C1 10 uFd 16V
C2 10 uFd 16V
VCC

U1 CY8C24094 QFN68

TP2 CMOD
Rb
NO LOAD R88
C3 0.01 uFd CMOD

P0[0] P0[1] P0[2] P0[3] P0[4] P0[5] P0[6] P0[7] — R3 R6 R9 R2 R12 R16 R18 560
P2[0] P2[1] P2[2] P2[3] P2[4] P2[5] P2[6] P2[7] — R22 R24 R25 R27 R29 R31 R33 R35 560
P4[0] P4[1] P4[2] P4[3] P4[4] P4[6] P4[7] — R37 R39 R41 R43 R45 R49 R51 560

VBUS R47 1.5K
XRES R53 100

Place close to connector.
OCDE R56 47 ohm
OCDO R62 47 ohm
HCLK R64 47 ohm
CCLK R67 47 ohm

DP
DM

NOTE: Place all resistors close to PSoC

TP15 GND

R4 2.00 ohm
R7 100 ohm
R10 560
R11 560
R14 300
R17 300
R19 300
R23 560
R28 560
R30 560
R32 560
R34 560
R36 560
R38 560
R40 560
R42 560
R44 560
R46 560
R48 560
R50 560
R52 560

P1[0] P1[1] P1[3] P1[4] Select P1[5] P1[6] P1[7]
R5 0 OHM P1[0]b
R8 0 OHM P1[1]b
R15 0 OHM P1[5]b
R20 0 OHM P1[7]b
R13 7.5K Rb

P3[0] P3[1] P3[2] P3[3] P3[4] P3[5] P3[6] P3[7]
P5[0] P5[1] P5[2] P5[3] P5[4] P5[5] P5[6] P5[7]
P7[0] P7[1] P7[2] P7[3] P7[4] P7[5] P7[6] P7[7]
R54 R55 R60 R63 R66 R65 R68 R70 560
P7[0]b P7[1]b P7[2]b P7[3]b P7[4]b P7[5]b P7[6]b P7[7]b

Remove if using LCD (Recommended)

DO NOT POPULATE R21 BY DEFAULT
R1 560 P1[4]
R21 zero TP8 EXTCLK

P1[4] Selection Notes:
1. Keep resistors as close together as possible and close to PSoC to avoid long stubs.
2. Install only R1 for use in CapSense applications.
3. Install only R21 for use as external clock source.

VCC VCC TP1
Vadj J1 HEADER 3
5V
NOTE: DEFAULT JUMPER PIN 2 TO 3

Place test points next to connector P2.
Vin TP3 VIN
5V TP5 5V
VCC TP9 VCC
Vadj TP11 VADJ
TP13 GND
DO NOT POPULATE - PROBE POINTS

Place test points near edge of board.
Vin TP4 VIN
5V TP6 5V
TP7 GND
VCC TP10 VCC
Vadj TP12 VADJ
TP14 GND

DO NOT POPULATE
VCC R57 R58 R61 R59 56k
J2 SPI/I2C
P1[0]b P1[1]b P1[5]b P1[7]b
6 PIN HDR
HEADER

DO NOT POPULATE
I2C Address: 0101100 / 44 / 2Ch
U2 AD5161 50K
P0[5] P3[1] P1[0]b P3[1] Rb P1[1]b
C4 1 uFd 16v

XRES R90 1K
C5 330 pFd
HCLK CCLK OCDO OCDE
P1 ICE R/45 Right Angle
C12 0.1 uFd
R72 R73 R74 R76 1K

DO NOT POPULATE
R75 1.37K
R79 POT 5K
R80 1.07K
P4 LCD MODULE
GND VCC VO RS R/nW EN D0 D1 D2 D3 D4 D5 D6 D7
VO P7[5] P7[6] P7[4] P7[0] P7[1] P7[2] P7[3]
LCD HEADER

R77 1K D1 LED Red
R78 1K D2 LED Red

R89 100K
VBUS D3 DIODE SCHOTTKY
J6 USB MINI AB
VBUS DM DP ID GND
R71 24 DM
R69 24 DP
R87 zero 100K
C11 0.01 uFd

ISSP / I2C
J3 HDR 1x5
P1[1] P1[0]
XRES/INT P1[5]b
J4 HEADER 3
NOTE: DEFAULT JUMPER PIN 1 TO 2

U3 LP3875ES-ADJ TO263-5
VIN VOUT nSD GND ADJ
RegAdj R81 8.87K 1%
C7 0.01 uFd
R82 NO LOAD
C6 10 uFd 16v
C8 10 uFd 16v

DO NOT POPULATE
BH1 BAT 9V FEMALE
POS 9V NEG
BH2 BAT 9V MALE
D4 DIODE SCHOTTKY

I2C Address: 0101101 / 45 / 2Dh
U4 AD5161 10K
RegAdj P1[0]b P1[1]b

D5 DIODE SCHOTTKY
J5 POWER JACK P-5
6V-12V
D6 DIODE SCHOTTKY
U5 LM1117MPX-5.0
VIN VOUT GND TAB
C9 10 uFd 16v
C10 10 uFd 16v

P2 22x2_RA_Recptacle
P3 22x2_RA_Recptacle
P1[0] P1[1] SDA SCL
R83 R85 R84 R86 zero
NC
P0[1] P2[5] P2[1] P1[5] P1[2] P1[6] P3[2] P2[2] P2[6] P0[2] P0[6]
P0[7] P0[3] P2[7] P2[3] P3[3] P1[7] P1[3] P1[4] P3[0] P2[0] P0[0] P0[4]
P4[1] P7[5]b P7[1]b P3[5] P5[5] P5[1] P5[2] P5[6] P3[6] P7[2]b P7[6]b P4[2] P4[6]
P3[7] P5[7] P5[3] P5[0] P5[4] P3[4] P7[0]b P7[4]b P4[0] P4[4]

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