RedEdge·MX™

Professional Multispectral Sensor Kit
by MicaSense®

Quick Start Guide

Thank you for your purchase!
Use the instructions in this guide to get started.

ⓠ SIGN UP

Visit atlas.micasense.com to create your free MicaSense Atlas account. Once you create your Atlas account you will have access to future firmware updates.

ⓛ VISIT

For user manuals, integration guides and other support materials, please visit our Knowledge Base at support.micasense.com.

ⓥ REGISTER

Visit micasense.com/product-registration to register your sensor and activate the warranty.
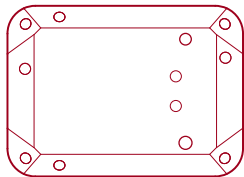
ⓒ CONTACT

Questions? US based MicaSense support is here to help at support@micasense.com.

1. Check that you have everything

1 MicaSense RedEdge-MX sensor

2 DLS 2 with embedded GPS

3 Calibrated Reflectance Panel (CRP)

4 USB WiFi dongle

5 Necessary integration cables

6 Assorted mounting hardware

7 SD Card
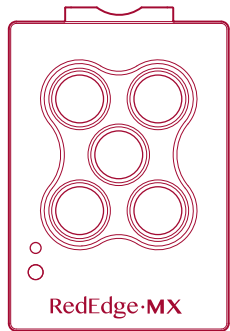
NOTE: Images are not shown to scale

RedEdge·MX

RedEdge-MX Sensor

DLS 2

2. Mount and configure the sensor
These instructions assume that your drone is configured and ready for flight.

- Provide a supported power supply (4.2 V to15.8 V) to the port labelled "PWR/TRG".

- The RedEdge-MX should be installed such that it has a clear view of the area directly below the aircraft. The "cone" of the lenses should be considered in the process of deciding where to mount the sensor on the aircraft or payload bay.

- Ensure that the sensor points straight down (with respect to the earth) at all times during flight. The best way to ensure this is to tilt the sensor at an angle that will point nadir while flying, or use a gimbal.

3. Mount and configure the DLS 2
More detailed integration instructions can be downloaded at support.micasense.com

- The DLS 2 should always be the highest object on the aircraft in order to avoid shadows or reflections. It contains an integral GPS sensor that may be utilized for geotagging of the RedEdge-MX imagery if system GPS signals are not provided to the sensor by other means.

- Install the module where it will have a clear view of the sky, far away from any devices that could interfere with it (like a data link or video transmitters).

- On multi-rotor aircraft, install the DLS 2 on a rigid post such that it is the highest object on the aircraft, with a minimum of 5 cm above the rotor plane.

- Ensure that there are no obstructions in the DLS 2's field of view to the sky, including propellers and other items on the aircraft.

- Keep the DLS 2 away from the aircraft GPS. Installing the DLS 2 near the aircraft GPS may impact the aircraft's GPS reception.

4. Magnetometer calibration

1. The sensor firmware includes a calibration procedure, found in the Settings page in the DLS Configuration section.

2. During the procedure, avoid any sources of magnetic interference.

3. After calibration, verify that the magnetometer information displayed in the Heading section of the sensor's Home Page is accurate using a handheld compass.

You are ready to start collecting data!

Best practices for capturing quality data

- ✓ 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

Solar Noon

W
Sunset

S

N

E
Sunrise
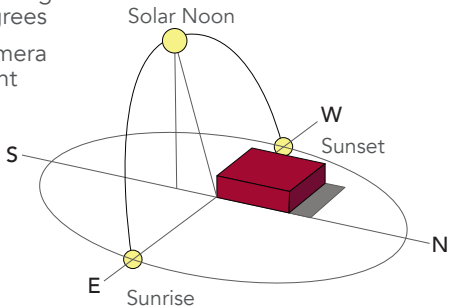
Consider your overlap

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%
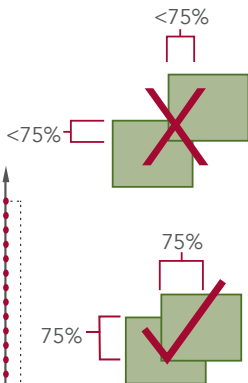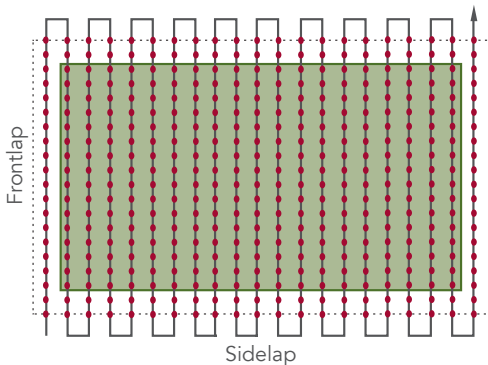
Reflectance Panel Best Practices

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.

Don't Forget to Register!

Get full access to our support services
and product warranties when you register.
micasense.com/product-registration

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

Notes:

MicaSense®

Scan for manuals and other
support documentation

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.