

MicaSense Series

RedEdge-PTM Triple

Precision multispectral imaging supporting agronomy and ecology, from seedling to harvest.

High-resolution multispectral drone sensors for plant classification, weed identification, environmental research and conservation, and digital plant phenotyping.

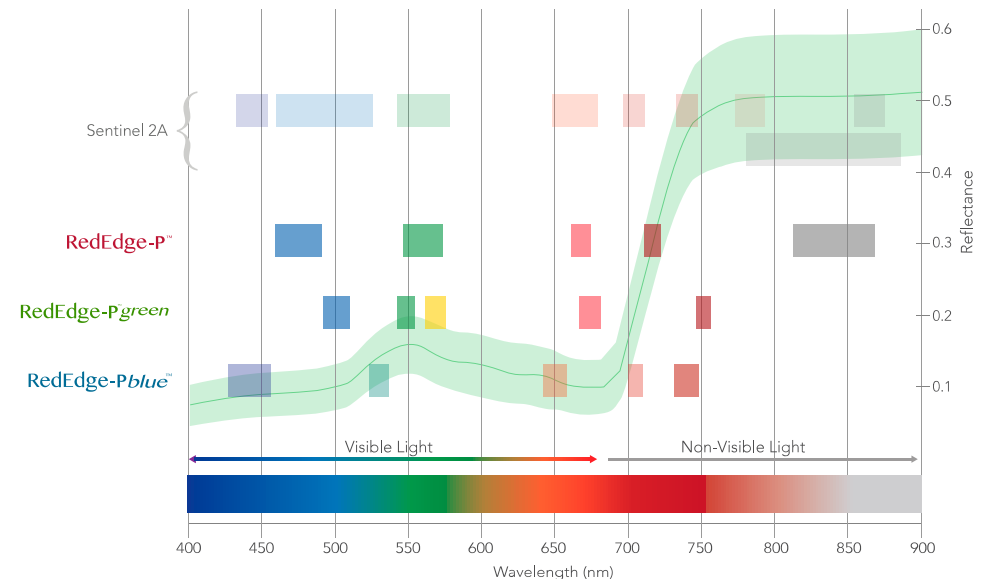
Benefits

- ✓ **Obtain imagery comparable to Landsat and Sentinel satellite data** at an enhanced resolution.
- ✓ **Perform detailed analysis on chlorophyll efficiency** and identify weeds.
- ✓ **Conduct reliable time-series analysis** even in varying light conditions.
- ✓ **Enable accurate crop counting in early growth stages** using machine learning and AI.
- ✓ **Generate insights beyond what the eye can see** with multiple outputs and indices such as RGB, NDVI, NDRE, OSAVI, CIR and DSM.
- ✓ **Work with the equipment you already have** - compatible with most professional drone platforms such as DJI and Pix4D.
- ✓ **Monitor shallow water environments** with the **coastal blue band**.
- ✓ **Perform detailed analysis on carotenes and anthrocyanin** by using indices like PRI.

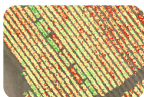
Pair any two of the **RedEdge-P**, **RedEdge-P blue**, and **RedEdge-P green** to get a 10-band dual solution, or combine all three for a 15-band solution.



RedEdge-P cameras comparison with Sentinel 2A satellite



Applications



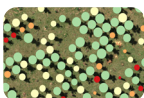
Crop Health Analysis

Monitor chlorophyll levels, detect stress early, and evaluate crop health to optimize treatment.



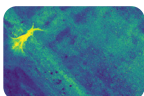
Field Mapping

Generate high-resolution maps to track growth, assess stand counts, and predict yields.



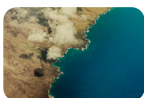
Species Identification

Differentiate crops from weeds, identify invasive species, and enable targeted field management.



Ecosystem Resource Surveillance

Track vegetation changes, soil conditions, and water availability for sustainable land conservation.



Coastal Habitat Mapping

Map near-shore ecosystems, detect algae blooms and aquatic vegetation across tidal zones and wetlands.

Key features

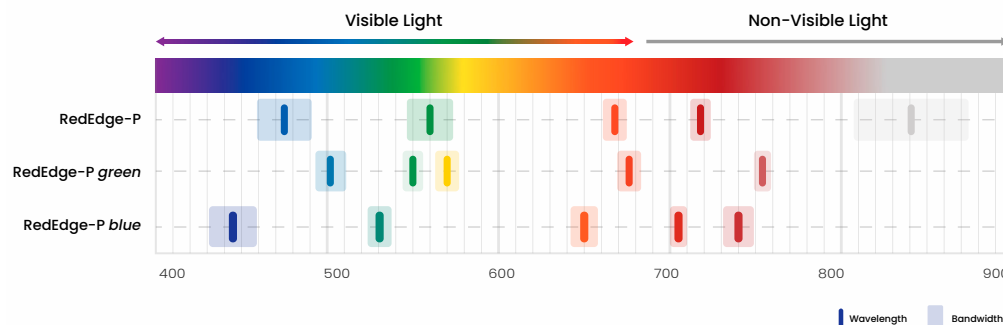
- Use RedEdge-P, Blue, and Green in **single, dual, or triple setups** for up to 15 multispectral spectral bands.
- **Pan-sharpening technology** for spatial resolution of 2 cm / 0.8 in per pixel compared to satellites at ~10 m / 32 ft.
- **Coastal blue band** for water vegetation analysis and weeds identification.
- **Double radiometric calibration with light sensor and calibration reflectance panel** for reliable data in varying light conditions.
- **Narrow bands** for enhanced data accuracy.
- **Fast capture rate:** 3 raw DNG images per second.
- **Synchronized capture of all 15-bands**, automatic triggering and geotagging of images for efficient Flight times and effective post processing.
- **RTK enabled.**

Specifications

Weight	1080 gr / 38 oz (including mounting hardware, DLS2, and cable)
Dimensions	21.9 cm x 11.4 cm x 9 cm / 8.6 in x 4.5 in x 3.5 in
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

Spectral bands

RedEdge-P	Blue 475(32), Green 560(27), Red 668(14), Red Edge 717(12), Near-IR 842(57)
RedEdge-P green	Cyan 502(18), Green 550(12), Yellow 570(14), Red 678(14), Near-IR 754(10)
RedEdge-P blue	Ocean blue 444(28), Green 531(14), Red 650(16), Red Edge 705(10), Red Edge 740(18)



*With appropriate post-processing.

Note: Specifications are subject to change without notice.