

Transvaro Elektronik Aletleri

PRODUCT CATALOG

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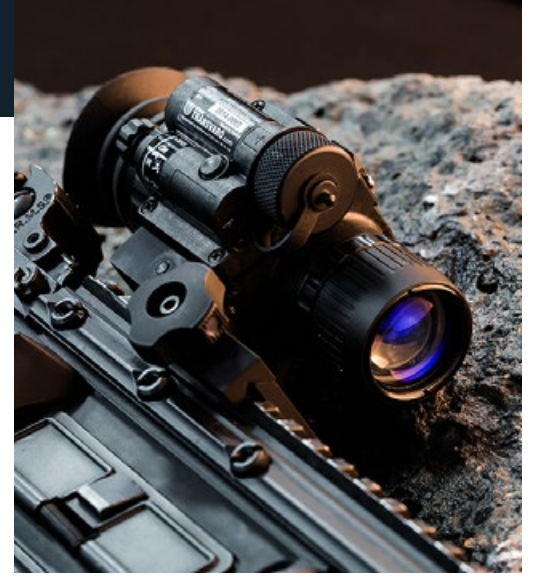
Transvaro Elektronik Aletleri Sanayi ve Ticaret A.Ş. reserves the right to make changes on the product.
Transvaro Elektronik Aletleri Sanayi ve Ticaret A.Ş. an UYAR HOLDING subsidiary.



About Us

Transvaro is a leading company, designing and manufacturing day/night, thermal and multi vision systems, laser systems, border safety systems, periscope systems, 360-degree situation awareness systems and electromagnetic weapon systems in addition to having experience with the installation and repair of image intensifier tubes (18mm and 25mm), turn-key simulator systems/ centers and electronic security systems projects have been carried out and delivered successfully.

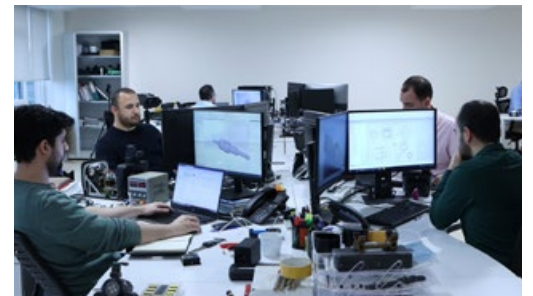
Transvaro is located in Halkali/Istanbul, Turkey. With our experience of more than 30 years in electronic/electrooptical systems the armed forces and security forces of Turkey and several other nations rely on our systems and products. Electro-Optic production in 7.000 m² closed area in Istanbul, 27.000 m² Electro-Optic systems production area in Dilovasi, 5.000 m² indoor production factory in Ankara and 10.000 m² indoor production factory in Yozgat is among the leading companies in the sector.



Transvaro's quality management system is structured according to the requirements of ISO 9001:2015 and AQAP-2120 standards and certified by ABS Quality assessments (ABS QE) and the Ministry of National Defence Quality Management Department. It also has ISO 14001, OHSAS18001 and the Ministry of National Defence's "National Confidential" Privacy-Grade Facility Security documents.



- AQAP 2120 QUALITY ASSURANCE CERTIFICATE
- ISO 9001:2015 QUALITY ASSURANCE CERTIFICATE
- FACILITY SECURITY CLEARANCE CERTIFICATE
- ISO 14001 CERTIFICATE
- OHSAS 18001 CERTIFICATE
- NATO REGISTRATION T0585



History

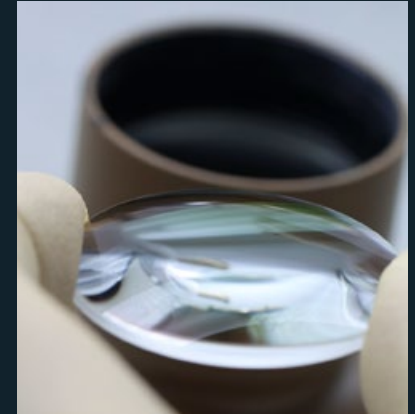
- 1988 ● Foundation Transanka & Usa Varo Joint Venture
- 1992 ● Foundation Of Factory Facilities In Halkali
- 1994 ● %100 National Capital, Mine Dedector Production
- 1995 ● First Laser Target Pointer Design And Production With 3 Different Models
- 1996 ● First Shooting Training Simulator Production
- 1997 ● Electronic Time Setter Device Production For 155 Mm Icm Ammunition
- 1998 ● Installation M48/Leopard 1 Armoured Vehicle Training Center for TAF
- 2000 ● Final Installation And Test Process Of Eryx Antitank Weapons
- 2004 ● 4 Pieces Mine Hunting Vessels, 2 Pieces Frigate And 1 Piece Fast Patrol Boat Cable Group Production Installation In Germany
- 2009 ● 3500 Piece Thermal Weapon Sight Design And Production
- 2012 ● Repair And Assembly Of Tubes
- 2013 ● Tube Design And Tactical Night Vision Tübitak Project
- 2014 ● Clip On Thermal Scope Design And Production
- 2015 ● Red Dot Target Pointer Design And Production
- 2016 ● 3 12x50 Sniper Scope Design And Production
- 2017 ● Thermal Monocular Design And Production
- 2018 ● Scope Design and Production, Acoustic Sniper Detection Systems, Radar Systems
- 2019 ● Gimbal Design, Laser Designator, Electromagnetic Weapon Systems
- 2020 ● FEDAI UAV Detection System, DROKA, Jammer
- 2021 ● R&D Center Application and Acceptance

Vision

Provide swift and integrated solutions to our customers to enhance their performance in view of defence security, viewing and target designation in the manner to give tactical superiority based on the advanced technology Provide logistic support of all type during and subsequent to sales in order to benefit from such solutions optimally

Mission

Being a company pioneering in the field of National Defense with the products of high technology



Facilities & Capabilities

Optical Production

Mechanical Production

Electro-Optical Production

- Night Vision Devices
- Infrared Vision Devices
- Day Vision Devices
- Armored Vehicle Periscopes
- Laser Target Pointer Devices
- Image Intensifier Tube Repair

Quality

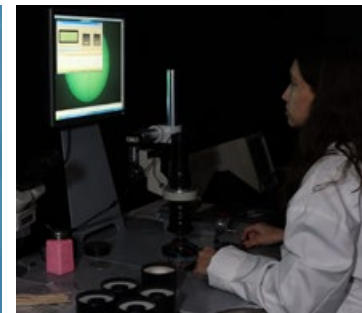
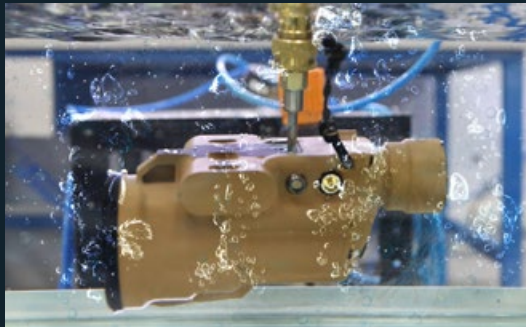
- Incoming Inspection
- In-Process Quality Control (IPQC)
- Environmental Conditions Test Laboratory

Modernization Projects, After Sales Services



Environmental Conditions Test Laboratory

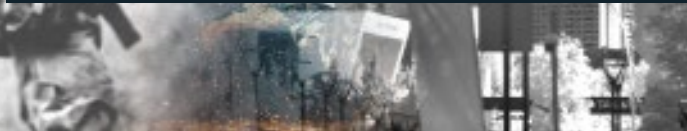
- High Temperature operating and storage test
- Low Temperature operating and storage test
- Temperature shock test
- Humidity test
- Dust and sand test
- Mechanical vibration and shock test
- Drop test
- Immersion test
- Pressure test





PRODUCTS & SOLUTIONS

- Multi Sensor & Surveillance Systems
- UAV Detection & Defence Systems
- Gimbal Systems
- Fusion Vision Products
- Thermal Vision Products
- Night Vision Products
- Day Vision Products
- Sniper Detection Systems
- Laser Systems
- PAN-TILT Systems
- Electromagnetic Weapon Systems
- Tactical Products



TV/GUARD

OPTICAL DAY / NIGHT OBSERVATION SYSTEM



TV/GUARD OPTICAL DAY / NIGHT OBSERVATION SYSTEM

General Features

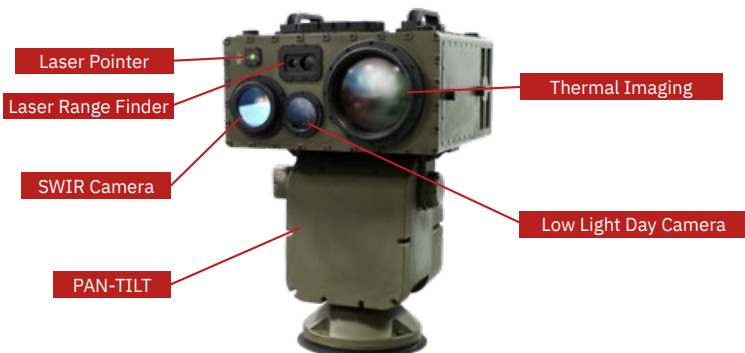
TV/GUARD is a multi-sensor camera with automatic target detection and moving target tracking.

The device is integrated with SWIR Camera, MWIR cooled thermal camera, low light day camera, laser range finder, laser pointer, GPS and digital magnetic compass.



*Standard lens values. Values may differ with optional lenses.

- Multiple Target Detection and Moving Target Tracking.
- MWIR Cooled Thermal Camera with Optical and Digital Magnification.
- Optional SWIR camera unit available.
- Automatic Thermal gain / pallet / gain area selection / detailing.
- Low Light Daylight Camera with Optical and Digital Magnification.
- Low Light Camera day-night modes / electronic-optical fog correction / contrast / saturation / detailing.
- Laser range finder measurement in meters/yards/feet.
- Target vertical and horizontal distance, spot elevation, heading and elevation angles and coordinate display.
- Geographic, UTM and GRID coordinate detection of the device and target location.
- Does not require zeroing and calibration settings.
- Pan-Tilt Unit It can move $n \times 360^\circ$ continuously in horizontal (pan) and $\pm 40^\circ$ in vertical (tilt) axis.
- Pan-Tilt unit speed and position control is done with a command control unit.
- Automatic target detection and automatic target tracking.
- Programmable Sector Scan Mode



TV/GUARD OPTICAL DAY / NIGHT OBSERVATION SYSTEM

Technical Specifications			
TECHNICAL FEATURES	Detector Resolution	Cooled 640x512 15µm	
	Spectral Range	3~5µm (MWIR)	
	Electronic Zoom	8x	
	Optical Magnification	18x continuous zoom	
	Field of View	1,2°x1°~21.7°x17.5° (Optional: 0,9°x0,7°~16.5°x13°)	
	Gain Adjustment	Automatic / Manual	
	Brightness / Contrast	Automatic / Manual	
	Polarity	White-Hot / Black-Hot	
WORKING DISTANCES (*DRI data are theoretical values calculated according to Johnson criteria and may vary depending on weather conditions. Temperature different between target and background: 10°C with %90 probability in good weather conditions.)		1.8mx0.5m Human	2.3mx2.3m NATO
	Detection Distance	≥ 12 km / 17 km	≥ 26 km / 32 km
	Recognition Distance	≥ 3 km / 4.3 km	≥ 6.5 km / 9.4 km
	Identification Distance	≥ 1.5 km / 2.1 km	≥ 3.2 km / 4.7 km
VISIBLE CAMERA	Resolution	2 Mp. 1920x1080	
	Electronic Zoom	8X	
	Optical Magnification	35X	
	Field of View	2.3°~ 56°	
SWIR CAMERA (OPTIONAL)	Resolution	640x512	
	Lens	50 mm f1.1 (Optional zoom optic: 20 mm~ 100 mm f/3)	
	Field of View	11°x8.8° (Optional Zoom Optic: 5.5°x4.4° ~ 27°x21°)	
	Dark Current Level	≤ 6 nA/cm² (≤ 13.5 fA)	
	Detector material	InGaAs	
	Detector Size	9.60 mm x 7.68 mm (Detector active area)	
	Pixel Size	15 µm x 15 µm	
	FPS	30 Hz (Adjustable for lower values)	
	Dynamic Field (dB)	≥ 60 dB	
	Electronic Zoom	x8	
GPS	Position Accuracy	≤15m	
DIGITAL MAGNETIC COMPASS	Resolution	0.1°	
	Orientation Accuracy	1° (RMS)	
LASER RANGE FINDER	Spectral Band	1.54 µm µm eyesafe	
	Distance	a) For 2.3x2.3m typical target, the maximum measurement distance is 10 km	
		b) Building, building etc. for targets, 32km	
	Distance Accuracy	≤5m	
LASER TARGET POINTER	Wavelength	840 nm	
	Beam divergence	1.5 mrad	
	Distance (At night and in open weather conditions)	10km	
SCREEN	External Monitor	Colored, 1920 x1080	
INTERFACE	Video Interface	HDMI	
	Communication Interface	Ethernet	
POWER	Power Input	External Power Supply: DC24V ±0.5V; AC220 V	
ENVIRONMENTAL PARAMETERS	Operating temperature	-30°C~+50°C	
	Tightness	IP67	
PHYSICAL PROPERTIES	Weight	20 kg	
LASER ILLUMINATOR (OPTIONAL)	Wavelength	1550 nm	

All technical parameters has 10% tolerance value.

ENGEREK®9

COOLED THERMAL MULTI PURPOSE TACTICAL BINOCULAR

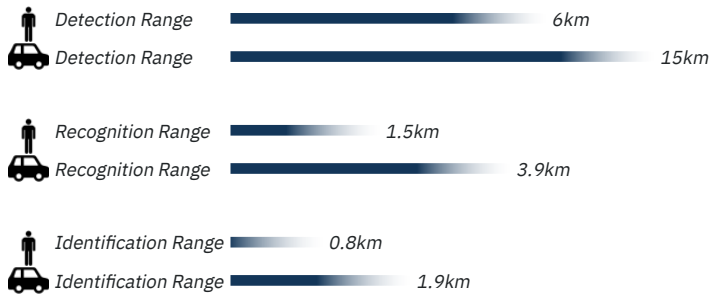


ENGEREK®9 COOLED THERMAL MULTI PURPOSE TACTICAL BINOCULAR

General Features

ENGEREK®9 is a multifunctional cooled handheld thermal binocular viewer.

The device is integrated with MWIR cooled thermal camera, low light daytime camera, laser range finder, laser pointer, GPS and digital magnetic compass. It has a compact and robust structure and is easy to use and transport.



FOV: 29° - 2°



3kg



640x512 15µm



128 x 212 x 290mm



-30° to +50°



Laser Range Finder



MIL-STG 810



GPS, Magnetic Compass

- MWIR Cooled Thermal Camera with Optical and Digital Magnification
- Thermal automatic gain / palette / contrast / gain area selection / detailing
- Low-Light Daylight Camera with Optical and Digital Magnification
- Ethernet, WIFI Video Transfer, Fusion, Image Stabilization, Auto Focus, PiP E-Magnification
- Photo / video capture and display function in internal memory
- Transfer of recordings in internal memory to USB memory and video recording on USB memory
- Laser range finder measurement in meters / yards / feet
- Target vertical and horizontal distance, spot elevation, direction and elevation angles and coordinate display
- Geographical, UTM and GRID coordinate detection
- Day / Thermal Cooler Standby / Thermal Cooler Active modes for Energy Saving
- Operator Control Unit and Mobile Router with Working feature
- Remote control feature with Rugged Tablet
- Video output interface, direct connection to an external screen



Operator Control Unit



ENGEREK®9 COOLED THERMAL MULTI PURPOSE TACTICAL BINOCULAR

Technical Specifications			
INFRARED THERMAL CAMERA	Detector Resolution	640x512 15µm	
	Spectral Band	3~5µm (MWIR)	
	Electronic Magnification	8x / Narrow Field of View 29° - 2°	
	Optical Magnification	15x Continuous Magnification	
	Gain Adjustment	Automatic/Manuel	
	Polarity	White-hot / Black-hot / Colorful	
RANGE		1.8mx0.5m Human	2.3mx2.3m NATO
	Detection Distance	≥6 km	≥15 km
	Recognition Distance	≥1.5 km	≥3.9 km
	Identification Distance	≥0.8km	≥1.9 km
LOW LIGHT DAYTIME CAMERA	Resolution	1280 x 1024	
	Electronic Magnification	4x	
	Optical Magnification	30x continuous zoom / Narrow Field of View 2.3°	
GPS	Position Accuracy	≤10m	
DIGITAL MAGNETIC COMPASS	Resolution	0.1°	
	Orientation Accuracy	1° (RMS)	
LASER RANGE FINDER	Spectral Band	Class 1 eyesafe 1.5 µm	
	Distance (Visibility 15 km, target reflection 30%, 90% chance)	10 km for 2.3x2.3m typical targets	
		30km for targets such as buildings	
	Distance Accuracy	±2m up to 1000m	
LASER TARGET POINTER	Wavelength	830nm	
	Beam Scattering	1.5 mrad	
	Distance (At night and in open weather conditions)	>15km (When observed with a night vision device containing a GEN III Tube)	
ADVANCED FEATURES	Auto Focus		
	Image Stabilization		
	Fusion		
	PiP Zoom		
	Fall of Shot		
STORAGE	Video Storage	Video recording time >5 hours	
	Video Format	MP4	
	Picture Format	JPG	
SCREEN	OLED	Colorful, 1280x1024	
INTERFACE	Video Interface	WIFI, Ethernet, USB (Image & Video Download))	
	Communication Interface	RS422	
POWER	Power Input	External Power Supply: DC20V-35V	
	Operating Time (Continuous with battery)	≥4h (Hot-swap battery)	
ENVIRONMENTAL PARAMETERS	Operating temperature	-30°C~+50°C	
	Tightness	IP67	
PHYSICAL CHARACTERISTICS	Weight	≤3kg (Including batteries)	
	Dimensions	~128mmx212mmx290mm	

All technical parameters has 10% tolerance value.

QEYE MMS-1 THERMAL MONOCULAR



QEYE MMS-1 THERMAL MONOCULAR

General Features

QEYE MMS 1; is a multi-purpose electro-optic system that can be used for surveillance, target, direction and position determination.

- Digital Magnification Low Light / Day Light Camera
- 12.4° x 9.9° FOV Thermal Camera
- 2x Extender 6.2°x5 ° (Optional)
- 3x Extender 4.1x 3.3° (Optional)
- 6X Magnification
- Laser Range Measurement
- Laser Pointer
- 6 Hours Battery Life on Thermal Mode
- 7 Hours Battery Life on Normal Mode



Laser Range Finder Mode

- Laser Range Measurement
- GPS
- Digital Magnetic Compass
- Laser Pointer



Thermal Camera Settings

- Polarity
- Gain
- Contrast
- Detail
- NUC Table
- Manual/Oto Calibration



Day Camera

- Color Balance Adjustment
- Night Vision, Low Light Modes
- Brightness Adjustment
- Contrast Adjustment
- Digital Detailing
- Saturation Adjustment
- Fog Mode





QEYE MMS-1 THERMAL MONOCULAR

Technical Specifications		
Thermal Imager	Detector Type	LWIR, 640x512
	Spectral Band	8-12 μm
	FOV	12.4x9.9°
	Electronic Magnification	16x
Afocal Day Light Optical System	FOV	>6°
Low Light Day Light Camera	Electronic Magnification	16x
Laser Pointer	Mode	Always
	Wavelength	830nm
	Distance Accuracy	0.5 mrad
	Range	>2500 m (GEN III with night vision device)
Laser Range Finder	Laser class	Eyesafe (Class-1)
	Wavelength	1540 μm
	Max Range	7800 m (2.3x2.3m)
		32 km (6x6m)
Digital Magnetic Compass	Azimuth Accuracy	0,6° (RMS)
	Elevation Accuracy	0,2° (RMS)
GPS	Position Accuracy	<15m
Enviromental Parameters	Working Temperature	-30°C / +50°C
	Storage Temperature	-35°C / +60°C
	Tightness	IP67
Physical Parameters	Height	85mm
	Wight	180mm
	Lenght	160mm
	Weight	1,7 kg (Include battery)



FOV: 12.4x9.9°



Electronic Magnification



1.7kg



GPS, Digital Magnetic Compass



640x512 LWIR detector



Fog mode



Digital Detailing



Color mode



-30° to +50°



IP67

All technical parameters has 10% tolerance value.



7800m



32km

QEYE MMS-1
Laser Range Finder

QEYE MMS-2 THERMAL MONOCULAR



QEYE MMS-2 THERMAL MONOCULAR

General Features

QEYE MMS 2; is a multi-purpose electro-optic system that can be used for surveillance, target, direction and position determination.

- Continuous Zoom LWIR Thermal Camera, Continuous Zoom Low Light Camera
- Laser Range Finder, Laser Pointer, Digital Magnetic Compass and GNSS
- Photo and Video Recording
- Day/Thermal Video 16x E-Zoom
- Wired/Wireless Video Stream
- Target Geo-Locationing and Fall of Shot Correction
- Internal / External Photo and Video Recording
- Built in Media Interface to View Recorded Images/ Videos



Laser Range Finder

- Laser Range Measurement
- GPS
- Digital Magnetic Compass
- Laser Pointer



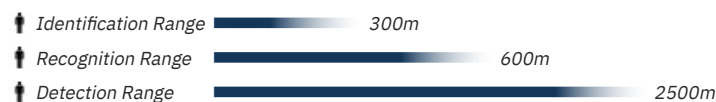
Thermal Camera Settings

- Polarity
- Gain
- Contrast
- Detail
- NUC Table
- Manual/Auto Calibration



Day Camera

- Color Balance Adjustment
- Night Vision, Low Light Modes
- Brightness Adjustment
- Contrast Adjustment
- Digital Detailing
- Saturation Adjustment
- E-Defogging



* 1.8x0.5m Human Target Thermal Imaging



QEYE MMS-2 THERMAL MONOCULAR

Technical Specifications		
Thermal Imaging Channel	Detector Type	LWIR, 640x512
	Pixel Pitch	12 μ m
	Frame Rate	30 Hz
	Features	AGC, Digital Detail Enhancement, Contrast, ROI
	WFOV - NFOV	17° - 5.2° (Horizontal)
	DORI Ranges (with %90 probability)	Human (1.8x0.5m) NATO Target (2.3x2.3m)
	Detection	2500 m 5000 m
	Orientation	1600 m 4000 m
	Recognition	600 m 1500 m
	Identification	300 m 700 m
Low Light Day Light Camera	Resolution	1920 x 1080
	WFOV - NFOV	40.8° - 1.8° (Horizontal)
	Min Illumination	Color:0.001Lux/ B&W: 0.0001LUX
	Features	Color mode, LowLight Mode, Detail Enhancement, Electronic DeFogging
Laser Range Finder	Range	NATO Target (2.3x2.3m) Vehicle (6x6m) 7.8km 15km
	Wavelength	1.54 μ m Class I
	Accuracy	$\leq \pm 5$ m
Laser Pointer	Beam Divergency	1.5mrad
	Wavelength	830 nm
	Range	2500m with GEN III night vision device
Power	Operating Time	5 hours
	Hot-Swap Battery Packs	
Physical Characteristics	Weight	<2.1 kg (Including Batteries)
	Dimensions	205 x 195 x100 mm

All technical parameters has 10% tolerance value.



GPS, Digital Magnetic Compass



Defogging



2.1kg



Detail Enhancement



640x512 LWIR detector



Color mode

DROKA

UAV DETECTION & DEFENCE SYSTEM



DROKA UAV DETECTION & DEFENCE SYSTEM

General Features

Droka has been designed, developed and produced locally for especially small UAV threats. The system has a standard basic structure for detection and identification.

The protection system can be adjusted according to the kind of threats and customer requests such as RF jammer and HPEM. Additionally HP-laser gun and Spectrum measurement options are also available.

System Configuration

UAV Detection System



TV/904 3D Anti UAV Radar



TV/GUARD Optical Day/Night Observation System



TRSA-U360 Radio Frequency Detector

UAV Defence System



TRADJ-02 UAV Jammer



TV/EMG-7200 HPEM System for Drone Swarm Attacks



FEDAI UAV Killer



The system can be customized according to application areas and threat elements in military/special areas.





DROKA UAV DETECTION & DEFENCE SYSTEM

Areas of Application



Armored Vehicle Mounted



Border Line



Power Plants



Oil Refinery



Sea Ports



Civil & Military Aviation

TV-904

3D ANTI UAV RADAR



TV-904 3D ANTI UAV RADAR

General Features

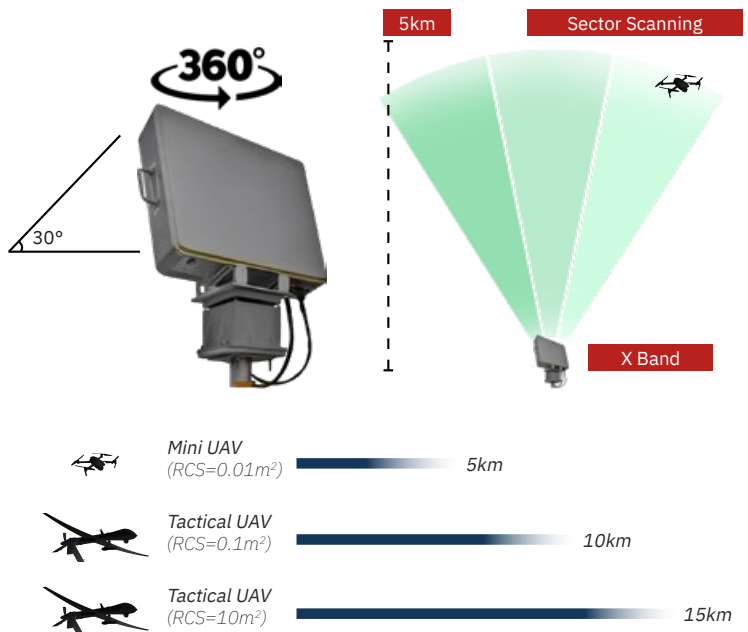
TRANSVARO's TV-904 is mainly used to monitor close targets in the process of near-field operations. Under the complex environment with strong ground clutter, it can detect and extract target information to provide information support for operators

TRANSVARO's TV-904 is a low altitude security radar system is to detect, find, locate and classify Low altitude helicopters, UAVs, ground moving targets, and sea targets.

The TRV-904 is a flexible deployment, compact design, highly portable, low cost system which consisting of one or more remotely stationed radar sensors networked to a central control and display unit.

The TV-904 has all weather, all light level capability and can detect either moving or stationary targets. It is a low power continuous scan microwave radar sensor. Due to its small size and lightweight nature, it is easily transported and set up.

TV-904 can be configured for either temporary or permanent installations.



- Full solid-state, full coherent, digital pulse compression system, available for the detection of targets moving at the extremely slow speed
- Excellent anti-active / anti-passive jamming capability
- Display of multiple targets, and synchronous searching and tracking function
- High data transmission performance, long- distance control and audio alarm function
- Playback and analysis of the stored historical data
- Piggyback or on-board design, easy to operate, fast erection and strong mobility



TV-904 3D ANTI UAV RADAR

Technical Specifications

Working frequency band	X band - 3D Phase Array
Working mode	Phase Scanning system
Operating weight	35kg
Detection range ($P_d \geq 90\%$, $P_f \leq 10^{-6}$)	$\geq 5\text{km}$ for mini UAV ($RCS=0.01\text{m}^2$) $\geq 10\text{km}$ for Tactical ($RCS=1\text{m}^2$) $\geq 15\text{km}$ for Tactical ($RCS=10\text{m}^2$)
Scanning range	$0^\circ \sim 360^\circ$
Antenna pitch angle	$0^\circ \sim 30^\circ$
Pitch angle detection accuracy	$\leq 0.7^\circ$
Minimum detection height	$\leq 10\text{m}$
Azimuth detection accuracy	$\leq 0.5^\circ$
Speed detection accuracy	$\leq 0.5\text{m/sn}$
Dimensions	880 x 510 x 240 mm
Speed detection range	$\pm 0.5\text{m/s} \sim \pm 50\text{m/s}$ (radial speed)
Tracked targets	>100
Search status	$\leq 6\text{Sn}$
Tracking status	$\leq 2\text{Sn}$
Environmental Temperature	$-40^\circ\text{C} \sim +60^\circ\text{C}$
Overall power consumption	$\leq 300\text{W}$
Protection grade	IP66 (with rain proof, dust proof, sand spinning, moisture-proof, mildew proof and other measures)
Standards	Mil STD 810
MTBF	5000h
MTTR	30min

Areas of Application



Armored Vehicle Mounted



Border Line



Power Plants



Oil Refinery



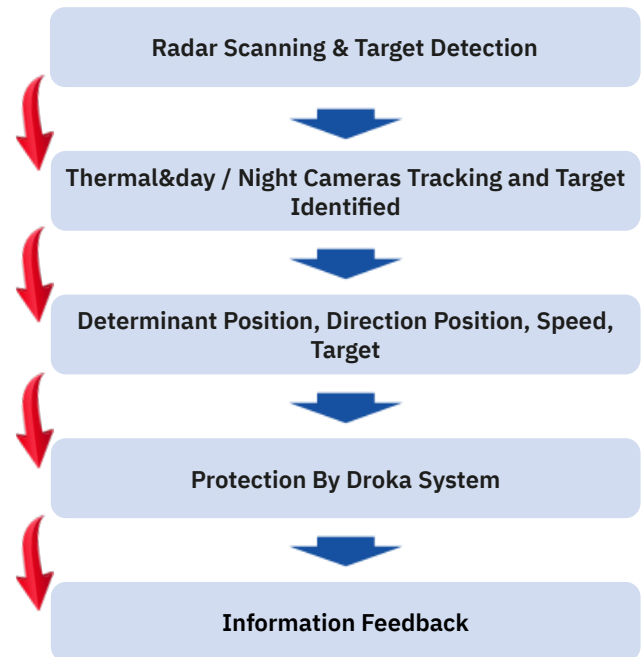
Sea Ports



Civil & Military Aviation

Implementation Plan

Through the TV-904 low altitude detection radar system, the targets in the monitoring area are detected. When suspicious targets are found, their directions altitude and tracks are determined and generated, Monitoring with Droka camera system and effective relevant information is feed back, so as to send out early Warning & Protection systems in time.



TRADJ-02 UAV JAMMER



TRADJ-02 UAV JAMMER

Technical Specifications	
System power supply	Battery power or 220V AC power can be used
Power consumption of the whole machine	≤ 400W;
Overall dimension	500cm x 380cm x 230 cm
Overall weight	≤ 30kg;
Communication interface	10 / 100M Ethernet, RS422 / RS232 interface
Operating temperature	-30° to + 45°
MTTR	≤ 30min (Field replaceable parts)
Accessories	Provide attached accessories such as connecting cable, carrying case, dismantling tool, operation and maintenance instructions, display and control software CD and other documents
MTBF	> 1000 hours

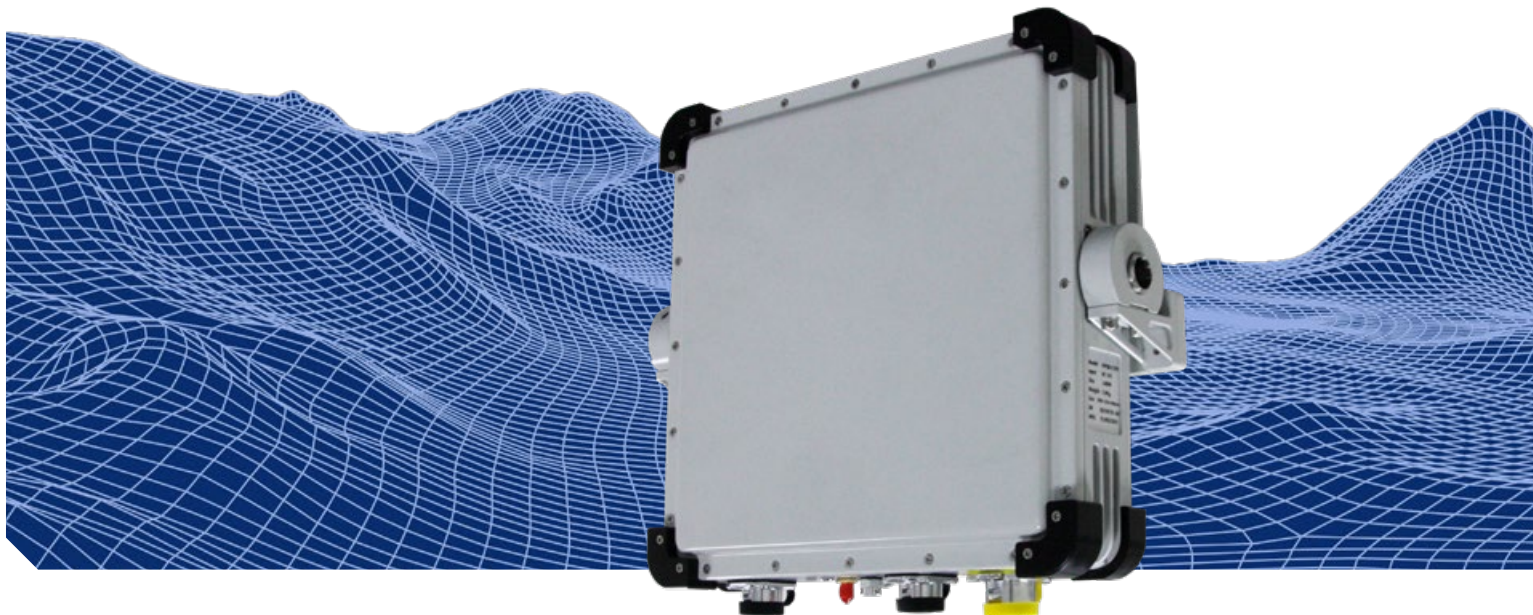


433MHz	
Working frequency	433.05MHz-434.79MHz
Transmitting power	≥ 40W
900MHz GSM	
Working frequency	850mhz –970Mhz
1800MHz GSM	
Working frequency	1790mhz –1900MHz
Transmitting power	≥ 20W
2400MHz	
Working frequency	2400MHz –2483.5MHz
Transmitting power	≥ 20W
GPS/GLONASS	
Working frequency	
a) Band 1	1170mhz –1280mhz (GPS L2, GPS L5, GLONASS L2)
b) Band 2	1550mhz –1620mhz (GPS L1, GLONASS L1)
Transmitting power	≥ 20W
5G (5700MHz -5900MHz)	
Working frequency	5700mhz 5900mhz
Transmitting power	≥ 20W

All technical parameters has 10% tolerance value.

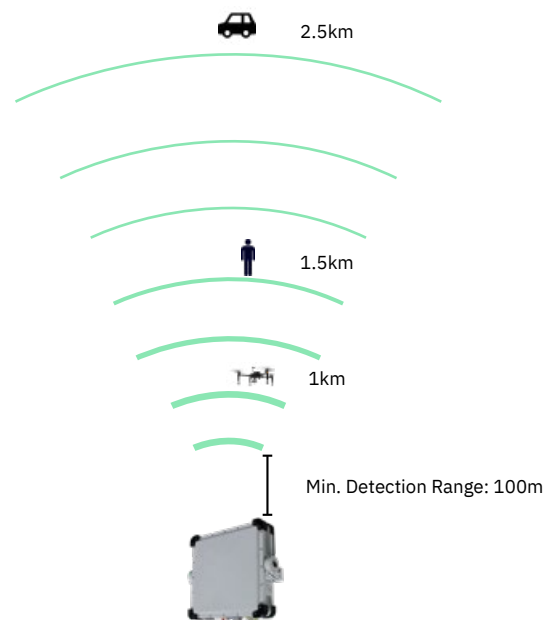
TVSR-C101

PERIMETER SURVEILLANCE RADAR



TVSR-C101 PERIMETER SURVEILLANCE RADAR

Technical Specifications	
Working system	Phased array system (<i>Azimuth phase scanning</i>)
Work pattern	Puls Doppler
Working frequency band	C band (<i>5 working frequency points</i>)
Maximum range	≥1.5km (<i>Human</i>)
	≥2.5km (<i>Vehicle</i>)
	≥1km (<i>UAV</i>)
Minimum detection distance	≤ 100m
Detection range	Azimuth coverage: 30/45/90 (<i>Configurable</i>)
Detection speed	Elevation coverage: 18
	0.5m/s-30m/s
Measurement accuracy	Distance accuracy: ≤ 10m
	Azimuth accuracy: ≤ 1.0° hız
	Speed accuracy: ≤ 0.2m/s
Data rate	≥ 1 time / S
Data interface	RJ45, UDP
Power supply and power consumption	Power consumption: ≤ 45W
Work environment	Power supply: AC200v ~ AC240V
	Working temperature: -40°~60°;
	Storage temperature: 45°~65°;
Outline dimension	324mm × 295mm × 86mm array
Weight	≤4.0kg array



All technical parameters has 10% tolerance value.

TRSA-U360

RADIO FREQUENCY DETECTOR



TRSA-U360 RADIO FREQUENCY DETECTOR

General Features

TRSA-U360 with its flexible deployment, compact design is a highly portable, low cost system which consists of one or more remotely stationed radar, networked to a central control and display unit.

It has capacity to work at all weather and light levels and can detect both moving and stationary targets. It is a low power continuous scan microwave radar sensor. Due to its small size and lightweight nature, it is easily transported and set up.

The TRSA-U360 can be configured for either temporary or permanent installations.

- Portable, low cost, lightweight (<11Kg, 45 x 35cm, IP65)
- Long-range detection and early-warning up to ≥5km
- Wide Frequency Range: 300MHz–6000MHz
- Recognition technology: Spectrum feature + Decoding
- Intuitive presentation of data –Can be integrated with customer system
- Long-range detection Detect vehicles and watercrafts –up to 1000 meters
- Automatic self checking with status warning.

Technical Specifications

Frequency range	300MHz-6000MHz;
Scanning speed	20GHz/s (25kHz resolution)
Polarization mode	Vertical polarization
Detection range	≥ 5km (UAV transmitting power 0.1W, standard test site)
Recognition technology	Spectrum feature-decoding recognition
Minimum detection time	≤ 3s
Direction finding accuracy	≤ 5° (RMS standard site)
Equipment power	≤ 100W
Structural dimension	456mm x 352mm
Weight	<11kg
Power supply mode	220 V AC
Data interface	RJ45 interface
Working temperature	-20°C~ + 60°C;
Storage temperature	-40°C~ + 65°C;
Relative humidity	Normal working 93% (Temperature 35°C)
	Bearing condition 93% (Temperature 40°C)
Rainfall intensity	Working condition: rainfall rate 0.8mm/m
	Bearing condition: The avg. rainfall rate within 1 hour is not less than 2.5mm/min
Shock and vibration	Can withstand the bumpy impact and vibration during driving

All technical parameters has 10% tolerance value.

FEDAI UAV KILLER



FEDAI UAV KILLER

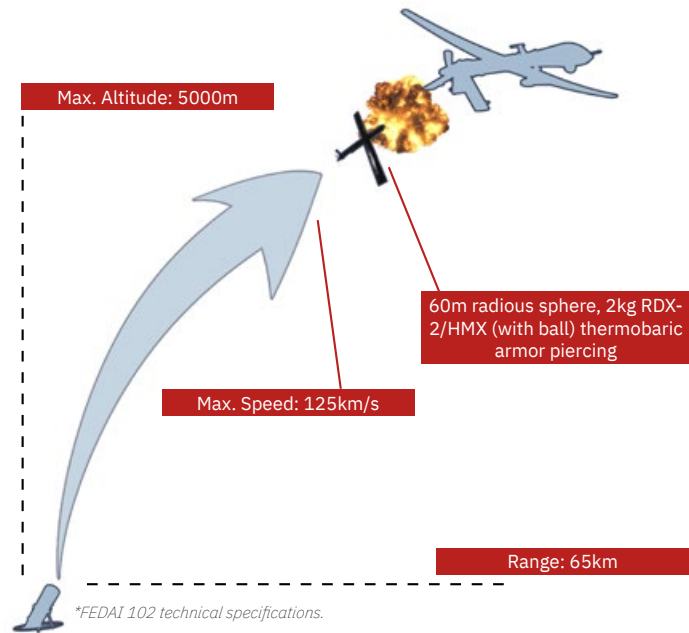
General Features

A tube-launched loitering munitions system equipped with a wing-folding mechanism.

Fedai is a uav loitering system and it has a high target hitting capacity either with an antipersonal or anti-tank warhead. The system's unique feature is a folding wing structure in order to fit inside a canister-launching system.

The system can be launched pneumatically from a tube mounted on any ground vehicle, or site at which point the wings unfold once it gets airborne. The addition of a DROKA radar and Thermal/Day-night cameras and FCS to the warhead allows for the assessment of a target before launching a strike, and a number of fail safe mechanisms means that missions can be easily aborted if intelligence is revised.

- High targeting accuracy
- Interchangeable warheads
- Low acoustic trace
- High performance
- Modular /Multi canister-launching system
- Integrated with DROKA system



FEDAI UAV KILLER

Technical Specifications	FEDAI-101	FEDAI-102
Max. airspeed	100 km/s (60 mph)	125 km/s (75 mph)
Max altitude	1200 mt (3,900 ft)	5000 mt (16,400 ft)
Range	40 km (25 mi)	65 km (40 mi)
Endurance	30 min	45 min
Weight	7,5 kg	9,5 kg
Length	1.2 mt	1.5 mt
Wingspan	2.10 mt	2.50 mt
Warheads	3 type	2 type
Fragmentation	50m radius sephire, 1,7kg RDX-2/HMX (with ball) thermobaric armor piercing	60m radius sephire, 2kg RDX-2/HMX (with ball) thermobaric armor piercing
Parachute landing	Available	Available
Application	Single self contained launcher and multi channel Cannister (launcher) types are available (4x3, 6x4, 8x5 and others)	Single self contained launcher and multi channel Cannister (launcher) types are available (4x3, 6x4, 8x5 and others)

STRIKE

The attack mode initiates a strike on a selected target, and control of the AV is fully-autonomous during the strike.

The user is shown a video footage, at the mobile control station of DROKA from the camera mounted on the front of the warhead and this feature can be used to assist in directing the aircraft.

WARHEADS

The FEDAI airframe can incorporate various types of warheads (training, high-explosive anti-personal, anti-tank), which are interchangeable and can be changed in the field depending on the mission requirements.

Effected zone: 3500, fragment: 30m radius Sphere with 2.4kg Semtex/TNT

USER FRIENDLY

The FEDAI System is part of DROKA mobile ground control station (GCS) is easy to use and provides a real time video footage to the user. A wide range of autonomous flight modes can be managed at the GCS.

RAPID DEPLOYMENT

The take-off of the FEDAI is fully automated. The platform is launched from a tube mounted on a vehicle.

The UAV is launched following a series of pre-flight tests to ensure communication between the ground control station and the AV. Take-off is fully automated ensuring that the AV will climb to 5000 m before switching to the chosen flight plan.

FLIGHT MODES

Auto mode - the main flight mode that is pre-programmed by the user prior to a flight. During this mode the AV will take-off and then follow a series of waypoints according to a flight plan. However, at any point during this mode three further modes can be activated

Loiter flight mode - The AV orbits around a point over the ground.

Fly to coordinate - This flight mode is similar to the 'Loiter Flight Mode' except that the AV will fly from its current position to a new position set by the operator.

Cruise - This mode causes the AV to fly in a straight line in the direction which the camera is facing.

Search - This mode is use for slow diving it necessary proper target selection.

Attack - This mode initiates a strike. The automated videotracker allows for a precise target hit without the operator's control even after the loss of communication.

ABORTING A MISSION

Landing of the vehicle, in an emergency is possible by using a manual landing flight mode. The air vehicle will land, by belly landing, in any open area identified by the user. In addition, the warhead may be detonated remotely when the air vehicle is in flight allowing the abortion of a mission.



TRVG-18 HIGH PERFORMANCE E/O SURVEILLANCE SYSTEM



TRVG-18 FALCON TRACER HIGH PERFORMANCE E/O SURVEILLANCE SYSTEM

General Features

Stable Electro Optical System that has Cooled Thermal/Day-Night Cameras. Designed for UAV and helicopter platforms.



4.3kg



180mm



8X

Digital Magnification



VNIR 0.005Lux



MWIR Thermal Camera (Optional HD)
VNIR Day/Night Camera
Laser Range Finder
Laser Target Pointer
GEO-LOC/GEO TRACK (Optional)
Embedded Video Record
Multiple Target Tracking

Thermal (MWIR) Channel

Human Target (1.8mx0.5m)	Detection Range	4.2km
	Recognition Range	1.2km
	Identification Range	0.9km

NATO Target (2.3mx2.3m)	Detection Range	9km
	Recognition Range	2.7km
	Identification Range	1.8km

Day (VNIR) Channel

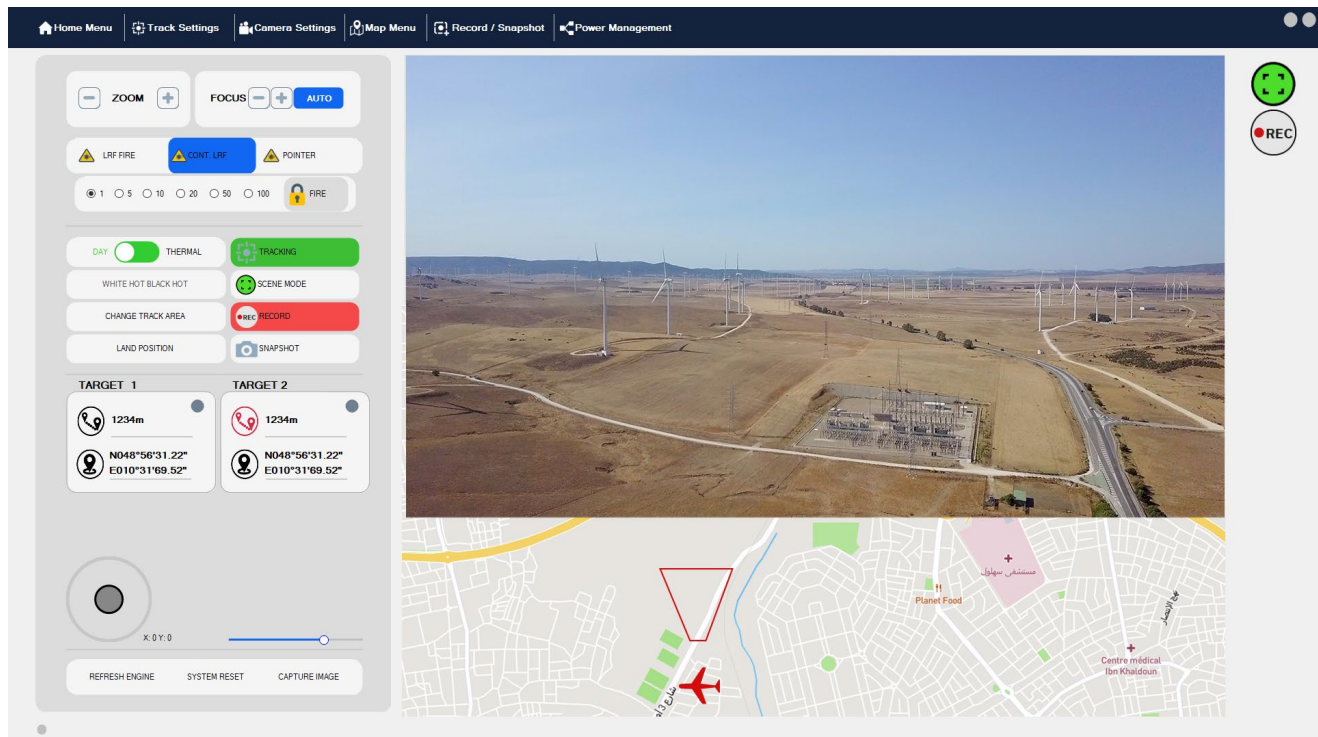
Human Target (1.8mx0.5m)	Detection Range (10 ppm)	3.6km
	Observation Range (25 ppm)	2.3km
	Recognition Range (62 ppm)	1.5km
	Identification Range (125 ppm)	1km

NATO Target (2.3mx2.3m)	Detection Range (10 ppm)	8.5km
	Observation Range (25 ppm)	5.3km
	Recognition Range (62 ppm)	3.4km
	Identification Range (125 ppm)	2.4km



TRVG-18 FALCON TRACER HIGH PERFORMANCE E/O SURVEILLANCE SYSTEM

Technical Specifications		TRVG-18
GIMBAL SPECIFICATIONS	Stabilisation	< 100 μ rad (2-axis)
	Weight	< 4.3 kg
	Dimensions	180x250mm
	Field of Regard Azimuth	360° continuous
	Field of Regard Elevation	-10° / 80°
	Video Output Resolution	1280x1024
DAYLIGHT CAMERA	Field of View Horizontal	WFOV. 56° NFOV 2.1°
	Digital Zoom	2X/4X/8X
	Low Light Luminance Level	VNIR 0.005Lux
INFRARED CAMERA	Spectral Band	MWIR 3 – 5 μ m
	Field of View	WFOV 17°, NFOV 2.9°
	Resolution	640x512 px (Optional 1280x1024)
	Sensor Type	T2SL
EYE SAFE LASER RANGE FINDER	Wavelength	Class 1 eye safe
	Precision	$\pm$ 5m
	Range Measurement	50m to 30 km (2.3m x 2.3m NATO Target=8.6km)
LASER POINTER	Laser Wavelength	830nm (Nominal) class 3B
ENVIROMENTAL	Compatibility	MIL STD 810
	Operating Temperature	-30/+50 °C
	Storage Temperature	-40°/+60°
OTHER SPECIFICATIONS	Interface	TCP/IP
	Video	UDP
	Power Supply	12-18 VDC, 40 watt nominal (peak 100W)
	Ground Situation	GUI (Windows based) Operable by Logitech joystick console



TRVG-28 HIGH PERFORMANCE E/O SURVEILLANCE SYSTEM



TRVG-28 FALCON TRACER HIGH PERFORMANCE E/O SURVEILLANCE SYSTEM

General Features

Stable Electro Optical System that has Cooled Thermal/Day-Night Cameras. Designed for UAV and helicopter platforms.



20kg



280mm



4X Digital Magnification

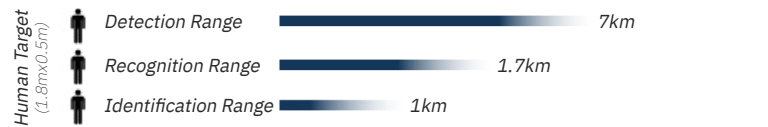


CMOS 1945x1225
VNIR 0.002Lux



MWIR Thermal Camera (Optional HD)
VNIR Day/Night Camera
Laser Range Finder
Laser Target Pointer (Compatible STANAG 3733)
GEO-LOC/GEO TRACK (Optional)
Embedded Video Record
Multiple Target Tracking

Thermal (MWIR) Channel



Day (VNIR) Channel



TRVG-28 FALCON TRACER HIGH PERFORMANCE E/O SURVEILLANCE SYSTEM

Technical Specifications		TRVG-28
GIMBAL SPECIFICATIONS	Stabilisation	< 20 μ rad rms (4-axis)
	Weight	< 20 kg
	Dimensions	280x365mm
	Field of Regard Azimuth	360°, continuous
	Field of Regard Elevation	-120° / 15°
	Video Output Resolution	Analog (Optional HD)
DAYLIGHT CAMERA	Field of View Horizontal	1.4° to 15°
	Digital Zoom	4X
	Sensor Type	CMOS 1945x1225 VNIR 0.002Lux, Global shutter
INFRARED CAMERA	Spectral Band	< Cooled MWIR 3 – 5 μ m detector
	Field of View	WFOV 1.8°, NFOV 15° motorized athermalised optical zoom lens
	Resolution	640x512 pixel (Optional HD)
EYE SAFE LASER RANGE FINDER	Wavelength	Class 1 - Eye safe
	Resolution	5m
	Range Measurement	50m to 20km (2.3m x 2.3m NATO Target=8.9km)
ENVIROMENTAL	Compatibility	MIL STD 810
	Operating Temperature	-20/+55 °C
	Storage Temperature	-55°/+85°
	Interface	RS-232, RS-422, STANAG 3350 B HD-SDI
	Video	3350B, NTSC or PAL
OTHER SPECIFICATIONS	Power Supply	18-36 VDC, 150-watt nominal (peak 300W)
	System Features	Operator Control Unit
	System Options	ND capability, LD capability, Consult factory

Additional Software and Options

- Laser Target Designator
- MTT
- MTI
- GEO-LOC/GEO-TRACK
- Image Optimisation
- Embedded Photo/Video Record



TV/GT-3

THERMAL/DAY AND NIGHT VISION LONG RANGE GIMBAL CAMERA



THERMAL/DAY AND NIGHT VISION LONG RANGE GIMBAL CAMERA



Technical Specifications		
THERMAL CAMERA	Detector Type	LWIR, 640x512 Uncooled (Optionally Cooled)
	Spectral Band	8-12 μm
	Field of view	12.4°-9.9°
	Electronic Zoom	6x
DAY AND NIGHT CAMERA	Resolution	2 Mp. 1920x1080
	Resolution	8x
	Optical Magnification	35x continuous zoom
	Narrow Field of View	2°
LASER TARGET POINTER	Wavelength	840nm
	Beam divergence	0,5 mrad
	Distance (At night and in open weather conditions)	10km
RANGE FINDING (OPTIONAL)	Spectral Band	1.54 μm Eye safe
	Distance	a) For 2.3x2.3m typical target, the maximum measurement distance is 2 km. b) Building, building etc. for targets, 6km Distance Accuracy: $\leq \pm 5\text{m}$
	Position Accuracy	$\leq \pm 5\text{m}$
	Digital Magnetic Compass (Optional)	$\leq 15\text{m}$
GPS (OPTIONAL)	Resolution	0.1°
	Orientation Accuracy	1° (RMS)
	Operating temperature	-20°C~+50°C
ENVIRONMENTAL PARAMETERS	Immersion	IP67
	Operational use	7/24, with / without operator
TECHNICAL INFORMATION	Power Supply	24V battery
	Weight	8 Kg
	Dimensions (LxWxH)	310mm x 215mm x 260mm

All technical parameters has 10% tolerance value.



QEYE 007®-B18X FUSION BINOCULAR



QEYE 007®-B18X FUSION BINOCULAR

General Features

Qeye 007®-B18 is a part of fusion binocular family which is designed for surveillance and reconnaissance at short and mid-range distances.

It combines light amplification like night vision goggles and heat detection feature as a thermal cameras. Suitable for day and night use.

In order to provide the best view to the user, it is optional to choose among only night vision or thermal camera and also as a mixture of these two.

In this way, it creates an increased awareness of the environment. Thermal and fusion imaging can be used in one channel or optionally in both channels.





QEYE 007®-B18X FUSION BINOCULAR

Technical Specifications		
Optical Magnification	1X ± 0.05	Thermal and Night Vision
Digital Magnification	2X / 4X	Thermal Only
View Angle	40±2° circular	Night Vision
	24 ° horizontal, 19 ° vertical	Thermal
Focus Range	25 cm to infinity	Night Vision
	3 m to infinity	Thermal
Focus Adjustment	Manual	Night Vision
	Fixed focus	Thermal
Functional Features		
Gain Adjustment	Automatic and Manual	Thermal and Night Vision
Extreme Light Protection	Available	Night Vision
Battery Low Warning	Available	When it drops below 25%
Auto Shut-Off	Available	When put into stand-by position
IR Illumination	Available	For close ranges
Polarity Options	Black Hot / White Hot / Color palette	Thermal
Thermal Camera Detector	640x480 pixel ve 12 micron	Thermal
Image Intensifier Tube	18mm, Gen 2+ veya Gen 3	Night Vision
Display Screen	Colored OLED	Thermal
Displaying Modes		
Qeye 007®-B18L	Left Eye	Thermal and Fusion
Qeye 007®-B18R	Right Eye	Thermal and Fusion
Qeye 007®-B18X	Both Eyes	Thermal and Fusion
All Models	Both Eyes	Night Vision
Enviromental, Power & Physical Features		
Battery Type	AA, CR123, 18650 lithium battery options	
Battery Compartment	Split Unit	Can Be Attached to Helmet
Battery Life (With 2 x AA Lithium Batteries)	> 48 hours	Night Vision
	> 7 hours	Thermal Imaging
	> 6 hours	Fusion
Weight	675 g	Glasses
Helmet Mounting Adaptor Features		
Forward-Backward Adjustment Distance	2.7 cm	
Height Control	2.2 cm	
Height Adjustment	±5°	
Parking Position	Yes	
Weight	135 g	

All technical parameters has 10% tolerance value.



675g



Pixel Pitch



Digital Zoom



up to 48 hours



GEN3 IIT



FOV: 43°



QEYE F27

FUSION WEAPON SIGHT



QEYE F27 FUSION WEAPON SIGHT

General Features

Qeye F27 is a weapon sight with digital fusion feature developed by Transvaro, which detects advanced VNIR and LW bands and offers detection and diagnosis in these bands.

The Qeye F27 is a fully Military Standards compliant surveillance device specifically designed for short and medium range surveillance and targeting.

The Qeye F27 combines the latest Low Light VNIR CMOS Sensor and uncooled Thermal Imaging in one lightweight, compact structure.

It has the latest micro bolometer technology; 12μm uncooled thermal sensor, making it one of the lightest products of its kind.

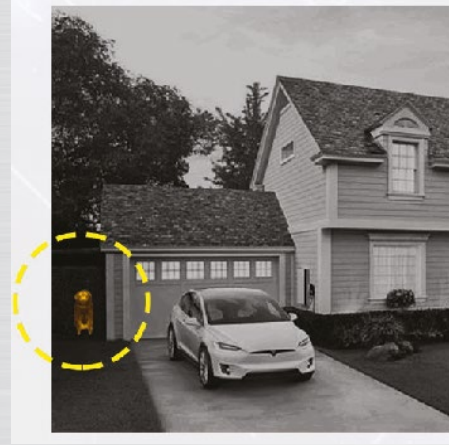


Technical Specifications

Optical Magnification	2X
Detection Range (Human)	1050m (1.8mx0.5m)
Detection Range (Vehicle)	2500m (2.3mx2.3m)
Digital Magnetic Compass	Yes
GPS	Optional
Thermal Camera (LWIR)	
FPA type	Uncooled
FPA spectral band	8-14μm
FPA resolution	640x480, 12μm
Digital magnification	2X, 4X
Polarity	Yes
Day/Night Channel	
Magnification	2X
Dioptr	Adjustable
Enviromental Specifications	
Power supply	2x18650
Operation time	5 hours (Single mode)
Operation temperature	-32°C +55°C
Weight	990 g
Interface	STANAG 4694
Tightness	30 min at 1m water (MIL-STD 810G)
Display modes	VNIR/IR/Fusion

QEYE F27

FUSION WEAPON SIGHT



QEYE F27 FUSION WEAPON SIGHT

Air Detection Device	
Wireless Bluetooth	Yes
Sensors	Wind Velocity
	Wind Direction
	Temperature Measurement
	Humidity Measurement
	Pressure Measurement
Tightness	IP67
Weapon Mounted Interface	
Mechanic Elevation Angle Adjustment	Yes
Elevation Angle Sensor	Yes
MIL-STD 1913 Picatiny Rail	Yes
Load Capacity	2 kg

F27 Sight	
Sensors	Pusula
	Inclinometre
	Soğutmasız LWIR μ B Sensör
Optic	Sabit 2X Büyütme
Diopter Adjustment	-6D +2D arasında
Laser Range Finder	2500m (NATO Hedefi 2.3mx2.3m)
Batter Type	18650x2 LI-ION
Battery Life	En az 5 saat (Ek özellikler kapalı iken)
Smart Reticle	Yes
Polarity	Yes
GPS	Yes
Display	800x600px
Weight	990g
Tightness	IP67
Accessories	
Spare Parts Catalog	
User Manual	
Service Manual	
Battery Charger	
Connection Wire	
Carrying Bag	
Shipping Box	



ENGEREK® THERMAL WEAPON SIGHTS



ENGEREK® THERMAL WEAPON SIGHTS

General Features

Engerek thermal weapon sight is designed according to the multiple using options one of them is with the daytime optical sight on sniper rifles and the other is stand alone. It has the ability to detect people and vehicles continuously for 24 hours even in poor visibility conditions, and unlike night vision devices, it can easily detect targets in complete darkness and combat environment.

ENGEREK Thermal Weapon Sights has the latest uncooled thermal imager technology, lightweight, compact and has low power consumption. There is no reticle and sight zeroing device on the Thermal Scope and the reticle and sight zeroing capabilities of the daytime optical scope are utilized.



Standard Accessories

- Transportation Container
- Bellows/Eye Cup
- Mounting Bracket
- Protective Cover
- Remote Control
- Charging Device
- Vehicle Adapter
- Socket Adapter
- USB Cable
- Battery
- Booklet
- Cleaning Kit



ENGEREK® THERMAL WEAPON SIGHTS (CLIP-ON)



Technical Specifications

Model		C27	C48	C56	C70	C120	C120HD-L
OPTIC SPECIFICATIONS	FOV	16.3°x13°	9.3° x 7.45°	8° x 6°	6.4° x 5°	3.7° x 3°	6° x 4°
	Optic Zoom	1X	1X	1X	1X	1X	1X
	Digital and Optic Total Zoom	X2	1.0 ~ 8.0X	1.0 ~ 8.0X	1.0 ~ 8.0X	1.0 ~ 8.0X	1.0 ~ 4.0X
	Detection Distance (0.75x1.8 m Human Silhouette Target 1.5 cycle)	1250m	1500m	2000m	2500m	3500m	4000m
	Identification Distance (0.75x1.8 m Human Silhouette Target 3.8 cycle)	400m	600m	800 m	1500m	2000m	2500m
DETECTOR SPECIFICATIONS	Technology	Uncooled μ B	Uncooled μ B	Uncooled μ B	Uncooled μ B	Uncooled μ B	Uncooled μ B
	Resolution	640x512	640x512	640x512	640x512	640x512	1024x768
	Spectral Band	LWIR (8-12 μ m)	LWIR (8-14 μ m)	LWIR (8-14 μ m)	LWIR (8-14 μ m)	LWIR (8-14 μ m)	LWIR (8-14 μ m)
	Pixel Pitch	12 μ m	12 μ m	12 μ m	12 μ m	12 μ m	12 μ m
	NETD (with F1.0 lens)	50mK	50mK	50mK	50mK	40mK	40mK
	Image Rate	min 25 Hz	min 25 Hz	min 25 Hz	min 25 Hz	min 25 Hz	min 25 Hz
	Polarity	Warm White, Cold White					
	Color Palettes	Min 5	Min 5	Min 5	Min 5	Min 5	Min 5
GENERAL SPECIFICATIONS	Lining	Digital Noise Reduction, Digital Detail Enhancement					
	Multimedia	Image and Video Capture					
	Battery Count, Type	2 pcs Lithium Polymer 18650					
	Battery Life (Normal Use)	360min	360min	360min	360min	360min	240min
	Outline Contour	Yes	Yes	Yes	Yes	Yes	Yes
	WIFI Connection	Yes	Yes	Yes	Yes	Yes	Yes
	Remote control	Yes	Yes	Yes	Yes	Yes	Yes
	Inclinometer	Yes	Yes	Yes	Yes	Yes	Yes
	Bullet counting	Yes	Yes	Yes	Yes	Yes	Yes
	Color	Type 3 Hard Anodized with TAN Color Coating Screw, cover, button, accessories and other parts may have different colors					
	Body Material	Aluminium 7075-T6					
	Rail Interface	Compatible with STANAG 4684 Attachable-detachable without any tool, lock mechanism against self-opening No more than 0.5 MOA change during assembly/disassembly of target line and between shoots					
	Optic Axis Height	Height of colorimeter/ocular optic axis above Picatinny rail is 40 $\pm$ 3mm					
	Target Angle	The height between colorimeter's optic axis and Picatinny rail increases with an angle of 40 $\pm$ 3 MOA as it moves towards the user					
	OLED Resolution		1024x768	1280x1024	1024x768	1024x768	1024x768
	OLED Type	Colored	Colored	Colored	Colored	Colored	Colored
	Device Dimensions (Length x Width x Height) (mm)	135x77x80		18x8.2x12	20x8.2x12.5	25x15x10	27x15x10
	Total Weight of Device and Mounting Bracket (Without Accessories)	600g		850 g	950 g	1.8 Kg	1.9 Kg
ENVIRONMENTAL CONDITIONS	Seal	Device maintains its seal for two hours under atmospheric pressures between 0.5-1.5 Usable between 0.7-1.3 atm					
	Temperature Shock	Transferable to temperatures between -40 - +50°C after resting at ambient temperature for 5 minutes					
	Working Temperature	-30°C / + 50°C					
	Storage Temperature	-40°C / + 70°C					

All technical parameters has 10% tolerance value.



ENGEREK® THERMAL WEAPON SIGHTS (STAND-ALONE)



Technical Specifications									
Model		S21	S27	S38	S48	S56	S70	S120	S120HD
OPTIC SPECIFICATIONS	FOV	20.5° x 16.5°	16.3°x13°	11.5°x9°	9.3° x 7.45°	8° x 6°	6.4° x 5°	3.7° x 3°	6° x 4°
	Optic Zoom	1.3X	2X	2.4X	3X	3X	4X	7X	4.4X
	Digital and Optic Total Zoom	1.0 ~ 8.0X	1 ~ 4X	2.4 ~ 4X	3 ~ 12X	3 ~ 12X	4 ~ 16X	7 ~ 28X	4.4 ~ 17X
	Detection Distance (0.75x1.8 m Human Silhouette Target 1.5 cycle)	1000m	1250m	1750m	1500m	2000 m	2500 m	3500m	4000m
	Identification Distance (0.75x1.8 m Human Silhouette Target 3.8 cycle)	350m	400m	600m	600m	800m	967 m	2000m	2500m
DETECTOR SPECIFICATIONS	Technology	Uncooled μ B	Uncooled μ B	Uncooled μ B	Uncooled μ B	Uncooled μ B	Uncooled μ B	Uncooled μ B	Uncooled μ B
	Resolution	640x512	640x512	640x512	640x512	640x512	640x512	640x512	1024x768
	Spectral Band	LWIR (8-14 μ m)							
	Pixel Pitch	12 μ m	12 μ m	12 μ m	12 μ m	12 μ m	12 μ m	12 μ m	12 μ m
	NETD (with F1.0 lens)	50mK	50mK	50mK	50mK	50mK	50mK	40mK	40mK
	Image Rate	min 25 Hz	min 25 Hz	min 25 Hz	min 25 Hz	min 25 Hz	min 25 Hz	min 25 Hz	min 25 Hz
	Polarity	Warm White, Cold White							
	Color Palettes	Min 5	Min 5	Min 5	Min 5	Min 5	Min 5	Min 5	Min 5
GENERAL SPECIFICATIONS	Lining	Digital Noise Reduction, Digital Detail Enhancement							
	Multimedia	Image and Video Capture							
	Battery Count, Type	2 pcs Lithium Polymer 18650							
	Battery Life (Normal Use)	360 min	360 min	360 min	360 min	360 min	360 min	360 min	360 min
	Outline Contour	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	WIFI Connection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Remote control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Inclinometer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Bullet counting	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Color	Type 3 Hard Anodized with TAN Color Coating Screw, cover, button, accessories and other parts may have different colors							
	Body Material	Aluminium 7075-T6							
	Rail Interface	Compatible with STANAG 4684 Attachable-detachable without any tool, lock mechanism against self-opening No more than 0.5 MOA change during assembly/disassembly of target line and between shoots							
	OLED Resolution	1280x1024	1280x1024	1280x1024	1280x1024	1280x1024	1280x1024	1280x1024	1280x1024
	OLED Type	Colored	Colored	Colored	Colored	Colored	Colored	Colored	Colored
	Device Dimensions (Length x Width x Height) (cm)	15.5x8.5x9	13.5x7.7x8	13.5x7.7x8			20x8.2x12.5		
	Total Weight of Device and Mounting Bracket (Without Accessories)	<600 g	<600 g	<600 g		850 g	1 kg	1.8 Kg	1.9 Kg
ENVIRONMENTAL CONDITIONS	Seal	Device maintains its seal for two hours under atmospheric pressures between 0.5-1.5 Usable between 0.7-1.3 atm							
	Temperature Shock	Transferable to temperatures between -40 - +50°C after resting at ambient temperature for 5 minutes							
	Working Temperature	-30°C / + 50°C							
	Storage Temperature	-40°C / + 70°C							

All technical parameters has 10% tolerance value.

TV/TMG BARREL EYE HAND HELD THERMAL CAMERA



TV/TMG BARREL EYE HAND HELD THERMAL CAMERA

General Features

Transvaro Hand Held Thermal Camera is designed for stand-alone usage.

- Compact design, one-handed usage
- 4x zoom
- 8GB internal memory
- Image capture and wireless image transfer
- Live video transfer via Wifi
- Image capture during video
- Date and time support for video and photos
- Internal GPS antenna
- Charge, video and file transfer support
- Battery lifespan is up to 6 hours
- Replaceable and rechargeable battery
- Internal compass
- IP67 impermeability



FOV: 7,3°x5,9°



800g



215mm x 78mm x 70mm



GPS



-10°C to + 40°C



Image & Video Record



IP67



4,5 hours



WIFI



4X Magnification





TV/TMG BARREL EYE HAND HELD THERMAL CAMERA

Use		Image Transfer Mode
Model		TMG
OPTICAL SPECIFICATIONS	FOV	7,3°x5,9°
	Optical Magnification	4X
	Detection Range	700m
DETECTOR SPECIFICATIONS	Technology	Uncooled
	Resolution	640x512
	Spectral Band	LWIR (8-14μm)
	Pixel Pitch	12μm
	NETD (with F1.0 Lens)	<50mK
	Image Rate	Min 25 Hz
	Polarity	Warm White, Cold White
	Color Palettes	Greyscale
GENERAL SPECIFICATIONS	Image Processing	Digital Noise Reduction, Digital Detail Enhancement
	Multimedia	Image and Video Recording
	Battery Type	21700 battery 1 main, 1 spare (Total 2 pcs)
	Battery Life (Normal Use)	4,5 hours
	Color	Black body, Screw, lid, button, accessories etc. parts different dark in colors it could be
	Body Material	Aluminium 7075-T6
	OLED Resolution	1280x1024
	OLED Type	Colorful
	Device Dimensions (Length x Width x Height mm)	215x78x70
	Total Weight of Device and Mounting Bracket (Without Accessories)	<800g
	Video Output	HDMI
	File Transfer	USB Cable and micro SD card
	Wireless Image Transfer	WIFI
	Video Output Resolution	1280x1024
ENVIRONMENTAL CONDITIONS	Impermeability	IP67
	Working Temperature	-10°C to + 40°C
	Storage Temperature	-20°C to + 50°C

All technical parameters has 10% tolerance value.

Accessories

- Charge Adaptor
- USB cable
- 1 battery + (1 spare)
- User guide
- Image transfer cable (HDMI)
- 128 GB micro SD card
- External battery charge device
- Carry bag

TV/MON-3/7

MONOCULAR NIGHT VISION DEVICE



TV/MON-3/7 MONOCULAR NIGHT VISION DEVICE

General Features

TV/MON-3 and TV/MON-7 are new generation, multi purpose night vision devices.

TV/MON-3 is monocular night vision device which placed in a strong, light, compact and ergonomic, composite body, compliant with military standards for optics, is able to work when encountered with salt, water and rain. It can demonstrate a superior performance under harsh conditions such as humidity, extreme heat, shocks and impacts

TV/MON-3/7 can be used by connecting to hand, headband, helmet or if desired directly on to the gun, with its wide range of accessories. It can even be used under water up to 6 meters by wearing special scuba glasses and filters. With the product-specific accessory, the two devices can be used together as a binocular. If desired, TV/MON-3/7 can also be configured to protect the tube in high light environments. TV/MON-3/7 can be also used attached to a headband or a helmet, user is able to lift the device up, in this scenario device turns itself off automatically

- Thanks to its lightness, it can be easily used by hand and on a helmet.
- Manual gain adjustment in different light levels (TV/MON-7 only)
- Automatic brightness protection (TV/MON-3 only)
- Automatic shut-off feature when raised / not in use while wearing headband / helmet
- Possibility to use as a sight with adapter on the gun
- Easy adjustment
- "Low battery voltage" and "IR illumination on" warnings



Hand-Held



Weapon Sight



Helmet Mounted



FOV: 41°±2°



105mm x 42mm x 67mm



-51° / +55°



30min at 8m water



295g



≥ 18mm Gen 2+ / Gen 3



F1.16



72 hours (IR off)
36 hours (IR on)



TV/MON-3/7 MONOCULAR NIGHT VISION DEVICE

Optical Specifications	
Magnification	1x
Field of view	41°±2°
Focus Range	25 cm to infinity
Lens Equivalent Focal Length	26mm
Lens F No	F1.16
Dioptr Range	+2 to -6
Eye Relief	25mm
System Resolution	≥1.4 lp/mrad (Depends on the tube)
Image Intensifier Tube	≥ 18mm Gen 2+/ Gen 3
Physical Specifications	
Device	Dimensions (Excluding eyecups)
	Length *
	Width
	Height
	Weight
Carrying Case	Dimensions
	Weight
Electrical Specifications	
Power Supply	1 pc. 1.5V AA Lithium battery or 1.5V AA Alkaline battery or 1.2V AA Rechargeable battery
Battery Life (Lithium Battery)	72 hours (IR-Off) at 20°C 36 hours (IR-On) at 20°C
"IR On" Warning	Red LED
Low Battery Alert	Red flashing LED alert
High Level Light Warning	Yellow LED warning
Auto Power Off	Automatically shuts off when not used (raised) on monocular, headband or helmet
Enviromental Specifications	
Working Temperature	-51°C/+55°C
Storage Temperature	-51°C/+71°C
Humidity	%95 Relative humidity (+ 68 ° C / + 23 ° C)
Immersion	30 min in 8m water
Operating Height	3500m

Standard Accessories

- Lens cover
- Carrying bag
- Battery
- Booklet
- Cleaning Kit



Optional Accessories

- Shipping Bag
- Head mount assembly
- Helmet mount assembly
- Gun mount assembly
- Dual use adapter
- X3 magnification lens
- X5 magnification lens
- Supply socket
- Low temperature adapter
- Vehicle power adapter
- AC power adapter
- Camera adapter
- Capped eyecup
- Remote control unit
- Anti-fog lens
- Underwater mask assembly
- Objective protective lens
- Picatinny converter
- Scope mount adapter



TV/BIN-3

BINOCULAR NIGHT VISION GOGGLE



TV/BIN-3 BINOCULAR NIGHT VISION GOGGLE

General Features

BIN-3 is a passive binocular with adjustable eye distance that can be operated on a single AA battery and can be used as handheld or helmet mounted night vision binocular/goggles.

- With its lightweight design, it can be used as handheld and as a clip-on on a helmet.
- Optional manual gain adjustment at different light levels
- Infrared illumination
- Optional automatic brightness protection
- Easy to adjust
- "Low battery voltage" and "IR illumination on" warnings



FOV: $41^{\circ} \pm 2^{\circ}$



600g



105mm x 93mm x 82mm



≥ 18 mm Gen 2+/ Gen 3



$-51^{\circ} / +55^{\circ}$



F1.16



30 min at 8m water



36 hours (IR off)
24 hours (IR on)





TV/BIN-3 BINOCULAR NIGHT VISION GOGGLE

Optical Specifications		
Magnification		1x
Field of view		41°±2°
Focus Range		25 cm to infinity
Lens Equivalent Focal Length		26mm
Lens F No		F1.16
Diopter Range		+2 to -6
Eye Relief		25mm
System Resolution		≥1.4 lp/mrad <i>(Depends on the tube)</i>
Image Intensifier Tube		≥ 18mm Gen 2+ / Gen 3
Physical Specifications		
Device	Dimensions <i>(Excluding eyecups)</i>	
	Length *	105 -115mm <i>*Varies depending on focus and diopter setting</i>
	Width	93mm
	Height	82mm
	Weight	600g <i>(Excluding battery)</i>
Carrying Case	Dimensions	205mm(U) x 330mm(G) x 80mm(Y)
	Weight	270g
Electrical Specifications		
Power Supply	1 pc. 1.5V AA Lithium battery or 1.5V AA Alkaline battery or 1.2V AA Rechargeable battery	
Battery Life <i>(Lithium Battery)</i>	36 hours (IR-Off) at 20°C	
	24 hours (IR-On) at 20°C	
"IR On" Warning	Red LED	
Low Battery Alert	Red flashing LED alert	
High Level Light Warning	Yellow LED warning	
Auto Power Off	Automatically shuts off when not used (raised) on monocular, headband or helmet	
Enviromental Specifications		
Working Temperature	-51°C/+55°C	
Storage Temperature	-51°C/+71°C	
Humidity	%95 Relative humidity (+ 68 ° C / + 23 ° C)	
Immersion	30 min in 8m water	
Operating Height	3500m	

All technical parameters has 10% tolerance value.

TV/PNVG-40

PILOT NIGHT VISION GOGGLE



TV/PNVG-40 PILOT NIGHT VISION GOGGLE

General Features

TV/PNVG-40, is a pilot night vision goggle designed specifically for pilots to work with maximum performance in low-light environments, under moonlight, starlight and challenging conditions. It is fully completely compatible with all helmet and ANVIS mounting interface.

Ergonomic interface controls (including interpupillary and vertical / forward / tilt settings) provide improved system visibility, thus greatly enhancing helicopters' ability to move on duty.

- Compatible with Gen II/Gen II+/Gen III image intensifiers
- Fixed wing/Rotary wing helmet adapter
- Automatic turn-off in stowed position.
- Cockpit compatible class A/B filters available



Technical Specifications

FOV	40°
F number	1,15/1
Image intensifier	FOM 1600/1800/2000
Image color	Green-black/Black-white
Magnification	1x ±5%
Focus range	20cm to infinity
Objective EFL	27mm
Diopter adjustment	+2 to -6
Eye distance adjustment	51-76 mm
Vertical adjustment	30 mm
Depth adjustment	30 mm
Inclination adjustment	±5° (10°)
Weight	Max. 600g
Mount adapter weight	130g

All technical parameters has 10% tolerance value.



FOV: 40°



600g



Fully compatible with all pilot helmets with ANVIS connection interface



Inclination: ±5° (10°)



TV/NWS 3-4-6

SNIPER RIFLE IMAGE INTENSIFIED SIGHT



TV/NWS 3-4-6 SNIPER RIFLE IMAGE INTENSIFIED SIGHT

General Features

TV/NWS series night vision weapon scopes are products with light and compact designs manufactured according to military standards. The NWS-4 was designed especially for short and medium range weapons with a caliber of 5.56 mm and 7.62 mm, while the NWS-6 was designed specifically for medium and long-range surveillance and sighting purposes up to 12.7 mm.

NWS-3, NWS-4 and NWS-6 are night vision weapon scopes with 3X, 4X & 6X magnification and provide high resolution images in low light conditions. In NWS Series scopes, 2nd generation or 3rd generation image intensifier tubes are used depending on the model selected.

TV/NWS-3	Recognition Range	300m
	Detection Range	600m
TV/NWS-4	Recognition Range	400m
	Detection Range	800m
TV/NWS-6	Recognition Range	500m
	Detection Range	1100m

Technical Specifications

Model	TV/NWS-3	TV/NWS-4	TV/NWS-6
Magnification	3X	4X	6X
Field of View	12.8	8°	5,6°
Eye Relief	40mm	45mm	45mm
Tube Type	18mm GEN II+/GEN III		
Focus Range	20m to infinity	20m to infinity	30m to infinity
Diopter adjustment	-4 / +4		
Battery	1XCR123/AA		
Battery life	min 40 hours at +20°C		
Human Recognition Range (With GEN III, 64 lp/mm tube)	300m (Starlight)	400m (Starlight)	500m (Starlight)
Human Detection Range (With GEN III, 64 lp/mm tube)	600m (Starlight)	800m (Starlight)	1100m (Starlight)
Weight (without batteries)	850g	1000g	1800g
Dimensions (mm)	205x83x82mm	205x83x82mm	280x100x100mm

TV/NVA-13

NIGHT VISION ATTACHMENT



TV/NVA-13 NIGHT VISION ATTACHMENT

General Features

TV / NVA-13 is a Clip-On night vision device that allows the optical sight on the weapon to be used at night with the same settings and habits as daytime. With the reflective optical design compared to its counterparts, it is both smaller and lighter in size.

It is a lightweight, compact, high-resolution image intensifier tube night vision attachment designed to use in a variety of military and law enforcement weapons mounted flush with an optical day sight.

It can be applied with various fixed and changeable magnification daytime scopes without requiring zeroing.

As an ultra-light, compact and robust product, it is designed to provide strength and high performance tested according to military standards.



Technical Specifications		
Field of View	13°	
Magnification	1x	
Weight (without batteries)	510g	
Dimensions (LxHxW)	183x75x60mm	
Focus Range	10m to infinity	
Battery	1x AA Lithium or Alkaline	
Battery Life	> 50 hours (Lithium battery)	
Infrared Illumination	up to 500m (optional)	
Human detection range (GEN III GYT ve 4x magnifier)	1250m (Starlight)	
	2100m (Moonlight)	
Compatibility with Scope Magnifications	1-20x (Acceptable)	3-12x (Recommended)
	F#	
		1.5

All technical parameters has 10% tolerance value.



TV/RPG-7 NIGHT VISION ATTACHMENT



TV/RPG-7 NIGHT VISION ATTACHMENT

General Features

RPG-7 NIGHT VISION ATTACHMENT is a Clip-On night vision device that allows the optical sight on the weapon to be used at night with the same settings and habits as daytime. With the reflective optical design compared to its counterparts, it is both smaller and lighter in size.

It is a lightweight, compact, high-resolution image intensifier tube night vision attachment designed to use in a variety of military and law enforcement weapons mounted flush with an optical day sight.

The RPG-7 NIGHT VISION ATTACHMENT provides night-time surveillance and target setting by condensing light that is less at night. It can be applied with various fixed and changeable magnification daytime scopes without requiring zeroing

As an ultra-light, compact and robust product, it is designed to provide strength and high performance is tested according to military standards. It can be used as an illuminator.



Technical Specifications

Field of View	13°
Magnification	1x
Weight (without batteries)	510g
Dimensions (LxHxW)	183x75x60
Focus Range	10m to infinity
Battery	1x AA Lithium or Alkaline
Battery Life	> 50 hours (Lithium battery)
Infrared Illumination	up to 500m (optional)
Human detection range (GEN III GYT ve 4x magnifier)	1250m (Starlight)
	2100m (Moonlight)
Compatibility with Scope Magnifications	1-20x (Acceptable)
	3-12x (Recommended)
F#	1.5

All technical parameters has 10% tolerance value.



TV/KND 3-12x50 SNIPER WEAPON SIGHT



TV/KND 3-12x50 SNIPER WEAPON SIGHT

General Features

TV/KND is a sniper daytime weapon sight is designed for use up to 12.7 mm (0.5 inches) caliber infantry rifles.

There are reticle and sight zeroing devices on sniper binoculars.



Technical Specifications

Magnification	3-12x
Objective Lens diameter	50 mm / 2 inches
Tube diameter	34 mm / 1 1/8 inches
Field of view: (Angular)	1.8 ° - 6.7 °
Field of view: (at 100 yards)	39 feet at 3X, 10.5 feet at 12X
FOV: (at 100 meters)	11.7 meters at 3X, 3.2 meters at 12X
Parallax adjustment	20meters/22yards to infinity
Diopter Adjustment	+2D to -3D
Eye relief	80 mm / 3 inches
Battery	1 x 3V CR2032 Battery
Reticle	MIL-DOT
Reticle focal plane	First focal plane (FFP)
Reticle lighting	11 steps
Elevation Adjustment Range	26 mRad (1 click = 0.1 mRad)
Windage Adjustment	± 6 mRad (1 click = 0.1 mRad)
Clicks	1 full circle 140 click, 2. circle 127 click
Reserve click & total click	±115 reserve click, total 500 click
Shock resistance	MIL STD 810G
Anti-fog	Nitrogen purged
Weight	<920 gr (Without accessories)
Dimensions	345 mm x 85 mm x 70 mm (13,4" x 3,3" x 2,7")
Finish	Black matte
Lens Protection	Flip-Up Covers on Objective and Ocular
Operating Temperature	-30°C / + 50°C (-22°F / + 122°F)
Storage Temperature	-40°C / + 70°C (-40°F / + 158°F)

TV/KND 5-25x56 SNIPER WEAPON SIGHT

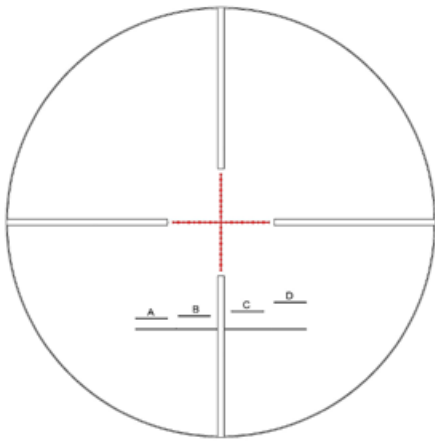


TV/KND 5-25x56 SNIPER WEAPON SIGHT

General Features

TV/KND is a sniper daytime weapon sight is designed for use up to 12.7 mm (0.5 inches) caliber infantry rifles.

There are reticle and sight zeroing devices on sniper binoculars.



Technical Specifications

Magnification	5-25x
Objective Lens diameter	56 mm / 2 1/8 inches
Tube diameter	34 mm / 1 1/8 inches
FOV (Angular)	0.86° - 3°
FOV (100m)	5.3 meters at 5X, 1.5 meters at 25X
Parallax adjustment	20 meters to infinity
Diopter Adjustment	+2D to -3D
Eye relief	80 mm / 3 inches
Battery	1 x 3V CR2032 Battery
Reticle	MIL-DOT or MIL-H
Reticle focal plane	FFP
Reticle lighting	11 steps
Elevation Adjustment Range	26 mRad (1 click = 0.1 mRad)
Clicks	1 full circle 140 click, 2. circle 130 click
Reserve click & total click	±45 reserve click, total 360 click
Windage Adjustment	± 6 mRad (1 click = 0.1 mRad)
Windage Adjustment	MIL STD 810G
Anti-fog	Nitrogen purged
Weight	<1250 gr (without accessories)
Dimensions	390 mm X 85 mm X 70 mm (15" x 3,3" x 2,7")
Finish	Black matte
Lens Protection	Flip-Up Covers on Objective and Ocular
Operating Temperature	-30°C - + 50°C (-22°F / + 122°F)
Storage Temperature	-40°C - + 70°C (-40°F / + 158°F)

TV/MTRS-1 MINI SIGHT AND ACCESSORIES



TV/MTRS-1 MINI SIGHT AND ACCESSORIES

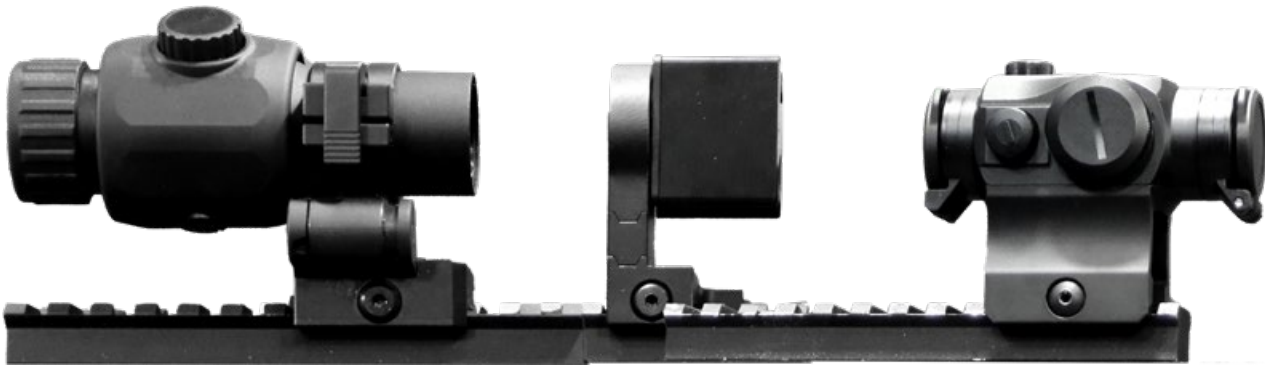
General Features

MTRS-1 offers usage variety on the weapon thanks to its accessory options.

The stand-alone mini-sight can be used in conjunction with the gun's mechanical sight or independently offers the opportunity. Adding 3X scopes increases the accuracy of shooting at long distances.

Corner sight provides the opportunity to aim from the side and top of the gun, especially in residential areas and positions with limited vision.

Easy to put on and take off increases operational comfort.





TV/MTRS-1 MINI SIGHT AND ACCESSORIES

Mini Sight Technical Specifications

Magnification	None (1x)
Eye Distance	Infinite
Reticle	2 MOA RED DOT
Optical coating	Protective multi-layer coating
Zero adjustment range	± 50 MOA in both axes
Adjustment Accuracy	0.5 MOA
Brightness adjustment	10 levels of day vision, 2 levels of night vision
Battery Type	CR2032
Automatic shutdown	after 8 hours
Dimensions	66 x 64 x 37 mm
Weight	140g
Connection	Capability of using high and low profile in accordance with MIL-STD-1913 standards (Capability to use with mechanical sight by means of high profile adapter.)
Working Temperature	-30°C / +70°C
Storage Temperature	-40°C / +70°C
Immersion	30 minutes in 1 meter of water

Corner Sight Technical Specifications

Connection adapter	MIL-STD-1913
Field of View	At least 3 directions (Right, left, top)
Weight	Up to 200 g
Rotation Range	360°
Operating Temperature	-30±2°C / +50±2°C
Storage Temperature	- 40±2°C / +70±2°C
Moisture Resistance	Up to 95% at 40 ° C
Sand and dust	510.5 Proc1 by MIL-STD-810G Method
Vibration	3mm 10-30 Hz XYZ 30 seconds & 5.75G 30-150 Hz XYZ 30 seconds
Chemical resistance	Cleaning materials, oil and drugs

3X Magnifier Technical Specifications

Zoom	3x
Lens	23mm
Eye Aperture	6cm
Field of view	7.5°
Outlet opening	0.7mm
W/E clicks (MOA)	1
Immersion	1 hour at 4m water
Dimensions	10.39mm x 4.90mm x 4.90mm

All technical parameters has 10% tolerance value.



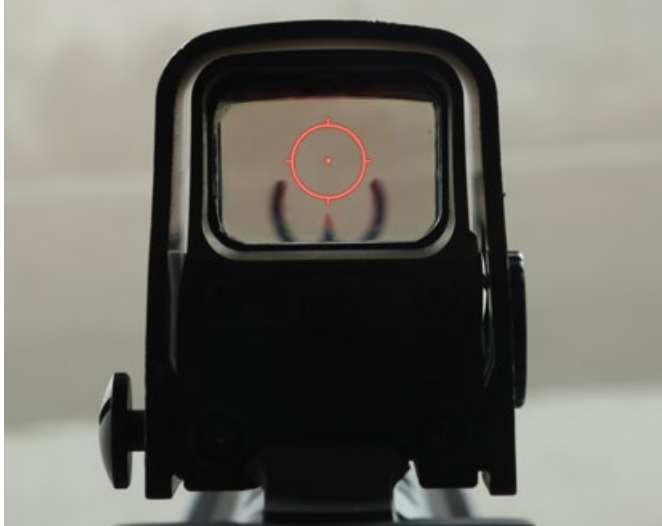
TV/HS-10 HOLOGRAPHIC SIGHT



TV/HS-10 HOLOGRAPHIC SIGHT

General Features

The TV / HS-10 is a low-profile design with a compact structure and a long operating time, a hologram reticle structured sight.



250g



-40° / +60°



17° (7cm eyerelief)



5.56x45mm
7.62x51mm

Technical Specifications

FOV	7cm eyerelief, 17°
Compatibility	5.56x45mm 7.62x51mm
Battery	CR123 / CR123A
Battery Life	Min 500 hours
Screen size	30x23 mm
Brightness adjustment	12 levels day vision & 2 levels night vision
Zero adjustment range	±40 MOA
Adjustment accuracy	0.6 MOA
Middle dot / Circle size	1 MOA / 66 ±2MOA
Storage temperature	-40~60
Operating temperature	-32~52
Weight	250 g
Body	Metal cover
Color	Black
Dimensions (LxWxH)	93x60x65 mm

All technical parameters has 10% tolerance value.



- Long life battery
- Low-profile compact structure
- Infinity FOV
- Safety body structure

MTRS 2A RED DOT

TV/SHIELD TYPE MINI REFLEX SIGHT



MTRS 2A RED DOT

General Features

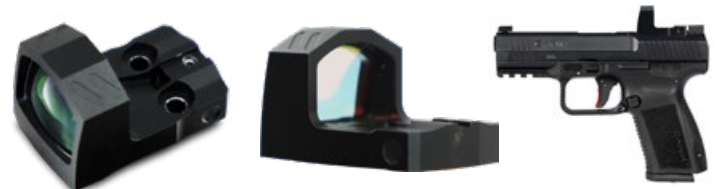
- 1x Magnification
- Parallax free
- Dot: 3 MOA
- Motion Sensor
- Zeroing Feature
- Multi Coating
- Auto Brightness



TV/SHIELD TYPE MINI REFLEX SIGHT

Technical Specifications

Brightness Setting Steps	12 level
Lock Mode	Yes
Sleep Mode	3 minutes of no movement
Wake Up	wake up and turn on with any motion detection to last saved settings
Sleep Mode Adjustment	10 min-1 h-12 h
Memory Function	Remember the last saved brightness setting when turn off/on
Low Battery Warning	Below 2.2vdc, red dot blinks
Each Adjustment Click	1 moa, 1 inch, 4 click at 25 yards
Adjustment Range	±50 moa
Dot Size	3 MOA (2 MOA optional)
Circle Size	36 MOA
Magnification	1X
Storage Temperature	-40C to 70C
Working Temperature	-30C to 60C
Submersion	IP67
Vibration	5000G
Window Size (in)	0,58x0,77
Body Dimension (in)	1,6x0,98x0,95
Battery	CR1632



TV/8x32 OPTICAL BINOCULAR



TV/8x32 OPTICAL BINOCULAR

General Features

Precision optical technology is used for maximum image quality and brightness in TV/8x32 day binocular.

It is a lightweight handheld binoculars with a durable body in military standards.



Optical Specifications

Magnification	8x
Objective lens diameter	30± 2mm
Exit pupil diameter	3,85 ± 0,2 mm
Field of view	6,8°
Field of view (at 1000m)	120 m
Eye relief	18±3mm
Min focus range	25±1m
Reticle	Yes
Prism type	Roof Prism

Mechanical Specifications

Ocular adjustment	54±3 mm -74±3 mm
Diopter adjustment	+4/-4
Dimensions (HxWxD)	145mm x 210mm x 65mm
Weight	Max 600 g (Without accesories)

Enviromental Features

Operational temperature	+ 55°C, -25°C
Storage temperature	-30° +60°

All technical parameters has 10% tolerance value.

Optionals

Rubber Coating
Body Color (Green/Black)
Carrying Case
Carrying Strap
Lens protective cover
Cleaning kit

TV/10x50 OPTICAL BINOCULAR



TV/10x50 OPTICAL BINOCULAR

General Features

These handheld binoculars with 50 mm focal length are specially designed for outdoor use. In addition to being waterproof, the binoculars are protected by a durable natural rubber coating. All binoculars are purged with nitrogen.



Optical Specifications

Magnification	10X
Objective Diameter	50mm
Field of View (Degree)	6.5°
Field of View at 1000 m	114mm at 1000m
Exit Pupil	5mm
Eye Relief	20mm
Prism	Porro Prism, BaK4
Coating of Lens	±8
Dioptric Adjustment/Correctio	±8
Focus	Individual focus
Brightness	≥85%
Inter Pupillary Adjustment Distance	56mm~74mm
Reticle	Yes
Reticle Type	M-22
Viewing Range	114m at 1000m

Mechanical Specifications

Ocular opening	56-74 (mm)
Dioptric Adjustment	+5/-5
Dimensions	185x202x66(mm)
Weight	1150g

Enviromental Specifications

Operational Temperature	+ 60°C,-20°C
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All technical parameters has 10% tolerance value.

TV/BIN-20x120 BINOCULAR



TV/BIN-20x120 BINOCULAR

General Features

The device has a magnification of 20 × and the body of scope is made of magnesium to keep weight to a minimum.

Binoculars are waterproof, filled with nitrogen to protect against fogging and lens fungus. The eyepieces can be changed to achieve different magnifications



9.96kg



FOV: 57.15°



70cm x 28.5cm



26X

26X Magnification

Technical Specifications

Prism	Porro Prism
Magnification	26X
Objective diameter	120mm
Diopter	+5' / -7'
FOV (Angular)	2.4°
FOV (Visible)	57,15°
FOV (1000m)	41,91°
Exit pupil	4,1mm
Eyerelief	20mm
Relative Brightness Ratio	21,3
Min focus range	30m
Weight	9,96 kg
Dimensions	70x28,5 cm

All technical parameters has 10% tolerance value.



TV/15-45x60

TACTICAL SPOTTING SCOPE



TV/15-45x60 TACTICAL SPOTTING SCOPE

General Features

The device has a magnification of 15X-45X and designed for strategic observation.

15-45x60 tactical spotting scope has waterproof and dustproof features.



Waterproof - Dustproof



FOV: @1000m: 55m (15x) – 20m (45x)



60mm lens



45X Magnification

Technical Specifications

Effective diameter of objective lens	60 mm
Magnification	15x-45x
FOV	@1000m: 55m (15x) – 20m (45x)
Eyepiece	20±5 mm
Diopter adjustment	+3 / -3
Weight	1250 gr. (Without accessories)
Water tightness	IP67
Dustproof	IP67

All technical parameters has 10% tolerance value.

TV-SD 500 / TV-SD 1000

ACOUSTIC SNIPER DETECTION SYSTEMS



TV-SD 500

ACOUSTIC SNIPER DETECTION SYSTEM

General Features (TV-SD 500)

TR/SD-500 Acoustic detection system can detect the locations of trajectory weapons such as infantry rifles, sniper rifles and machine guns in terms of distance and direction. The system which is capable of detecting from shoulder, can show the user the direction and distance information of a fired shot with a mini screen and also gives an audible warning with the headset.

The TR/SD-500 System also works in residential areas with background noises and in terrain areas with echo effects. Settings can be adjusted easily and quickly through the control panel on the mini screen.

Detects shots up to 500 m
Accuracy in determining the location of the shot is minimum > 85%.

Technical Specifications

Shooting detect range	500m
Determining of the shots	>%85 (Supersonic shots)
Detects shots	1-2m
Max. distance mistake	+/- %10
Max. lateral mistake	+/- % 8
Accuracy location	>% 85
Battery	6 hours
Weight	<600g



TV-SD 1000

STATIONARY VEHICLE ACOUSTIC SNIPER DETECTION SYSTEM

General Features (TV-SD 1000)

The Transvaro On-Board Sniper Detection System is a device that detects the direction and distance of the projectile (5.56, 7.62, 12.7..) and can transmit these data to the Firing Range Indicator Unit.

Marking by GPS position on the map via the display unit
Past shot recording and reporting
No calibration shot required
Ability to work collaboratively with Electro-Optic systems

Technical Specifications

Shooting detect range	1000m
Accuracy location	>%95 (Supersonic shots)
Max. distance mistake	+/- %10
Detection angle (azimuth) mistake	<2.5°
Detection angle (elevation) mistake	<2.5°
Detection time	<1.5 sn
Interface	Ethernet, RS-232, RS-422, USB
Compatibility	MIL-STD-810G, MIL-STD-461F



TV/LRF 2500E-3500E LASER RANGE FINDER



TV/LRF 2500E-3500E LASER RANGE FINDER

General Features

It is a light and powerful, easy-to-use laser distance measuring device designed to meet the needs of the armed forces, security forces and special forces.

Since it is light weight, it can be used easily with one hand and it can be easily connected to night vision binoculars mechanically.

- It is eye safe and has class 1 laser
- It can be used with one hand.
- 6 ° Field of view
- 6X magnification
- GPS, inclinometer and digital magnetic compass are available
- Meter, Yard and feet measurements
- Determination of vertical and horizontal distance, target direction and elevation angle.
- Horizontal distance measurement between two targets
- It calculates its and target's coordinates
- It has Bluetooth feature



Technical Specifications

Range (@20km visibility 30% albedo at 10 km)	LRF 2500E	LRF 3500E
Human Target (1m x 1m)	>2000 m	>2500 m
NATO Target (2.3m x 2.3m)	>2400 m	>3500 m
Range	5-5000 m	5-6000 m
Measuring Sensitivity	<50 cm (@<150m)	<200 cm (@>150m)
Inclination Sensitivity	1° RMS	1° RMS
Magnification	6x	6x
Field of view (FOV)	6°	6°
Diopter	-4; +4	-4; +4
Dimensions	75 x 105 x 132 cm	85 x 135 x 132 cm
Weight	500g	800g
Compatibility	MIL-STD-810	MIL-STD-810
Tightness	IP67 (30 min. At 1 m depth)	
Wavelength	1550 nm – Class 1 Eye Safe	
Operating temperature	-32 ~ +50° C	-32 ~ +50° C

All technical parameters has 10% tolerance value.



TV/LTD-01 LASER TARGET DESIGNATOR



TV/LTD-01 LASER TARGET DESIGNATOR

General Features

Transvaro Model TV-LTD-01 is a technological LTD product developed by Transvaro in Turkey and is independent of ITAR.

It supports standard NATO (*STANAG 3733 Band I and Band II*) and National coded ammunition. Designed in an OEM structure to be made a system according to customer requirements and intended use. Features to support LTD needs of Air, Land and Navy Forces.

Specific to the customer's area of use, designed in accordance with Stable Gimbal and Tripod conditions of use;

Compact: L:50 mm x H: 160 mm x H: 65 mm (*Max. dimensions*)

Lightweight: The weight of the model that used in the stable gimbal is less than 1.3 kg.

The weight of the model that used on tripods is less than 2.3 kg.



Technical Specifications

Nd: YAG Wavelength	1064 nm
Optional Energy	25 mJ, 50mJ, 70 mJ, 100mJ (<i>As energy decreases, size and weight decrease</i>)
Pulse Width	15 ± 1 nanoseconds. It has superior technological properties than products with similar impact power but impact widths of more than 16 nanoseconds on the market
Distance	300μRad (<i>Maximum</i>)
Operating Ambient Temperature	-30 °C / + 60 °C
Storage Ambient Temperature	-40 / +85°C
Supply	Adapted to customer use with 24VDC, 28VDC or battery (<i>External accessory</i>)
Communication Standard Interface	RS422 with customer-friendly options (<i>Bluetooth, etc.</i>)
Maintenance Under Normal Conditions (MTBF)	12,000 hours and at least once every 12M (<i>Calculated according to MIL-HDBK-217</i>)

All technical parameters has 10% tolerance value.



1.3kg



25 mJ, 50mJ, 70 mJ, 100 mJ



50mm x 160mm x 65mm



-30 °C / + 60 °C

TV/MCAD-2

MULTI-CHANNEL AIMING DEVICE



TV/MCAD-2 MULTI-CHANNEL AIMING DEVICE

General Features

TV / MCAD-2 is a multi-channel pointing device with low and high power options, visible laser, infrared laser and infrared illumination. The mode selection button can be used to switch between high and low laser pointer modes.

It can be adjusted synchronously with 3 lasers with a single adjustment turret (*height & left-right*). There is a zoom button behind it.

- Visible laser, IR laser and IR illuminator
- Low battery and infrared indicator
- Quick release mount and addable picatinny rail option
- Waterproof remote control
- Micro arc oxidation coating on aluminum body
- Direct green laser (TV / MCAD-2G only)
- Red & green color options

Functions

- Laser pointer
- Infrared laser illumination
- Remote control



Laser Pointer	
Infrared Wavelength	830
Visible Wavelength (nm):	TV/MCAD-2R (Red) 650
	TV/MCAD-2G (Green) 520
Output power (mW)	Low: 1 & 0.7
	High: 30 & 50
Beam scattering (mrad)	0.4
Laser class	3B
Laser Illuminator	
Wavelength	830 nm
Output power	<50 mW
Beam divergence	1 – 210 mrad
Laser class	3R
Mechanical Features	
Body Material	Duralumin
Coating	Micro Arc Oxidation
Adjustment Range	±1°
Mounting interface	Pikatinny
Environmental Features	
Operating temperature	-40° - 51°C
Storage temperature	-40° - 70°C
Tightness	IP67
Physical Features	
Dimensions	92 x 57 x 43 mm
Weight	248g

All technical parameters has 10% tolerance value.

TV/LZP-1 LASER ZEROING POINTER



TV/LZP-1 LASER ZEROING POINTER

General Features

The LZP-1 is a laser zeroing pointer which can be adapted to various barrel diameters, minimizing resetting time and cost.

- Strong and durable body in military standards
- Working with one (1) standard "AA" battery
- Can be used with different types of weapons

Standart Aksesuarlar

- AA battery
- Carrying bag
- Optical lens cleaning patch
- Optical lens cleaning brush
- User guide
- 5.56 mm barrel attachment
- 7.62 mm barrel attachment
- 8.59 mm barrel attachment
- 12.7 mm barrel attachment

Technical Specifications

Wavelength	635 nm
Output Power	12 ± 2mW
Laser class	3B
Beam divergence	0.5 mrad
Operating Range	250m
Immersion	30m in 5m water
Operating Temperature	-40°C - + 60°C
Storage Temperature	-40°C - + 70°C
Battery Type	1 x AA 1.5 V
Battery Life	10 hours
Reverse Battery Protection	Yes
Weight (Without Battery)	220g
Dimensions	210 x 42 x 29 mm

All technical parameters has 10% tolerance value.



TV/MPL

MULTI-PURPOSE LASER POINTER

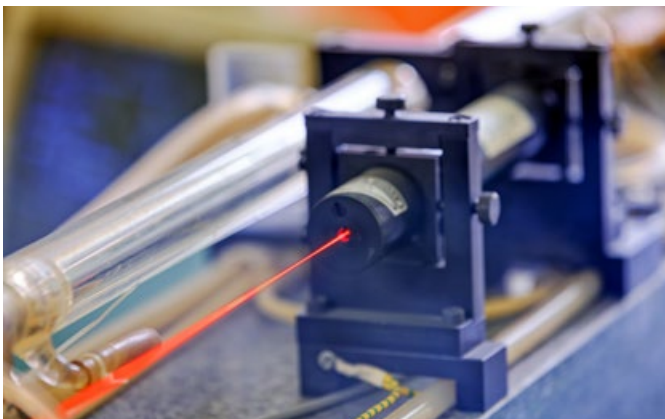


TV/MPL MULTI-PURPOSE LASER POINTER

General Features

MPL-200 is a target pointer which comes with multiple using options one is handheld and the other is on a weapon it is used to mark targets in long distances thanks to its high power IR laser

- Strong and durable body manufactured according to military standards.
- IR marking possibility.
- Compatible with night vision binoculars / goggles.
- Can be used as handheld.
- Versatile design to allow usage on different types of weapons.
- Capability of adjusting the laser in horizontal and vertical planes.



Technical Specifications

Wavelength	840 nm
Output Power	The highest 200 mW, the lowest 5 mW
Beam Scattering Angle	0,5 mrad
Battery Type	1 x 18650 Battery
Battery Life	11 hours at continuous high power, 36 hours at continuous low power
Range	15 Km (Night and outdoor conditions)
Weight (Excluding battery)	185 g
Working Temperature	-40°C to + 60°C
Storage Temperature	-45°C to + 70°C
Immersion	30 minutes in 8m water

All technical parameters has 10% tolerance value.



185g



200mW - 5mW



15km range



-40 °C / + 60 °C

Standard Accessories

- 2 AA or 1 CR123 batteries
- Remote control / trigger cable
- Gun mount adapter
- Carrying bag
- Shipping case
- Optical lens cleaning cloth
- Userguide

TV/PT-5/20/50 PAN-TILT SYSTEMS



TV/PT-5/20/50 PAN-TILT SYSTEMS

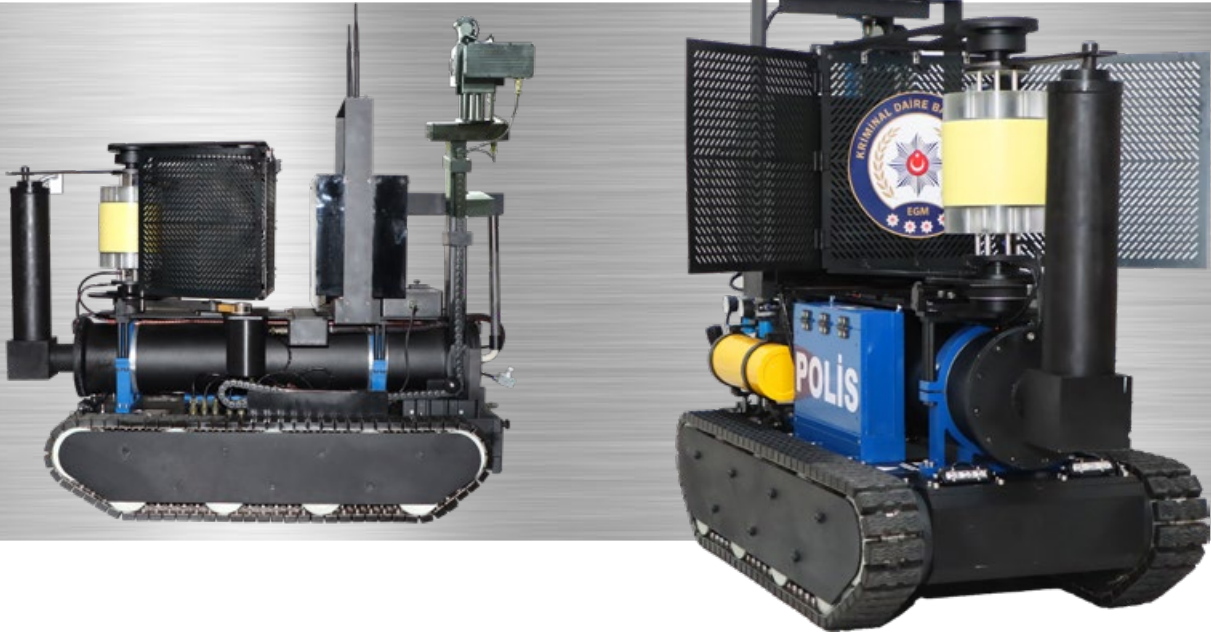
Technical Specifications			
Model	PT-5	PT-20	PT-50
Material	Aluminium	Aluminium	Aluminium
Color	Custom	Custom	Custom
Motor type	Step Motor	Step Motor	Step Motor
Rotating angle	Pan 0-360° with endstop Tilt -40° to +40° (Option: Custom angles up to -90° to +90°)		
Speed	Pan 0,01 ° ~24 °/sn Tilt 0,01 ° ~11,43 °/sn		
Positioning accuracy	<0,02 °	<0,02°	<0,02°
Load Capacity	5 kg	20 kg	50 kg
Mount	Max.5 kg	Max.20 kg	Max.50 kg
Voltage Supply	DC18V-DC32V	DC18V-DC32V	DC18V-DC32V
Operation Temperature	-10°C +65°C (Optional: -25°C +65°C)		
Weight	15 kg	15 kg	15 kg
Size (mm)	240Dx352Wx258H	284Dx358Wx358H	284Dx358Wx358H
Protection	IP67	IP67	IP67
Power Consumption	<0,02	<0,02	<0,02
Baud rate	2400/4800/9600/19200 bps , N,8,1		
Communication interface	CANBUS	CANBUS	CANBUS
Wiring	STx wiring or customized wiring (Lens and aux control optional)		

All technical parameters has 10% tolerance value.





TV/HPEM18S HPEM SYSTEM



TRV HPEM18S HPEM SYSTEM

General Features

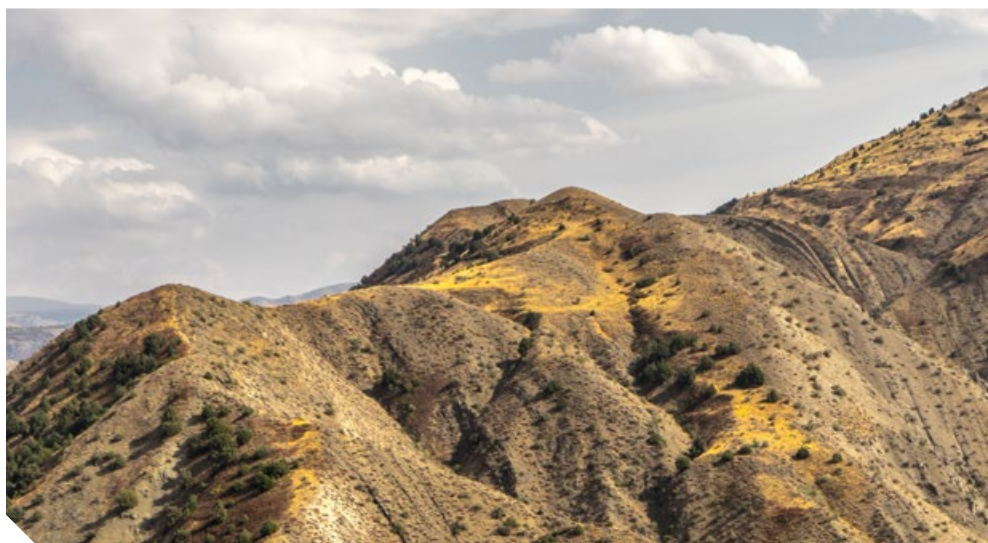
HPEM 18S system is composed of remote controlled unmanned vehicle including an HPEM(High Power Electromagnetic)generator and UWB Antenna as payload. The system generates a high magnitude level of electric field which radiated via its antenna. This electric pulse affects the IED (Improvised Electronic Device) triggered threat resulting either deactivating or pre-detonating the threat. On the contrary of jammers which are only effective for remote controlled IEDs,TRV HPEM18S system is effective for all kind of IED triggered threats.

TRV-HPEM 18S has two main subsystems.First one is remote controlled vehicle that carries the HPEM payload and the second one is Operator Control Unit. Remote control can be achieved via wireless and wired methods according to the user requirements. TRV-HPEM 18S is designed smart enough to identify its own radiated electric field so it won't be interfered by itself. The TRV-HPEM18S has powered by Li-on battery cells enough for 3 hours continuous operation.



TV/ATG

ATG SEISMIC UNATTENDED GROUND SENSORS



TV/ATG SEISMIC UNATTENDED GROUND SENSORS

General Features

The ATG seismic unattended ground sensor (UGS) system combines an innovative, rapid-deployment design, exceptional power efficiency and accurate target detection and classification with intelligent wireless networking.

Our sensors will detect and classify people and vehicles, filtering out false alarms, and can be easily integrated with remote cameras and wireless surveillance hubs to form a complete integrated surveillance solution for visual confirmation of targets.

Weighing less than 0.45kg and with an ingenious screw-in design for ease of use, our sensor nodes are portable, redeployable and designed to ensure optimal contact with the ground for exceptional seismic - sensing performance.

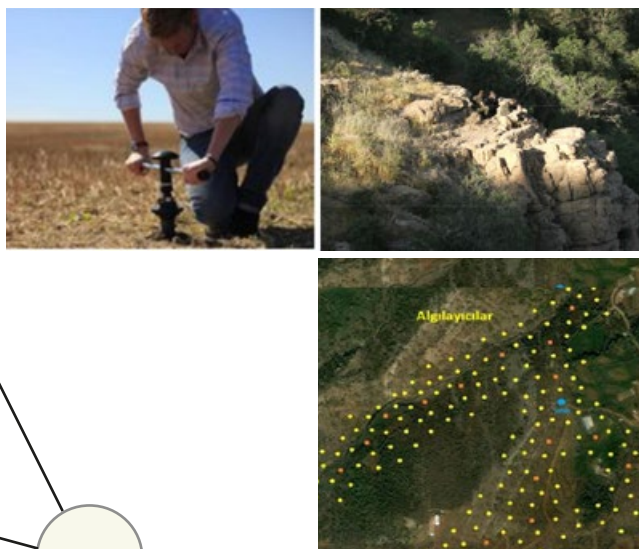
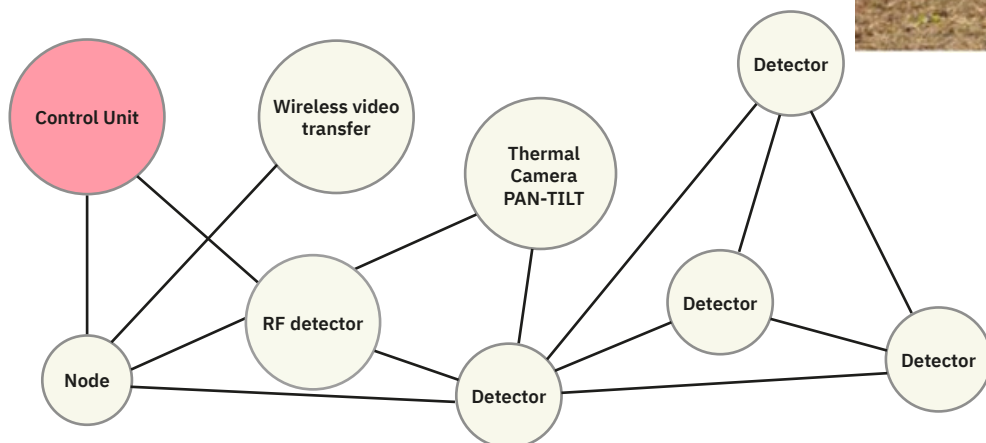
Our innovative power-efficient wireless platform also has the intelligence to adapt if one node is put out of action.

As part of an integrated surveillance platform, unattended ground sensors (UGS) can provide a cost effective alternative to conventional measures, especially on sites where perimeters are in extreme locations or constantly changing.

ATG's seismic-sensing algorithms have been extensively tested and is able to provide class-leading false-alarm rates.

ATG includes mesh-only nodes that allow third-party sensors, such as passive infrared-PIR's, ultrasound or magnetic anomaly, to be included in the sensor field. This provides maximum flexibility to utilise the right mix of sensors for each deployment within a common environment.

Alarm rules operating across the sensor network can be applied to reduce false-alarm rates to near zero for many applications.



ARMADILLO IR STROBE



ARMADILLO IR STROBE

Technical Specifications		
Light Models	Low IR (Strobe)	
	High IR (Strobe)	
	Green (Steady)	
	Green (Steady) + Bright White (Strobe)	
Battery	1xCR123	
Operation time	Green (Steady) + Bright White (Strobe)	>10 hours (25°C)
	High IR (Strobe)	>24 hours (25°C)
Weight (Without battery)	<55g	
Dimensions (mm)	Width	75mm
	Height	36mm
	Length	49mm
Operating temperature	-40°C / + 70°C	
Tightness	IP67	
Vibration option	Yes	
Reverse Polarity Protection	Yes	
Programmable	Yes	



4 light modes:
Low IR, High IR, Green, Green + Bright White (Strobe)



-40 °C / + 70 °C



55g



>10 hours (Green (Steady) + Bright White (Strobe))
>24 hours (High IR (Strobe))



Tightness





Transvaro Elektronik Aletleri Sanayi ve Ticaret A.Ş. bir UYAR HOLDİNG şirkettir.

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