

MicaSense Series

# RedEdge-P™ *dual*



Two sensors. 10 bands. For enhanced data comparison with satellites.

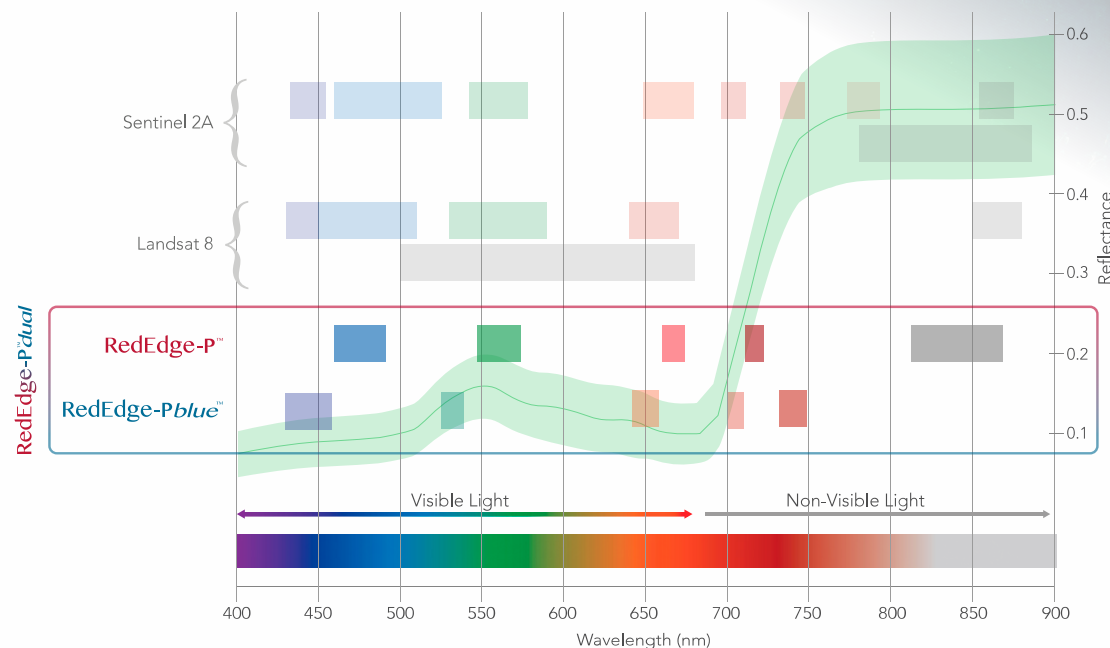
High-resolution multispectral and RGB composite drone sensor for plants classification, weeds identification, environmental research and conservation, and vegetation analysis of water bodies.

The dual solution features the RedEdge-P and the new RedEdge-P *blue* cameras.

## Benefits

- ✔ Obtain imagery comparable to Landsat and Sentinel satellite data at an enhanced resolution.
- ✔ Monitor shallow water environments with the coastal blue band.
- ✔ Perform detailed analysis on chlorophyll efficiency and identify weeds.
- ✔ Conduct reliable time-series analysis even in varying light conditions.
- ✔ Perform machine learning and AI applications such as early stage crop counting.
- ✔ Generate insights invisible to the naked eye with multiple outputs and indexes such as RGB, NDVI, NDRE, OSAVI, NIT, CIR, DSM.
- ✔ Work with the equipment you already have - compatible with DJI Matrice 300 and a wide range of post-processing and flight planning software.

RedEdge-P *dual* comparison with Landsat 8 and Sentinel 2A satellites



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## Applications



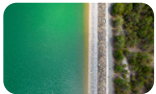
### Vegetation analysis of water bodies

Surveys over water for chlorophyll efficiency examination, vegetation analysis and identification of algae or floating, submerged and emergent plants.



### Environmental monitoring

Coastal and near-shore mapping for water resources management, tidal zones, swamps and glacier monitoring.



### Water management

Public water supply surveillance, water resources management.



### Habitat monitoring, protection and restoration

Erosion and biodiversity inspections, reef surveys over shallow waters, inaccessible to vessels and sensitive to human interaction.



### Vegetation species and weeds identification

Vegetation health management and species identification, including the ability to differentiate and count plants, trees, invasive species, and weeds.

## Key features

- **10 multispectral bands** at 1.6 MP each.
- **Pan-sharpening technology** for spatial resolution of 2 cm / 0.8 in per pixel compared to satellites at ~10 m / 32 ft.
- **Coastal blue band** for water vegetation analysis and weeds identification.
- **Double radiometric calibration** with light sensor and calibration reflectance panel for reliable data in varying light conditions.
- **Global shutter** on all 10 lenses for distortion-free image capture.
- **Narrow bands** for enhanced data accuracy.
- **Fast capture rate:** 3 raw DNG images per second.
- **Synchronized capture** of all 10-bands, **automatic triggering** and **geotagging of images** for efficient flight times easy post-processing.

## Specifications

<b>Weight</b>	745 g / 26.2 oz (two sensors, mounting hardware, DLS2, and cable)
<b>Dimensions</b>	13.2 cm x 8.8 cm x 9.67 cm / 5.1 in x 3.1 in x 3.5 in
<b>Spectral bands</b>	Coastal blue 444(28)*; Blue 475(32), Green 531(14)*; Green 560(27), Red 650(16)*, Red 668(14), Red Edge 705(10)*, Red Edge 717(12), Near-IR 740(18)*; Near-IR 842(57)
<b>RGB output</b>	5.1 MP** (global shutter, aligned with all bands)
<b>Sensor resolution</b>	1456 x 1088 (1.6 MP per multispectral band) 2464 x 2056 (5.1 MP panchromatic band)
<b>Ground sample distance</b>	7.7 cm / 3 in per pixel (per multispectral band) at 120 m / ~400 ft AGL 3.98 cm / 1.5 in per pixel (panchromatic band) at 120 m / ~400 ft AGL
<b>Field of view</b>	50° HFOV x 38° VFOV (multispectral), 44° HFOV x 38° VFOV (panchromatic)
<b>Capture rate</b>	Up to 3 images per second raw DNG
<b>Storage</b>	CFexpress card
<b>Interfaces</b>	Three configurable GPIO: select from trigger input, PPS input, PPS output, and top of frame signals. Host virtual button. USB 2.0 port for WiFi. Serial. 10/100/1000 Ethernet.
<b>External power</b>	7.0 V - 25.2 V
<b>Power input</b>	11/14.0/20W (standby, average, peak)
<b>Heat</b>	Ambient without airflow: 0-40 °C / 0-104 °F Ambient with airflow >0.5 meter per second / >1.1 mph: 0-50 °C / 0-122 °F
<b>IP rating</b>	IP4X

\*Denote RedEdge-P blue bands. \*\*With appropriate post-processing. Note: Specifications are subject to change without notice.

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