

find the full project documentation at <https://github.com/generationmake/CANFDZeroHAT>

use MCP2517FD or MCP2518FD

U1
MCP2518FD

MCP2517_CS 13 nCS VDD 14
SPL_CLK 10 SCK TXCAN 1
SPL_MOSI 11 SDI RXCAN 2
SPL_MISO 12 SDO OSC2 5
MCP2517_INT 4 INT# OSC1 6
9 INT0#/GPIO0/XSTBY OSC1 7
8 INT1#/GPIO1 RH100
3 CLK0/SDF VSS

+3V3
C1 100nF
GND

connected pin 8 to GND to allow use of SN65HVD230 (no CANFD)

U2
TCAN332GDR

D R VCC 3
CANL CANH 7
Rs GND 2
Vref GND

OSC2 40 MHz
Y1 40.000-18-F-2050-TR
RH100
C2 22pF
C3 22pF
GND

SW1A JS202011JCQN
R4 120R
D5 DNI
SW1B JS202011JCQN

use NUP2105L or PESD2CAN

UAVCAN Dronecode connectors

CAN in
CANVCC 1
CANH 2
CANL 3
GND 4
MP MP

CN3 GH_SM04B-GHS-TB

CAN out
CANVCC 1
CANH 2
CANL 3
GND 4
MP MP

CN4 GH_SM04B-GHS-TB

+5V
F1 OZCM0020FF2G
polyfuse 200 mA
CANVCC_F
D1 DNI
CANVCC

R10 1k
R11 1k
R12 2k
D2 150060GS75000
D3 150060RS75000
D4 150060YS75000
+3V3
green
red
yellow
GND

CN1 RASPI-I/O

I2C_SDA 1 3V3
I2C_SCL 3 BCM2/SDA
5 BCM3/SCL
7 BCM4/GPCLK0
9 GND
11 BCM17
13 BCM27
15 BCM22
17 3V3
19 SPI_MOSI BCM10/MOSI
21 SPI_MISO BCM9/MISO
23 SPI_CLK BCM11/SCLK
25 GND
27 BCM0/ID_SD
29 BCM5
31 BCM6
33 BCM13/PWM1
35 BCM19/MISO
37 BCM26
39 GND

BCM14/TXD
BCM15/RXD
BCM18/PWM0
GND
BCM23
BCM24
GND
BCM25
BCM8/CE0
BCM9/CE1
BCM1/ID_SC
GND
BCM12/PWM0
GND
BCM16
BCM20/MOSI
BCM21/SCLK

SERIAL_TX 2
SERIAL_RX 4
8
10
12
14
16 INTERRUPT_23
18 INTERRUPT_24
20
22 INTERRUPT_25
24 SPL_CE0
26 SPL_CE1
28
30
32 INTERRUPT_12
34
36
38
40

+3V3
R13 10k
GND

+5V
R3 10k
MCP2517_CS
DNI R1 OR
R2

INTERRUPT_23 R6 DNI
INTERRUPT_24 R7 DNI
INTERRUPT_25 R8 OR
INTERRUPT_12 R9 DNI
MCP2517_INT
R5 10k
+3V3

L1 Label
labels:generationmake_small_solder
L2 Label
labels:generationmake_logo

generationmake
Sheet: /
File: CANFDZeroHAT.kicad_sch
Title: CANFDZeroHAT
Size: A4 Date: 2023-08-24
KiCad E.D.A. kicad 6.0.11-2627ca5db0~126-ubuntu22.04.1 Rev: 0.3
Id: 1/1

L3 Label
Symbol:OSHW-Symbol_6.7x6mm_SilkScreen