Quality Report

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

> Click here for additional tips to analyze the Quality Report

Summary

Project	100%_ugeom_ugcp
Processed	2021-02-28 02:34:51
Camera Model Name(s)	Insta360Pro_1.9_7680x3840 (RGB)
Average Ground Sampling Distance (GSD)	undefined
Time for Initial Processing (without report)	11h:08m:30s

Quality Check

Images	median of 24911 keypoints per image	✓
Dataset	1074 out of 1074 images calibrated (100%), all images enabled	✓
Camera Optimization	0% relative difference between initial and optimized internal camera parameters	✓
Matching	median of 193.138 matches per calibrated image	⚠
Georeferencing	no, no 3D GCP	⚠

Calibration Details

Number of Calibrated Images	1074 out of 1074
Number of Geolocated Images	0 out of 1074

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.

Bundle Block Adjustment Details

Number of 2D Keypoint Observations for Bundle Block Adjustment	209575
Number of 3D Points for Bundle Block Adjustment	23609
Mean Reprojection Error [pixels]	0.598

Internal Camera Parameters

EXIF ID: Insta360Pro_1.9_7680x3840

It is a spherical camera and it doesn't have internal parameters.

 The number of Automatic Tie Points (ATPs) per pixel, averaged over all images of the camera model, is color coded between black and white. White indicates that, on average, more than 16 ATPs have been extracted at the pixel location. Black indicates that, on average, 0 ATPs have been extracted at the pixel location. Click on the image to the see the average direction and magnitude of the re-projection error for each pixel. Note that the vectors are scaled for better visualization. The scale bar indicates the magnitude of 1 pixel error.

2D Keypoints Table

	Number of 2D Keypoints per Image	Number of Matched 2D Keypoints per Image
Median	24911	193
Min	15696	40
Max	30912	328
Mean	24234	195

3D Points from 2D Keypoint Matches

	Number of 3D Points Observed
In 2 Images	7015
In 3 Images	5972
In 4 Images	3228
In 5 Images	1644
In 6 Images	1031
In 7 Images	665
In 8 Images	474
In 9 Images	392
In 10 Images	288
In 11 Images	246
In 12 Images	194
In 13 Images	148
In 14 Images	152
In 15 Images	122
In 16 Images	103
In 17 Images	82
In 18 Images	98
In 19 Images	78
In 20 Images	66
In 21 Images	65
In 22 Images	77
In 23 Images	50
In 24 Images	53
In 25 Images	43
In 26 Images	45
In 27 Images	51
In 28 Images	36
In 29 Images	39
In 30 Images	34
In 31 Images	23
In 32 Images	24
In 33 Images	40
In 34 Images	32
In 35 Images	27
In 36 Images	29
In 37 Images	21
In 38 Images	30
In 39 Images	32
In 40 Images	26
In 41 Images	20

In 42 Images	20
In 43 Images	21
In 44 Images	24
In 45 Images	13
In 46 Images	12
In 47 Images	22
In 48 Images	26
In 49 Images	14
In 50 Images	11
In 51 Images	9
In 52 Images	14
In 53 Images	12
In 54 Images	14
In 55 Images	8
In 56 Images	17
In 57 Images	12
In 58 Images	11
In 59 Images	11
In 60 Images	10
In 61 Images	9
In 62 Images	12
In 63 Images	8
In 64 Images	15
In 65 Images	6
In 66 Images	8
In 67 Images	11
In 68 Images	9
In 69 Images	12
In 70 Images	6
In 71 Images	8
In 72 Images	8
In 73 Images	6
In 74 Images	10
In 75 Images	7
In 76 Images	4
In 77 Images	5
In 78 Images	4
In 79 Images	6
In 80 Images	1
In 81 Images	4
In 82 Images	3
In 83 Images	4
In 84 Images	3
In 85 Images	5
In 86 Images	2
In 87 Images	5
In 88 Images	4
In 89 Images	4
In 90 Images	4
In 91 Images	5
In 92 Images	9
In 93 Images	5
In 94 Images	5
In 95 Images	3
In 96 Images	2
In 97 Images	6
In 98 Images	3
In 99 Images	9
In 100 Images	2

In 101 Images	4
In 102 Images	4
In 103 Images	4
In 104 Images	5
In 105 Images	2
In 106 Images	3
In 107 Images	3
In 108 Images	3
In 109 Images	3
In 110 Images	1
In 111 Images	3
In 112 Images	3
In 113 Images	4
In 114 Images	2
In 115 Images	2
In 116 Images	2
In 118 Images	3
In 119 Images	1
In 120 Images	2
In 121 Images	2
In 122 Images	2
In 123 Images	2
In 124 Images	4
In 125 Images	5
In 126 Images	4
In 127 Images	2
In 128 Images	3
In 129 Images	1
In 130 Images	2
In 131 Images	2
In 132 Images	3
In 133 Images	5
In 134 Images	3
In 135 Images	3
In 136 Images	2
In 137 Images	3
In 139 Images	4
In 140 Images	1
In 141 Images	1
In 142 Images	3
In 143 Images	1
In 145 Images	2
In 147 Images	4
In 148 Images	2
In 150 Images	2
In 151 Images	1
In 152 Images	3
In 153 Images	1
In 154 Images	2
In 155 Images	2
In 156 Images	3
In 157 Images	1
In 158 Images	2
In 161 Images	2
In 162 Images	1
In 163 Images	1
In 165 Images	2
In 167 Images	2
In 168 Images	2

In 169 Images	2
In 172 Images	1
In 174 Images	1
In 175 Images	1
In 176 Images	1
In 177 Images	2
In 179 Images	1
In 181 Images	2
In 185 Images	2
In 186 Images	2
In 187 Images	1
In 188 Images	2
In 189 Images	1
In 190 Images	1
In 194 Images	1
In 197 Images	2
In 198 Images	1
In 200 Images	3
In 202 Images	1
In 203 Images	2
In 204 Images	1
In 207 Images	2
In 208 Images	1
In 211 Images	1
In 212 Images	2
In 213 Images	2
In 214 Images	2
In 216 Images	2
In 222 Images	1
In 224 Images	3
In 225 Images	1
In 227 Images	1
In 228 Images	2
In 231 Images	1
In 237 Images	2
In 239 Images	2
In 245 Images	1
In 248 Images	2
In 250 Images	2
In 251 Images	1
In 252 Images	1
In 254 Images	1
In 255 Images	1
In 260 Images	1
In 263 Images	1
In 264 Images	1
In 265 Images	3
In 273 Images	1
In 274 Images	1
In 275 Images	1
In 280 Images	1
In 285 Images	1
In 286 Images	1
In 287 Images	1
In 288 Images	1
In 290 Images	2
In 291 Images	1
In 294 Images	1
In 297 Images	1

In 298 Images	1
In 300 Images	1
In 302 Images	2
In 303 Images	1
In 306 Images	2
In 314 Images	1
In 321 Images	1
In 323 Images	1
In 326 Images	1
In 327 Images	2
In 328 Images	1
In 329 Images	1
In 331 Images	1
In 337 Images	2
In 338 Images	1
In 342 Images	1
In 345 Images	1
In 351 Images	1
In 352 Images	2
In 363 Images	1
In 371 Images	1
In 377 Images	1
In 379 Images	1
In 383 Images	1
In 386 Images	1
In 388 Images	1
In 389 Images	1
In 392 Images	1
In 393 Images	1
In 394 Images	1
In 395 Images	1
In 396 Images	2
In 397 Images	1
In 406 Images	1
In 408 Images	1
In 423 Images	1
In 428 Images	1
In 430 Images	1
In 441 Images	1
In 442 Images	1
In 443 Images	1
In 445 Images	1
In 448 Images	1
In 456 Images	1
In 464 Images	2
In 473 Images	1
In 475 Images	1
In 484 Images	1
In 489 Images	1
In 490 Images	1
In 502 Images	1
In 584 Images	2

2D Keypoint Matches

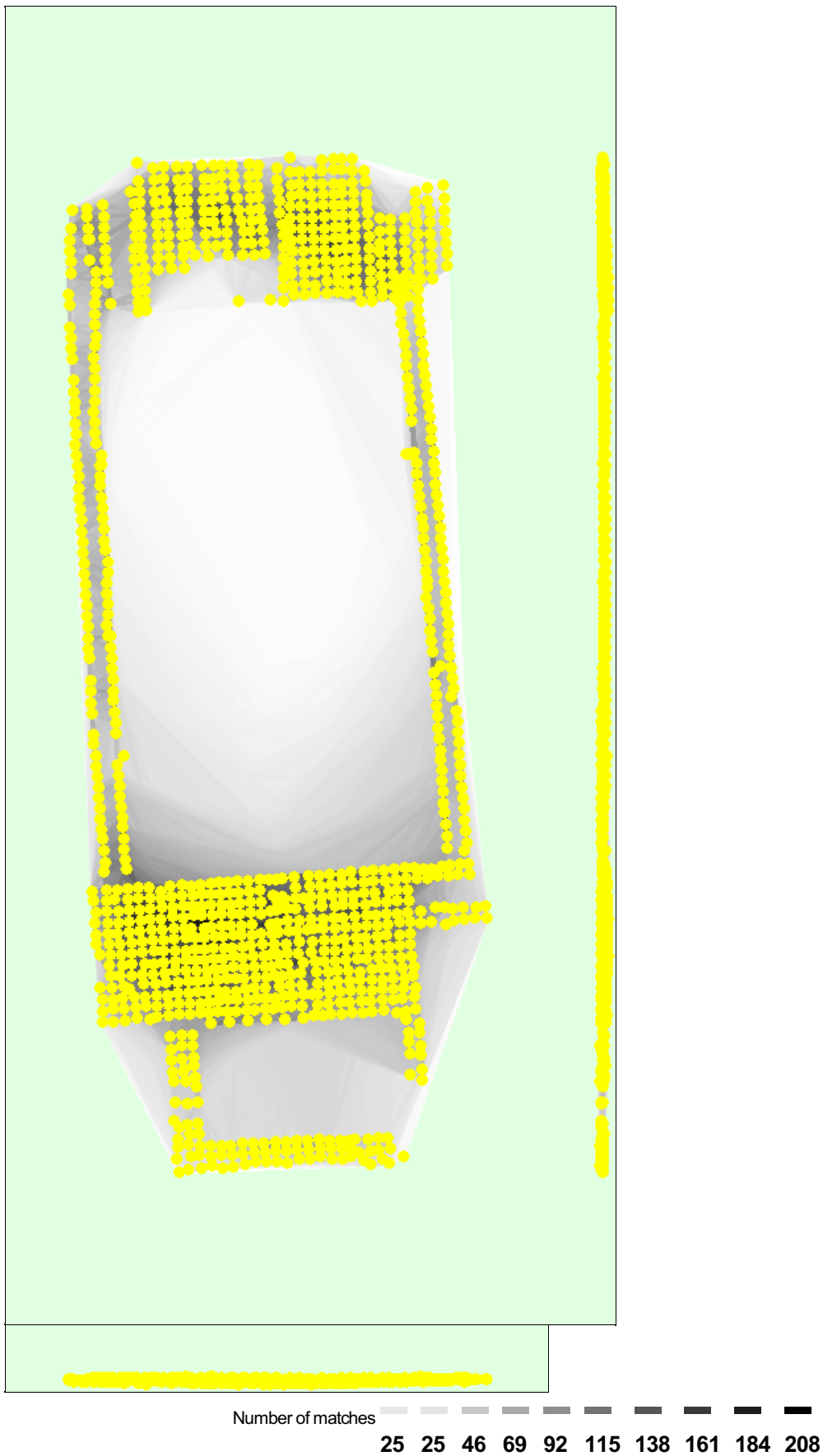| Number of matches									
25	25	46	69	92	115	138	161	184	208

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) Core(TM) i5-4670K CPU @ 3.40GHz RAM: 16GB GPU: NVIDIA GeForce GTX 770 (Driver: 27.21.14.5671)
Operating System	Windows 10 Home, 64-bit

Coordinate Systems ⓘ

Output Coordinate System	Arbitrary (m)

Processing Options ⓘ

Detected Template	🗄 3D Models
Keypoints Image Scale	Full, Image Scale: 1
Advanced: Matching Image Pairs	Free Flight or Terrestrial
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	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	03h:15m:24s
Time for Point Cloud Classification	NA
Time for 3D Textured Mesh Generation	49m:48s

Results ⓘ

Number of Processed Clusters	19
Number of Generated Tiles	1
Number of 3D Densified Points	7143462
Average Density (per m^3)	24.13