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# **Module 1: Description, Parts of drone & their Functions**

## **Session 1:**

### **\* Components of Agri. Drone**



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# Components Of Agri. Drone

- Autopilot
- Mauch Sensor
- Mauch BEC
- Electronic Speed Controller(ESC)
- Motor
- Radar
- GPS
- Pump
- Atomizer
- Raspberry Pi
- Dosage Control Unit(DCU)
- Power Distribution Board
- RC Transmitter
- RC Receiver
- Telemetry Module
- Battery
- RS-232 USB Converter
- Tank
- Buzzer & Micro USB connector
- Different types of connectors



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## Autopilot

- Pixhawk2.1 is the autopilot
- Controls the aircraft during flying

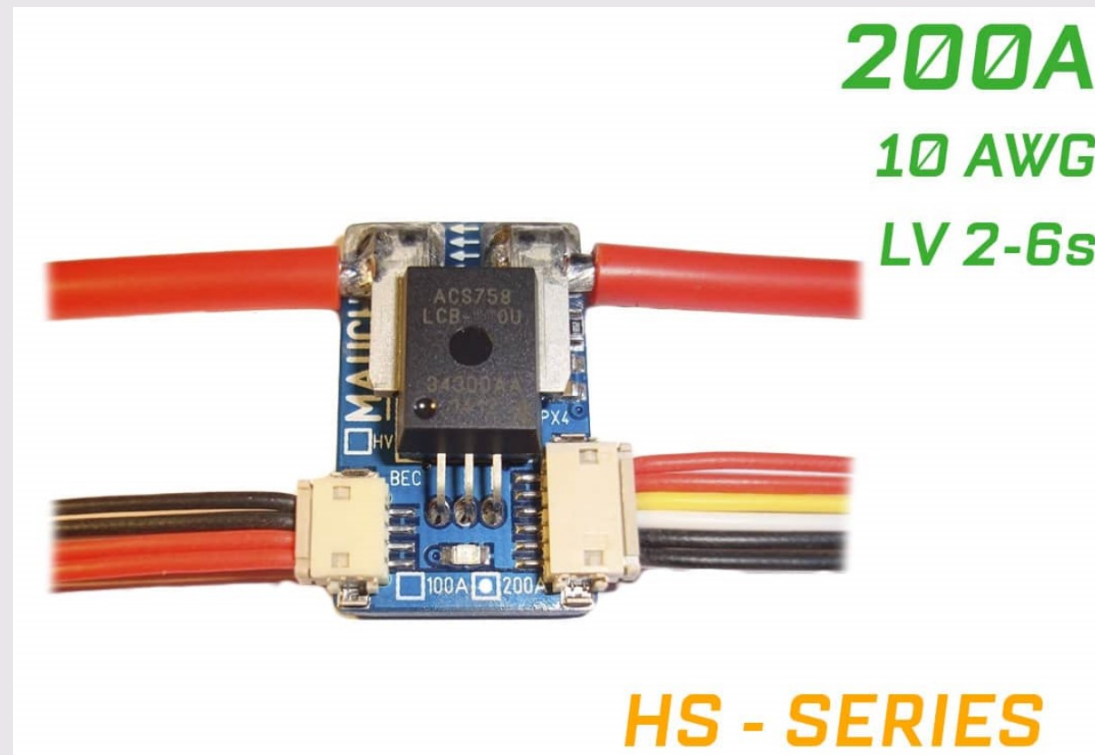




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## Mauch Sensor

- Monitors both battery voltage and current consumption from the battery.
- Send the data to Autopilot





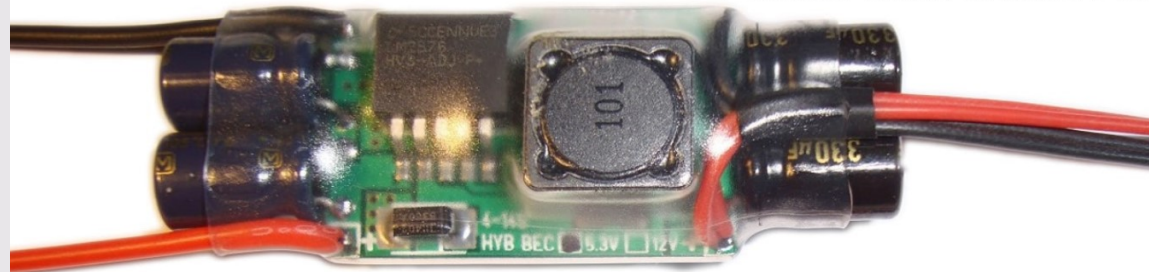
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## Mauch BEC

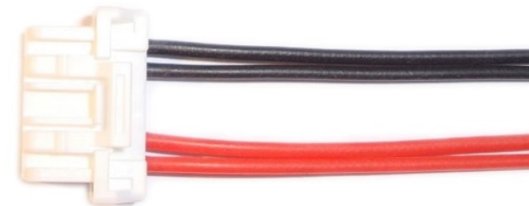
- Provide 5V for mauch sensor and Autopilot

**4-14s BACKUP BEC**

**4-14s / 5.30V / 3A  
20cm Klik-Mate 2.0**



**To Pixhawk 2 - Power 2**



**HS - SERIES**



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## Electronic Speed Controller(ESC)

- Controls & regulates the speed of an electric module according to the input pulse width modulated (PWM) signal





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## BLDC Motor

- Brushless DC motors
- Rotates according to the signal from ESC





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## Radar

- Measures distance using radio waves
- Send the data to autopilot over serial communication







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## GPS

- Both compass & GPS for navigation in single unit
- Send the data to autopilot over serial & 12C communication.
- GPS status LEDs and safty switch are also on this.





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## PUMP

- Pump water from tank to atomiser





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## Atomizer

- Emit incoming water as a spray
- Spray molecule size depends upon the rotational speed of the disc





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## Raspberry Pi

- Companion computer
- Sends PWM signal commands for pump and atomizer control
- Communicates with dosage control unit





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**Thank you...**