

21 KM Cooled Multi Sensor Camera



The Multi sensor ST-20S system is composed of a Day/Night Camera and a Thermal Camera mounted on a pan-tilt unit. Day/Night and thermal cameras are installed on the same optical axis with a deviation of less than 0.05 dgr. The videos from both Day/Night and thermal cameras are available simultaneously as digital video MPEG4 or H.264.

ST-20S includes a built-in test and status mechanism. All video distribution to viewing workstations is done digitally. Both video digital streams have low latency.

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 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-20S incorporates an incredible 1.3 mega pixel MWIR cooled detector. The resolution can be downsized to HD 1280 x 720 to have a standard 16:9 ratio video image if required.

ST-20S has mid-wave, cooled Indium Antimonide [InSb] detector which offers extremely long range detection in total darkness and all weather conditions. The cameras offer a continuous zoom, which provides excellent situational awareness while also giving the possibility to zoom in at suspect activities. This makes ST-20S cameras an ideal tool for very long range observation over sea and land in HD resolution.

HD Day/Night Camera

Day/ night Module in ST-20S 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 protection applications. It is designed to deliver high - performance images, even under the harshest conditions, in temperatures ranging from - 32° C to + 65° C with IP66 protection, 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

ST-20S 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.

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)
- Rigid system design
- 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 +65°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

Specifications

Thermal Camera

Detector Type:	Cooled Detector
Detector array resolution:	1280 x 1024 (HD) InSb focal plane array
Detector pitch:	10µm
FOV:	.61 degrees to 12.8 degrees (H)
Spectral Range	3 µm - 5 µm
Focal length	57-1200 mm
Focus:	Focus Automatic or Manual / remote
Frame rates:	50/60Hz (100Hz with windowing) PAL
Analogue video output:	(CCIR)
Defrost:	Automatic Window defrost

Digital video output:	Ethernet (H.264, ONVIF), RS-422
Vehicle Detection (DRI):	21Km
Human Detection (DRI) Dynamic:	16Km
range enhancement:	Dynamic Range Enhancement
Image stabilization:	Yes
Continuous Zoom options:	Optical 21x, digital zoom 16x
Auto focus:	Automatic or Manual
Non-uniformity corrector:	Built-in Optical NUC
Detector NETD:	<25mK

HD Day/Night Camera

Sensor:	Ultra high sensitivity 2/3" HD CMOS sensor .
Resolution (H x V):	1920 (H) x 1080 (V) low light
Focal Lens :	16-1000mm (62X zoom) , (32-2000 mm) with x2 extender
Field of view:	Narrow: Hor. .5° (.25°) Wide: Hor. 24.8° (12.4°)
Digital output:	H.264 (MPEG-4) , ONVIF.
Image adjustment auto /manual :	Brightness , Saturation , B&W/Color or mode , BLC , HLC , AGC
Sensitivity:	Color: 0.008 Lux @ (F2.8, AGC ON), B/W: 0.0008 Lux @ (F2.8, AGC ON)
Zoom:	Continuous optical zoom
Wide dynamic range:	(DWDR)
Scanning system:	(color with IR cut filter] and visible + NIR [monochrome]
image stabilization:	EIS (electronic image stabilization)
Focus:	manual / auto / remote
Filter:	De-Fog filter
Spectral Response:	Auto switch between DAY and NIGHT mode (IR cut filter)

Pan/Tilt system

Max load (kg):	30kg + 30kg / 60Nm
Height/width /length (mm):	412 X 735 X 302 mm
Pan angle:	n X 360°
Tilt angle:	± 90°
Pan movement speed:	0.001 ° to 90°/sec
Tilt movement speed:	0.001 ° to 90°/sec
Accuracy:	0.05° / 0.9 mRad
Resolution:	.1 mRad
Park/ Home position:	Yes
Backlash:	None
Gyro Stabilization:	±300 µrad
Peak Power:	120W
Operating voltage (v):	24- 48 VDC
Communication:	R-232, RS-485, RS-422, Ethernet
Control protocol:	DC-PT protocol , PelcoD (optional)
Material:	Aluminum

Laser Range Finder

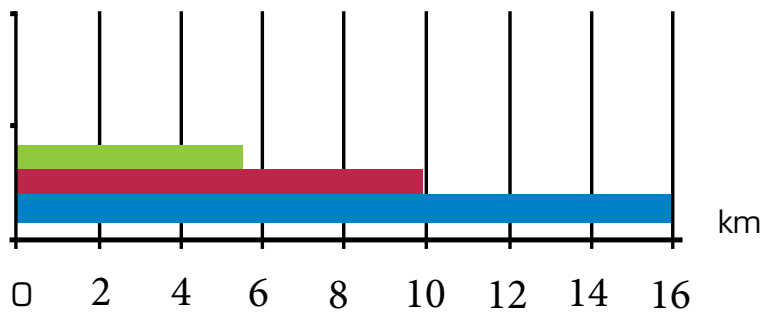
Laser type:	Erbium glass
Wavelength:	1,54 µm
Safety:	Class 1 IEC 60825-1 ED 2 of 2007-3
Measuring range:	80m to 20,000m
Range resolution:	±5m
Range accuracy:	±10 m
Extinction:	37db
Measuring rate:	6 ppm continuous
Multiple target resolution:	50m
Nominal ocular hazard distance (NDHD):	0 m

Environment

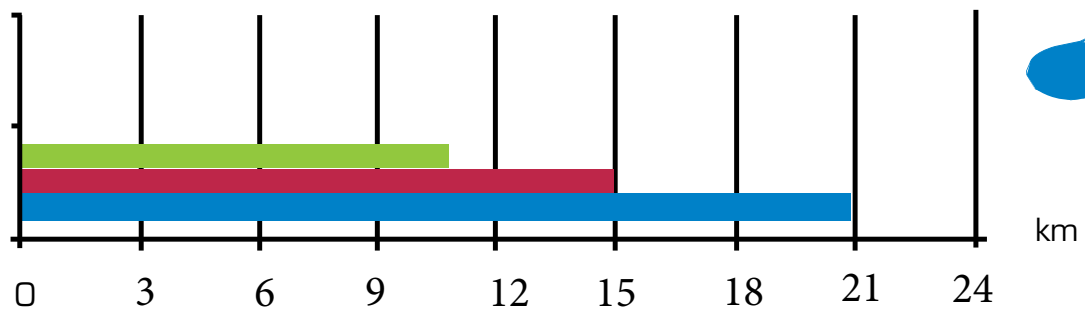
Working Temperature:	(-30°C to +65°C)
Weight :	75 Kg
Power Consumption :	300 W
IP rating:	IP 66

DRI ranges for ST-20S as per Johnson criteria

Detection, Recognition, Identification of a Human Target 1.8m x .5m



Detection, Recognition, Identification of a Vehicle with 2.3x2.3 m



- Identification
- Recognition
- Detection