

Quality Report



Generated with Pix4Denterprise version 4.3.31

! **Important:** Click on the different icons for:

? Help to analyze the results in the Quality Report

i Additional information about the sections

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Summary



| | |
|--|---|
| Project | eldo_3k_2 |
| Processed | 2018-12-30 05:58:00 |
| Camera Model Name(s) | RedEdge_5.5_1280x960 (Blue), RedEdge_5.5_1280x960 (Green), RedEdge_5.5_1280x960 (Red), RedEdge_5.5_1280x960 (NIR), RedEdge_5.5_1280x960 (Red edge), FC350_3.6_4000x3000 (RGB) |
| Rig name(s) | «MicaSense 5 band_merge_eldo_3k_1_re_merge_eldo_3k_1_re_merge_eldo_3k_2_re» |
| Average Ground Sampling Distance (GSD) | 7.83 cm / 3.08 in |
| Area Covered | 0.000 km ² / 0.0000 ha / 0.00 sq. mi. / 0.0001 acres |
| Time for Initial Processing (without report) | 2d:02h:51m:34s |

Quality Check



| | | |
|-------------------------------------|--|----------|
| ? Images | median of 7463 keypoints per image | ⚠ |
| ? Dataset | 12583 out of 12608 images calibrated (99%), all images enabled | ✓ |
| ? Camera Optimization | 1.24% relative difference between initial and optimized internal camera parameters | ✓ |
| ? Matching | median of 2022.6 matches per calibrated image | ✓ |
| ? Georeferencing | yes, no 3D GCP | ⚠ |

Preview



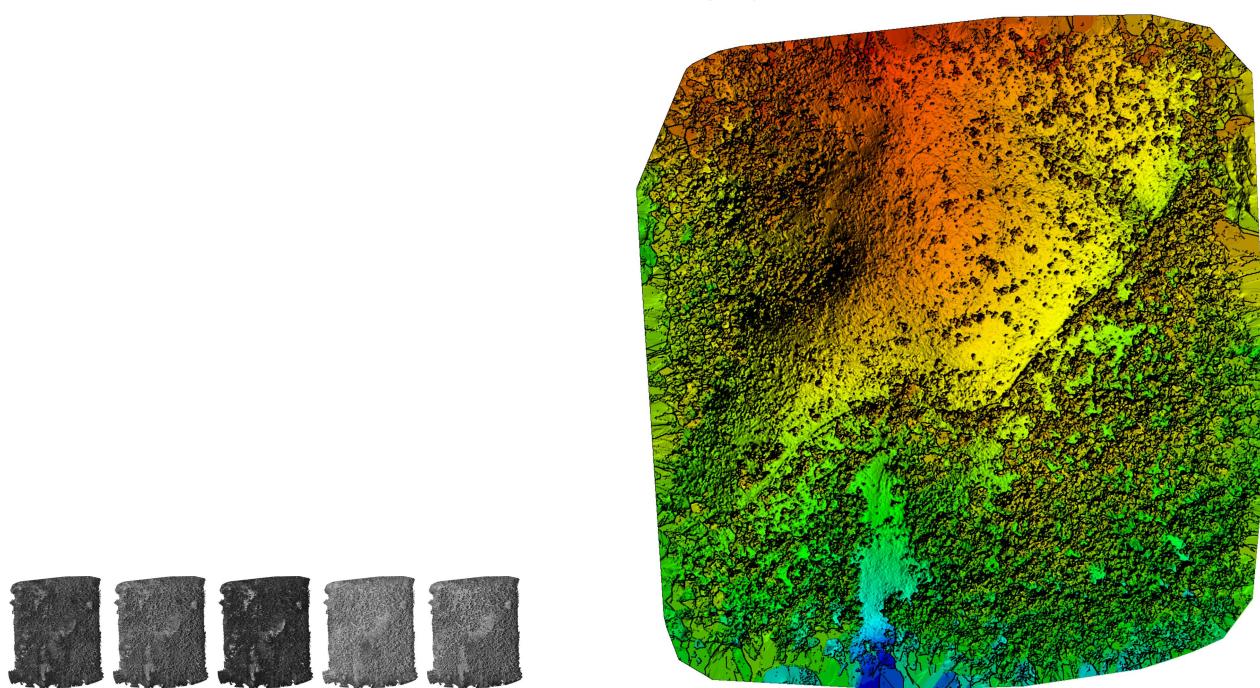


Figure 1: Orthomosaic and the corresponding sparse Digital Surface Model (DSM) before densification.

Calibration Details



| | |
|-----------------------------|--------------------|
| Number of Calibrated Images | 12583 out of 12608 |
| Number of Geolocated Images | 12608 out of 12608 |

Initial Image Positions

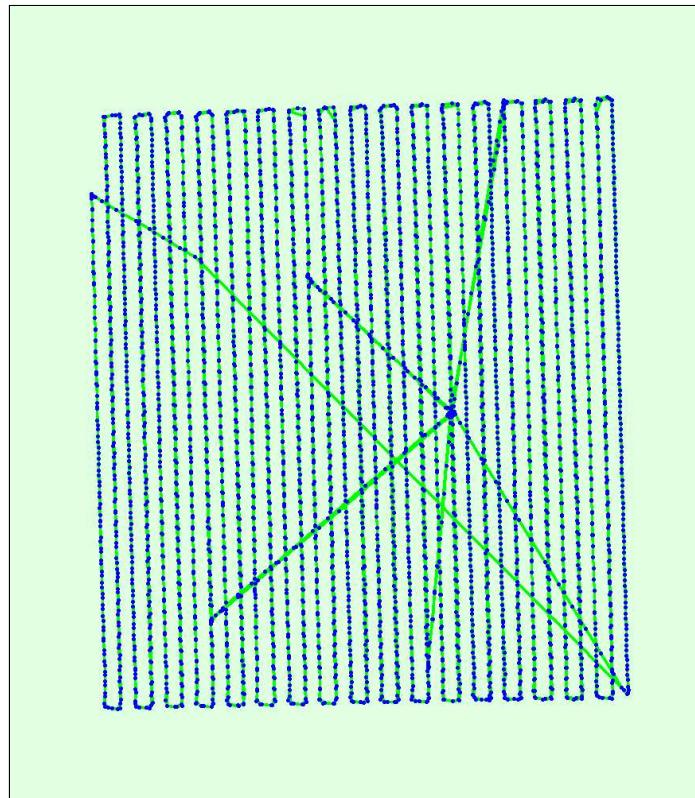
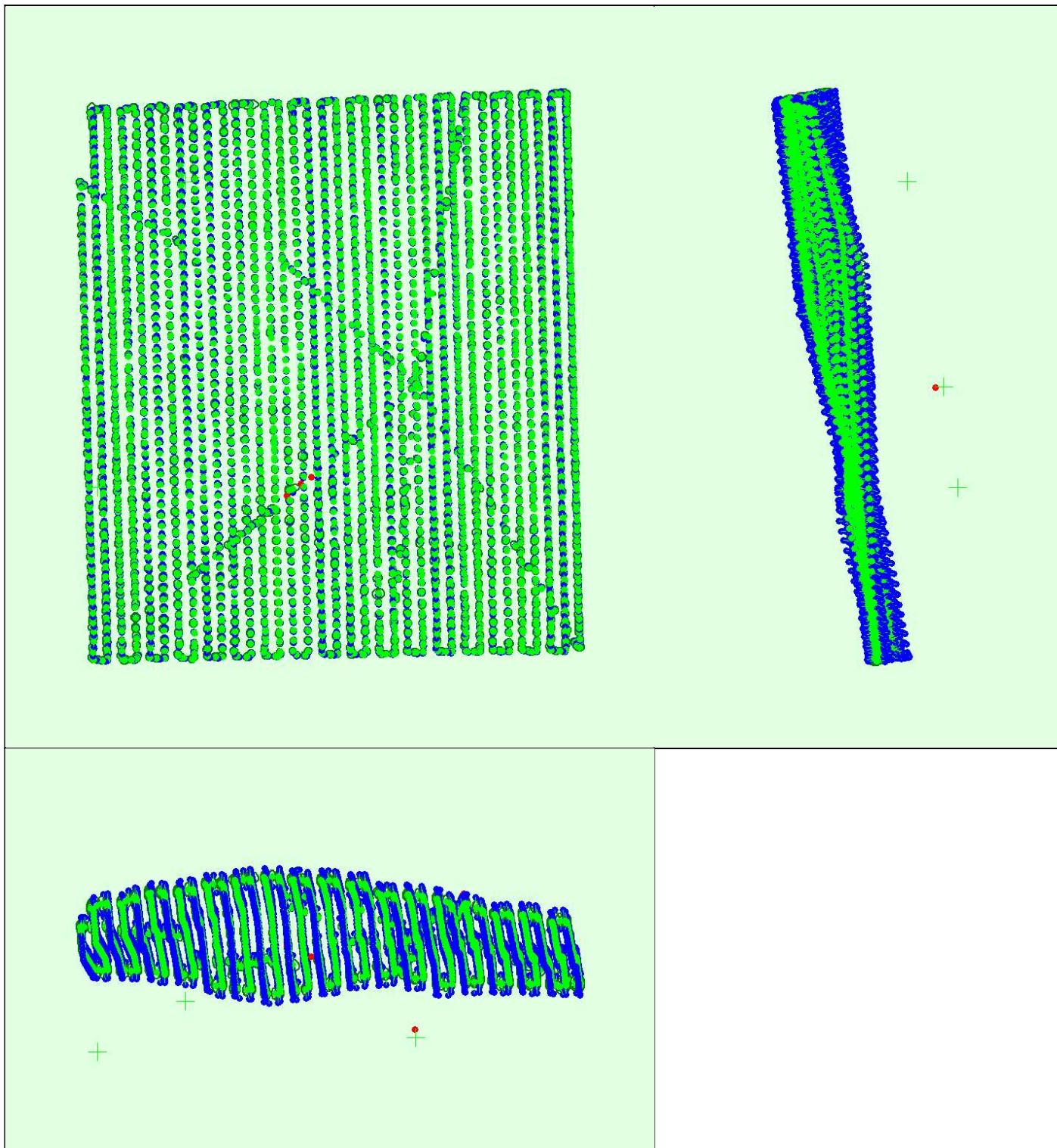


Figure 2: Top view of the initial image position. The green line follows the position of the images in time starting from the large blue dot.

Computed Image/GCPs/Manual Tie Points Positions



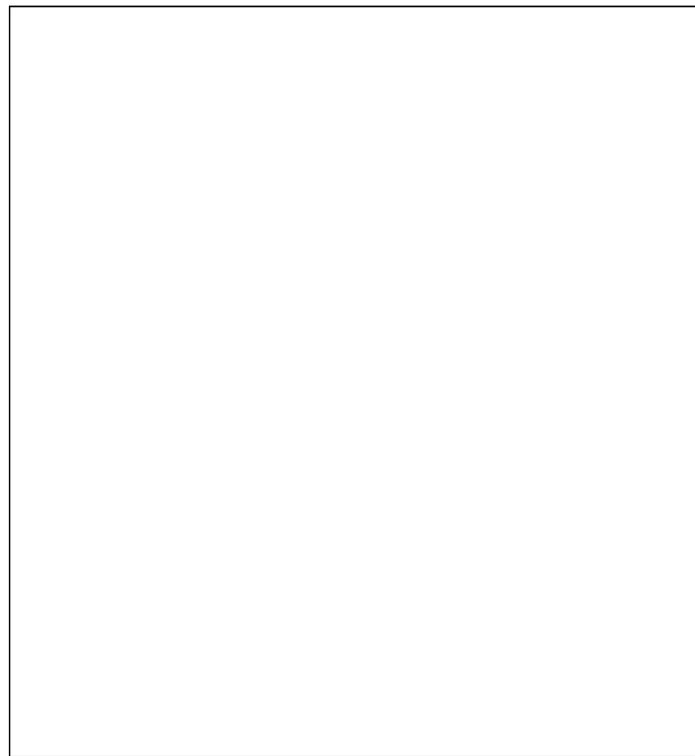


Uncertainty ellipses 50x magnified

Figure 3: Offset between initial (blue dots) and computed (green dots) image positions as well as the offset between the GCPs initial positions (blue crosses) and their computed positions (green crosses) in the top-view (XY plane), front-view (XZ plane), and side-view (YZ plane). Red dots indicate disabled or uncalibrated images. Dark green ellipses indicate the absolute position uncertainty of the bundle block adjustment result.

Absolute camera position and orientation uncertainties

| | X [m] | Y [m] | Z [m] | Omega [degree] | Phi [degree] | Kappa [degree] |
|-------|-------|-------|-------|----------------|--------------|----------------|
| Mean | 0.070 | 0.073 | 0.124 | 0.029 | 0.028 | 0.012 |
| Sigma | 0.014 | 0.016 | 0.023 | 0.008 | 0.006 | 0.003 |

 Overlap 

Number of overlapping images: 1 2 3 4 5+

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 | 12092376 |
| Number of 3D Points for Bundle Block Adjustment | 3760004 |
| Mean Reprojection Error [pixels] | 0.168 |

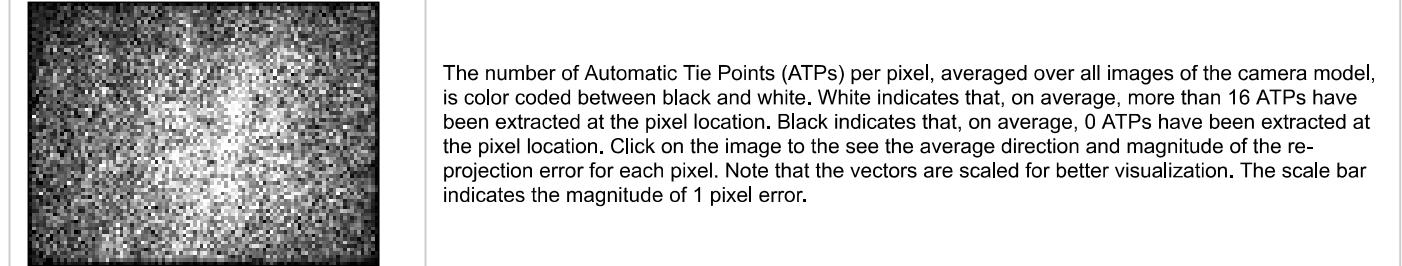
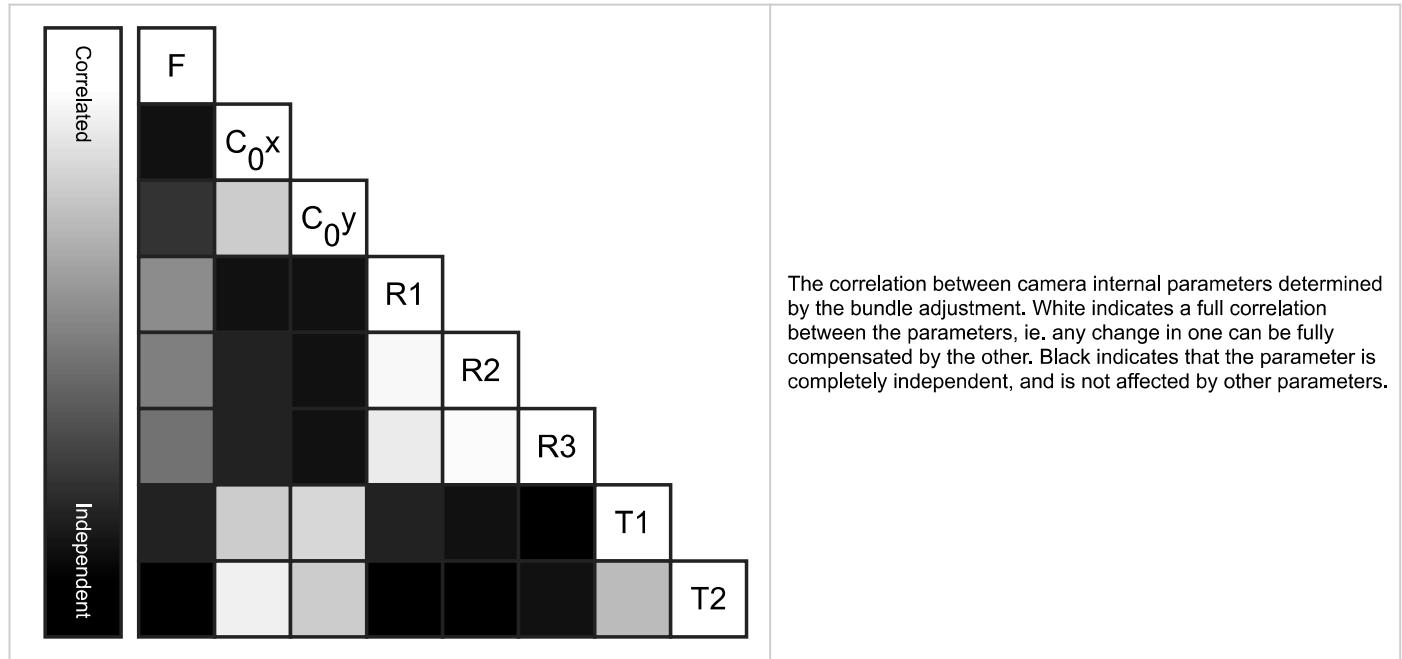
Internal Camera Parameters

RedEdge_5.5_1280x960 (Blue). Sensor Dimensions: 4.800 [mm] x 3.600 [mm]



EXIF ID: RedEdge_5.5_1280x960

| | Focal Length | Principal Point x | Principal Point y | R1 | R2 | R3 | T1 | T2 |
|-----------------------|--------------------------------|-------------------------------|-------------------------------|--------|-------|--------|-------|--------|
| Initial Values | 1466.667 [pixel] 5.500 [mm] | 657.605 [pixel] 2.466 [mm] | 495.123 [pixel] 1.857 [mm] | -0.097 | 0.149 | -0.017 | 0.000 | 0.000 |
| Optimized Values | 1445.077 [pixel] 5.419 [mm] | 654.272 [pixel] 2.454 [mm] | 494.590 [pixel] 1.855 [mm] | -0.099 | 0.213 | -0.185 | 0.000 | -0.001 |
| Uncertainties (Sigma) | 0.172 [pixel] 0.001 [mm] | 0.286 [pixel] 0.001 [mm] | 0.216 [pixel] 0.001 [mm] | 0.002 | 0.014 | 0.032 | 0.000 | 0.000 |



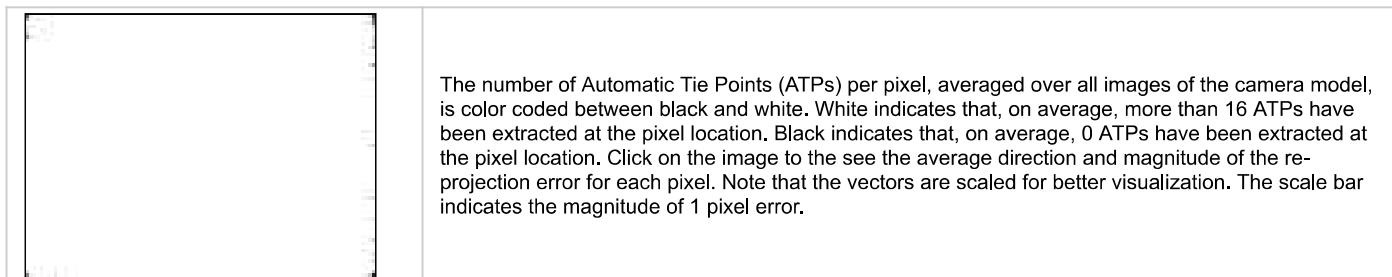
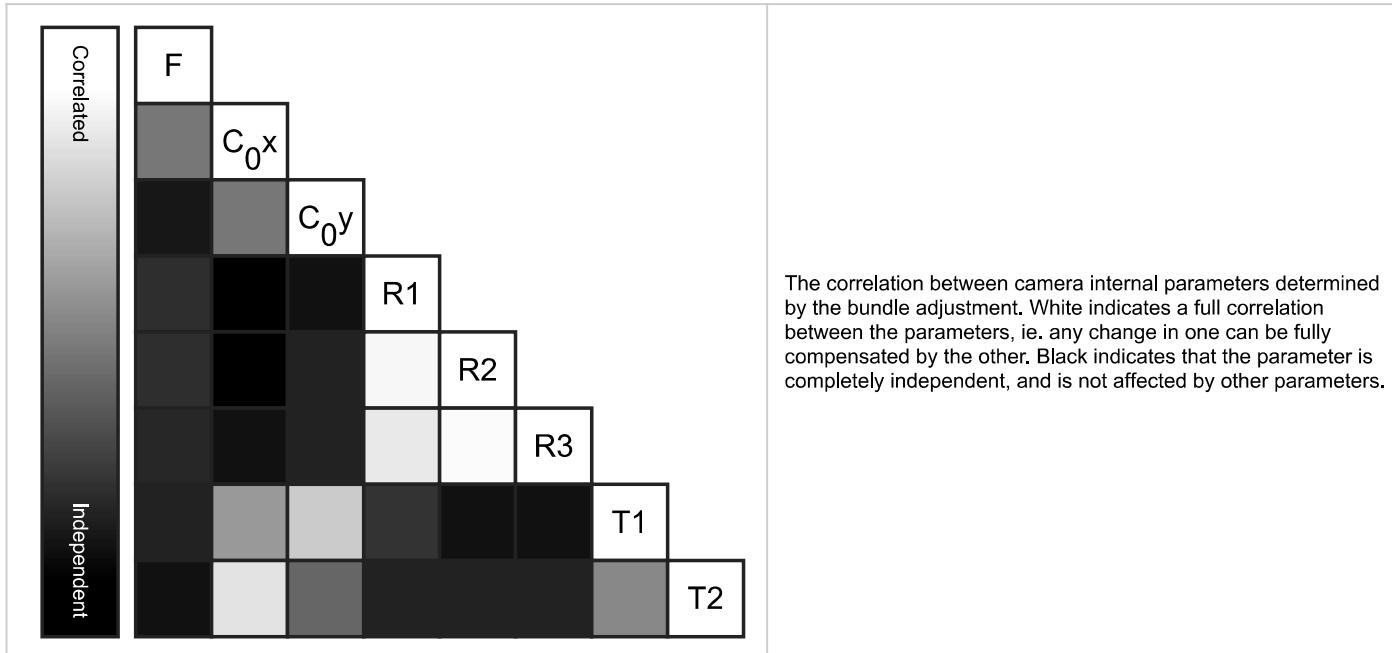
Internal Camera Parameters

RedEdge_5.5_1280x960 (Green). Sensor Dimensions: 4.800 [mm] x 3.600 [mm]



EXIF ID: RedEdge_5.5_1280x960

| | Focal Length | Principal Point x | Principal Point y | R1 | R2 | R3 | T1 | T2 |
|-----------------------|--------------------------------|-------------------------------|-------------------------------|--------|-------|--------|-------|-------|
| Initial Values | 1466.667 [pixel] 5.500 [mm] | 657.835 [pixel] 2.467 [mm] | 481.299 [pixel] 1.805 [mm] | -0.099 | 0.143 | -0.021 | 0.000 | 0.001 |
| Optimized Values | 1442.025 [pixel] 5.408 [mm] | 655.659 [pixel] 2.459 [mm] | 481.392 [pixel] 1.805 [mm] | -0.100 | 0.186 | -0.134 | 0.000 | 0.000 |
| Uncertainties (Sigma) | 0.141 [pixel] 0.001 [mm] | 0.078 [pixel] 0.000 [mm] | 0.062 [pixel] 0.000 [mm] | 0.000 | 0.004 | 0.008 | 0.000 | 0.000 |



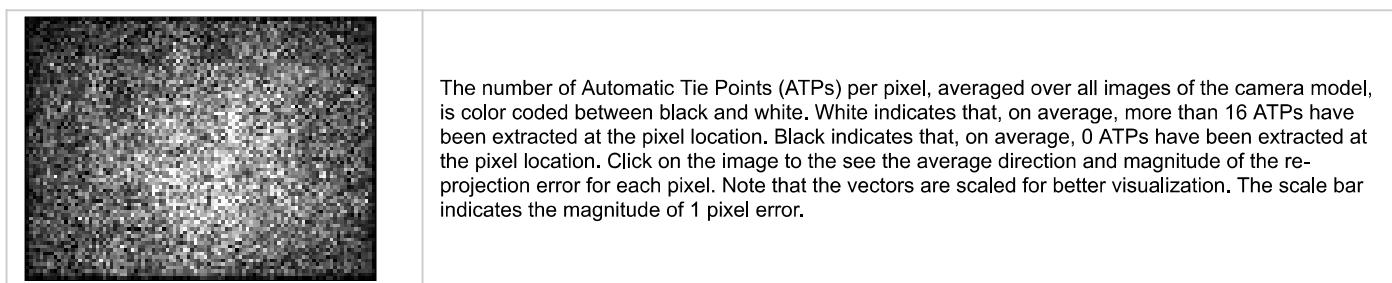
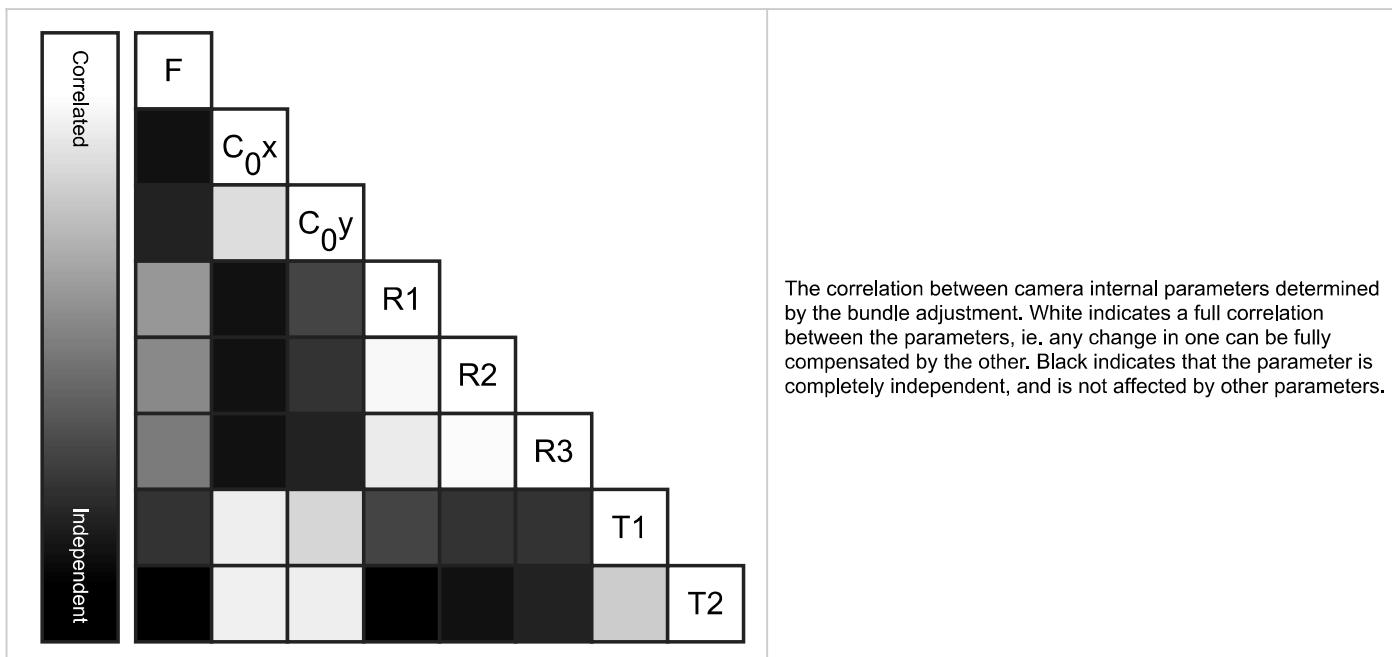
ⓘ Internal Camera Parameters

📄 RedEdge_5.5_1280x960 (Red). Sensor Dimensions: 4.800 [mm] x 3.600 [mm]



EXIF ID: RedEdge_5.5_1280x960

| | Focal Length | Principal Point x | Principal Point y | R1 | R2 | R3 | T1 | T2 |
|-----------------------|--------------------------------|-------------------------------|-------------------------------|--------|-------|--------|--------|--------|
| Initial Values | 1466.667 [pixel] 5.500 [mm] | 657.200 [pixel] 2.465 [mm] | 493.864 [pixel] 1.852 [mm] | -0.100 | 0.131 | -0.003 | -0.000 | 0.000 |
| Optimized Values | 1447.090 [pixel] 5.427 [mm] | 654.044 [pixel] 2.453 [mm] | 493.162 [pixel] 1.849 [mm] | -0.102 | 0.182 | -0.119 | -0.000 | -0.000 |
| Uncertainties (Sigma) | 0.181 [pixel] 0.001 [mm] | 0.323 [pixel] 0.001 [mm] | 0.243 [pixel] 0.001 [mm] | 0.002 | 0.016 | 0.036 | 0.000 | 0.000 |



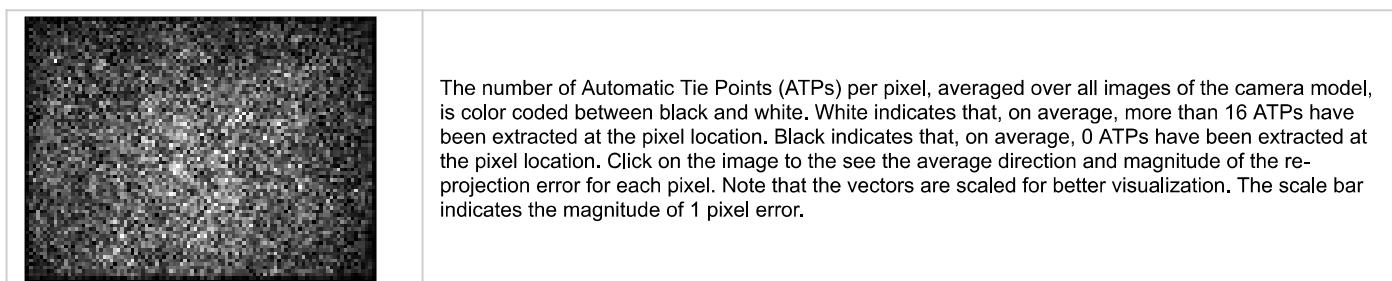
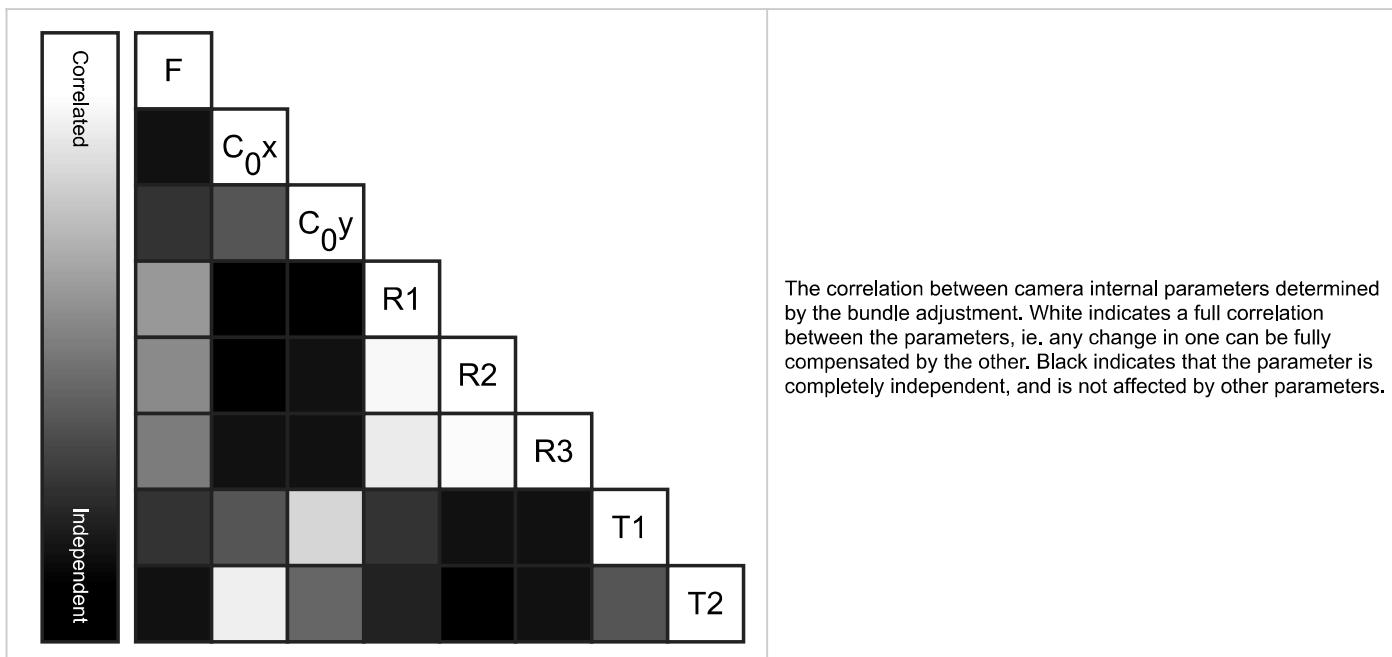
Internal Camera Parameters

RedEdge_5.5_1280x960 (NIR). Sensor Dimensions: 4.800 [mm] x 3.600 [mm]



EXIF ID: RedEdge_5.5_1280x960

| | Focal Length | Principal Point x | Principal Point y | R1 | R2 | R3 | T1 | T2 |
|-----------------------|--------------------------------|-------------------------------|-------------------------------|--------|-------|--------|-------|--------|
| Initial Values | 1466.667 [pixel] 5.500 [mm] | 666.605 [pixel] 2.500 [mm] | 482.221 [pixel] 1.808 [mm] | -0.105 | 0.153 | -0.045 | 0.000 | 0.000 |
| Optimized Values | 1447.859 [pixel] 5.429 [mm] | 661.783 [pixel] 2.482 [mm] | 481.949 [pixel] 1.807 [mm] | -0.108 | 0.217 | -0.199 | 0.000 | -0.001 |
| Uncertainties (Sigma) | 0.181 [pixel] 0.001 [mm] | 0.320 [pixel] 0.001 [mm] | 0.241 [pixel] 0.001 [mm] | 0.002 | 0.015 | 0.034 | 0.000 | 0.000 |



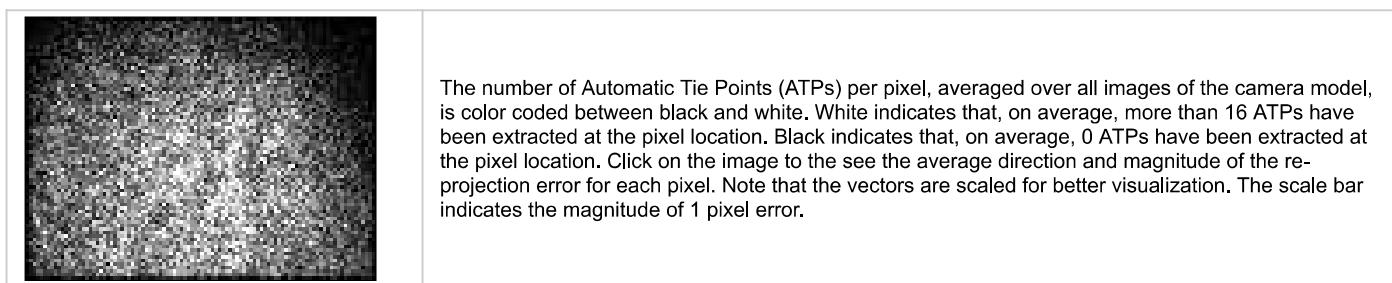
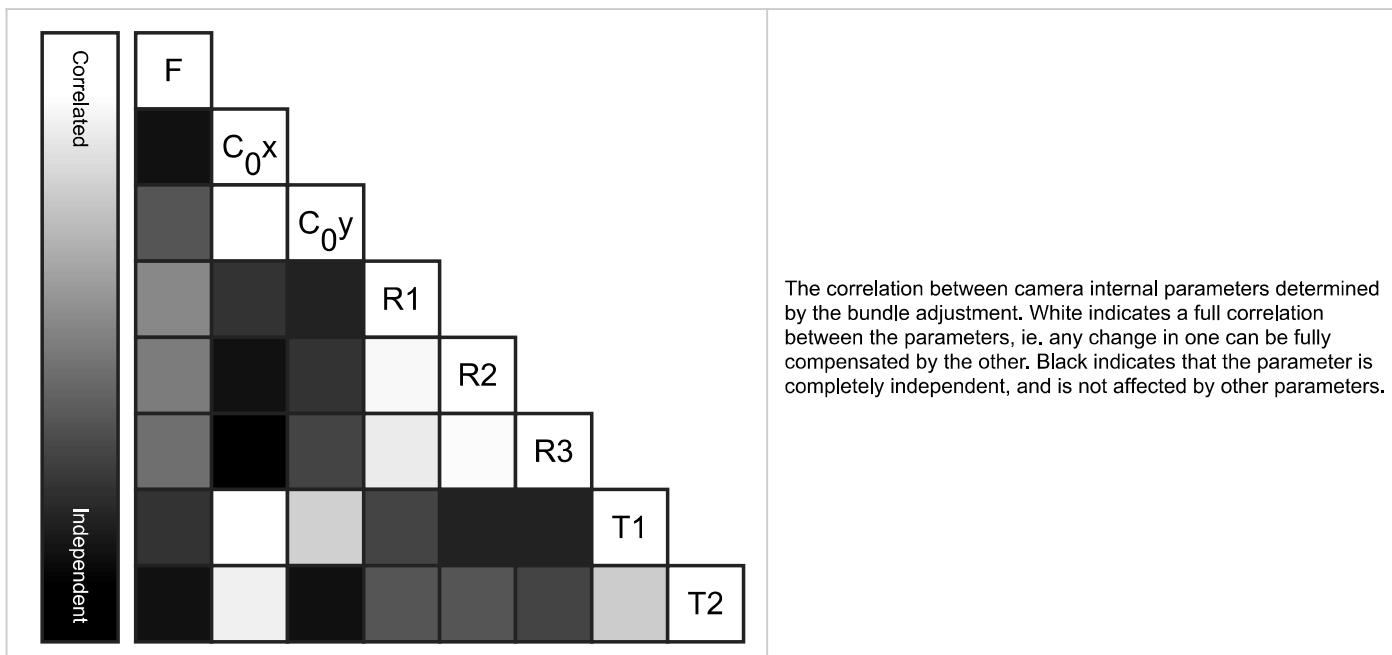
Internal Camera Parameters

RedEdge_5.5_1280x960 (Red edge). Sensor Dimensions: 4.800 [mm] x 3.600 [mm]



EXIF ID: RedEdge_5.5_1280x960

| | Focal Length | Principal Point x | Principal Point y | R1 | R2 | R3 | T1 | T2 |
|-----------------------|--------------------------------|-------------------------------|-------------------------------|--------|-------|--------|--------|--------|
| Initial Values | 1466.667 [pixel] 5.500 [mm] | 661.440 [pixel] 2.480 [mm] | 495.379 [pixel] 1.858 [mm] | -0.103 | 0.155 | -0.049 | 0.000 | 0.001 |
| Optimized Values | 1445.384 [pixel] 5.420 [mm] | 653.863 [pixel] 2.452 [mm] | 492.250 [pixel] 1.846 [mm] | -0.105 | 0.211 | -0.200 | -0.000 | -0.001 |
| Uncertainties (Sigma) | 0.170 [pixel] 0.001 [mm] | 0.307 [pixel] 0.001 [mm] | 0.227 [pixel] 0.001 [mm] | 0.002 | 0.015 | 0.035 | 0.000 | 0.000 |

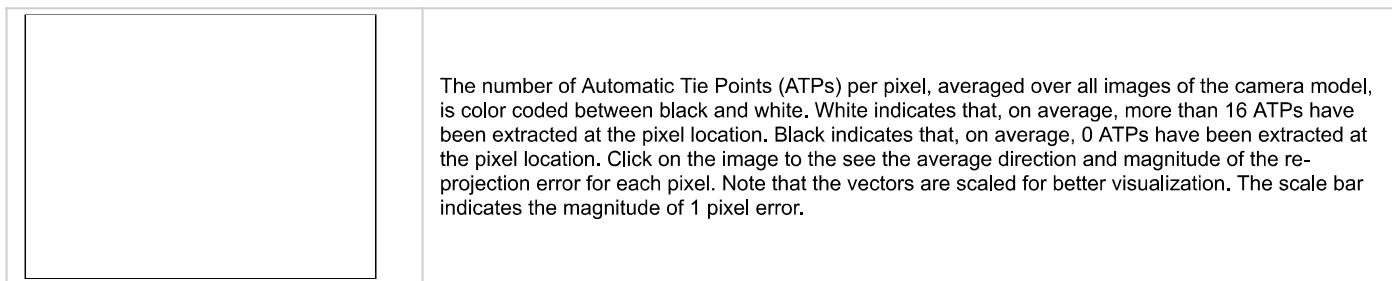
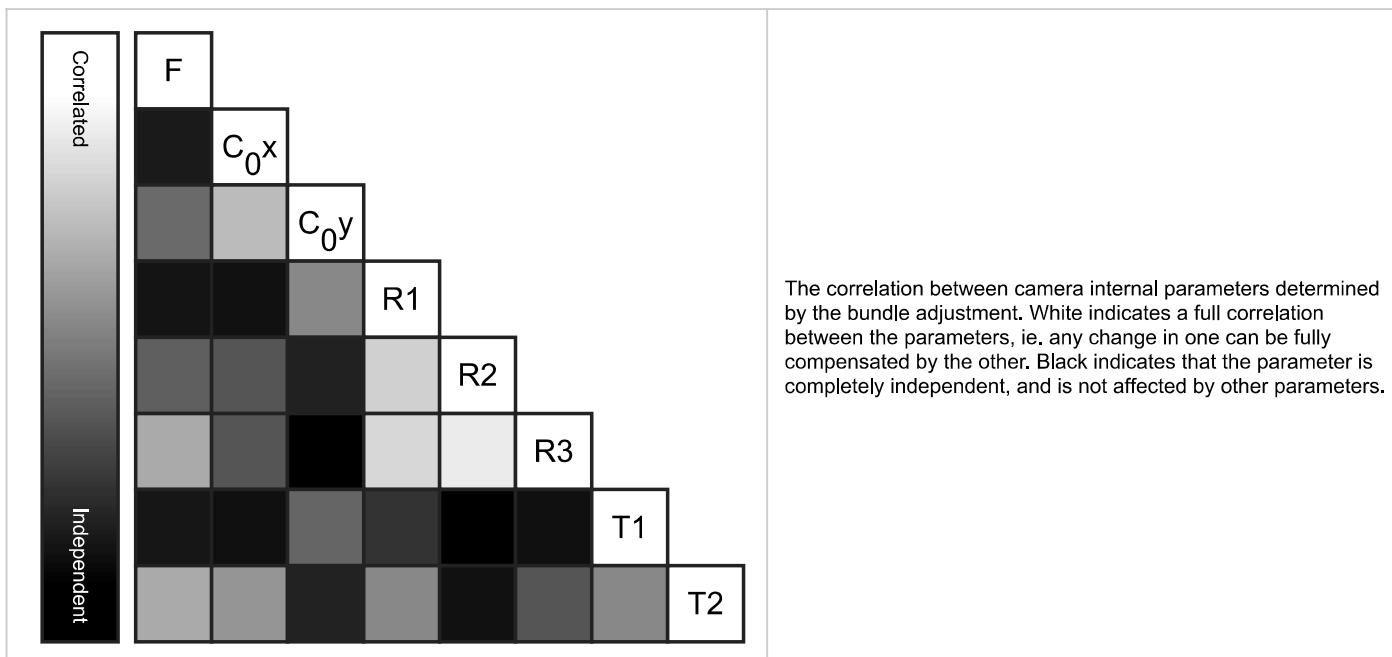


Internal Camera Parameters

FC350_3.6_4000x3000 (RGB). Sensor Dimensions: 6.317 [mm] x 4.738 [mm]

EXIF ID: FC350_3.6_4000x3000

| | Focal Length | Principal Point x | Principal Point y | R1 | R2 | R3 | T1 | T2 |
|-----------------------|--------------------------------|--------------------------------|--------------------------------|--------|-------|--------|--------|-------|
| Initial Values | 2285.722 [pixel] 3.610 [mm] | 2000.006 [pixel] 3.159 [mm] | 1500.003 [pixel] 2.369 [mm] | -0.130 | 0.106 | -0.016 | -0.000 | 0.000 |
| Optimized Values | 2291.076 [pixel] 3.618 [mm] | 1986.151 [pixel] 3.137 [mm] | 1503.576 [pixel] 2.375 [mm] | -0.127 | 0.108 | -0.015 | 0.001 | 0.000 |
| Uncertainties (Sigma) | 0.183 [pixel] 0.000 [mm] | 0.022 [pixel] 0.000 [mm] | 0.021 [pixel] 0.000 [mm] | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |



Camera Rig «MicaSense 5 band_merge_eldo_3k_1_re_merge_eldo_3k_1_re_merge_eldo_3k_2_re» Relatives. ? i

Images: 10650

| | Transl X [m] | Transl Y [m] | Transl Z [m] | Rot X [degree] | Rot Y [degree] | Rot Z [degree] |
|---------------------------------|------------------|--------------|--------------|----------------|----------------|----------------|
| RedEdge_5.5_1280x960 (Green) | Reference Camera | | | | | |
| RedEdge_5.5_1280x960 (Blue) | | | | | | |
| Initial Values | 0.030 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Optimized values | 0.030 | 0.000 | 0.000 | -0.088 | 0.128 | -0.371 |
| Uncertainties (sigma) | | | | 0.009 | 0.012 | 0.001 |
| RedEdge_5.5_1280x960 (Red) | | | | | | |
| Initial Values | 0.000 | 0.022 | 0.000 | 0.000 | 0.000 | 0.000 |
| Optimized values | 0.000 | 0.022 | 0.000 | 0.066 | 0.103 | -0.061 |
| Uncertainties (sigma) | | | | 0.010 | 0.013 | 0.001 |
| RedEdge_5.5_1280x960 (NIR) | | | | | | |
| Initial Values | 0.030 | 0.022 | 0.000 | 0.000 | 0.000 | 0.000 |
| Optimized values | 0.030 | 0.022 | 0.000 | -0.134 | -0.144 | 0.122 |
| Uncertainties (sigma) | | | | 0.010 | 0.013 | 0.001 |
| RedEdge_5.5_1280x960 (Red edge) | | | | | | |
| Initial Values | 0.015 | 0.011 | 0.000 | 0.000 | 0.000 | 0.000 |
| Optimized values | 0.015 | 0.011 | 0.000 | 0.008 | -0.709 | -0.305 |
| Uncertainties (sigma) | | | | 0.009 | 0.013 | 0.001 |

2D Keypoints Table ? i

| | Number of 2D Keypoints per Image | Number of Matched 2D Keypoints per Image |
|--------|----------------------------------|--|
| Median | 7463 | 2023 |

| | | |
|------|-------|------|
| Min | 5341 | 8 |
| Max | 79068 | 9729 |
| Mean | 27516 | 2448 |

2D Keypoints Table for Camera RedEdge_5.5_1280x960 (Blue)

| | Number of 2D Keypoints per Image | Number of Matched 2D Keypoints per Image |
|--------|----------------------------------|--|
| Median | 6244 | 372 |
| Min | 5452 | 8 |
| Max | 7927 | 1528 |
| Mean | 6287 | 429 |

2D Keypoints Table for Camera RedEdge_5.5_1280x960 (Green)

| | Number of 2D Keypoints per Image | Number of Matched 2D Keypoints per Image |
|--------|----------------------------------|--|
| Median | 6879 | 861 |
| Min | 5341 | 65 |
| Max | 9144 | 3763 |
| Mean | 6876 | 928 |

2D Keypoints Table for Camera RedEdge_5.5_1280x960 (Red)

| | Number of 2D Keypoints per Image | Number of Matched 2D Keypoints per Image |
|--------|----------------------------------|--|
| Median | 6412 | 343 |
| Min | 5691 | 9 |
| Max | 7998 | 1600 |
| Mean | 6459 | 400 |

2D Keypoints Table for Camera RedEdge_5.5_1280x960 (NIR)

| | Number of 2D Keypoints per Image | Number of Matched 2D Keypoints per Image |
|--------|----------------------------------|--|
| Median | 7688 | 358 |
| Min | 6525 | 19 |
| Max | 9238 | 1477 |
| Mean | 7677 | 384 |

2D Keypoints Table for Camera RedEdge_5.5_1280x960 (Red edge)

| | Number of 2D Keypoints per Image | Number of Matched 2D Keypoints per Image |
|--------|----------------------------------|--|
| Median | 7548 | 322 |
| Min | 6198 | 24 |
| Max | 9258 | 1564 |
| Mean | 7526 | 352 |

2D Keypoints Table for Camera FC350_3.6_4000x3000 (RGB)

| | Number of 2D Keypoints per Image | Number of Matched 2D Keypoints per Image |
|--------|----------------------------------|--|
| Median | 59029 | 5011 |
| Min | 48829 | 1203 |
| Max | 79068 | 9729 |
| Mean | 58891 | 4998 |

Median / 75% / Maximal Number of Matches Between Camera Models

| | RedEdge_5.5_1280x960 (Blue) | RedEdge_5.5_1280x960 (Green) | RedEdge_5.5_1280x960 (Red) | RedEdge_5.5_1280x960 (NIR) | RedEdge_5.5_1280x960 (Red edge) | FC350_3.6_4000x3000 (RGB) |
|------------------------------------|--------------------------------|---------------------------------|-------------------------------|-------------------------------|------------------------------------|------------------------------|
| RedEdge_5.5_1280x960 (Blue) | 10 / 43 / 1167 | 7 / 25 / 524 | 15 / 56 / 597 | 8 / 21 / 206 | 9 / 29 / 305 | 3 / 8 / 108 |
| RedEdge_5.5_1280x960 (Green) | | 11 / 45 / 3327 | 6 / 20 / 428 | 5 / 17 / 364 | 7 / 25 / 694 | 4 / 13 / 753 |
| RedEdge_5.5_1280x960 (Red) | | | 9 / 44 / 1265 | 7 / 18 / 204 | 8 / 23 / 298 | 3 / 7 / 86 |
| RedEdge_5.5_1280x960 (NIR) | | | | 8 / 42 / 1302 | 11 / 35 / 366 | 2 / 7 / 93 |
| RedEdge_5.5_1280x960 (Red edge) | | | | | 8 / 38 / 1251 | 3 / 8 / 133 |
| FC350_3.6_4000x3000 (RGB) | | | | | | 12 / 59 / 5394 |

3D Points from 2D Keypoint Matches



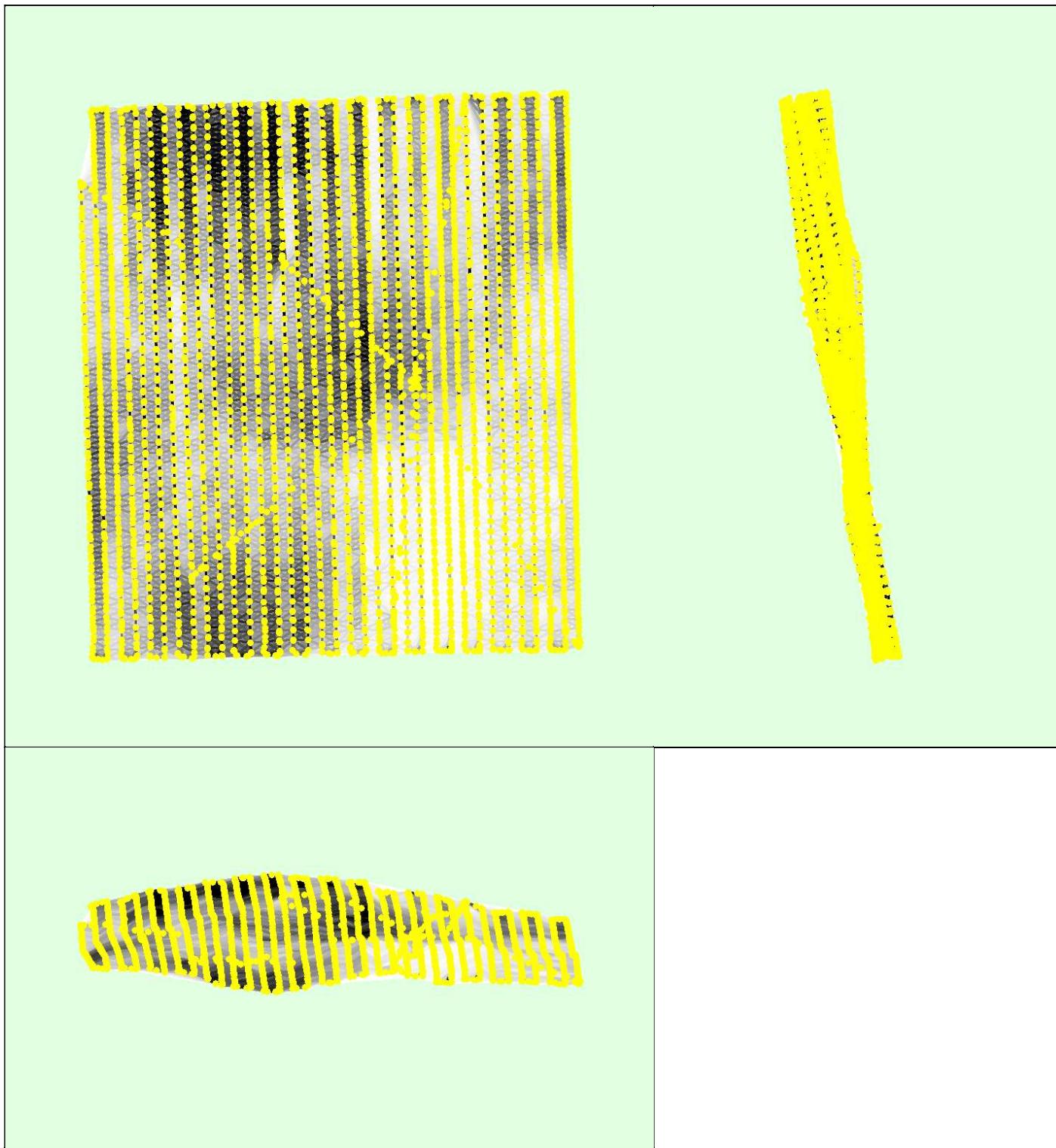
| | Number of 3D Points Observed |
|--------------|------------------------------|
| In 2 Images | 2285703 |
| In 3 Images | 659746 |
| In 4 Images | 296985 |
| In 5 Images | 161358 |
| In 6 Images | 97776 |
| In 7 Images | 63642 |
| In 8 Images | 43722 |
| In 9 Images | 31409 |
| In 10 Images | 23404 |
| In 11 Images | 17613 |
| In 12 Images | 13779 |
| In 13 Images | 10861 |
| In 14 Images | 8565 |
| In 15 Images | 6816 |
| In 16 Images | 5543 |
| In 17 Images | 4586 |
| In 18 Images | 3848 |
| In 19 Images | 3198 |
| In 20 Images | 2558 |
| In 21 Images | 2216 |
| In 22 Images | 1923 |
| In 23 Images | 1568 |
| In 24 Images | 1388 |
| In 25 Images | 1208 |
| In 26 Images | 1093 |
| In 27 Images | 904 |
| In 28 Images | 788 |
| In 29 Images | 739 |
| In 30 Images | 662 |
| In 31 Images | 600 |
| In 32 Images | 540 |
| In 33 Images | 492 |
| In 34 Images | 427 |
| In 35 Images | 368 |
| In 36 Images | 322 |
| In 37 Images | 277 |
| In 38 Images | 258 |

| | |
|--------------|-----|
| In 39 Images | 290 |
| In 40 Images | 242 |
| In 41 Images | 191 |
| In 42 Images | 181 |
| In 43 Images | 175 |
| In 44 Images | 156 |
| In 45 Images | 141 |
| In 46 Images | 130 |
| In 47 Images | 96 |
| In 48 Images | 115 |
| In 49 Images | 94 |
| In 50 Images | 99 |
| In 51 Images | 99 |
| In 52 Images | 82 |
| In 53 Images | 75 |
| In 54 Images | 55 |
| In 55 Images | 66 |
| In 56 Images | 50 |
| In 57 Images | 51 |
| In 58 Images | 44 |
| In 59 Images | 33 |
| In 60 Images | 55 |
| In 61 Images | 37 |
| In 62 Images | 34 |
| In 63 Images | 26 |
| In 64 Images | 33 |
| In 65 Images | 22 |
| In 66 Images | 33 |
| In 67 Images | 21 |
| In 68 Images | 18 |
| In 69 Images | 16 |
| In 70 Images | 17 |
| In 71 Images | 16 |
| In 72 Images | 17 |
| In 73 Images | 26 |
| In 74 Images | 21 |
| In 75 Images | 19 |
| In 76 Images | 11 |
| In 77 Images | 7 |
| In 78 Images | 7 |
| In 79 Images | 16 |
| In 80 Images | 12 |
| In 81 Images | 9 |
| In 82 Images | 18 |
| In 83 Images | 4 |
| In 84 Images | 9 |
| In 85 Images | 5 |
| In 86 Images | 9 |
| In 87 Images | 11 |
| In 88 Images | 10 |
| In 89 Images | 5 |
| In 90 Images | 8 |
| In 91 Images | 8 |

| | |
|---------------|---|
| In 92 Images | 6 |
| In 93 Images | 6 |
| In 94 Images | 4 |
| In 95 Images | 2 |
| In 96 Images | 9 |
| In 97 Images | 8 |
| In 98 Images | 7 |
| In 99 Images | 3 |
| In 100 Images | 3 |
| In 102 Images | 1 |
| In 103 Images | 6 |
| In 104 Images | 2 |
| In 105 Images | 3 |
| In 106 Images | 3 |
| In 107 Images | 2 |
| In 108 Images | 2 |
| In 109 Images | 2 |
| In 110 Images | 3 |
| In 112 Images | 3 |
| In 113 Images | 1 |
| In 114 Images | 1 |
| In 116 Images | 1 |
| In 118 Images | 1 |
| In 119 Images | 2 |
| In 124 Images | 1 |
| In 125 Images | 2 |
| In 126 Images | 1 |
| In 127 Images | 1 |
| In 128 Images | 1 |
| In 133 Images | 1 |
| In 137 Images | 1 |
| In 142 Images | 1 |
| In 143 Images | 1 |
| In 150 Images | 1 |
| In 158 Images | 1 |
| In 165 Images | 1 |

 2D Keypoint Matches





Number of matches

25 222 444 666 888 1111 1333 1555 1777 2000

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.

ⓘ Manual Tie Points



| MTP Name | Projection Error [pixel] | Verified/Marked |
|----------|--------------------------|-----------------|
| mtp1 | 0,943 | 41 / 41 |
| mtp2 | 0,797 | 30 / 30 |

Projection errors for manual tie points. The last column counts the number of images where the manual tie point has been automatically verified vs. manually marked.

Geolocation Details

Absolute Geolocation Variance

| Min Error [m] | Max Error [m] | Geolocation Error X [%] | Geolocation Error Y [%] | Geolocation Error Z [%] |
|----------------------|---------------|-------------------------|-------------------------|-------------------------|
| - | -15.00 | 0.00 | 0.00 | 0.00 |
| -15.00 | -12.00 | 0.00 | 0.00 | 5.68 |
| -12.00 | -9.00 | 0.00 | 0.00 | 9.75 |
| -9.00 | -6.00 | 0.00 | 0.00 | 0.13 |
| -6.00 | -3.00 | 0.00 | 1.84 | 0.00 |
| -3.00 | 0.00 | 42.46 | 55.96 | 0.00 |
| 0.00 | 3.00 | 57.43 | 39.22 | 0.00 |
| 3.00 | 6.00 | 0.10 | 2.96 | 0.00 |
| 6.00 | 9.00 | 0.00 | 0.03 | 0.48 |
| 9.00 | 12.00 | 0.00 | 0.00 | 80.94 |
| 12.00 | 15.00 | 0.00 | 0.00 | 3.02 |
| 15.00 | - | 0.00 | 0.00 | 0.00 |
| Mean [m] | | 0.137236 | -0.235310 | 7.224444 |
| Sigma [m] | | 0.819696 | 1.443283 | 8.117589 |
| RMS Error [m] | | 0.831104 | 1.462340 | 10.866823 |

Min Error and Max Error represent geolocation error intervals between -1.5 and 1.5 times the maximum accuracy of all the images. Columns X, Y, Z show the percentage of images with geolocation errors within the predefined error intervals. The geolocation error is the difference between the initial and computed image positions. Note that the image geolocation errors do not correspond to the accuracy of the observed 3D points.

Relative Geolocation Variance

| Relative Geolocation Error | Images X [%] | Images Y [%] | Images Z [%] |
|--|--------------|--------------|--------------|
| [-1.00, 1.00] | 99.99 | 99.34 | 10.51 |
| [-2.00, 2.00] | 100.00 | 100.00 | 100.00 |
| [-3.00, 3.00] | 100.00 | 100.00 | 100.00 |
| Mean of Geolocation Accuracy [m] | 5.000000 | 5.000000 | 10.000000 |
| Sigma of Geolocation Accuracy [m] | 0.000000 | 0.000000 | 0.000000 |

Images X, Y, Z represent the percentage of images with a relative geolocation error in X, Y, Z.

| | |
|------------------------------------|--------------|
| Geolocation Orientational Variance | RMS [degree] |
| Omega | 0.824 |
| Phi | 0.780 |
| Kappa | 4.774 |

Geolocation RMS error of the orientation angles given by the difference between the initial and computed image orientation angles.

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 4.15.0-1029-aws x86_64 |

Coordinate Systems

| | |
|--------------------------|--------------------------------------|
| Image Coordinate System | WGS 84 (EGM 96 Geoid) |
| Output Coordinate System | WGS 84 / UTM zone 10N (EGM 96 Geoid) |

Processing Options

| | |
|---|---|
| Detected Template | No Template Available |
| Keypoints Image Scale | Custom, 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, no |
| Rig «MicaSense 5 band_merge_eldo_3k_1_re_merge_eldo_3k_1_re_merge_eldo_3k_2_re» processing | optimize relative rotation using a subset of secondary cameras |

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 | Blue, Green, Red, NIR, Red edge, group1 |
| Advanced: Use Processing Area | yes |
| Advanced: Use Annotations | yes |
| Time for Point Cloud Densification | 03h:10m:50s |
| Time for Point Cloud Classification | 08m:24s |
| Time for 3D Textured Mesh Generation | 01h:02m:52s |

Results

| | |
|---------------------------------------|----------|
| Number of Processed Clusters | 2 |
| Number of Generated Tiles | 5 |
| Number of 3D Densified Points | 93716623 |
| Average Density (per m ³) | 13.31 |

DSM, Orthomosaic and Index Details



Processing Options



| | |
|---|---|
| DSM and Orthomosaic Resolution | 1 x GSD (7.83 [cm/pixel]) |
| DSM Filters | Noise Filtering: yes Surface Smoothing: yes, Type: Sharp |
| Raster DSM | Generated: yes Method: Triangulation Merge Tiles: yes |
| Orthomosaic | Generated: yes Merge Tiles: yes GeoTIFF Without Transparency: no Google Maps Tiles and KML: no |
| Raster DTM | Generated: yes Merge Tiles: yes |
| DTM Resolution | 5 x GSD (7.83 [cm/pixel]) |
| Radiometric calibration with reflectance target | yes |
| Index Calculator: Reflectance Map | Generated: yes Resolution: 1 x GSD (7.83 [cm/pixel]) Merge Tiles: yes |
| Index Calculator: Indices | ndvi |
| Time for DSM Generation | 08m:29s |
| Time for Orthomosaic Generation | 05h:49m:03s |
| Time for DTM Generation | 01m:01s |
| Time for Contour Lines Generation | 00s |
| Time for Reflectance Map Generation | 08h:51m:13s |
| Time for Index Map Generation | 01m:51s |

Camera Radiometric Correction



| Camera Name | Band | Radiometric Correction Type | Reflectance target |
|----------------------|----------------------|-----------------------------|--------------------|
| RedEdge_5.5_1280x960 | Blue | Camera and Sun Irradiance | ✓ |
| RedEdge_5.5_1280x960 | Green | Camera and Sun Irradiance | ✓ |
| RedEdge_5.5_1280x960 | Red | Camera and Sun Irradiance | ✓ |
| RedEdge_5.5_1280x960 | NIR | Camera and Sun Irradiance | ✓ |
| RedEdge_5.5_1280x960 | Red edge | Camera and Sun Irradiance | ✓ |
| FC350_3.6_4000x3000 | Red Green Blue | No Correction | n/a |