
Power manage ment	Timed shutdown and sleep mode	
Charging mode	The device can be charged through desktop charger after shutdown.	
Charging time	90% of full charge in 2.5 hours	
Environmental parameters		
Working temper ature	-20℃ to 50℃	
Storage temper ature	-40℃ to 70℃	
IP rating	IP54	
Certification	CE, FCC, ROHS, KCC, Anatel, Damp heat test, Vibration test, Shock test, Impact test, UN3 8.3, MSDS	
Physical parameters		
Weight	≤1.35 Kg (with battery)	≤1.5 Kg (with battery)
Size (L × W × H)	206 × 145 × 135 mm	206 × 169 × 135 mm
Software kit	ThermoTools	
Standard	A device, Lens cover, Lithium-ion battery, Power adapter, Adapter plug (5) , TYPE-C USB cable, Micro HDMI cable, Network cable, Quick Start Guide, Instruc tions, Data download card, SD card (64 G B) , Shoulder strap, Carrying case, Factor y certificate	A device, Lens cover, Lithium-ion battery, Power adapter, Adapter plug (5) , TYPE-C USB cable, Micro HDMI cable, Network cable, Quick Start Guide, Instructions, Data download card, SD card (64 GB) , Shoulder strap, Carrying cas e, Factory certificate, Desktop charger
Options	Lithium-ion battery, Carrying bag, Deskto p charger, Bluetooth headset, Expanded l ens, 4G module, Tripod	Lithium-ion battery, Carrying bag, Bluetooth hea dset, Expanded lens, 4G module, Tripod

Extended lens information list

Model	PS400	PS600	PS800
Standard Lens			
Focal length	15mm	25mm	28mm
FOV	25°×19°	25°×19°	25°×19°
IFOV	1.13mrad	0.68mrad	0.43mrad
Min focus distance	0.15m	0.3m	0.3m
Standard Lens+Wide Angle 48°×35°			
Focal length	7.78mm	13mm	15mm
FOV	45°×34°	45°×34°	45°×34°
IFOV	2.19mrad	1.31mrad	0.8mrad
Min focus distance	0.1m	0.15m	0.1m
Standard Lens+Telephoto 11°×8°			
Focal length	33mm	55mm	45mm
FOV	11°×9°	11°×9°	15°×11°
IFOV	0.52mrad	0.31mrad	0.27mrad
Min focus distance	2m	2m	3m
Standard Lens+Ultra-Telephoto 7°×5°			
Focal length	50.7mm	85mm	75mm
FOV	7°×6°	7°×6°	9°×7°
IFOV	0.34mrad	0.2mrad	0.16mrad
Min focus distance	4m	4m	5m
Standard Lens+Macro Lens			
Working distance	67mm		
Object/target Size	23.3mm*17.5mm		
Spatial Resolution(IFOV)	60.7μm		
Standard Lens+High Temp			
FOV	25°×19°		
Temp Measurement Range	-40°C~2000°C		

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Technical parameters are subject to change without notice. For the latest information, please visit our **website:**
www.guideir.com

Documents / Resources

	Guide Sensmart PS Series High Performance Thermal Camera [pdf] User Manual PS Series High Performance Thermal Camera, PS Series, High Performance Thermal Camera, Performance Thermal Camera, Thermal Camera, Camera

References

- US Infrared Inc. - Infrared Cameras, Security Systems
- Guide Sensmart-Thermal Imaging Camera Manufacturer | Guide Sensmart

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