MicaSense®

RedEdge-MX™ & Altum™
DJI Matrice 100/600 Quick Mount
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 Matrice 100/600. It covers attaching mounting brackets included in the kit, powering the camera from the host system, and placement of the Downwelling Light Sensor (DLS 2) unit.

⚠️ Warning: This kit is not intended for any other RedEdge models other than the RedEdge-M/MX and Altum. Damage will occur if any other RedEdge model is connected.

What's inside?

1. Quick Mount Adapter (Qty 1)
2. 6 Pin Cable (Qty 1)
3. Sensor Mounting Plate (Qty 1)
4. Go-Pro Mount Adapter (Qty 1)
5. M 3 X 0.5, 8 mm Screws (Qty 4)
6. M 2 X 0.4, 6 mm Screws (Qty 2)
7. M 2 X 0.4, 8 mm Screws (Qty 2)
8. M 2.5 X 0.45, 4 mm Screws (Qty 2)

9. Alcohol Wipe (Qty 1)
10. Zip Ties (Qty 4)
11. Double Sided Tape (Qty 5)
12. DLS2 Mounting Disc (Qty 1)
13. DLS2 Mast kit (Qty 1)
14. Connector Board (Qty 1)

Images shown 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 Matrice manufacturer. Before assembling this kit, ensure the Matrice 100/600 is not powered, has the battery removed, and the rotor blades removed. Failure to follow these instructions can result in injury and/or damage to the Matrice, RedEdge-MX, or Altum.

Attaching DLS 2 mast assembly

1. Locate and remove the DJI mast kit from its packaging.
2. There are three carbon rod sizes. Choose the longest and insert it into the base mount.
3. Secure the base mount with the included M2 screw.
4. Place the top cap on the other side of the carbon rod.
5. Secure the top cap on the rod by screwing the M2 screw.
6. Screw in the base of the mast assembly into the aircraft frame using the provided M2.5 screws and mating cap.
7. Secure the DLS2 mounting disc to the mast using the provided M2.5 x 4mm screws.
8. Mount the DLS2 to the DLS2 mounting disc using the provided M2 x 6mm screws.
9. Ensure the DLS 2 connector is oriented toward the front of the drone.
10. Use zip ties to secure any loose wires.
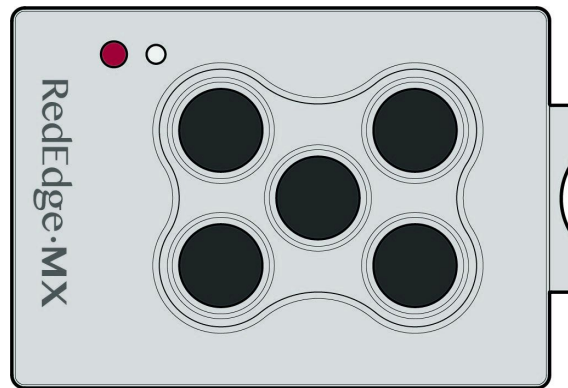
DLS2 Mounted on Matrice 100


Assembled DLS2 Mast Mounting Plate

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

RedEdge-MX Instructions

Attaching the RedEdge-MX and the Mount

1. Locate the four M3 x 8 mm flat-head screws and sensor mounting plate.
2. Peel off the brown protective paper from the sensor mounting plate.
3. Using the countersink screw holes, attach the mount to the back of the RedEdge-MX.
4. Locate the two M2 x 8 mm screws and the Go-Pro mount adapter.
5. Attach the Go-Pro mount adapter to the sensor mounting plate.
6. Locate the Quick Mount adapter and remove the thumbscrew.
7. Attach the Go-Pro mount adapter of the assembled sensor mounting plate to the Quick mount adapter and secure it with the thumbscrew.
8. Connect the Quick Mount cable to the RedEdge-MX "PWR/TRG" port.
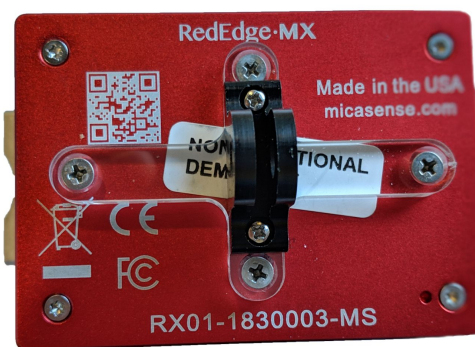
Mounting Bracket attached to RedEdge-MX

Fully connected Quick Mount

Attaching the RedEdge-MX and DLS 2 to the Matrice

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

1. Attach the assembled Quick Mount (with connected RedEdge-MX) to the Matrice using the DJI lock mechanism on the Matrice.
2. Plug the DLS 2 cable from the DLS 2 port to the connector board.
3. Using the provided shorter 6-pin cable, connect the RedEdge-MX "DLS" port to the connector board.
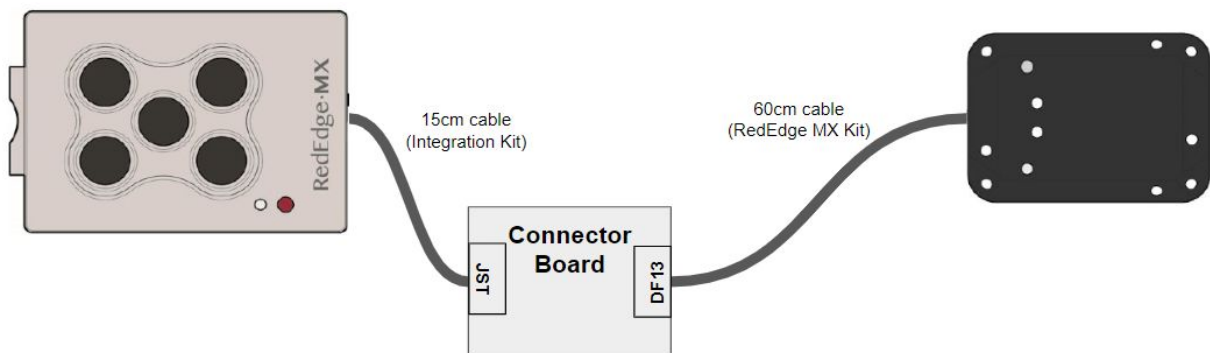

Diagram: RedEdge-MX to Connector Board to DLS 2

4. Secure the connector board using the double sided tape in a safe location.
5. Angle the camera so that, while flying forward, it will point nadir (straight down). The forward-tilt angle can vary by aircraft, but it is typically 8° to 12°.
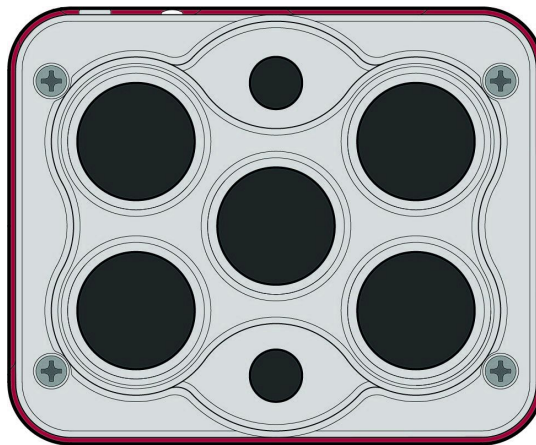6. Use zip ties to secure any loose wires.

Quick Mount on Matrice 100

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

Altum Instructions

Attaching the Altum and the Mount

1. Locate the four M3 x 8 mm flat-head screws and sensor mounting plate.
2. Peel off the brown protective paper from the sensor mounting plate.
3. Using the countersink screw holes, attach the mount to the back of the Altum.
4. Locate the two M2 x 8 mm screws and the Go-Pro mount adapter.
5. Attach the Go-Pro mount adapter to the sensor mounting plate.
6. Locate the Quick Connect mount and remove the thumbscrew.

7. Attach the Go-Pro mount adapter of the assembled sensor mounting plate to the Quick mount adapter and secure it with the thumbscrew.
8. Connect the Quick Mount cable to the Altum wire harness.

Fully connected QuickMount

Attaching the Altum and DLS 2 to the Matrice

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

1. Attach the assembled Quick Mount (with connected Altum) to the Matrice using the DJI lock mechanism on the Matrice.
2. Plug the DLS 2 cable from the DLS 2 port to the connector board.
3. Using the provided shorter 6-pin cable, connect the Altum "DLS" wire harness to the connector board.
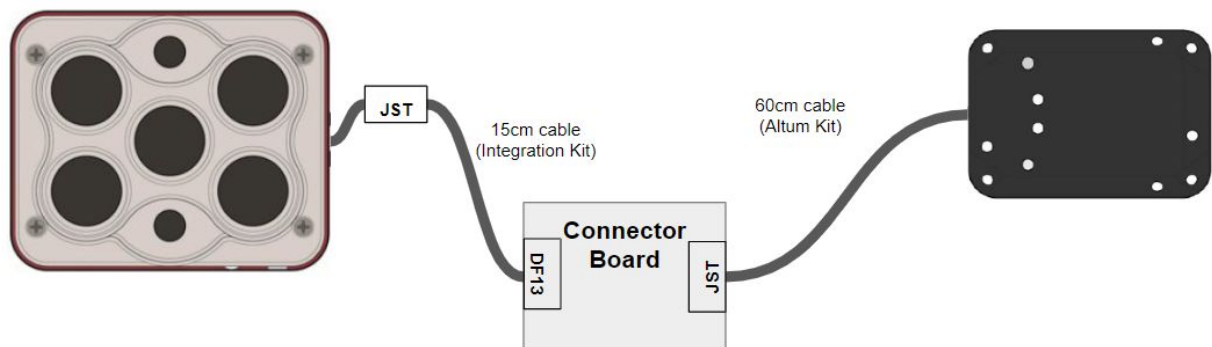

Diagram: Altum to Connector Board to DLS 2

4. Secure the connector board using the double sided tape in a safe location.

5. Angle the camera so that, while flying forward, it will point nadir (straight down). The forward-tilt angle can vary by aircraft, but it is typically 8° to 12°.
6. Use zip ties to secure loose wires to prevent entanglement.

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

It's simple to plan a successful mission

FLY
The MicaSense sensors low weight, low power requirements, 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.

To learn more about Atlas or to start a free trial, please visit micasense.com/atlas

SIGN UP

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

DOWNLOAD

Download RedEdge-M user manuals, integration guides and support resources via your ATLAS account.

CONTACT

Support@micasense.com US based MicaSense support is here to help.

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.

Revision History

Revision	Description	Date
01	Initial Release	04 Dec 2018
02	Kit content updated	29 Jul 2019