Power Budget

Team Number:	**201**
Project Name:	**Power Budget**
Team Member Names:	**Marcus Perez**
Version:	**1**

A. List ALL major components (active devices, integrated circuits, etc.) except for power sources, voltage regulators, resistors, capacitors, or passive elements

All Major Components	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	ESP32-S3-WROOM1	1965-ESP32-S3-WROOM-1-N4CT-ND	3V ~ 3.6V	1	355	355	mA
	LED	475-LBT64G-AACB-59-Z484-20-R33-ZCT-ND	3V	1	20	20	mA
							mA
							mA
							mA
							mA

B. Assign each major component above to ONE power rail below. Try to minimize the number of different power rails in the design.

+3.3V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	ESP32-S3-WROOM1	1965-ESP32-S3-WROOM-1-N4CT-ND	3V ~ 3.6V	1	355	355	mA
	LED	475-LBT64G-AACB-59-Z484-20-R33-ZCT-ND	3V	1	20	20	mA
						0	mA
						0	mA
					Subtotal	375	mA
					Safety Margin	25%	
					Total Current Required on +3.3V Rail	468.75	mA
c4. Regulator or Source Ch	3.3V Regulator	LM3671MF-3.3/NOPBCT-ND	2.5-5.5V	1	600	600	mA
					Total Remaining Current Available on 3.3V Rail	131.25	mA

C. For each power rail above, select a specific voltage regulator using the same process as for major component selection. Confirm that the Total Remaining Current Available on each rail above is not

D. Select a specific external power source (wall supply or battery) for your system, and confirm that it can supply all of the regulators for all of the power rails simultaneously. If you need multiple

External Power Source 1	Component Name	Part Number	SupplyVoltageRange	Output	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
Power Source 1 Selection	Plug-in Wall Supply	WSU090-2000-13	90-264VAC	9V	2000	2000	mA
							mA
Power Rails Connected to External Power Source 1							mA
	+3.3V low-dropout regula	KA78RM33RTF	2.5-5.5V	3.3	600	1980	mA
					Total Remaining Current Available on External Power Source 1	20	mA