DJI Terra Quality Report

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Quality Report for LiDAR Point Cloud Processing

Aircraft Data Collection Time

POS Data Collection Time	12min 26s
Point Cloud Data Collection Time	9min 53s

Software Processing Time

Point Cloud Optimization Time	7min 29s
• Point Cloud Accuracy Optimization Time	2min 32s
• Point Cloud Colorization Time	24s
• Output Saving Time	1min 6s
• Others	3min 26s
Ground Point Classification Time	1min 49s
DEM Generation Time	2min 4s

Reconstruction Parameters

Point Cloud Optimization Parameters

Use custom base station data	No
Scenario	Point Cloud Processing
Point Cloud Density (By Percentage)	High
Point Cloud Effective Distance Range	3-300 m
Accuracy Control and Check	No
Optimize Point Cloud Accuracy	Yes
Smooth Point Cloud	No

Point Cloud Output Parameters

Ground Point Classification	Yes
Ground Point Classification Parameters	Gentle Slope | 20 m | 6° | 0.5 m
DEM	Yes
DEM Parameters	By GSD | 0.1 m
Contour	No
Point Cloud Format	PNTS | LAS
Merged Output	No
LiDAR Point Cloud Block Count	1
Output Coordinate System	WGS 84 / UTM zone 32N | NN2000 height

Mission Parameters

Aircraft Parameters (Aircraft 1)

Hardware Parameters

Payload	DJI Zenmuse L1
Payload SN	3FCDJ9N00455MK
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l1/specs

LiDAR and IMU Calibration Parameters

Parameters	X (m)	Y (m)	Z (m)	roll (rad)	pitch (rad)	yaw (rad)
Before Calibration	0.03508	0.01694	-0.04644	3.1261957	-0.0003296	0.0035991

Flight Parameters (1 Flights)

Average Flight Speed	3.64m/s
Flight Height	81.29m
Ground Beam Diameter	406mm*40mm
Pulse Rate	240kHz
Scan Rate	720kHz

System Parameters

CPU	AMD Ryzen 9 7950X 16-Core Processor 32 cores
GPU Count	1
GPU 0	NVIDIA GeForce RTX 4090
RAM	130805 M

Accuracy Parameters

POS Status

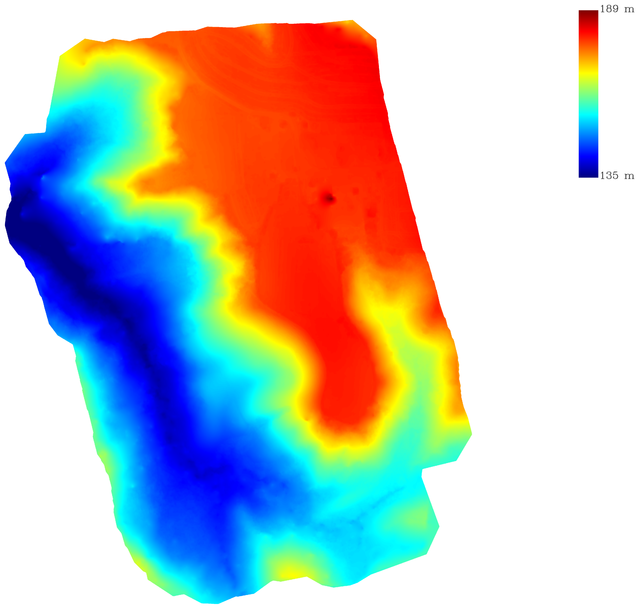
Fix	100.00%
Other	0.00%

IMU Trajectory Error

Parameters	X(E) RMSE	Average X(E)	Y(N) RMSE	Average Y(N)	Z(U) RMSE	Average Z(U)
Location	0.00013 m	0.00698 m	0.00008 m	0.00562 m	0.00009 m	0.00575 m
Attitude	0.0000071 rad	0.0001759 rad	0.0000044 rad	0.0001842 rad	0.0000748 rad	0.0005663 rad

Output Preview

DEM



Output Parameters

Point Cloud Density

Scale	Point Cloud Average Density	Point Cloud Standard Density	Grid Side Length	Total Grid Number	Non-conforming Grid Ratio
1:500	796points/m²	16points/m²	0.25 m	1981944	2.52%
1:1000	796points/m²	4points/m²	0.5 m	503656	1.62%
1:2000	796points/m²	1points/m²	1 m	128084	1.69%

Output List

PNTS LAS DEM TIF DEM Tile