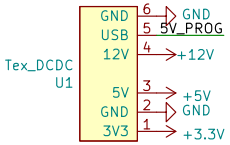
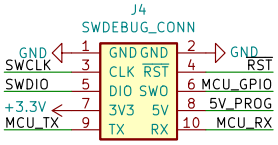
CAN POWER CONNECTORS

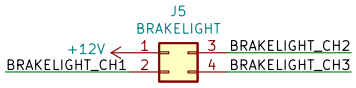
DCDC



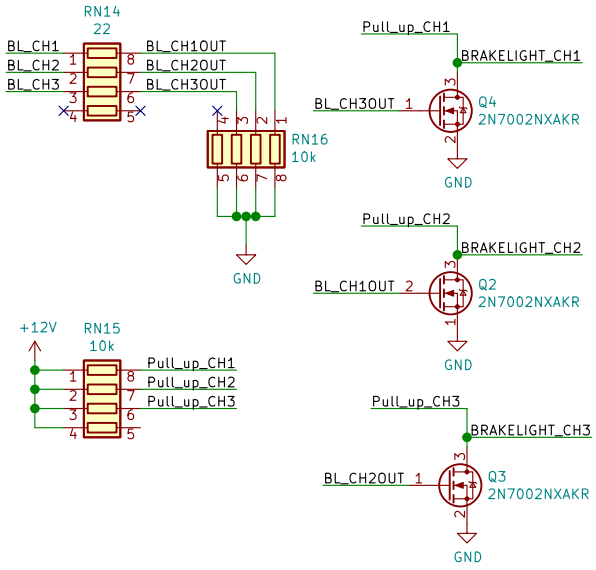
DEBUG

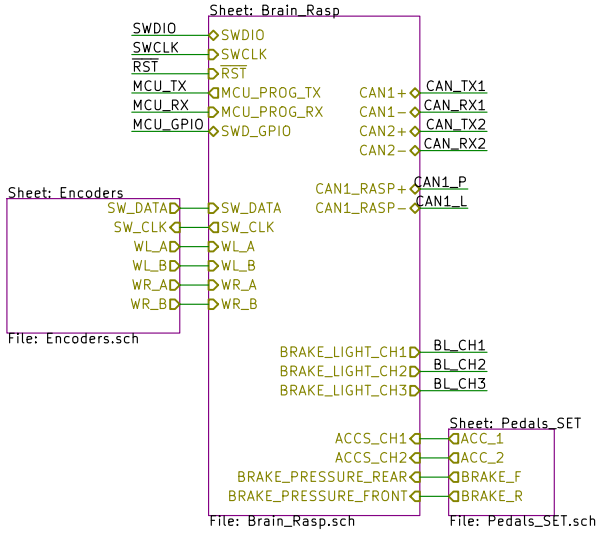


BRAKELIGHT

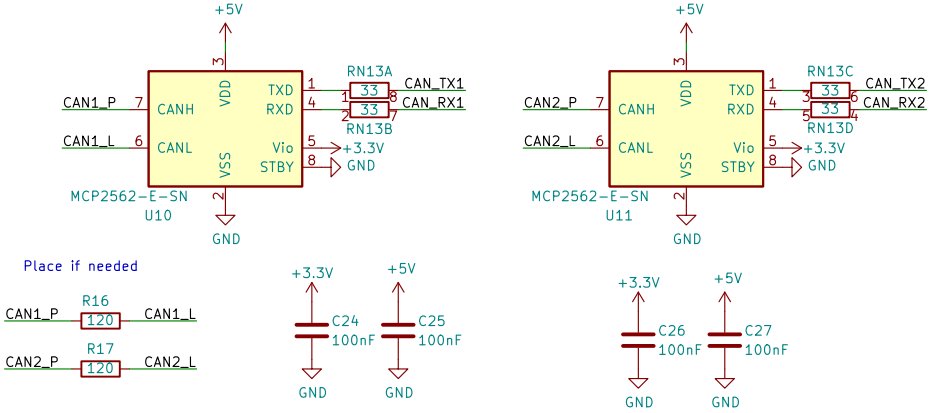


CONTROLL PWM SIGNAL BRAKELIGHT





CAN INTERFACE WITH TRANCIVER FOR F446

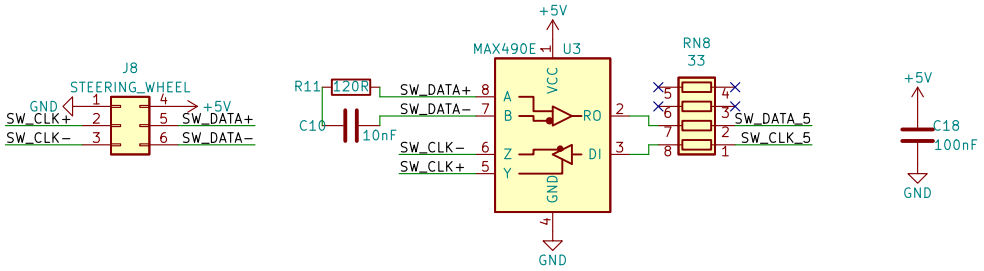


E-Agle TRT		
Sheet: / File: DAS_ECU.sch		
Title: DAS+ECU		
Size: A4	Date: 2021-12-13	**Rev: v1**
KiCad E.D.A. kicad (5.1.10)-1		Id: 1/4

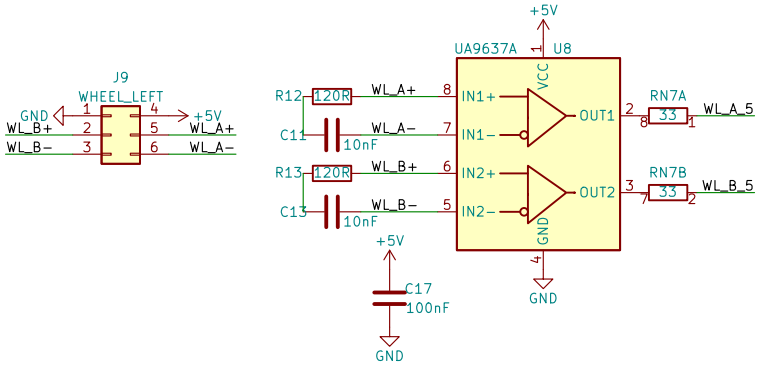
Steering Wheel Encoder

Steering Wheel Encoder:
RLS RM44SC0012B10F2F10

Cable:
-Vdd: Red
-GND: Blue
-Clock+: White
-Clock-: Brown
-Data+: Green
-Data-: Yellow



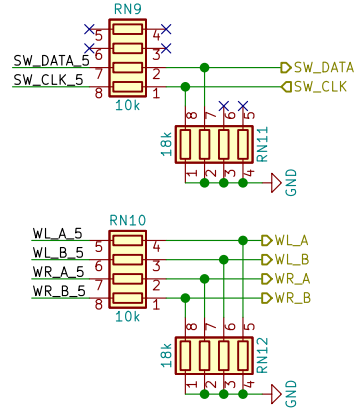
LEFT WHEEL ENCODER



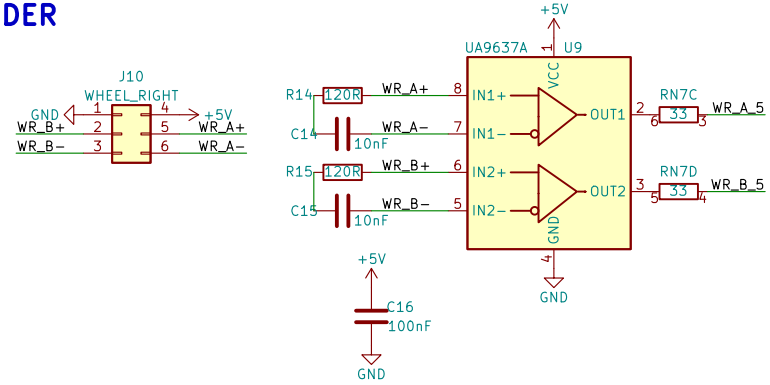
Radial incremental magnetic rings:
RLS MR075E060A120B00
-outer diameter: 57mm
-cross section height: 10mm
-radial magnetisation
-inner diameter: 85mm
-with reference mark
-number of poles: 120

Wheel Encoder:
RLS LM13ICD40AB10F00
-RS422
-interpolation factor: 400

Cable:
-5V: Brown
-GND: White
-A+: Green
-A-: Yellow
-B+: Blue
-B-: Red



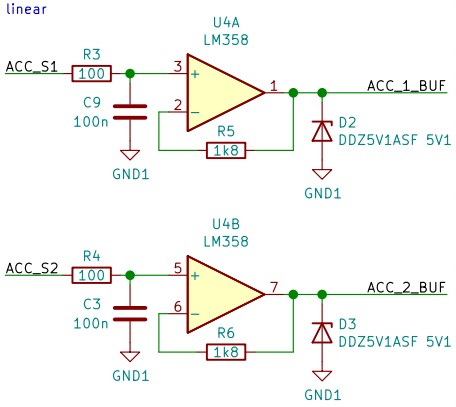
RIGHT WHEEL ENCODER



E-Agle TRT		
Sheet: /Encoders/		
File: Encoders.sch		
Title: DAS+ECU		
Size: A4	Date: 2021-12-13	**Rev: v1**
KiCad E.D.A. kicad (5.1.10)-1		Id: 2/4

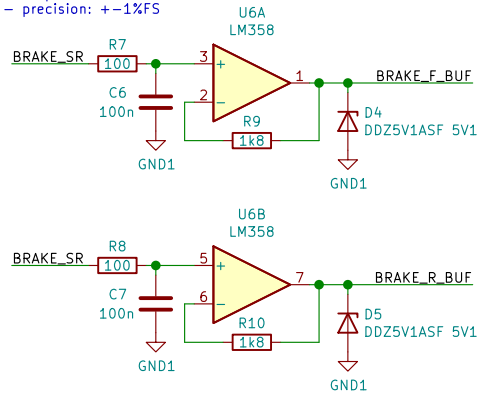
ACCELERATOR

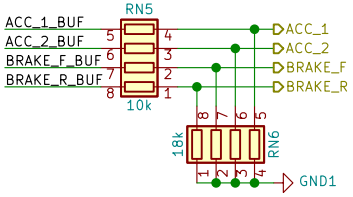
Accelerator potentiometer:
Aviorace DIA95-25
- resistance: 1.7kOhm
- linear

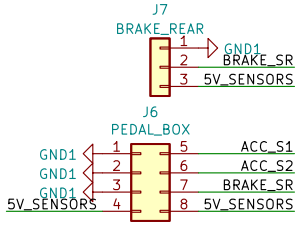


BRAKES

Brake pressure transducers:
Aviorace SP100
- ratiometric
- input: 0-100 bar
- output: 0.5-4.5 V
- precision: +-1%FS



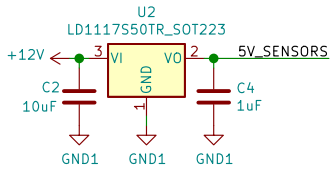


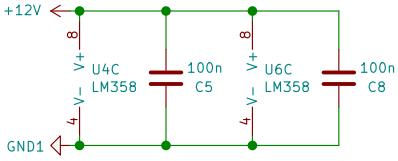


POWER

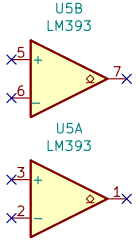
Output current @5V:
- Brake transducers: 2x5.5mA=11mA
- Accelerator potentiometers: 2x3mA=6mA

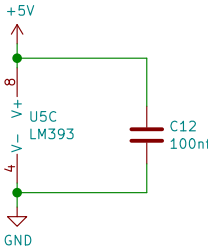
Power dissipated: 0.12W





TODO whatever is this

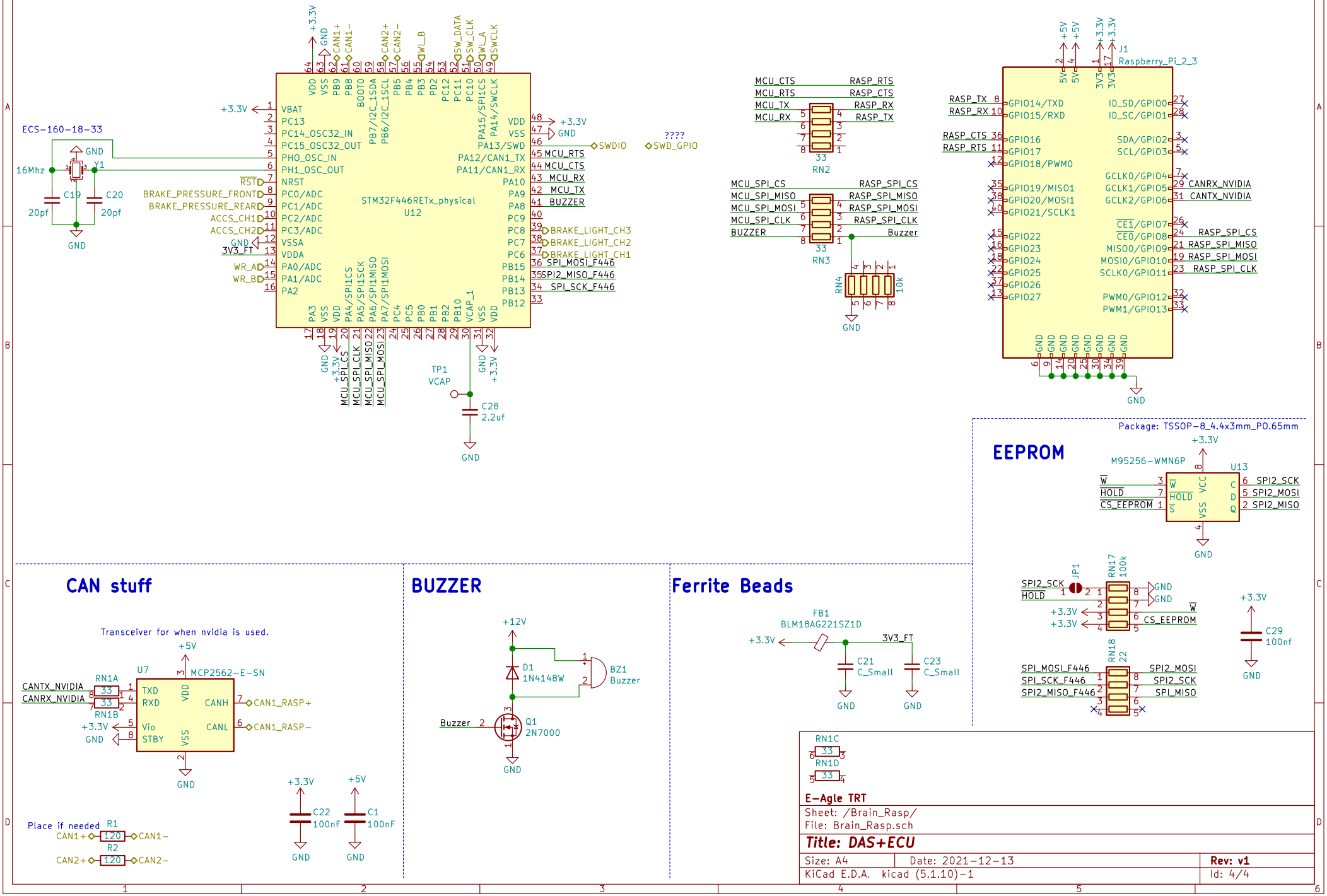




E-Agle TRT
Sheet: /Pedals_SET/
File: Pedals_SET.sch

Title: DAS+ECU

Size: A4	Date: 2021-12-13	**Rev: v1**
KiCad E.D.A. kicad (5.1.10)-1		Id: 3/4


ECS-160-18-33
16Mhz
Y1
C19
20pf
C20
20pf
GND
STM32F446RETx_physical
U12
+3.3V
VBAT
PC13
PC14_OSC32_IN
PC15_OSC32_OUT
PH0_OSC_IN
PH1_OSC_OUT
NRST
PC0/ADC
PC1/ADC
PC2/ADC
PC3/ADC
VSSA
VDDA
PA0/ADC
PA1/ADC
PA2
RST
BRAKE_PRESSURE_FRONT
BRAKE_PRESSURE_REAR
ACCS_CH1
ACCS_CH2
3V3_FT
WR_A
WR_B
VDD
VSS
PB9
PB8
BOOT0
PB7/I2C_1SDA
PB6/I2C_1SCL
PB5
PB4
PB3
PD2
PC12
PC11
PC10
PA15/SPI1CS
PA14/SWCLK
PA13/SWD
PA12/CAN1_TX
PA11/CAN1_RX
PA10
PA9
PA8
PC9
PC8
PC7
PC6
PB15
PB14
PB13
PB12
PA3
PA4/SPI1CS
PA5/SPI1SCK
PA6/SPI1MISO
PA7/SPI1MOSI
PC4
PC5
PB0
PB1
PB2
PB10
VCAP_1
MCU_RTS
MCU_CTS
MCU_RX
MCU_TX
BUZZER
SPI_MOSI_F446
SPI2_MISO_F446
SPI_SCK_F446
BRAKE_LIGHT_CH3
BRAKE_LIGHT_CH2
BRAKE_LIGHT_CH1
SWDIO
SWD_GPIO
????
TP1
VCAP
C28
2.2uf
MCU_CTS
MCU_RTS
MCU_TX
MCU_RX
RASP_RTS
RASP_CTS
RASP_RX
RASP_TX
RN2
33
MCU_SPI_CS
MCU_SPI_MISO
MCU_SPI_MOSI
MCU_SPI_CLK
BUZZER
RASP_SPI_CS
RASP_SPI_MISO
RASP_SPI_MOSI
RASP_SPI_CLK
Buzzer
RN3
RN4
10k
J1
Raspberry_Pi_2_3
RASP_TX
RASP_RX
RASP_CTS
RASP_RTS
GPIO14/TXD
GPIO15/RXD
GPIO16
GPIO17
GPIO18/PWM0
GPIO19/MISO1
GPIO20/MOSI1
GPIO21/SCLK1
GPIO22
GPIO23
GPIO24
GPIO25
GPIO26
GPIO27
ID_SD/GPIO0
ID_SC/GPIO1
SDA/GPIO2
SCL/GPIO3
GCLK0/GPIO4
GCLK1/GPIO5
GCLK2/GPIO6
CE1/GPIO7
CE0/GPIO8
MISO0/GPIO9
MOSI0/GPIO10
SCLK0/GPIO11
PWM0/GPIO12
PWM1/GPIO13
CANRX_NVIDIA
CANTX_NVIDIA
RASP_SPI_CS
RASP_SPI_MISO
RASP_SPI_MOSI
RASP_SPI_CLK
Package: TSSOP-8_4.4x3mm_P0.65mm
EEPROM
M95256-WMN6P
U13
W
HOLD
CS_EEPROM
SPI2_SCK
SPI2_MOSI
SPI2_MISO
JP1
RN17
100k
RN18
22
SPI_MISO
C29
100nf
CAN stuff
Transceiver for when nvidia is used.
U7
MCP2562-E-SN
RN1A
RN1B
CANTX_NVIDIA
CANRX_NVIDIA
TXD
RXD
Vio
STBY
VDD
VSS
CANH
CANL
CAN1_RASP+
CAN1_RASP-
Place if needed
R1
R2
CAN1+
CAN1-
CAN2+
CAN2-
C22
100nF
C1
100nF
BUZZER
+12V
D1
1N4148W
BZ1
Buzzer
Q1
2N7000
Ferrite Beads
FB1
BLM18AG221SZ1D
3V3_FT
C21
C_Small
C23
C_Small
RN1C
RN1D
E-Agle TRT
Sheet: /Brain_Rasp/
File: Brain_Rasp.sch
Title: DAS+ECU
Size: A4
Date: 2021-12-13
Rev: v1
KiCad E.D.A. kicad (5.1.10)-1
Id: 4/4