Schematic Component Labels

Crystal / Oscillator section:
- DGND
- Y1 U254... GND HOT / HOT GND — 25Mhz
- C1 22pF, C2 22pF
- OSC_OUT_H, OSC_IN_H
- BOOT0, BOOT 100K, DGND DGND
- C3 6pF, C4 6pF
- Y2 32.768KHz
- OSC_IN_L, OSC_OUT_L

SWD Header:
- 3V3-MCU
- SWDIO, SWDCLK, NRST
- DGND
- SWD 1 2 3 4 5 — Header 5

U11 ADR3412:
- GND
- GND_FORCE, GND_SENSE, ENABLE
- VOUT_FORCE, VOUT_SENSE, VIN
- 3V3, 1V2
- C28 0.1uF, C26 1uF, C27 0.1uF
- GND

U10 ADM7171:
- GND
- EN, GND, VIN, VIN
- SS, SENSE, OUT, OUT
- AVCC_5V
- C29 4.7uF, C31 1nF, C30 4.7uF
- 3V3, GND

U13 AMS1117:
- GND
- GND, Vout, Vin
- Vout
- 3V3-MCU, AVCC_5V
- C34 10uF, C35 22uF
- GND

U1 STM32H750VBT6:
- 3V3-MCU, DGND, BOOT0, SWDCLK, SWDIO
- Pins: VDD VSS PE1 PE0 PB8 PB7 PB6 PB5 PB4 PB3 PD7 PD6 PD5 PD4 PD3 PD2 PD1 PD0 PC12 PC11 PC10 PA15 PA14
- Left side: PE2, PE3, PE4, PE5, PE6, VBAT, PC13, PC14-OSC32-IN, PC15-OSC32-OUT, VSS, VDD, PH0-OSC-IN, PH1-OSC-OUT, NRST, PC0, PC1, PC2, PC3, VSSA, VDDA, VREF+, VDDA, PA0, PA1, PA2, PA3
- Right side: VDD, VSS, VCAP-2, PA13, PA12, PA11, PA10, PA9, PA8, PC9, PC8, PC7, PC6, PD15, PD14, PD13, PD12, PD11, PD10, PD9, PD8, PB15, PB14, PB13, PB12
- Bottom: VSS VDD PA4 PA5 PA6 PA7 PC4 PC5 PB0 PB1 PB2 PE7 PE8 PE9 PE10 PE11 PE12 PE13 PE14 PE15 PB10 PB11 VCAP-1 VSS VDD
- VCAP_2, SWDIO, VCAP_1
- 3V3-MCU, DGND
- OSC_IN_L, OSC_OUT_L, OSC_IN_H, OSC_OUT_H, NRST, PC0, PC1
- VDDA, PA0, PA1, PA2, PA3
- PA10, PA9

VCAP caps:
- VCAP_1, VCAP_2
- C13 225, C12 225
- DGND DGND

DAC Header 3:
- PA5, DAC_IN, PA4
- DAC, Header 3

Op-amp U4A MAX4477:
- DAC_IN, R6 18.7K, R7 18.7K
- C16 180pF, R8 1K, C18 100nF, AGND
- AVCC_5V
- C17 160pF, AGND, AGND
- R9 25.5K, R10 25.5K
- C19 180pF, R11 1K
- U4B MAX4477
- C20 68pF, AGND
- DAC_OUT, OPA_IN
- DAC_OUT Header 2

R001 R002 R003:
- DGND, R001 0, R002 0, R003
- GND, AGND

Power decoupling:
- 3V3-MCU, R1 10R, VDDA
- C11 104, C10 225
- DGND
- 3V3-MCU
- C9 104, C8 104, C7 104, C6 104, C5 104
- DGND

LEDs:
- 3V3-MCU, D1 LED, R5 1K, PA0
- 3V3-MCU, D2 LED, R4 1K, DGND

Reset:
- 3V3-MCU, R2 10K, NRST, RST, C14 104, DGND

Bias section U5A LMP7702:
- 3V3, C21 100nF, AGND
- OPA_IN
- 1V2
- Bias Header 3 (3 2 1)
- U5B LMP7702, AGND
- AGND

U9 LMP7715MF:
- 3V3, C25 100nF, AGND
- 1V2
- PA3, VRE, Header 2

U6 电化学传感器:
- CE, RE, WE
- RE

Q1 MMBFJ177LT1G:
- RE, WE
- R? 1M, 3V3

U8B OPA2350UA:
- 1V2
- PA7, REF, Header 2

U7 LMP7721:
- C22 0.02uF
- R12 12K
- 3V3, C23 100nF, AGND
- 1V2
- AGND

U8A OPA2350UA:
- 3V3, C24 100nF, AGND
- VWE, PA6, Header 2
- AGND

Location holes:
- Location hole_1, Location hole_2, Location hole_3, Location hole_4

U2 U254-051T-4BH83-F1S:
- GND, ID, D+, D-, VBUS
- G, UD+, UD-, VIN

U3 CH340E:
- UD+, UD-, GND, RTS#, CTS#
- V3, RXD, TXD, VCC, TNOW
- 3V3-MCU, PA9, PA10, 3V3-MCU
- DGND, C15 104, DGND

Power input inductors:
- VIN, L1 10uH, AVCC_5V
- C33 22uf
- G, L2 10uH, GND

U12 SHT31:
- 3V3-MCU, R13 10K, PC0
- DGND, PC1, R14 10K, 3V3-MCU
- SDA, ADDR, ALERT, SCL
- VSS, R, NRESET, VDD, EPAD
- DGND, 3V3-MCU, C32 106, DGND

Title block:
- Title
- Size A3
- Number
- Revision
- Date: 2021/5/26
- Sheet of
- File: C:\Users\..\CV210506.SchDoc
- Drawn By:

Comment	Description	Designator	Footprint	LibRef	Quantity
Header 3	Header, 3-Pin	Bias, DAC	HDR1X3	Header 3	2
100K	Resistor	BOOT	RES_0805	Res2	1
22pF		C1, C2	CAP_0805	电容	2
6pF		C3, C4	CAP_0805	电容	2
104		C5, C6, C7, C8, C9, C11, C14, C15	CAP_0805	电容	8
225		C10, C12, C13	CAP_0805	电容	3
180pF		C16, C19	CAP_0805	电容	2
160pF		C17	CAP_0805	电容	1
100nF		C18, C21, C23, C24, C25	CAP_0805	电容	5
68pF		C20	CAP_0805	电容	1
0.02uF		C22	CAP_0805	电容	1
1uF		C26	CAP_0805	Cap	1
0.1uF		C27, C28	CAP_0805	Cap	2
4.7uF		C29, C30	CAP_0805	Cap	2
1nF		C31	CAP_0805	Cap	1
106		C32	CAP_0805	Cap	1
Cap2	Capacitor	C33	CAP_0805	Cap2	1
10uF	Capacitor	C34	CAP_0805	Cap	1
22uF	Capacitor	C35	CAP_0805	Cap	1
LED	LED	D1, D2	DIODE_0603	LED	2
Header 2	Header, 2-Pin	DAC_OUT, REF, VRE, VWE	HDR1X2	Header 2	4
Inductor	[NoValue], Inductor	L1, L2	RES_1206	Inductor	2
Touch		Location hole_1, Location hole_2, Location hole_3, Location hole_4	kong 3.5	Touch	4
MMBFJ177LT1G		Q1	SOT23-3	MMBFJ177LT1G	1
10R		R1	RES_0805	电阻	1
0	Resistor	R001, R002, R003	RES_0805	Res1	3
10K	[NoValue], Resistor	R2, R13, R14	RES_0805	电阻, Res2	3
1K	[NoValue], Resistor	R4, R5, R8, R11, R?	RES_0805	电阻, Res2	5
18.7K		R6, R7	RES_0805	电阻	2
25.5K		R9, R10	RES_0805	电阻	2
12K		R12	RES_0805	电阻	1
SW-PB	Switch	RST	key3*3	SW-PB	1
Header 5	Header, 5-Pin	SWD	HDR1X5	Header 5	1
STM32H750VBT6		U1	LQFP-100	STM32H750VBT6	1
U254-051T-4BH83-F1S		U2	USB	U254-051T-4BH83-F1S	1
CH340E		U3	MSOP-10_L3.0-W3.0-P0.50-LS5.0-BL	CH340-E	1
MAX4477		U4	uMAX-8	MAX4477	1
LMP7702		U5	SOIC-8	LMP7702	1
电化学传感器		U6	HDR1X3	电化学传感器	1
LMP7721		U7	SOIC-8	LMP7721	1
OPA2350UA		U8	SOIC-8	OPA2350UA	1
LMP7715MF		U9	SOT-23-5	LMP7715MF	1
ADM7171		U10	LFCSP-8	ADM7172	1
ADR3412		U11	SOT-23-6	ADR3412	1
SHT31		U12	DFN-8_EP_3x3mm	SHT31	1
AMS1117		U13	SOT-223	AMS1117	1
25Mhz	3225贴片无源晶振	Y1	SMD 3225	XTAL_3225	1
32.768KHz	普通晶振	Y2	SMD 3215-2P 32.768K	XTAL	1