

Team Number:	302						
Project Name:	U.C.C						
Team Member Names:	Jason Klinkbeil, Justin Hanson, Alijah Williams, Evan Lininger						
Version:	1						
All Major Components	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	Microcontroller	PIC18F57K42-I/PT	1.8V - 3.6V	1	350	350	mA
	Temperature Sensor	TC74A4-3.3VCTTR	2.7V - 5.5V	1	0.35	0.35	mA
	Fan	MF80251V1-1000U-A9	4.5V - 13.8V	1	120	120	mA
	12V Regulator	BDJ2GC0WEFJ-E2	4.5V - 14V	1	1000	1000	mA
	3.3V Regulator	LM3671MF-3.3/NOP	2.7V - 5.5V	1	600	600	mA
	Motor controller	296-42660-2-ND	6.5V - 45V	1	10	10	mA
	Humidity Sensor	SHT40-AD1B-R3	1.8V-3.6V	1	100	100	mA
+12V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	Fan	MF80251V1-1000U-A9	4.5V - 13.8V	1	120	120	mA
						0	mA
						0	mA
						0	mA
						0	mA
						120	mA
						25%	
						150	mA
	12V Regulator	BDJ2GC0WEFJ-E2	4.5V - 14V	1	1000	1000	mA
						850	mA
Total Remaining Current Available on +12V Rail							
+3.3V Power Rail						TotalCurrent(mA)	Unit
	Microcontroller	PIC18F57K42-I/PT	1.8V - 3.6V	1	350	350	mA
	Temperature Sensor	TC74A4-3.3VCTTR	2.7V - 5.5V	1	0.35	0.35	mA
	Motor controller	296-42660-2-ND	6.5V - 45V	1	10	10	mA
	Humidity Sensor	SHT40-AD1B-R3	1.8V-3.6V	1	100	100	mA
						0	mA
						460.35	mA
						25%	
						575.4375	mA
	3.3V Regulator	LM3671MF-3.3/NOP	2.7V - 5.5V	1	600	600	mA
						24.5625	mA
Total Remaining Current Available on +5V Rail							

External Power Source 1		Component Name	Part Number	SupplyVoltageRange	Outpu	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
Power Source 1 Selection		12V Battery Pack (x8 AA)	EN91	12V	12V	12V	2000	mA
Power Rails Connected to External Power Source 1		12V Regulator	BDJ2GC0WEFJ-E2	4.5V - 14V	1	1000	1000	mA
							0	mA
							0	mA
		Total Remaining Current Available on External Power Source 1					1000	mA
External Power Source 2		Component Name	Part Number	SupplyVoltageRange	Outpu	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
Power Source 2 Selection		4.5V Battery Pack	EN91	4.5V	4.5V	4.5V	1500	mA
Power Rails Connected to External Power Source 2		3.3V Regulator	LM3671MF-3.3/NOP	2.7V - 5.5V	1	600	600	mA
		Total Remaining Current Available on External Power Source 2					900	mA
	Component Name	Part Number	SupplyVoltageRange	Capacity(mAh)	equiredByRegulators			
	4.5V Battery Pack	EN91	4.5V		1500	600		
					Battery Life	2.5	hours	
	12V Battery Pack	EN91	12V		2000	1000		
					Battery Life	2	hours	
Notes								
External Supply Voltage should be determined by the dropout voltage for highest-voltage regulator (e.g., +14V for a +12V regulator).								
If you have multiple units in your design (e.g., a base unit and remote unit) then you need a separate power budget for each unit								