

1) Summary

A short overall description of the project (from proposal).

2) System Design Formulation and Specifications

This section contains written descriptions and specifications for a system-level design. Reference the applicable requirements in the descriptions.

- a. System-level description and specifications with a block diagram of the project hardware, including:
 - Microprocessor/Microcontroller type. Ideal and actual, rationale.
 - Each MCU resource used. (A/D, UART, Timers, Power Management, bus frequency, etc)
 - Memory types and size requirements.
 - Description and specs of other **major** components/peripherals required.
 - Power Supply, with source type, input voltage specs, output voltage specs, output current specs, and efficiency specs.
- b. Description of the software system design, including:
 - Programming language(s)
 - Real-time kernel type
 - **Major** algorithms
 - OEM Software with licensing description

3) Development Plan

This section contains a detailed written description of your development plan.

- a. Written description of project development tasks and the planned sequence of performing tasks
 - Team projects must show how tasks are split between team members
 - Weekly schedule showing tasks to be completed winter and spring quarters
 - Any potential delivery problems for critical parts
- b. A description of the required development hardware and software. Include the source.
 - MCU Software development tools, lab equipment, extra lab space.
- c. A safety plan only as needed
 - For example, AC power (wall transformer or internal transformer).
- d. A demonstration plan.
 - Posters - required
 - Extraordinary items
 - Space requirements

Appendix A - Preliminary Parts List

Create a preliminary parts list for the final product. This list only needs to be accurate enough to determine cost, lead times, and power dissipation. Therefore, your list must include part number, description, cost, lead time, and power dissipation.

Appendix B - Cost Breakdown

Show an estimated cost breakdown of parts to estimate the BOM (electrical and board). With the BOM, find the MSRP using the rule of thumb of $MSRP = 3 \times BOM$. These are only estimates.

Appendix C - Power Budget Calculations

Show the calculations used for the overall power budget.