

Team Number: 301							
Project Name: HMI Subsystem							
Name: Xander Heafey							
Version: 2							
All Major Components	Component Name	Part Number	Supply Voltage Range	#	Absolute Maximum Current (mA)	Total Current (mA)	Unit
	3.3V Switching Regulator	LM2575D2T-3.3G	4.75-40V	1	1000	1000	mA
	OLED Screen	NHD-1.8-160128UBC3	2.7-3.5V	1	250	250	mA
	Buttons	JS5208	0-20V	1	20	20	mA
	USB Programer	USB3131-30-0230-A	0-30V	1	1000	1000	mA
	ESP 32	ESP32-S3-WROOM-1-N4	3-3.6V	1	500	500	mA
3.3V Power Rail	Component Name	Part Number	Supply Voltage Range	#	Absolute Maximum Current (mA)	Total Current (mA)	Unit
	OLED Screen	NHD-1.8-160128UBC3	2.7-3.5V	1	250	250	mA
	Buttons	JS5208	0-20V	1	20	20	mA
	ESP 32	ESP32-S3-WROOM-1-N4	3-3.6V	1	500	500	mA
					Subtotal	770	mA
					Safety Margin	25%	
					Total Current Required on +3.3V Rail	962.5	mA
Switching Regulator	3.3V Switching Regulator	LM2575D2T-3.3G	4.75-40V	1	1000	1000	mA
					Total Remaining Current Available on 3.3V Rail	37.5	mA
External Power Source 1	Component Name	Part Number	Supply Voltage Range	Output Voltage	Absolute Maximum Current (mA)	Total Current (mA)	Unit
Power Source 1 Selection	Plug-in Wall Supply	L6R24-120	90 ~ 264 VAC	12V	2000	2000	mA
	3.3V Switching Regulator	LM2575D2T-3.3G	LM2575D2T-3.3G	3-3.6V	1000	1000	mA
Power Rails Connected							
					Total Remaining Current Available on External Power Source 1	1000	mA
External Power Source 2	Component Name	Part Number	Supply Voltage Range	Output Voltage	Absolute Maximum Current (mA)	Total Current (mA)	Unit
Power Source 2 Selection	Micro USB-B	USB3131-30-0230-A	0-5VDC	0-5VDC	1800	1800	mA
	3.3 V Switching Regulator	LM2575D2T-3.3G	4.75-40V	3-3.6V	1000	1000	mA
Power Rails Connected							
					Total Remaining Current Available on External Power Source 2	800	mA