

Homework 3: Design Constraint Analysis and Component Selection Rationale					
Section	Description	Max	Poor	Good	Excellent
			0-2 / 0-4	3-4 / 5-8	5 / 9-10
1	Introduction (including updated PSSC)	10	Brief introduction of product.	PSSCs listed. Introduction touches on report topic (Design Constraints).	Introduction notes key design constraint(s).
2	Design Constraint Analysis	-			
2.1	Computational Requirements	10	Few and unquantified	Most computational requirements of the project listed, requirements not well quantified.	Detailed description of project's computational requirements. Requirements quantified. Identification of real-time constraints.
2.2	Interface Requirements	5		I/O functions described. Voltages of electronics mentioned.	Number of GPIO pins detailed. I/O voltage constraints listed. Mentioned PLDs needed for project, if necessary.
2.3	On-Chip Peripheral Requirements	10		On-chip peripherals needed identified. Some effort mentioning need for peripherals on microcontroller	On-chip peripherals detailed with number of channels for each. Need for on-chip peripherals on microcontroller detailed.
2.4	Off-Chip Peripheral Requirements	5		Off-chip peripherals necessary identified.	Off-chip peripherals necessary detailed and purposes noted.
2.5	Power Constraints	5	Power constraints listed.	Power constraints described.	Detailed description of power constraints. Heat dissipation constraints detailed.
2.6	Packaging Constraints	5	Packaging constraints fail to be realistic/reasonable.	Reasonable packaging constraints described.	Detailed description of packaging constraints. User comfort considered. Sophistication of users considered.
2.7	Cost Constraints	5		Maximum cost mentioned.	Cost constraint described with some justification.
3	Component Selection Rationale	20	Major component choice was missing from discussion.	Major component choices discussed, with some comparison between choices.	Detailed comparison of at least two candidates for each major component. Discussed how design constraints guided component choices.
4	Summary	5	Irrelevant summary	Summary touches design constraints and component selection choices	Summary goes over key design constraints and summarizes the design choices taken
5	List of References	10	Some references listed	Relevant references References formatted to IEEE standards	References listed in order of mention in article Effort taken to fill out references with details (year, source, link)
App A	Parts List Spreadsheet	5	Some parts listed Parts listed with no price/details	Key components listed Some effort taken to fill up table	Almost all components listed with descriptions and prices
App B	Updated Block Diagram	5	Some squares and some arrows Formatting issues	Looks somewhat like a block diagram	Block diagram shows connections between components effectively