

MicaSense RedEdge-MX

FIVE-BAND MULTISPECTRAL IMAGING PAYLOAD

Capture synchronized blue, green, red, red-edge, and near-infrared imagery for crop-health analysis, vegetation mapping, environmental monitoring, and precision agriculture workflows.

PAYLOAD SPECIFICATION

Blue	475 nm
Green	560 nm
Red	668 nm
Red edge	717 nm
Near-infrared	842 nm

5

SPECTRAL BANDS

12-bit

DATA OUTPUT

1.2 MP

PER IMAGER (×5)

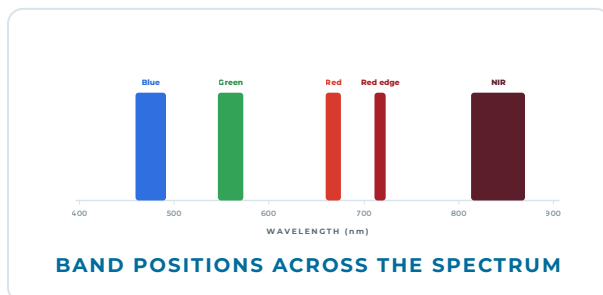
231.9 G

CAMERA + DLS 2

4 CM

GSD AT 60 M

Spectral Bands



Band	Center	Bandwidth
Blue	475 nm	32 nm
Green	560 nm	27 nm
Red	668 nm	16 nm
Red edge	717 nm	12 nm
Near-infrared	842 nm	57 nm

Key Capabilities

- Five synchronized spectral bands in a single flight
- Global shutter for reduced image distortion
- 12-bit image output for detailed data analysis
- DLS 2 records ambient light and sun-angle data
- Supports consistent datasets under changing light conditions
- Compatible with common multispectral photogrammetry workflows

Typical Applications

- Crop vigor and plant-stress assessment
- NDVI and NDRE vegetation analysis
- Disease and nutrient-deficiency monitoring
- Irrigation and stand-count analysis
- Vegetation classification and environmental mapping

Core Specifications

Image resolution	1280 × 960 per band
Imagers	Five 1.2 MP sensors
Output	12-bit
Shutter	Global shutter
Focal length	5.4 mm
Field of view	47.2° H × 35.4° V
GSD at 60 m	4 cm/pixel per band
GSD at 120 m	8 cm/pixel per band
Capture rate	Approx. 1 capture/second
Capture modes	Overlap, timer, external trigger
Recommended overlap	75% or greater
Camera + DLS 2 weight	231.9 g
Camera dimensions	83 × 59 × 45.4 mm
DLS 2 dimensions	63.5 × 46 × 14.03 mm

DLS 2 Light Sensor

Measures ambient light and sun angle during flight and records the data in image metadata to support radiometric correction and more consistent multispectral datasets.

Integration Notes

- Sensor supports Ethernet, serial/MAVLink, Wi-Fi, PWM/GPIO, and HTTP API interfaces.
- Final enabled interfaces, triggering method, mounting hardware, and integrated payload weight should reflect the exact WISPR configuration.

REFERENCE

Specifications are based on the MicaSense RedEdge-MX Integration Guide. Confirm final aircraft integration, firmware, and included components before publication.