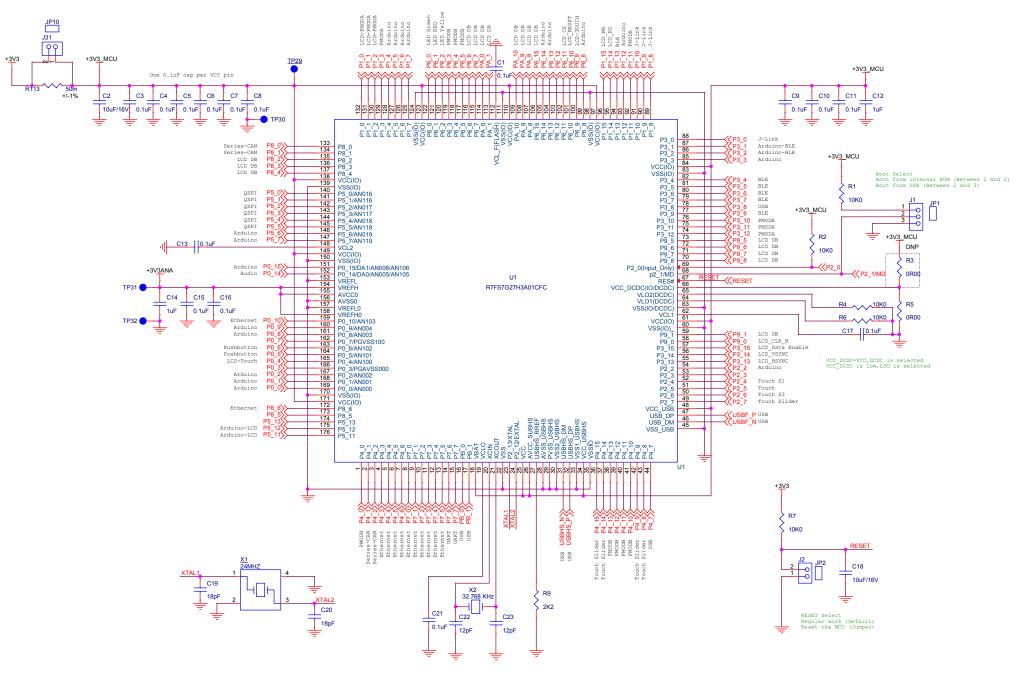
Table of Contents
TITLE PAGE
MCU Main Signals
Bluetooth Low Energy
LCD Hot Bar Interface
USB Host and Device Interface
QSPI
RS232/485,CAN Interface
Ethernet Interface
Touch Sense Interface
PMOD Interface
Audio Amplifier
LEDs, Push Buttons
JTAG, J-Link On Board with RX621
SC32 MCU Breakout Pins
Arduino Shield
Power Supplies

### Revision History

Rev. Code	Date	Description
V0.5	04/14/2015	Initial Draft
V0.6	05/14/2015	
	08/05/2015	- DNP the resistors:R20,R26,R28 Place the resistors:R19,R22,R29 Cut the tray from J3 pin 14 to U3 pin 10,Connect pin 14 of J3 to pin 2 of J14 Cut the tray from J3 pin 17 to U3 pin 9,Connect pin 10 of U3 to pin 17 of J3 Connect pin 9 of U3 to pin 18 of J3 Changed U14 from RT9722BGB to AP2141DWG-7 DNP the capacitor:C80,C81 Changed the footprint of J17.
	08/10/2015	- Changed the RF unit oscillation circuit of U2.
	08/13/2015	- Changed the touch controller IC from XPT7603 to SX8656 Changed the connections of LCD 4-wire SPI Changed the BLE power supply circuit.Add connectors to program RL78.
V3.0	12/10/2015	- Exchanged the RX and TX of Arduino connector(J27) with each other.

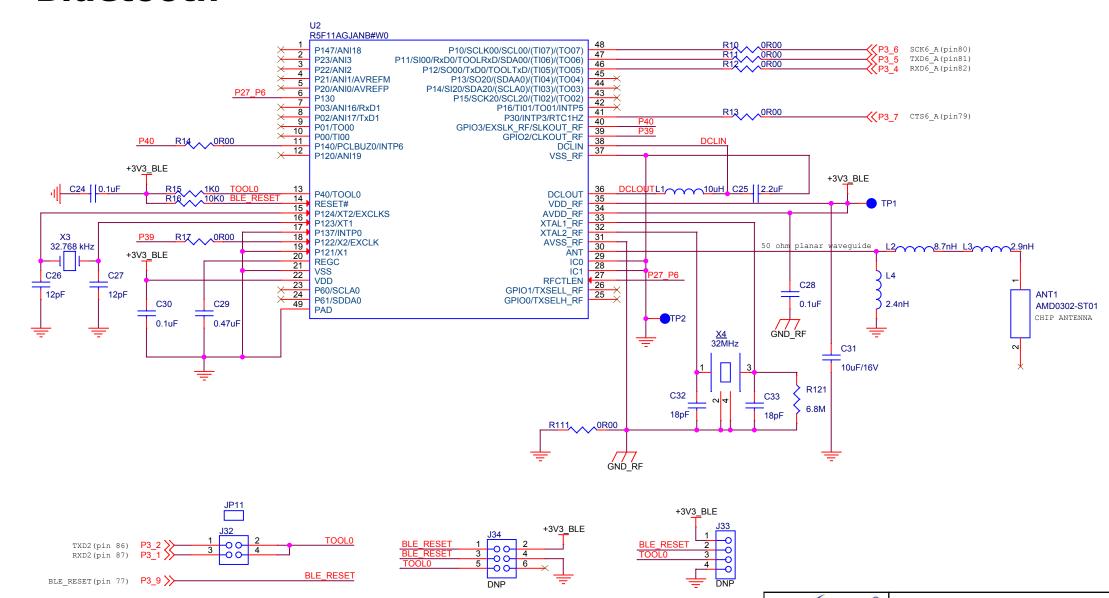
# SK-S7G2







### **Bluetooth**



http://arm.embedinfo.com

Date: Wednesday, January 06, 2016

**Bluetooth Low Energy** 

Rev:

v3.0

Sheet: 3 of 16

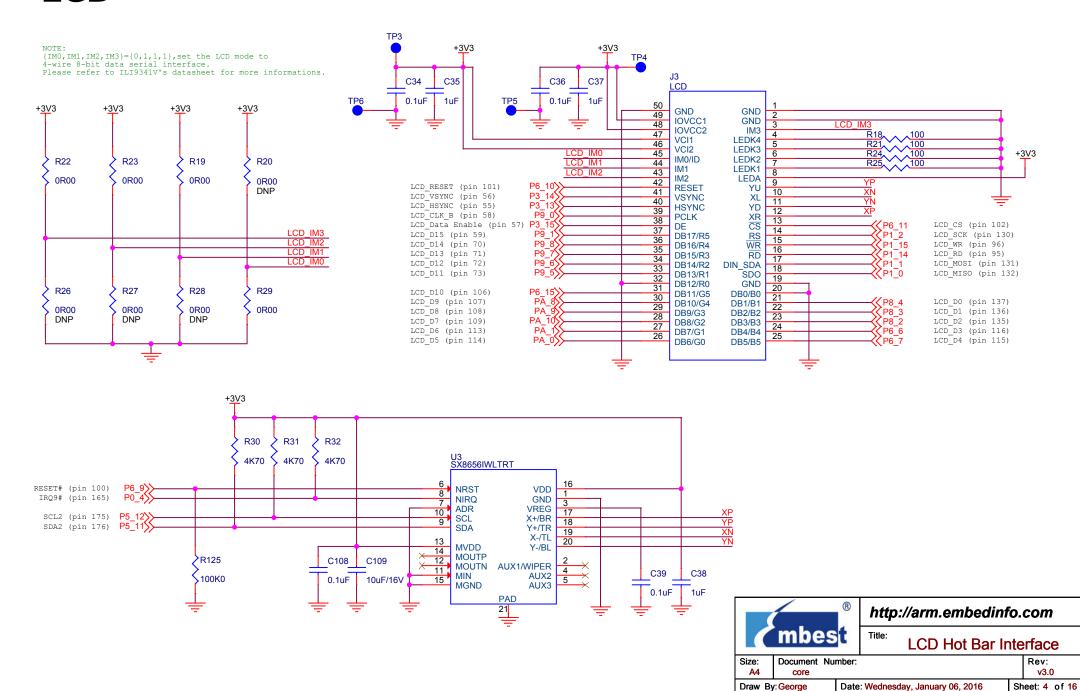
mbes

Size:

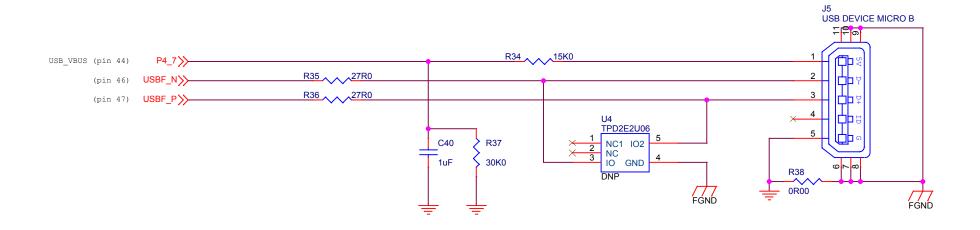
Draw By: George

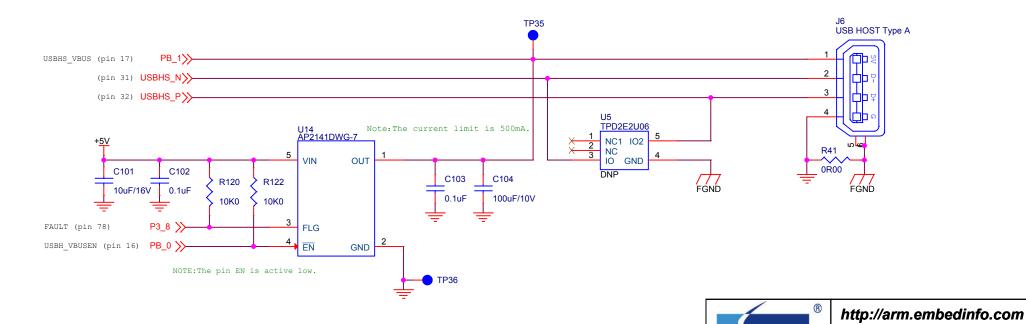
Document Number:

### **LCD**



# **USB**





**USB Host and Device Interface** 

Date: Wednesday, January 06, 2016

Document Number:

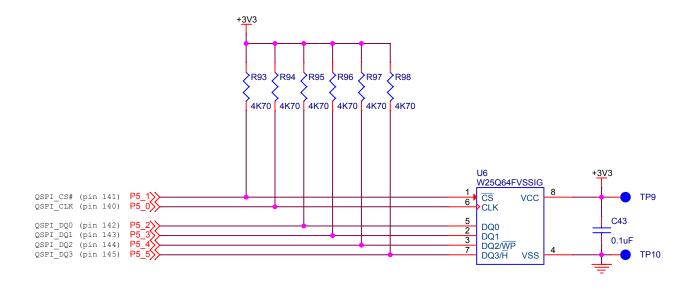
Draw By: George

Rev:

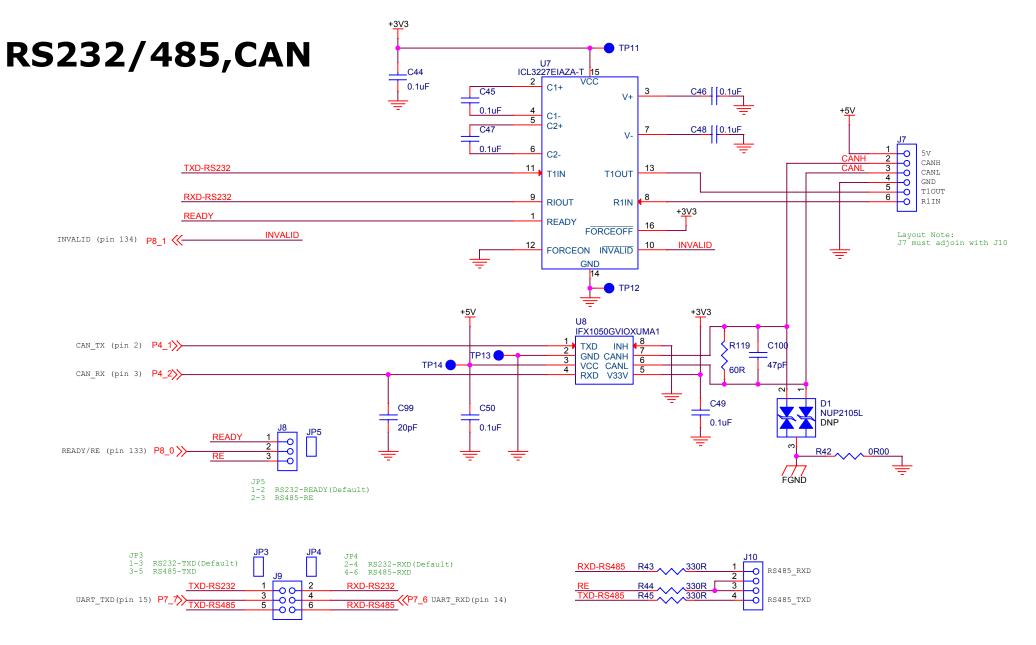
v3.0

Sheet: 5 of 16

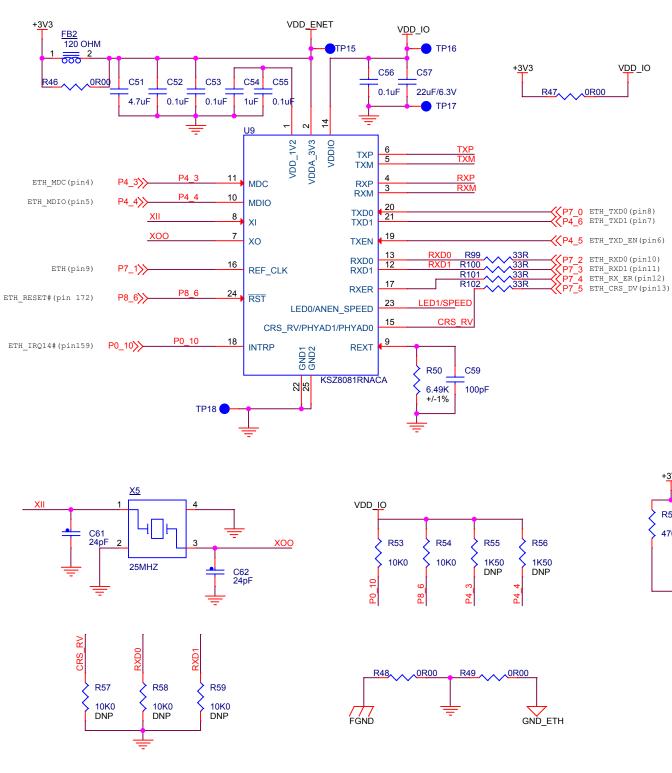
# **QSPI**







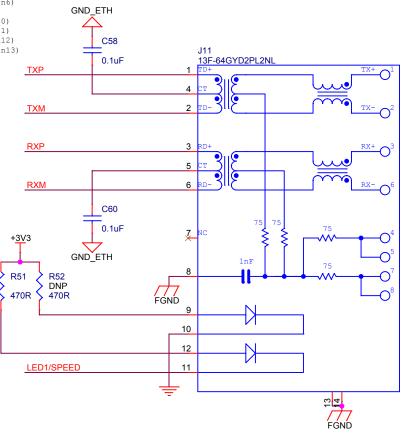




### **Ethernet**

#### Layout NOTES:

- The differential pair (TX+/- or RX+/-) should be routed away from all other signals and close together to use 5-mil trace width and 5-mil trace space in same length as possible with a 1000hm controlled trace.
- 2. Keep both traces of each differential pair as identical to each other as possible.
- Route each differential pair on the same PCB layer. Avoid via and pad in the path.
- Route both TX+/- and RX+/- pairs as far as away each other at least four times of 5-mil trace space.



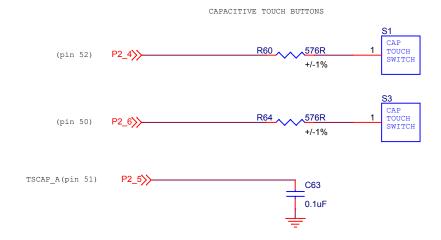
Draw By: George



Date: Wednesday, January 06, 2016

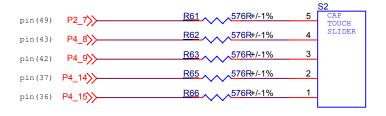
Sheet: 8 of 16

# **Touch**



Layout NOTE:
The wiring between the electrode
and the Touchsensor (TS) port
should be the shortest length
possible. It is recommended to
separate the trace from noisy
signal lines.

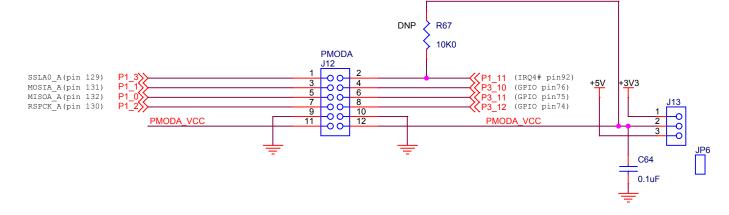
#### CAPACITIVE TOUCH SLIDER

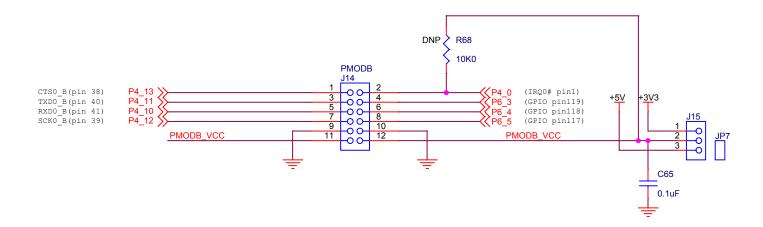


clear Lexan covering mounting holes MTG1



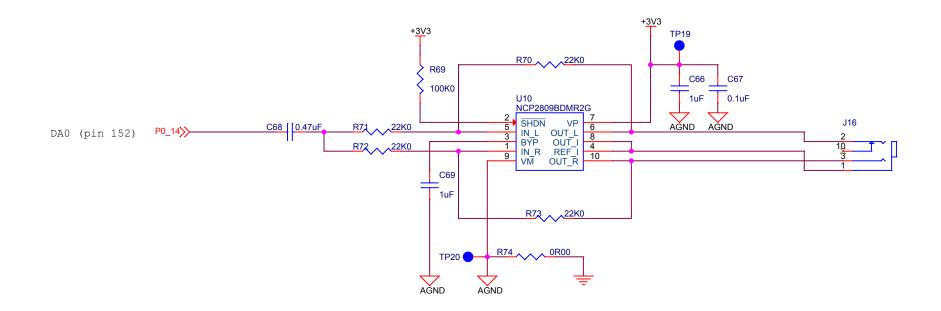
# **PMOD**





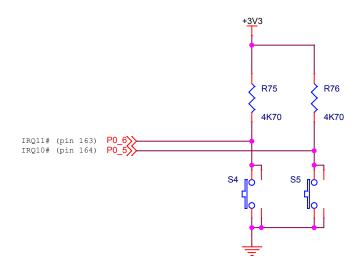


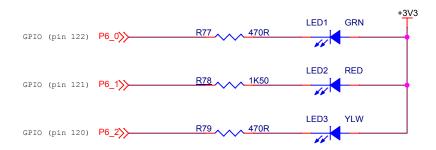
# **Audio**





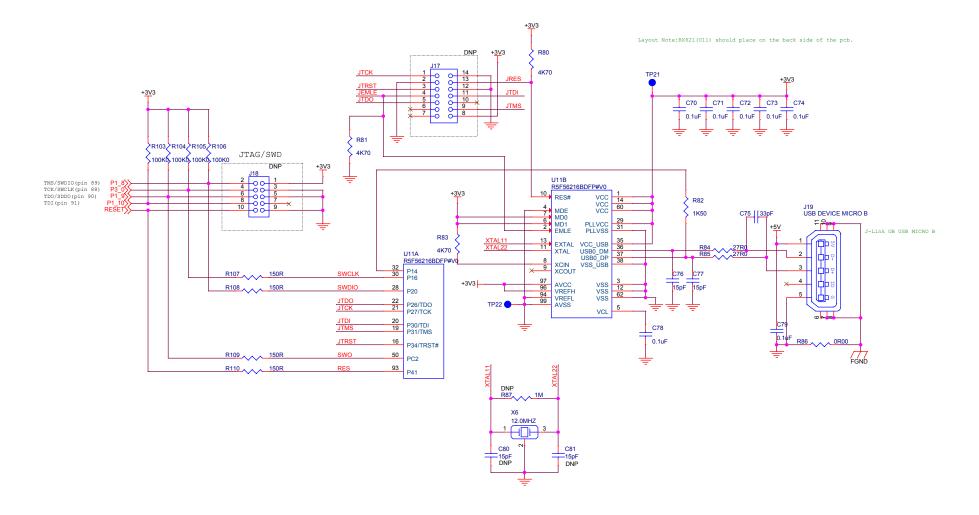
# **LED, Push Button**





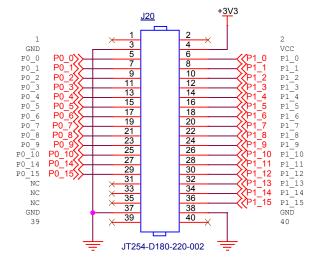


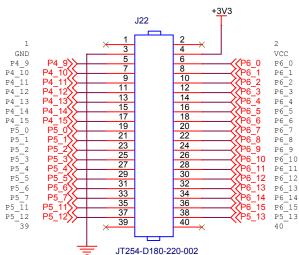
### J-link



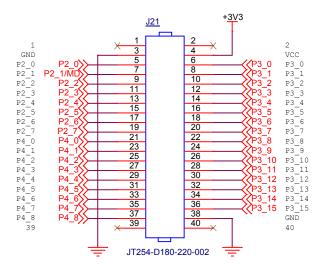


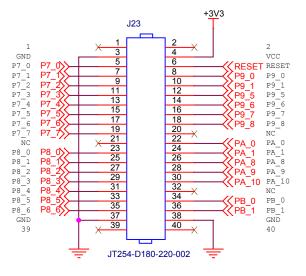
### **Breakout Pin**





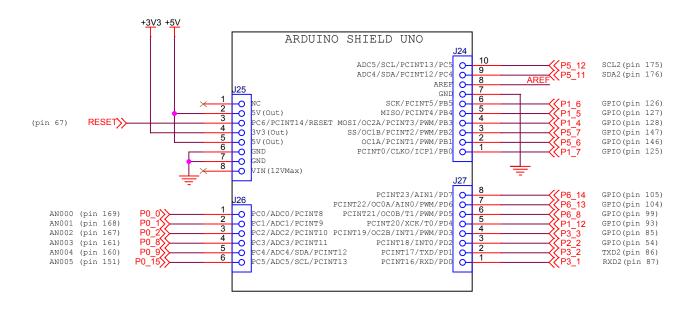


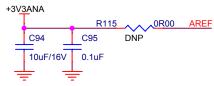






### **Arduino**







### **Power**

