

NST-2 THERMAL SIGHTING DEVICE



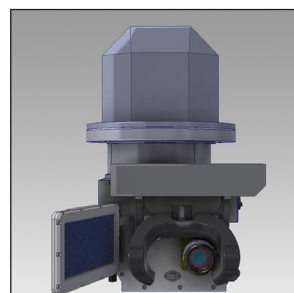
NST 2 thermal sighting device is a modern solution for the upgrade of a large number of old T55 and T62 tanks. By installing this device, tank becomes more lethal on the battlefield, both by day and by night. Sighting device consists of the following:

- Fourth generation thermal imaging camera (4th generation)
- Laser rangefinder (Nd:Yag or ErGlass up to 10000 m)
- Optical channel with 4x and 12x magnification
- Up to 23x optical zoom day vision camera

The device is installed and coupled with gun using sight linkage, while deviator mirror enables it ballistic self-corrections.

Optical channel	
Field of view at 4x magnification	12°
Field of view at 12 magnification	4°
Diopter	±5

Laser rangefinder – LRF10	
Laser type	Nd:Yag, (OPTIONAL: Er Glass)
Range	80-10000m
Precision	±2m
Range gate	80-2000m
Number of objects	2 + 1 blocked
Wavelength	1064 nm (1540 nm)
Energy	20 MJ (ErGlass: 8 MJ)
Beam divergence	< 1 mrad
Measuring frequency	up to 20 pulses at 1 Hz



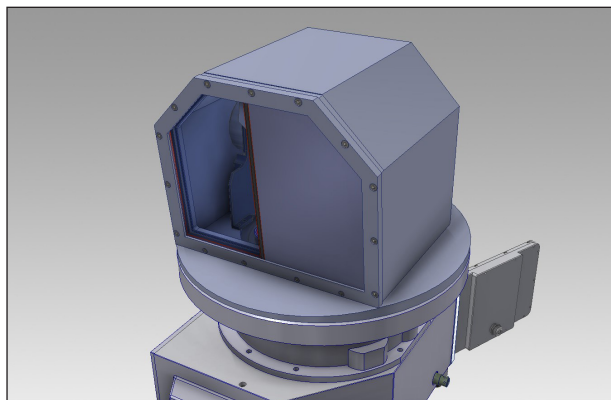
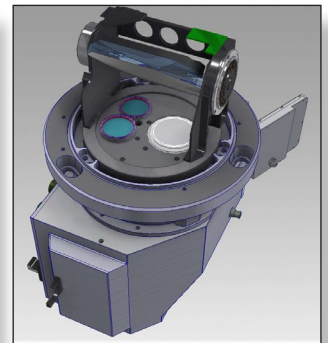
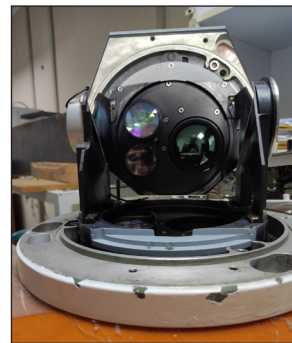
Modern, uncooled thermal imaging camera is characterized by extraordinary detection capabilities, even of hidden vehicles at long distances. At night, thermal imaging camera is indispensable for aiming purposes.

Thermal imaging camera	
Detector type	Uncooled, Von Microbolometer
Resolution	800x600 pixels, 12 um
Horizontal field of view	6.2°
Vertical field of view	5.0°
Focal length	60 mm
Detection	Vehicle 2.3x2.3 m: > 6.2 km Human 1.7x0.75 m: > 2.6 km
Recognition	Vehicle 2.3x2.3 m: > 1.6 km Human 1.7x0.75 m: > 650 m
Identification	Vehicle 2.3x2.3 m: > 800 m Human 1.7x0.75 m: > 330 m
Digital zoom	2x, 4x, 8x



Day vision camera enables long-range surveillance and aiming during the daytime and in low visibility conditions (dusk).

Day vision camera	
Resolution	800x600
Optical zoom	1x-23x (4x, 12x, 23x)
Field of view	580-2.80
Minimum illumination	0.001 Lux/F1.5



The sighting device is installed in place of an old gunner's observation device TPN-22 and it does not require major additional modifications on the turret. The device is protected by an armored housing and high-level ballistic protection glasses.

Technical characteristics: Tank driver visualization system

Thermal imaging camera	
Detector type	Uncooled, VOX
Resolution	640x512 pixels, 17 um
Horizontal field of view	78°
Vertical field of view	58°
Focal length	8.3 mm
Lens	Fixed-focus lens
Minimum focus	2 m
Day vision camera	
Type	1/2.8", 2MP
Resolution	1920x1080 pixels
Minimum illumination	0.001 Lux/F1.0
Horizontal field of view	87°
Vertical field of view	72°
Focal length	3.6 mm
Lens	Fixed-focus lens
Minimum focus	1.6 m
Video compression	H.265/H.264/H264B/
Smart code support	H.265+/H.264+
Operating conditions	
Temperature range	-30°C to +70°C
Power supply	10-36 V
Ethernet	RJ-45 (10/100 Base-T)
Device dimensions	237x230x160 mm
Distribution box dimensions	296x260x76 mm
Analog video	PAL

Technical characteristics: Tank driver navigation system

Specifications of GNSS receiver	
Receiver type	GNSS Position and Heading RTK Receiver
Signals	GPS, GLONASS, BeiDou, Galileo, QZSS, IRNSS, Atlas
Channels	1059
GPS sensitivity	-142 dBm
SBAS Tracking	3- channels, parallel tracking
Refresh rate	10 Hz, 20 Hz-optional
Angular rate	up to 100°/s
Activation time	from 5 s to 20 s
Receiving antenna impedance	10Ω
Precision	
Positional	1m
Direction	<0.1° @ 1m receiver spacing
Slope and gradient	1°
Power supply	
Operating voltage	9-36 VDC
Maximum consumption	10.8 W
Maximum current	1.2 A
Reverse polarity protection	YES
Operating conditions	
Temperature	-40°C to + 70°C
Storage	-40°C to + 85°C
Impact, vibration, EMC standard	MIL-STD-810G
Housing protection	IP69K
Device dimensions	232x165x79 mm
Distribution box dimensions	296x260x76 mm
Analog video	PAL

Technical characteristics: Laser radiation detector (laser warning system) LDWS 1

Direct radiation detection	
Wavelength range	0.4 – 1.7 um
Number of receiving channels	10
Horizontal field of detection	360°
Vertical field of detection	from -20° to + 60°
Indirect radiation detection	
Wavelength range	0.4 – 1.7 um
Number of receiving channels	1
Horizontal field of detection	360°
Vertical field of detection	from -7° to -30°
Dimensions	
Detector head	120x190 mm, 2.1 kg
Display-screen	220x120x150 mm, 1.5 kg
Axle assembly	55x55x150 mm, 0.9 kg
Cables	3x, 0.9 kg
Display - screen	
Horizontal resolution	10x36° LED
Display resolution	1°
Radiation type	Laser rangefinder Lase designator Laser beam rider
Memory	20 last detections
Activation	Alarm/Smoke pot launchers
Temperature range	-30°C to +55°C
Power supply	18-36 VDC