





Title			
CAL POLY ME - 507 MCU BOARD HW 3			
Size	Number	Revision	
Tabloid	01-SHEET 2	01	
Date:	5-01-2024	Sheet of MCU BOARD	
File:	C:\Users\MCU\SchDoc	Drawn By: AIDAN SCHWING	

									\$29.72									
Part Number	Brief Description	Type	Package	Value	QTY	Purpose	Price (\$)	Price (\$)	Total	Supplier	Link	Notes						
STM32H7R3V8T6	IC MCU 32BIT 64KB FLASH 100LQFP	IC	100LQFP	-	1	MCU	\$7.89		\$7.89	digikey	https://www.digikey.com/en/products/detail/stmicroelectronics/STM32H7R3V8T6/22486039							
LM2576-5.0WU	Switching Voltage Regulators 3A Step-Down SMPS Regulator	IC	-	-	1	12->5V	\$1.79		\$1.79	mouser	https://www.mouser.com/ProductDetail/Microchip-Technology/LM2576-5.0WU?qs=kh6iOki%2FeLHil9xhWDTjJw%3D%3D							
NCP1117DT33T5G	IC REG LINEAR 3.3V 1A DPAK (LDO)	IC	-	-	1	5->3.3V	\$0.64		\$0.64	digikey	https://www.digikey.com/en/products/detail/onsemi/NCP1117DT33T5G/921285							
XT30PW-M	XT30 Elbow Board Connector	Conn	-	-	1	External power connection	\$0.81		\$0.81	TME	https://www.tme.com/us/en-us/details/xt30pw-m/dc-power-connectors/amass/							
0685P2000-01	Surface Mount Fuses Surface Mt Chip fuse 1206 size, 2A	Fuse	-	-	1	Fusing main power	\$0.73		\$0.73	mouser	https://www.mouser.com/ProductDetail/Bel-Fuse/0685P2000-01?qs=vlWxofP3U2wVwMvAft2WoWQ%3D%3D							
ECS-80-18-4XDN	8 MHz Oscillator	Osc	-	-	1	External oscillator for MCU	\$0.71		\$0.71	digikey	https://www.digikey.com/en/products/detail/ecs-inc/ECS-80-18-4XDN/827606?s=N4lgTCBcDalkKIGEDKBaAHABhQRjSgLABoAiAciALoC%2BQA							
Tactile Switch B3F	Tactile Button switch (6mm), thru hole	But	-	-		NRST circuit 6mm tactile switch	\$2.50		\$0.00	adafruit	https://www.adafruit.com/product/367							
CR0805-FX-6200ELF	RES SMD 620 OHM 1% 1/8W 0805	Res	-	-	1	R_ext for oscillator circuit	\$0.10		\$0.10	digikey	https://www.digikey.com/en/products/detail/bourns-inc/CR0805-FX-6200ELF/3785055							
CR0603-FX-1002ELF	RES SMD 10K OHM 1% 1/10W 0603	Res	0603	10k	2	NRST pull up, BOOT0 pull down	\$0.10		\$0.20	digikey	https://www.digikey.com/en/products/detail/bourns-inc/CR0603-FX-1002ELF/3593188							
CR0603-FX-1300ELF	RES SMD 130 OHM 1% 1/10W 0603	Res	0603	130	1	Resistor for 5V status LED	\$0.10		\$0.10	digikey	https://www.digikey.com/en/products/detail/bourns-inc/CR0603-FX-1300ELF/3740907							
CR0603-FX-3300ELF	RES SMD 330 OHM 1% 1/10W 0603	Res	0603	330	1	Resistor for 3V3 status LED	\$0.10		\$0.10	digikey	https://www.digikey.com/en/products/detail/bourns-inc/CR0603-FX-3300ELF/3783948?s=N4lgTCBcDaiMICUAMA2JBmAtAMQBqfXSSQFEAZbEAXQF8g							
HSMG-C170	Standard LEDs - SMD Green Diffused 572nm 15mcd	Diode	0805	-	1	5V status	\$0.38		\$0.38	mouser	https://www.mouser.com/ProductDetail/Broadcom-Avago/HSMG-C170?qs=YDL0qNrpDT4lm8ArMPkMEA%3D%3D							
HSMA-C170	Standard LEDs - SMD Amber Diffused 592nm 90mcd	Diode	0805	-	1	3V3 status	\$0.61		\$0.61	mouser	https://www.mouser.com/ProductDetail/Broadcom-Avago/HSMA-C170?qs=YDL0qNrpDT47TEfDRX4SKQ%3D%3D							
1N5819HW1-7-F	Diode 40 V 1A Surface Mount SOD-123F	Diode	SOD-123F	-	1	Diode for switching circuit	\$0.10		\$0.10	digikey	https://www.digikey.com/en/products/detail/diodes-incorporated/1N5819HW1-7-F/5768523							
GRM0335C1H101JA01D	CAP CER 100PF 50V C0G/NP0 0201	Cap	0603	10n	4	Generally for MCU & switching circuit power isolation	\$0.10		\$0.40	digikey	https://www.digikey.com/en/products/detail/murata-electronics/GRM0335C1H101JA01D/2269165							
AGC0603X7R500-104KNP	Auto Grade Capacitor,0603,X7R,50	Cap	0603	0.1u	16		\$0.10		\$1.60	digikey	https://www.digikey.com/en/products/detail/venkel/AGC0603X7R500-104KNP/20484942							
DNE	Capacitor	Cap	0603	1u	10		\$0.50		\$5.00			need to re-spec, 1u DNE in 0603 (bump to 0805)						
DNE	Capacitor	Cap	0603	2.2u	3		\$0.50		\$1.50			need to re-spec, 2.2u DNE in 0603 (bump to 0805)						
DNE	Capacitor	Cap	0805	10u	4		\$0.50		\$2.00	?	?	could not find, need to re-spec						
DNE	Capacitor	Cap	0805	22u	4		\$0.50		\$2.00	?	?	could not find, need to re-spec						
865080543009	CAP ALUM 47UF 20% 35V SMD	Cap	6.6x6.6x8	47u	2		\$0.28		\$0.56		digikey	https://www.digikey.com/en/products/detail/w%C3%BCrth-elektronik/865080543009/5728103						
865080343009	CAP ALUM 100UF 20% 16V SMD	Cap	6.6x6.6x8	100u	2		\$0.28		\$0.56		digikey	https://www.digikey.com/en/products/detail/w%C3%BCrth-elektronik/865080343009/5728014						
GRM0335C1H330GA01D	CAP CER 33PF 50V C0G/NP0 0201	Cap	0805	32p	2		\$0.10		\$0.20		digikey	https://www.digikey.com/en/products/detail/murata-electronics/GRM0335C1H330GA01D/4358723						
SSR1280-331K	5050 330uH inductor	Ind	5050	330u	1	Inductor for switching circuitry	\$1.01		\$1.01	mouser	https://www.mouser.com/ProductDetail/Bourns/SRR1280-331K?qs=brMhP%2FMjUfd0KI3Wq6D0xQ%3D%3D							
DS04-254-2-01BK-SMT-TR	DIP Switches / SIP Switches DIP Switch, SPST, 2.54 pitch, flat actuator, SMT	Sw	-	-	1	Dip switch for BOOT0	\$0.73		\$0.73	mouser	https://www.mouser.com/ProductDetail/CUI-Devices/DS04-254-2-01BK-SMT-TR?qs=wnTfsH77Xs4xXRFXKF0ssg%3D%3D							