TERRA VTOL-6 with Lidar 260P LIDAR

LIDAR Sensor Specifications: POSTERRA-260P LiDAR Scanning System

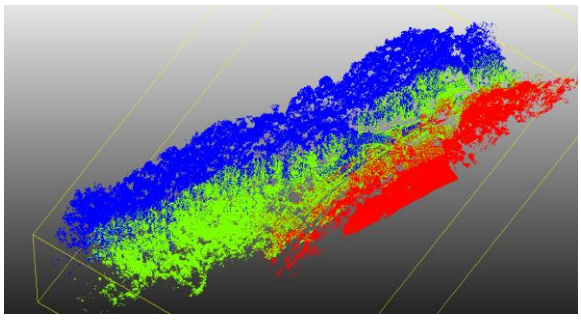
Drone LiDAR Scanning System mounted on TERRA VTOL-6 or DJI M300 with 3D data collection. POSTERRA-260P is a kind of light compact LiDAR point cloud data acquisition system, integrated Livox new generation laser scanner, GNSS and IMU positioning and attitude determination system, and storage control unit, is able to real-time, dynamically, massively collect high-precision point cloud data and rich image information. It is widely used in the acquisition of 3D spatial information in surveying, electricity, forestry, agriculture, land planning.

Long Detection Range

The Livox Avia adjusts its detection range according to the intensity of ambient light, while maintaining noise at a low level. The detection range increases to 450m under low-light conditions (such as on a cloudy day, indoors or at night), ensuring distant objects are captured in detail.

Dual-Scanning Mode

The use of multi-line laser and high-speed scanning enable the Livox Avia to achieve a point cloud data rate of up to 720,000 point/s with 3 bound with 240,000 points per scan. The high performance device is equipped with both repetitive and non-repetitive scanning modes, to meet the needs of different scenarios.



"The potential to blow any conventional fixed-wing UAV out of the market."

TERRA VTOL-6 Specification Sheet

Product photo:

Table 1 VTOL- Platform

Drone type	Combination VTOL
Dimension	3140*1660*405mm
Weight (empty)	7kg
Maximum takeoff weight	13.5kg
Typical payload weight	1.5kg
Maximum payload weight	2.3kg
Maximum ascending speed (Cruising)	2.5m/s
Maximum descending speed (Cruising)	2.5m/s
Maximum ascending speed (VTOL)	2.5m/s
Maximum descending speed (VTOL)	1.5m/s
Typical cruising speed	76km/h
Maximum flying speed	100km/h
Maximum takeoff altitude (AMSL)	4500m
Maximum flying altitude (AMSL)	5000m
Maximum wind resistance	Level 6 in cruise/Level 5 in VTOL
Weather proof	Small rain/snow/fog
Operation temperature	-10～60℃
Material	Carbon fiber & Glass fiber composite
Hovering accuracy	Vertical ±0.2m; Horizontal ±1m
Takeoff and landing space required	5*5m
Endurance (Tested under ideal condition)	70-160 minutes depending on payload
Non-stop Flight distance (Tested under ideal condition)	90-200km depending on payload

Table 2 Navigation & Flight Control

Navigation	GNSS+INS
Navigation light	Optional
IMU	2 sets
Flight mode	Autonomous/Semi-autonomous
Safety Assurance	One-button RTL/Out of control RTL/Low battery RTL Emergency Protection Function
FDR	Yes

Table 3 Power System

Motor	Brushless electric motor
ESC	High-power brushless ESC

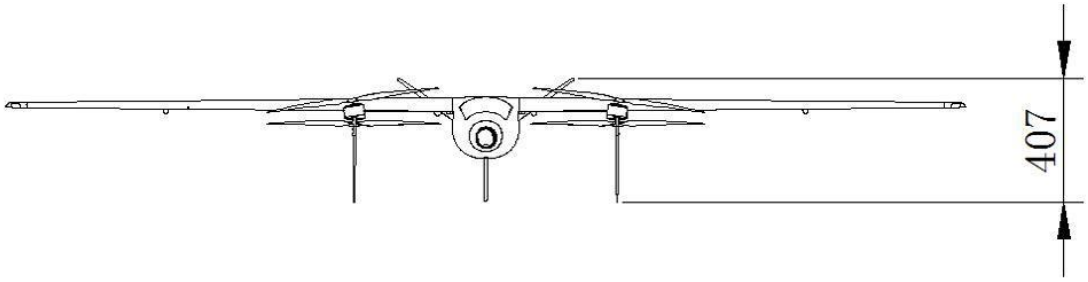
Propeller	19 inch hi-performance propeller
IP rating	IP54
Battery type	Li-poly/6S
Battery capacity	Typical 22000mAh*2 = 44000mAh
Battery charger	Fast charger

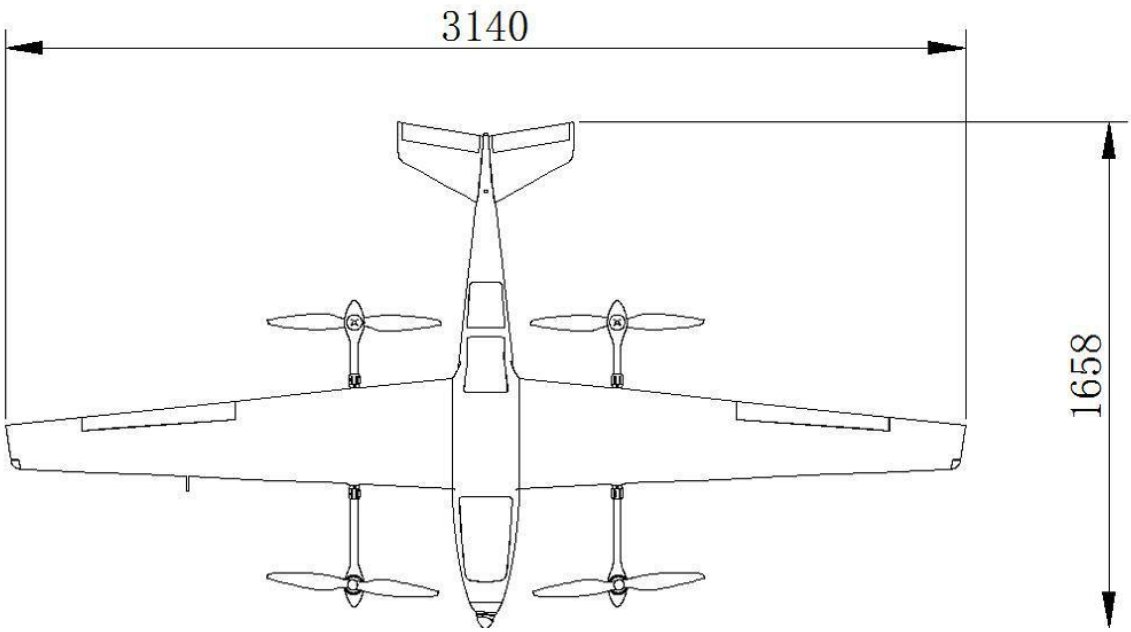
Table 4 Data Transmission

Data link	845MHz
Data link range (Tested under ideal condition)	Normally 10-15km Up to 30km(Optional)

Table 5 Packaging

Structure	Detachable to different parts
No. of protection box	1
Installation time	Less than 10 minutes





POSTERRA VHAWK-260P		
	Item Name	**System Parameter**
260P Parameter	Weight	Less than 0.85 kg
	Measuring accuracy	Less than 0.10 cm /0.05 @150 m AGL
	Power range	12V~16V
	Working temperature	-20℃~+55℃
	Consumption	Average 20W
	Support Platform	DJI M210, DJI M600 PRO, DJI M300 and others
	Storage	64 GB storage, maximum support 128GB TF card
Lidar Unit	Laser Model	Livox Avia
	Measuring Range	190m@10% Reflectivity, 260m@20% Reflectivity, 450m@80% Reflectivity
	Laser class	905nm Class1 (IEC 60825-1:2014)
	Laser line number	Equivalent to 64-beam
	Max. range	450 M
	Range Precision	2 cm
	data	Triple echo, 720,000 Points/Sec
	FOV	70° the circular view
POS Unit	POS type	AGS 303
	Update frequency	200HZ
	Heading accuracy	0.017°
	Pitch accuracy	0.005°
	Rolling accuracy	0.005°
	Position accuracy	0.02 - 0.05m
	GNSS signal type	GPSL1/L2 GLONASSL1/L2 BDS B1/B2a/B3
Pre-processing software	POS software	Post Terra Lidar Base Module. Output information: position, speed, attitude
	Point cloud software	Output point cloud data format: LAS format, custom TXT format