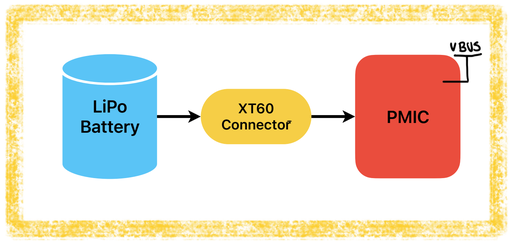
Linux based scout UAV idea

Requirements:
Quadcopter drone format.
System is Linux based.
Programming interface (USB).
Battery powered.
2G/3G comms capable.
Global navigation satellite system (GPS/GLONASS/etc.).
Storage (SD card or eMMC drive).
MCU sub-system.
Accelerator sub-system.
6DoF sensing.
Can detect fires in difficult to access areas.
Environmental sensing.
Camera sensor for vision.
Long range radio for data transmission.
Battery charging in base stations (Optional for later revisions).
Can deploy battery powered sensor modules in remote areas.

Components:
OSD32MP15x Linux capable SiP.
XT60 LiPo battery connector
Quectel M65 2G/3G module.
Quectel GNSS LC76G GPS/GLONASS module.
OSD32MP15x has a Cortex M4 available.
Google Coral accelerator over USB.
InvenSense MPU-6050 3-axis gyroscope & 3-axis accelerometer.
Panasonic Grid-eye sensor.
SDINBDG4-8G-X12 eMMC 8G drive.
OV5640/OV7670 camera modules.
Microchip RN2903 LoRaWAN module.

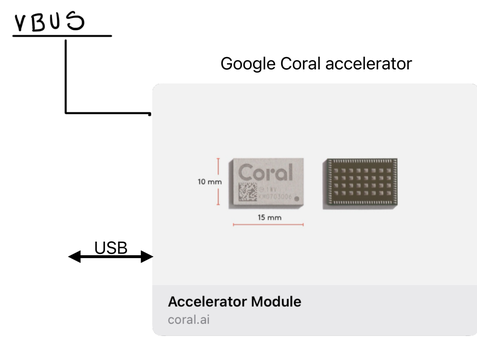
Power section



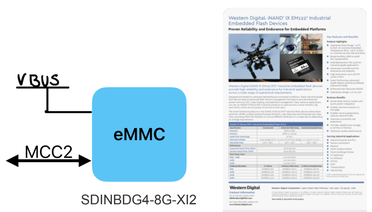
OSD32MP1 SiP

Datasheet
STM32MP1 System in Pack...
octavosystems.com

Accelerator



eMMC drive



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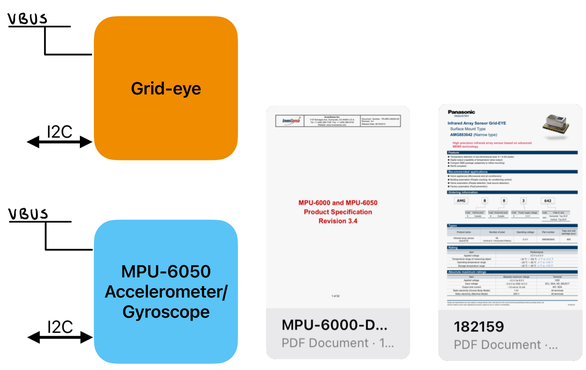
Sensors



MPU-6000-D...
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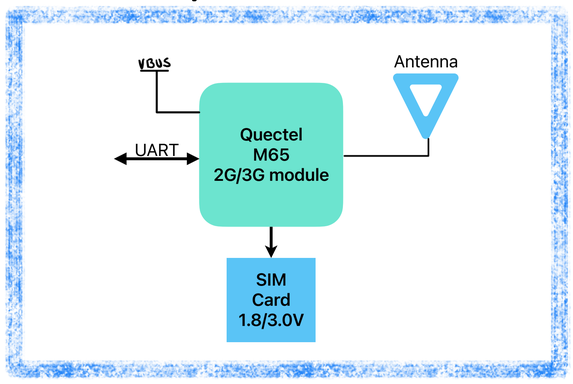
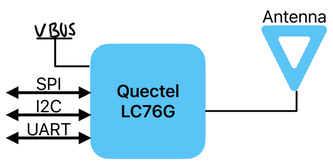
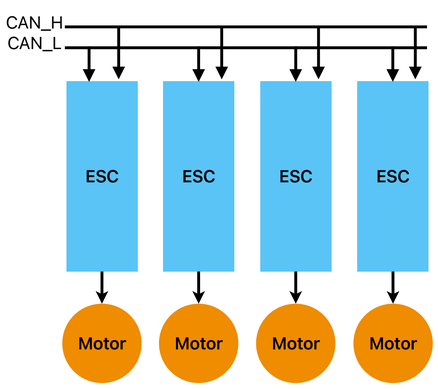
2G/3G comms



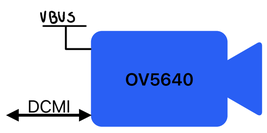
GNSS module



Motor control



Camera




OV5640_Data...
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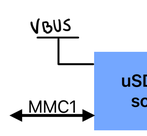
mouser.mx

uSD card socket

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