SensorTec
Canada

(ST-12S)

12 KM Un-cooled Multi-Sensor Camera

The Multi sensor ST-12S This system consists of a thermal camera and a day-night high resolution camera with very high optical zoom placed on a movable pan & tilt platform. The platform is able to turn the cameras in all directions, both in azimuth and elevation and can be controlled from a remote operator or an existing command and control center.

The movable pan tilt platform is capable of extremely slow/high speed, variable speed in small steps-continuous, panoramic observation with constant speed and tour mode. All these functions can be triggered locally or remotely, it is also possible to program the unit to function automatically with a standard protocol.

Day/Night and Thermal cameras allows observation in total darkness and under all weather conditions even in fog, rain or snow. have continuous optical and digital zoom. The System provides stable picture in windy conditions with proven methods of stabilization.

Multiple payloads on one pan· tilt system within a separate housing (individually removable to enable service of one payload while the other is still operational)

Thermal Camera

ST-12S is equipped with a highly reliable, long-wave, un-cooled Vanadium Oxide (VOx) detector which offers good long range detection in all weather conditions. There is no maintenance required since there is no cooling device. The cameras offer a continuous zoom. This offers excellent situational aware-ness while also giving the possibility to zoom in at suspect activities, and have a closer look, once they are detected. The ST-12S can be integrated into existing networks or used portably.

HD Day/Night Camera

Day/ night Module in ST-12S Multi sensor camera is based on a highly sensitive CMOS megapixel camera module with sensitivity equal to EM-CCD technology and combined with a powerful zoom lens. It is ideal for day/night surveillance of military camp, homeland security [border protection], and critical infrastructure protec-tion (CIP) applications. It is designed to deliver high - performance images, even under the harshest conditions, built according to MIL-810 standards.

The operator at the control center is able to monitor the status of all systems [power, camera status ...). All data signals output from the multi sensor camera can be sent to the control center via multiple means of communication [Ethernet, wireless, optic fiber ...).

PT Head

DC PT in multi sensor camera systems deliver high performance and stabilization for demanding payloads. Their light weight and compact size makes them ideal for mobile solutions. All systems are IP66 approved to make them suitable for all weather conditions and harsh environ-ments. Proven in critical security and observation applications with 24/7 operation. In a fully machined aluminum body lies a single powerful motion control board. Simplicity in construction adds to a unit's robustness and long life time. All units undergo a series of environmental and endurance tests before leaving production to ensure end-user satisfaction. Mechanical assembly kits and software packages can be fully customized to meet customer specifications.

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General Features:

- Simultaneous preview of day/night camera and thermal
- Continuous zoom on both payloads
- Radar connectivity (Slew to Cue)
- Radar tracking possibility
- Target acquisition and tracking
- (auto or remote triggering) (optional)
    - Auto/ manual/ remote focus on both payloads
- Rigid system design
    - (up to 90 km/h wind without damage and 50 km/h in use)
- CE marked
- Control and picture streaming via TCP/IP
- Gyro stabilized pan-tilt platform (optional)
- Electronic image stabilization on both payloads
- Temperature range of the whole system: -32 to +55°C
- Maximum humidity of the whole system: 95 %
- Comply with: IP66
    - Vibration test: IEC 60068-2-64
    - Shock test: IEC 60068-2-27
    - Icing test: NEMA 250
    - Salt fog test: IEC 60068-2-52

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Specifications

Thermal Camera

Detector	Un-cooled Vanadium Oxide (VOx)
Detector type	640 x 480 native detector resol.
Spectral range:	7.5 to 14 µm
Detector pitch:	17 µm
Continuous Digital Zoom:	Yes, up to 16x
Focus:	Manual (remote)
Image Processing :	Tunable Digital Detail Enhancement (ODE), Histogram Equalization.
Vehicle Detection (DRI)	12 Km
Human Detection (DRI)	7.5 Km
Video outputs:	Analog (NTSC / PAL) and digital Ethernet (H264, ONVIF)
Control:	RS422, RS485, RS232, Ethernet
Lens:	24 – 225 mm @ F/1.5
Thermal Sensitivity :	<=50 mK

HD Day/Night Camera

Sensor:	Ultra high sensitivity 2/3" CMOS sensor equivalent to EM -CCD
Pixels (H x V):	1920 (H) x 1080 (V)
Focal Lens	20-750mm 37.5X zoom , (40-1500 mm) with x2 e-extender
Field of view	Narrow: Hor. .67° (.34°) Wide: Hor. 24.8° (12.4°)
Digital output:	H.264 (MPEG-4) / Motion JPEG, RTSP, ONVIF,HD -SDI, analog
Resolution:	1920 x 1080 HDTV - 1080 p 1280 x 720 HDTV - 720 p 640 x 480 VGA
Sensitivity:	Color 0. 005 Lux @ (F1.4, 30 fps)
Spectral response:	Switchable between visible only (color with IR cut filter] and visible + NIR [monochrome]
Signal to Noise ratio:	>50 dB
Scanning system:	Up to 30 fps @ 1920 X 1080
Digital zoom:	16x Continuous
Image transmission protocols:	TFTP, HTTP, RTSP, RTP/TCP, RTP/UDP

Pan/Tilt system

Max load (kg):	50kg / 60Nm
Height/width /length (mm):	552 X 754 X 172mm
Pan angle:	n X 360°
Tilt angle:	± 45°
Pan movement speed:	0.001 ° to 100°/sec
Tilt movement speed:	0.001 ° to 100°/sec
Accuracy:	0,05°
Resolution:	0,005°
Park/ Home position:	Yes
Backlash:	None
Stabilization:	±300 µrad (option)
Peak Power:	120W
Operating voltage (v):	24- 48 VDC
Communication:	R-232, R-485, RS-422, Ethernet
Control protocol:	DC-PT protocol , PelcoD (optional)
Material:	Aluminum

Laser Range finder

Laser type:	Erbium glass
Wavelength:	1,54 µm
Safety:	Class 1 IEC 60825-1 ED 2 of 2007-3
Measuring range:	80m to 20,000m
Range resolution:	±5m
Range accuracy:	±10 m
Extinction:	37db
Measuring rate:	6 ppm continuous
Multiple target resolution:	50m
Nominal ocular hazard distance (NDHD):	0 m

Environment

Working Temperature:	(-30°C to +55°C)
Weight	70 K
Power Consumption	200 W
IP rating:	IP 66