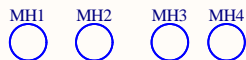


MOUNTING HOLES



Title: Microcontroller

Drawing Engineer: S. Kale

Revision: 1.3

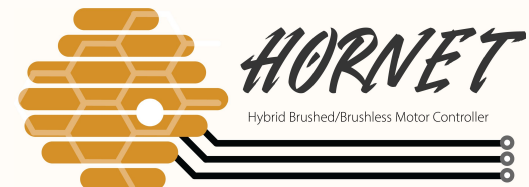
Checking Engineer: A. Chaudhary

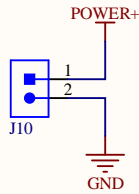
Date: December 26, 2020

Notes:

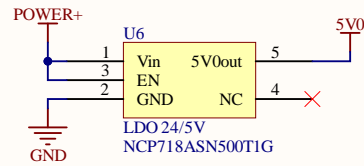
Document Name:

Sheet: 1 of 4

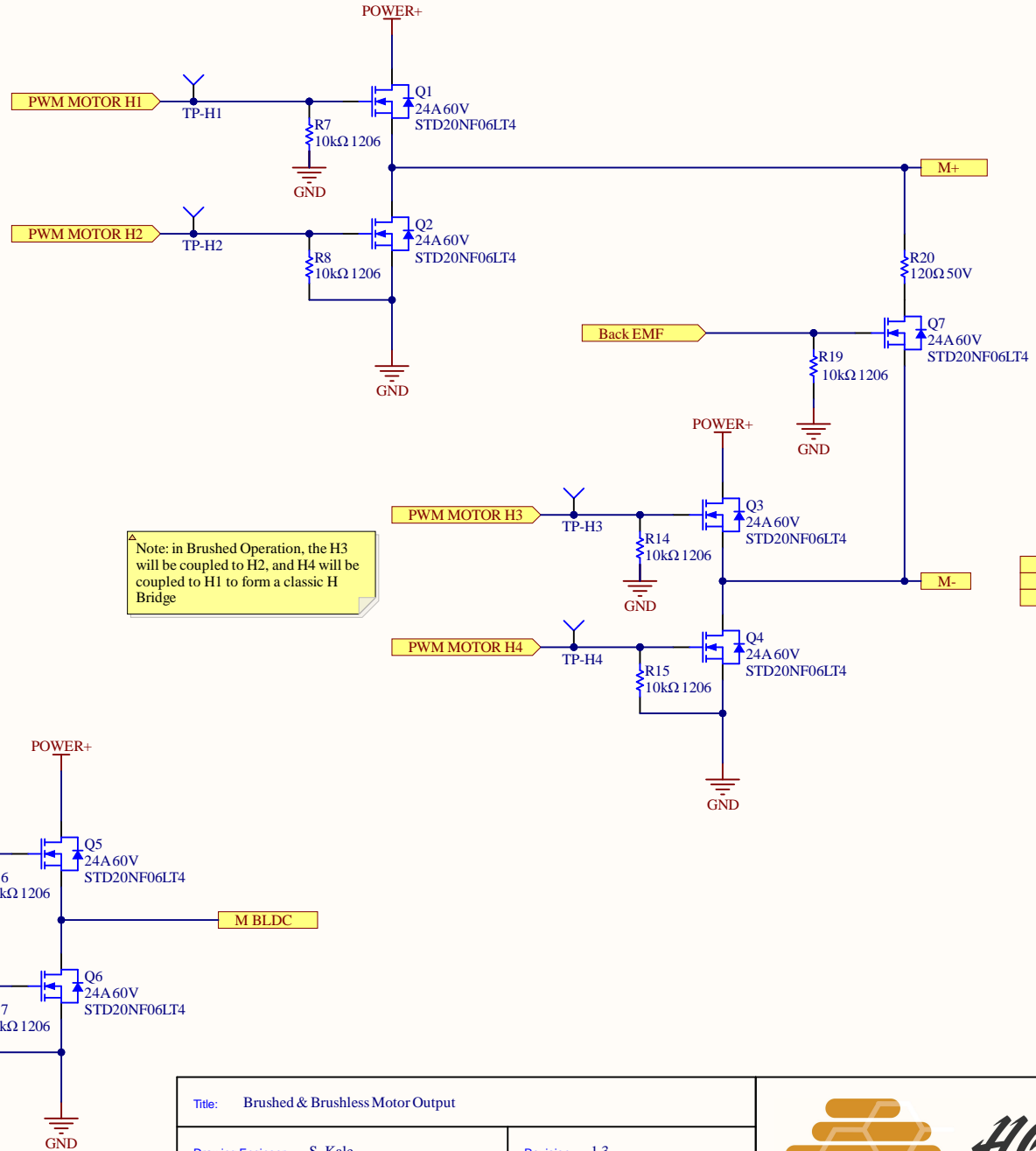




POWER TO 5V LDO



Note: in Brushed Operation, the H3 will be coupled to H2, and H4 will be coupled to H1 to form a classic H Bridge



Title: Brushed & Brushless Motor Output

Drawing Engineer: S. Kale

Revision: 1.3

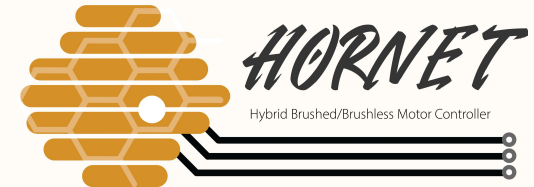
Checking Engineer: A. Chaudhary

Date: January 3, 2021

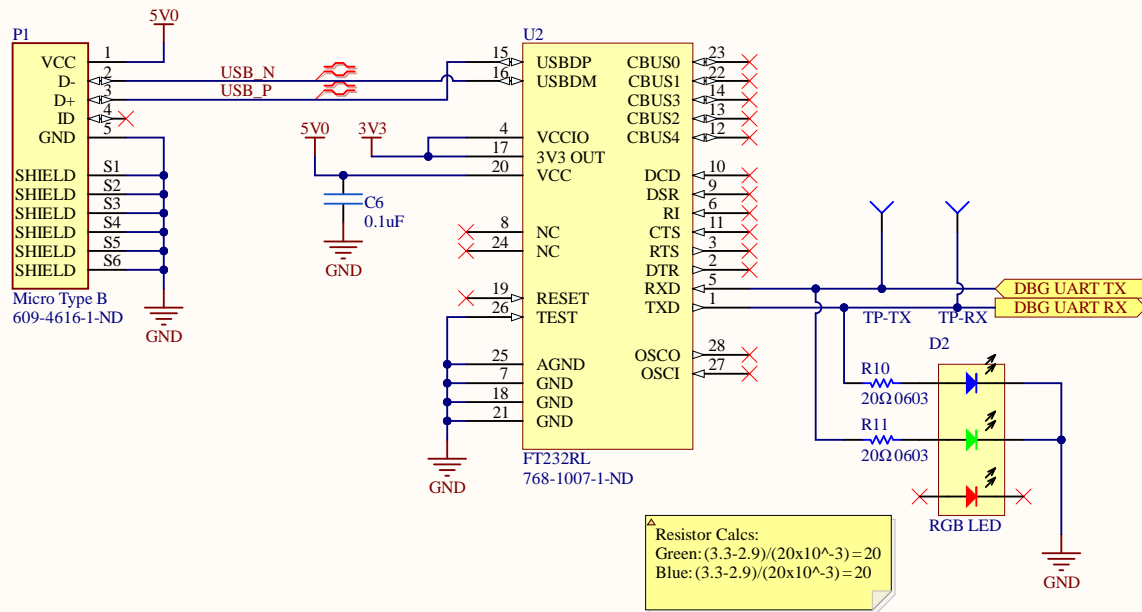
Notes: Input MAX 5A/24V

Document Name:

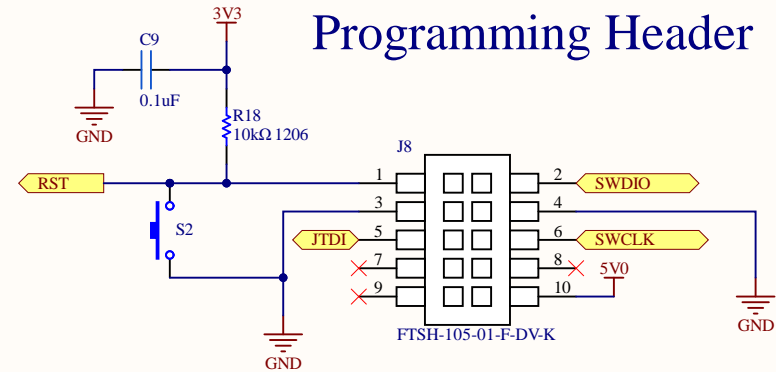
Sheet: 2 of 4



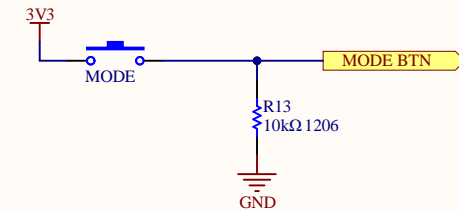
USB - UART Interface



Programming Header



BUTTON MODE PUSH



Title: Debug Communication

Drawing Engineer: S. Kale

Revision: 1.3

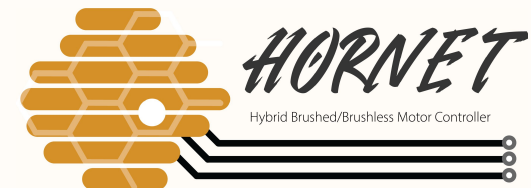
Checking Engineer: A. Chaudhary

Date: January 3, 2021

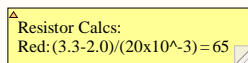
Notes:

Document Name:

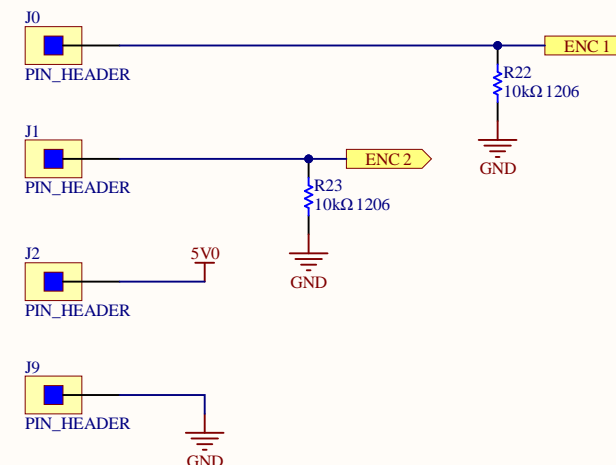
Sheet: 3 of 4



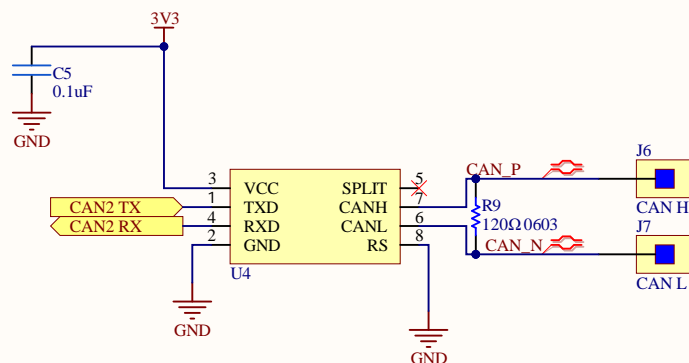
POWER IN LED



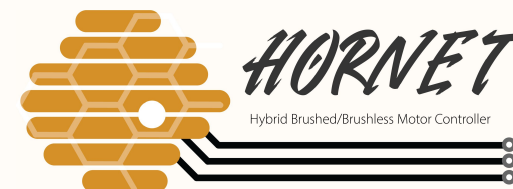
ENCODER

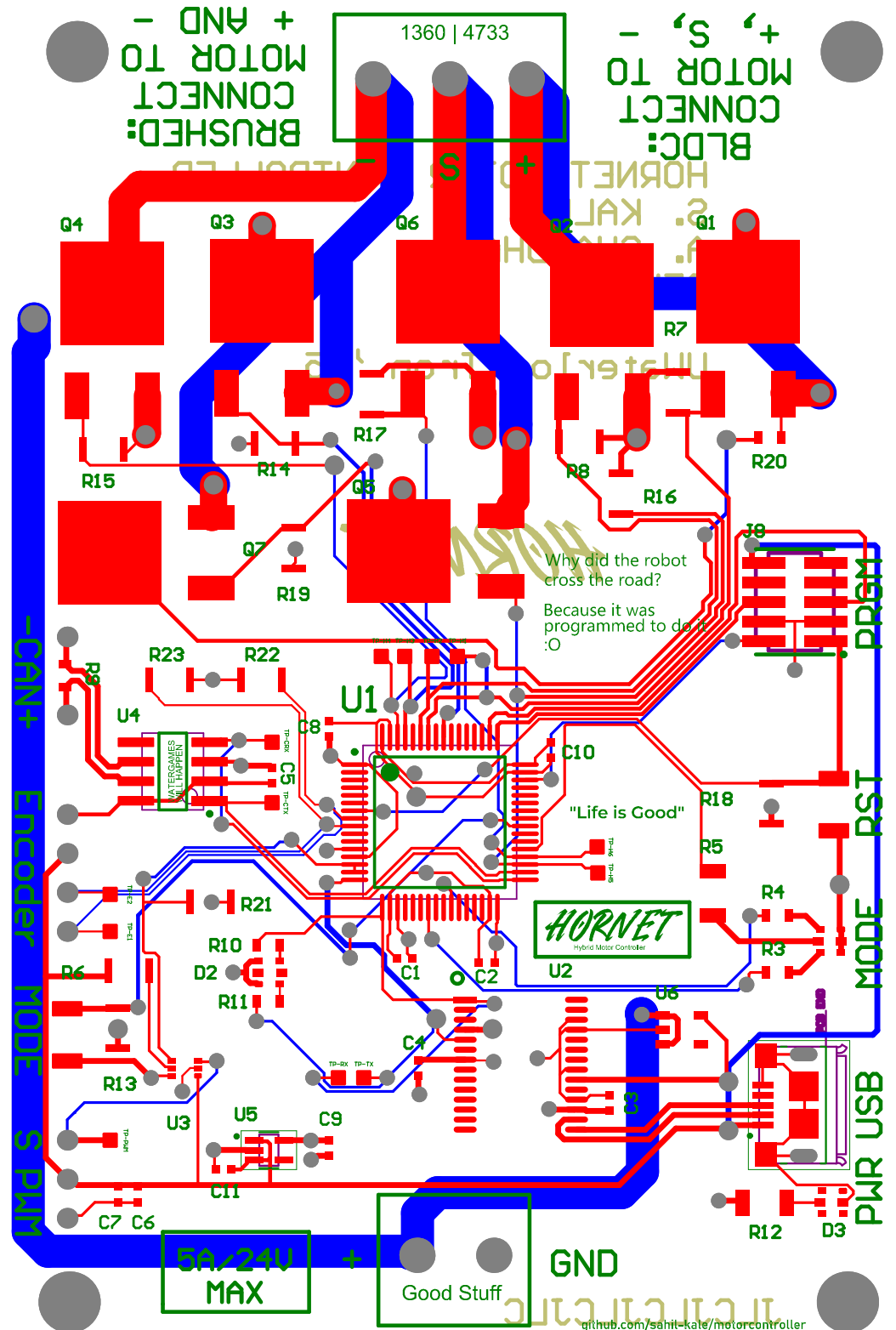


CAN BUS CONNECTORS



Title: CAN & PWM I/O	
Drawing Engineer: S. Kale	Revision: 1.3
Checking Engineer: A. Chaudhary	Date: January 3, 2021
Notes:	
Document Name:	Sheet: 4 of 4





Line #	Name	Description	Designator	Quantity	Manufacturer 1	Manufacturer Part Number 1	Manufacturer Lifecycle 1	Supplier 1	Supplier Part Number 1	Supplier Unit Price 1	Supplier Subtotal 1
	0.1uF	Ceramic Capacitor, Multilayer, Ceramic, 16V, 10% Tol, X7R, 15% Tol, 0.1uF, Surface Mount, 0402	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11	11	Murata	GRM155R71C104KABD	Not Recommended for New Design	Digi-Key	490-3261-1-ND	0.02117	0.23299
	RGB LED	Tri Color PCB Top View SMD, 3-lead R	D1, D2, D3	3	Everlight	19-337C-RGBHGHCA88/AT	Unknown	Digi-Key	1080-1631-1-ND	0.40331	1.21
	PIN HEADER	Board Connector, 1 Contact(s), 1 Row(s), Male, Straight, Solder Terminal	J0, J1, J2, J3, J4, J5, J9	7	Sullins	PRE0015AAN-RC	Unknown	Digi-Key	51012EC-01-ND	0.06628	0.46399
	CAN H	Board Connector, 1 Contact(s), 1 Row(s), Male, Straight, Solder Terminal	J6	1	Sullins	PRE0015AAN-RC	Unknown	Digi-Key	51012EC-01-ND	0.05213	0.05213
	CAN L	Board Connector, 1 Contact(s), 1 Row(s), Male, Straight, Solder Terminal	J7	1	Sullins	PRE0015AAN-RC	Unknown	Digi-Key	51012EC-01-ND	0.041	0.041
	CON_5T	CONN HEADER SMD, 5POS, 1.27MM	J8	1	Samtec	FTSH-105-01-F-DV-K	Volume Production	Digi-Key	SAM8796-ND	2.92	2.92
	CON 2-SIDEW	BOARD BKT, 2POS SIDE ENTRY SMD	J10	1	Phoenix Contact	1935161	Volume Production	Digi-Key	277-1667-ND	0.43356	0.43356
	CON 3-SIDEW	BOARD BKT, 3POS SIDE ENTRY SMD	J11	1	Phoenix Contact	1935174	Volume Production	Digi-Key	277-1578-ND	0.60496	0.60496
	MOUNTING HOLE	M4x1, M4x2, M4x3, M4x4		4							
	SW_SPST_NG	SWITCH TACTILE SPST, NO. 0.05A, 12V	MODE, S2	2	Omron	R3U-1000P	Volume Production	Digi-Key	5W1020CT-ND	0.92761	1.86
	Micro Type B	2.5B Connector, 5 Contact(s), Female, Right Angle, Solder Terminal, Locking, Receptacle	P1	1	Amphenol ICC / FCI	10118193-0001LF	Unknown	Digi-Key	609-4616-1-ND	0.48397	0.48397
	24A 40V	Power Field-Effect Transistor, 24A (DS), 40V, 0.05ohm, 1-Element, N-Channel, Metal, Silicon, Metal, Solderable Semiconductor, P-FET, TO-252AA	Q1, Q2, Q3, Q4, Q5, Q6, Q7	7	STMicroelectronics	ST200NF06LT4	Volume Production	Digi-Key	497-5888-1-ND	0.99819	6.99
	200 0603	Fixed Resistor, 0.1W, 20ohm, 50V, 5% +/- Tol, 200ppm/Cel, Surface Mount, 0603	R3, R4, R10, R11	4	Rohm	SDR03EPJ200	Volume Production	Digi-Key	511-1747-1-ND	0.10083	0.40331
	480 1206	Fixed Resistor, 0.5W, 480ohm, Res Thick Film, 1206	R5, R12	2				Digi-Key	541-SRCW12066880-NEACCT-ND		
	10K 1206	Fixed Resistor, Metal Glaze/Thick Film, 0.25W, 10000ohm, 10V, 1%, +/- Tol, 200ppm/Cel, Surface Mount, 1206	R6, R7, R8, R13, R14, R15, R16, R17, R18, R19, R21, R22, R23	13	Yageo	RE1206FRE0710KL	Volume Production	Digi-Key	13-RE1206FRE0710KLCT-ND	0.05949	0.77335
	1200 0603	Fixed Resistor, 0.1W, 120ohm, 50V, 5% +/- Tol, 200ppm/Cel, Surface Mount, 0603	R9	1	Rohm	SDR03EPJ121	Volume Production	Digi-Key	511-1735-1-ND	0.12926	0.12926
	1200 50V 0603	Fixed Resistor, 0.1W, 120ohm, 50V, 5% +/- Tol, 200ppm/Cel, Surface Mount, 0603	R20	1	Rohm	SDR03EPJ121	Volume Production	Digi-Key	511-1735-1-ND	0.10166	0.10166
	TESTPT	TP-CBK, TP-CTX, TP-E1, TP-E2, TP-H1, TP-H2, TP-H3, TP-H4, TP-H5, TP-H6, TP-PWM, TP-RX, TP-TX		13							
	STM32F446RE76	MCU Microcontroller, 32-Bit, FLASH, Cortex-M4F, CPU, 180MHz, 2MBS, 1024KB	U1	1	STMicroelectronics	STM32F446RE76	Volume Production	Digi-Key	497-15376-ND		
	FT232RL	USB-to-UART Bridge IC, 3.3V, RS-485, 100kbps	U2	1	FTDI	FT232RL-REEL	Volume Production	Digi-Key	768-1007-1-ND	4.54	4.54
	5.5v MAX	Transceiver, LVCMOS, 1.8V, 1.8V, True Output, 2MBS, RS-485	U3	1	Diodes	74VLC14526-7	Volume Production	Digi-Key	74VLC14526-7DCT-ND	0.39323	0.39323
	IC_CAN_1	IC TXRX CAN, 1Mbps, 80	U4	1	Analog Devices / Linear Technology	LT2875S8PBF	Unknown	Digi-Key	LT2875S8PBF-ND	4.32	4.32
	2.5V Out 5.5V MAX	Microchip Technology, MIC3365, 3.3VCS-TR, 100mA, 3.3V, 40% 5-Pin, SC-70	U5	1	Microchip	MIC3365-3.3VCS-TR	Volume Production	Digi-Key	576-3193-1-ND	0.12099	0.12099
	LDO 24/5V	Fixed Positive LDO Regulator, 5V, 0.38V Dropout, MOSFET	U6	1	ON Semiconductor	NCP718AS00T1G05CT-ND	Volume Production	Digi-Key	NCP718AS00T1G05CT-ND	0.39323	0.39323