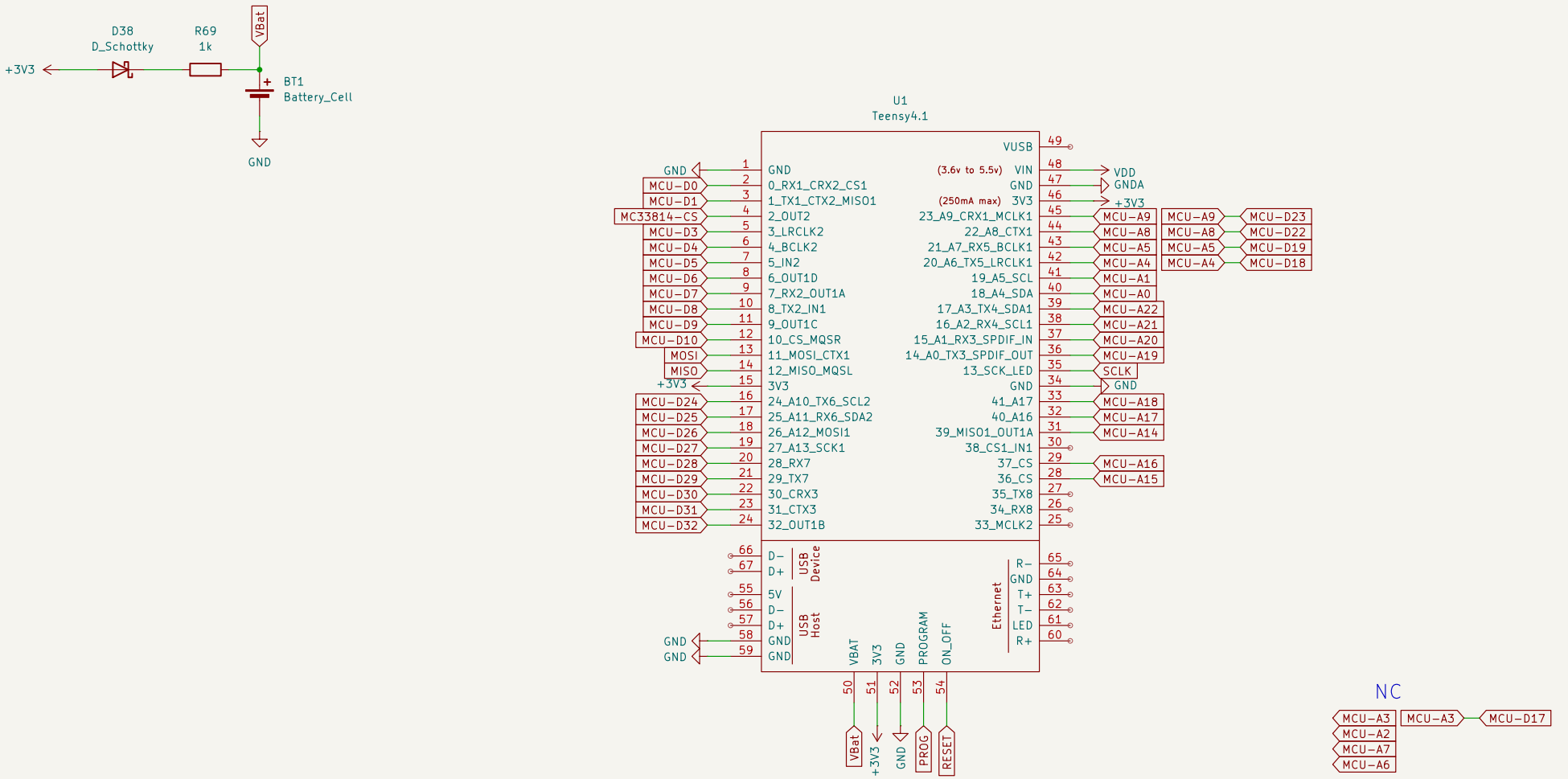
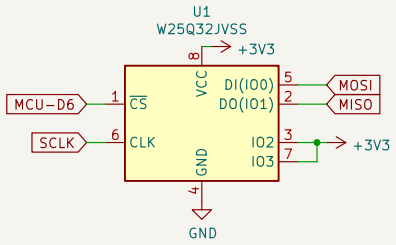
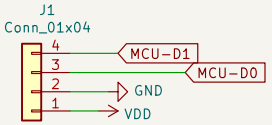

D38
D_Schottky
R69
1k
VBat
+3V3
BT1
Battery_Cell
GND
U1
Teensy4.1
VUSB
GND
0_RX1_CRX2_CS1
1_TX1_CTX2_MISO1
2_OUT2
3_LRCLK2
4_BCLK2
5_IN2
6_OUT1D
7_RX2_OUT1A
8_TX2_IN1
9_OUT1C
10_CS_MQSR
11_MOSI_CTX1
12_MISO_MQSL
3V3
24_A10_TX6_SCL2
25_A11_RX6_SDA2
26_A12_MOSI1
27_A13_SCK1
28_RX7
29_TX7
30_CRX3
31_CTX3
32_OUT1B
(3.6v to 5.5v) VIN
GND
(250mA max) 3V3
23_A9_CRX1_MCLK1
22_A8_CTX1
21_A7_RX5_BCLK1
20_A6_TX5_LRCLK1
19_A5_SCL
18_A4_SDA
17_A3_TX4_SDA1
16_A2_RX4_SCL1
15_A1_RX3_SPDIF_IN
14_A0_TX3_SPDIF_OUT
13_SCK_LED
GND
41_A17
40_A16
39_MISO1_OUT1A
38_CS1_IN1
37_CS
36_CS
35_TX8
34_RX8
33_MCLK2
USB Device
USB Host
Ethernet
VBAT
3V3
GND
PROGRAM
ON_OFF
MCU-D0
MCU-D1
MC33814-CS
MCU-D3
MCU-D4
MCU-D5
MCU-D6
MCU-D7
MCU-D8
MCU-D9
MCU-D10
MOSI
MISO
MCU-D24
MCU-D25
MCU-D26
MCU-D27
MCU-D28
MCU-D29
MCU-D30
MCU-D31
MCU-D32
VDD
GNDA
MCU-A9
MCU-A8
MCU-A5
MCU-A4
MCU-A1
MCU-A0
MCU-A22
MCU-A21
MCU-A20
MCU-A19
SCLK
MCU-A18
MCU-A17
MCU-A14
MCU-A16
MCU-A15
MCU-D23
MCU-D22
MCU-D19
MCU-D18
NC
MCU-A3
MCU-A2
MCU-A7
MCU-A6
MCU-D17
Comms
File: Comms.kicad_sch
Conntectors
File: Conntectors.kicad_sch
Inputs
File: Inputs.kicad_sch
Inputs 2
File: Inputs2.kicad_sch
Crank and Cam
File: Crank-and-Cam.kicad_sch
Drivers
File: Drivers.kicad_sch
Outputs
File: Outputs.kicad_sch
Power Regulator
File: Power-Regulator.kicad_sch
Sheet: /
File: ECU.kicad_sch
Title: Gen 1 Hayabusa ECU
Size: A4
Date: 2024-10-31
Rev: 1
KiCad E.D.A. 8.0.6
Id: 1/9

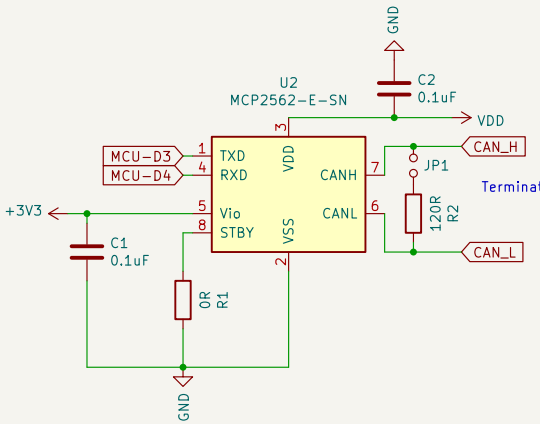
Flash Storage



HC-05 Bluetooth Connector

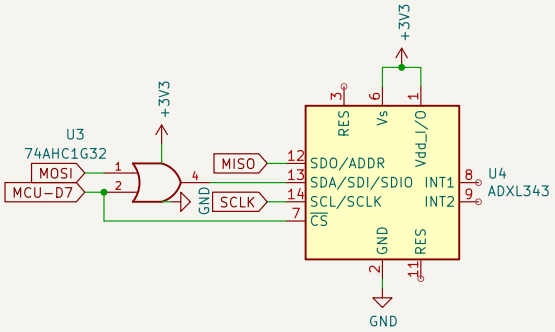


CAN Transceiver



Terminator resistor is optional and left off by default

Accelerometer



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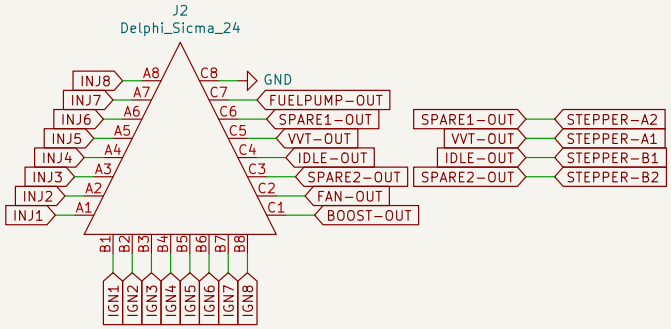
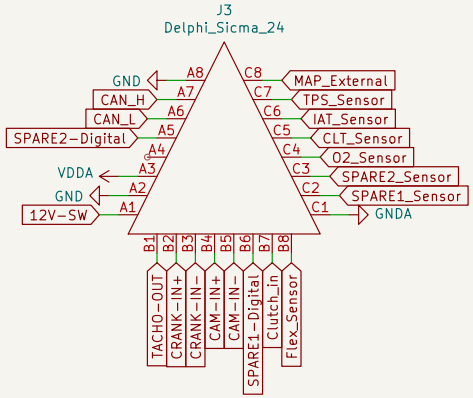
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.6		Id: 2/9





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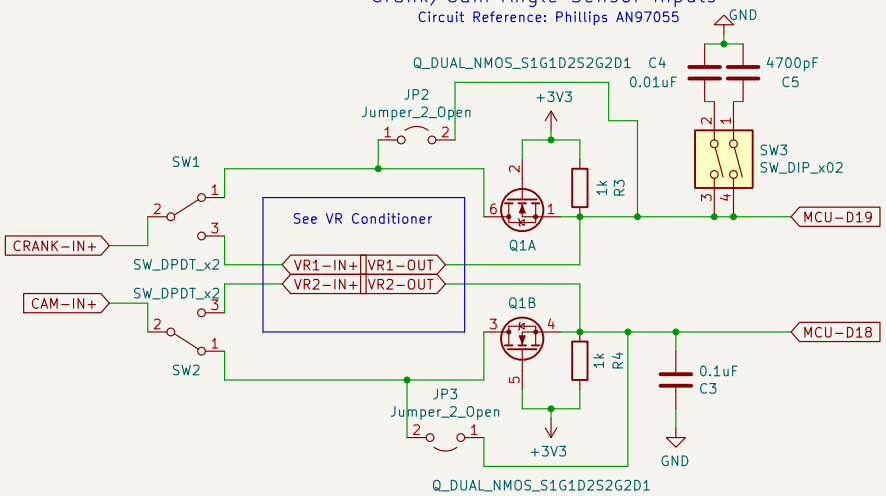
File: Conntectors.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.6		Id: 3/9

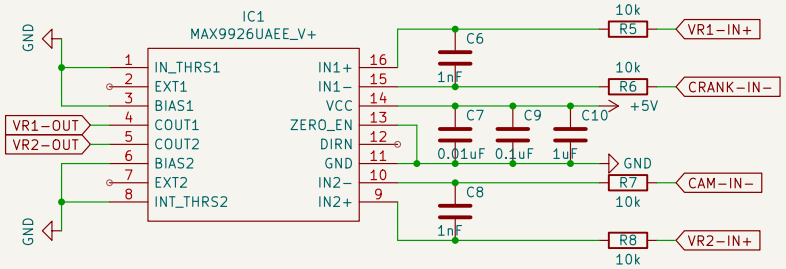
Crank/Cam Angle Sensor Inputs

Circuit Reference: Phillips AN97055



VR Conditioner Circuit

Running in A2 mode



Sheet: /Crank and Cam/		
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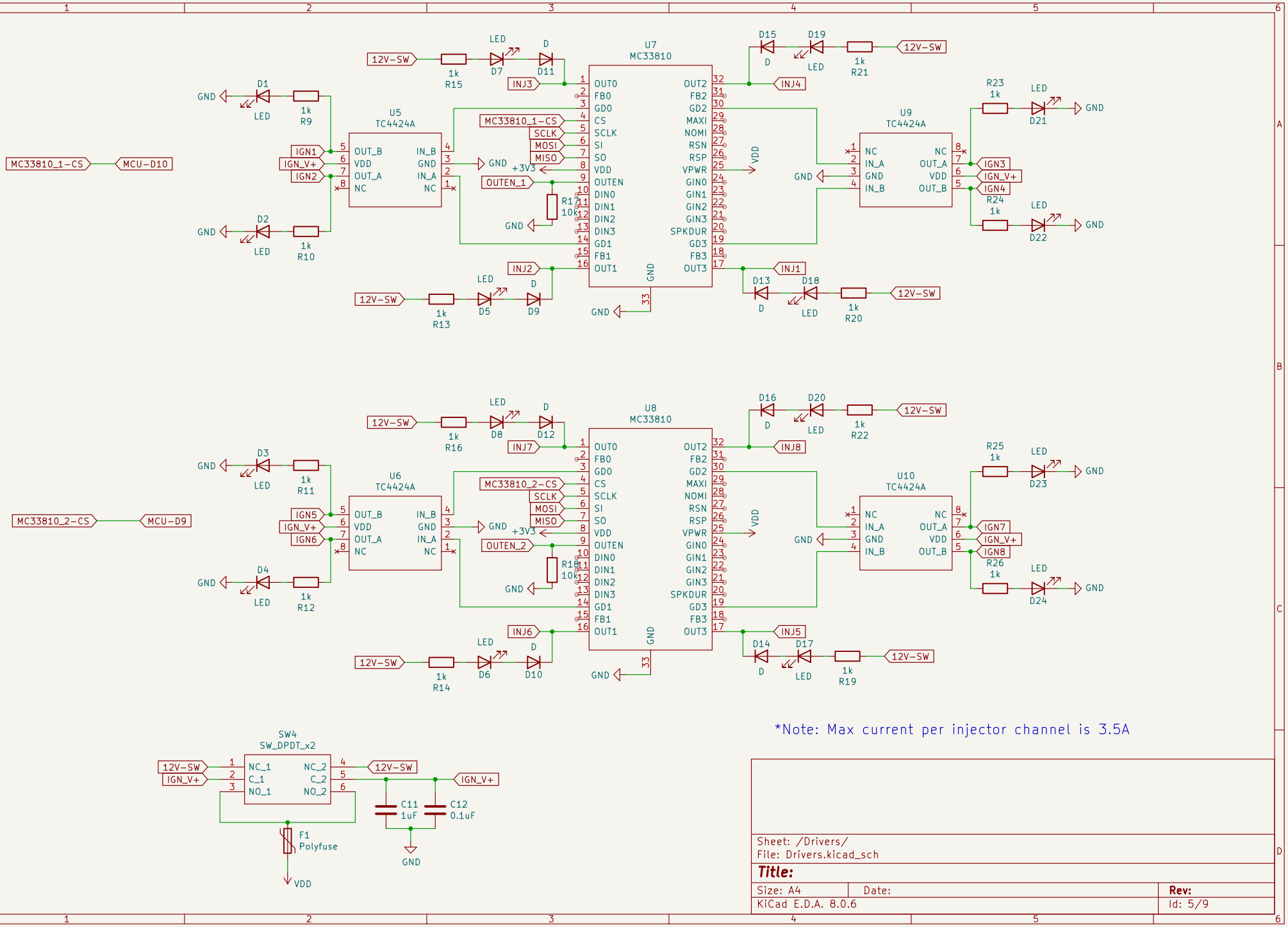
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.6		Id: 4/9



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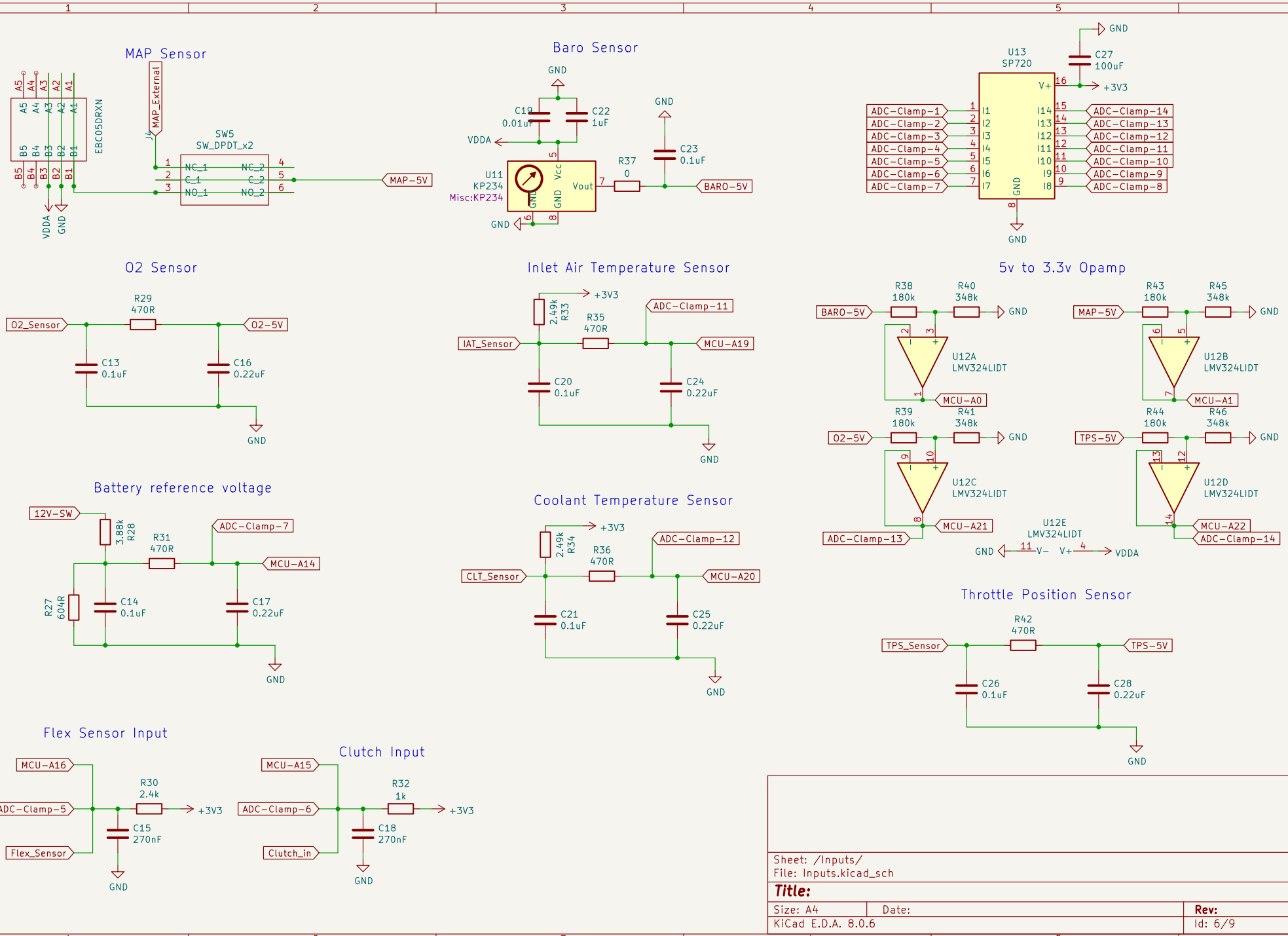
File: Drivers.kicad_sch

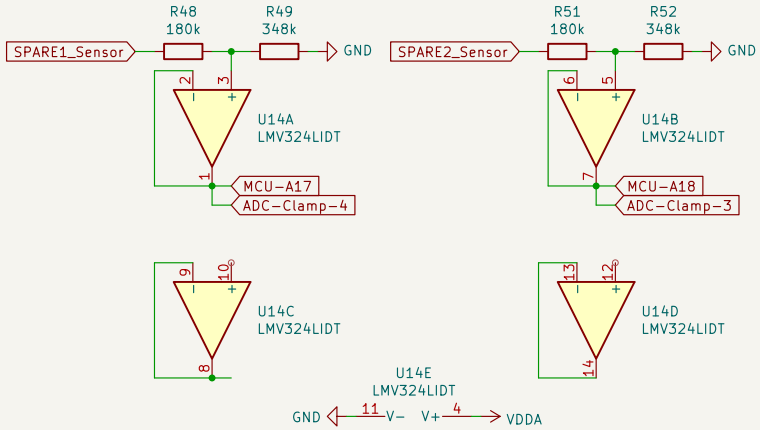
Title:

Size: A4 | Date: | **Rev:**

KiCad E.D.A. 8.0.6 | Id: 5/9

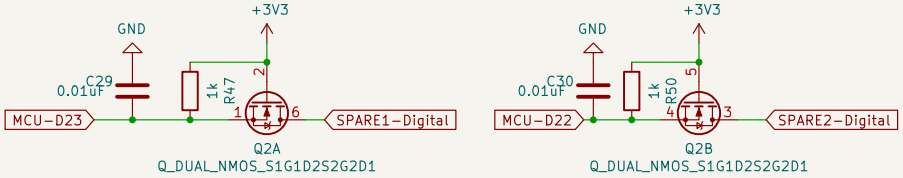

MAP Sensor
EBC05DRXN
MAP_External
SW5
SW_DPDT_x2
MAP-5V
VDDA
GND
Baro Sensor
C19
0.01uF
C22
1uF
C23
0.1uF
R37
0
U11
KP234
Misc:KP234
BARO-5V
U13
SP720
C27
100uF
+3V3
ADC-Clamp-1
ADC-Clamp-2
ADC-Clamp-3
ADC-Clamp-4
ADC-Clamp-5
ADC-Clamp-6
ADC-Clamp-7
ADC-Clamp-8
ADC-Clamp-9
ADC-Clamp-10
ADC-Clamp-11
ADC-Clamp-12
ADC-Clamp-13
ADC-Clamp-14
O2 Sensor
O2_Sensor
O2-5V
R29
470R
C13
0.1uF
C16
0.22uF
Inlet Air Temperature Sensor
IAT_Sensor
R33
2.49k
R35
470R
MCU-A19
C20
0.1uF
C24
0.22uF
5v to 3.3v Opamp
R38
180k
R40
348k
U12A
LMV324LIDT
MCU-A0
R43
180k
R45
348k
U12B
LMV324LIDT
MCU-A1
R39
180k
R41
348k
U12C
LMV324LIDT
MCU-A21
R44
180k
R46
348k
U12D
LMV324LIDT
MCU-A22
U12E
LMV324LIDT
Battery reference voltage
12V-SW
3.88k
R28
R31
470R
R27
604R
C14
0.1uF
C17
0.22uF
MCU-A14
ADC-Clamp-7
Coolant Temperature Sensor
CLT_Sensor
R34
2.49k
R36
470R
C21
0.1uF
C25
0.22uF
MCU-A20
ADC-Clamp-12
Throttle Position Sensor
TPS_Sensor
R42
470R
C26
0.1uF
C28
0.22uF
TPS-5V
Flex Sensor Input
MCU-A16
ADC-Clamp-5
Flex_Sensor
R30
2.4k
C15
270nF
Clutch Input
MCU-A15
ADC-Clamp-6
Clutch_in
R32
1k
C18
270nF
Sheet: /Inputs/
File: Inputs.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 8.0.6
Id: 6/9

5v to 3.3v Opamp



Second O2 sensor should be on Spare 2 if in use

Spare digital inputs



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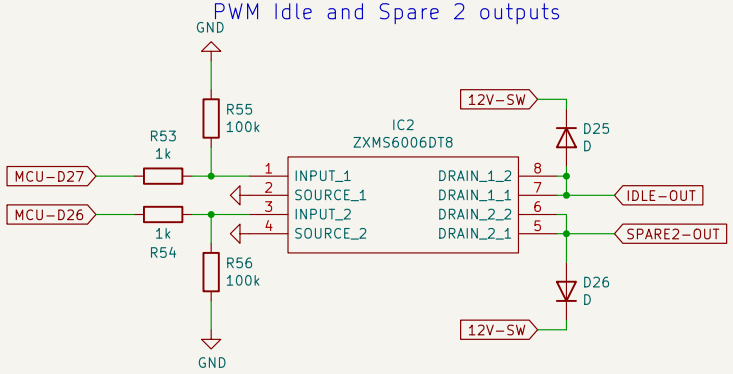
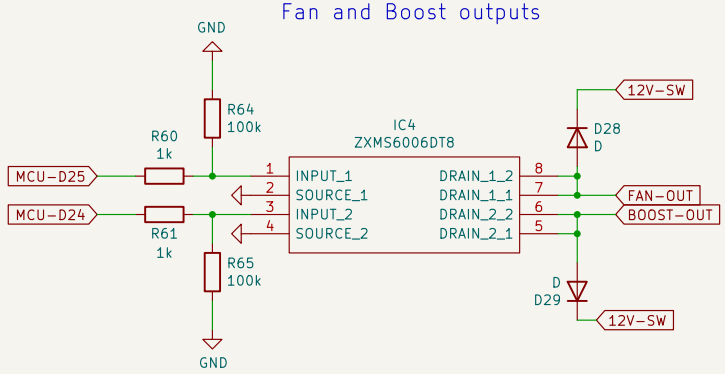
File: Inputs2.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.6		Id: 7/9

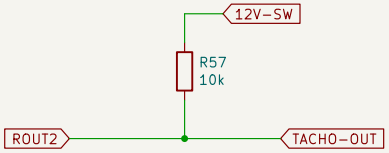
PWM Idle and Spare 2 outputs



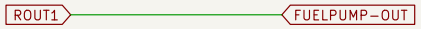
Fan and Boost outputs



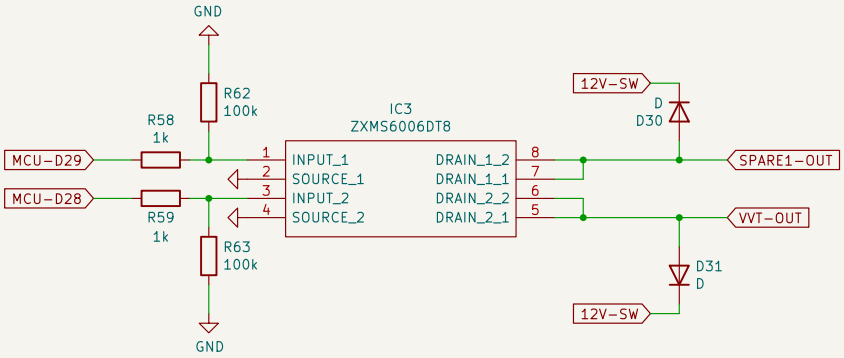
Tacho output



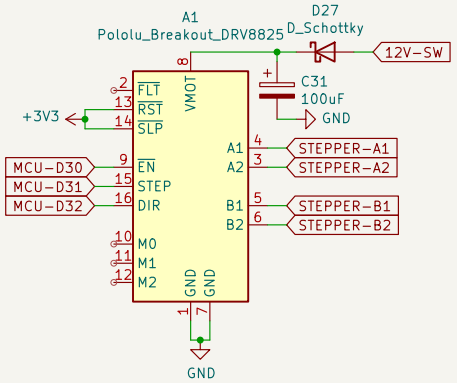
Fuel pump relay



VVT and Spare 1



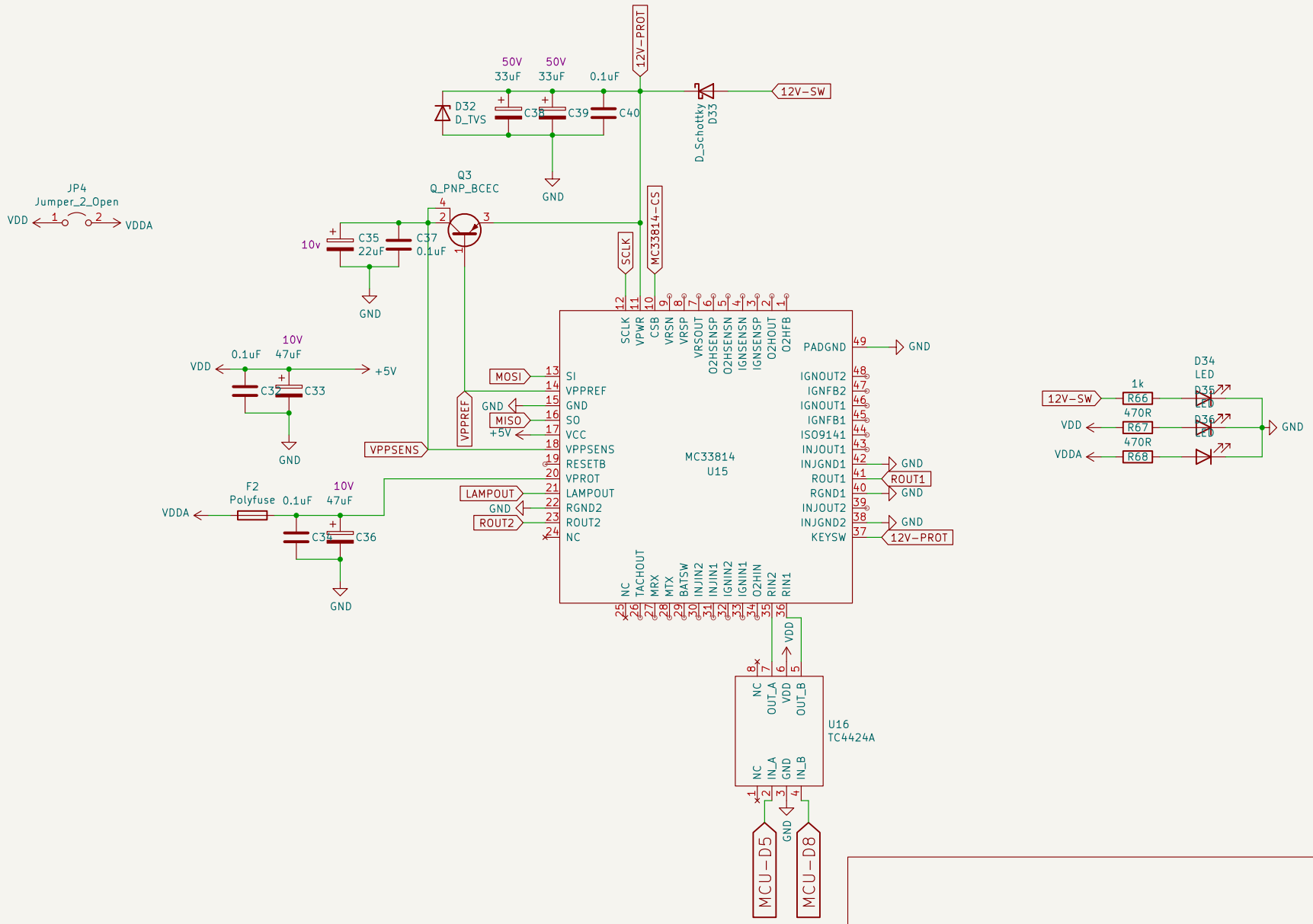
Stepper Driver (DRV8825)



Sheet: /Outputs/
File: Outputs.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.6		Id: 8/9



Sheet: /Power Regulator/		
File: Power-Regulator.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.6		Id: 9/9