## **Individual Power Budget**

Team Number:
Project Name:
Team Member Names:
Version:

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A. List ALL major compone	ents (active devices, intea	rated circuits, etc.) except for bo	wer sources, voltage regulate	ors, resis	tors, capacitors, or passive elements		
All Major Components	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	PIC Discovery Nano	PIC18F577Q43	1.8V - 5.0V	1	500	500	
	Operational Amplifier	MCP601-I/P	2.7V - 6.0V	1	2	2	mA
							mA
							mA mA
1							mA
1							mA
B. Assign each major com	ponent above to ONE pow	ver rail below. Try to minimize the	number of different power ra	ails in the	design.		<u>'                                    </u>
+12V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
1							mA
1							mA.
1						0	
1							
1					Subtotal		
İ					Safety Margin	25%	
İ					Total Current Required on +12V Rail	0	mA
İ					•		
c1. Regulator or Source Ch	noice					C	
L					ining Current Available on +12V Rail	0	
+5V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
İ	PIC Discovery Nano Operational Amplifier	PIC18F577Q43 MCP601-I/P	1.8V - 5.0V 2.7V - 6.0V	1	500	500	mA mA
	operational Ampliner	IVICE OUT-I/F	2.7V = 0.0V	1	2		mA mA
İ							
						C	mA
İ					Subtotal	502	mA
1					Safety Margin	25%	
1					Total Current Required on +5V Rail	627.5	mA
e3 Begulator or Source Cl	h .EV/Dogulator	LM1084IT-5.0/NOPB	1.5V - 25V	1	5000	5000	mA
c2. Regulator or Source Ch	1 TOV Negulator	LW1100411-3.0/NOFB			naining Current Available on +5V Rail	4372.5	
-5V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
					,	C	
1						C	
1						C	mA
1						C	
İ					Subtotal Safety Margin	25%	mA
1					Total Current Required on -5V Rail	25%	
İ					Total Current Required on -5 v Ruil		11116
c3. Regulator or Source Ch	hoice					C	mA
			:	Total Ren	naining Current Available on -5V Rail	C	mA
+3.3V Power Rail							
	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	C	Unit mA
	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	C	Unit mA mA
	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	0	Unit mA mA mA
	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	0	Unit mA mA mA
	Component Name	Part Number	SupplyVoltageRange	#		0	Unit mA mA mA mA mA mA
	Component Name	Part Number	SupplyVoltageRange	#	Subtotal	000000000000000000000000000000000000000	Unit mA mA mA mA mA mA
		Part Number	SupplyVoltageRange	#	Subtotal Safety Margin	C C C C C C C C C C C C C C C C C C C	Unit mA mA mA mA mA mA
c4. Regulator or Source Cl		Part Number		#	Subtotal Sofety Margin Total Current Required on +3.3V Rail	25% 0 0 0 0 25% 0	Unit mA mA mA mA mA mA mA
c4. Regulator or Source Cf		Part Number		#	Subtotal Safety Margin	C C C C C C C C C C C C C C C C C C C	Unit mA mA mA mA mA mA mA
	hoice		T.	# otal Rema	Subtotal Safety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail	25% C	Unit  mA  mA  mA  mA  mA  mA  mA  mA  mA  m
C. For each power rail abou	hoice we, select a specific voltaç	ge regulator using the same proc	т. ess as for major component.	# otal Rema	Subtotal Safety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail Confirm that the Total Remaining C	25%	mA mA mA mA mA
C. For each power rail about D. Select a specific externa	hoice ve, select a specific voltaş al power source (wall supp	ge regulator using the same proc ply or battery) for your system, a	T ess as for major component nd confirm that it can supply	#  otal Remandation selection all of the	Subtotal Sofety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail Confirm that the Total Remaining C	urrent Available on each rail	Unit MA MA MA MA MA MA MA MA MA MA MA MA MA
C. For each power rail abo  D. Select a specific externs  External Power Source 1	hoice we, select a specific volta; al power source (wall sup; Component Name	ge regulator using the same proc ply or battery) for your system, a Part Number		#  otal Remandation  selection  all of the  Outpu	Subtotal Safety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail Confirm that the Total Remaining C regulators for all of the power rails s AbsoluteMaximumCurrent (mA)	urrent Available on each rail imultaneously. If you need n TotalCurrent(mA)	Unit  mA  mA  mA  mA  mA  mA  mA  mA  mA  m
C. For each power rail about D. Select a specific externa	hoice we, select a specific volta; al power source (wall sup; Component Name	ge regulator using the same proc ply or battery) for your system, a	T ess as for major component nd confirm that it can supply	#  otal Remandation selection all of the	Subtotal Sofety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail Confirm that the Total Remaining C	urrent Available on each rail	Unit  mA  mA  mA  mA  mA  mA  mA  mA  mA  m
C. For each power rail abo  D. Select a specific externat  External Power Source 1  Power Source 1 Selection	hoice ve, select a specific volta; al power source (wall supp Component Name 9V batteries	ge regulator using the same proc ply or battery) for your system, a Part Number		#  otal Remandation  selection  all of the  Outpu	Subtotal Safety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail Confirm that the Total Remaining C regulators for all of the power rails s AbsoluteMaximumCurrent (mA)	urrent Available on each rail imultaneously, if you need in TotalCurrent(mA)	mA mA mA mA mA mA mA mA mA mA mA mA mA m
C. For each power rail abo  D. Select a specific externe External Power Source 1 Power Source 1 Selection  Power Rails Connected to	hoice eve, select a specific voltas al power source (wall supp Component Name 9V batteries	ge regulator using the same proc ply or battery) for your system, a Part Number PC1604BKD	These as for major component and confirm that it can supply SupplyVoltageRange 9.0V	#  otal Remandation  selection  all of the  Outpu	Subtotal Safety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail Confirm that the Total Remaining C regulators for all of the power rails s AbsoluteMaximumCurrent (mA)	urrent Available on each rail imultaneously. If you need n TotalCurrent(mA)	Unit  MA  MA  MA  MA  MA  MA  MA  MA  MA  M
C. For each power rail abo  D. Select a specific externat  External Power Source 1  Power Source 1 Selection	hoice ve, select a specific volta; al power source (wall supp Component Name 9V batteries	ge regulator using the same proc ply or battery) for your system, a Part Number		#  otal Remandation  selection  all of the  Outpu  9.0V	Subtotal Safety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail Confirm that the Total Remaining C regulators for all of the power rails s AbsoluteMaximumCurrent (mA) SOCC	urrent Available on each rail imultaneously: If you need in TotalCurrent(mA)	Unit  MA  MA  MA  MA  MA  MA  MA  MA  MA  M
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C. For each power rail abo D. Select a specific externe External Power Source 1 Power Source 1 Selection Power Rails Connected to External Power Source 1	hoice  we, select a specific voltas al power source (wall supp Component Name  9V batteries  +5V Regulator	ge regulator using the same proc ply or battery) for your system, a Part Number PC1604BKD LM1084IT-5.0/NOPB	ess as for major component. Ind confirm that it can supply SupplyVoltageRange 9.0V 1.5V - 25V Total Remaining (	#  otal Remaisselection all of the Outpu 9.0V  1  Current A	Subtotal Safety Margin Total Current Required on +3.3V Rail aining Current Available on 3.3V Rail Confirm that the Total Remaining C regulators for all of the power rails s AbsoluteMaximumCurrent (mA) 5000 627.5	urrent Available on each rail imultaneously. If you need in TotalCurrent(mA) 5000 627.5	Unit mA mA mA mA mA mA mA mA mA mA mA mA mA
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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