

NST-2 THERMAL SIGHTING DEVICE



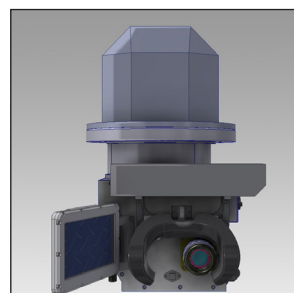
NST 2 thermal sighting device is a modern solution for the upgrade of a large number of old T55 and T62 tanks. By installing this device, tank becomes more lethal on the battlefield, both by day and by night. Sighting device consists of the following:

- 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.

| 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 |

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



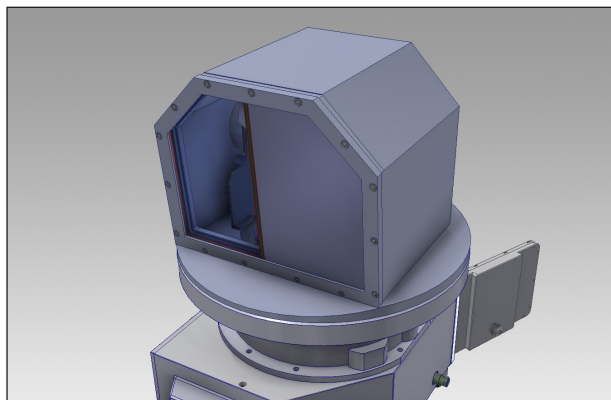
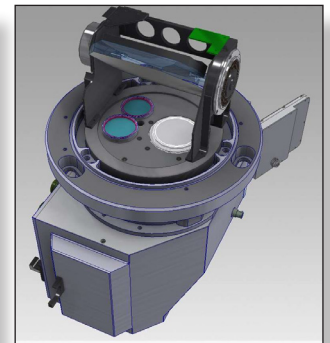
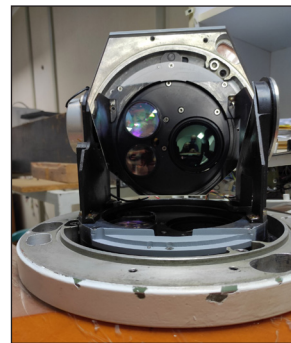
Modern, uncooled thermal imaging camera is characterized by extraordinary detection capabilities, even of hidden vehicles at long distances. At night, thermal imaging camera is indispensable for aiming purposes.

| 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 |