

vMSIS3-CHD-C1200-T



vMSIS3-CHD-C1200-T Vlatacom Multi Sensor Imaging System 3 - Cooled High Definition

Product Description

The vMSIS3-CHD-C1200-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 cooled MWIR high definition thermal imager, a color low light day/night high definition imager, and an optional SWIR imager. Each of them employs ultra-long range optics and a real-time image stabilization system.

The vMSIS3-CHD-C1200-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 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.

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 like an: eye-safe laser rangefinder, a digital magnetic compass, and a GPS.

Key Features

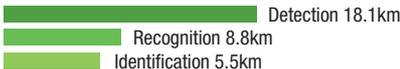
- Modular multi-sensor high definition imaging system
- Superior cooled MWIR high definition thermal imager
- Ultra long-range color low-light high definition imager with atmospheric interference reduction
- Crisp high resolution image
- Excellent range performance
- High-performance T-shaped gyro stabilized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



Extreme fog conditions - Left: Visible, Right - SWIR

Specifications:

MWIR thermal imager		Color low light imager	
Array format:	1280 x 1024 pixels	Array format:	1974 x 1110 pixels
Detector type:	XBn (HOT) FPA	Detector type:	Single CMOS / RGB Bayer
Resolution:	1.3 Megapixels	Resolution:	2.2 Megapixels
Pixel pitch:	15µm	Pixel size:	5 µm
Spectral band:	3.6µm to 4.2µm	Sensor sensitivity:	<0.0025lx
NETD:	20mK@50% well fill capacity (mean)	Minimal subject illumination:	0.04 lx (F4, 30 fps, 50IRE, +72db, color) (Night level 2 - half moon or cloudy full moon equivalent)
Cooler MTTF:	20,000 hours	Optics:	Motorized continuous zoom lens
Optics:	Motorized continuous zoom lens	Focal length:	12mm - 1680mm, with motorized 2.5x extender
Focal length:	55mm - 1200mm		
F#:	4.7		
SWIR imager - optional		Laser rangefinder - optional	
Array format:	640 x 512 pixels	Range:	10 km for target 2.3m x 2.3m
Detector type:	InGaAs 2D array	Wavelength:	1.54µm
Resolution:	640 x 512	Range of measurement:	80m to 20,000m
Pixel pitch:	15µm	Fully Eye-safe:	Class 1
Spectral band:	0.9µm to 1.7µm		
Noise (RMS):	<195 electrons Low Gain ; <50 electrons High Gain		
Optics:	Motorized continuous zoom lens		
Focal length:	20mm - 750mm		
Pan tilt platform		General	
Azimuth movement range:	N x 360°	Interface:	Ethernet 100/1000BaseT
Elevation movement range:	-10° to +10°	Power supply/Consumption:	24VDC or 230V/450W @ 24VDC
Azimuth speed range:	From 0.005°/sec to 60°/sec	Dimensions (WxDxH):	817mm x 726mm x 543mm
Elevation speed range:	From 0.005°/sec to 60°/sec	Weight:	Up to 83kg (without connection box)
		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*	
	Real world**	
Vehicle		
	Geometrical calculation*	
	Real world**	

(*) 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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