Guide Sensmart IR-TK451 Handheld Thermal Imaging Monocular User Guide

**IR-TK451 Handheld Thermal Imaging Monocular
User Guide**

Contents

TK Gen2 Kitalpha Series

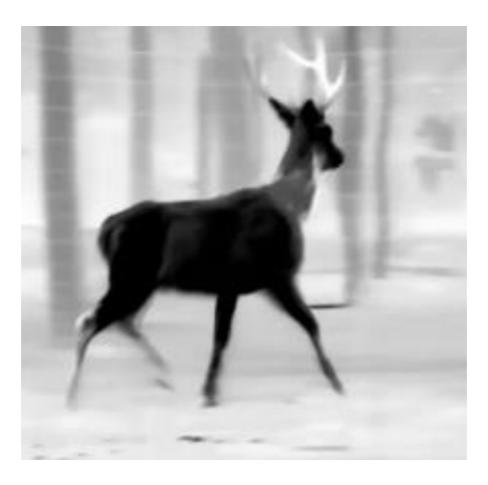**Instant, Sharp** Handheld Thermal Imaging Monocular

Upgraded Detector

Laser Indicator

Illuminator

Introduce

Equipped with Guide's new self-developed infrared detector and the patented image processing technology, the TK Gen2 Kitalpha Series captures sharp imaging and is acked with powerful features like image and video recording, smooth zoom, pseudo-color adjustment, approximate ranging and PIP. Personalized image observation is upported in different scene modes. The builtin laser indicator and illuminator facilitate itself to be operated in harsh environment.

Features and Benefits

- New self-developed infrared metal detector with high sensitivity
- PureIR adaptive filtering algorithm for sharp images in complex environments
- Built-in laser indicator to locate the targets up to 200m
- 0.4-inch 1280×960 display for comfortable observation
- Differential buttons for easy operation in total darkness
- The connected app via WiFi for remote control, live image and video transmission
- Designed to be operated under extreme environmental conditions with IP66 and 1meter drop test.

Application

- Night Hunting
- Search & Rescue
- Law Enforcement
- Night Patrol
- Outdoor Sports
- Personal Security

Specifications

Model	TK451
Infrared detector	
Resolution ratio	400×300@17μm
Wavelength range	8 14μm
NETD	≤50mk @ F1 25°C
Lens	
Focal length	50mm F1.2
Focusing mode	Manual focusing
Field angle	7.8×5.8
Frame rate	
Output frame frequenc	50Hz
Zoom multiple	
Optical zoom multiple	3.3x
Digital zoom multiple	1x—4x
Visual effect	It's like viewing at a 22'' screen at a distance of 1m
Power supply	

Battery	Built-in 2*18650 batteries with a capacity of 6,000mah
Working time	Battery continuous working time ≥ 5 hours @ 25 °C (only observe the state)
Interface	
USB	Type C (USB 2.0 standard) interface, chargeable and data access
Video interface	Micro HDMI
WIFI	Transmission of real-time video via WIFI, 2.4G frequency, distance up to 15m
External extension	External display and external Bluetooth remote control
Mechanical interface	1/4" tripod base port
Display screen	
Display screen	0.4", color LCOS screen
Resolution ratio	1280×960
Eyepiece	Monocular, exit pupil distance ≥ 10mm, adjustable diopter -4~ 2
Eyepiece zoom multiple	13.8x
Video output system	HDMI
Button	
Butt	Switch/Up/Menu/Down/Photo/video
Functions	
Smooth zoom in	Available
Adjust screen brightness	10 levels
Adjust detector brightness	10 levels
Adjust detector contrast	10 levels
Image enhancement	Available
Scene mode adjustment	Three modes: Default, Enhanced, Highlight
Super power saving mode	Available
Photo	Available
Video recording	Available
WIFI	Transmission of real-time video via WIFI for remote control, 2.4G frequency band, distance up to 15m
Pseudo colors	White Hot/ Black Hot/ Iron Red/ Blue Hot/ Green Hot/ Adjustable Red Hot
Hot spot tracking	Available

Work indicator switch	Switch
Charging indicator switch	Switch
Compensation mode	Automatic compensation, shutter compensation and scene compensation
Rough ranging	Available
Automatic shutdown	Adjustable shutdown time from 15min, 30min to 60min
Auto sleep	Adjustable shutdown time from 5 min, 10 min to 15 min
Language settings	Chinese/English/Russian/German/French
Laser indicator	Up to 201m, Red/Yellow/Green
Floodlight	Switch
System	
Time setting	Available
Watermark settings	Closure, and setting of date or date and location
PIP	Capable to swipe left and up, or pause in the middle and swipe up; or swipe right and up to close
Restore to default	Available
Startup time	15s (turn on to live image) @25℃
Memory capacit	16GB
Environmental parameters	
Working temperature	-10℃~50℃
Storage temperature	-30℃~60℃
Humidity	10%~95%, non-condensing
Impact	30G/1ms semi-sinosoidal IEC60068-2-27
Vibration	10Hz~150Hz~10Hz 0.15mm as per IEC60068-2-6
Drop	1m
Encapsulation	IP66
Certificati	IP66/FCC/CE/Rohs/EAC/un38.3
Physical parameters	
Weight	≤535g
Size	214*65*71mm
Standard	Equipped with a power adapter, a USB cable (Type C), a micro HDMI cable, a lens cover, a wrist strap, an inner bag, a shoulder strap, a Quick User Guide

Documents / Resources

Guide Sensmart IR-TK451 Handheld Thermal Imaging Monocular [pdf] User Guide
IR-TK451 Handheld Thermal Imaging Monocular, IR-TK451, Handheld Thermal Imaging
Monocular, Thermal Imaging Monocular, Imaging Monocular, Monocular

References

- **Guide Sensmart-Thermal Imaging Camera Manufacturer | Guide Sensmart**

Manuals+,