Power and Battery

J1
USB_B_Micro
VBUS
Shield
GND

+5P

USB Power in
+5P
R1
10k
Q1
AO3401A
D1
+BATT
VBUS
GND

U2
3v LDO AP2112K-3.3V
VIN VOUT
ON/OFF BP
GND
VBUS
+3V0
C4
10uF
C6
10uF
C7
10uF
C8
0.1uF
GND

IC2
S-1000C32-I471U
VDD NC
OUT VSS
GND
VBUS
OUT driven low
when voltage is less than 3.2
Low Voltage Cutout

IC1
MCP73831T-2ACI_MC
VDD_1 PROG
VDD_2 NC
VBAT_1 VSS
VBAT_2 STAT
+5P
+BATT
800k
1.5uA Drain
C3
10uF
C5
10uF
BATSENSE
GND

R4
10k   10k = 100mA Charge
CHGSTAT
GND
R5
100k
+3V0

SM02B-SRSS-TB
J2
+BATT
GND

SOC and FLASH

Y1
32.768
XL1 XL2
C1
18pF
C2
18pF
GND

U3
BMD-340-A-R
VCC1
VCCH1
VBUS
SWCLK SWCLK P1.00 QSPI_DIO0
SWDIO SWDIO P1.01 QSPI_CLK
D+ USB-D+ P1.02 QSPI_DIO3
D- USB-D- P1.03 SW_D
P1.04
P1.05
XL1 P0.00 P1.06
XL2 P0.01 P1.07 ACC_AG_NT
LCD_BL P0.02 P1.08 ACC_INT
SW_B P0.03 P1.09
P0.04 P1.10
P0.05 P1.11
P0.06 P1.12
P0.07 P1.13
LCD_DC P0.08 P1.14 IIC_SCL IIC_SCL
NFC1 P0.09 P1.15 IIC_SDA IIC_SDA
NFC2 P0.10
LCD_CLK P0.11 P0.31 BATVSENSE
LCD_MOSI P0.12 P0.30 GES_INT
LCD_RST P0.13 P0.29 SW_A
LCD_CS P0.14 P0.28 MIC_DATAOUT
LCD_TE P0.15 P0.27 MIC_WS
CHGSTAT P0.16 P0.26 MIC_SEL
SW_C P0.17 P0.25 MIC_BCLK
RESET P0.18 P0.24
P0.19 P0.23 QSPI_CS
QSPI_DIO2 P0.20 P0.22 QSPI_DIO1
P0.21
GND
+3V0 +5P

Can't be swapped

U1
W25Q32JVZPIQ
QSPI_CS CS DI(IO0) DO(IO1) QSPI_DIO0
QSPI_CLK CLK IO2 QSPI_DIO1
VCC GND IO3 QSPI_DIO2 QSPI_DIO3
+3V0
GND

Sensors

Tricorder on a chip
Temp, Pressure, Humidity, VOC.

U6
BME680
VDDIO
VDD
CSB
SCK
SDI
SDO
GND
+3V0
R15 100k
IIC_SCL
IIC_SDA
R16 100k
IIC: 0x76
GND

U7
APDS-9960
LEDK
LDR
INT GES_INT
SCL IIC_SCL
SDA IIC_SDA
LEDA
R17 22
C13 0.1uF
+3V0
GND
C11 10uF
C12 10uF
C14 0.1uF
GND
IIC addr: 0x39

Gesture Sensor, For some minority
report style swiping

Also, a ambient light sensor.
Also, color and proximity.

U5
LSM9DS1
VDD
VDDIO
DEN_A/G
CS_M
CS_A/G
SCL/SPC IIC_SCL
SDO_A/G
SDA/SDI/SDO IIC_SDA
SDO_M
INT_M INT_M
INT1_A/G ACC_INT
INT2_A/G ACC_AG_NT
DRDY_M
C1
CAP
RES
GND
+3V0
C15 10uF
C16 0.1uF
R10 100k
R11 100k
R12 100k
R13 100k
C9 10nF
C10 0.1uF
GND

SW1 SW2
SW3 SW4
R20 100k R21 100k R22 100k R23 100k
+3V0
GND

MIC1
VDD
WS MIC_WS
SEL MIC_SEL
BCLK MIC_BCLK
DATA_OUT MIC_DATAOUT
GND
+3V0
SPH0645LM4H-B
Mic, Optional, nice to have
GND

LCD

TFT1
IMO
IM1
IM2
GND
+3V0
+3V0
BUSSEL

Q2
AO3401A
R6 33
+3V0
R8 100k
LCD_BL
RESET LCD_RST
LEDA
LEDK
VCI
GND
POWER/LITE

TE LCD_TE
CS LCD_CS
RS/CLK LCD_CLK
WR/DC LCD_DC
RD
SDA LCD_MOSI
GND
CONTROL

DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
GND
DATA

DISP_TFT_1.54N_240X240_22P

Testpoints

RESET TP11
SWCLK TP1
SWDIO TP2
D+ TP3
D- TP4
IIC_SDA TP5
IIC_SCL TP6

+3V0 VBUS +5P +BATT
TP7 TP8 TP10 TP12
TP9
GND

J3
Conn_01x04_Shielded
GND
+3V0
IIC_SDA
IIC_SCL
SH
GND