



Senopex

ZEN

**Cooled Multifunctional  
Thermal Binoculars**



## **Multifunctional ALL-IN-ONE Thermal Binoculars**

**D**esigned for the most demanding applications in all weather conditions, Senopex ZEN cooled multifunctional thermal binoculars is the most advanced handheld thermal imaging binoculars in the market.

**U**sing a 15 $\mu$ m pitch HgCdTe focal plane array along with Senopex pioneering long-life cooler technology, the device could see through darkness, rain, fog and smoke to be the most powerful thermal imager that integrates thermal imager, 5MP night vision imager, laser range finder, GPS and digital compass all in one concrete unit.





## Dual Vision, Dual Channel

Switch between thermal mode and 5MP high resolution visible light mode (digital night vision) to detect your target either at highlighted or with details. Using as a dual channel device to survive during both day and nighttime.





## **640 x 512@15 $\mu\text{m}$ Cooled MWIR Focal Plan Array**

Design for the most demanding applications with high resolution &  $\leq 20\text{mK}$  NETD cooled thermal imaging module that offers superb thermal imaging clarity. Use it for all weather conditions to see through darkness, rain, fog and smoke.



## **5MP High Resolution Color CMOS Detector**

**2592x1944** (5MP) high resolution CMOS detector provides ultra-smooth digital night vision experience. Built-in 'Defog' function provides reliable and consistent imagery quality.

## **Military Standard 0.5 Inch HD OLED**

**1280x1024** High resolution military standard OLED display with high optical magnification makes hunting and searching easier. The Dot is designed for an extreme temperature range of  $-40^{\circ}\text{C} + 60^{\circ}\text{C}$ .



## Built-in Laser Range Finder

High accuracy eye-safe laser range finder for measuring distances with simple one-click. Senopex provides customize laser range finder solution from **1km to 10km** to detect animals, man-size targets, vehicles and buildings in any weather conditions.

## Built-in GPS Module

High accuracy GPS system enable the device to recognize your location anywhere and anytime.

## Built-in Digital Magnetic Compass

Dynamic digital compass function enables you to know the exact direction heading for.



## Continuous Zoom Germanium Lens

40-200mm continuous zoom germanium lens for thermal mode 4.5mm~148.5mm continuous zoom germanium lens for visible light mode.



## Aircraft-grade Aluminum Alloy Housing

Hard-anodized aluminum alloy housing without any plastic parts to ensure the best durability.

## Unparalleled Detection Range

Continuous zoom lens, high basic magnification and cutting-edge thermal imaging algorithm ensure the unparalleled detection range of 7.5km for man-size targets and 15km for vehicles.

## Customizable Solutions for Your applications

From the size of the lens and the range of laser range finder to specific features of the device, we are able to **offer customizable solutions** per your request.

### Picture in Picture

PIP allows you to see targets on top center of the screen, so you can keep an eye on what you're aiming with digital magnification.

### IP67 Rated

Genuine IP67 protection level with proved tests and certificate. The unit can be dropped into a body of water up to a meter deep for half an hour.

### High Frame Rate

High frame rate ensures vivid and flawless thermal image always displayed.

### Picture & Video Recorder

Built-in picture and video recorder with 64G memory.

### Hot spot tracking

Detect and track the hottest spot within the field of view in real-time.



## ZEN Cooled Multifunctional Thermal Binoculars - Technical Specifications 1

### THERMAL DETECTOR

Detector Type HgCdTe Cooled	Detector Resolution 640*512	NETD ≤20mK	Pixel Pitch 15μm
Spectral Range 3-5μm	Frame Rate 50Hz		

### LOW-LIGHT CMOS DETECTOR

Detector Type 5MP High Resolution Color CMOS	Detector Resolution 2592*1944	Pixel Pitch 2.7μm	Frame Rate 50Hz
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### Optics

Thermal Lens 40mm~200mm F4.0	FOV 2.8°×2.2°~13.8°×11.0°	Visible Light Lens 4.5mm ~ 148.5mm Optical Zoom	Detection Range 7.5km (Human)/15km(Vehicle)
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### IMAGE PROCESSING

Digital Zoom X2 X4 X6 X8	Display OLED 1280*1024	Image Enhancement DDE	Image Correction Non-uniformity Correction
Polarity Whitehot/Blackhot/Digital Night Vision/ Multiple Palettes			

### LASER RANGEFINDER

Wavelength 1535nm	Measurement Accuracy ±1m	Measuring Range 8km(Customizable)
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## ZEN Cooled Multifunctional Thermal Binoculars - Technical Specifications 2

### DIGITAL COMPASS & GPS

Compass Measurement Accuracy  
≤2°

GPS Measurement Accuracy  
±3m

### POWER SUPPLY

Battery Type  
18650 rechargeable battery

Working Time  
4 hours

### SYSTEM ELECTRICAL INTERFACE

Serial Communication Interface  
RS232

Video Output  
PAL

Video Format  
AVI

Picture Format  
JPG

Memory Card  
64G Built-in

Data Interface  
USB 2.0

### ENVIRONMENTAL PARAMETERS

Working Temp.  
-40°C ~ +60°C

Storage Temp.  
-50°C ~ +70°C

Protection  
IP67

### PHYSICAL PARAMETERS

Weight  
3kg

Dimensions  
310×220×120mm



# Military Standard Thermal For Hunting & Law Enforcement

Senopex