RedEdge-M™

Professional Multispectral Camera Kit
by MicaSense
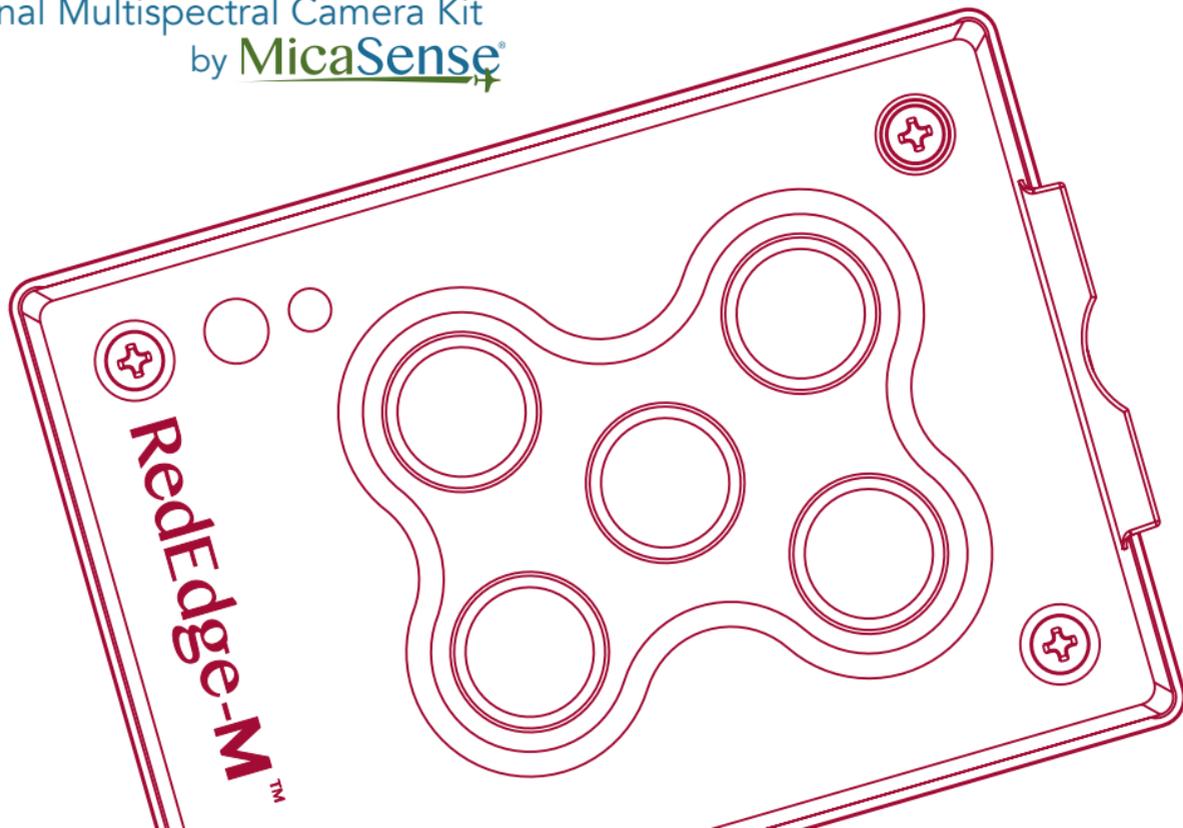
RedEdge-M™

Thank you for your purchase!

Let's get started

SIGN UP

Visit atlas.micasense.com to create your free MicaSense Atlas account.

REGISTER

Visit micasense.com/product-registration to register your new RedEdge-M Kit.

CONTACT

support@micasense.com

US based MicaSense support is here to help.

RedEdge-M Quick Start

1. Connect DLS to camera using the long 6-pin cable
2. Connect GPS module to DLS using connectors attached to GPS module
3. Connect power source (4.2-15.6 volts DC, 4W nominal 8W peak) to camera using power cable
4. Connect to camera WiFi using WiFi-enabled device

   WiFi SSID: rededge [RedEdge-M Serial Number]
   Password: micasense

   (The serial number can be found on the back side of your RedEdge-M camera)
5. Type 192.168.10.254 into browser to access camera home page
6. Click 📷 for Live View page

What's inside?

1 MicaSense RedEdge-M camera
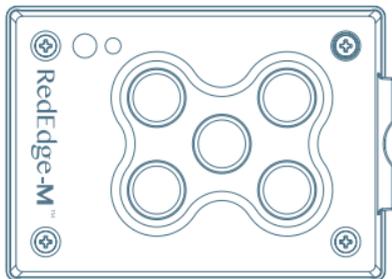
2 Downwelling Light Sensor (DLS)
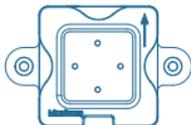
For more detailed instructions visit
micasense.com/rededgemquickstart

3 GPS/MAG module

4 SD Card

5 USB WiFi Dongle

6 RedEdge-M Wire Integration Kit

> RedEdge-M Power Cable (3-pin to USB)
> 60 cm DLS Cable (6-pin)
> 15 cm Power/Trigger Cable (3-pin)
> 15 cm Ethernet Cable (12-pin)
> 2 Ferrite Beads
> 4 Mounting Screws w/ Washers

7 Calibrated Reflectance Panel (CRP)
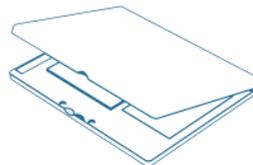
NOTE: Images are not shown to scale

DLS Quick Start Guide

Read these instructions or go to micasense.com/dls for details

Installation Instructions:

- You must update your RedEdge-M firmware to v3.2.0 or newer via MicaSense Atlas at atlas.micasense.com

- DLS, GPS, and UAV axes must be aligned

- Mount DLS and GPS on pole(s) away from parts of UAV that may cause magnetic interference or shadows on DLS

- Turn camera off and connect the DLS and GPS unit (Figure 1)

- DLS and GPS to be mounted on top surface with both arrows pointed forward (Figure 2)
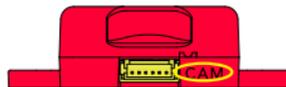
DLS
Connect 6-pin cable from camera to CAM port
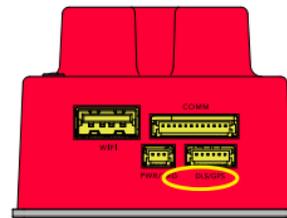
RedEdge-M
Connect DLS to port labeled DLS/GPS

Figure 1

GPS to DLS
4-pin plug for MAG
6-pin plug for GPS
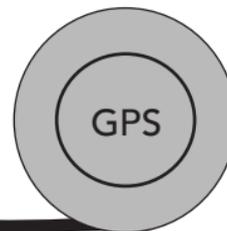
GPS Module
In addition to GPS information, this module is needed to obtain heading (may be substituted out with MAVLINK or HTTP API injected attitude).

Magnetometer Calibration Instructions:

Go to micasense.com/dls for DLS Mag Calibration video

- Before calibration, move away from large metal objects (open field is best)
- Connect to WiFi interface per instructions in RedEdge-M User Manual
- Go to the Settings tab in the RedEdge-M web interface
- Click on "DLS Configuration"
- In the DLS Configuration section, click "Calibrate DLS Mag"
- Use the heading on the WiFi home screen or magnetometer calibration complete screen
- Verify magnetic heading using WiFi home screen
- OK if variability is +/- 5°, redo if outside this window

Figure 2

6-pin to 6-pin connector
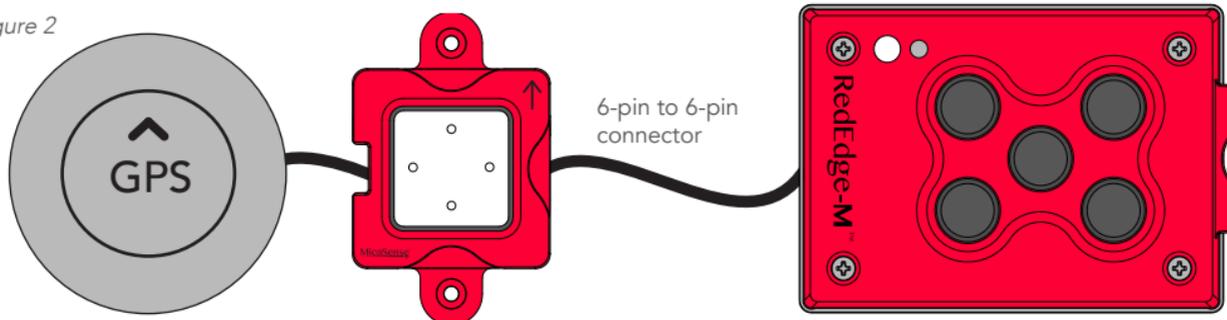
Reflectance Panel Best Use Practices

Capture an image of the Calibrated Reflectance Panel immediately before and immediately after each flight.

1. Place panel flat on the ground
2. Stand in front of panel with the sun to your back
3. Take one large step to your right
4. Ensure no shadows or reflections are over the panel
5. Ensure the DLS is parallel to the ground and free of shadows
6. Take an image with the RedEdge-M camera that includes the full panel (lid and base) in the image frame

Note: Additional instructions are included on the inside of the CRP lid.

Start analyzing your images

MicaSense Atlas: Intelligent analytics to harness the power of smart sensors

FLY

PROCESS

ANALYZE

ANYWHERE
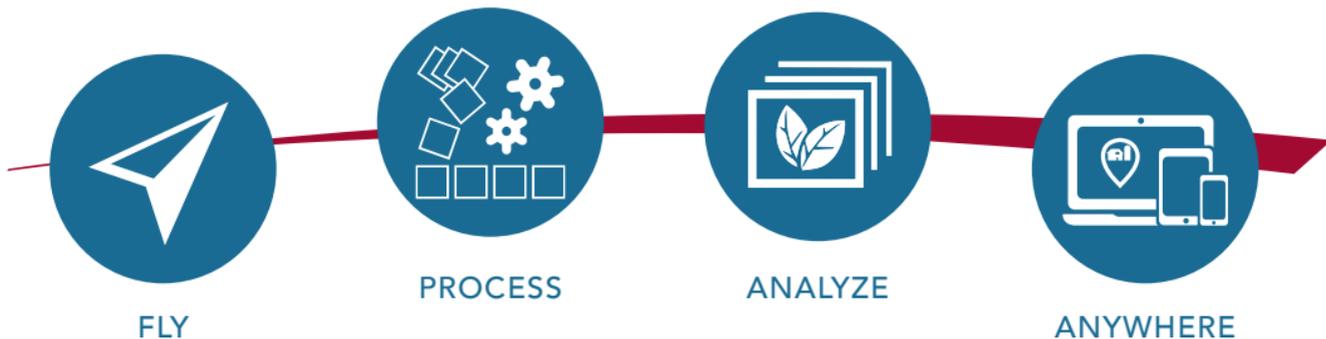
Atlas is a simple to use cloud based platform built to provide intelligent solutions for precision agriculture. After processing raw data, turn imagery into actionable information using powerful analytics and visualization tools. Backed by the cloud, this dynamic platform allows for easy sharing and mobile access.

SIGN UP FOR YOUR FREE TRIAL TODAY!
WWW.MICASENSE.COM/ATLAS

Data collection guidelines

Plan a successful mission

⊘ Fly within 2 hours of local solar noon

⊘ Ensure sidelap and frontlap yields a 75% overlap

⊘ Capture CRP image immediately before and immediately after each flight

⊘ Ensure camera points straight down within +/-10 degrees

⊘ Confirm GPS fix via camera home page before flight

Fly within 2 hours of local solar noon to avoid harsh shadowing that can affect your results.
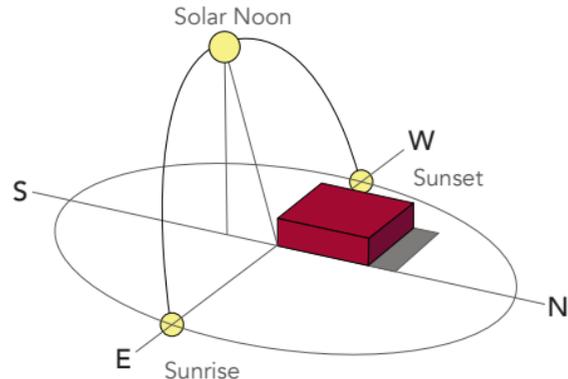
When planning your mission, pay careful attention to the distance between tracks. Both sidelap and frontlap should be configured to yield a 75% overlap of images.

Fly beyond field boundaries to maximize coverage

Frontlap

Sidelap

<75%

<75%

75%

75%
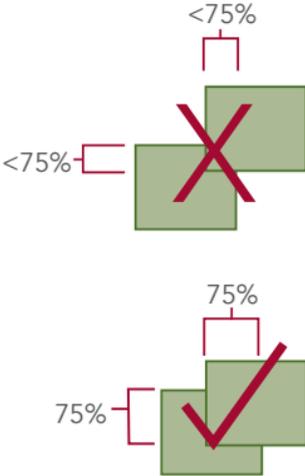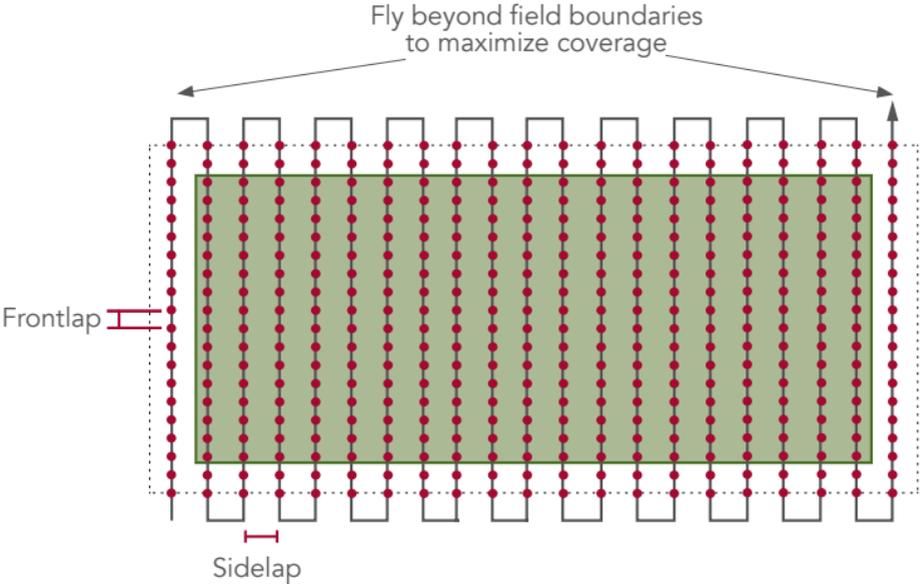
Don't Forget to Register!
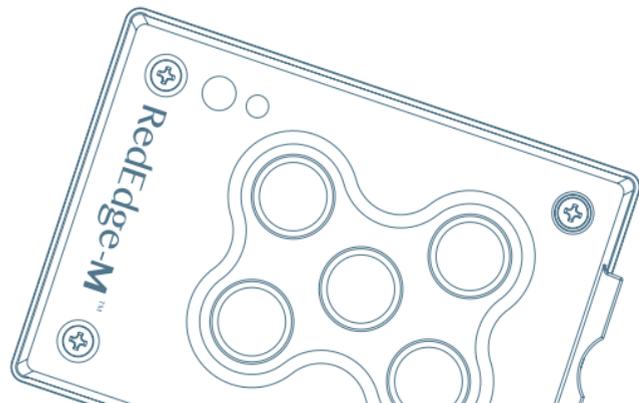
Product registration helps ensure you get full access to our support services and product warranties.

At MicaSense, we strive to provide the highest quality of support for our users. Register your RedEdge-M at **micasense.com/product-registration**

Questions? Email us at **support@micasense.com**

Notes:

⊡ SIGN UP

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⊕ DOWNLOAD

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⊘ REGISTER

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☎ CONTACT

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MicaSense®

Scan for more information

At MicaSense, we're at the forefront of multispectral sensor development and together with our customers, we're pushing the boundaries on agricultural data analysis. We get the right tools into your hands so you can make the right call at the right time—with clear, actionable information to guide your decisions in the field. We're here to work with you, helping you get better data and therefore better results, so you can focus on maximizing your crops.

Because we know that you are experts in your field, just like we are in ours.