



# 2020

BROCHURE



**HUNTING**  
WITH PASSION

# Philosophy of Night Pearl brand

Since the establishment of the brand, emphasis has been placed on high quality production and subsequent service in line with an advantageous pricing policy. The Night Pearl brand was created by hunters, who put their passion for hunting and the hunting experience into every Night Pearl product. This in turn has led to Night Pearl becoming popular all over Europe, due to the signature high quality and rugged design of our products. Over the course of time and due to the increasing interest in the brand, Night Pearl eventually expanded to armed forces.

Night Pearl has invested in a new facility, new equipment and new technologies, using the same as those used by the leading world manufacturers of military optics and optoelectronics. This ensures we achieve extreme precision and excellent image quality for all our devices.

In order to meet the needs of different users we created several product groups: Sport, Hunting and Defence. The Sport Division offers value-for-money equipment for everyday and recreational use. Night Pearl uses large production capacities of foreign companies to achieve desired quality and best prices. The Hunting Division is the golden division of Night Pearl brand, the brand derives from hunting, and therefore holds the highest possible standard of products we offer. Night Pearl Hunting products are manufactured, controlled and precisely tuned in the Czech Republic by a team of experts.

The Defence Division focuses on the state-of-the-art image, excellent ergonomics and the durability of offered products. Devices undergo various tests using high-end laboratory equipment and are also tested under harsh conditions during the deployment of armed forces. All our devices are tried and tested in the harshest of conditions.

## **Night Pearl Vision**

Develop, produce and service innovative products for the hunting industry and armed forces. Provide hunters with a better hunting experience and brilliant image quality for an affordable price. Contribute to freedom protection and security of society with state-of-the-art optoelectronic technologies.

## **Night Pearl Mission**

Night Pearl brings state-of-the-art technology used by professionals to the life of nature lovers and hunters. Night Pearl hunting gear keeps a high standard of image quality and accuracy.

The accuracy of clip-on devices is proof of this mission.

# OUR COMPANY

ZAHORI TRADE Ltd. was founded in the year 2000 with specialization on the hunting market. The company offers quality products from own production and is distributor of well-known hunting brands.

Since 2007 our company started distributing night vision to our local market. In the year 2009, Night Pearl was founded with one simple philosophy, to design devices as hunters requested.

## NIGHT PEARL

Night Pearl offers a complete portfolio of thermal imaging and night vision devices. The thermal imaging devices we offer are monocular, clip-on and dedicated scopes. The production of night vision technologies offers monocular for both civilians and armed forces using, binoculars, clip-on and scopes. We are one of the few companies around the world that offer all our technology to both armed forces and hunters alike.

The Night Pearl brand and the entire company ZAHORI TRADE Ltd. has moved to a new premises, which we renovated in 2016. Investments in the modernization of company headquarters and new manufacturing equipment was covered by the company owner and partly from EU funds. Currently, the new building provides facilities for the whole company. From the development centre of new equipment, through actual production and product completion, to the sales department and company management. Night Pearl is a brand of the 21st century, that uses modern digital technology for measurement and optical adjustment to achieve precise image quality, absolute shooting precision and complete user satisfaction.

A team of experienced professionals ensures and maintains Night Pearl brand quality, that specialises in optical devices, mostly in night vision and thermal devices. Every product, which leaves the Night Pearl production line, is thoroughly checked and prepared for immediate use.





# PRODUCTION



## PRODUCTION

In Night Pearl laboratories, we pay close attention to the precise processing of each part of the device, as well as to the final quality control of every and each device. Digital collimators for clip-ons and other kinds of night vision devices are used for absolute accuracy of installing of microchannel image intensifier tubes (IIT). This process is applied for Night Pearl night vision every time.

We are constantly searching for new technologies, components and parts, which we can use in our devices to offer the best technologic progress and give our users the best image quality.

# NIGHT VISION

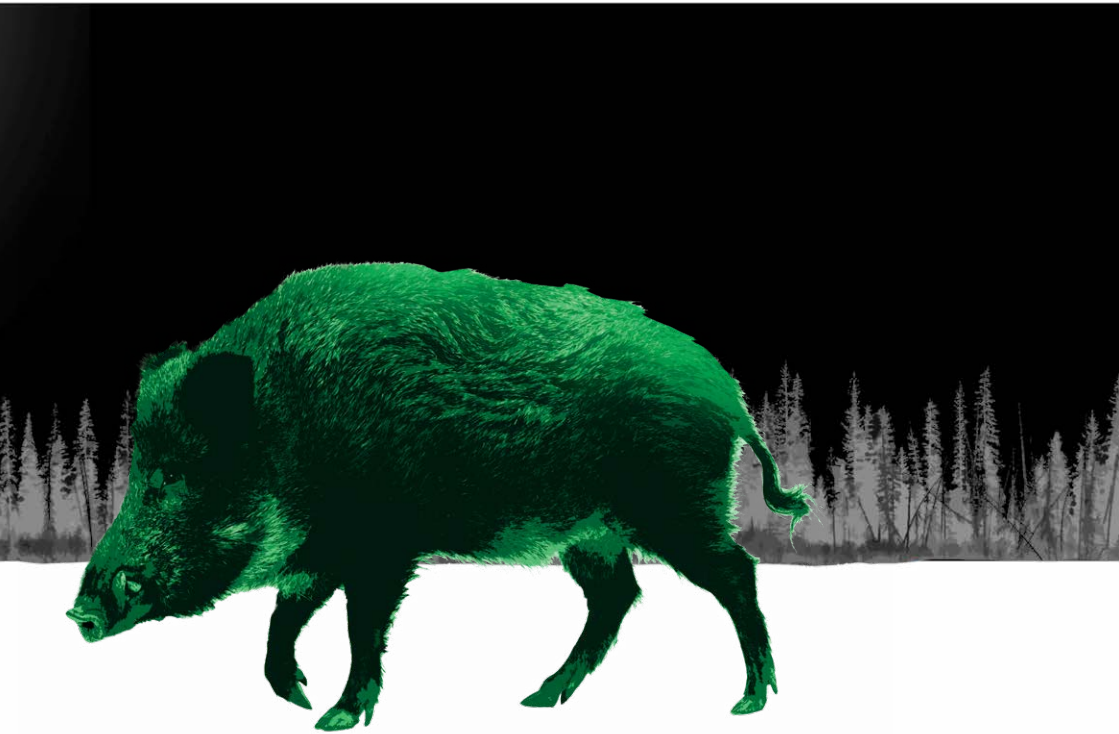


## **ADVANTAGES**

- Real image and good resolution, 3D image
- Recognise animal details
- Use higher optical magnification
- Run time up to 50 hours

## **DISADVANTAGES**

- Often needed external illumination for brilliant picture
- Difficult detection on long distances
- Bad image in fog or heavy rain
- Sensitive to day light / brightness of scenery



# NP-22 and NP-MR



Night Pearl NP-22, as well as the newest version called NP-MR are the most popular night vision attachments in Czech Republic and Slovakia. These ageless models are improved by the newest technology of image intensifier tube (IIT) and easily controlled. The improvement has come from many years of hunting experience. Hunters tested Night Pearl NP-22 for many years, the functional optical system guarantees high quality picture and precise shooting. The know-how of Night Pearl allows proven methods of alignment of optical axis and image intensifier tube for precise shooting and a perfect image while being fixed on your riflescope. Precise accuracy of the Night Pearl attachments is based on production experience and the newest assembling technologies. Each device is using the new IIT developed and made for Night Pearl only. Customers are able to choose from gen 2+ to gen 3+. The warranty period on the IIT is two years, the rest of the unit comes with a 4 year manufacturers warranty.





\*NP-22



## Technical features

	NP-22	NP-MR
Magnification	1x	1x
Objective Ø	70 mm	48 mm
Field of View	13°	13°
Exit Pupil	21 mm	21 mm
Range of Focus	10 m	10 m
Battery Lifetime	60 h	60 h
Operating Temperature	-40°C / +50°C	-40°C / +50°C
Dimension (L, W, H)	140x77x86 mm	180x77x80 mm
Weight	670 g	678 g
Warranty	24 months for complete system, 48 months for body and mechanical parts	

# Bino4 and Bino6



The Bino4 and Bino6 are the most popular night vision binoculars thanks to their versatility. Bino4 helps you to recognise small antlers or weight of wild boar for long distance. The 4 x magnification is ideal for observing both at long and short range distances. The Bino4 is the perfect device for hunting in dark conditions. The Night Pearl Bino6 is a specialist product for users who require the detail of a higher magnifications and want to recognize game at longer distances. The objective with 6 x magnification and a new system of coating the lenses are able to offer a brighter and lighter image than before. Thanks to the Bino4 and Bino6 you can now observe game for longer, giving the user all the time they need to prepare for a safe shot.



\*Bino6



\*Bino6



## Technical features

	Bion4	Bino6
Magnification	4x	6x
Objective Ø	82 mm	160 mm
Lens System	F1:1.5	F1:2.0
Field of View	9°	6.5°
Diopter Adjustment	-5 / +5	-5 / +5
Range of Focus	10 m	20 m
Battery Life	60 h	60 h
Operating Temperature	-40°C / +50°C	-40°C / +50°C
Dimensions	280mm x 102mm x 70mm	330 x 102mm x 70mm
Weight	1130 g	1230 g
Warranty	24 months for complete system, 48 months for body and mechanical parts	

# THERMAL IMAGING





## **ADVANTAGES**

- Detection at longer distances
- Easy detection in dense environments (forests, etc)
- Clear image through fog or heavy rain
- Not sensitive to daylight
- No illumination required, no output of light (undetectable)
- Digital image allows simple recording and image capturing

## **DISADVANTAGES**

- Shorter battery life
- Difficult identification at long distances
- Often objective focusing
- Flat image, because of the display



# SEER 35 plus and SEER 50 plus



**Improved  
and tested  
accuracy by  
Night Pearl**

\*Thermal Sensor and display made in France

Night Pearl SEER 35 plus and the SEER 50 plus are thermal clip-on systems. These simply mount on your existing day scope and provide excellent target acquisition and aiming capabilities. Ideal for demanding sport shooters, varmint hunter, law enforcement, or security personnel. Due to the fact that shooters use their own day scope's reticle that they are familiar with - no additional training is required. The SEER has ten different colour palettes, these different palettes allow the user to detect the target depending on different background or weather conditions. The ergonomic joystick helps with the quick navigation of the multilanguage menu. The new 2020 model plus offer Wi-Fi connection as the first clip-on in hunting market. User could enjoy 32 Gb integrated memory and live stream by App. Night Pearl SEER 35 / SEER 50 perfectly holds mean point of impact each time every time.



\*SEER 50

## Technical features



### SEER 35 **plus**



### SEER 50 **plus**

#### Magnification

1x, digital 2x, 4x

1x, digital 2x, 4x

#### Sensor Resolution, material

384x288 px, Ceramic ASi, 17µm

384x288 px, Ceramic ASi, 17µm

#### Objektiv Ø

35 mm

50 mm

#### Refresh Rate

50 Hz (PAL), 60 Hz (NTSC)

50 Hz (PAL), 60 Hz (NTSC)

#### Display Type

1024x768 px, OLED

1024x768 px, OLED

#### Field of View

10,6°x8,0°

7,4°x5,6°

#### Colour Palettes

10

10

#### Stadiametric Rangefinder

Yes

Yes

#### Taking Photo and Video

Output for Photo / Video

Output for Photo / Video

#### Wi-Fi

Mobile App and Live Stream

Mobile App and Live Stream

#### Memory

32 GB

32 GB

#### Battery Lifetime

up to 5 h

up to 5 h

#### Operating Temperature

-40°C / +60°C

-40°C / +60°C

#### Dimension (L, W, H)

175x70x63 mm

190x70x63 mm

#### Weight

495 g

511 g

#### Warranty

36 months

36 months

# SEER 35 elite and SEER 50 elite



**NEW  
2020**



\*Thermal Sensor and display made in France

Night Pearl SEER 35 elite and SEER 50 elite are the newest thermal clip-on systems on the market, based on 12  $\mu\text{m}$  technology. These simply mount on your existing day scope and provide excellent target acquisition and aiming capabilities. Ideal for demanding sport shooters, varmint hunter, law enforcement, or security personnel. Due to the fact that shooters use their own day scope's reticle that they are familiar with - no additional training is required.

The SEER elite series has ten different colour palettes these different palettes allow the user to detect the target depending on different background or weather conditions. The ergonomic control by joystick help to quick navigation in multilanguage menu for the most demanding users. The newest trends follow Wi-Fi connection as the first clip-on in hunting market. The user can enjoy 32 Gb integrated memory and live stream by App. The new firmware and improved sensor pixel architecture offer the requested picture quality and possibility of personal setting. The Night Pearl SEER elite perfectly holds mean point of impact each time every time.





\*SEER 50

## Technical features



### SEER 35 elite

### SEER 50 elite

#### Magnification

1x, digital 2x, 4x

1x, digital 2x, 4x

#### Sensor Resolution, material

320x240 px, Ceramic ASI, 12μm

320x240 px, Ceramic ASI, 12μm

#### Objektiv Ø

35 mm

50 mm

#### Refresh Rate

50 Hz (PAL), 60 Hz (NTSC)

50 Hz (PAL), 60 Hz (NTSC)

#### Display Type

1024x768 px, OLED

1024x768 px, OLED

#### Field of View

6,3°x4,7°

4,4°x3,3°

#### Colour Palettes

10

10

#### Stadiametric Rangefinder

Yes

Yes

#### Taking Photo and Video

Output for Photo / Video

Output for Photo / Video

#### Wi-Fi

Mobile App and Live Stream

Mobile App and Live Stream

#### Memory

32 GB

32 GB

#### Battery Lifetime

up to 5 h

up to 5 h

#### Operating Temperature

-40°C / +60°C

-40°C / +60°C

#### Dimension (L, W, H)

175x70x63 mm

190x70x63 mm

#### Weight

464 g

480 g

#### Warranty

36 months

36 months

# Oracle 35 plus and Oracle 50 plus



**NEW  
2020**

\*Thermal Sensor and display made in France

The Oracle 35 plus and Oracle 50 plus are thermal imaging scopes for night hunting. The precision optics and software tested by hunters guarantees high quality. The Oracle's family provides excellent target acquisition and aiming capabilities for the most demanding hunters, law enforcement, or security personnel. The Oracle plus simply mounts on a weaver rail or any other kind of rail, which allows the user to maintain consistent eye relief and shooting position. The powerful optical magnification is a good compromise of good image, wide field of view and weight of the device. Most thermal sights have one choice for black-hot/white hot commonly referred to as polarity. The Oracle plus has nine different colour palettes. Different palettes allow the user to detect the target depending on different background or weather conditions. The ergonomic joystick control helps to quickly navigate the multilanguage menu. Unique to the Oracle is the possibility to use 25 different zeroing positions. The Oracle has 5 zeroing profiles; each profile can have up to 5 different zeroing (for different distances). The 5 different reticule styles are available in 4 colours. The new 2020 model plus offers Wi-Fi connection as the first clip-on in hunting market. The user can enjoy 32 Gb integrated memory and live stream by App. The Night Pearl Oracle plus perfectly holds mean point of impact each time every time and has shock proof 1200 G.



2,5x – 10x

\*Oracle 50



50 mm

\*Oracle 50



384x288px



1024x768px



32 GB



Wi-Fi

## Technical features



### Oracle 35 plus



### Oracle 50 plus

#### Magnification

1,5x, digital 2x, 4x, PIP

2,5x, digital 2x, 4x, PIP

#### Sensor Resolution, material

384x288 px, Ceramic ASI, 17µm

384x288 px, Ceramic ASI, 17µm

#### Objektiv Ø

35 mm

50 mm

#### Refresh Rate

50 Hz (PAL), 60 Hz (NTSC)

50 Hz (PAL), 60 Hz (NTSC)

#### Display Type

1024x768 px, OLED

1024x768 px, OLED

#### Field of View

10,6°x8,0°

7,4°x5,6°

#### Colour Palettes

9

9

#### Stadiametric Rangefinder

Yes

Yes

#### Taking Photo and Video

Output for Photo / Video

Output for Photo / Video

#### Wi-Fi

Mobile App and Live Stream

Mobile App and Live Stream

#### Memory

32 GB

32 GB

#### Battery Lifetime

up to 5 h

up to 5 h

#### Operating Temperature

-40°C / +60°C

-40°C / +60°C

#### Dimension (L, W, H)

190x70x63 mm

210x70x63 mm

#### Weight

495 g

520 g

#### Warranty

36 months

36 months



# Oracle 35 elite and Oracle 50 elite

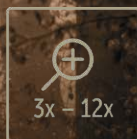


\*Thermal Sensor and display made in France

The Oracle 35 elite and Oracle 50 elite are the newest thermal imaging systems on the market, based on 12  $\mu\text{m}$  technology. The precision optics and software tested by hunters guarantees high quality. The Oracle's family provides excellent target acquisition and aiming capabilities for the most demanding hunters, law enforcement, or security personnel. The Oracle elite simply mounts on a weaver rail or any other kind of rail, allowing the user to maintain consistent eye relief and shooting position. The powerful optical magnification together with 12  $\mu\text{m}$  sensor is a choice for professionals who want to see at longer distances without compromise on a lightweight device.

The Oracle elite has nine different colour palettes. Different palettes allow the user to detect the target depending on different background or weather conditions. The ergonomic control by joystick helps to quickly navigate the multilanguage menu for. Unique to the Oracle is the option to use 25 different zeroing positions. The Oracle has 5 zeroing profiles; each profile can have up to 5 different zeroing (for different distances). The 5 different reticule styles are available in 4 colours. The newest trends follow Wi-Fi connection as the standard for sights in hunting market. The user can enjoy 32 Gb integrated memory and live stream by App. The new firmware and improved sensor pixel architecture offer the requested picture quality and possibility of personal setting. The Night Pearl Oracle plus perfectly holds mean point of impact each time every time and has shock proof 1200 G.





3x – 12x

\*Oracle 50



50 mm

\*Oracle 50



320x240px



12  $\mu$ m



32 GB



Wi-Fi

## Technical features



### Oracle 35 elite



### Oracle 50 elite

#### Magnification

2,2x, digital 2x, 4x, PIP

3x, digital 2x, 4x, PIP

#### Sensor Resolution, material

320x240 px, Ceramic ASI, 12 $\mu$ m

320x240 px, Ceramic ASI, 12 $\mu$ m

#### Objektiv Ø

35 mm

50 mm

#### Refresh Rate

50 Hz (PAL), 60 Hz (NTSC)

50 Hz (PAL), 60 Hz (NTSC)

#### Display Type

1024x768 px, OLED

1024x768 px, OLED

#### Field of View

10,6°x8,0°

7,4°x5,6°

#### Colour Palettes

9

9

#### Stadiametric Rangefinder

Yes

Yes

#### Taking Photo and Video

Output for Photo / Video

Output for Photo / Video

#### Wi-Fi

Mobile App and Live Stream

Mobile App and Live Stream

#### Memory

32 GB

32 GB

#### Battery lifetime

up to 5 h

up to 5 h

#### Operating Temperature

-40°C / +60°C

-40°C / +60°C

#### Dimension (L, W, H)

190x70x63 mm

210x70x63 mm

#### Weight

495 g

520 g

#### Warranty

36 months

36 months

# FOX 25 hunt and FOX 35 hunt



The exceptional Night Pearl thermal imaging sight is the perfect choice for customers who want perfect image quality, proven technology and an excellent price. The Night Pearl FOX uses VOx sensor technology with a choice of 25 mm or 35 mm lenses. A very compact design and recoil resistance which are rarely found in this class. The optical enlargement offers a comfortable use also for further distances. The simple user menu has three buttons. The Night Pearl FOX turns night hunting into an adventure hunt. A sharp image helps to easily spot game from a distance.



\*Fox 35 hunt



\*Fox 35 hunt



## Technical features



### FOX 25 hunt



### FOX 35 hunt

Magnification	1,4x, digital 2x, 4x, PIP	2x, digital 2x, 4x, PIP
Sensor Resolution, material	384x288 px, Ceramic VOx, 17µm	384x288 px, Ceramic VOx, 17µm
Objektiv Ø	25 mm	35 mm
Refresh Rate	50 Hz (PAL), 60 Hz (NTSC)	50 Hz (PAL), 60 Hz (NTSC)
Display Type	1280x960 px, OLED	1280x960 px, OLED
Field of View	14,9°x11,2°	10,7°x8°
Colour Palettes	4	4
Reticule	4	4
Stadiametric Rangefinder	No	No
Taking Photo and Video	No	No
Battery Lifetime	up to 4 h	up to 4 h
Operating Temperature	-20°C / +50°C	-20°C / +50°C
Dimension (L, W, H)	180x60x60 mm	193x60x60 mm
Weight	410 g	420 g
Warranty	24 months	24 months

# Scops 13



Model 2020

**VOx**

VOx-Ceramic

The new generation of thermal imaging camera, the Night Pearl Scops 13 offers a variety of interesting upgrades. The Scops 13 is designed for users who like a small device with a good image and at an affordable price. The Scops 13 operates at a resolution of 240x180 px and offers the image quality of more expensive cameras. The Scope 13 has a user friendly interface, offers several colour palettes, a new VOx-ceramic sensor using 17 µm technology, lower power consumption and 2x digital zoom. Night Pearl Scops 13 will help both beginner and professional hunters alike who are looking for a device for shorter distances. The Scops 13 is also widely used for nature observing, personal security and a variety of other outdoor activities.





## Technical features

### Scops 13

Magnification	1x, digital 2x
Sensor Resolution, material	240x180 px, Ceramic VOx, 17 µm
Objektiv Ø	13 mm
Refresh Rate	50 Hz (PAL) / 60 Hz (NTSC)
Display Type	720x540 Pixel, LCOS
Field of View	17,8°x13,4°
Colour Palettes	5
Battery Lifetime	up to 15 h
Taking Photo and Video	Output for Photo / Video
Operating Temperature	-20°C / +50°C
Dimension (L, W, H)	160x62x62 mm
Weight	315 g
Warranty	36 months

# Scops 19 PRO



Model 2020

**15h**

**Battery  
Lifetime**

The upgraded thermal imaging camera, Night Pearl Scops 19 PRO uses quality optical lenses and a modern ceramic VOx sensor to help to improve image quality. The Scops 19 PRO operates on a 384x288 px resolution and offers all our favourite features for hunters. It is a user friendly model with five colour palettes, 2x / 4x digital zoom and a short start-up time. The Scops 19 PRO has a battery life of 15 hours.



1,4 – 5,6x



19 mm



384x288px



15 h



3s start-up



## Technical features

### Scops 19 PRO

Magnification	1,4x, digital 2x, 4x
Sensor Resolution, material	384x288 px, Ceramic VOx, 17 µm
Objektiv Ø	19 mm
Refresh Rate	50 Hz (PAL) / 60 Hz (NTSC)
Display Type	720x540 px, LCOS
Field of View	19,5°x14,7°
Colour Palettes	5
Battery Lifetime	up to 15 h
Taking Photo and Video	Output for Photo / Video
Operating Temperature	-20°C / +50°C
Dimension (L, W, H)	160x62x62 mm
Weight	350 g
Warranty	36 months

# Scops 25 PRO and 25 MAX



The perfect thermal imaging monocular for customers who demand the latest technology. The image quality is due to a 25 mm objective lens with focusing capabilities, ensuring a sharp image at a variety of ranges. Scops 25 PRO has a resolution of 384x288 px, a 17  $\mu\text{m}$  sensor and VOx technology. The Scops 25 MAX has a resolution of 640x512 px, a 12  $\mu\text{m}$  sensor and VOx technology. The Night Pearl Scops 25 PRO can take both picture and video, and comes with sharing capability. The Wi-Fi connection offers live stream through the App.





## Scops 25 PRO



## Scops 25 MAX



## Technical features

	Scops 25 PRO	Scops 25 MAX
Magnification	2x, digital 2x, 4x	1x, digital 2x, 4x
Sensor Resolution, material	384x288 px, VOx, 17µm	640x512 px, VOx, 12µm
Objektiv Ø	25 mm	25 mm
Refresh Rate	50 Hz (PAL) / 60 Hz (NTSC)	50 Hz (PAL) / 60 Hz (NTSC)
Display Type	1280x960 px, LCOS	720x540 px, LCOS
Field of View	14,9°x11,2°	17,5°x14°
Colour Palettes	5	5
Battery Lifetime	up to 4,5 h	up to 12 h
Stadiametric Rangefinder	Yes	No
Taking Photo and Video	Output for Photo / Video	Output for Photo / Video
Wi-Fi	Mobile App and Live Stream	No
Memory	8 GB	No
Operating Temperature	-20°C / +50°C	-20°C / +50°C
Dimension (L, W, H)	181x65x64 mm	193x70x63 mm
Weight	455 g	480 g
Warranty	36 months	36 months

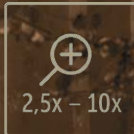
# Scops 35 PRO and 35 PRO II



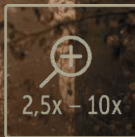
Ultimate new thermal imaging camera Scops 35 PRO and Scops 35 PRO II is designed for professional hunters that require high image quality. The most common users are demanding hunters, law enforcement and security personnel. The Scops PRO family has a thermal pixel sensor with a resolution of 384x288 px ensuring perfect image quality. The focusing objective allows precision and a crystal clear image at all times. Both units come with five colour palettes, a new VOx sensor using 17  $\mu$ m technology and both 2x and 4x digital zoom. The LCOS display has a resolution of 1280x960 px, ensuring maximum quality. Both devices can take both picture and video, which can be shared via Wi-Fi with friends.



## Scops 35 PRO



## Scops 35 PRO II



## Technical features

	Scops 35 PRO	Scops 35 PRO II
Magnification	2,5x, digital 2x, 4x	2,5x, digital 2x, 4x
Sensor Resolution, material	384x288 px, VOx, 17µm	384x288 px, VOx, 17µm
Objektiv Ø	35 mm	35 mm
Refresh Rate	50 Hz (PAL) / 60 Hz (NTSC)	50 Hz (PAL) / 60 Hz (NTSC)
Display Type	720x540 px, LCOS	1280x960 px, LCOS
Field of View	10,7°x8°	10,7°x8°
Colour Palettes	5	5
Battery Lifetime	up to 4,5 h	up to 4,5 h
Stadiametric Rangefinder	No	Yes
Taking Photo and Video	Output for Photo / Video	Output for Photo / Video
Wi-Fi	Mobile App and Live Stream	Mobile App and Live Stream
Memory	8 GB	8 GB
Operating Temperature	-20°C / +50°C	-20°C / +50°C
Dimension (L, W, H)	180x60x60 mm	186x65x64 mm
Weight	420 g	425 g
Warranty	36 months	36 months



# Scops 35 MAX and 50 MAX



The ultimate thermal imaging cameras from Night Pearl are the MAX versions of our Scops range. The Scops 35 MAX and Scops 50 MAX are designed for professional hunters and law enforcement members that demand the best available image quality and resolution. A Sensor resolution of 640x512 px and an objective with a manual focusing lens helps identify targets at extremely long distances. The phenomenal widescreen LCOS display with a resolution of 1280x960 px ensures maximum quality of image and is designed with the most seasoned professionals in mind. Both Scops MAX units run with 5 colour palettes, a new VOx sensor based on 17  $\mu$ m technology and both 2x and 4x digital magnification. The best in its class, the Scops 50 MAX allows detection of deer up to distance of around 3 km. The inbuilt Stadiametric rangefinder supports these models high class level.

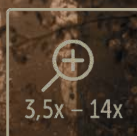




## Scops 35 MAX



## Scops 50 MAX



## Technical features

	Scops 35 MAX	Scops 50 MAX
Magnification	2,5x, digital 2x, 4x	3,5x, digital 2x, 4x
Sensor Resolution, material	640x512 px, VOx, 17 µm	640x512 px, VOx, 17 µm
Objektiv Ø	35 mm	50 mm
Refresh Rate	50 Hz (PAL) / 60 Hz (NTSC)	50 Hz (PAL) / 60 Hz (NTSC)
Display Type	1280x960 px, LCOS	1280x960 px, LCOS
Field of View	17,7°x 13,3°	12,4°x9,3°
Colour Palettes	5	5
Battery Lifetime	up to 4 h	up to 4 h
Stadiametric Rangefinder	Yes	Yes
Taking Photo and Video	Output for Photo / Video	Output for Photo / Video
WiFi	Mobile App and Live Stream	Mobile App and Live Stream
Memory	8 GB	8 GB
Operating Temperature	-20°C / +50°C	-20°C / +50°C
Dimension (L, W, H)	180x65x64 mm	202x65x64 mm
Weight	430 g	520 g
Warranty	36 months	36 months

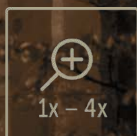
# IR510SE n and IR510SE nw



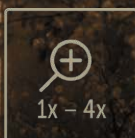
The thermal imaging monocular IR510SE continue the successful line of the first monocular Night Pearl brand. The IR510 experienced rapid sales right from launch, thanks to its good price-power ratio. The new versions n and nw follow the same trend. The model IR510SE and IR510X are two of the bestselling thermal imaging cameras in Europe. The entry level model IR510SE n has a 19 mm lens, VOx sensor and a resolution of 400x300 px, and comes with the red hot colour pallet. This red-hot colour helps observe animals at a longer distance. The calibration is almost inaudible, and battery is approximately 5 hours, making the product ideal for hunters. The Night Pearl IR510SE series work perfectly during day and night, and during fog or even heavy rain. Users that require photo and video will need to look to the IR510SE nw.



## IR510SE n



## IR510SE nw



## Technical features



	IR510SE n	IR510SE nw
Magnification	1x, digital 2x, 4x	1x, digital 2x, 4x
Sensor Resolution, material	400x300 px, VOx, 17µm	400x300 px, VOx, 17µm
Objektiv Ø	19 mm	19 mm
Refresh Rate	50 Hz (PAL) / 60 Hz (NTSC)	50 Hz (PAL) / 60 Hz (NTSC)
Display Type	720x540 px, OLED	720x540 px, OLED
Field of View	19,0°x14,5°	19,0°x14,5°
Colour Palettes	6	6
Taking Photo and Video	No	Output for Photo / Video
Wi-Fi	No	Yes, Mobile App and Live Stream
Battery Lifetime	up to 5 h	up to 5 h
Operating Temperature	-10°C / +50°C	-10°C / +50°C
Dimension (L, W, H)	160x67x62 mm	160x67x62 mm
Weight	340 g	340 g
Warranty	24 months	24 months

# IR510X n and IR510X nw

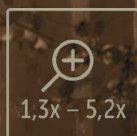


This monocular was introduced in the year 2017, and received huge amounts of positive feedbacks that time. This was mainly thanks to its focusing objective and 25 mm lens. The good image is further improved by new sensor technology. IR510X was diversified by two models with VOx sensors and 17  $\mu\text{m}$  pitch size in year 2019. Both have a 25 mm objective and a sensor resolution of 400x300 px. The red-hot colour palette improves the detection of animals at longer distances. The calibration is almost inaudible, and battery life is approximately 5 hours, making the units ideal for hunters. The Night Pearl IR510X series work perfectly during day and night, and during fog or even heavy rain. Users that require photo and video will need to look to the IR510X nw.





## IR510X n



1,3x – 5,2x



25 mm



400x300px

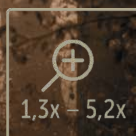


5 h



Lens manual  
focus

## IR510X nw



1,3x – 5,2x



25 mm



400x300px



5 h



Lens manual  
focus



Wi-Fi

## Technical features



	IR510X n	IR510X nw
Magnification	1,3x, digital 2x, 4x	1,3x, digital 2x, 4x
Sensor Resolution, material	400x300 px, VOx, 17µm	400x300 px, VOx, 17µm
Objektiv Ø	25 mm	25 mm
Refresh Rate	50 Hz (PAL) / 60 Hz (NTSC)	50 Hz (PAL) / 60 Hz (NTSC)
Display Type	720x540 px, OLED	720x540 px, OLED
Field of View	14,6°x11,1°	14,6°x11,1°
Colour Palettes	6	6
Taking Photo and Video	No	Output for Photo / Video
Wi-Fi	No	Yes, Mobile App and Live Stream
Battery Lifetime	up to 5 h	up to 5 h
Operating Temperature	-10°C / +50°C	-10°C / +50°C
Dimension (L, W, H)	168x67x62 mm	168x67x62 mm
Weight	355 g	355 g
Warranty	24 months	24 months

# Night Pearl Adapter



Each Adapter Set consists two parts, objective adapter and reduction ring. The objective adapter has to be placed on the rifle scope objective lens. The reduction ring connects to the adapter with the user's night vision or thermal imaging device. The objective adapter and reduction ring have to be used screwed together.

## Objective Adapter

Night Pearl produce adapters for each common rifle scopes. The right objective adapter is chosen after measuring output diameter in objective part. Size available: (Ø in mm) **30 38 39 41 42 48 49 50 54 55 56 57 58 59 60 62 62.5 64 65 66 67 79 80**

## Reduction ring

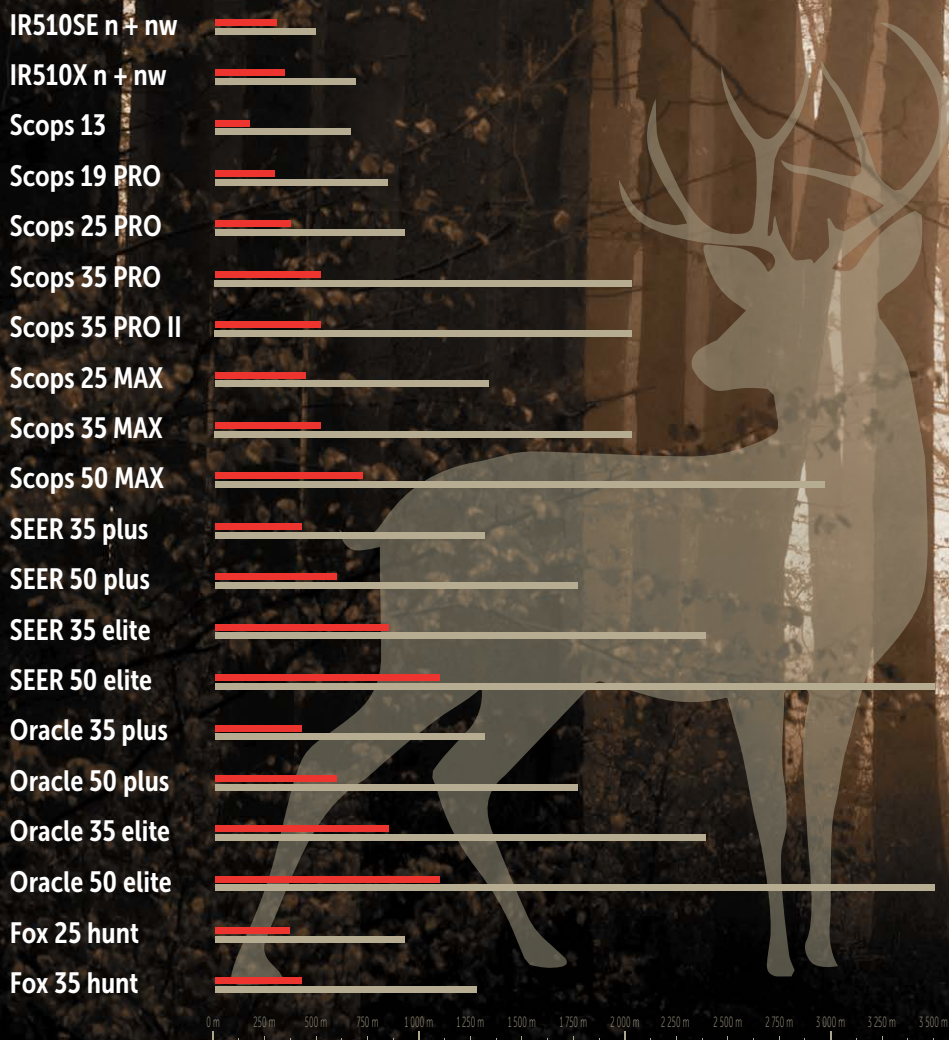
Reduction ring connect device with Objective Adapter. Reduction rings and Objective Adapters are completely designed and produced by Night Pearl brand. Adapter Set and Night Pearl products fits together and allow the available precision which can be reach. The Reduction rings are produce for these devices:

**NP 22, NP- MR, SEER 35, SEER 50, NiteHog TIR-M50, NiteHog TIR-M35, Guide TA435, FLIRb by Armasight CO-X, FLIR by Armasight CO-MR, NightSpotter MR 2.0 (NightSpotter X 2.0, NightSpotter EVO), Reduction ring for adapter Rusan.**

## Adapter Set

Adapter Set contain from Objective Adapter and Reduction ring.

# Detection and identification



According Johnson's criteria is 50% probability on object detection beside mentioned critical specification. Mentioned values are based on empiric monitoring and data evaluation thermal imaging camera.

# Night vision technology

Image intensifier tube is part of night vision devices, that enables to see in the dark. Image intensifier tube intensifies remaining visible light and turns invisible and infrared light into visible. Below are the most important parameters for choosing image intensifier tube for night vision.

## Resolution (lp/mm)

Determines image clarity. The higher the resolution, the better the image quality. High resolution together with high signal to noise ratio results in longer detection and recognition distances.

## Signal to noise ratio

Determines how much noise contains final image. The bigger the value is the less noise is seen. Noise is perceived as "snowing".

## Gain

It determines by how many times image intensifier tube can amplify gathered light.

## Integral sensitivity ( $\mu A \setminus lm$ )

It is the ability of image intensifier tube to effectively gather and then convert light (photons) into electrons, which are then amplified many times and converted back to visible light. The higher this value is, the better the image intensifier tube operates under darker conditions.

Generation 3+ image intensifier tubes are more sensitive than generation 2+ tubes. In real life this means that in truly dark conditions with the 2+ generation (if the moon is not visible, stars are poorly visible or the sky is completely overcast) you will need to use an IR illuminator to improve the image quality. When using generation 3+ image intensifier tubes under same conditions, IR illumination is not necessary. Older generation image intensifier tubes can work effectively only with IR illumination.







## Phosphorus type

Another important parameter is the color of the image. It can be green or black and white. Phosphorus type determines color that can be seen through night vision device. The use of green phosphorus (P43) is recommended for night vision sights and clip-ons, because due to evolution the human eye distinguishes more shades green, allowing the user to see more details and detect movement over longer distances. However, for long-term observations it is recommended to use a blueish-white or black-and-white type of phosphorus (P45) that is also called ONYX. This color reduces eye fatigue and is psychologically more comfortable for long-term observation at night.

# Thermal technology

To select suitable thermal imaging device, it is necessary to determine in advance how you will use it, like observation, shooting etc. Image quality is affected by several parameters. Most common uncooled thermal imagers process heat radiation with a wavelength of 8 - 14  $\mu\text{m}$  (LWIR spectrum). The resulting image is determined not only by the following parameters, but also by the software and country of origin. The resulting image is determined not only by the following parameters, but also by the software and country of origin.

## Sensor resolution

The higher the resolution of the thermal sensor is, the more detailed is the image, and device can process data (heat signal) more efficiently. Higher resolution results also in a larger field of view (FOV). For clip-on devices it is not so important to have high resolution, as clip-on FOV is limited by day sight, that is usually has smaller FOV than clip-on.

## Sensors' production technology (12 $\mu\text{m}$ or 17 $\mu\text{m}$ )

12 micrometer technology can make a real difference because of the overall smaller size of the device (using smaller lens diameters) at similar observation distances compared to 17  $\mu\text{m}$  technology. 12 $\mu\text{m}$  devices provide greater optical magnification and greater detection distances compared to 17 $\mu\text{m}$  when using the same lens diameter. For clip-ons 12  $\mu\text{m}$  technology is also important for better accuracy, at a distance of 100 m, there may be a difference even a couple cm compared to 17  $\mu\text{m}$ .

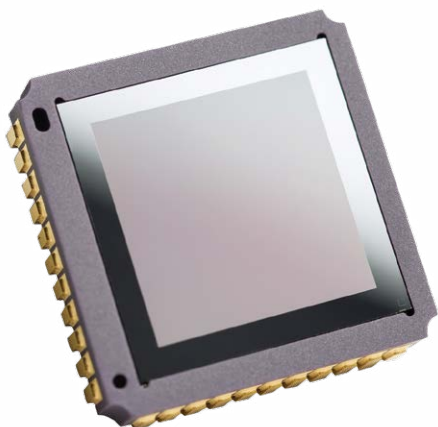
## Sensor material (VOx or ASi)

Newest ASi sensors made in France by Lynred (Ulis in past) have the same performance and endurance as VOx. They also have similar sensitivity for thermal signal (NETD).

## NETD

This value indicates sensitivity of the sensor to thermal radiation in the electromagnetic spectrum. The larger the value, the clearer the details in the image and the device is capable of detecting even small temperature differences. Quality sensors have a sensitivity between 30 and 50 mK.





### **Display resolution**

With higher resolution, you can get better picture quality. Quality of display significantly affects operating temperatures and energy consumption. If the display resolution is too high or too low for the sensor, the image will be blurred.

### **Shock proofness**

This parameter is especially important for sights and clip-ons. Some of the sensors and devices manufactured in Asia is not sufficiently resistant to recoil. The sensor or device can be destroyed after several shots. Devices with sensors from France, producer Lynred are also resistant to .50 BMG and Night Pearl tests them at 1200G, that equals to 8,000 J.

### **Software**

High quality software can significantly increase picture quality as well as detection and recognition distances of the device by better image processing algorithm.

# HUNTING

## WITH PASSION



Reseller:

**Night Pearl** | Czech Republic | Producer: ZAHORI TRADE s.r.o., Holesovska 1714, Bystrice pod Host. 768 61, CZ  
[www.nightpearl.eu](http://www.nightpearl.eu) | [info@nightpearl.eu](mailto:info@nightpearl.eu)

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