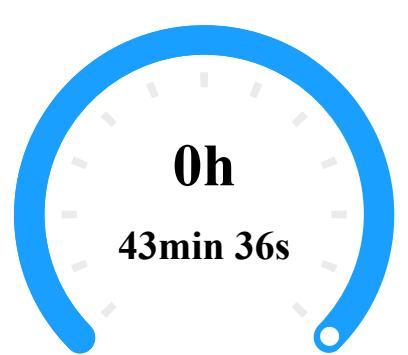


DJI Terra Quality Report

V4.1.0 | 2024-07-01 15:48 | Mission: Sander_2022-01-13_L1_Oblique

Quality Report for LiDAR Point Cloud Processing

Aircraft Data Collection Time



POS Data Collection Time

43min 36s

Point Cloud Data Collection Time

31min 26s

Software Processing Time



Point Cloud Optimization Time

- Point Cloud Accuracy Optimization Time
- Point Cloud Colorization Time
- Merging Output Time
- Output Saving Time
- Others

Ground Point Classification Time

DEM Generation Time

31min 27s

18min 20s

4min 1s

4s

4min 8s

12min 53s

5min 53s

3min 39s

Reconstruction Parameters

Point Cloud Optimization Parameters

Use custom base station data	Yes
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	Yes
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	3FCDF3N00455MK
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	4.53m/s
Flight Height	41.34m
Ground Beam Diameter	206mm*20mm
Pulse Rate	240kHz
Scan Rate	720kHz

Aircraft Parameters (Aircraft 2)

Hardware Parameters

Payload	DJI Zenmuse L1
Payload SN	3FCDF3N00455MK
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 (2 Flights)

Average Flight Speed	4.46m/s
Flight Height	36.83m
Ground Beam Diameter	184mm*18mm
Pulse Rate	240kHz
Scan Rate	720kHz

Aircraft Parameters (Aircraft 3)

Hardware Parameters

Payload	DJI Zenmuse L1
Payload SN	3FCDF3N00455MK
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 (3 Flights)

Average Flight Speed	4.27m/s
Flight Height	50.11m
Ground Beam Diameter	250mm*25mm
Pulse Rate	240kHz
Scan Rate	720kHz

Aircraft Parameters (Aircraft 4)

Hardware Parameters

Payload	DJI Zenmuse L1
Payload SN	3FCDF3N00455MK
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 (4 Flights)

Average Flight Speed	4.4m/s
Flight Height	38.4m
Ground Beam Diameter	192mm*19mm
Pulse Rate	240kHz
Scan Rate	720kHz

Aircraft Parameters (Aircraft 5)

Hardware Parameters

Payload	DJI Zenmuse L1
Payload SN	3FCDF3N00455MK
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 (5 Flights)

Average Flight Speed	4.52m/s
Flight Height	41.68m
Ground Beam Diameter	208mm*20mm
Pulse Rate	240kHz
Scan Rate	720kHz

Aircraft Parameters (Aircraft 6)

Hardware Parameters

Payload	DJI Zenmuse L1
Payload SN	3FCDF3N00455MK
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 (6 Flights)

Average Flight Speed	4.37m/s
Flight Height	42.02m
Ground Beam Diameter	210mm*21mm
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

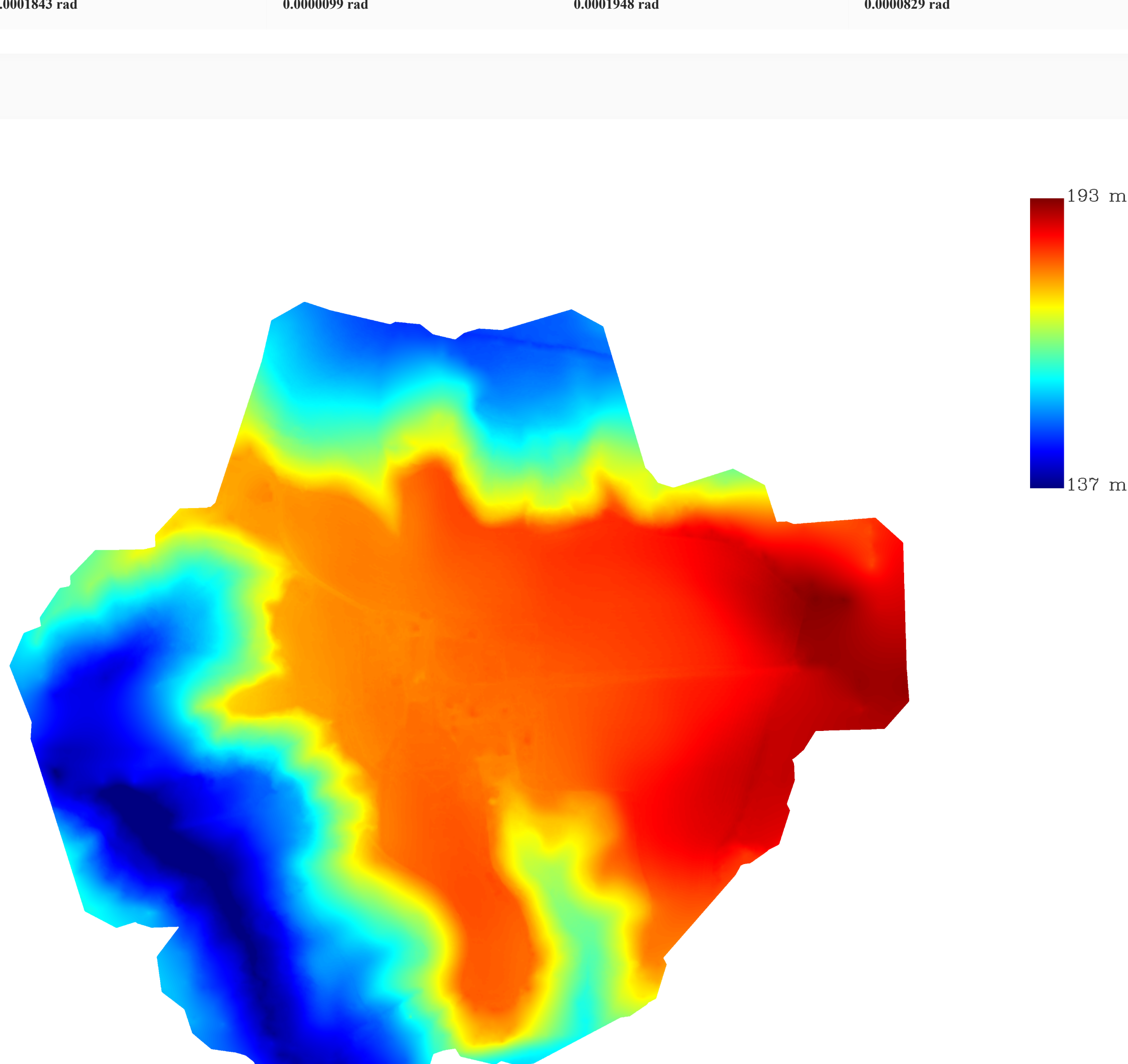
Fix	100.00%
Other	0.00%

IMU Trajectory Error

Parameters	X(E) RMSE	Average X(E)	Y(N) RMSE	Average Y(N)	Z(U) RMSE	Average Z(U)
Location	0.00068 m	0.00703 m	0.00041 m	0.00569 m	0.00022 m	0.00582 m
Attitude	0.0000086 rad	0.0001843 rad	0.0000099 rad	0.0001948 rad	0.0000829 rad	0.0005783 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	2153points/m²	16points/m²	0.25 m	241384	10.54%
1:1000	2153points/m²	4points/m²	0.5 m	667604	9.63%
1:2000	2153points/m²	1points/m²	1 m	186080	10.31%

Output List

PNTS | LAS | DEM TIF | DEM Tile