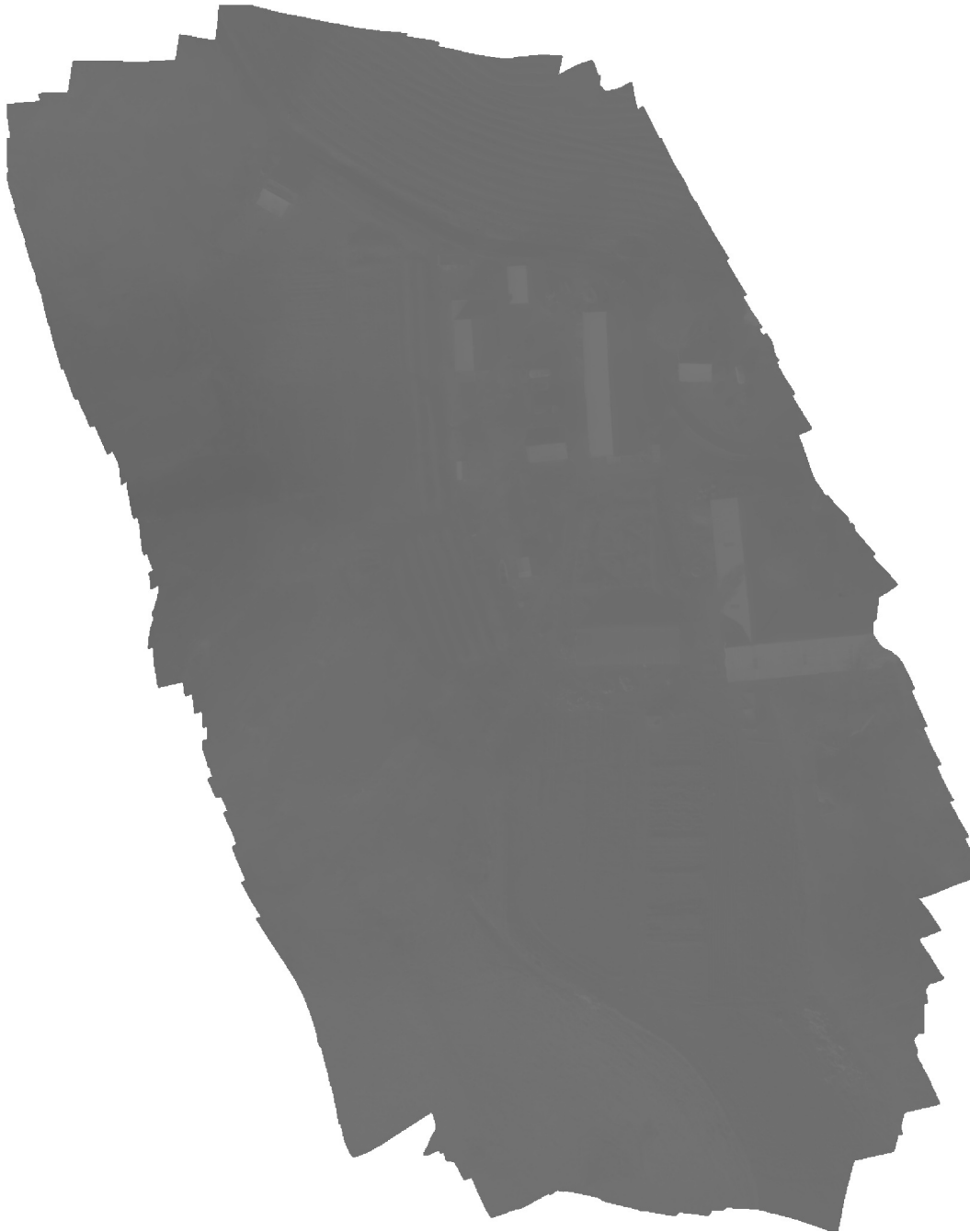


Sander_2021-10-17_Mavic2EA_Thermal

Processing Report

28 June 2024



Survey Data

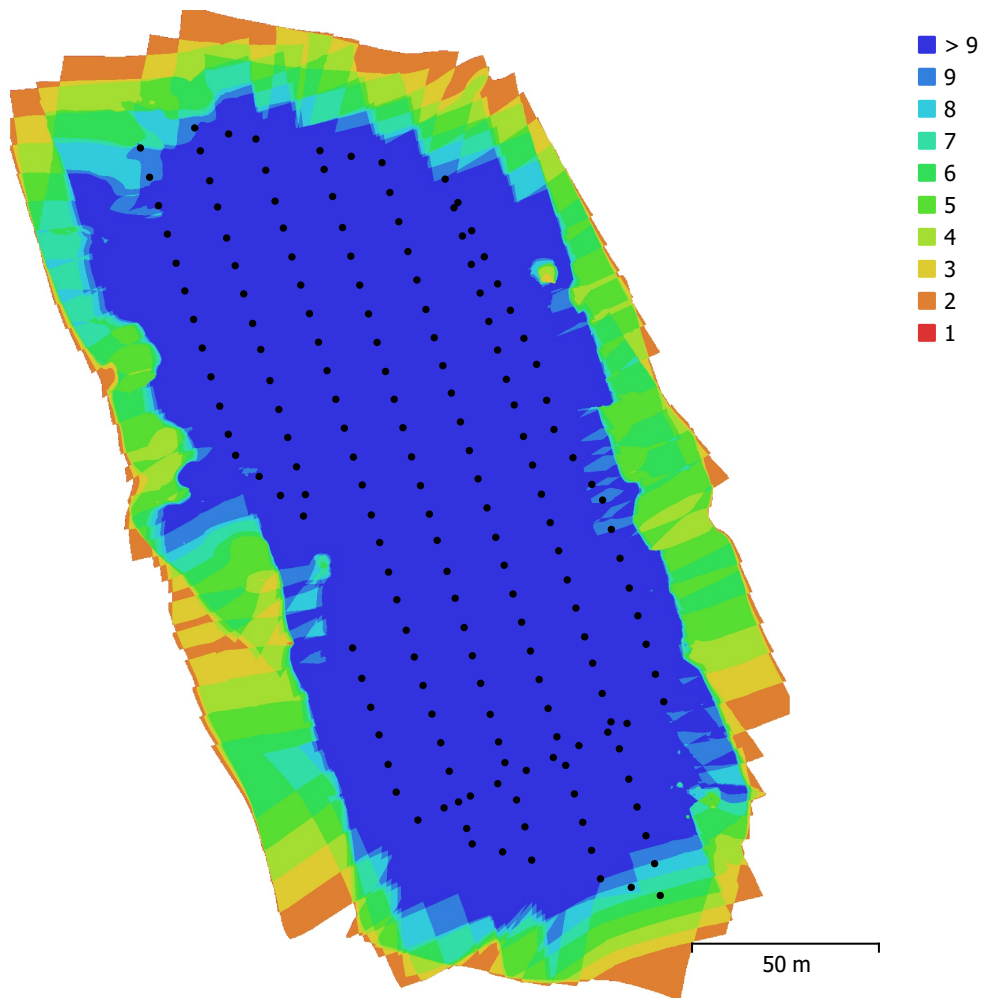


Fig. 1. Camera locations and image overlap.

Number of images:	171	Camera stations:	171
Flying altitude:	66.5 m	Tie points:	32,698
Ground resolution:	8.31 cm/pix	Projections:	171,894
Coverage area:	0.036 km ²	Reprojection error:	0.418 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
MAVIC2-ENTERPRISE-ADVA...	640 x 512	unknown	unknown	No

Table 1. Cameras.

Camera Calibration

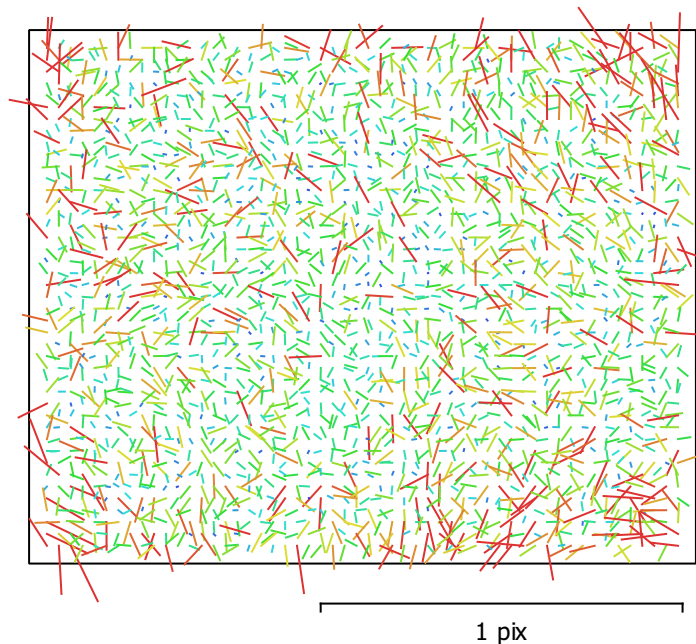


Fig. 2. Image residuals for MAVIC2-ENTERPRISE-ADVANCED.

MAVIC2-ENTERPRISE-ADVANCED

171 images

Type	Resolution	Focal Length	Pixel Size
Frame	640 x 512	unknown	unknown

	Value	Error	F	K1	K2	P1	P2
F	800.045	1	1.00	-0.70	-0.05	0.45	-0.49
K1	-0.296765	0.0011		1.00	-0.51	-0.72	0.73
K2	-0.00974665	0.0012			1.00	0.30	-0.26
P1	0.00176419	2.7e-05				1.00	-0.57
P2	-0.00187443	2.6e-05					1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

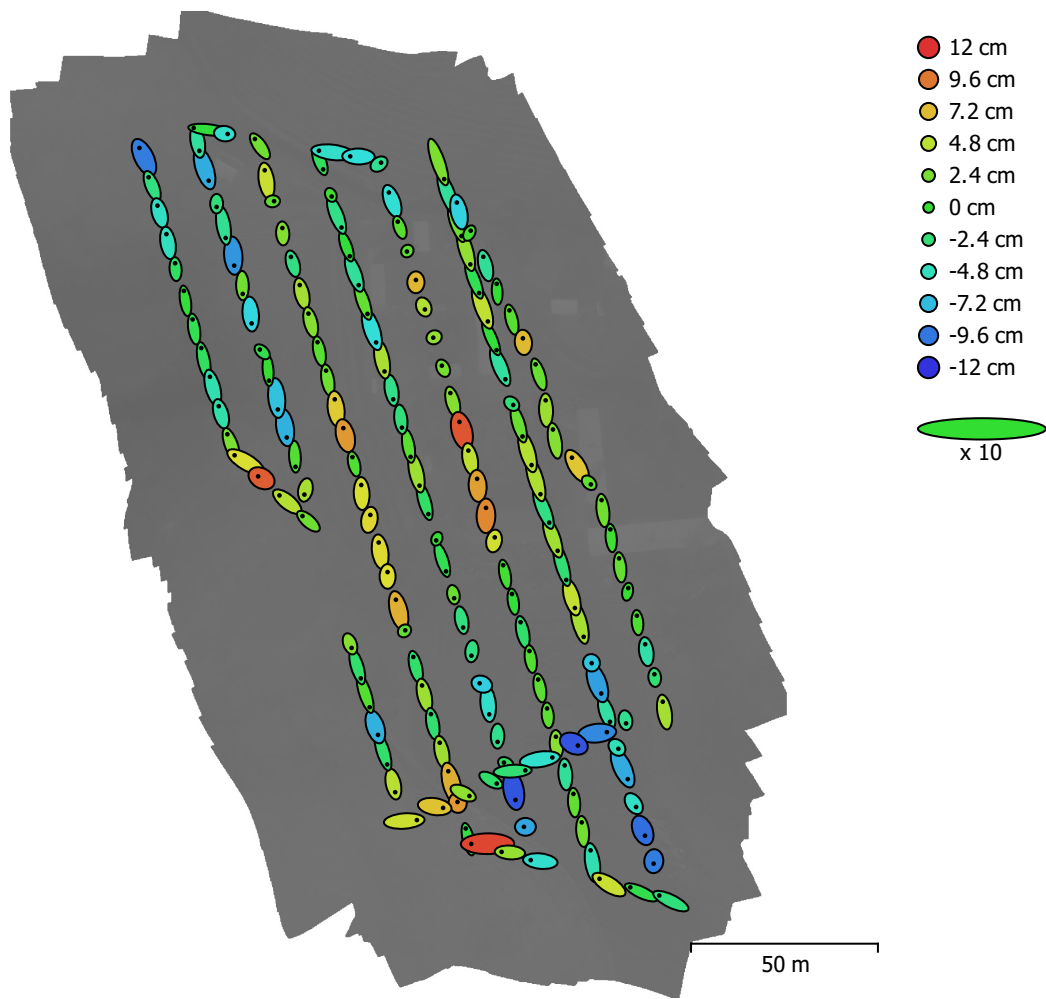


Fig. 3. Camera locations and error estimates.

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)
23.3506	46.0758	4.68965	51.6549	51.8674

Table 3. Average camera location error.

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

Digital Elevation Model

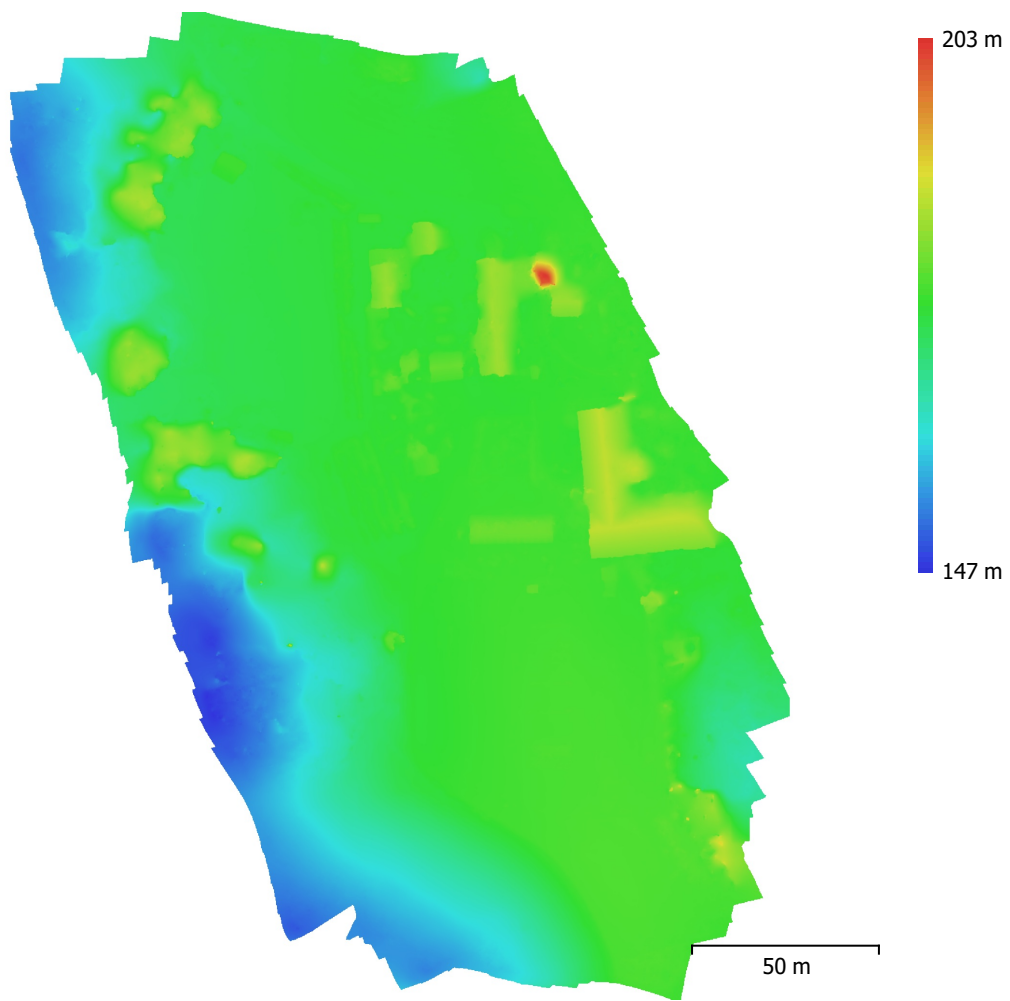


Fig. 4. Reconstructed digital elevation model.

Resolution: 20 cm/pix
Point density: 25 points/m²

Processing Parameters

General

Cameras	171
Aligned cameras	171
Coordinate system	ETRS89 / UTM zone 32N + NN2000 height (EPSG::5972)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	32,698 of 38,466
RMS reprojection error	0.132446 (0.417895 pix)
Max reprojection error	0.400481 (6.48743 pix)
Mean key point size	2.96994 pix
Point colors	1 bands, uint16
Key points	No
Average tie point multiplicity	5.70826

Alignment parameters

Accuracy	High
Generic preselection	Yes
Reference preselection	Source
Key point limit	40,000
Key point limit per Mpx	1,000
Tie point limit	4,000
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	Yes
Matching time	11 seconds
Matching memory usage	223.62 MB
Alignment time	24 seconds
Alignment memory usage	142.13 MB
Date created	2024:06:28 10:31:31
Software version	2.1.0.17532
File size	4.19 MB

Depth Maps

Count	171
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	59 seconds
Memory usage	244.73 MB
Date created	2024:06:28 10:33:51
Software version	2.1.0.17532
File size	24.13 MB

DEM

Size	1,042 x 1,321
Coordinate system	ETRS89 / UTM zone 32N + NN2000 height (EPSG::5972)
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	16
Processing time	59 seconds
Memory usage	244.73 MB

Reconstruction parameters

Source data	Depth maps
Interpolation	Enabled
Processing time	16 seconds
Memory usage	796.74 MB
Date created	2024:06:28 10:34:07
Software version	2.1.0.17532
File size	4.27 MB

Orthomosaic

Size	2,080 x 2,640
Coordinate system	ETRS89 / UTM zone 32N + NN2000 height (EPSG::5972)
Colors	1 bands, uint16

Reconstruction parameters

Blending mode	Mosaic
Surface	DEM
Enable hole filling	Yes
Enable ghosting filter	No
Processing time	5 seconds
Memory usage	427.60 MB
Date created	2024:06:28 10:38:30
Software version	2.1.0.17532
File size	140.98 MB

System

Software name	Agisoft Metashape Professional
Software version	2.1.0 build 17532
OS	Windows 64 bit
RAM	127.15 GB
CPU	AMD Ryzen 9 7950X 16-Core Processor
GPU(s)	NVIDIA GeForce RTX 4080 SUPER