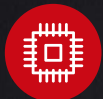


TK Gen2 Kitalpha Series

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 packed with powerful features like image and video recording, smooth zoom, pseudo-color adjustment, approximate ranging and PIP. Personalized image observation is supported in different scene modes. The built-in 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 1280x960 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 1-meter drop test

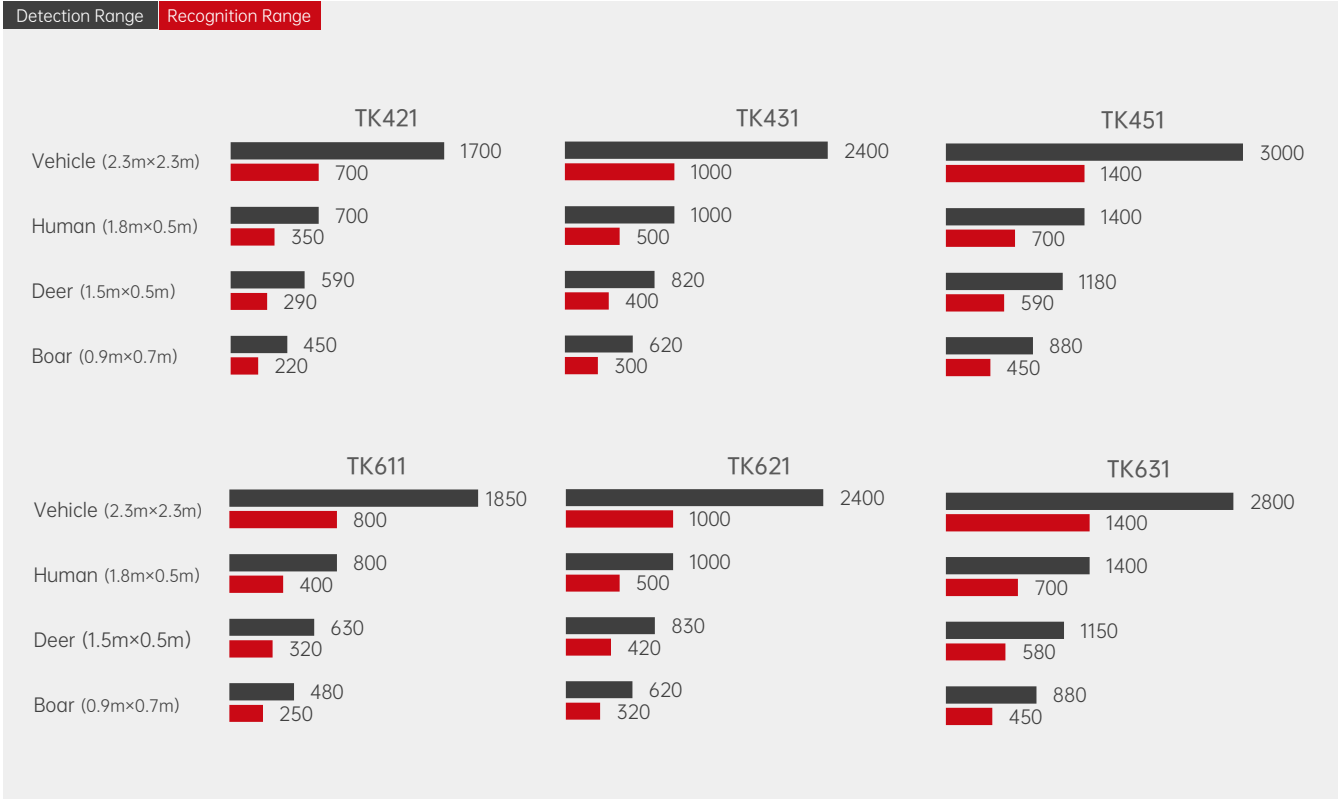
Application

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

Specifications

Model	TK421	TK431	TK451	TK611	TK621	TK631
Infrared Detector						
Detector type	VOx					
Detector resolution and pitch	400 × 300, 17 μm			640 × 480, 12 μm		
Spectral range	8 to 14 μm					
NETD	≤30mk @ F1 25°C					
Lens						
Focal length	25mm; F1.1	35mm; F1.2	50mm; F1.2	19mm; F1.0	25mm; F1.0	35mm; F1.0
Focus	Manual					
Field of view	15.4° × 11.6°	11.1° × 8.3°	7.8° × 5.8°	22.9° × 17.2°	17.5° × 13.1°	12.5° × 9.4°
Frame Rate						
Output frame frequency	50Hz					
Zoom						
Optical zoom	1.7x	2.3x	3.3x	1.1x	1.5x	2.0x
Digital zoom	1 – 4x			1 – 8x		
Visual effect	It's like viewing at a 22" screen at 1 meter					
Power						
Battery type	2 built-in 18650 batteries (6000mAh)					
Battery life	≥ 5 hours			≥ 4.5 hours		
Interface						
USB	Type C (USB 2.0 standard), supporting power supply and data access					
Video interface	micro HDMI					
External expansion	External Display					
Mechanical interface	UNC ¼"-20 (Tripod mounting), Picatinny					
Display						
Display type	0.4" FLCOS					
Resolution	1280 × 960					
Eyepiece	Monocular, exit pupil distance ≥ 10 mm, diopter adjustment: -4 to + 2					
Eyepiece zoom	13.8x					
Video output	Digital video					
Button						
Button functions	Power / Up / Menu / Down / Photo / Video					
Functions						
Smooth zoom	Available					
Screen brightness adjustment	10 levels					
Detector brightness adjustment	10 levels					
Detector contrast adjustment	10 levels					
Image enhancement	Available					
Scene modes	Enhanced, Highlight and Natural					
Ultra power saving mode	Available					
Image capturing	Available					
Video recording	Available					
WIFI	Transmission of real-time video via WIFI for remote control in the 2.4G frequency band and within 15 meters					
Color palettes	Black Hot, White Hot, Adjustable Red Hot, Iron Red, Blue Hot, Green Hot					
Hot spot tracking	Available					
Working indicator	On/Off					
Charging indicator	On/Off					
Compensation modes	Automatic, shutter and scene compensation					
Rough ranging	Available					
Automatic shutdown	Closed, 15, 30 or 60 mins					
Automatic sleep	Closed, 5, 10, or 15 mins					
Language settings	Chinese / English / Russian / German / French					
Laser indicating	Up to 200 meters					
System						
Time setting	Available					
Watermark settings	Closed, setting of date or date and location					
PIP	Upper left, Upper middle, Upper right, Closed					
Restore to default	Available					
Start up	2 s					
Memory capacity	16 GB					
Environmental						
Operating temperature range	-10 °C to 50 °C					
Storage temperature range	-30 °C to 60 °C					
Humidity	10 % to 95 % non-condensing					
Shock	30 G at 11 ms half sine pulse (as per IEC60068-2-27)					
Vibration	10 Hz - 150 Hz - 10 Hz 0.15 mm (as per IEC60068-2-6)					
Drop	1 m					
Encapsulation	IP66					
Certification	IP66, FCC, CE, RoHS, EAC, un38.3					
Physical						
Weight	≤470 g	≤485 g	≤535 g	≤490 g	≤560 g	≤560 g
Size (L × W × H)	192 × 65 × 71 mm		214 × 65 × 71 mm	192 × 65 × 71 mm		214 × 65 × 71 mm
Standard	Power adapter, USB cable (Type C), micro HDMI cable, lens cap, wrist strap, inner bag, shoulder strap, quick start guide					

Specifications



Specifications

Model	TK421
Infrared Detector	
IR Resolution	400×300@17μm
Spectral Range	8 ~ 14μm
NETD	≤50mk @ F1 25°C
Lens	
Focal Length	25mm F1.1
Focus	Manual focusing
FOV	15.4°×11.6°
Frame Rate	
Output Frame Frequency	50Hz
Zoom	
Optical Zoom	1.7x
Digital Zoom	1x—4x
Visual Effect	It's like viewing at a 22" screen at a distance of 1m
Power Supply	
Battery Type	Built-in 2*18650 batteries with a capacity of 6,000mah
Battery Operating 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	
Display	0.4", color LCOS screen
Resolution Ratio	1280×960
Monocular Eyepiece	Monocular, exit pupil distance ≥ 10mm, adjustable diopter -4~ + 2
Eyepiece Zoom	13.8x
Video Output	HDMI
Button	
Button	Switch/Up/Menu/Down/Photo/video
Functions	
Smooth Zoom	Available
Screen Brightness Adjustment	10 levels
Detector Brightness Adjustment	10 levels
Detector Contrast Adjustment	10 levels
Image Enhancement	Available
Scene Mode Adjustment	Three modes: Default, Enhanced, Highlight
Super Power Saving	Available
Images	Available
Videos	Available
WIFI	Transmission of real-time video via WIFI for remote control, 2.4G frequency band, distance up to 15m
Color Palettes	White Hot/ Black Hot/ Iron Red/ Blue Hot/ Green Hot/ Adjustable Red Hot
Hot Spot Tracking	Available
Working Indicator	Switch
Charging Indicator	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 200m, Red/Yellow/Green
Floodlight	Switch
System	
Time Setting	Available
Watermark Settings	Closure, and setting of date or date and location
Picture-in-Picture	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°C
Internal Storage	16GB
Environmental	
Working temperature	-10°C~50°C
Storage Temperature	-30°C~60°C
Humidity	10%~95%, non-condensing
Impact	30G/1ms semi-sinoidal IEC60068-2-27
Vibration	10Hz~150Hz~10Hz 0.15mm as per IEC60068-2-6
Drop Test Rating	1m
IP Rating	IP66
Certifications	IP66/FCC/CE/Rohs/EAC/un38.3
Physical parameters	
Weight	≤470g
Size	192*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

Specifications

Model	TK431
Infrared detector	
Resolution ratio	400×300@17μm
Wavelength range	8 ~ 14μm
NETD	≤50mk @ F1 25°C
Lens	
Focal length	35mm F1.2
Focusing mode	Manual focusing
Field angle	11.1×8.3
Frame rate	
Output frame frequenc	50Hz
Zoom multiple	
Optical zoom multiple	2.3x
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 200m, 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°C
Memory capacit	16GB
Environmental parameters	
Working temperature	-10°C~50°C
Storage temperature	-30°C~60°C
Humidity	10%~95%, non-condensing
Impact	30G/1ms semi-sinoidal 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	≤485g
Size	192*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

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°C
Memory capacit	16GB
Environmental parameters	
Working temperature	-10°C~50°C
Storage temperature	-30°C~60°C
Humidity	10%~95%, non-condensing
Impact	30G/1ms semi-sinoidal 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

Specifications

Model	TK611
Infrared detector	
Resolution ratio	640×480@12μm
Wavelength range	8 ~ 14μm
NETD	≤50mk @ F1 25°C
Lens	
Focal length	19mm F1.0
Focusing mode	Manual focusing
Field angle	22.9×17.2
Frame rate	
Output frame frequenc	50Hz
Zoom multiple	
Optical zoom multiple	1.1x
Digital zoom multiple	1x—8x
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 ≥ 4.5 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°C
Memory capacit	16GB
Environmental parameters	
Working temperature	-10°C~50°C
Storage temperature	-30°C~60°C
Humidity	10%~95%, non-condensing
Impact	30G/1ms semi-sinoidal 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	≤490g
Size	192*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

Specifications

Model	TK621
Infrared detector	
Resolution ratio	640×480@12μm
Wavelength range	8 ~ 14μm
NETD	≤50mk @ F1 25°C
Lens	
Focal length	25mm F1.0
Focusing mode	Manual focusing
Field angle	17.5×13.1
Frame rate	
Output frame frequenc	50Hz
Zoom multiple	
Optical zoom multiple	1.5x
Digital zoom multiple	1x—8x
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 ≥ 4.5 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
Eyeiece	Monocular, exit pupil distance ≥ 10mm, adjustable diopter -4~ +2
Eyeiece 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 202m, 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°C
Memory capacit	16GB
Environmental parameters	
Working temperature	-10°C~50°C
Storage temperature	-30°C~60°C
Humidity	10%~95%, non-condensing
Impact	30G/1ms semi-sinoidal 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	≤490g
Size	192*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

Specifications

Model	TK631
Infrared detector	
Resolution ratio	640×480@12μm
Wavelength range	8 ~ 14μm
NETD	≤50mk @ F1 25°C
Lens	
Focal length	35mm F1.0
Focusing mode	Manual focusing
Field angle	12.5×9.4
Frame rate	
Output frame frequenc	50Hz
Zoom multiple	
Optical zoom multiple	2.0x
Digital zoom multiple	1x—8x
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 ≥ 4.5 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 202m, 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°C
Memory capacit	16GB
Environmental parameters	
Working temperature	-10°C~50°C
Storage temperature	-30°C~60°C
Humidity	10%~95%, non-condensing
Impact	30G/1ms semi-sinoidal 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	≤560g
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