

Quality Report



Generated with Pix4Denterprise version 4.8.3
Preview

- !** **Important:** Click on the different icons for:
- ?** Help to analyze the results in the Quality Report
 - i** Additional information about the sections

💡 Click [here](#) for additional tips to analyze the Quality Report

Summary



Project	280791-Project-2024-05-21T04_55_51.139Z
Processed	2024-05-21 18:16:02
Camera Model Name(s)	_0.0_1080x1920 (RGB)
Average Ground Sampling Distance (GSD)	undefined
Area Covered	undefined
Time for Initial Processing (without report)	03h:46m:31s

Quality Check



? Images	median of 9786 keypoints per image	!
? Dataset	1893 out of 1893 images calibrated (100%), 10 images disabled	✓
? Camera Optimization	3.08% relative difference between initial and optimized internal camera parameters	✓
? Matching	median of 5946.69 matches per calibrated image	✓
? Georeferencing	no, no 3D GCP	!

? Preview

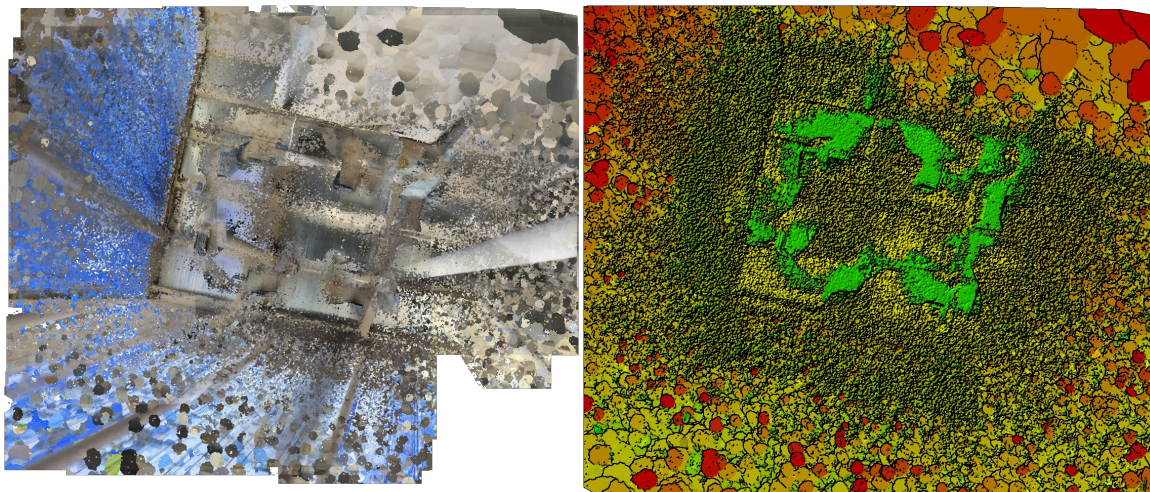


Figure 1: Orthomosaic and the corresponding sparse Digital Surface Model (DSM) before densification.

Calibration Details



Number of Calibrated Images	1893 out of 1903
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Initial Image Positions

The preview is not generated for images without geolocation.

Computed Image/GCPs/Manual Tie Points Positions

The preview is not generated for images without geolocation.

Overlap

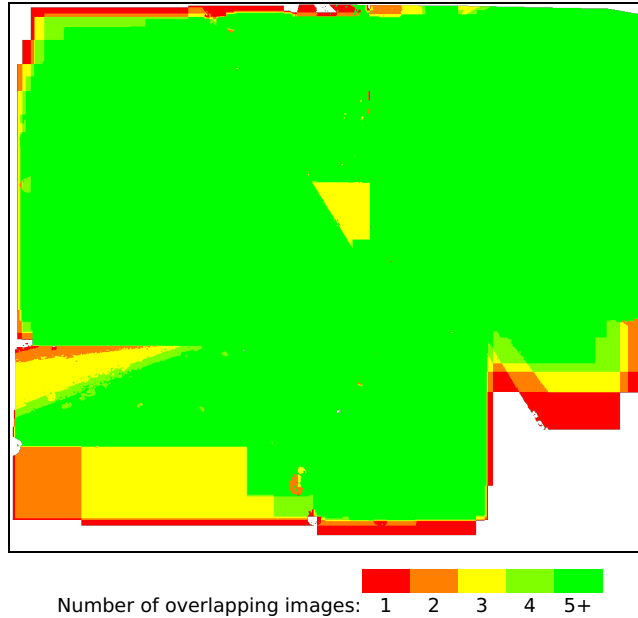


Figure 4: Number of overlapping images computed for each pixel of the orthomosaic.

Red and yellow areas indicate low overlap for which poor results may be generated. Green areas indicate an overlap of over 5 images for every pixel. Good quality results will be generated as long as the number of keypoint matches is also sufficient for these areas (see Figure 5 for keypoint matches).

Bundle Block Adjustment Details

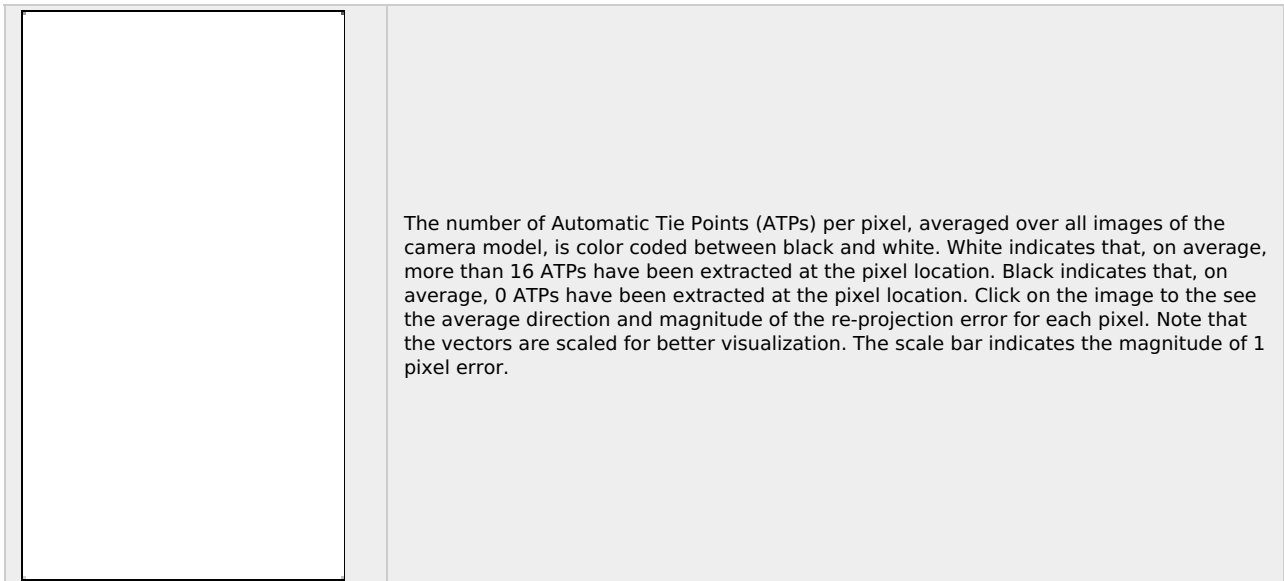
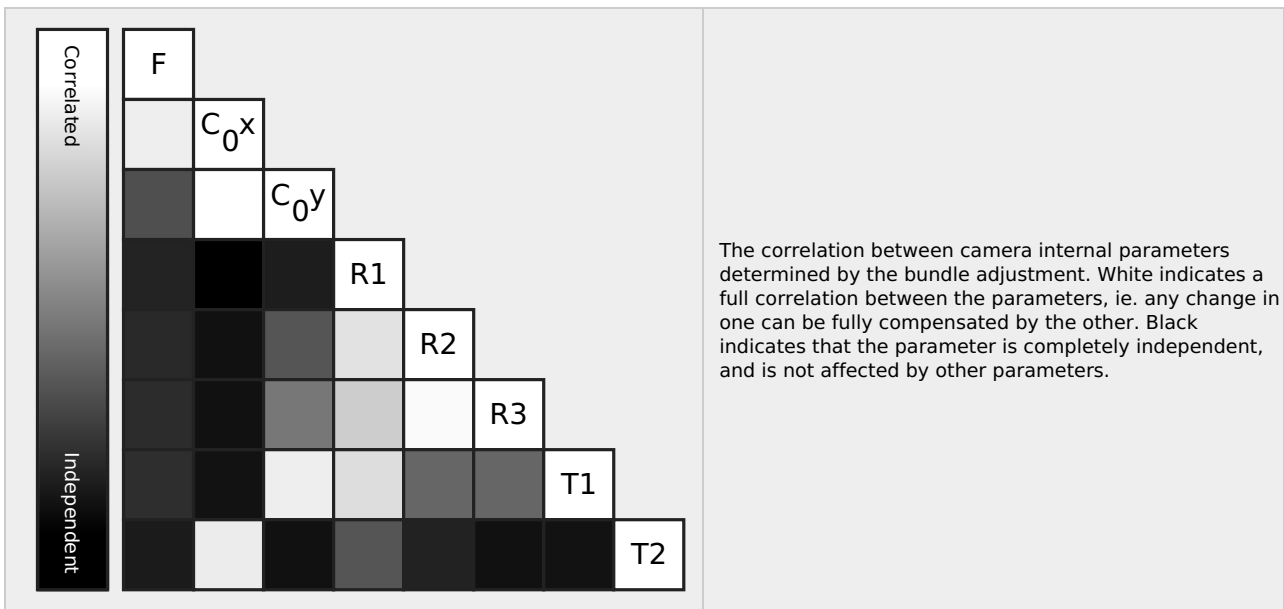
Number of 2D Keypoint Observations for Bundle Block Adjustment	11161868
Number of 3D Points for Bundle Block Adjustment	2051901
Mean Reprojection Error [pixels]	0.266

Internal Camera Parameters

_0.0_1080x1920 (RGB). Sensor Dimensions: 25.400 [mm] x 45.156 [mm]

EXIF ID: _0.0_1080x1920

	Focal Length	Principal Point x	Principal Point y	R1	R2	R3	T1	T2
Initial Values	850.394 [pixel] 20.000 [mm]	540.000 [pixel] 12.700 [mm]	960.000 [pixel] 22.578 [mm]	0.000	0.000	0.000	0.000	0.000
Optimized Values	876.595 [pixel] 20.616 [mm]	540.728 [pixel] 12.717 [mm]	958.499 [pixel] 22.542 [mm]	-0.005	0.004	-0.001	-0.000	-0.000
Uncertainties (Sigma)	0.031 [pixel] 0.001 [mm]	0.039 [pixel] 0.001 [mm]	0.066 [pixel] 0.002 [mm]	0.000	0.000	0.000	0.000	0.000



2D Keypoints Table



	Number of 2D Keypoints per Image	Number of Matched 2D Keypoints per Image
Median	9786	5947
Min	8106	3060
Max	11765	7387
Mean	9781	5896

3D Points from 2D Keypoint Matches



	Number of 3D Points Observed
In 2 Images	1007472
In 3 Images	342960
In 4 Images	170033
In 5 Images	102356
In 6 Images	69948
In 7 Images	50382
In 8 Images	38846
In 9 Images	30842
In 10 Images	25102
In 11 Images	21095
In 12 Images	17961
In 13 Images	15194

In 14 Images	13440
In 15 Images	11576
In 16 Images	10480
In 17 Images	9202
In 18 Images	8386
In 19 Images	7517
In 20 Images	6723
In 21 Images	6238
In 22 Images	5666
In 23 Images	5350
In 24 Images	4808
In 25 Images	4497
In 26 Images	4042
In 27 Images	3718
In 28 Images	3569
In 29 Images	3135
In 30 Images	2972
In 31 Images	2701
In 32 Images	2503
In 33 Images	2326
In 34 Images	2284
In 35 Images	2047
In 36 Images	1852
In 37 Images	1624
In 38 Images	1615
In 39 Images	1552
In 40 Images	1388
In 41 Images	1411
In 42 Images	1243
In 43 Images	1186
In 44 Images	1111
In 45 Images	1110
In 46 Images	1079
In 47 Images	997
In 48 Images	932
In 49 Images	877
In 50 Images	828
In 51 Images	786
In 52 Images	777
In 53 Images	697
In 54 Images	671
In 55 Images	641
In 56 Images	649
In 57 Images	643
In 58 Images	540
In 59 Images	519
In 60 Images	524
In 61 Images	510
In 62 Images	467
In 63 Images	479
In 64 Images	487
In 65 Images	438
In 66 Images	404
In 67 Images	363
In 68 Images	331
In 69 Images	354
In 70 Images	352
In 71 Images	349
In 72 Images	332

In 73 Images	352
In 74 Images	351
In 75 Images	270
In 76 Images	301
In 77 Images	266
In 78 Images	239
In 79 Images	266
In 80 Images	241
In 81 Images	168
In 82 Images	179
In 83 Images	180
In 84 Images	163
In 85 Images	171
In 86 Images	161
In 87 Images	170
In 88 Images	127
In 89 Images	111
In 90 Images	109
In 91 Images	118
In 92 Images	116
In 93 Images	115
In 94 Images	106
In 95 Images	87
In 96 Images	72
In 97 Images	82
In 98 Images	82
In 99 Images	89
In 100 Images	71
In 101 Images	53
In 102 Images	76
In 103 Images	70
In 104 Images	63
In 105 Images	61
In 106 Images	58
In 107 Images	52
In 108 Images	46
In 109 Images	56
In 110 Images	47
In 111 Images	46
In 112 Images	41
In 113 Images	44
In 114 Images	37
In 115 Images	36
In 116 Images	32
In 117 Images	33
In 118 Images	27
In 119 Images	22
In 120 Images	25
In 121 Images	17
In 122 Images	25
In 123 Images	18
In 124 Images	16
In 125 Images	9
In 126 Images	15
In 127 Images	15
In 128 Images	20
In 129 Images	12
In 130 Images	15
In 131 Images	13

In 132 Images	17
In 133 Images	14
In 134 Images	10
In 135 Images	18
In 136 Images	14
In 137 Images	19
In 138 Images	16
In 139 Images	6
In 140 Images	10
In 141 Images	12
In 142 Images	8
In 143 Images	14
In 144 Images	10
In 145 Images	10
In 146 Images	16
In 147 Images	9
In 148 Images	1
In 149 Images	4
In 150 Images	7
In 151 Images	11
In 152 Images	12
In 153 Images	6
In 154 Images	8
In 155 Images	11
In 156 Images	7
In 157 Images	7
In 158 Images	3
In 159 Images	3
In 160 Images	4
In 161 Images	3
In 162 Images	11
In 163 Images	2
In 164 Images	4
In 165 Images	8
In 166 Images	7
In 167 Images	5
In 168 Images	5
In 169 Images	12
In 170 Images	6
In 171 Images	7
In 172 Images	7
In 173 Images	4
In 174 Images	3
In 175 Images	8
In 176 Images	7
In 177 Images	6
In 178 Images	6
In 179 Images	2
In 180 Images	9
In 181 Images	8
In 183 Images	1
In 184 Images	5
In 185 Images	7
In 186 Images	5
In 187 Images	4
In 188 Images	4
In 189 Images	1
In 190 Images	5
In 191 Images	3

In 192 Images	1
In 193 Images	3
In 194 Images	4
In 195 Images	1
In 196 Images	3
In 197 Images	4
In 198 Images	1
In 199 Images	3
In 200 Images	5
In 201 Images	3
In 202 Images	3
In 203 Images	6
In 204 Images	5
In 205 Images	2
In 206 Images	3
In 207 Images	7
In 208 Images	3
In 209 Images	2
In 210 Images	3
In 211 Images	1
In 212 Images	1
In 213 Images	5
In 214 Images	3
In 216 Images	1
In 217 Images	1
In 220 Images	3
In 221 Images	1
In 222 Images	4
In 224 Images	1
In 229 Images	2
In 230 Images	1
In 232 Images	1
In 233 Images	4
In 235 Images	3
In 236 Images	1
In 237 Images	1
In 244 Images	1

2D Keypoint Matches





Figure 5: Computed image positions with links between matched images. The darkness of the links indicates the number of matched 2D keypoints between the images. Bright links indicate weak links and require manual tie points or more images.

Initial Processing Details

System Information

Hardware	CPU: Intel(R) Xeon(R) Platinum 8124M CPU @ 3.00GHz RAM: 69GB GPU: no info (Driver: unknown)
Operating System	Linux 5.15.0-1058-aws x86_64

Coordinate Systems

Output Coordinate System	Arbitrary (m)
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Processing Options

Detected Template	cloud-3d-maps-1*
Keypoints Image Scale	Full, Image Scale: 1
Advanced: Matching Image Pairs	Aerial Grid or Corridor
Advanced: Matching Strategy	Use Geometrically Verified Matching: no
Advanced: Keypoint Extraction	Targeted Number of Keypoints: Automatic
Advanced: Calibration	Calibration Method: Standard Internal Parameters Optimization: All External Parameters Optimization: All Rematch: Auto, yes

Point Cloud Densification details



Processing Options



Image Scale	multiscale, 1/2 (Half image size, Default)
Point Density	Optimal
Minimum Number of Matches	3
3D Textured Mesh Generation	yes
3D Textured Mesh Settings:	Resolution: Medium Resolution (default) Color Balancing: no
LOD	Generated: no
Advanced: 3D Textured Mesh Settings	Sample Density Divider: 1
Advanced: Image Groups	group1
Advanced: Use Processing Area	yes
Advanced: Use Annotations	yes
Time for Point Cloud Densification	20m:09s
Time for Point Cloud Classification	NA
Time for 3D Textured Mesh Generation	04m:44s

Results



Number of Generated Tiles	1
Number of 3D Densified Points	8043937
Average Density (per m ³)	15.55

DSM, Orthomosaic and Index Details



Processing Options



DSM and Orthomosaic Resolution	1 x GSD (6.05 [cm/pixel])
DSM Filters	Noise Filtering: yes Surface Smoothing: yes, Type: Sharp
Raster DSM	Generated: yes Method: Inverse Distance Weighting Merge Tiles: yes
Orthomosaic	Generated: yes Merge Tiles: yes GeoTIFF Without Transparency: no Google Maps Tiles and KML: no
Time for DSM Generation	01m:33s
Time for Orthomosaic Generation	14m:05s
Time for DTM Generation	00s
Time for Contour Lines Generation	00s
Time for Reflectance Map Generation	00s
Time for Index Map Generation	00s