

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.

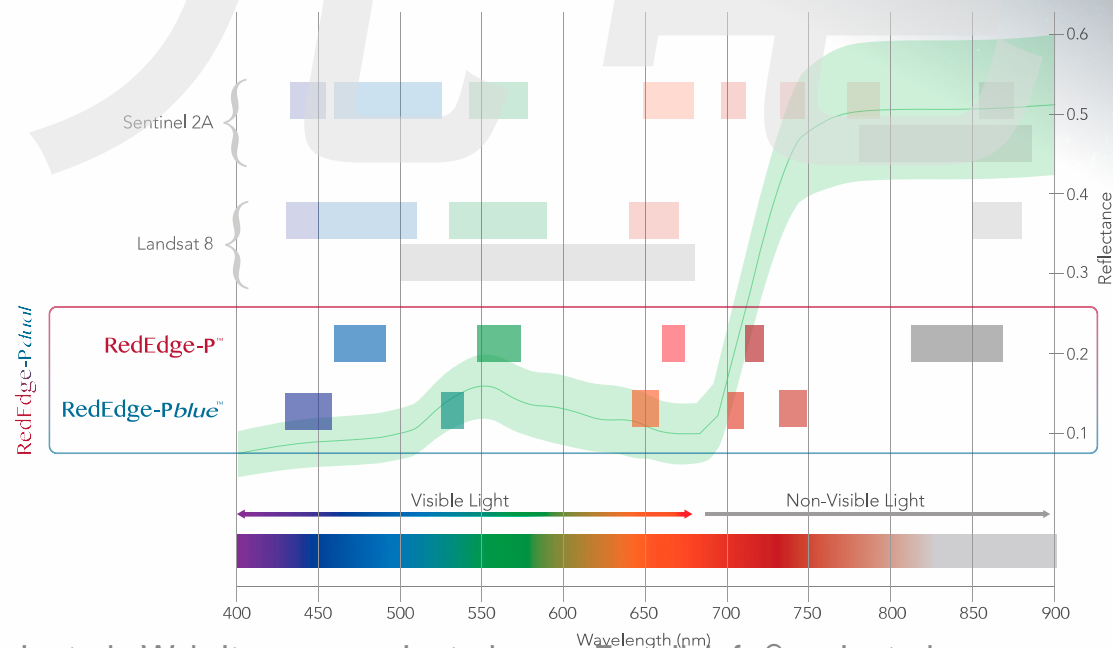
The dual solution features the RedEdge-P and the new RedEdge-P blue cameras.

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



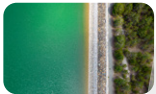
Vegetation analysis of water bodies

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

Weight	745 g / 26.2 oz (two sensors, mounting hardware, DLS2, and cable)
Dimensions	13.2 cm x 8.8 cm x 9.67 cm / 5.1 in x 3.1 in x 3.5 in
Spectral bands	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)
RGB output	5.1 MP** (global shutter, aligned with all bands)
Sensor resolution	1456 x 1088 (1.6 MP per multispectral band) 2464 x 2056 (5.1 MP panchromatic band)
Ground sample distance	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
Field of view	50° HFOV x 38° VFOV (multispectral), 44° HFOV x 38° VFOV (panchromatic)
Capture rate	Up to 3 images per second raw DNG
Storage	CFexpress card
Interfaces	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.
External power	7.0 V - 25.2 V
Power input	11/14.0/20W (standby, average, peak)
Heat	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
IP rating	IP4X

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

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