### Merger Технические характеристики

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## Thermal performance with class



Thermal Imaging Binoculars

## MERGER LRF





## Classic design. Compact size

Merger LRF thermal imaging binoculars are built with the classic design of daytime binoculars. With a small form factor, these thermal imaging binoculars fit comfortably in the hand, but still offer appealing external aesthetics and exemplary ergonomics. The six function buttons are placed in the comfort access zone and the most used digital device functions are activated with a single touch.



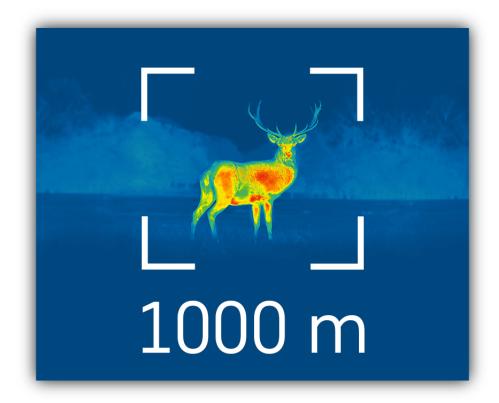
## Comfortable viewing experience

The Merger LRF binoculars' optical design fully takes into account the nature of human vision. It is natural for a person to receive visual information through two visual channels simultaneously. Viewing with two eyes is less tiring than viewing with one. This means better detection of small or faint objects, and better performance in low-contrast scenarios than similar monocular thermal imaging devices with the same technical level. The interpupillary distance in the Merger LRF binoculars is adjustable from 56 to 71 mm in accordance with the individual characteristics of a particular user.

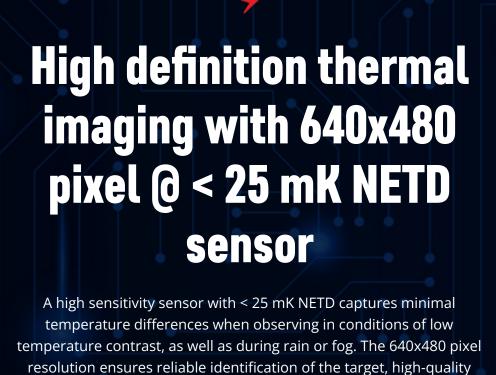


### f

## Precise laser rangefinder



Understanding the target distance is an essential factor in making the right decisions. A built-in laser rangefinder with a range of up to 1 kilometre allows you to measure distances in single measurements and continuous scanning modes with an accuracy of  $\pm$  1 meters for quick and error-free assessment of the situation.



visualisation of important anatomical features of the animal plus minute details of the surrounding landscape.





## Fast aperture F50/1.0 germanium lens

The characteristics of thermal imaging optics have a decisive influence on a thermal imager's ability to capture even the lowest radiation levels. Ultimate detection efficiency is achieved with the fast lens of the Merger LRF (F50/1.0) thermal imager in combination with the highly sensitive thermal sensor. The Merger LRF gives users the best quality, most detailed & high-contrast, informative imagery every time, even during rain or fog, when the temperature contrast of the observed scene is minimal.



F50/1.0

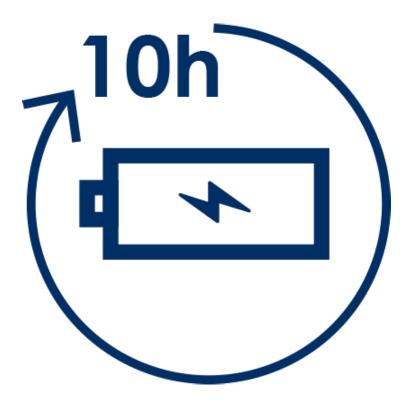
## Latest image processing algorithms



The Merger LRF thermal imaging binoculars are equipped with advanced image processing algorithms that show their effectiveness under different weather conditions and device operation scenarios. With the Merger LRF eyepieces, the user receives a new level of clear and noise-free imaging, with increased object details and improved contrast.

4

# Two independent batteries. Up to 10 hours of continuous work



The Merger LRF is powered with two rechargeable batteries: one built-in with a capacity of 4 Ah, the other replaceable with a capacity of 3.2 Ah. A single charge guarantees up to 10 hours of battery life. The embossment on the body of the replaceable battery for accurate determination of the correct position makes it possible to quickly and confidently replace a flat battery with a new one in complete darkness by touch.

### Long detection range

1800 m

A powerful long-distance objective lens combined with a 640x480@17µm highly-sensitive thermal imaging sensor provides exceptional detection capabilities. A standard 1.8m tall object can be detected up to 1800 m away in complete darkness.



### 2.5x-20x variable magnification



Digital zoom, up to 8x, provides improved focus and better overall object recognition at significant distances. The zoom changes either gradually in 2x step or continuously for a truly optimum, customized field of view for specific situation.



### High-quality reinforced magnesium alloy housing



Merger LRF is designed for constant, often hard use. A magnesium alloy housing is light and strong at the same time. The housing reliably protects the internal components of a thermal imaging device from shocks, drops, moisture, heat or cold. At the same time, a metal housing effectively removes the heat from electronics and increases consistency of the device operation during long-term observation.



### **Built-in photo and video recorder**



The Merger LRF has a built-in video recorder. The internal memory of Merger LRF can store hours of vic and tens of thousands of photos. One touch of a button is enough to take a photo of an interesting sce start recording video. The footage is copied to a computer hard drive via a USB-C port. The Merger LRF owner has a free 16 GB disk space for storing photos and videos captured with the device in the Pulsar cloud storage. Simply install the Stream Vision 2 mobile application, log in and connect the device with smartphone via WiFi.



### Stream Vision 2. Wi-Fi integration with iOS and Android devices



Built-in WiFi connects the Merger LRF to Android and iOS smartphones via the Stream Vision 2 mobile application. This opens up a wide range of options including wireless device software updates, real-tim image transmission from the device to the smartphone screen, publication on social media of photo ar video content captured by the device or transfer to messengers, remote control of digital device function and access to the latest news from Pulsar. Moreover, registered users receive 16 GB of cloud storage for photos and videos recorded with the device.



Improved Wi-Fi connectivity with 2.4 / 5 GHZ waveband support



In Merger LRF thermal imagers, the standard smartphone connection frequency range via a 2.4 GHz W complemented with an effective 5 GHz range. The 5 GHz connection offers better bandwidth, a faster c rate, noise immunity and improved connection stability, resulting in more productive and easier operathermal imager with a smartphone.



### **High-contrast HD AMOLED displays**



While the Merger's HD AMOLED displays deliver crisp, richly contrasted, vividly colored field of view, AN technology ensures flawless, fluid, high-resolution image, and power saving.



### A selection of 8 color palettes



A choice of 8 colour palettes lets the user observe their field of view more effectively, allowing them to unit for specific tasks as well as react to changing observation conditions. White Hot, Black Hot and Rec

optimal for object detection, Rainbow and Ultramarine help increase chances for recognition & identification Monochrome, Sepia and Violet are most suitable for long observation in the night.



### **IPX7 Waterproof Rated**



IPX7 waterproof-rated for protection from heavy rainfall, snow or other precipitation. The unit is design even after submersion in up to 1 meter of water for up to 30 minutes.



### Wide range of operating temperatures (-25 to +50°C)



Housing, power unit, optics and electronics of Merger LRF are designed with regard to applications in v temperatures. Merger ensures reliable and effective performance in freezing cold up to -25°C.

### **Specs**



### **Merger LRF XP50**

#### Main

Sensor 640x480 @ 17 µm (NETD <25 mK)

Objective lens F50/1.0

Magnification, x 2.5 – 20 (x8 zoom)

Field of view (HxV), degrees / m@100m 12.4x9.3 / 21.8x16.3

Detection range, m 1800

### Main

Sensor	640x480 @ 17 μm (NETD <25 mK)
Objective lens	F50/1.0
Magnification, x	2.5 – 20 (x8 zoom)
Field of view (HxV), degrees / m@100m	12.4x9.3 / 21.8x16.3
Detection range, m	1800

### Sensor

Туре	uncooled
Resolution, pixels	640x480
Pixel pitch, µm	17
NETD, mK	<25
Frame rate, Hz	50

### **Optics**

Objective lens	F50/1.0
Magnification, x	2.5 - 20
Field of view (HxV), degrees / m @ 100 m	12.4x9.3 / 21.8x16.3
Interpupillary distance adjustment, mm	56 - 71
Eye relief, mm	15

### Display

Туре	AMOLED HD
Resolution, pixels	1024x768

### Range Performance

|--|--|--|

### Laser Rangefinder

Safety class for laser equipment according to IEC 60825-1:2014	1
Wavelength, nm	905
Max. measuring range, m	1000
Measurement accuracy, m	±1

### Video Recorder

Video / photo resolution, pixel	1024x768
Video / photo format	.mp4/.jpg
Built-in memory, GB	16
Built-in memory capacity	-

### Wi-Fi

Wireless Standard	IEEE 802.11 b/g/n/ac (WPA)
Frequency, GHz	2.4/5

### **Environmental Characteristics**

Degree of protection, IP code (IEC60529)

IPX7 (waterproof)

Operating temperature range, °C

-25 - +50

### **Connections and Compatibilities**

1/4" socket Mount, type Supported Application Stream Vision 2

### **Power Supply**

Output voltage, V 3.7

Dual Li-lon Power System: 3.2 A·h Changeable Battery (external) / 4.0 Battery type

A·h Battery (internal)

Capacity, mAh 3200 (external) + 4000 (internal)

Operating time on battery pack (at  $t=22^{\circ}C$ ), h \*

10

External power supply, V

5 (USB Type C)

### Weight & Size

Body material Magnesium alloy Dimensions, mm 196x143x76 Weight, kg 0.8

### **Trade Data**

SKU (Model #) 77465 Status production

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