MicaSense®

RedEdge-MX™ & Altum™
DJI M300 RTK Quick Mount Gen. 2
INTEGRATION GUIDE

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Thank you for your purchase!

These instructions show how to integrate the MicaSense RedEdge-MX and/or Altum with a DJI M300 RTK. It covers attaching mounting brackets included in the kit, powering the camera from the host system, and placement of the Downwelling Light Sensor (DLS2) unit.
This kit is also compatible with RedEdge-M, as long as you also have a DLS2.

What's inside?

1. Quick Mount Gen 2 Adapter (Qty 1)
2. 6-pin 60cm cable for DLS2 (Qty 2)
3. Altum to Quick Mount cable (Qty 1) [Use with Altum sensor]
4. RedEdge-MX to Quick Mount cable (Qty 1) [Use with MX sensor]
5. M3x0.5, 8mm BHCS Screws (Qty 2)
6. M3x0.5, 10mm BHCS Screws (Qty 2)
7. M2x0.4, 5mm SHCS screws (Qty 2)
8. M2 Lock Washer (Qty 2)
9. M2 Flat Washer (Qty 2)
10. M3 Lock Washer (Qty 4)
11. Spacer, 3mm (Qty 2)
12. Spacer, 6mm (Qty 2)
13. Loctite threadlocker (Qty 1)
14. Zip Ties (Qty 5)
15. Carbon fiber mount for DLS2 (Qty 2)

Images are not to scale

What's Required?

- #1 Phillips Screwdriver
- Cutting tool - such as scissors or diagonal cutter
- 1.5 mm hex wrench
- 2 mm hex wrench

Let's get started!

Warning: Installation of this kit into a drone should be done by an experienced person, in adherence with all recommendations and guidelines of the drone manufacturer. Before assembling this kit, ensure the drone is not powered, has the battery removed, and the rotor blades removed (if possible). Failure to follow these instructions can result in injury and/or damage to the Matrice, RedEdge-M/MX, or Altum.

Assembling the DLS2 mount

1. Before you get started, it is recommended that you have a clear working surface where you won't easily lose track of any small screws or washers that are essential to assembling this kit.
2. Locate the carbon fiber mount, and line up the mounting hole on the bottom of your DLS2 unit with the holes on the top of the carbon fiber mount. Be sure the DLS2 connector port is oriented toward the "tab" of the mounting plate towards the nose of the aircraft. Refer to Fig. 1 below.
3. Apply Loctite to the provided M2 X 5mm (Qty 2) screws and mount the DLS 2 unit on top of the carbon fiber plate using the M2 lock washer (Qty 2) and flat washers (Qty2). Make sure the DLS2 connector port is oriented toward the "tab" of the mounting plate.
4. Now you can mount the assembly onto the drone itself. Place the assembled mount on top of the M300 RTK towards the nose of the aircraft. Notice that the surface is not flush, so you will need to use the appropriate spacers.
5. Place the 3mm spacers directly between the M300's body and the lower mounting plate located at each of the mounting holes. Apply Loctite to the M3 x 8mm screws (Qty 2), and use them to secure the back of the lower mounting plate to the drone.
6. We'll repeat the previous step for the front of the lower mounting plate. This time, we use the 6mm spacers and the M3 x 10mm screws (Qty 2) with Loctite.

7. Use the included zip ties to ensure that the DLS2 cable is routed neatly and secured to the gimbal connectors at the bottom of the drone. A cutting tool should be used in order to cut off excess plastic from the zip ties. Be sure that the cable and zip ties are not blocking any cameras or sensors surrounding the drone.

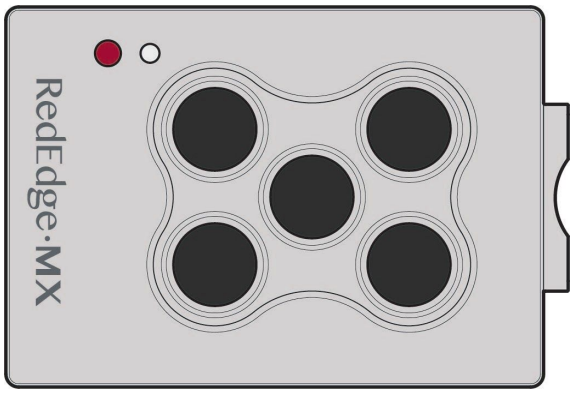
   The finished assembly should look similar to Fig. 1 below.

Warning: Before any flight, always be sure to check the DLS2 and any other mounted components are secure. Screws and cable ties can loosen over time due to wind and vibration during flights. The included Loctite threadlocker helps to avoid this, but it is not foolproof. Always do a pre-flight safety check!

Fig. 1: DLS 2 mounted on M300 RTK

Note: your rubber dampers may vary

RedEdge-MX Instructions



Attaching the RedEdge-MX and the Mount

1. Locate the two M3 x 6 mm socket head cap screws, M3 lock washers, and Quick Mount Gen. 2 Adapter.
2. Using the counterbore screw holes, attach the mount to the back of the RedEdge-MX. Make sure the mount 8-pin camera port is located on the same side as the camera "PWR/TRG" port.
3. Connect the provided Quick Mount Gen.2 RedEdge-MX cable to the RedEdge-MX "PWR/TRG" and "DLS" ports.

Quick Mount Gen 2 Adapter attached to RedEdge-MX

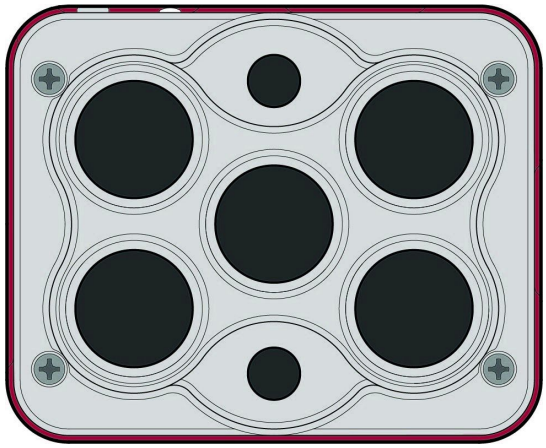
Attaching the RedEdge-MX and DLS 2 to the Matrice

Once assembled, the Quick Mount Gen. 2 can quickly and easily be installed or removed from the Matrice. Power is provided by the Matrice via the Quick Mount Gen 2.

1. Attach the assembled Quick Mount Gen. 2 (with connected RedEdge-MX) to the drone using the DJI lock mechanism on the gimbal connector.
2. Use the provided 6-pin 60cm cable to connect the DLS2 and the RedEdge-MX. Plug the DLS 2 cable from the DLS 2 port to the Quick Mount Gen. 2 "6-pin DLS" port.
3. When attached, the camera will be tilted forward slightly to compensate for the tilt of the aircraft while flying.

Warning: Failure to properly secure loose wires may lead to interference with the aircraft propellers. This may damage the drone, RedEdge-MX/Altum, or both.

Altum Instructions



Attaching the Altum and the Mount

1. Locate the two M3 x 8 mm socket head cap screws, M3 lock washers, and Quick Mount Gen 2 Adapter.
2. Using the counterbore screw holes, attach the mount to the back of the Altum. Make sure the 8-pin camera port found on the Quick Mount is located on the same side as the camera "HOST" port.
3. Connect the provided Altum Gen. 2 Quick Mount cable to the "HOST" port found on the Altum camera and the Power/Trigger and Communication ports found on the Quick Mount.

Fully connected Quick Mount Gen. 2

Attaching the Altum and DLS 2 to the Matrice

Once assembled, the Quick Mount Gen. 2 can quickly and easily be installed or removed from the Matrice. Power is provided by the Matrice via the Quick Mount Gen 2.

1. Attach the assembled Quick Mount Gen. 2 (with connected Altum) to the Matrice using the DJI lock mechanism on the drone.
2. Plug the DLS 2 cable from the DLS 2 port to the Quick Mount Gen. 2 “6-pin DLS” port.
3. When attached, the camera will be tilted forward slightly to compensate for the tilt of the aircraft while flying.

Warning: Failure to properly secure loose wires may lead to interference with the aircraft propellers. This may damage the camera, drone, or both.

Support

For other RedEdge-MX or Altum associated integration guides, please visit our Knowledge Base at support.micasense.com

For additional questions, please contact support@micasense.com

MicaSense RedEdge-MX & Altum Quick Mount Gen. 2 for DJI Matrice 300 RTK Instructions.

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It’s simple to plan a successful mission

FLY

The MicaSense sensors low weight, low power requirement, and ability to capture RGB and narrowband spectral bands simultaneously means you can gather the data you need in fewer flights. Have multiple UAVs? MicaSense sensors quickly integrate with many different drone platforms.

PROCESS

With MicaSense sensors, you own your data. You’re not limited to a particular processing platform. You can choose whichever platform is best for you, your customer, or your project.

ANYWHERE

We know you need tools you can rely on. That’s why we built the sensors we wanted in the field—predictable, tough, and reliable—so you can gather the data you need when you need it.

ANALYZE

RedEdge-MX and Altum have five bands—blue, green, red, red edge, and near-infrared—that our research showed were optimal for sensing crop health. It simply shows you more. And with MicaSense Atlas, you can see many different analytical layers in one easy to use interface, and compare these outputs across time.

SIGN UP

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

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MicaSense®

Located in Seattle, Washington, MicaSense delivers integrated solutions for data gathering, processing, and analytics across the global agriculture market. With decades of expertise in widely varied UAV applications, the MicaSense team is redefining remote sensing technology and pioneering new ways to collect and analyze information.

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Revision History

Revision	Description	Date
01	Initial Release	21 July 2020