**THERMION DUO DXP50**

**FEATURES LIST**

**KEY FEATURES:**

* The first multispectral Pulsar hunting riflescope
* Day & night use
* 4K full-colour sensor for daytime hunting
* 640x480 @ NETD < 25 mK high-sensitivity thermal imaging sensor
* Fast aperture F50/1.0 thermal lens
* Advanced image processing: enhanced detail, clarity and contrast
* Combined multispectral viewing modes
* One-shot freeze zeroing in thermal and digital channels
* 1800m thermal detection range day & night
* Full-featured: video recording, WiFi, Stream Vision 2 mobile app compatibility

**EXTENDED FEATURES LIST:**

**The first multispectral Pulsar hunting riflescope**

The Thermion Duo DXP opens a new page in the history of Pulsar hunting optics. This is the first commercial riflescope to combine the effectiveness of thermal imaging detection at any time of day with the comfort of full-colour daytime observation. With the synergy that comes from the integration of different technologies, observation with the Thermion Duo brings enhanced high-information content.

**Day & night use**

For many hunters the Thermion Duo DXP is set to become the only option for an optical riflescope at any time of the day and in any weather conditions. This thermal imaging riflescope, the Thermion Duo DXP, is based on the best solutions and components used in the development of Pulsar optics to ensure good handling of the challenges of night hunting. Full darkness, rain and fog will not prevent the Thermion Duo DXP from locating a beast and revealing its trophy qualities. The 4K resolution digital channel gives the full colours of day hunting.

**4K full-colour sensor for daytime hunting**

The daytime digital channel clearly draws objects at distances of 10 meters and over. Using the Thermion Duo DXP as a daytime riflescope is always simple and convenient as the lens does not require focusing. The 4K-resolution CMOS sensor provides exemplary detail and identification of objects across the entire range of magnifications, from 2x to 16x. Day hunting is not only comfortable, but also high-tech when using the Thermion Duo DXP. A full-colour image peculiar to classic daytime optics is combined with extreme digital functionality. At any time, the hunter can record an image, change the reticle pattern and colour, or connect the riflescope to a smartphone.

**640x480 @ NETD < 25 mK high sensitivity thermal imaging sensor**

A high-sensitivity European-made sensor with < 25 mK NETD captures minimal temperature differences when observing in low temperature contrast conditions, or in rain or fog. The 640 x 480-pixel resolution ensures reliable identification of the target, high-quality visualization of important anatomical features of the animal plus minute details of the surrounding landscape. The sensor's large size gives the Thermion Duo DXP a wide field of view for comfortable and informative observation of both static and dynamic scenes.

**Fast aperture F50/1.0 thermal lens**

The potential of the high-sensitivity sensor is fully revealed in a thermal imaging channel by the high-aperture F50/1.0 germanium lens. The thermal imaging channel ensures maximum detection efficiency for the hunter in any weather conditions at any time of day.

**Advanced image processing: enhanced detail, clarity and contrast**

The Thermion Duo implements modern algorithms to reach a new level of image detailing, clarity and contrast. The thermal imaging channel, using a wide range of halftones, has the capability to render complex scenes with evenly emitting low-contrast objects, such as the sky, grass or water surfaces. The enhanced detail and software that sharpens objects at different distances, renders a highly informative thermal image. Manually increasing the sensitivity of the thermal imaging sensor allows you to improve the quality of detection of the animal if observation conditions deteriorate. A smoothing filter and brightness and contrast settings ensure comfort for prolonged observation times. The daytime channel gives ideal image perception in both sunny and cloudy conditions.

**Combined multispectral viewing modes**

The Thermion Duo supports four observation modes. The digital image mode is used for daytime hunting. The thermal imaging mode is designed for night conditions, and as an auxiliary mode in difficult daytime conditions – fog, dense clouds, rain, oncoming or side sunlight, tall grass, shrubbery and trees in sight affect the ability to detect an animal, comfortably observe it and clearly determine its trophy characteristics. The “Picture-in-Picture” function in the Thermion Duo makes it possible to simultaneously display images from both optical channels, prioritising the thermal or digital image.

**One-shot freeze zeroing of thermal and digital channels**

One cartridge and the Freeze software function are enough to zero in both optical channels at a selected distance. After the ranging shot, the riflescope takes a photo of the target, and the thermal imaging and digital channel reticles are set at the point of impact of the bullet. The Thermion Duo DXP can be zeroed using the base magnification or the zoom, while the click value decreases in proportion to zoom – with maximum magnification the сlick value is less than 0.1 MOA. The aiming point is stable in the full magnification range.

**1800 m thermal detection range day & night**

The advantage of thermal imaging is early animal detection at any time of day. At night, it is the most effective way to find game at a great distance. Due to high-quality long-focal-length optics and a high-sensitivity sensor, the Thermion Duo DXP sight has outstanding capabilities for the observation range – an object with a height of 1.8 m is detected at 1800 meters in complete darkness. During the day, the Thermion Duo thermal imaging channel helps locate game despite fog, haze, difficult terrain and camouflage, in tall grass, behind shrubbery or deep in the forest.

**Mounting on standard 30 mm rings**

The Thermion Duo offers visual aesthetics on any hunting weapon. From the outside the riflescope resembles a classic daytime sight in a 30mm housing. This form factor provides flexibility for mounting the scope on hunting weapons using proven ring solutions.

**High-precision ambidextrous lens focusing**

Objective lens with an internal focusing mechanism gives a clear and sharp image at any range. Ergonomic focusing wheels are located on the right and left sides, making focusing easy either left- or right-handed.

**Photo and video recording**

Keep the best moments of observation and share them with your friends and hunting colleagues. One touch of a button is enough to capture an interesting moment or start recording video. The 16 GB internal memory enables recording many hours of video and tens of thousands of photos.

**High calibre recoil resistance: 12 gauge, 9.3x64, .375H&H**

Thermion Duo thermal riflescopes are high impact resistant and can be used with rifled hunting weapons with calibres of 9.3x64, .30-06, .300, .375H&H, etc., as well as with smooth-bore and pneumatic weapons.

**6 hours of battery life on a single charge**

The Thermion Duo is powered with two rechargeable batteries: one built-in with a capacity of 4.9 Ah, the other replaceable with a capacity of 2 Ah. A single charge guarantees up to 6 hours of battery life, which covers the time of active use of the scope for a hunt. The embossment on the body of the replaceable battery is designed to determine its position accurately. It enables quick and confident replacement of a flat battery in complete darkness by touch.

**Five individual shooting profiles / 50 zeroing distances**

Zeroing settings are saved in a shooting profile. The Thermion Duo memory contains up to five shooting profiles for several types of weapons or cartridges. Each profile can hold up to ten zeroing distances.

**A selection of 10 reticle shapes in nine colour modes**

A reticle is electronically displayed in the same plane as the target. The Thermion Duo memory contains ten reticle configurations and functions (direct shot type, ballistic, scalable and regular), all available in nine colours.

**High-precision aiming in the “Picture-in-picture” mode**

The “Picture-in-Picture” function enables the shooter to display a high-precision zeroing frame. Taking only 10% of the total display area, the frame shows a magnified image of the target and reticle and allows the user to view the image close up in the aiming area and have visual control of the entire field of view at the same time. In the Thermion Duo the images from different channels can be combined on a single display, showing a thermal image in the secondary frame when using digital mode in the main frame, and vice versa. A classic function for Pulsar products, “Picture-in-Picture” is also available, when the image from one channel is simultaneously displayed in the main and additional frame.

**High-contrast HD AMOLED display**

1024x768 HD AMOLED display has enhanced colour rendering, power saving, a high-contrast image and quick-response, providing clear and smooth images for on-the-move observation or in cold conditions.

**A selection of 8 colour palettes in thermal mode**

A choice of eight colour palettes enables the user to observe their field of view more effectively, allowing them to optimise the unit for specific tasks as well as react to changing observation conditions. White Hot, Black Hot and Red Hot are optimal for object detection. Rainbow and Ultramarine help increase the chances of recognition & identification. Red Monochrome, Sepia and Violet are best for extended observation at night.

**Instant Start-up**

Just 4 seconds from the moment you press the power button the Thermion Duo is completely ready for work.

**Wide-angle eyepiece for comfortable observation**

Observation with the Thermion Duo does not strain your eyes and enables the hunter to fully concentrate on the hunting process. The wide-angle eyepiece (29.5°) and wide viewing angle of the HD quality AMOLED display provide comfortable image perception and the absence of the keyhole effect with safe removal of the exit pupil of 50mm.

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

The built-in Wi-Fi module will connect the device with smartphones based on Android and iOS via the Stream Vision 2 mobile application. This combination provides a great opportunity, such as wireless update of the device software, transmission of images to a mobile device screen in real time, remote control digital functions and many others. Users registered in the application are provided with cloud storage space for photos and videos taken with a digital or thermal imaging device.

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

In the Thermion Duo the standard smartphone connection frequency range via a 2.4 GHz Wi-Fi channel is complemented with an effective 5 GHz range. The 5 GHz connection offers better bandwidth, a faster data transfer rate, noise immunity and improved connection stability, resulting in more productive and easier operation of the thermal sight with a smartphone.

**Completely waterproof IPX7**

With an IPX7 waterproof rating, the Thermion Duo riflescopes work in conditions of high humidity and heavy rain and can withstand half an hour immersion in water to a depth of 1 meter.

**Operating temperature range: -25 to +50 °C**

Thermion Duo riflescopes are designed to operate in a wide range of temperatures, from -25 to +50 °C. The frost-resistant AMOLED display has a standout quick response time and ensures a sharp image when observed in motion.

**Optimized equal field of view of thermal and digital channels**

Magnification in each optical channel varies in the range 2 to 16 times. Magnification changes either gradually in 2x step or continuously to set the ideal ratio of magnification and visible field of view for specific scenarios. A huge advantage is that the magnification factors and fields of view of the digital and thermal imaging channels match up. This allows the hunter not to lose concentration on the observation objects when switching from channel to channel – the hunter will see the same scene, just in a different spectrum.