

Power Budget

Team Number:	106						
Project Name:	Automatic Plant Care System						
Team Member Names:	Jon San Vicente						
Version:	1						

All Major Components	Component Name	Part Number	Supply	#	Absolute	Total	Unit
	Curiosity Nano	PIC18F57Q43	1.7V -5.1V	1	500	500	mA
	MOSFET	AOTF2618L	0V - 60V	1	200	200	mA

+12V Power Rail	Component Name	Part Number	Supply	#	Absolute	Total	Unit
						0	mA
						0	mA
						0	mA
						0	mA
						0	mA
					Subtotal	0	mA
					Safety Margin	25%	
					Total Current Required on +12V Rail	0	mA
						0	mA
					Total Remaining Current Available on +12V Rail	0	mA

+5V Power Rail	Component Name	Part Number	Supply	#	Absolute	Total	Unit
	Curiosity Nano	PIC18F57Q43	1.7V -5.1V	1	500	500	mA
	MOSFET	AOTF2618L	0V - 60V	1	200	200	mA
						0	mA
						0	mA
						0	mA
	Subtotal					700	mA
	Safety Margin					25%	

			Total Current Required on +5V Rail			875	mA
c2. Regulator or Source Choice	+5V Regulator	LM7805T	5V - 18V	1	1000	1000	mA
	Total Remaining Current Available on +5V Rail					125	mA
-5V Power Rail	Component Name	Part Number	Supply	#	Absolute	Total	Unit
						0	mA
						0	mA
						0	mA
						0	mA
					Subtotal	0	mA
					Safety Margin	25%	
					Total Current Required on -5V Rail	0	mA
						0	mA
						0	mA
	Total Remaining Current Available on -5V Rail					0	mA
+3.3V Power Rail	Component Name	Part Number	Supply	#	Absolute	Total	Unit
						0	mA
						0	mA
						0	mA
						0	mA
					Subtotal	0	mA
					Safety Margin	25%	
					Total Current Required on +3.3V Rail	0	mA
						0	mA
						0	mA
	Total Remaining Current Available on 3.3V Rail					0	mA
C. For each power rail above, select a specific voltage regulator using the same process as for major component selection. Confirm that							
External Power Source 1	Component Name	Part Number	Supply	Output	Absolute	Total	Unit
Power Source 1 Selection	Plug-in Wall Supply	(full part number)	110VAC	+24V	5000	5000	mA
						0	mA
Power Rails Connected to External Power Source 1	+5V Regulator	LM7805T	5V - 18V	1	1000	1000	mA
						0	mA
	Total Remaining Current Available on External Power Source 1					4000	mA

External Power Source 2	Component Name	Part Number	Supply	Output	Absolute		Total	Unit
							500	mA
							0	mA
							500	mA
	Component Name	Part Number	Supply		Capacity		Required	
					0		0	
					Battery Life		0	hours
Notes								

[1] For inductive loads (e.g., motors, solenoids) this is often called "stall current" on the data sheet