J3
LogicAnalyzer
DIP

16 Chan0
15 Chan1
14 Chan2
13 Chan3
12 Chan4
11 Chan5
10 Chan6
9 Chan7

8 DP0
7 DP0
6 DP0
5 DP0
4 DP0
3 DP0
2 DP0
1 DP0
Gnd

R1 4.7K
R2 4.7K
R4 4.7K

+3.3V +3.3
+3.3

One

MK1
MIKROE
DIL

16 ×
15 ×
14 ×
13 ×
12
11
10 ×
9

1 ×
PC62
3 ×
4 ×
5 ×
6 ×
7 ×
8

One

Gnd

+Vref

C3
CoinSelector
DIL

1

PD7 2
PD6 3

One

J4
ST7735
LCD

160×128 pixels
16-bit color

Gnd 1 Gnd
+3.3 2 Vcc
PA7 3 Reset
PA6 4 Data/Command
PA3 5 CARD_CS
PA5 6 TFT_CS
PA5 7 MOSI
PA2 8 SCLK
9 MISO
+3.3 10 Light

Gnd

U3a
BoosterPack
QIP

10 PA7
9 PA6
8 PA5
13 PA4
12 PA3
11 PA2

D2
LEDT1.76
R5
470

3 ×
4
B3F-1050
1 ×
2

3 ×
4
B3F-1050
1 ×
2

One Gnd

U3b
BoosterPack
QIP

15 PB7
14 PB6
2 PB5
7 PB4
38 PB3
19 PB2
4 PB1
3 PB0

U3c
BoosterPack
QIP

34 PC7
35 PC6
36 PC5
37 PC4

U3d
BoosterPack
QIP

32 PD7
33 PD6
26 PD3
25 PD2
24 PD1
23 PD0

U3e
BoosterPack
QIP

6 PE5
5 PE4
29 PE3
28 PE2
27 PE1
18 PE0

U3f
BoosterPack
QIP

31 PF4
39 PF3
40 PF2
30 PF1
17 PF0

A1

http://users.ece.utexas.edu/~valvano/HowToDesignEnclosureMakerspace.htm
This PCB will go into a Lab9Box, WoodBox and WoodBox2

Dropout voltage is 350mV
Maximum output current is 100 mA

D1
LEDT1.75
Red 1mA
Avago HLMP-D150

R3
470

C2
4.7uF

TP2
1 2
U2
LP2950CZ-3.3
TO220
1 In Out 3
2 Gnd

Gnd3
1 2

Top
1 Out
2 Gnd
3 In

Replace with LM2937-3.3 if 100<I<500mA

C1 4.7uF

TP1
1 2

Gnd
1 2

SW2
OffBoardPowerSwitch
1 2

Battery external to PCB
+5V battery

m1 6 8 m3
+5V 1 Vdd
2 D-
3 D+
4 Id
5 Gnd
m2 7 9 m4
J5
USB_Micro-B_SM
SM

J1
1
2

any battery >3.3V+VDO
Alternate power connector

U3g
BoosterPack
QIP
21
5V 1
3.3V 20
Gnd 22
Reset 16 RST

SW1
KSC353JLFG
SM
4
3
2
1

University Of Texas At Austin

Schematic Name:	Lab 7 starter file Power	
Name(s):	David Chun & Grace Zhuang	
Date:	3/6/2018	Semester: Spring 2018

A2