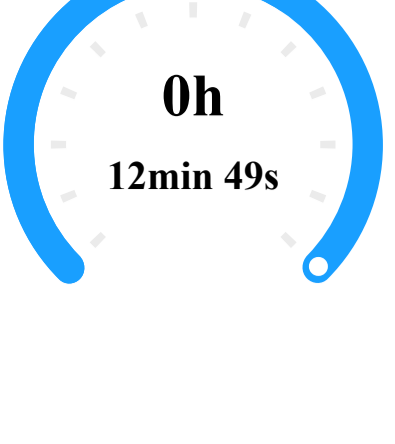


DJI Terra Quality Report

V3.0.2 | 2023-10-06 12:31 | Mission: 2023-08-25_Sandlot_2

Quality Report for LiDAR Point Cloud Processing

Aircraft Data Collection Time



0h
12min 49s

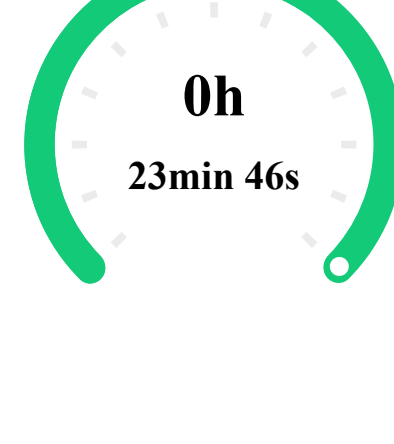
POS Data Collection Time

Point Cloud Data Collection Time

12min 49s

11min 6s

Software Processing Time



0h
23min 46s

Point Cloud Optimization Time

- Point Cloud Accuracy Optimization Time
- Smoothing Point Cloud Time
- Point Cloud Collocation Time
- Merging Output Time
- Output Saving Time
- Colors

2D Map Generation Time

Ground Point Generation Time

DEM Generation Time

13min 53s

2min 47s

2min 24s

3s

2s

1min 41s

6min 14s

4min 15s

2min 56s

2min 42s

Reconstruction Parameters

Point Cloud Optimization Parameters

Use custom base station data	No
Scenario	Point Cloud Processing
Point Cloud Density (By Percentage)	High(100%)
Point Cloud Effective Distance Range	3-300 m
Accuracy Control and Check	Yes
Optimize Point Cloud Accuracy	Yes
Smooth Point Cloud	Yes

Point Cloud Output Parameters

Point Cloud Format	PNTS LAS
Merged Output	Yes
LiDAR Point Cloud Block Count	1
2D Map	Yes
2D Map Parameters	Resolution (Custom) 2 cm/px
Ground Point Classification	Yes
Ground Point Classification Parameters	Gratic Slope Building Max Diagonal 20m Iteration Angle 0° Iteration Distance 8.5m
DEM	Yes
DEM Parameters	Size (GSD) 0.1m/px
Contour	No
Output Coordinate System	ETRS89 / UTM zone 32N NN2000 height

Mission Parameters

Aircraft Parameters (Aircraft 1)

Hardware Parameters						
Payload	DJI Zenmuse L2					
Payload SN	643DLBR004155Y					
LiDAR Parameters	https://enterprise.dji.com/zenmuse-l2/specs					
LiDAR and IMU Calibration Parameters						
Parameters	X	Y	Z	roll	pitch	yaw
Default	0.0267m	0.0145m	-0.0415m	-3.1377091 rad	0.0028995 rad	0.0048439 rad
Flight Parameters (1 Flights)						
Average Flight Speed	5.99m/s					
Flight Height	72.99m					
Ground Beam Diameter	87mm*29mm					
FOV	70°*75°					
Pulse Rate	240.81z					
Scan Rate	1200.8Hz					
Scan Mode	Non-repetitive					
System Parameters						
CPU	AMD Ryzen 9 7900X 16-Core Processor 32 cores					
GPU Count	1					
GPU 0	NVIDIA GeForce RTX 4080 SUPER					
RAM	130198 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	0.0001 m	0.0063 m	0.0007 m	0.00512 m	0.0008 m	0.00644 m
Attitude	0.0000016 rad	0.0000625 rad	0.0000026 rad	0.0000644 rad	0.000026 rad	0.0002125 rad

Point Cloud Check Point Error

Parameters	No. of Check Points	Average Altitude	Average Altitude Difference	Min Altitude Difference	Max Altitude Difference	Average Absolute Value of Altitude Difference	Root Mean Square	Standard Deviation
Value	17	177.714882 m	0.064786 m	0.031789 m	0.088192 m	0.064786 m	0.064799 m	0.066793 m

Point Cloud Check Point List

ID	Check Point Latitude(YN)	Check Point Longitude(E)	Check Point Altitude (ZU)	Reconstruction Altitude	Altitude Difference	Max Altitude Difference	Average Altitude Difference	Reconstruction Altitude Standard Deviation	Altitude Difference RMSE	Intensity
GCP 1	6094277.96 m	625095.868 m	178.67 m	178.748529 m	0.069529 m	0.181124 m	0.069529 m	0.011683 m	0.078502 m	184.97
GCP 2	6094298.709 m	625067.078 m	177.58 m	177.643866 m	0.063866 m	0.189814 m	0.063866 m	0.024129 m	0.062664 m	97.42
GCP 3	6094229.257 m	625090.433 m	178.31 m	178.383144 m	0.071144 m	0.096861 m	0.071144 m	0.007852 m	0.071575 m	114.03
GCP 4	6094188.297 m	625114.106 m	179.49 m	179.562284 m	0.076284 m	0.140816 m	0.076284 m	0.019482 m	0.078648 m	105.85
GCP 5	6094137.243 m	625111.477 m	179.22 m	179.261639 m	0.045639 m	0.179621 m	0.045639 m	0.02513 m	0.052088 m	114.5
GCP 6	6094126.212 m	625091.909 m	171.56 m	171.592804 m	0.037804 m	0.162642 m	0.037804 m	0.053417 m	0.065385 m	184.75
GCP 7	6094079.541 m	625088.342 m	155.83 m	155.916796 m	0.087796 m	0.176811 m	0.087796 m	0.045446 m	0.098841 m	92.72
GCP 8	6094113.467 m	625144.703 m	180.95 m	180.984121 m	0.033121 m	0.077869 m	0.033121 m	0.017013 m	0.037226 m	105.47
GCP 9	6094088.702 m	625163.045 m	181.21 m	181.268853 m	0.061853 m	0.183861 m	0.061853 m	0.014378 m	0.063497 m	118.96
GCP 10	6094040.261 m	625179.823 m	180.62 m	180.650789 m	0.031789 m	0.056567 m	0.031789 m	0.012478 m	0.034522 m	94.93
GCP 11	6094251.913 m	625112.06 m	178.85 m	178.898801 m	0.050001 m	0.077564 m	0.050001 m	0.012735 m	0.051856 m	105.3
GCP 12	6094282.661 m	625133.191 m	178.97 m	179.051718 m	0.085718 m	0.146489 m	0.085718 m	0.018325 m	0.087651 m	107.38
GCP 13	6094234.079 m	625151.046 m	179.62 m	179.707156 m	0.084156 m	0.120763 m	0.084156 m	0.019213 m	0.086316 m	109.34
GCP 14	6094206.318 m	625145.034 m	180.84 m	180.895751 m	0.059751 m	0.211791 m	0.059751 m	0.021053 m	0.063342 m	96.65
GCP 15	6094177.345 m	625154.706 m	180.43 m	180.506051 m	0.071651 m	0.125328 m	0.071651 m	0.016545 m	0.073532 m	98.79
GCP 16	6094117.423 m	625169.581 m	181.4 m	181.487192 m	0.088192 m	0.153084 m	0.088192 m	0.014427 m	0.08936 m	98.17
Bloc k1	6094271.442 m	625092.903 m	178.43 m	178.458145 m	0.032145 m	0.076808 m	0.032145 m	0.011516 m	0.034139 m	31.02

DEM Error

Parameters	No. of Check Points	Average Altitude	Average Altitude Difference	Min Altitude Difference	Max Altitude Difference	Average Absolute Value of Altitude Difference	Root Mean Square	Standard Deviation
Value	17	177.714882 m	0.062021 m	0.022888 m	0.089294 m	0.062021 m	0.065124 m	0.067129 m

DEM Checklist

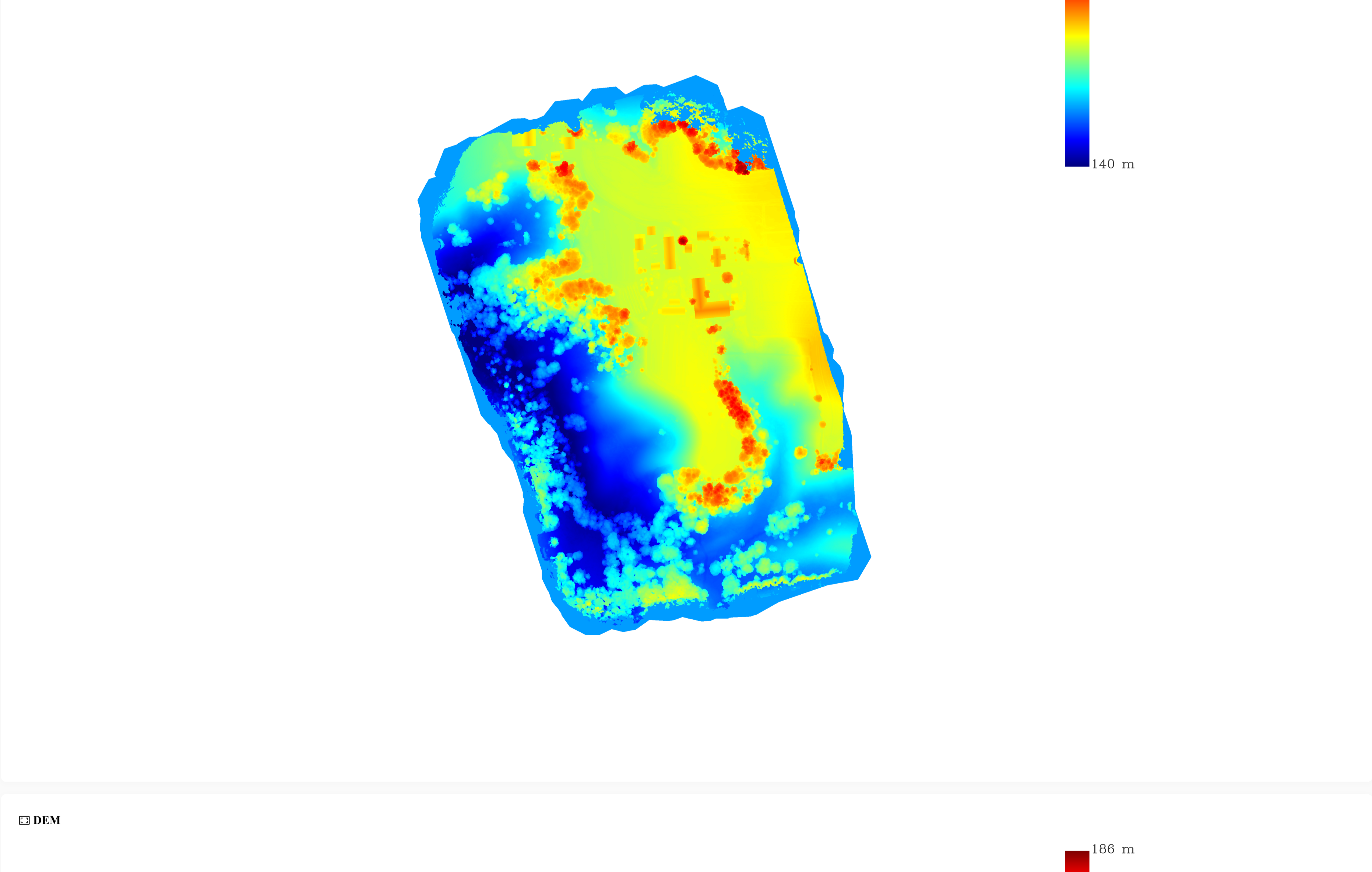
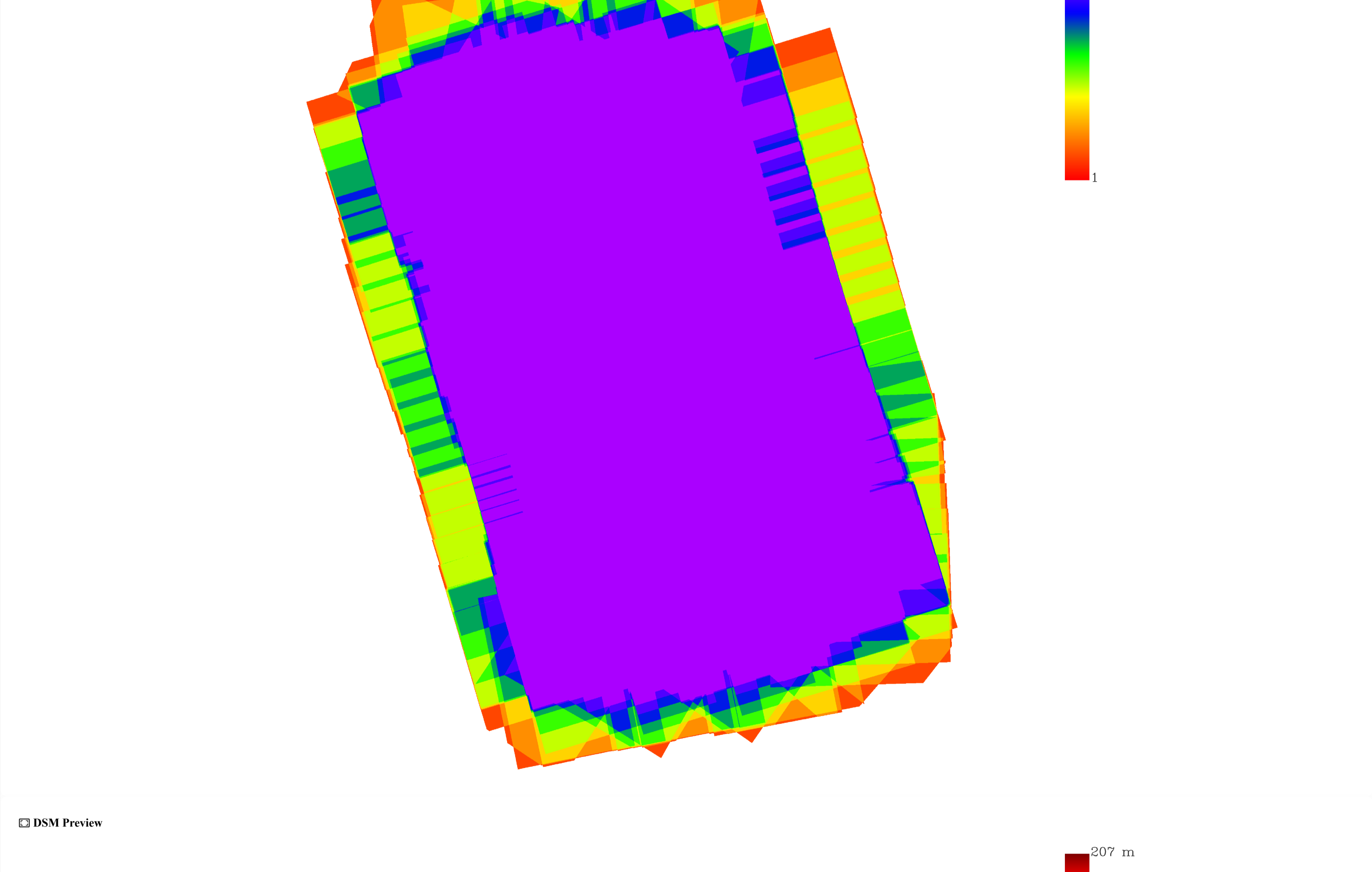
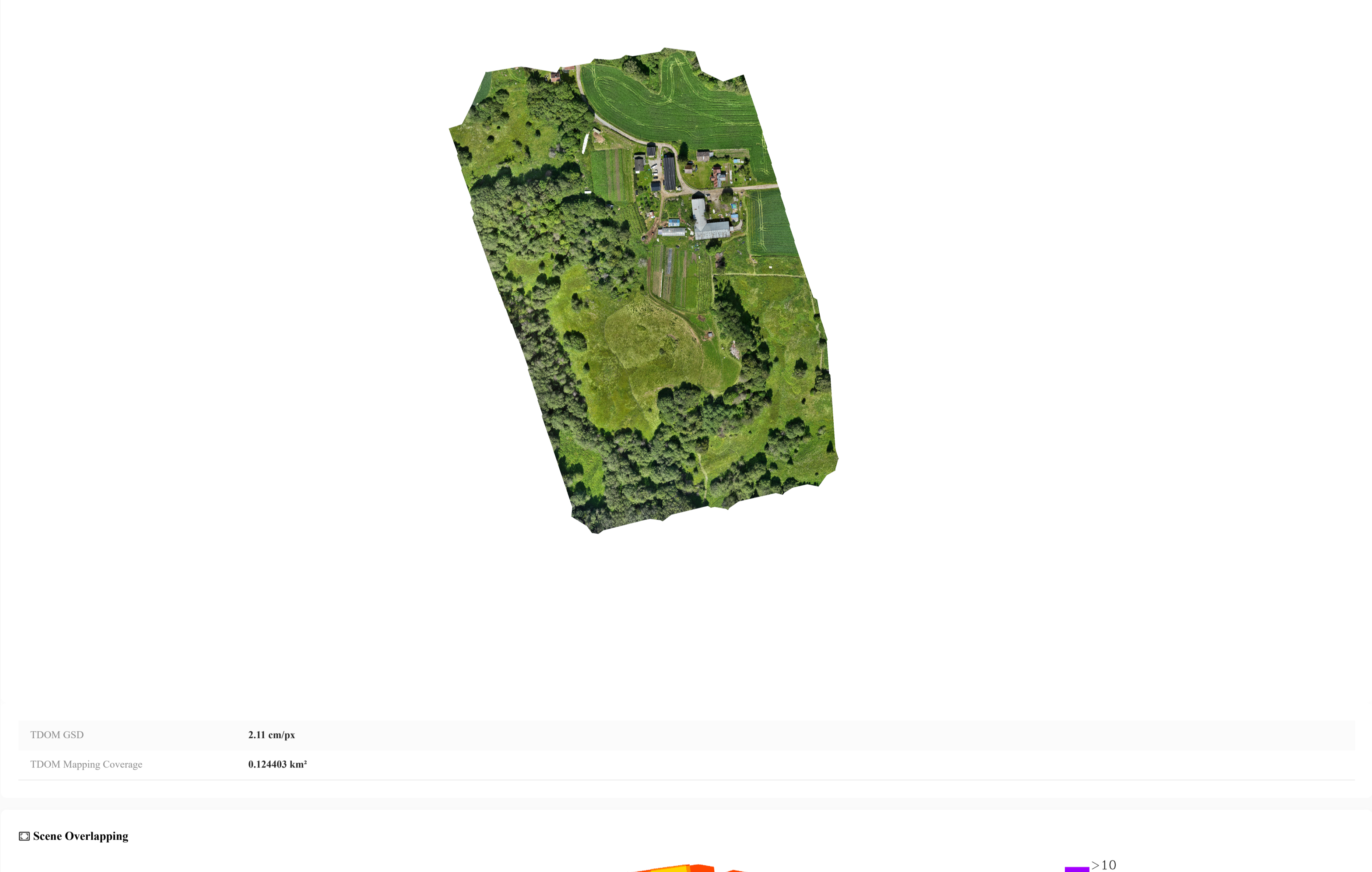
ID	Check Point Latitude(YN)	Check Point Longitude(E)	Check Point Altitude (ZU)	Reconstruction Altitude	Altitude Difference	Intensity
GCP 1	6094277.96 m	625095.868 m	178.67 m	178.746119 m	0.075119 m	184.97
GCP 2	6094298.709 m	625067.078 m	177.58 m	177.650903 m	0.079803 m	97.42
GCP 3	6094229.257 m	625090.433 m	178.31 m	178.385685 m	0.073685 m	114.03
GCP 4	6094188.297 m	625114.106 m	179.49 m	179.562294 m	0.076294 m	105.85
GCP 5	6094137.243 m	625111.477 m	179.22 m	179.270855 m	0.054855 m	114.5
GCP 6	6094126.212 m	625091.909 m	171.56 m	171.577888 m	0.022888 m	184.75
GCP 7	6094079.541 m	625088.342 m	155.83 m	155.889471 m	0.060471 m	92.72
GCP 8	6094113.467 m	625144.703 m	180.95 m	180.987514 m	0.036514 m	105.47
GCP 9	6094088.702 m	625163.045 m	181.21 m	181.263334 m	0.055334 m	118.96
GCP 10	6094040.261 m	625179.823 m	180.62 m	180.650195 m	0.034195 m	94.93
GCP 11	6094251.913 m	625112.06 m	178.85 m	178.903954 m	0.055954 m	105.3
GCP 12	6094282.661 m	625133.191 m	178.97 m	179.054489 m	0.084489 m	107.38
GCP 13	6094234.079 m	625151.046 m	179.62 m	179.712294 m	0.089294 m	109.34
GCP 14	6094206.318 m	625145.034 m	180.84 m	180.898775 m	0.062775 m	96.65
GCP 15	6094177.345 m	625154.706 m	180.43 m	180.496383 m	0.067383 m	98.79
GCP 16	6094117.423 m	625169.581 m	181.4 m	181.484022 m	0.085022 m	98.17
Bloc k1	6094271.442 m	625092.983 m	178.43 m	178.459356 m	0.033356 m	31.02

• When altitude difference between check point and actual point is greater than 60 cm, error data of the check point will be displayed as * and the check point will not be used for calculation.

Output Preview

TDOM Preview

TDOM GSD	2.11 cm/px
TDOM Mapping Coverage	0.124403 km²



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	1191points/m²	16points/m²	0.25 m	2504072	1.52%
1:1000	1191points/m²	4points/m²	0.5 m	638016	1.24%
1:2000	1191points/m²	1points/m²	1 m	160492	1.24%

Output List

Point Cloud	PNTS LAS
DEM	GstIFF