**CPU/Microcontroller Considerations**

1. Enough Processing Power for real-time data processing and SLAM (>120MHz clock speed with Dual/Quad core)
2. Enough RAM for temporary storage of variables, etc for complex computations (< 1GB supposedly enough)
   1. Too much RAM can result in:
      1. Higher costs
      2. Higher power consumption
      3. Complex and unnecessary features for drone applications
      4. Larger size, not fitting on drone
3. Enough ROM for data storage\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Can just use external SD Card
4. SD card slot
5. Nr of peripheral interfaces (UART, SPI, I2C, CAN bus) to interface with sensors
6. Nr. of analog inputs for barometer, accelerometer, etc
7. Power consumption characteristics (<<< μW/MHz or mW/MHz in active mode)
8. Durability and reliability\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Just look at it
9. Support System (Must have a lot of support)
10. Compatibility
    1. Must be able to run linux and ROS2
    2. Must be compatible with Flight controller
    3. Sensor compatibility\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Chose controller first, then compatible sensors
11. Size of microcontroller (must fit on drone)
12. Longevity and availability

**CPU/Microcontroller Comparison**

1. Khadas VIM3

(<https://www.researchgate.net/publication/358795290_RMF-Owl_A_Collision-Tolerant_Flying_Robot_for_Autonomous_Subterranean_Exploration>)

* A
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1. NUC i5

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1. NUC i7

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1. Jetson TX2

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1. Intel core i7

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