DJI Terra Quality Report

V5.1.1 | 2026-03-03 08:04 | Mission: AHK25

Quality Report for LiDAR Point Cloud Processing

Aircraft Data Collection Time

1h 9min 27s

POS Data Collection Time	55min 33s
Point Cloud Data Collection Time	55min 32s

Software Processing Time

3h 52min 46s

POS Calculation	17min 52s
Point Cloud Optimization Time	2h 2min 8s
• POS Calculation	17min 52s
• Point Cloud Accuracy Optimization Time	55min 59s
• Smoothing Point Cloud Time	17min 32s
• Point Cloud Colorization Time	5min 47s
• Merging Output Time	2s
• Output Saving Time	14min 40s
• Others	28min 7s
3D Mesh Generation Time	1h 50min 39s

Reconstruction Parameters

Point Cloud Optimization Parameters

POS Calculation	Data POS
Scenario	Point Cloud Processing
LiDAR Calibration	Yes
Point Cloud Density (By Percentage)	High(100%)
Computation Method	Standalone Computation

Point Cloud Output Parameters

Point Cloud Format	PNTS
Merged Output	Yes
LiDAR Point Cloud Block Count	1
2D Map	No
File Format	B3DM | PLY
Quality	High
Reduce Model to	100%
Gaussian Splatting	No
Output Coordinate System	WGS 84 / UTM zone 32N | Default

Mission Parameters

Flight Parameters (1 Flights)

Hardware Parameters

Payload	DJI Zenmuse L2
Payload SN	6U3DM4N0050Z8J
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l2/specs

LiDAR and IMU Calibration Parameters

Parameters	X	Y	Z	roll	pitch	yaw
Before Calibration	0.02667m	0.0145m	-0.04615m	-3.1385732 rad	0.0029999 rad	0.0125964 rad
After Calibration	0.02667m	0.0145m	-0.04615m	-3.1384826 rad	0.0035419 rad	0.0128598 rad

Flight Parameters

Average Flight Speed	4.44m/s
Flight Height	83.57m
Ground Beam Diameter	100mm*33mm
FOV	70°*3°
Pulse Rate	240kHz
Scan Rate	1200kHz
Scan Mode	Linear

Flight Parameters (2 Flights)

Hardware Parameters

Payload	DJI Zenmuse L2
Payload SN	6U3DM4N0050Z8J
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l2/specs

LiDAR and IMU Calibration Parameters

Parameters	X	Y	Z	roll	pitch	yaw
Before Calibration	0.02667m	0.0145m	-0.04615m	-3.1385732 rad	0.0029999 rad	0.0125964 rad
After Calibration	0.02667m	0.0145m	-0.04615m	-3.1384826 rad	0.0035419 rad	0.0128598 rad

Flight Parameters

Average Flight Speed	4.14m/s
Flight Height	29.69m
Ground Beam Diameter	35mm*11mm
FOV	70°*3°
Pulse Rate	240kHz
Scan Rate	1200kHz
Scan Mode	Linear

Flight Parameters (3 Flights)

Hardware Parameters

Payload	DJI Zenmuse L2
Payload SN	6U3DM4N0050Z8J
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l2/specs

LiDAR and IMU Calibration Parameters

Parameters	X	Y	Z	roll	pitch	yaw
Before Calibration	0.02667m	0.0145m	-0.04615m	-3.1385732 rad	0.0029999 rad	0.0125964 rad
After Calibration	0.02667m	0.0145m	-0.04615m	-3.1384826 rad	0.0035419 rad	0.0128598 rad

Flight Parameters

Average Flight Speed	4.2m/s
Flight Height	5.43m
Ground Beam Diameter	6mm*2mm
FOV	70°*3°
Pulse Rate	240kHz
Scan Rate	1200kHz
Scan Mode	Linear

Flight Parameters (4 Flights)

Hardware Parameters

Payload	DJI Zenmuse L2
Payload SN	6U3DM4N0050Z8J
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l2/specs

LiDAR and IMU Calibration Parameters

Parameters	X	Y	Z	roll	pitch	yaw
Before Calibration	0.02667m	0.0145m	-0.04615m	-3.1385732 rad	0.0029999 rad	0.0125964 rad
After Calibration	0.02667m	0.0145m	-0.04615m	-3.1384826 rad	0.0035419 rad	0.0128598 rad

Flight Parameters

Average Flight Speed	4.83m/s
Flight Height	55.03m
Ground Beam Diameter	66mm*22mm
FOV	70°*3°
Pulse Rate	240kHz
Scan Rate	1200kHz
Scan Mode	Linear

Flight Parameters (5 Flights)

Hardware Parameters

Payload	DJI Zenmuse L2
Payload SN	6U3DM4N0050Z8J
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l2/specs

LiDAR and IMU Calibration Parameters

Parameters	X	Y	Z	roll	pitch	yaw
Before Calibration	0.02667m	0.0145m	-0.04615m	-3.1385732 rad	0.0029999 rad	0.0125964 rad
After Calibration	0.02667m	0.0145m	-0.04615m	-3.1384826 rad	0.0035419 rad	0.0128598 rad

Flight Parameters

Average Flight Speed	3.91m/s
Flight Height	65.69m
Ground Beam Diameter	78mm*26mm
FOV	70°*3°
Pulse Rate	240kHz
Scan Rate	1200kHz
Scan Mode	Linear

Flight Parameters (6 Flights)

Hardware Parameters

Payload	DJI Zenmuse L2
Payload SN	6U3DM4N0050Z8J
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l2/specs

LiDAR and IMU Calibration Parameters

Parameters	X	Y	Z	roll	pitch	yaw
Before Calibration	0.02667m	0.0145m	-0.04615m	-3.1385732 rad	0.0029999 rad	0.0125964 rad
After Calibration	0.02667m	0.0145m	-0.04615m	-3.1384826 rad	0.0035419 rad	0.0128598 rad

Flight Parameters

Average Flight Speed	4.21m/s
Flight Height	64.83m
Ground Beam Diameter	77mm*25mm
FOV	70°*3°
Pulse Rate	240kHz
Scan Rate	1200kHz
Scan Mode	Linear

Flight Parameters (7 Flights)

Hardware Parameters

Payload	DJI Zenmuse L2
Payload SN	6U3DM4N0050Z8J
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l2/specs

LiDAR and IMU Calibration Parameters

Parameters	X	Y	Z	roll	pitch	yaw
Before Calibration	0.02667m	0.0145m	-0.04615m	-3.1385732 rad	0.0029999 rad	0.0125964 rad
After Calibration	0.02667m	0.0145m	-0.04615m	-3.1384826 rad	0.0035419 rad	0.0128598 rad

Flight Parameters

Average Flight Speed	4.02m/s
Flight Height	188.31m
Ground Beam Diameter	225mm*75mm
FOV	70°*3°
Pulse Rate	240kHz
Scan Rate	1200kHz
Scan Mode	Linear

System Parameters

CPU	Intel Xeon 24 cores
GPU Count	1
GPU 0	NVIDIA GeForce RTX 4090
RAM	523780 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	0.00009 m	0.00574 m	0.00008 m	0.00515 m	0.0001 m	0.00664 m
Attitude	0.0000043 rad	0.0000647 rad	0.000003 rad	0.0000657 rad	0.0000371 rad	0.0002341 rad

Flight Strip Accuracy

Number of Flight Strips	Average Altitude Difference	Average Overlap Rate	Altitude Tolerance	Speed Consistency	Flight Route Curvature
7	74.2761 m	23.05%	131.4185 m	0.31%	0.63°

Flight strip accuracy file is in the report/flight_strip_accuracy folder under the project folder

Point Cloud Accuracy

Point Cloud Density

Scale	Point Cloud Average Density	Point Cloud Standard Density	Grid Side Length	Total Grid Number	Non-conforming Grid Ratio
1:500	1940points/m²	16points/m²	0.25 m	6549624	1.08%
1:1000	1940points/m²	4points/m²	0.5 m	1645188	0.47%
1:2000	1940points/m²	1points/m²	1 m	413620	0.56%

Output Parameters

Output List

Point Cloud PNTS LAZ

Model B3DM PLY