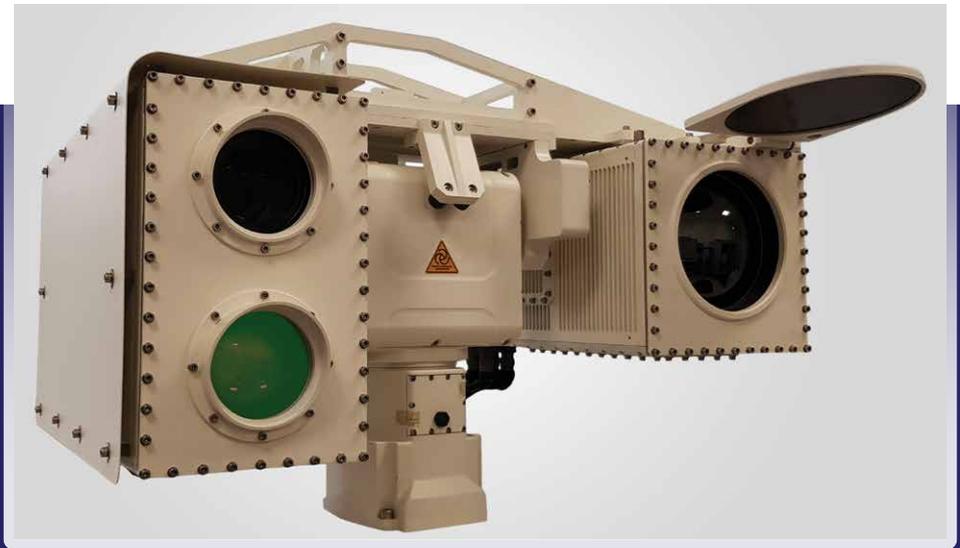


vMSIS3-USD-C225-T



Extreme fog conditions - Left: Visible, Right - SWIR

vMSIS3-USD-C225-T, Vlatacom Multi Sensor Imaging System 3 - Uncooled Standard Definition

Product Description

The vMSIS3-USD-C225-T is a state-of-the-art monitoring and surveillance system that integrates various high definition imaging sensors and provides medium range target detection, recognition, and identification based on highly advanced sensors, optics, and image processing. The system consists of an uncooled LWIR standard definition thermal imager, a color low light day/night standard definition imager, and an optional SWIR imager. Each of them employs medium range optics and a real-time image stabilization system. The vMSIS3-USD-C225-T utilizes a pan/tilt platform with gyro-stabilization. The entire system operates in a large temperature range and various climatic conditions. The entire system can be controlled, monitored, and have its parameters adjusted from a remote/local control center or an optional control console.

The uncooled thermal imager exposes targets even in total darkness and during atmospheric impairments caused by: rain, snowfall, fog, haze, dust, sandstorm and/or smoke. This system is recommended for medium range land applications.

The color low light imager provides additional details during day and low-light conditions. The optional SWIR imaging further improves target visualization and tracking in rough weather and atmospheric conditions (e.g. fog and smoke). Optional video stabilization, image enhancement, video-tracking, motion detection algorithms, and mapping toolkit are also available. Additionally, the system can include optional components: an eye-safe laser rangefinder, a digital magnetic compass, and a GPS.

Key Features

- Modular multi-sensor standard definition imaging system
- Superior uncooled LWIR standard definition thermal imager
- Medium range color low-light standard definition imager
- Crisp high resolution image
- Cost effective excellent range performance
- High-performance T-shaped gyro stabilized pan-tilt unit
- Optional SWIR imaging
- Remotely or locally controlled
- Optional control and monitoring console with one or three monitors
- Rugged enclosure
- 24/7/365 operation
- Optional features: video stabilization, image enhancement, video tracking, motion detection algorithms and mapping toolkit

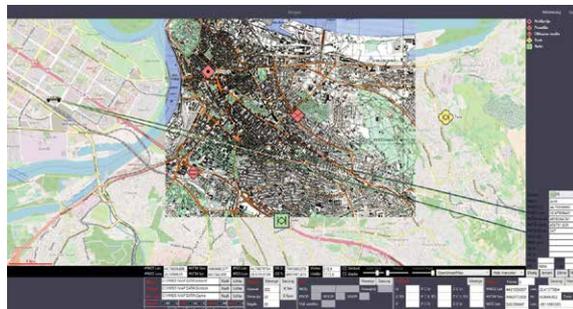
Control and Monitoring

- Remotely/locally controlled and monitored
- Video streams from each imager can be easily monitored

Specifications:

LWIR thermal imager		Color low light imager	
Array format:	640 x 480 pixels	Array format:	1028 x 596 pixels
Detector type:	Vanadium Oxide 2D array	Detector type:	Single CMOS / RGB Bayer
Resolution:	0.3 Megapixels	Resolution:	More than 650TVL (PAL)
Pixel pitch:	17µm	Pixel size:	5.0µm × 6.25µm
Spectral band:	8.0µm to 14.0µm	Sensor sensitivity:	<0.00003lx
NETD:	35mK@300K, F1.0	Minimal subject illumination:	Color: 0.0006lx F1.2 (AGC=ON, Shutter=x16, NR=ON, γ=0.45)
Optics:	Motorized continuous zoom lens	Optics:	Motorized continuous zoom lens
Focal length:	25mm - 225mm	Focal length:	22mm - 506mm
SWIR imager - optional		Laser range finder - optional	
Array format:	640 x 512 pixels	Wavelength:	1.54µm
Detector type:	InGaAs 2D array	Range of measurement:	80m to 20,000m
Resolution:	640 x 512	Fully Eye-safe:	Class 1
Pixel pitch:	15µm		
Spectral band:	0.9µm to 1.7µm		
Noise (RMS):	<195 electrons Low Gain <50 electrons High Gain		
Optics:	Motorized continuous zoom lens		
Focal length:	25mm - 300mm		
Pan tilt platform		General	
Azimuth movement range:	N x 360°	Interface:	Ethernet 100/1000BaseT
Elevation movement range:	up to ±10°	Power supply/Consumption:	24VDC or 230VAC/450W @ 24VDC
Azimuth speed range:	From 0.005°/sec to 60°/sec	Dimensions:	824mm x 721mm x 543mm
Elevation speed range:	From 0.005°/sec to 60°/sec	Weight:	Up to 71 kg depending on configuration
		Operating temperature:	-25°C to 55°C
Operating console (optional)			
Displays:	1 - 3 depending on choice		
Resolution:	Up to full HD (1920 x 1080)		

Detection, Recognition, and Identification Ranges		
Human		
	Geometrical calculation*	<div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background-color: #0056b3; margin-right: 5px;"></div> Detection 8.4km </div> <div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background-color: #0070c0; margin-right: 5px;"></div> Recognition 2.1km </div> <div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background-color: #0080e0; margin-right: 5px;"></div> Identification 1.1km </div>
	Real world**	<div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background-color: #008000; margin-right: 5px;"></div> Detection 4.3km </div> <div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background-color: #009000; margin-right: 5px;"></div> Recognition 1.0km </div> <div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background-color: #00a000; margin-right: 5px;"></div> Identification 0.8km </div>
Vehicle		
	Geometrical calculation*	<div style="display: flex; align-items: center;"> <div style="width: 100%; height: 10px; background-color: #0056b3; margin-right: 5px;"></div> Detection 20.3km </div> <div style="display: flex; align-items: center;"> <div style="width: 100%; height: 10px; background-color: #0070c0; margin-right: 5px;"></div> Recognition 5.1km </div> <div style="display: flex; align-items: center;"> <div style="width: 100%; height: 10px; background-color: #0080e0; margin-right: 5px;"></div> Identification 2.5km </div>
	Real world**	<div style="display: flex; align-items: center;"> <div style="width: 100%; height: 10px; background-color: #008000; margin-right: 5px;"></div> Detection 7.6km </div> <div style="display: flex; align-items: center;"> <div style="width: 100%; height: 10px; background-color: #009000; margin-right: 5px;"></div> Recognition 2.3km </div> <div style="display: flex; align-items: center;"> <div style="width: 100%; height: 10px; background-color: #00a000; margin-right: 5px;"></div> Identification 1.8km </div>



(*) Geometrical calculation for system IFOV (pixel size / maximum focal length).

(**) Calculated with NVThermIP model, according to STANAG 4347: 50% probability at 0.2/km atmospheric attenuation factor and 2K temperature difference.

Actual range may vary depending on environmental conditions, camera set-up, type of display and user experience.



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