

## Motor wiring inversion on certain batches

### Board identification

This errata sheet applies to the counter clockwise motors of some batches of the STEVAL-DRONE01 kit, identified by the STEVAL-FCU001V1 flight controller unit lot 2419.

The impacted motors have wires wrongly mounted (refer to Figure 3).

**Important:** Not the entire lot 2419 is impacted. Refer to Section 1.1 to check whether your kit is impacted.

**Table 1. Board identification**

Order code	Device info
STEVAL-DRONE01	Lot 2419 (on the STEVAL-FCU001V1 flight controller unit)

**Figure 1. STEVAL-FCU001V1 flight controller unit identification (lot 2419)**



## 1 Limitation

### 1.1 Description

The STEVAL-DRONE01 mini drone kit features the high performance STEVAL-FCU001V1 flight controller unit, as well as the motors, propellers, plastic frame and battery you need to assemble your own mini-drone.

Figure 2. STEVAL-DRONE01 reference design kit



Figure 3. STEVAL-DRONE01 - counter clockwise motor with wires correctly mounted



**Figure 4. STEVAL-DRONE01 - counter clockwise motor with wires correctly mounted (zoom)**

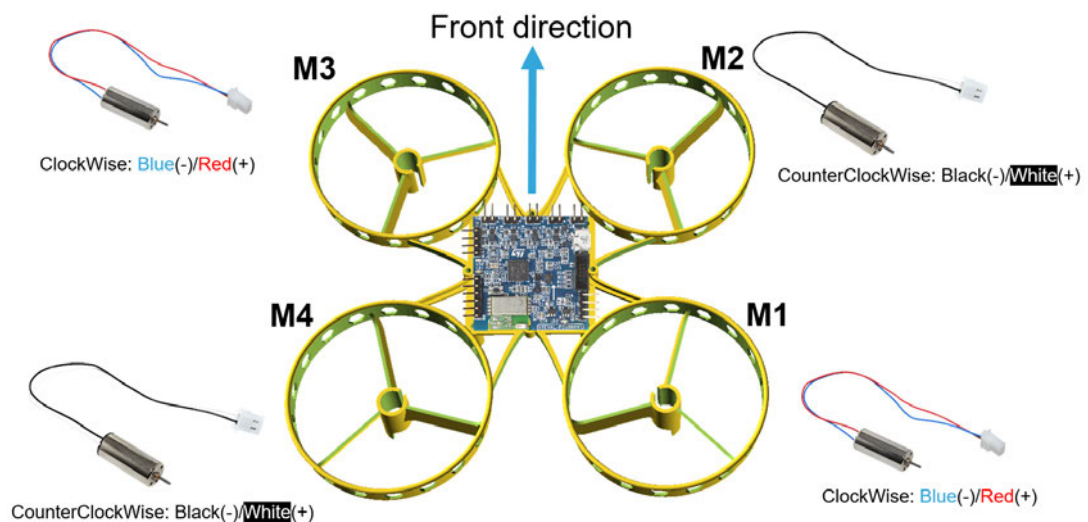


In some **STEVAL-DRONE01** batches (lot 2419 on the back of the **STEVAL-FCU001V1**), the counter clockwise motors have wires wrongly mounted (with respect to [Figure 3](#) and [Figure 4](#)): this makes the propellers rotate in the wrong direction and the drone appears too heavy to fly.

To know whether your kit has the motors wrongly wired, you have to:

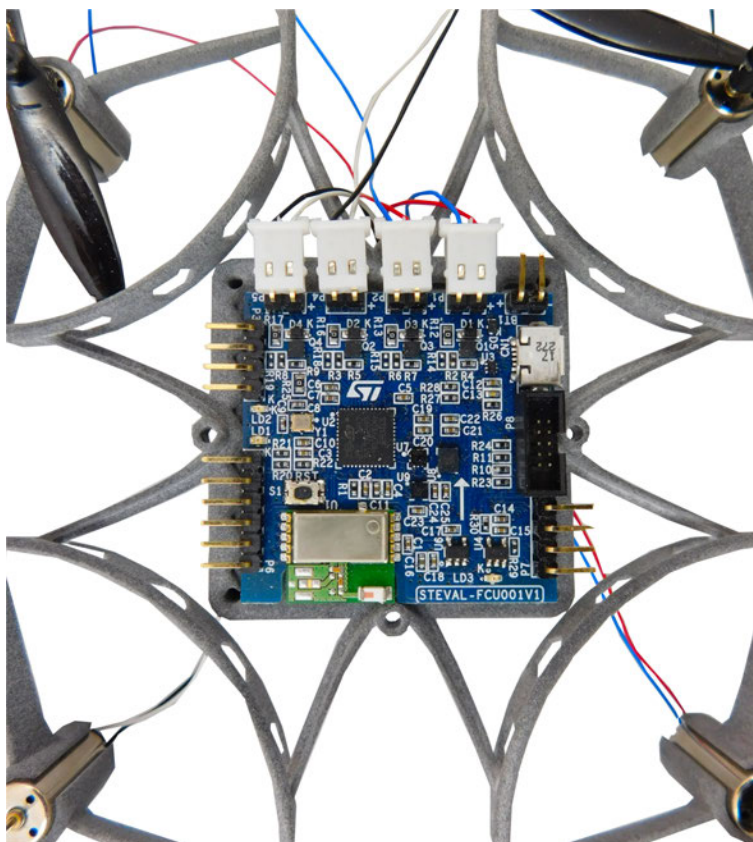
1. check the white connector of the CCW motors (the correct ones have the flat side as in [Figure 4](#))
2. check the effective rotation of the four motors and compare it with the figure below; in particular, check whether M2 and M4 can rotate in counter clockwise mode.

**Figure 5. STEVAL-DRONE01 - motor positioning and rotation sense (or direction)**



If M2 and M4 rotate in clockwise mode and the motors have been connected as shown in [Figure 6](#), this means the motors have the wrong wiring connection.

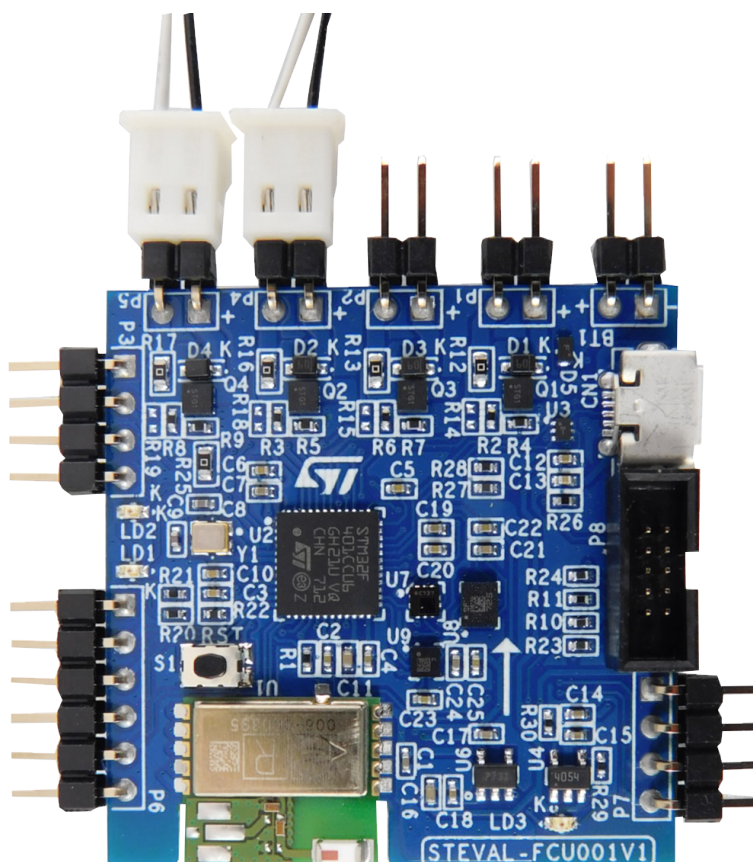
Figure 6. STEVAL-DRONE01 motor connection - standard case



## 1.2 Workaround

Rotate M2 and M4 connectors when plugging the CCW motors to the [STEVAL-FCU001V1](#) flight controller unit, as shown below.

Figure 7. Motor connectors with correct wiring (white and black wire sequence)



## Revision history

**Table 2. Document revision history**

Date	Revision	Changes
10-Mar-2020	1	Initial release.

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