



SYSTEM CONTROLS  
Versatility is Reality

# System Controls Technology Solutions Pvt Ltd

## LASER IMAGING SYSTEM (LIS)



### Products:

- Stabilized Platforms
- Gimbals
- Positioners
- Pointing Systems
- Pan Tilt Units
- Radar Subsystems
- Electro-Optical Systems
- Opto-Mechanical Systems
- Motion Controls Systems
- Test Benches

### Services:

- Engineering Design & Development
- Electronic Testing & Assembly
- CNC Machining & Manufacturing
- System Integration

Laser Imaging System is an EO system having electro-optical interfaces and mechanical design. This is a compact and lightweight tripod mounted unit. As LIS is a viewing device, the displayed image will be viewed through the monocular. In addition, an external 5 inch high contrast display. Usage of tripod ensures operational conveniences and the display can be covered when not in use. The power source is Li-ion battery through which the power is distributed to all the active subsystems. The operational range is 1800m and working wavelength is 1550nm.





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# Technical Specifications

## System Specification

Range of operation	: 1800 m
Source Wavelength	: 550 nm
Source Power	: 10W (approx.)
Divergence	Variable, 1 to 4 deg; slaved with real time FOV of the Imaging Camera through motorized zoom.
Sensor	InGaAs FPA (pixels: 640 x 512)
Laser Receiver FOV	Min; not more than 1 deg Max; not less than 4 deg (in steps of 0.5 deg)
Viewing	Monocular + SVGA micro display plus an external 5 to 6 inch high contrast display with flap as cover
Receiver zoom	Optical 4X typical, motorized , plus digital 4X
Interference Filters	Narrow band (~40 nm )with peak Tx at 1550 nm and a broad band (to be optimized for day/night viewing)
Operation	Bright Daylight & Moonless / highly overcast: $10^{-3} - 10^{-4}$ lux
Target Range	50m- 1800m , with an accuracy of $\pm 5$ m
Target coordinate computation	With an angular coordinate accuracy of better than $\pm 8$ mrad, GPS accuracy $\leq 10$ m
Bore sight accuracy	Not worse than 0.1m rad in the entire range of zoom
Size/ weight (approx)	550 X 300 X 200 mm / 12Kg

## System Features

System Configuration	Tripod Mounted
Field of regard	360 deg in azimuth , $\pm 10$ deg in elevation
Battery Type	Li -Ion Rechargeable
Duty Cycle	Minimum 'On time in active surveillance will be 1hr, with a duty cycle of 10min 'ON' and 5min 'OFF', in one time full battery charge condition.
Operation	Bright Daylight as well as Moonless night / highly overcast sky : $10^{-3} - 10^{-4}$ lux
Video Overlay for	Day/ Night Mode, Zoom value ,Video recording, Target detected ,range/ coordinates of target
Inbuilt flash memory	4 GB min
External Interfaces	Interface for USB & external monitor, socket for battery charging, and battery connection
Soft buttons/switches for	System ON/OFF, Transmitter ON/OFF ,TLM, Day/Night mode ,Optical/ digital zoom ,Video recording
Charging/Low battery Indicator	One LED will be provided for charging showing green color and low battery showing blinking red color
Zoom in/ Zoom out	In video recording mode also
Confirmation of target detection	Visual (glowing LED)