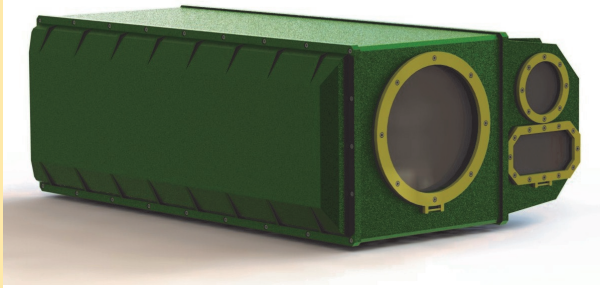
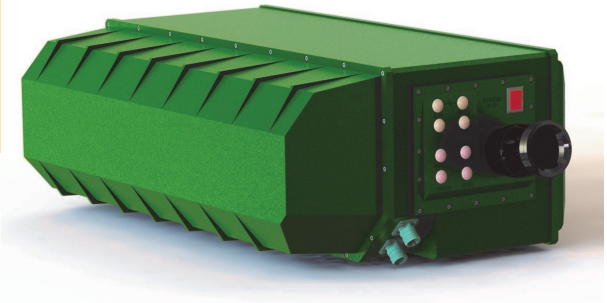
LASER IMAGING SYSTEM





Application Areas

- Sniper Detection
- VIP Security
- Border Protection
- Works in extreme weather conditions
- Tripod / vehicle mountable

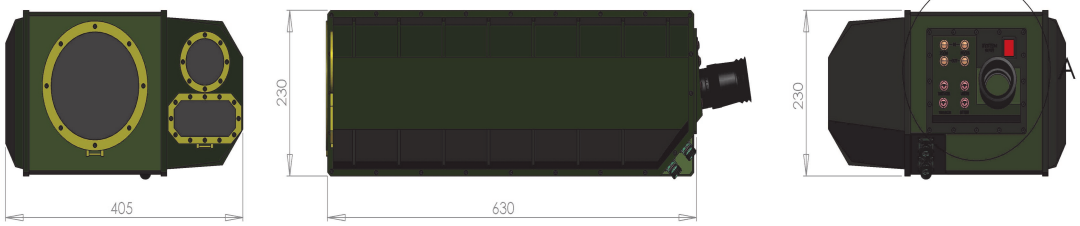
SERVICES

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

The laser imaging system (LIS) is an Passive surveillance / laser imaging system. It detects any optical system that is in the field of view/ scanning area and give the target Co-ordinates. It is a laser based active imaging system with additional feature of coordinate estimation of the target. The retro-reflected laser illuminated beam from the target optics will be acquired by the front end optics of the receiver and will be read by the image sensor. The Laser retro-reflected spot is detected and the exact location of the reflected spot is estimated through LRF, DMC and GPS readings.

PRODUCTS

* Electro-Optic Stabilized Platforms
* Radar Sub Systems
* Laser Applications
* Gimbals
* Pedestals
* Motion Control Systems
* Test Benches



Versatility is Reality

SYSTEM CONTROLS

TECHNOLOGY SOLUTIONS PRIVATE LIMITED

Technical Specifications

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System Specification :

Range of operation	:	1800 m
Source Wavelength	:	1550 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 (will 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 ±5m
Target coordinate computation	:	With an angular coordinate accuracy of better than ± 8 mrad, GPS accuracy ≤10m
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 , ±10 deg in elevation
Battery Type	:	Li –Ion Rechargeable
Duty Cycle	:	Minimum 'On time in active surveillance will be 1 hr, 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 charg--ing, 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)

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