

- 1. Why design a general purpose IOT system rather than a custom microcontroller system?**
The raspberry pi offers many of the necessary features already built in. It also offers the potential for a long term parts supply.
- 2. Do industrial/military environmental conditions need to be considered?**
Yes but that would be a consideration for the mechanical engineer.
- 3. What processor would you like for the integrated microcontroller? Is it important that it be ARM like the Raspberry pi?**
RP2040 which is used on the rpi pico and is an ARM SoC.
- 4. What features will be implemented by the microcontroller?**
Sensor interface and future development by way of a FFC interface to extend the system.
- 5. What are the power requirements for the high power LEDs?**
Half watt each.
- 6. Should the design lean towards using COTS daughter boards or avoid them if possible?**
Avoid if at all possible.
- 7. Would it be acceptable to reverse engineer a COTS board from China as long as the existing firmware was not used?**
Yes
- 8. Is the battery management system intended primarily for portability or backup power?**
Portability and soft shutdown are required.
- 9. Would sensors be interfaced to the CM4 or the integrated microcontroller?**
Microcontroller.
- 10. How would the sensor interface be implemented? (ie protocol)**
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- 11. What would the Android based phone be used for?**
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- 12. What would the GPS and cellular features be potentially used for?**
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- 13. Would part selection be a major concern?**
Yes. An early BOM would be needed to estimate recurring cost of the unit.
- 14. How close is Tetracore's relationship with the raspberry pi foundation?**
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- 15. Would the development plan include incremental development and testing of intermediate versions or would it be done by incorporating all features in a single prototype?**
Incremental versions would reduce the likelihood of the design not meeting it's requirements.
- 16. Do you have a preferred parts supplier or board house? Do you have a source for daughter boards and the CM4?**
? (I looked it up and the German board house I use is AISLER)