



# RedEdge/3DR Solo INTEGRATION GUIDE

# Table of Contents

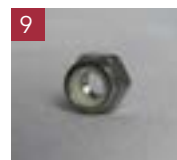
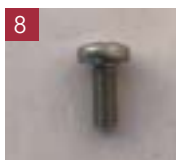
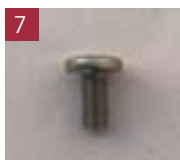
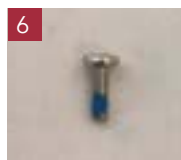
<b>Thank you for your purchase!</b> .....	1
<b>What's inside?</b> .....	1
<b>What's required</b> .....	2
<b>Let's get started!</b> .....	2
Attaching the power board.....	2
Attaching the power board.....	4
Attaching the DLS-GPS mast assembly .....	5

# Thank you for your purchase!

These instructions show how to integrate the MicaSense RedEdge with a 3DR Solo. This will cover powering the camera from the host system, attaching mounting brackets included in the kit, and placement of the Downwelling Light Sensor (DLS) and GPS.

## What's inside?

- |   |   |    |                                  |
|---|---|----|----------------------------------|
| 1 | Battery Eliminator Circuit (BEC)        | 7  | M2 x 0.4 6mm nyloc screw (Qty 4) |
| 2 | RedEdge/GoPro adapter assembly          | 8  | M3 x 0.5 8mm screw (Qty 4)       |
| 3 | Mast mounting plate                     | 9  | M3 x 0.5 nyloc nut (Qty 4)       |
| 4 | GPS-DLS mast                            | 10 | VHB tape squares (Qty 5)         |
| 5 | GPS-DLS mounting plate                  | 11 | Zip ties (Qty 4)                 |
| 6 | 4-40 1/2" flat head nyloc screw (Qty 3) | 12 | Alcohol wipe                     |



NOTE: Images are not shown to scale

# What's required

- ✓ #1 Phillips Screwdriver
- ✓ 5.5mm nut driver or wrench
- ✓ Scissors/cutters/etc.

## Let's get started!



Warning: Installation of this kit into a 3DR Solo drone should be done by an experienced person, in adherence with all recommendations and guidelines of the Solo manufacturer. Before assembling this kit, ensure the Solo 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 Solo or RedEdge.

### Attaching the power board

1. Remove the three screws on the 3DR Solo gimbal bay cover.



Arrows indicate which screws to remove to remove gimbal bay cover.

2. Pull off the gimbal bay cover.



Gimbal bay cover shown removed.

3. Clean the area outlined in the image below to remove all foreign debris and oils using the provided alcohol wipe.



Clean the area indicated with provided alcohol wipe.

4. Remove the adhesive cover from the power board.
5. Thread the RedEdge connector through the hole in the cover as shown. Peeling back the red adhesive lining, adhere the board to the cover in the position indicated below.



6. Locate the gimbal cable within the Solo and plug into the BEC as shown.



7. Replace the gimbal bay cover with the three screws.

## Attaching the power board

1. Remove the GoPro mount pin.



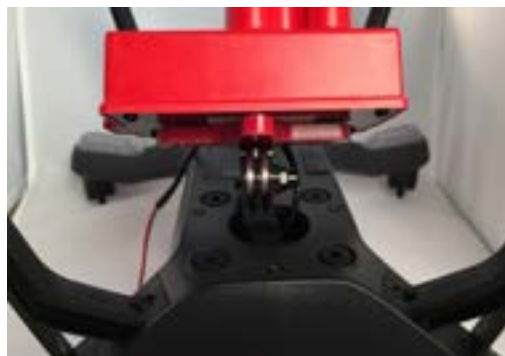
GoPro mount pin removed.

2. Using the three 4-40 screws, attach the RedEdge/GoPro adapter assembly to the RedEdge with a #1 drive phillips screwdriver.



Three flat head screws tightened to the RedEdge.

3. Slip the adapter assembly into the GoPro mount on the Solo.



Adapter assembly placed in Solo GoPro mount.

4. Flipping the Solo mount side up, insert and tighten the GoPro mount pin.

NOTE: While tightening, make sure to slightly tilt the camera to compensate for the tilt of the aircraft while flying.



Camera loosely screwed in.



Camera tilted to compensate for tilt during flight.

## Attaching the DLS-GPS mast assembly

1. Secure the DLS-GPS mast to the mast mount using the M3 screws with nuts, and the Phillips screwdriver and nutdriver or wrench previously mentioned.



Mast and mast mount secured.

2. Ensuring that the mast is folded by unscrewing the bottom retaining nut, attach the mast mount to the Solo using the four M2 screws. The folded mast should be on the bottom side of the mast mount (for now).



Mast folded.



Mast and mast mount attached to the Solo.

3. Flip the Solo over, so that the camera is now facing downwards and the mast is facing upwards (once unfolded and locked into place).



The locking mechanism on the mast will need to be tightened.

4. Using the included alcohol wipe, clean all surfaces where the VHB tape will be applied.  
NOTE: This is a critical step in promoting adhesion between surfaces.
5. Apply a single piece of VHB tape on the top of the mast once the alcohol has dried.



VHB tape applied to the top of the cleaned mast.

6. Center the GPS-DLS mounting plate over the VHB tape and firmly press together. Make sure the plate is pointing front-back relative to the aircraft.



DLS-GPS plate mounted on top of mast.

7. Using the included VHB tape squares, secure the DLS and GPS to the mounting plate as shown. Make sure the arrows on the DLS and GPS are both pointing forward, (towards the direction of travel).





GPS and DLS mounted with VHB and connected with their associated cables.

8. Connect the GPS unit to the DLS unit.

NOTE: See the RedEdge Integration Guide for more details.

9. Connect the long 6pin connector from the DLS "CAM" connector to the matching connector on the RedEdge camera.

NOTE: See the RedEdge Integration Guide for more details.



6pin cable connected between the RedEdge and DLS.

10. Using the zip ties, secure the wires to the mast and aircraft frame as necessary.



**WARNING:** Failure to properly secure loose wires may lead to interference with the aircraft propellers. This may damage the Solo, RedEdge, or both.

11. Using scissors or something similar, trim the zip ties.



Completed integration.

For other RedEdge associated integration guides, please visit our Knowledge Base at [support.micasense.com](http://support.micasense.com)

For additional questions, please contact [support@micasense.com](mailto:support@micasense.com)

MicaSense RedEdge/3DR Solo Integration Kit Instructions.

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## Review your outputs

When processing is complete, view your outputs from any connected device.

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US based MicaSense support is here to help.

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