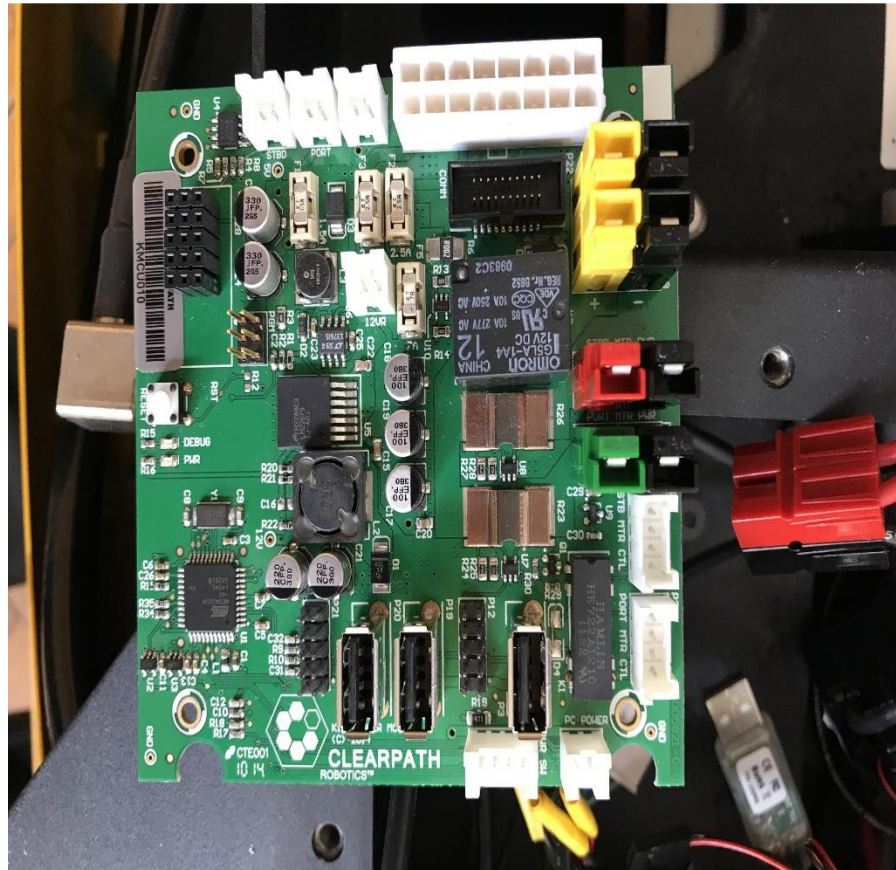## MCU

Working.

MCU on the Kingfisher acts like a power distribution board. It is activated by the push button. It consists of USB extension ports, 5V, ESC, LED and PC power adapter. The on-board Arduino handles serial and analog signal from Atom PC, radio receiver and motor controller.

GPS evaluation unit

Working.

It takes in the signal from GPS antenna and evaluates the signal. The output signal is sent via USB. But the GPS antenna still cannot be found. The test was done without antenna, but the results were still good.
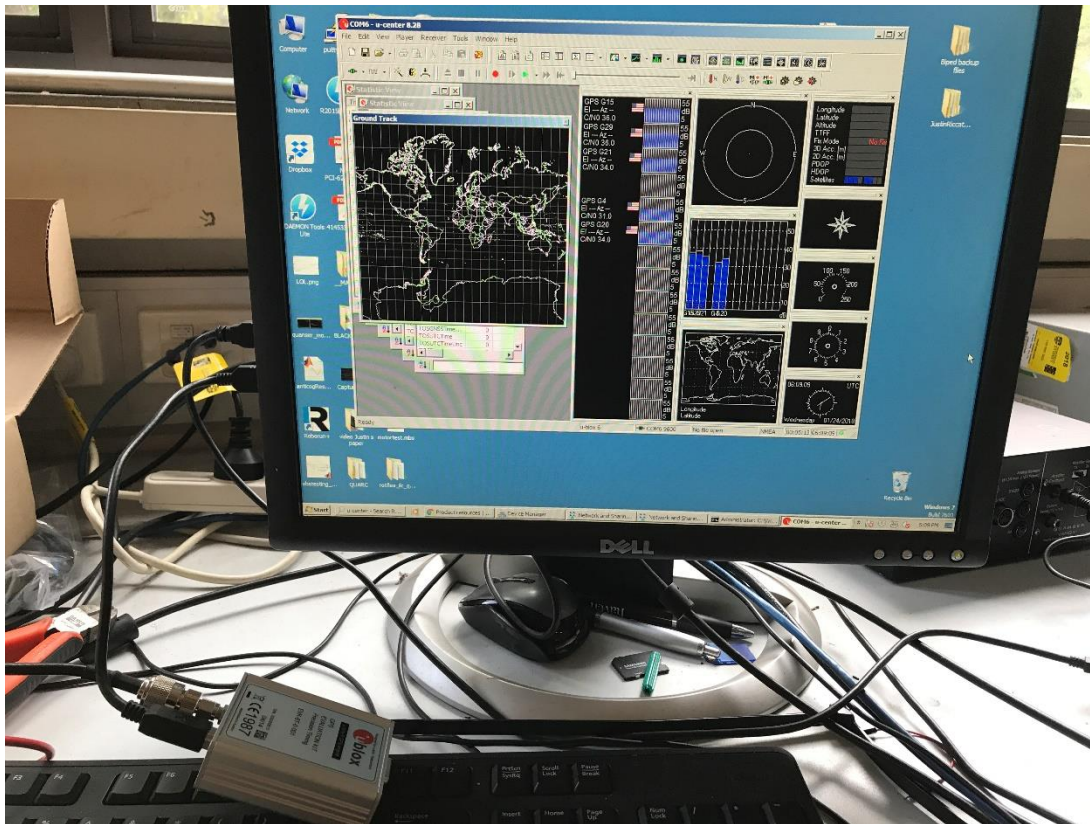
Atom PC

Working.

John has updated the PC to Ubuntu 16, which means the software we developed on Kingfisher will be compatible with WAMV. But it also means we have to write the low-level driver (e.g. ESC driver) ourselves. The driver of Kingfisher came with support packages, but it only supported ROS Hydro, but ROS hydro is obsolete and not compatible with newer version of Ubuntu.
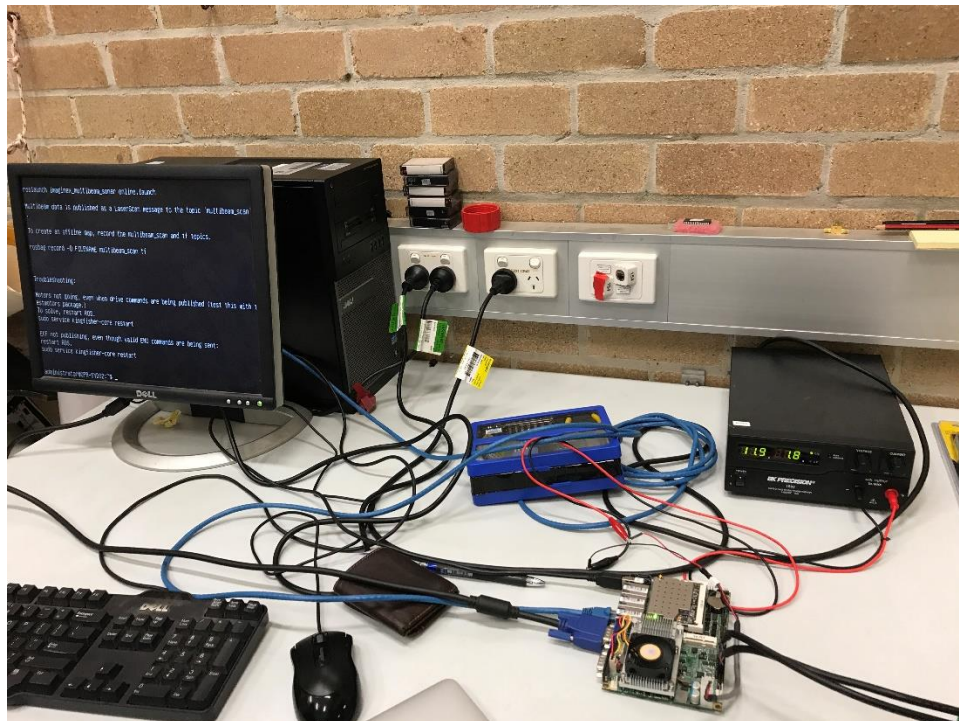
ESC

Working (requires more testing).

The ESC powers up correctly with LED and fans activated. Still in progress to figure out the communication protocol, tried using PPM and Castle link serial as described in manual using an external Arduino with no luck yet. We need to implement the communication ourselves as there is no compatible support packages available.
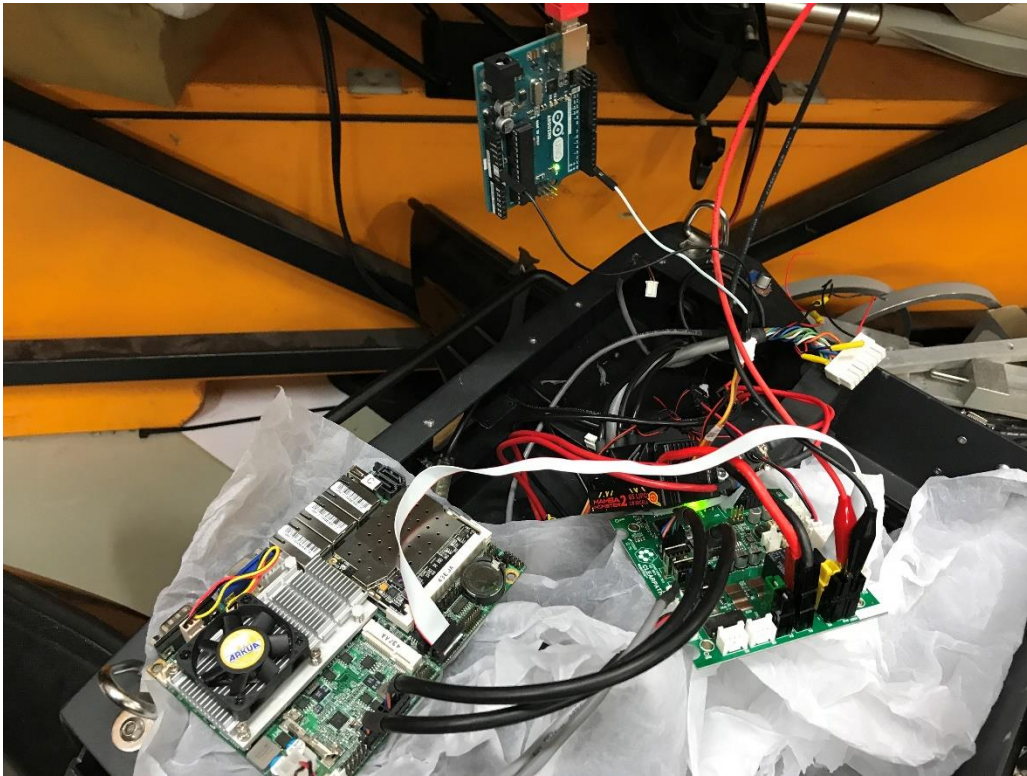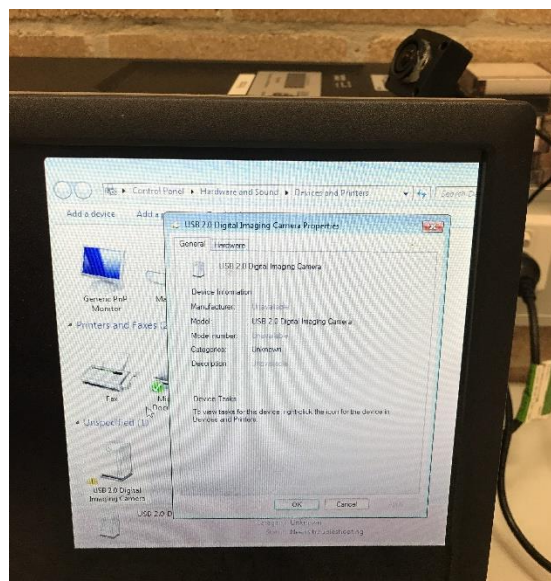
Voltage booster

Working.

It takes an input voltage and boosters it to 24V. It is located in electronics bay and its output is for payload bay.
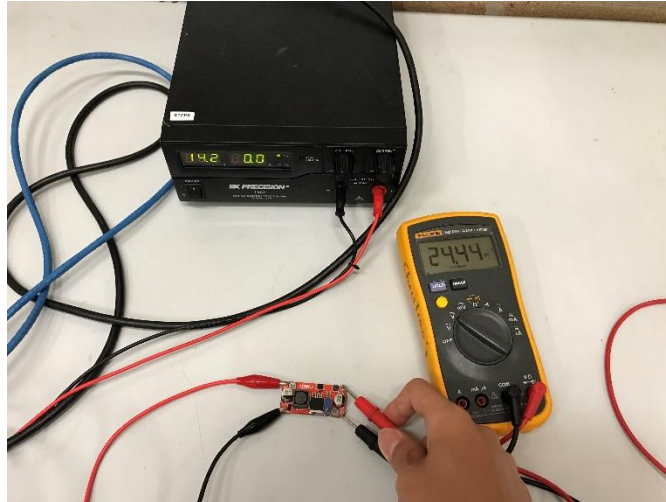
Webcam

Not working yet.

The camera can be detected but the driver for this camera is likely to be too old to be compatible with newer version of OS. An up-to-date webcam does not have this issue on the same setup.

Futaba radio transmitter

Working.

Futaba radio receiver

Not working.

The antenna for the receiver is broken, and this unit must be replaced.

NiMH Battery

Working.