



TRV/GUARD 021 OPTICAL DAY / NIGHT OBSERVATION SYSTEM

General Features

TRV / GUARD 021 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.



- 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 Horizontal
- Vertical axis angular speed can be increased up to $20^\circ / s$ and position precision is 0.1° . (1σ for the horizontal and vertical 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

TECHNICAL FEATURES	Detector Resolution	Soğutmalı 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°	
	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.)		1.8mx0.5m Human	2.3mx2.3m NATO
	Detection Distance	≥ 15 km	≥ 35 km
	Recognition Distance	≥ 4 km	≥ 10 km
	Identification Distance	≥ 2 km	≥ 5 km
VISIBLE CAMERA	Resolution	2 Mp. 1920x1080	
	Electronic Zoom	8x	
	Optical Magnification	35x continuous zoom	
	Narrow Field of View	2°	
SWIR CAMERA (OPTIONAL)	Resolution	640x512	
	Field of View	6°(Y)	
	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 ±10µm göz için güvenli	
	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 ±20nm	
	Beam divergence	0.5 mrad	
	Distance (at night and in open weather conditions)	10km	
SCREEN	External Monitor	Renkli, 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	30 kg	