J109 Connections
A: 1-2 1-5W Variable RF Out CW Tx
B: Open 1-5W Fixed by LT1086 and R2/R1

SI5351 Clock

FET Driver

HF Final Amplifier

$V = 1.25(1 + R2/R1)$

L101:
9T (24 cm) #24 Bifilar FT-50A-43

I2C pull-ups can be provided by uC
port pin pull-ups on SCL and SDA.

SIT1566AC TCO

RF Configurations
A: External 5-10.5V = 1-5W Variable RF Out CW Tx
B: Fixed 1-5W RF Out CW set by LT1086-ADJ
C: 20mW Fixed RF Out CW Tx (Q103 replaced by 47 ohm resistor)

Power Source Configurations
1. External 5-12.5V
2. Internal LiIon Battery (3.2-4.2V)

Sheet: /
File: SignalSlinger.kicad_sch
Title: SignalSlinger
Size: A4 | Date: 2023-11-17 | **Rev: 1.2**
KiCad E.D.A. kicad (6.0.4-0) | Id: 1/4

Power Supply Schematic

External Power Source
5V – 12.5V

V_ext

PWR_FLAG

J202 Connections
1: 1–2 = External 5–12.5V power source
2: 2–3 = Internal battery

J201
D202
F201 1.1A
L201
C204 470nF
GND

J202
+BATT

L202 1uH

U203
TPS63060

- 1 L1
- 2 VIN
- 3 EN
- 6 VAUX
- 4 PS/SYNC
- 10 L2
- 9 VOUT
- 8 FB
- 5 PG
- 7 GND
- 11 PGND

PWR_FLAG

B/B_PS_Enable

+7V

C205 10uF
C207 10uF
R205 105k
C208 100nF
R201 105k
GND

R202 1M
R203 80.6k
C211 10pF
+3V3
R204 1M

C212 1uF
C213 22uF
C214 22uF
C215 22uF
GND

GND GND GND GND GND GND

GNGND

Power_Good

V_ext
+VSW

D201 BAT54C
C206 10uF

U201
LP2985-3.3

- 5 VOUT
- 4 BP
- 3 ON/OFF
- GND
- VIN

+3V3
C201 10uF
C202 10nF
PWR_FLAG
C203 10uF

U202
LP2985-3.3

- 1 VIN
- 3 ON/OFF
- GND
- VOUT 5
- BP 4

V3V3_PWR_ENABLE

VDD
C210 10uF
C209 10nF

OPTIONAL AUX CONTROL

V_ext
JP201
V-ext disable

External Power Source
J203

C216 10uF

U204
TPS22810DBVT

- 1 VIN
- QOD
- EN/UVLO
- CT
- GND
- VOUT 6

Fan_Contr

Controlled Power
J204

+BATT
PWR_FLAG
BT201 LiIon Cell

MOD201
AdaFruit Charger

- 1
- 2
- 3
- 4

V+_Charging

RF Configurations
A: External 5–10.5V = 1–5W Variable RF Out CW Tx
B: Fixed 1–5W RF Out CW set by LT1086–ADJ
C: 20mW Fixed RF Out CW Tx (Q103 replaced by 47 ohm resistor)

Power Source Configurations
1. External 5–12.5V
2. Internal LiIon Battery (3.2–4.2V)

Sheet: /Power Supply/
File: PowerSupply.kicad_sch
Title: SignalSlinger
Size: A4   Date: 2023-11-17   **Rev: 1.2**
KiCad E.D.A. kicad (6.0.4-0)   Id: 2/4

80m LPF
6th order Chebychev
3.9MHz 3dB cut-off
w/ node at 10.7MHz

W301
GND
T5

W302
GND
T6

C304
91pF

W303
GND
T7

C301
470nF

RF_Raw

L301
2.7uH

C302
1100pF

C303
1800pF

L302
2.7uH

C305
1100pF

1
J301
To Antenna
2

L301 & L302:
20T (46 cm) #24 T60-2

40m LPF
6th order Chebychev
8MHz 3dB cut-off
w/ node at 21.5 MHz

L301 & L302 = 1.3uH
C302 & C305 = 470pF
C303 = 820pF
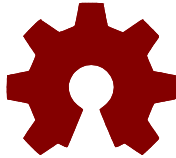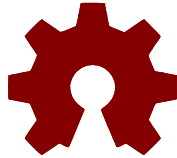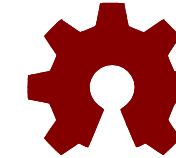C304 = 43pF

Core Product
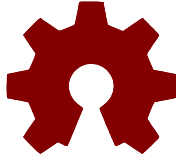
Chassis Box
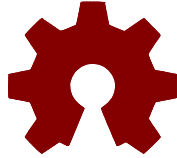
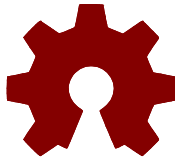PCB Screws
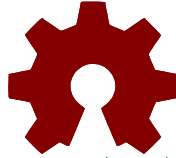
Pin Header (Straight)
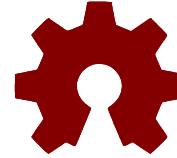
Pin Header Shorting Jumpers

LED Light Pipes

Magnet Wire for RF Inductors

PCB_AND_ASSEMBLY

FTDI Support

FTDI Cable
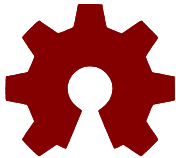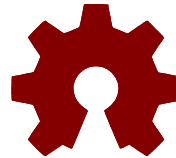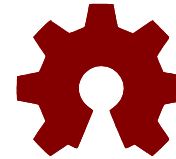
9POS Backshell
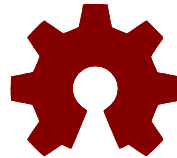
9-Pin D Male
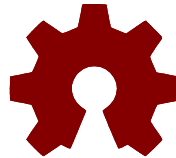
6-pin Angled Header

FTDI Adapter PCB

Internal Battery Support

BT401
LiPo Battery

LiPo Charger Module