Ledeganck - Groep Gaia Gevel Rechts

Processing Report

02 September 2025

Survey Data

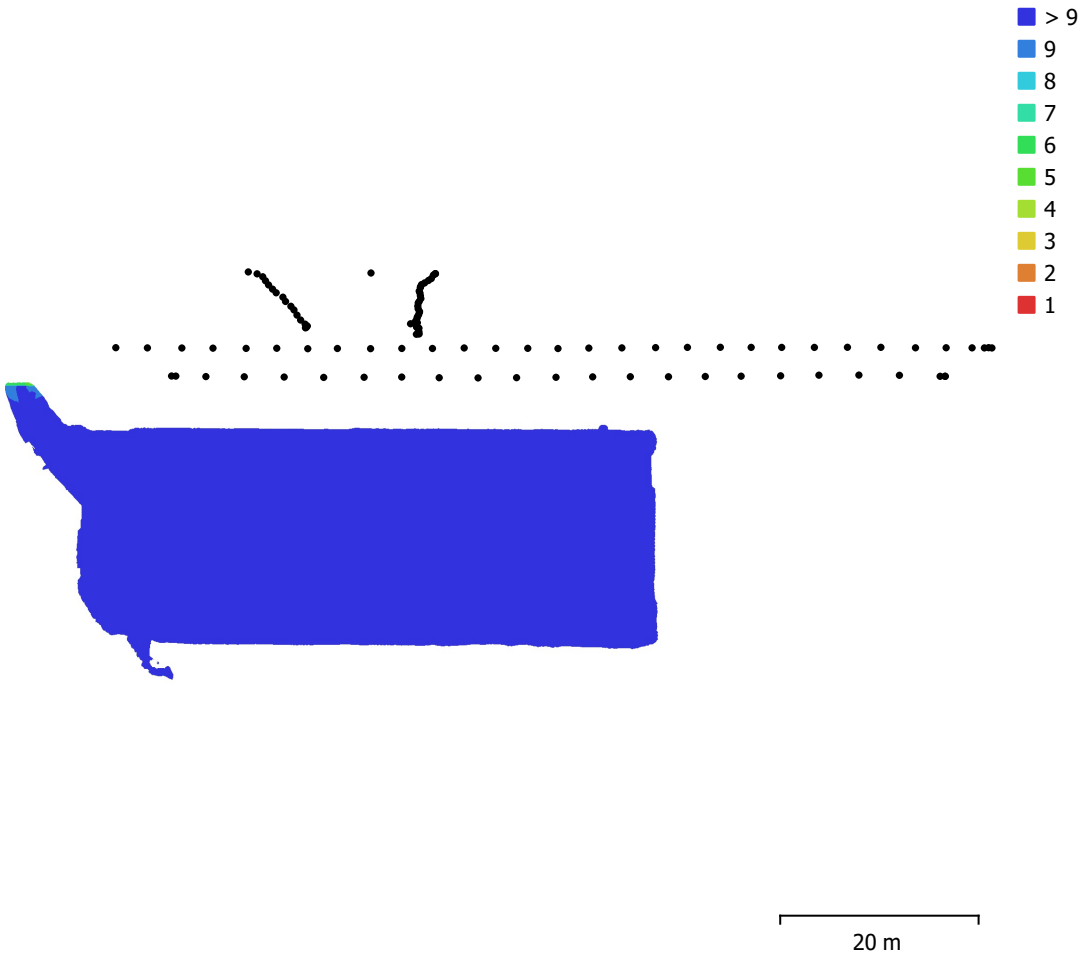

Fig. 1. Camera locations and image overlap.

Number of images:	105	Camera stations:	105
Flying altitude:	32.9 m	Tie points:	33,713
Ground resolution:	5.27 mm/pix	Projections:	121,090
Coverage area:	1.3e+03 m²	Reprojection error:	0.949 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
FC8482 (6.72mm)	8064 x 6048	6.72 mm	1.2 x 1.2 µm	No
FC8482 (6.72mm)	8064 x 6048	6.72 mm	1.2 x 1.2 µm	No

Table 1. Cameras.

Camera Calibration

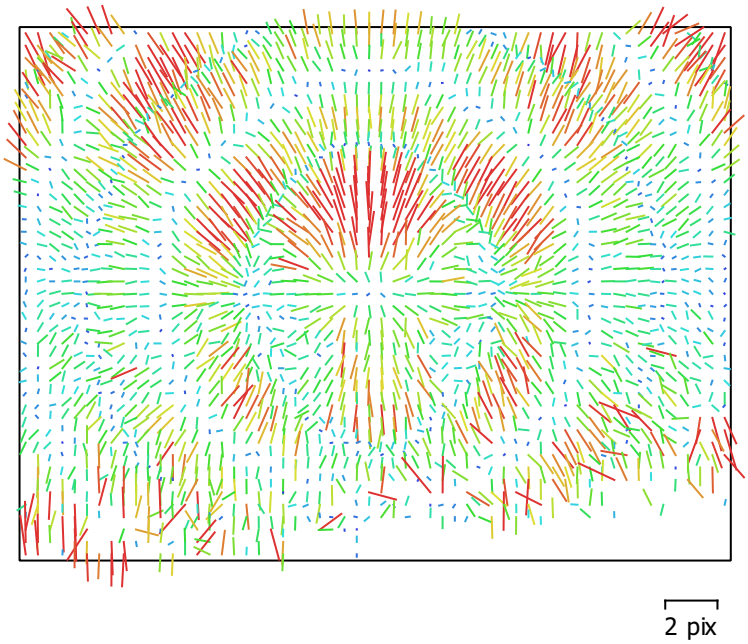

Fig. 2. Image residuals for FC8482 (6.72mm).

FC8482 (6.72mm)

55 images

Type	Resolution	Focal Length	Pixel Size
Frame	**8064 x 6048**	**6.72 mm**	**1.2 x 1.2 µm**

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	**5920.86**	0.61	1.00	-0.05	0.28	0.11	0.01	-0.02	-0.05	0.21
Cx	**11.5811**	1.3		1.00	0.03	-0.04	0.04	-0.04	0.98	0.04
Cy	**-18.5612**	1.1			1.00	0.19	0.01	-0.04	0.04	0.96
K1	**0.083097**	0.00017				1.00	-0.93	0.86	-0.04	0.22
K2	**-0.111145**	0.00054					1.00	-0.98	0.04	-0.02
K3	**0.0654838**	0.00056						1.00	-0.04	-0.02
P1	**-0.00033886**	6.1e-05							1.00	0.05
P2	**6.31062e-05**	5.1e-05								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Calibration

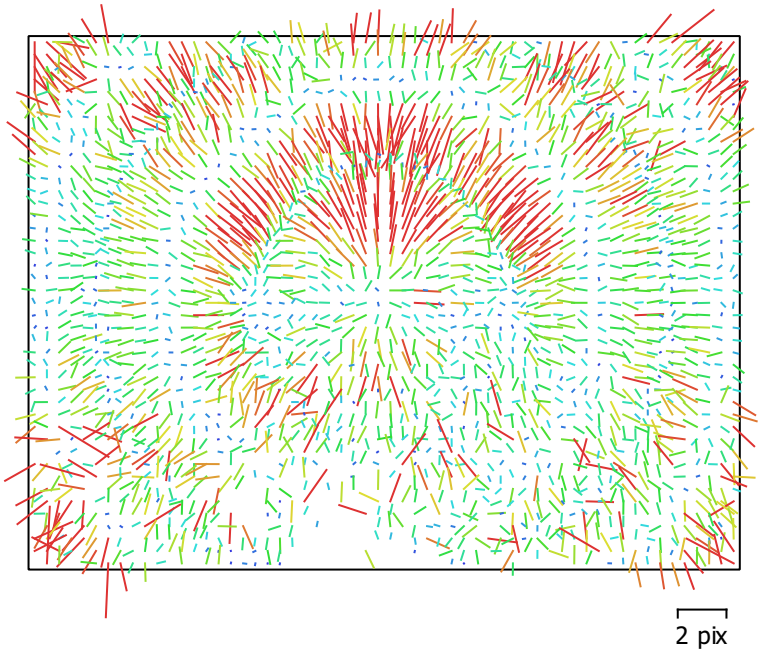

Fig. 3. Image residuals for FC8482 (6.72mm).

FC8482 (6.72mm)

50 images

Type	Resolution	Focal Length	Pixel Size
Frame	**8064 x 6048**	**6.72 mm**	**1.2 x 1.2 µm**

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	**5923.4**	0.56	1.00	-0.10	0.37	0.17	-0.01	-0.01	-0.09	0.27
Cx	**5.88416**	1.2		1.00	-0.15	-0.08	0.06	-0.05	0.99	-0.13
Cy	**-2.07675**	1.1			1.00	0.22	-0.06	0.03	-0.15	0.97
K1	**0.0837592**	0.00021				1.00	-0.94	0.88	-0.08	0.22
K2	**-0.115318**	0.00063					1.00	-0.98	0.05	-0.08
K3	**0.0685652**	0.00062						1.00	-0.05	0.04
P1	**-7.62113e-05**	5.8e-05							1.00	-0.14
P2	**0.000487339**	5.1e-05								1.00

Table 3. Calibration coefficients and correlation matrix.

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	1.58769	4.50806	3.81805	4.77947	6.11726

Table 4. Control points RMSE.

Count	X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total (cm)
2	3.99187	2.26743	4.22002	4.59089	6.23577

Table 5. Check points RMSE.

Label	X error (cm)	Y error (cm)	Z error (cm)	Total (cm)	Image (pix)
F1	0.711255	-1.73512	1.51686	2.41193	2.596 (16)
F2	-1.19736	-0.335327	1.11492	1.67008	2.045 (21)
F4	-1.88825	7.34726	-7.0196	10.3355	1.799 (26)
F5	-0.275671	-6.54898	4.4789	7.93887	2.519 (31)
F7	2.65003	1.27217	-0.0910854	2.94099	2.418 (21)
Total	**1.58769**	**4.50806**	**3.81805**	**6.11726**	**2.283**

Table 6. Control points.

Label	X error (cm)	Y error (cm)	Z error (cm)	Total (cm)	Image (pix)
F3	-4.10966	2.23606	5.83433	7.47855	2.425 (24)
F6	3.87051	-2.29837	-1.25606	4.67344	1.670 (29)
point 1_origin					1.682 (3)
point 2_horizontal					0.522 (2)
point 3_vertical					0.732 (2)
Total	**3.99187**	**2.26743**	**4.22002**	**6.23577**	**2.047**

Table 7. Check points.

Digital Elevation Model

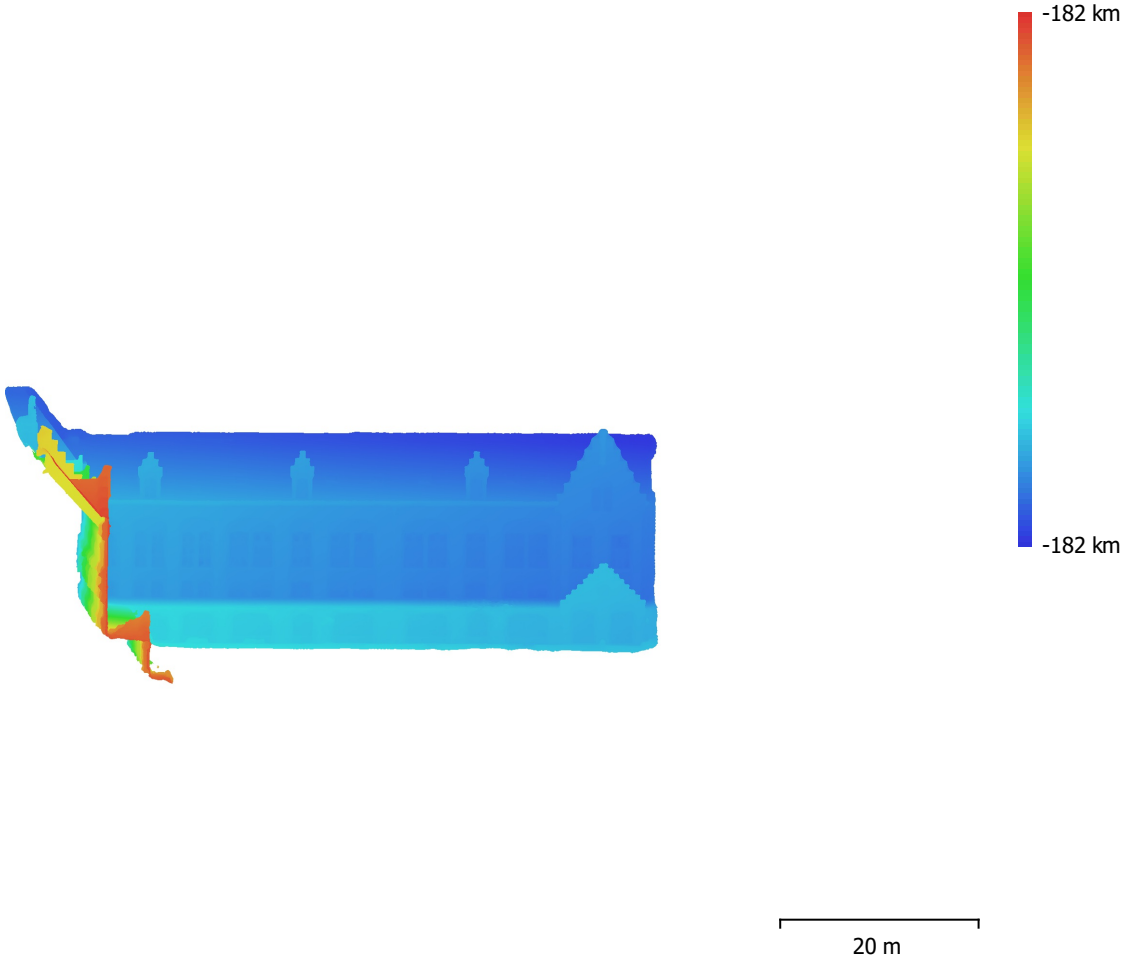

Fig. 5. Reconstructed digital elevation model.

Resolution:	2.11 cm/pix
Point density:	0.225 points/cm²

Processing Parameters

General	
Cameras	105
Aligned cameras	105
Markers	10
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll
Point Cloud	
Points	33,713 of 87,315
RMS reprojection error	0.349249 (0.949167 pix)
Max reprojection error	0.968249 (4.23214 pix)
Mean key point size	2.68449 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	5.10672
Optimization parameters	
Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Optimization time	0 seconds
Depth Maps	
Count	105
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Processing time	3 minutes 32 seconds
Software version	1.6.3.10732
Dense Point Cloud	
Points	6,760,301
Point colors	3 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Processing time	3 minutes 32 seconds
Dense cloud generation parameters	
Processing time	3 minutes 40 seconds
Software version	1.6.3.10732
Model	
Faces	1,348,185
Vertices	675,871
Vertex colors	3 bands, uint8
Texture	4,096 x 4,096, 4 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Processing time	3 minutes 32 seconds
Reconstruction parameters	
Surface type	Arbitrary
Source data	Dense cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	1 minutes 41 seconds

Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	4,096
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	1 minutes 12 seconds
Blending time	23 seconds
Software version	1.6.3.10732
DEM	
Size	3,596 x 2,661
Coordinate system	Local Coordinates (m)
Reconstruction parameters	
Source data	Dense cloud
Interpolation	Enabled
Processing time	2 seconds
Software version	1.6.3.10732
Orthomosaic	
Size	13,613 x 11,800
Coordinate system	Local Coordinates (m)
Colors	3 bands, uint8
Reconstruction parameters	
Blending mode	Mosaic
Surface	Mesh
Enable hole filling	Yes
Processing time	42 seconds
Software version	1.6.3.10732
System	
Software name	Agisoft Metashape Professional
Software version	1.6.3 build 10732
OS	Windows 64 bit
RAM	31.84 GB
CPU	13th Gen Intel(R) Core(TM) i7-13700KF
GPU(s)	NVIDIA GeForce RTX 4070