6 FPC Touch I2C connector

+3V3
GND
R4 4,7 K
TOUCH_INT
+3V3
J2
I2C_SCL 7
I2C_SDA 8
GND
Conn_01x06_Female

Extra IOs

J5
1
2
IO_2
GND
Conn_01x02_Male

10 FPC LCD connector

J1
LCD_CLK 1
LCD_MOSI 2
LCD_CS 3
4
+3.3V LCD_DISP 5
6
7
8
9
10
MP1 MP1
MP2 MP2
GND
FH52-10S-0.5SH_99

IO_9
BOOTMODE

Sharp Memory Display Connector as detailed in Datashet
https://cdn.sparkfun.com/assets/d/e/8/9/7/LS013B7DH03_datasheet.pdf

Pin	Function	Notes
1	SCLK	Serial Clock
2	MOSI	Serial Data Input
3	CS	Serial Chip Select
4	EXTCOMIN	External COM Inversion Signal
5	DISP	Display On(High)/Off(Low)
6	3V3	3.3V out
7	VIN	3.3-5.0V (into LDO supply)
8	EXTMODE	COM Inversion Select (Low = SW clock/serial)
9	GND	
10	VSSA	-> GND

C_Polarized 100uF C16
+3V3
GND
PWR_FLAG

GND
CTS R7 10 K
SW1
+3V3
RESET R9
Q2 BC817
R10 RTS
40 K
IO_9
TP2
CTS
Q3 BC817
BOOTMODE

GND
LCD_MOSI
RTC_INT
GND
R8 EPD_RST
+3.3V
+3.3V R6
4.7K
I2C_SDA
4.7 K
I2C_SCL
LCD_CLK
LCD_CS
TOUCH_INT
IO_9
BOOTMODE
USB_D-
USB_D+

C2935306
U1
ESP32-C3-MINI-1-N4
1 GND
2 GND
3 3V3
4 NC
5 IO_2
6 IO3
7 NC
8 EN
9 NC
10 NC
11 NC
12 IO0
13 IO1
14 GND
15 NC
16 IO10
17 NC
18 IO4
19 IO5
20 IO6
21 IO7
22 IO8
23 NC
24 NC
25 NC
26 IO18
27 IO19
28 NC
29 NC
30 RXD0

61 GND
60 GND
59 GND
58 GND
57 GND
56 GND
55 GND
54 GND
53 GND
52 GND
51 GND
50 GND
49 GND
48 GND
47 GND
46 GND
45 GND
44 GND
43 GND
42 GND
41 GND
40 GND
39 GND
38 GND
37 GND
36 GND
35 NC
34 NC
33 NC
32 NC
31 TXD0

GND

USB_C_Programming

VBUS A4 VBUS
A5 CC1
B5 CC2
A7 D-
B7 D-
A6 D+
B6 D+
USB_D-
USB_D+
A8 SBU1
B8 SBU2
J3
A1 GND
S1 SHIELD
GND GND GND

IMPORTANT: This PCB does not have UART Chip.
USB just connects to the IOs specified in C3-mini datasheet
for USB_D- (18) and USB_D+ (19)
TOUCH_INT IO8 needs to be pulled-high during boot to enter
download mode and be able to program the MCU

Charge and power management

GATE input voltage is LOW then P-channel
MOSFET connected in the circuit will be
turned ON letting VBAT flow to LDO

VBAT
U5
MCP1700-3302E_SOT23
3 VI VO 2
+3.3V
C18 10uF
1 GND
C19 10uF
GND

P-CH MOSFET
D
Q4 SI2301CDS
VBUS
GATE
R13 10K
D5 1N5817
GND
SRC

U4
TP4057-42-SOT26-R
VBAT 3 BAT
2 GND
1 *CHRG
VCC 4
*STDBY 5
PROG 6
R12 5K
R11 2K2
D6 GRE
VBUS
GND
GND
C12044

DS3231 Real time clock via I2C

PWR_FLAG
VBAT
+3.3V
I2C_SCL 8 SCL
I2C_SDA 7 SDA
VBAT VCC
32KHZ
TP1 32khz
+3.3V
R1 10 K
RTC_INT
INT/SQW 3
4 RST
5 GND
U2 DS3231MZ

Battery jack

J4
Jack-DC
1
2 VBAT
GND

H1 MountingHole
H2 Not included in PCB (no space) MountingHole
H3 MountingHole
H4 MountingHole