

Agisoft Metashape

Processing Report

12 November 2025



Survey Data

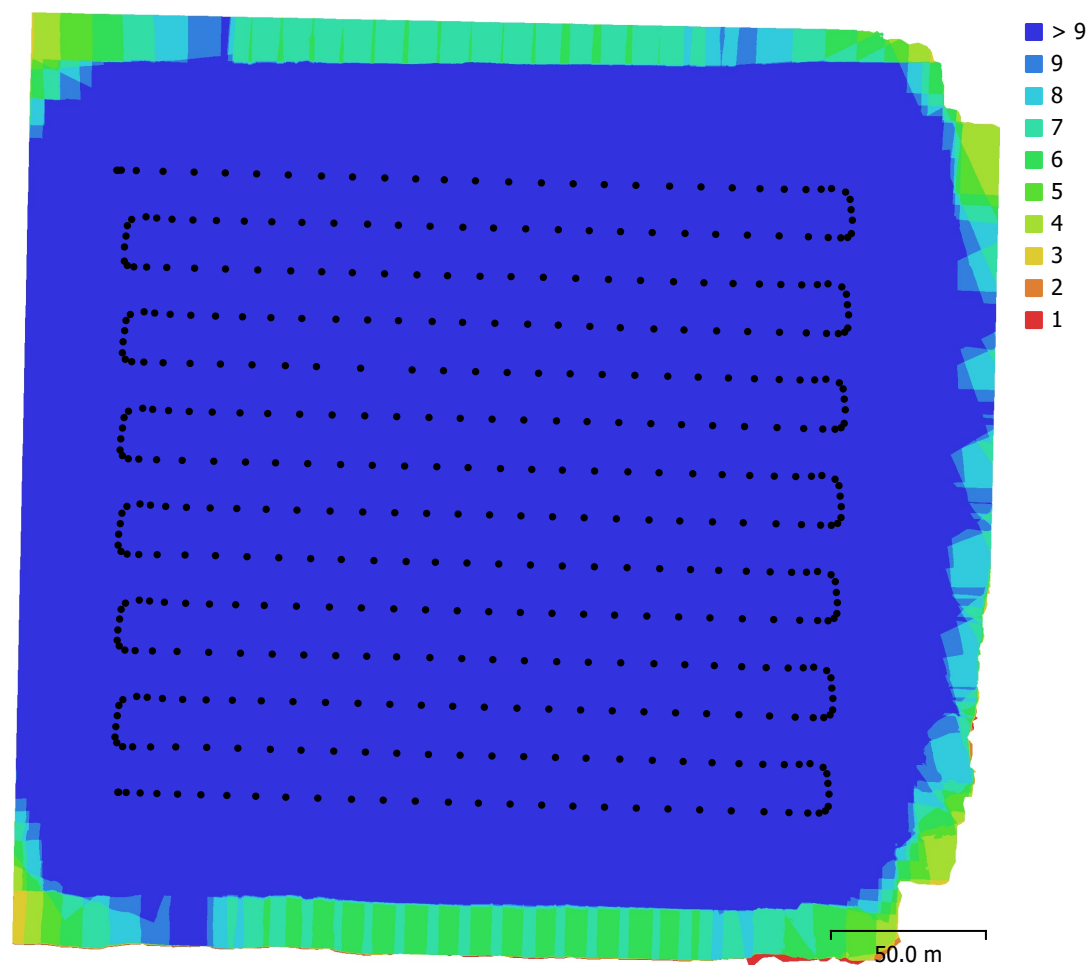


Fig. 1. Camera locations and image overlap.

Number of images:	445	Camera stations:	445
Flying altitude:	101 m	Tie points:	656,387
Ground resolution:	1.22 cm/pix	Projections:	4,911,467
Coverage area:	0.0922 km²	Reprojection error:	0.287 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
ZenmuseP1 (35mm)	8192 x 5460	35 mm	unknown	No

Table 1. Cameras.

Camera Calibration

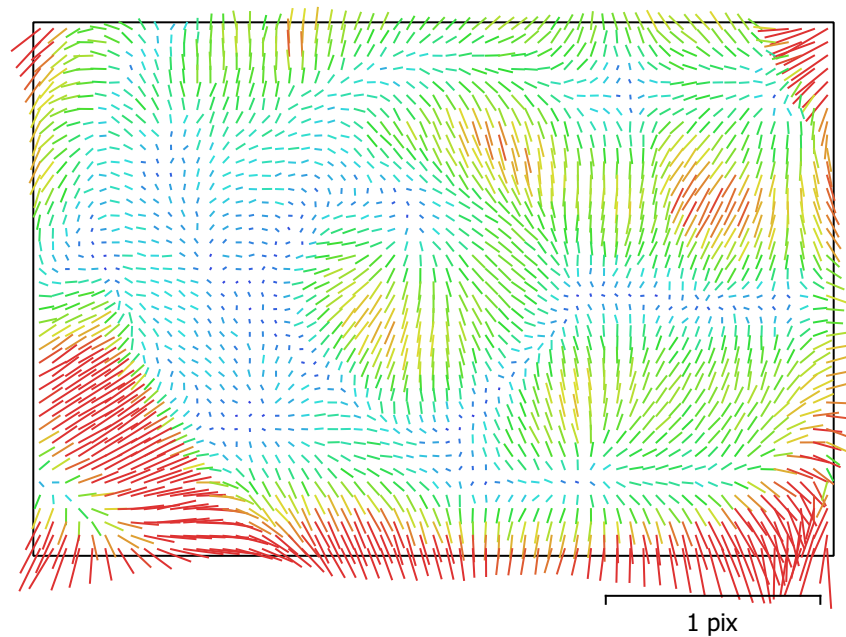


Fig. 2. Image residuals for ZenmuseP1 (35mm).

ZenmuseP1 (35mm)

445 images

Type	Resolution	Focal Length	Pixel Size
Frame	8192 x 5460	35 mm	unknown

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	8196.73	0.015	1.00	0.00	0.04	-0.20	0.16	-0.16	-0.00	0.01
Cx	-31.3309	0.011		1.00	0.03	-0.01	0.00	-0.01	0.35	-0.00
Cy	49.0222	0.01			1.00	0.01	-0.01	0.01	0.04	0.12
K1	-0.049672	6.8e-06				1.00	-0.96	0.91	-0.02	0.02
K2	0.0310783	4.2e-05					1.00	-0.98	0.02	-0.01
K3	-0.110657	7.7e-05						1.00	-0.02	0.01
P1	-0.000857738	2.6e-07							1.00	-0.00
P2	0.00234518	2e-07								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

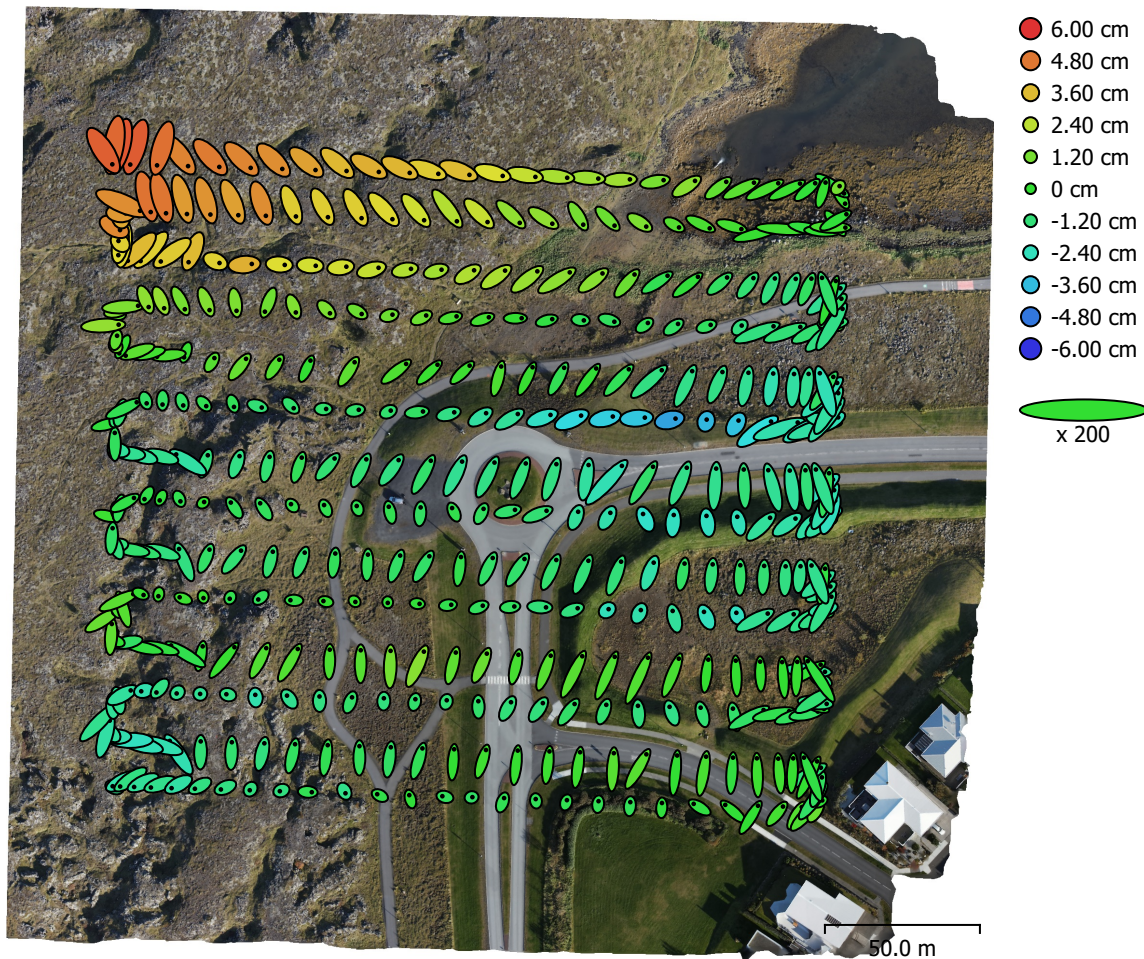


Fig. 3. Camera locations and error estimates.

Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.

Estimated camera locations are marked with a black dot.

X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total error (cm)
2.30973	2.87635	1.75721	3.68894	4.08608

Table 3. Average camera location error.

X - Easting, Y - Northing, Z - Altitude.

Ground Control Points

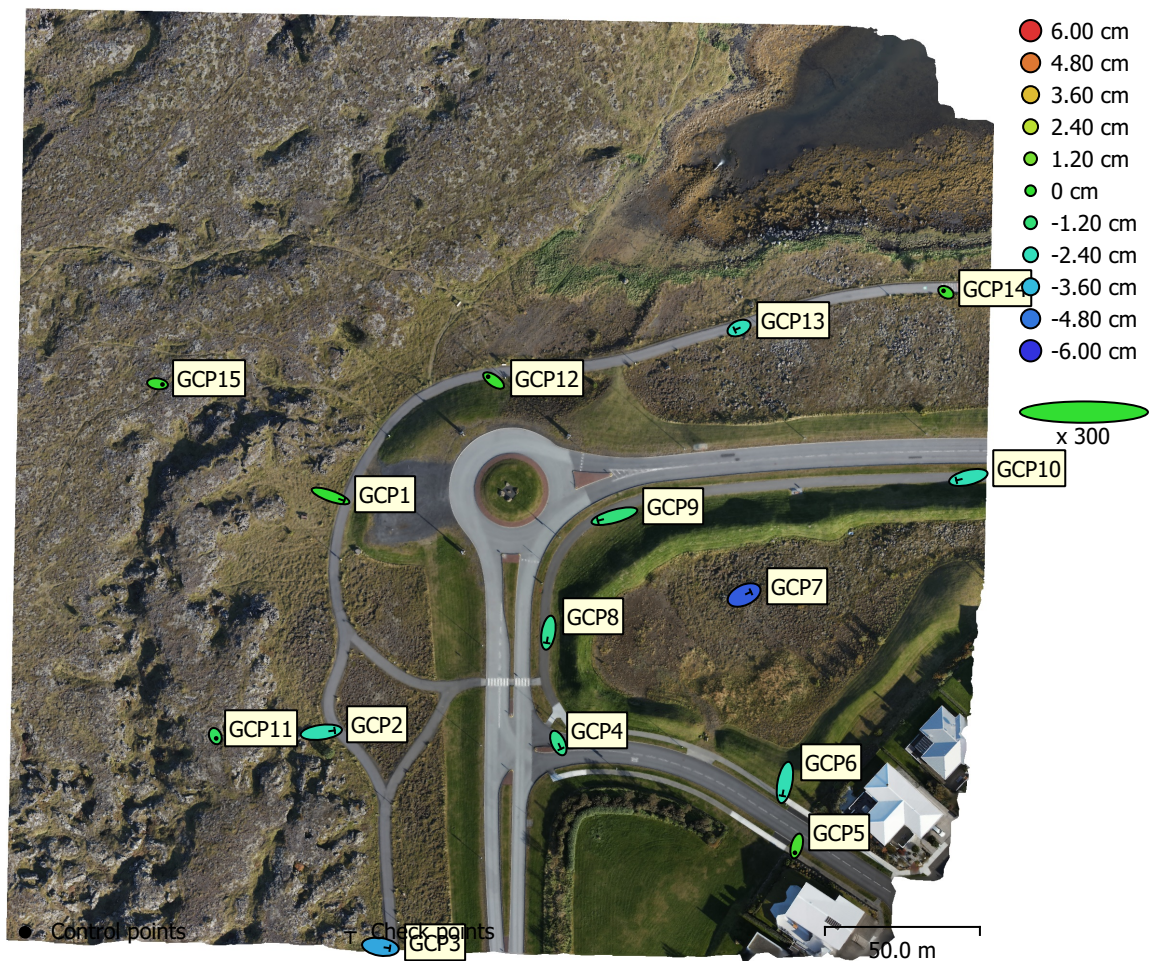


Fig. 4. GCP locations and error estimates.

Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.

Estimated GCP locations are marked with a dot or crossing.

Count	X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total (cm)
5	0.771397	0.796581	0.406939	1.10887	1.18118

Table 4. Control points RMSE.

X - Easting, Y - Northing, Z - Altitude.

Count	X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total (cm)
10	2.10623	1.34321	2.67145	2.49809	3.65747

Table 5. Check points RMSE.

X - Easting, Y - Northing, Z - Altitude.

Label	X error (cm)	Y error (cm)	Z error (cm)	Total (cm)	Image (pix)
GCP15	1.06594	-0.147868	0.141537	1.08542	1.025 (54)
GCP14	-0.519645	0.309604	0.227734	0.646334	1.102 (13)
GCP12	-1.17613	0.822672	0.148853	1.443	0.807 (47)
GCP11	0.196873	-0.485712	-0.767407	0.929295	0.889 (46)
GCP5	-0.383331	-1.46365	0.380829	1.56021	0.431 (23)
Total	0.771397	0.796581	0.406939	1.18118	0.887

Table 6. Control points.
X - Easting, Y - Northing, Z - Altitude.

Label	X error (cm)	Y error (cm)	Z error (cm)	Total (cm)	Image (pix)
GCP13	-0.940461	-0.40982	-2.35036	2.56449	0.881 (73)
GCP10	-2.57377	-0.618082	-2.28384	3.49604	0.892 (9)
GCP9	-3.57107	-0.985166	-1.24781	3.90898	0.507 (46)
GCP8	-0.363912	-2.20132	-1.66832	2.78595	0.535 (38)
GCP7	1.45715	0.680737	-5.28479	5.5241	0.632 (61)
GCP6	-0.547694	-2.88015	-2.26619	3.70552	0.667 (33)
GCP4	0.582615	-1.26059	-1.56131	2.08955	0.716 (32)
GCP3	2.0451	-0.302375	-3.97411	4.47967	0.406 (7)
GCP2	2.87447	0.371526	-2.23386	3.65934	0.459 (31)
GCP1	2.95985	-1.04815	-0.00781562	3.13997	0.696 (46)
Total	2.10623	1.34321	2.67145	3.65747	0.676

Table 7. Check points.
X - Easting, Y - Northing, Z - Altitude.

Digital Elevation Model

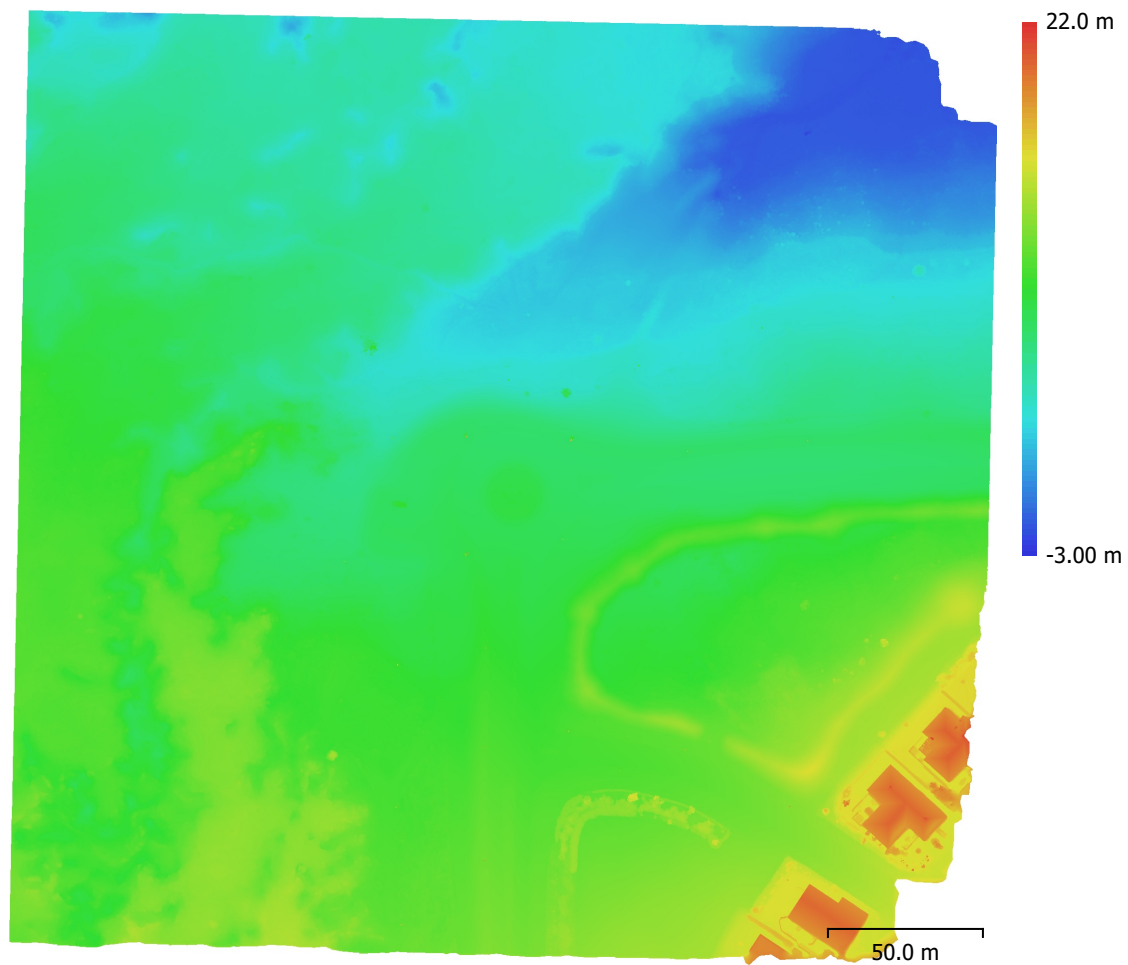


Fig. 5. Reconstructed digital elevation model.

Resolution: 8.56 cm/pix
Point density: 136 points/m²

Processing Parameters

General

Images	445
Aligned images	445
Markers	15
Coordinate system	ISN2016 + ISH2004
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	656,387 of 2,212,936
RMS reprojection error	0.138911 (0.286967 pix)
Max reprojection error	0.567187 (1.27498 pix)
Mean key point size	2.0647 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	7.87072

Alignment parameters

Accuracy	High
Generic preselection	No
Reference preselection	Source
Key point limit	60,000
Key point limit per Mpx	1,000
Tie point limit	0
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	18 minutes 2 seconds
Matching memory usage	2.17 GB
Alignment time	14 minutes 52 seconds
Alignment memory usage	5.37 GB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Exclude corners	No
Optimization time	13 seconds
Date created	2025:11:11 13:16:12
Software version	2.3.0.21427
File size	951.54 MB

Depth Maps

Count	445
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Depth maps generation parameters

Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	45 minutes 50 seconds
Memory usage	11.70 GB
Date created	2025:11:12 11:57:27
Software version	2.3.0.21427
File size	6.95 GB

Point Cloud

Points	711,696,298
Coordinate precision	3.06 mm

Point attributes	
Color	3 bands, uint8
Normal	
Confidence	1 - 68
Point classes	
Created (never classified)	711,696,298
Depth maps generation parameters	
Quality	Ultra High
Filtering mode	Mild
Max neighbors	16
Processing time	2 hours 13 minutes
Memory usage	45.69 GB
Point cloud generation parameters	
Source data	Depth maps
Processing time	7 hours 54 minutes
Memory usage	90.50 GB
Date created	2025:11:12 01:01:33
Software version	2.3.0.21427
File size	10.43 GB
Model	
Faces	12,220,700
Vertices	6,118,215
Vertex colors	3 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	45 minutes 50 seconds
Memory usage	11.70 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	30 minutes 26 seconds
Memory usage	14.63 GB
Date created	2025:11:12 12:27:41
Software version	2.3.0.21427
File size	262.37 MB
DEM	
Size	3,726 x 3,640
Resolution	8.56 cm/pix
Coordinate system	ISN2016 + ISH2004
Reconstruction parameters	
Source data	Model
Interpolation	Disabled
Processing time	10 seconds
Memory usage	821.79 MB
Date created	2025:11:12 12:48:03
Software version	2.3.0.21427
File size	64.15 MB
System	
Software name	Agisoft Metashape Professional
Software version	2.3.0 build 21427
OS	Windows 64 bit
RAM	127.76 GB

CPU
GPU(s)

12th Gen Intel(R) Core(TM) i9-12900K
NVIDIA GeForce RTX 3070 Ti