

vMSIS3-CHD10-C1000-T



vMSIS3-CHD10-C1000-T – Vlatacom Multi Sensor Imaging System 3 – Cooled High Definition 10µm

Product Description

The vMSIS3-CHD10-C1000-T is a state-of-the-art monitoring and surveillance system that integrates various high definition imaging sensors and provides ultra-long range target detection, recognition, and identification based on highly advanced sensors, optics, and image processing. The system consists of a 10µm cooled MWIR high definition thermal imager, a color low light day/night full HD imager and eye-safe laser rangefinder.

Each imager employs ultra-long-range optics and an IMU sensors based real-time video stabilization system. The vMSIS3-CHD10-C1000-T utilizes a pan/tilt platform with gyro-stabilization. The entire system operates in a large temperature range and various climatic conditions. The system can be controlled, monitored, and have its parameters adjusted from a remote/local control center or an optional control console. System can be equipped with optional components for orientation and location: digital magnetic compass – DMC, and a GNSS/GPS.

The cooled thermal imager exposes targets even in total darkness and during atmospheric impairments caused by: rain, snowfall, fog, haze, dust, sandstorm and/or smoke. This makes the system suitable for both land and coastal applications. Optional features are available: advanced video tracking, motion detection, video stabilization, image enhancement.

Key Features

- Modular multi-sensor high definition imaging system
- Superior cooled MWIR 10µm high definition thermal imager
- Ultra-long range color low-light high definition imager with atmospheric interference reduction
- Crisp high resolution image
- Excellent range performance
- High-performance T-shaped gyro stabilized pan-tilt positioner
- IMU sensors based video stabilization
- Eye-safe laser rangefinder,
- Optional equipment: a digital magnetic compass, a GNSS/GPS and control and monitoring console with one or three monitors
- Remotely or locally controlled
- Communication protocol for integration with command and control systems
- Rugged enclosure
- 24/7/365 operation
- Optional features: image enhancement, video tracking, motion detection algorithms and mapping toolkit

Key Benefits and Additional Applications

- Cooled mid-wavelength infrared imager with 1000mm optics offers superb range performance
- Full HD color imager with image enhancement modes

Advantages

- Provides effective day and night uninterrupted surveillance
- Thermal imager in vMSIS3-CHD10-C1000-T uses cooled mid-wavelength 10µm infrared technology that offers better range performance in the presence of maritime high humidity conditions
- IMU sensors based video stabilization

Specifications:

MWIR thermal imager		Color low light imager	
Videoformat:	HD 720p @30fps	Video format:	HD 1920 x 1080 @ 30 fps
Detector type:	InSb FPA cooled MWIR	Detector type:	CMOS
Resolution:	1.3 Megapixels	Minimal subject illumination:	Color 0.00015lux (at F1.2) / 0.0017lux (at F4.0) B/W 0.0001lux (at F1.2) / 0.0011lux (at F4.0)
Pixel pitch:	10µm	Optics:	Motorized continuous zoom lens
Spectral band:	3µm to 5µm	Focal length:	20mm - 800mm
NETD:	29mK@50% well fill capacity (mean)		
Cooler MTF:	20,000 hours		
Optics:	Motorized continuous zoom lens		
Focal length:	40mm - 1000mm		
F#:	4		
Laser rangefinder		Pan tilt platform	
Safety class:	1 (eye safe)	Azimuth movement range:	N x 360°
Wavelength:	1.5µm	Elevation movement range:	From -40° to +40°
Ranging capability:	39000m	Azimuth speed range:	From 0.005°/sec to 120°/sec
Precision*:	0.5m – 1.5m	Elevation speed range:	From 0.005°/sec to 120°/sec
Performance to standard NATO target**:	16000m		
Beam divergence:	0.25mrad		
Target discrimination:	<30m		
MTBF:	>500 000 measurements		
General		Operating console (optional)	
Interface:	Ethernet 100/1000BaseT	Displays:	1 to 3 depending on choice
Power supply/Consumption:	24VDC or ~230V; 150W	Resolution:	Up to full HD (1920 x 1080)
Dimensions (WxDxH):	796mm x 600mm x 539mm		
Weight:	60kg (without optional components, operating console and connection box)		
Operating temperature:	-25°C to +55°C		

(*) Depending on distance and target reflectivity.

(**) Target size 2.3m x 2.3m, visibility 20km, target reflectivity 30%, detection probability > 90%

Detection, Recognition, and Identification Ranges		
Human		
	Geometrical calculation*	
	Standard propagation model**	
Vehicle		
	Geometrical Calculation*	
	Standard propagation model**	

(*) 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.

Disclaimer: Subject to change without notice.



Address:
Vlatacom institute d.o.o.
Milutina Milankovića 5
11070 Belgrade, Serbia

tel: +381 11 377 11 00
fax: +381 11 377 11 99
info@vlatacom.com
www.vlatacom.com