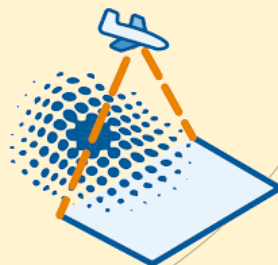


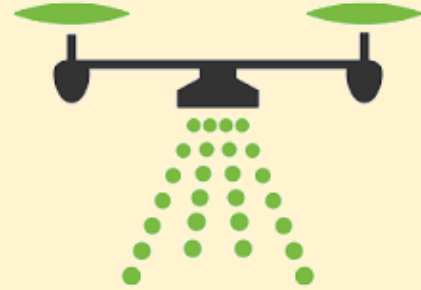


## Goodland Surveys

### Drone LiDAR Survey Data Acquisition, Processing & Mapping



LiDAR that stands for Light Detection and Ranging is a technology that is based on laser beams. It shoots out laser and measures the time it takes for the light to return. It is so-called active sensor as it emits its energy source rather than detects energy emitted from objects on the ground.



## Drone Survey

*A drone survey is simply a survey conducted from overhead using a lidar mounted drone. We produce 2D Orthomosaic images, 3D Models, LiDAR Point Cloud Data & Topographic Drawings from the Drone LiDAR Survey*



LiDAR Surveying Solution can produce surveys with high-accuracy point cloud for various industries, e.g, planning, consulting engineers, architects, construction, power plants, irrigation, etc.



## Area of Application

- Proposed & Existing Railway Line:- Design, Maintenance, Asset Management & Monitoring
- Green Field Roads & Highways – Pre-Bid & Post Bid Survey, Design, Maintenance, Asset Management & Construction
- Smart Cities - Design, Planning & Construction
- Industrial Area – SIPCOT, MIDC, SEZs, Power plants, etc
- Large Land Parcels like Forest, Irrigation, Dam, Agriculture, etc

## Applications & Deliverable

*“Bringing The Land Profile To Your Desktop Using Latest Technologies And Provide A Quality Service, Which Fulfills Your Requirements”*

UAV LiDAR as an active sensor technology penetrates vegetation. LiDAR is able to get through gaps in the canopy and reach the terrain and objects below, so it is useful for generating Digital Terrain Models. LiDAR is also particularly useful for modelling narrow objects such as power lines or telecom towers. LiDAR sensor is coupled with IMU (inertial motion unit) and GNSS receiver, which provide information about the position, rotation, and motion of the scanning platform. It allows achieving high relative accuracy (1-3cm). High absolute accuracy requires adding 1-2 Ground Control Points (GCPs) and several checkpoints

## Deliverable

- Orthomosaic Images (measurable in real scale)
- Point Cloud Data (las) large data sets composed of 3D point data
- Ground Classified Point Cloud Data, DEM, DSM, etc
- AutoCAD compatible Survey Drawing





# Goodland Geospatial

## Clients & Projects

*We do DGPS Survey,  
Control Points  
Survey Total Station  
Traverse & Fly Level,  
Drone survey, Drone  
Data Processing and  
preparing CAD  
compatible  
Drawings, etc.*



By using Drones, we have completed more than 1800 kilometers of Highways, Smart cities and Railway Line Surveying. We undertake projects all over India and abroad

### Few Important Clients:



L&T



KIIFB



Helica, Italy



Louis Berger



AECOM



EGIS India

### Few Recent Projects Completed:

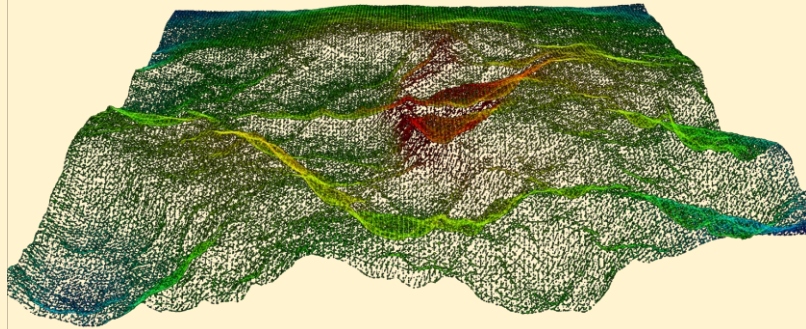
- Addu City Survey, Maldives
- 1200 Kms of NHAI-TOT Drone Videography (in the state of J&K, Punjab, Rajasthan, Haryana, MP, Maharashtra, AP & TamilNadu)
- 700 Kms of Kerala State Highway Projects
- Gorakhpur, Moradabad & Ayodhya Bypasses
- 300 Kms of Proposed Green Field Highway projects in Karnataka & Andhra Pradesh
- 10000 Acres of Industrial Land near Tumkur, Karnataka
- 300 Acres of Open Mine at Egypt
- Diu City Survey, near Gujarat



## Contact Us

*We have structured ourselves in such a way that we meet the requirements of the modern surveying practice. With the above in the background and the wholehearted support from our valued customers, we are able to successfully march one step forward towards our goal.*

*Pilot can adjust flight settings such as altitude, ground sampling distance (GSD), flight direction and point cloud & images overlap.*



We are seeking opportunities to help our customers and partners around the world for surveying, mapping, data processing and related services. Please feel free to call us or write to us



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# UAV & LiDAR Datasheet



GreenValley International

## LiAir V-70



## DJI MATRICE 600 PRO



# UAV & LiDAR Datasheet

## Specifications

Laser Sensor	Livox AVIA
Range Accuracy	± 2 cm
Detection Range (@100 klx)	190 m @ 10% reflectance
	230 m @ 20% reflectance
	320 m @ 80% reflectance
System Accuracy	± 5 cm
POS System Performance	Attitude: 0.008° (1σ)
	Azimuth: 0.038° (1σ)
Onboard Storage	128 GB
Mounting Platform	DJI's Matrice 600 Pro, M300 RTK & M210
Camera (Optional)	Sony A5100
Weight (excl. battery)	0.9 kg (Excl. Camera) 1.1 kg (Incl. Camera)
Dimensions (Incl. Camera)	178 * 81.6 * 140.2 mm
Route Planning Software	LiPlan (proprietary)
Acquisition/PP POS Software	LiAcquire web & LiGeoreference
Field of View (Repetitive Scanning Pattern)	70.4° (Horizontal) 4.5° (Vertical)
Scan Rate	240,000 pts/s (first return) 480,000 pts/s (dual return) 720,000 pts/s (triple return)

