MicaSense RedEdge-M™
Multispectral Camera

A rugged, built-to-last, professional multispectral sensor. Captures five discrete spectral bands, and is one of the most flexible solutions on the market.

Accurate information for your fields starts with quality sensors. MicaSense offers professional multispectral cameras optimized for use in drones, with narrowband filters, calibrated outputs, and a size and weight that allows integration with all types of unmanned aircraft.

FEATURES

• Narrowband optical filters provide full image resolution for each band
• Single SD card stores all images with geotags
• Standalone operation, with optional external trigger and data from host aircraft
• Intuitive web-based interface accessed from any Wi-Fi–capable device
• Option for Ethernet or serial communications with host aircraft for full configuration, status, and control of the camera
• GigE Ethernet connectivity for faster transfer of data between camera and host aircraft

BENEFITS

• Compact size allows for integration with a wide variety of drones
• Simultaneous capture of five discrete spectral bands, including RGB color
• Fast capture rate enables faster flight speeds and lower flight altitudes
• Global shutter design for distortion-free results on every platform
• Calibrated for precise, repeatable measurements
• Expanded voltage range to handle more integrations without extra power conversion
• Rugged design with no moving parts
# MicaSense RedEdge-M™ Multispectral Camera

## Specifications

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<tr>
<th>Specification</th>
<th>Details</th>
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<tr>
<td><strong>Weight</strong></td>
<td>150 g (5.3 oz.)</td>
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<tr>
<td><strong>Dimensions</strong></td>
<td>9.4 cm x 6.3 cm x 4.6 cm (3.7 in. x 2.5 in x 1.8 in.)</td>
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<tr>
<td><strong>External Power</strong></td>
<td>4.2 V DC - 15.6 V DC, 4 W nominal, 8 W peak</td>
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<tr>
<td><strong>Spectral Bands</strong></td>
<td>Blue, green, red, red edge, near IR (global shutter, narrowband)</td>
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<tr>
<td><strong>RGB Output</strong></td>
<td>Global shutter, aligned with all bands</td>
</tr>
<tr>
<td><strong>Ground Sample Distance</strong></td>
<td>8 cm per pixel (per band) at 120 m (~400 ft.) AGL</td>
</tr>
<tr>
<td><strong>Capture Rate</strong></td>
<td>1 capture per second (all bands), 12-bit RAW</td>
</tr>
<tr>
<td><strong>Interfaces</strong></td>
<td>Serial, 10/100/1000 ethernet, removable Wi-Fi, external trigger, GPS, SDHC</td>
</tr>
<tr>
<td><strong>Field of View</strong></td>
<td>47.2° HFOV</td>
</tr>
<tr>
<td><strong>Custom Bands</strong></td>
<td>400nm - 900nm (QE of 10% at 900nm)</td>
</tr>
<tr>
<td><strong>Triggering Options</strong></td>
<td>Timer mode, overlap mode, external trigger mode (PWM, GPIO, serial, and Ethernet options), manual capture mode</td>
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## SPECTRAL BANDS

![Spectral Bands Diagram](image)

Solid science, no guesswork

Plants reflect light in a predictable pattern across the color spectrum. These patterns are correlated to crop vigor and stress as well as nutrient information.

Multispectral imaging uses cameras with narrow-band filters to optimally sense plant reflectance, delivering the information needed to assess the status of your crops. This capability enables growers and agronomists to alter nutrient inputs and take action to address disease based on actual field conditions.

## DETAILED INFORMATION MAPS

- **RGB color composite**
- **NDVI** (Normalized Difference Vegetation Index)
- **NDRE** (Normalized Difference Red Edge)

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