

Revision History:

Rev	Date	Description

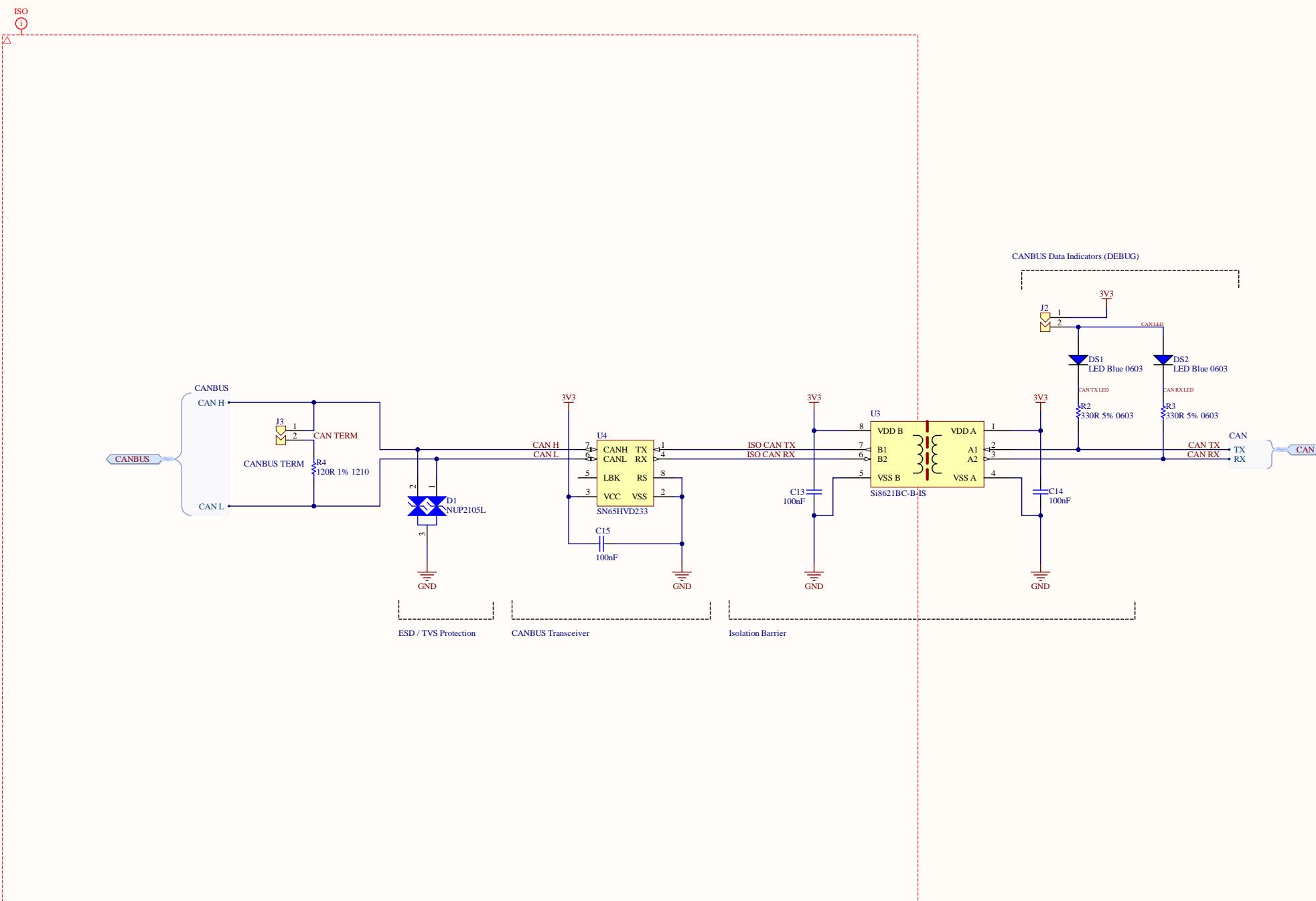
Sheet Title: Microcontroller

Project: Shutdown Board 2020

QUT Motorsport
O-120, Gardens Point
2 George Street
Brisbane, QLD 4000
Australia



Print Date: 22/07/2020 Print Time: 1:01:34 PM File Name: STRWHL-S02-V00-Microcontroller.SchDoc



Revision History:

Rev	Date	Description

Sheet Title: Isolated CANBUS @ 3V3

Project: Battery Management System 2020

QUT Motorsport
O-120, Gardens Point
2 George Street
Brisbane, QLD 4000
Australia



Print Date: 22/07/2020 Print Time: 1:01:35 PM File Name: STRWHL-S03-V00-IsolatedCAN.SchDoc

A

A

B

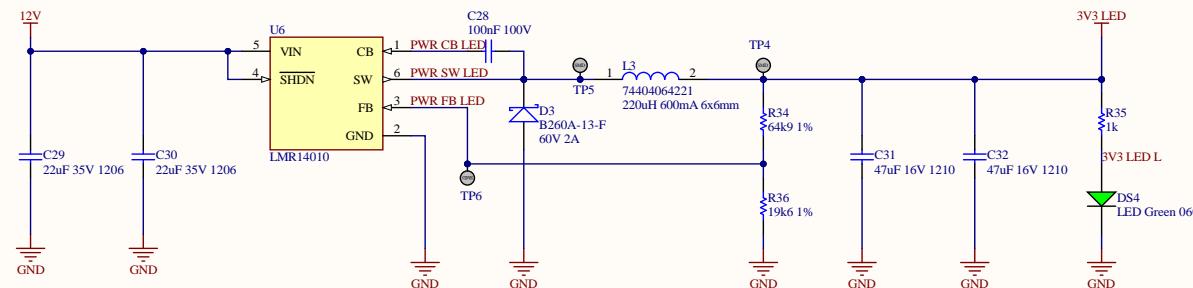
B

C

C

D

D



Revision History:

Rev	Date	Description

Sheet Title: Power Supply (20-40V to 3v3 @ 0.1-0.6A)

Project: Battery Management System 2020

QUT Motorsport
O-120, Gardens Point
2 George Street
Brisbane, QLD 4000
Australia



Print Date: 22/07/2020 Print Time: 1:01:35 PM File Name: STRWHL-S04-V00-PSU-LED.SchDoc

A

A

B

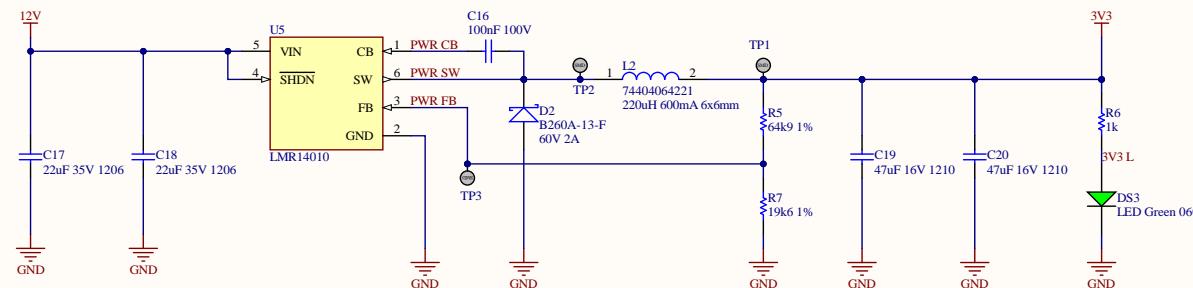
B

C

C

D

D



Revision History:

Rev	Date	Description

Sheet Title: Power Supply (20-40V to 3v3 @ 0.1-0.6A)

Project: Battery Management System 2020

QUT Motorsport
O-120, Gardens Point
2 George Street
Brisbane, QLD 4000
Australia



Print Date: 22/07/2020 Print Time: 1:01:35 PM File Name: STRWHL-S04-V00-PSU.SchDoc



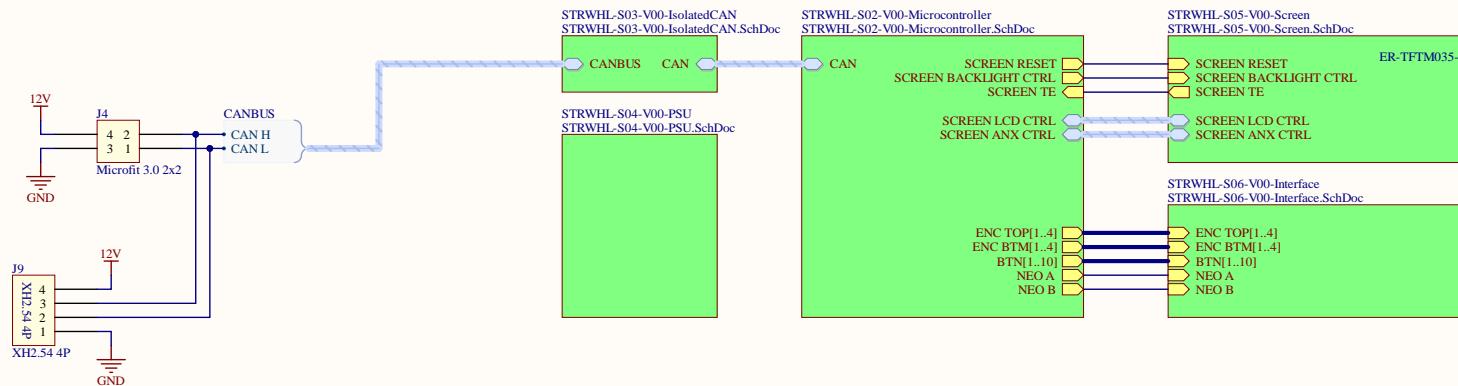
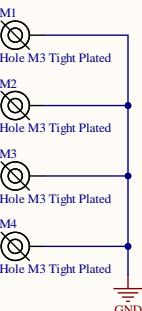
30mm Wide QUTMS Logo

FID1 FID2
Fiducial 1MM Fiducial 1MM
FID3 FID4
Fiducial 1MM Fiducial 1MM

LYID1
1 2
2 Layer Identification PCB Marker



15mm Wide QUTMS Logo



Revision History:

Rev	Date	Description

Sheet Title: *

Project:

QUT Motorsport
O-120, Gardens Point
2 George Street
Brisbane, QLD 4000



Size: A3 Number: * Version: *

Drawn By: *

Sheet * of *

Australia

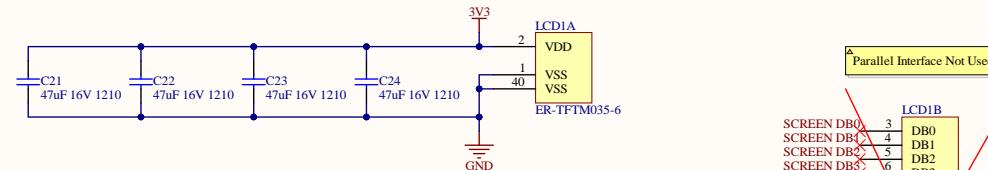
Print Date: 22/07/2020

Print Time: 1:01:35 PM

File Name: STRWHL-S01-V00-SteeringWheel.SchDoc

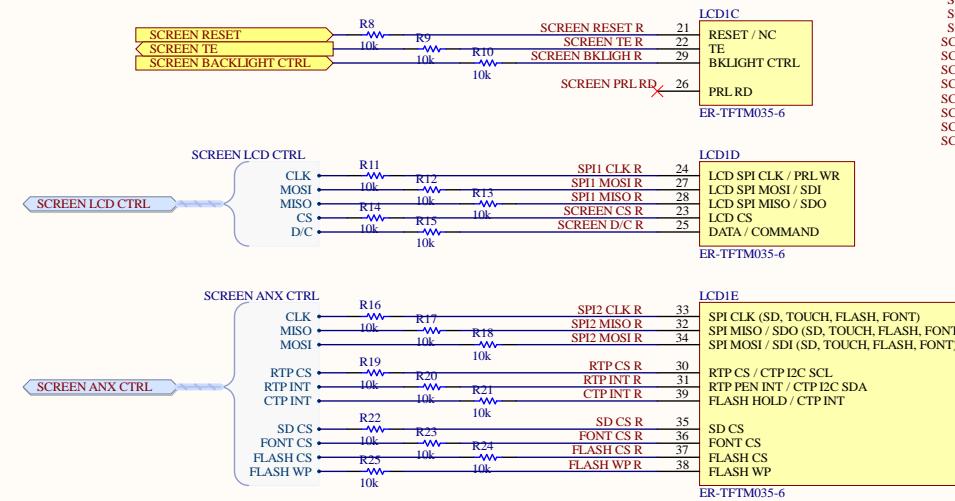
A

A



B

B



C

C

D

D

Revision History:

Rev	Date	Description

Sheet Title: *

Project:

QUT Motorsport
O-120, Gardens Point
2 George Street
Brisbane, QLD 4000



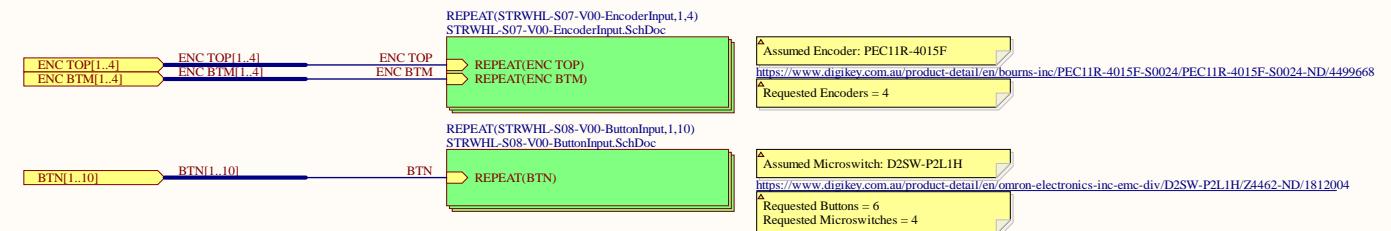
Size: A3 Number: * Version: *
Drawn By: * Sheet * of * Australia
Print Date: 22/07/2020 Print Time: 1:01:35 PM File Name: STRWHL-S05-V00-Screen.SchDoc

A

A

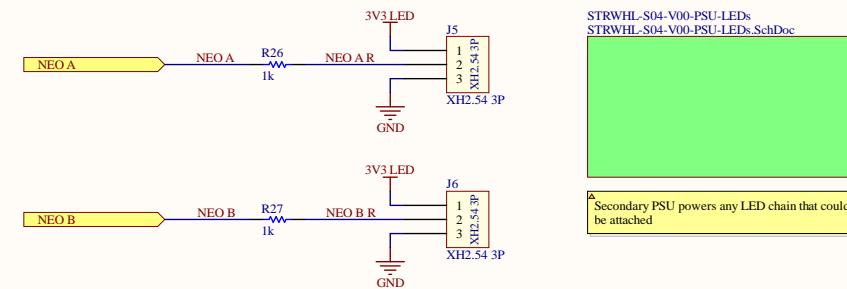
B

B



C

C



D

D

Revision History:

Rev	Date	Description

Sheet Title: *

Project:

QUT Motorsport
 O-120, Gardens Point
 2 George Street
 Brisbane, QLD 4000



Size: A3

Number: *

Version:

Revision: *

Sheet * of *

Australia

Drawn By: *

Print Date: 22/07/2020

Print Time: 1:01:36 PM

File Name: STRWHL-S06-V00-Interface.SchDoc

A

A

B

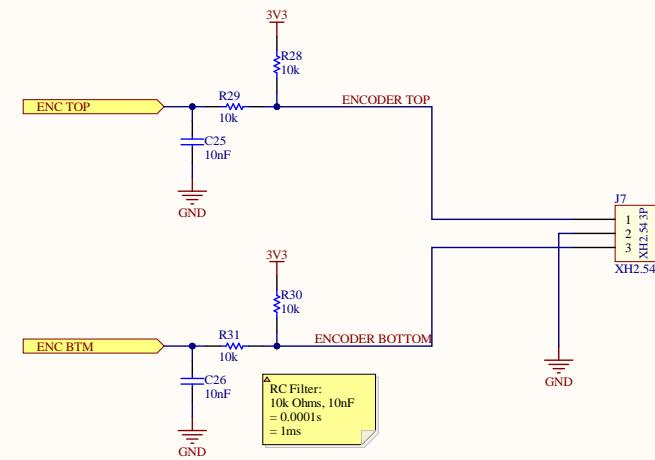
B

C

C

D

D



Revision History:

Rev	Date	Description

Sheet Title: *

Project:

QUT Motorsport
O-120, Gardens Point
2 George Street
Brisbane, QLD 4000



Size: A3 Number: * Version: *
Drawn By: * Sheet * of * Australia

Print Date: 22/07/2020 Print Time: 1:01:36 PM File Name: STRWHL-S07-V00-EncoderInput.SchDoc

A

A

B

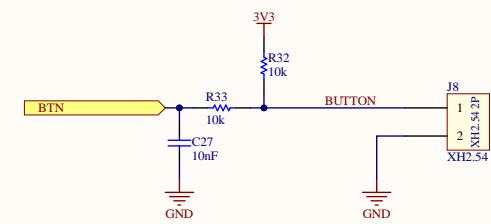
B

C

C

D

D



Revision History:

Rev	Date	Description

Sheet Title: *

Project:

QUT Motorsport

O-120, Gardens Point

2 George Street

Brisbane, QLD 4000

Australia

Size: A3 Number: *

Version:

Revision: *

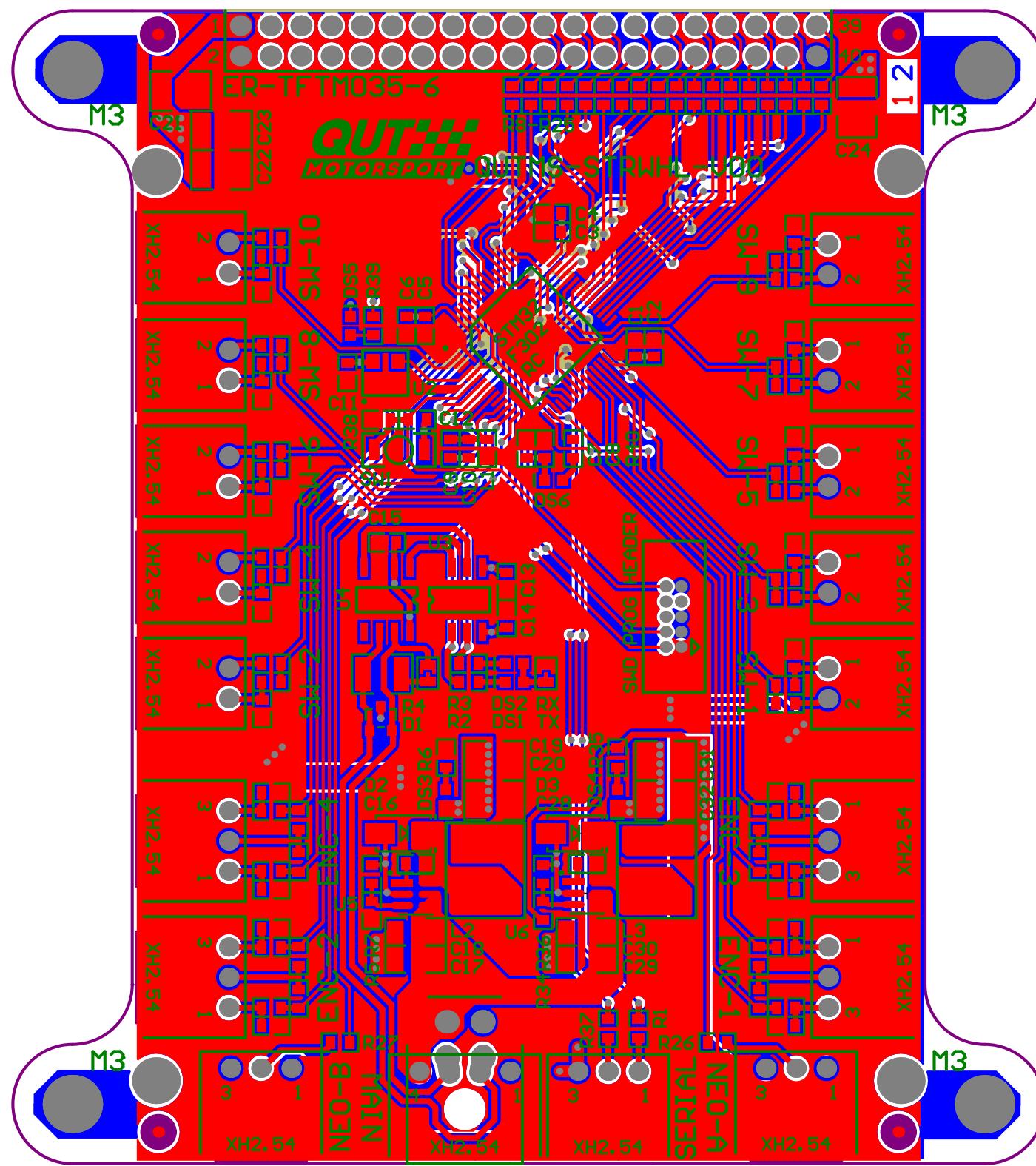
Drawn By: *

Sheet * of *

Print Date: 22/07/2020 Print Time: 1:01:36 PM

File Name: STRWHL-S08-V00-ButtonInput.SchDoc





Comment	Description	Designator	Footprint	LibRef	Quantity
100nF	Capacitor, Ceramic, SMD, 100nF, 50V, 5%, XTR_0603	C1, C3, C5, C7, C11, C12, C13, C14, C15	Cap_Ceramic_0603	100nF 50V 5% XTR 0603	9
4u7	Capacitor, Ceramic, SMD, 4u7, 50V, 5%, XTR_0603	C2, C4, C6, C8	Cap_Ceramic_0603	4u7 50V 5% XTR 0603	4
1uF	Capacitor, Ceramic, SMD, 1uF, 25V, 5%, XTR_0603	C9	Cap_Ceramic_0603	1uF 25V 5% XTR 0603	1
		C10, C25A, C25B, C25C, C25D, C26A, C26B, C26C, C26D, C27A, C27B, C27C, C27D, C27E, C27F, C27G, C27H, C27I, C27J			
10nF	Capacitor, Ceramic, SMD, 10nF, 50V, 5%, XTR_0603	Cap_Ceramic_0603	10nF 50V 5% XTR 0603	10nF 50V 5% XTR 0603	19
100nF 100V	Capacitor, Ceramic, SMD, 100nF, 100V, 5%, XTR_0603	C16, C28	Cap_Ceramic_0603	100nF 100V 5% XTR 0603	2
22uF 35V 1206	Capacitor, Ceramic, SMD, 22uF, 35V, 10%, XTR_1206	C17, C18, C29, C30	Cap_Ceramic_1206	22uF 35V 10% XTR 1206	4
47uF 16V 1210	Capacitor, Ceramic, SMD, 47uF, 16V, 5%, XTR_1210	C19, C20, C21, C22, C23, C24, C31, C32	Cap_Ceramic_1210	47uF 16V 10% XTR 1210	8
NUP2105L	NUP2105L	D1	NUP2105L	NUP2105L	1
B260A-13-F	Diode, Schottky Barrier Rectifier, 60 V, 2 A, B260A-13-F	D2, D3	SMA	B260A-13-F	2
LED Blue_0603	LED Blue 0603	D51, D52	LED BLUE 0603	LED BLUE 0603	2
LED Green_0603	LED Green 0603	D53, D54	LED GREEN 0603	LED Green 0603	2
LED Orange_0603	LED Orange 0603	D55, D56	LED ORANGE 0603	LED Orange 0603	2
Fiducial 1MM	Fiducial 1MM	FID1, FID2, FID3, FID4	FIDUCIAL 1MM	Fiducial 1MM	4
IDC 10P 2x5 1.27mm	IDC 10P 2x5 1.27mm	J1	IDC 1.27MM 10P	IDC 10P 2x5 1.27mm	1
Jumper 2Way Side Solderable	Jumper 2Way Side Solderable	J2, J3	Jumper 2Way Side Solderable	Jumper 2Way Side Solderable	2
Microfit 3.0 2x2		J4	Microfit_2X2_R_TH	Microfit_2x2	1
XH2.54 3P		J5, J6, J7A, J7B, J7C, J7D, J10	JST_XH25A_3P_TH_R	XH2.54 3P	7
XH2.54 2P		J8A, J8B, J8C, J8D, J8E, J8F, J8G, J8H, J8I, J8J	JST_XH25A_2P_TH_R	XH2.54 2P	10
XH2.54 4P		J9	JST_XH25A_4P_TH_R	XH2.54 4P	1
10uH, 10%, 0603	10uH, 10%, 0603	L1	Inductor_0603	10uH, 10%, 0603	1
74404064221	FIXED IND 220uH 660mA 850 uMHM	L2, L3	Inductor_6x6mm	74404064221	2
ER-TFTM035-6	3.5" 320x480 TFT Display Module, Opto Touch Screen w/Breakout Board	LCD1	ER-TFTM035-6	ER-TFTM035-6	1
30mm Wide QUTMS Logo	30mm Wide QUTMS Logo	LOGO1	QUTMS LOGO 30MM	QUTMS Logo 30mm	1
15mm Wide QUTMS Logo	15mm Wide QUTMS Logo	LOGO2	QUTMS LOGO 15MM	QUTMS Logo 15mm	1
2 Layer Identification PCB Marker	2 Layer Identification PCB Marker	LY1D1	LAYER IDENT 2	Layer Identification 2	1
Hole M3 Tight Plated	M3.2 Hole, Plated	M1, M2, M3, M4	M3.2 PLATED	Hole M3 Tight Plated	4
		R1, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R28A, R28B, R28C, R28D, R29A, R29B, R29C, R29D, R30A, R30B, R30C, R30D, R31A, R31B, R31C, R31D, R32A, R32B, R32C, R32D, R32E, R32F, R32G, R32H, R32I, R32J, R33A, R33B, R33C, R33D, R33E, R33F, R33G, R33H, R33I, R33J, R37	Res_ThinFilm_0603	10k 5% 0603	56
330R 5% 0603	Resistor, SMD, 330R, 0.1W, 5%, 0603	R2, R3	Res_ThinFilm_0603	330R 5% 0603	2
120R 1% 1210	Resistor, SMD, 120R, 0.25W, 1%, 1210	R4	Res_ThinFilm_1210	120R 1% 1210	1
64k9 1%	Resistor, SMD, 64k9, 0.1W, 5%, 0603	R5, R34	Res_ThinFilm_0603	64k9 1% 0603	2
1k	Resistor, SMD, 1k, 0.1W, 5%, 0603	R6, R26, R27, R35	Res_ThinFilm_0603	1k 5% 0603	4
19k6 1%	Resistor, SMD, 19k6, 0.1W, 5%, 0603	R7, R36	Res_ThinFilm_0603	19k6 1% 0603	2
4k7	Resistor, SMD, 4k7, 0.1W, 5%, 0603	R38	Res_ThinFilm_0603	4k7 5% 0603	1
330R	Resistor, SMD, 330R, 0.1W, 5%, 0603	R39, R40	Res_ThinFilm_0603	330R 5% 0603	2
B3U-1000P	Omrion B3U-1000P Ultra Miniature Switch	SW1	BTN B3U-1000P	BTN B3U-1000P	1
TestPoint_SMD		TP1, TP2, TP3, TP4, TP5, TP6	TestPointSMD	TestPoint_SMD	6
STM32F302RC	ARM® Cortex™-M4 STM32F3 Microcontroller IC 32 Bit 72MHz 256KB (256K x 8) FLASH 64- LoCF (10x10)	U1	STM32F302RC	STM32F302RC	1
DSC1001D1- 008.0000T	on 8MHz XO (Standard) CMOS Oscillator 1.8 - 3.3V Standby (Power Down) 4-SMD, No Lead	U2	DSC1001D1- 008.0000TCT-ND	DSC1001D1- 008.0000T	1
Si8621BC-B-1S	Si8621BC-B-1S	U3	Si8621BC-B-1S	Si8621BC-B-1S	1
SN65HVD233	SN65HVD233	U4	SN65HVD233DR	SN65HVD233	1
LMR14010		U5, U6	LMR14010	LMR14010	2