Pléiades imagery

Caracteristics

1. RESOLUTION

Very high spatial resolution

Pléiades images are onboard satellite acquired at 70 cm resolution (at nadir) for panchromatic spectral mode (black & white) and at 2,8 m resolution (at nadir) for multispectral mode (colour). On-ground 50 cm processing resampling algorithm is performed allowing images robustness, especially in the case of post processing.

50 cm resampled images reflect better quality in terms of information content and ensure the initial content is fully preserved in the final product.

Pléiades images distributed by Airbus DS are at 50 cm in panchromatic and at 2 m in multispectral modes.

2. RADIOMETRY

Spectral bands

5 spectral bands:

- Panchromatic (PA): 470 – 830 nm
- Blue (B0): 430 – 550 nm
- Green (B1): 500 – 620 nm
- Red (B2): 590 – 710 nm
- Near-infrared (B3): 740 – 940 nm

Spectral combinations

<table>
<thead>
<tr>
<th>Panchromatique (P)</th>
<th>Multispectral (MS)</th>
<th>Bundle (P+MS)</th>
<th>Pan-sharpened (PMS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 cm 1 band (black and white)</td>
<td>2 m 4 bands (B, G, R, NIR)</td>
<td>50 cm and 2 m separated Panchromatic 1 band Multispectral 4 bands</td>
<td>50 cm merge product Pansharpened 3 bands Natural or false colour Pansharpened 4 bands</td>
</tr>
</tbody>
</table>

© Copyright DINAMIS 2022
Panchromatic (black and white)
- One spectral band product
- 50 cm resolution

Multispectral (colour)
- Four spectral bands product (blue, red, green, near infra-red)
- 2 m resolution

Bundle
- 50 cm Panchromatic (on left) and 2 m Multispectral at 2 m (on right) simultaneously acquired
  Separately delivered (un-merge)

Pan-sharpened (merged)

Pan-sharpened products combine the visual coloured information of the Multispectral data with the details provided by of the Panchromatic data, resulting in a higher resolution 0.5 m colour product. Pan-sharpened products are proposed as three- and four band products. The three-band colour products are available in natural colour (blue, green and red) or false colour (green, red and near infrared). The natural and false colour images are derived from Multispectral combinations, with bands that have been acquired simultaneously.