

A

B

C

D

A


B

C

D

BATTERY CONNECTIONS
P1: BATTERY
2: A- NEGATIVE
3: B- TEMPERATURE
4: C- DATA
5: D- CLOCK
1: E- POSITIVE
N/C: F- KEY

Mating Pigtail: LIKE MMSST-02-20-F-12.00-S-K

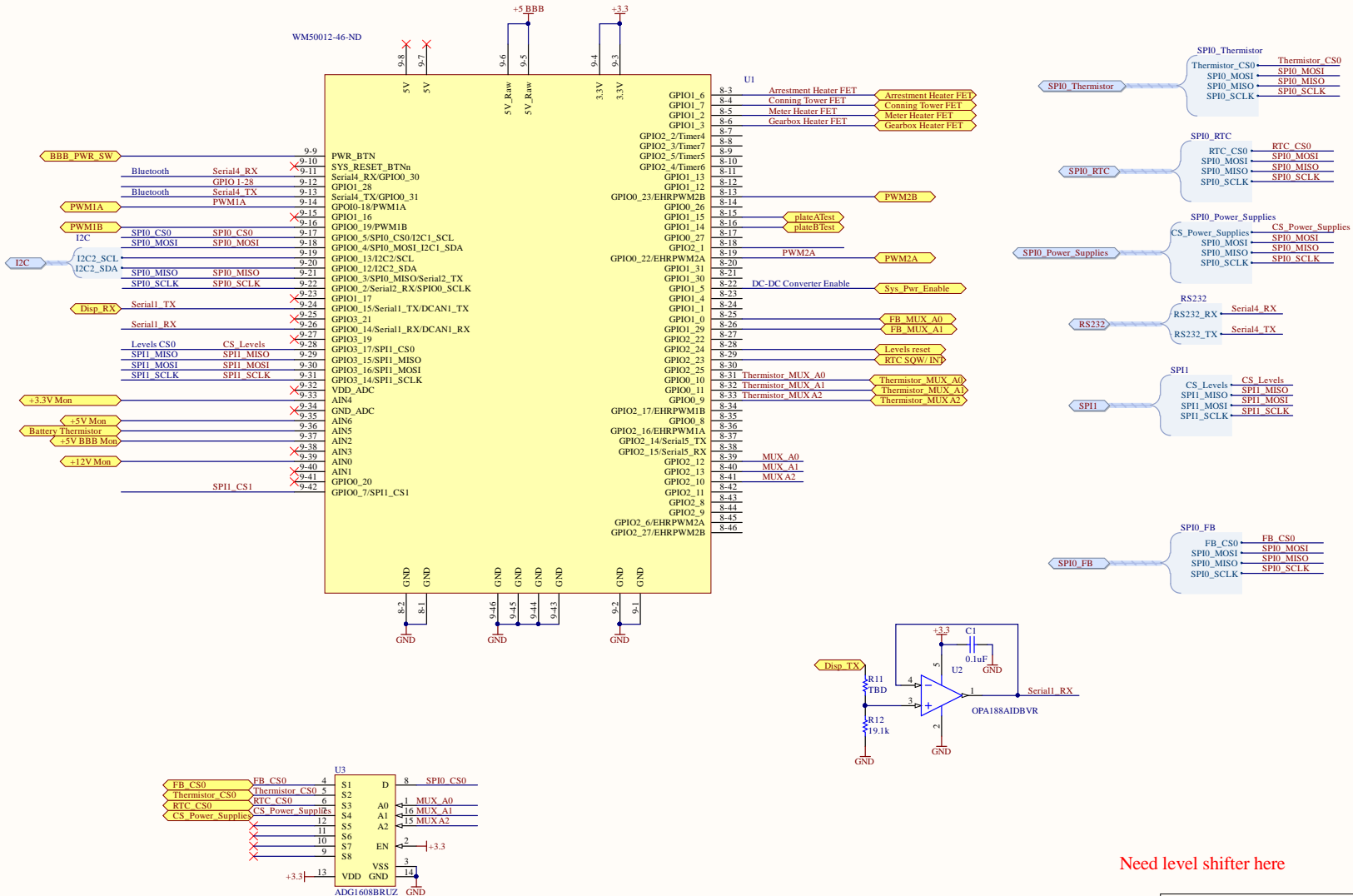
Title Power			
Size: Tabloid	Number: LM-003	Revision: 3.0	
Date: 11/1/2017	Time: 10:33:43 AM Sheet: 1 of 11		
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003-Production\Power.SchDoc			

Layout files for Beaglebone Black can be found at:
<http://elinux.org/Beagleboard:BeagleBoneBlack>

Ensure headers will mate to the BBB

<http://www.noritake-iron.com/NewWeb/TFT/Overview/Overview.asp>

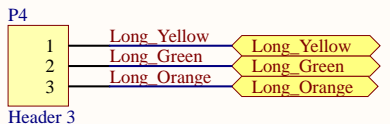
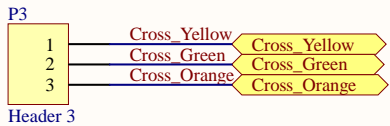
WM50012-46-ND



Need level shifter here

Title BBB Headers			ZLS Corporation 7801 North Lamar Blvd. Suite E-184 Austin, Texas 78752 USA (512) 453-0288
Size: Tabloid	Number: LM-003	Revision: 3.0	
Date: 11/1/2017	Time: 10:33:43 AM	Sheet: 4 of 11	
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003-Production\BBB Headers.SchDoc			

A

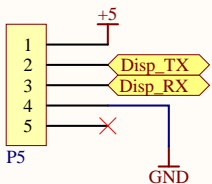


Check for TX/RX correctness

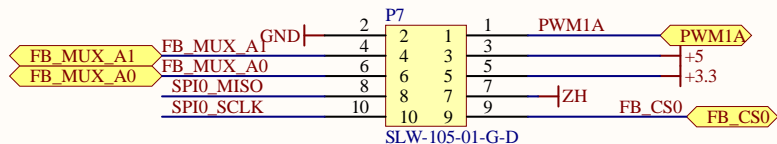
$$f(x) = 94974.5413538519 - 4696.967283124496x + 129.82663269538722x^2 - 2.618627915229906x^3 + 0.042544388235024x^4 - 0.0005976238111017604x^5 + 0.00000781963813533688x^6 - 9.536309770896e-8x^7 + 9.6915670491e-10x^8 - 7.19177773e-12x^9 + 3.497936e-14x^{10} - 9.821e-17x^{11} + 1.2e-19x^{12}$$

Thermistor Temperature Calculation

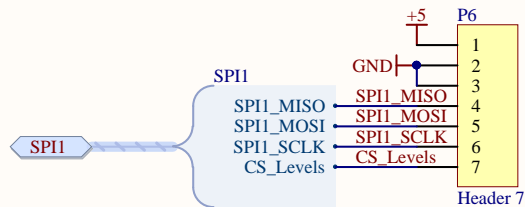
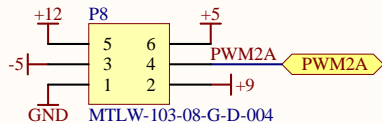
B



C



Feedback Board



Level Comms

D



Mating Pigtail: MMSST-04-28-F-12.00-S-K

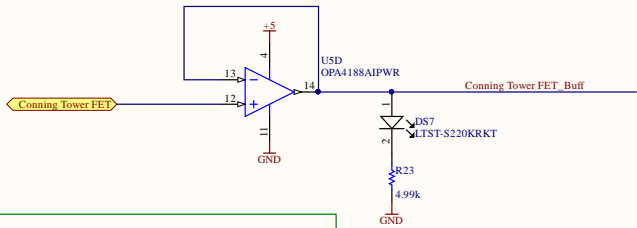
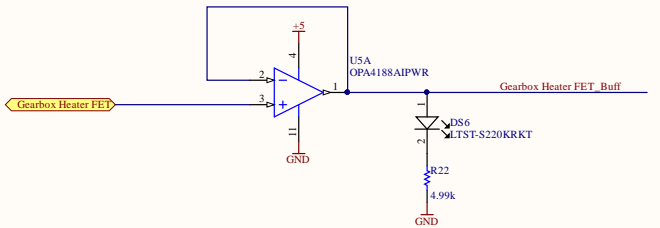
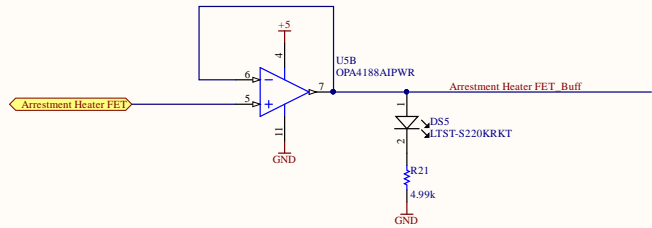
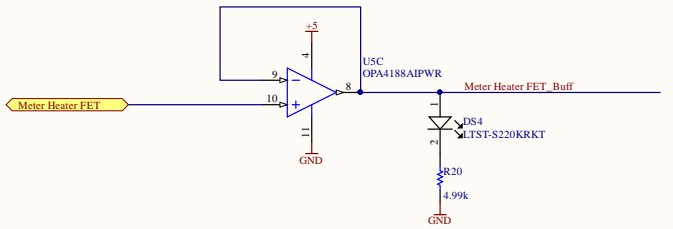
Title <i>Connectors</i>			<i>ZLS Corporation</i> <i>7801 North Lamar Blvd</i> <i>Suite E-184</i> <i>Austin, TX 78752</i> <i>Phone: (512) 453-0288</i>	Cannot open
Size: Orcad A	Number:LM-003	Revision:3.0		file
Date: 11/1/2017	Time: 10:33:44 AM	Sheet 5 of 11		Z:\jackwalker
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003-Production\Connectors.SchDoc				On My Mac\Documents \\Misc

A

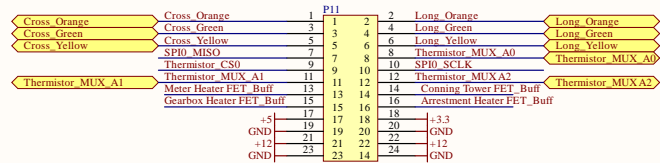
B

C

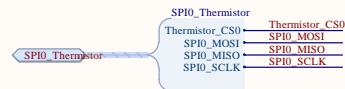
D



Heater Board



IPL1-112-01-F-S-K

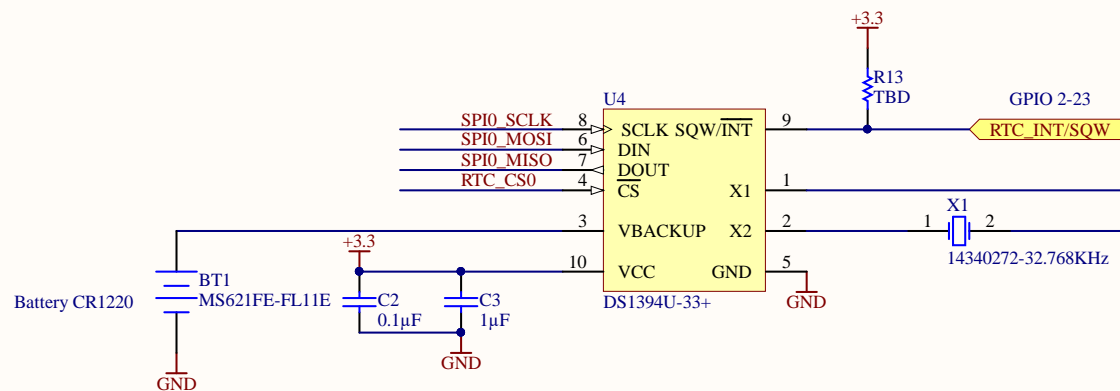


@ 12V	
Arrestment Heater	2.8W
Conning Tower Heater	2.8W
Gearbox Heater	2.8W
Meter Heater	6W
IC Heater	2.8W

Total	16.2W

Title Heater Control			ZLS Corporation 7801 North Lamar Blvd. Suite E-184 Austin, Texas 78752 USA (512) 453-0288	
Size: Tablet	Number LM-003	Revision 3.0		
Date: 11/1/2017	Time: 10:33:44 AM	Sheet 6 of 11		
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003-Production\heater_control.SchDoc				

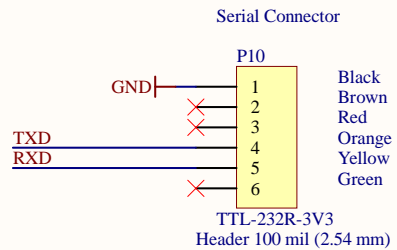
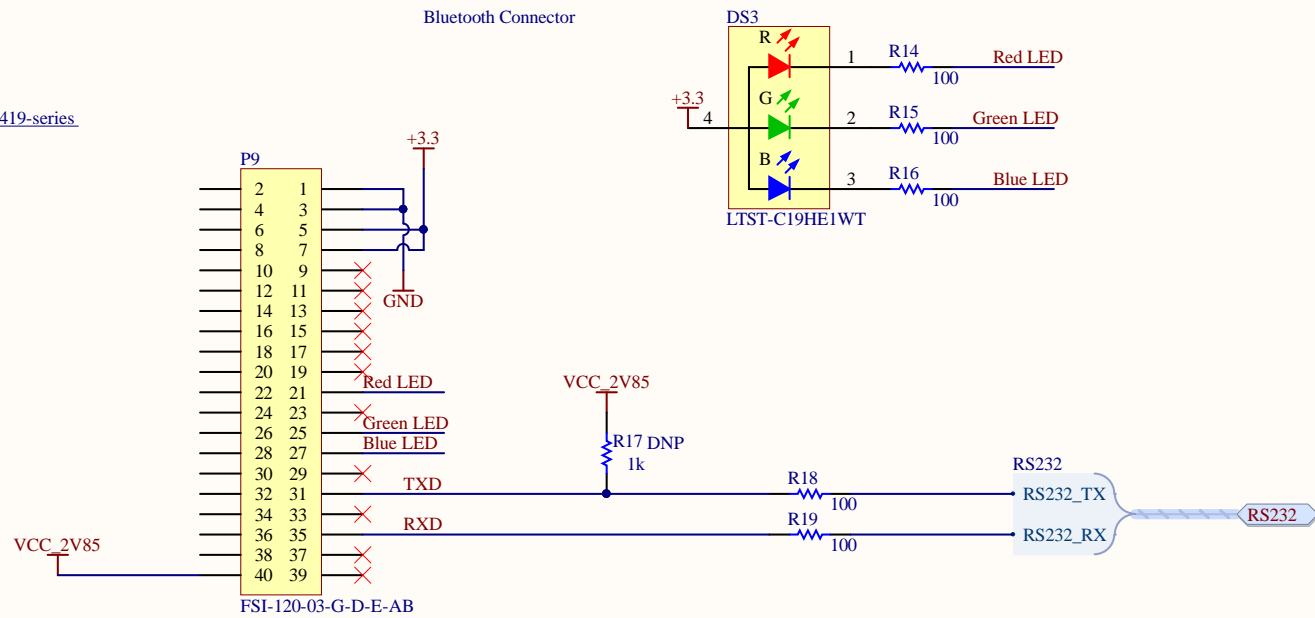




<https://learn.adafruit.com/adafruit-ds3231-precision-rtc-breakout/overview>

Title <i>Real Time Clock</i>			ZLS Corporation 7801 North Lamar Blvd Suite E-184 Austin, TX 78752 Phone: (512) 453-0288	Cannot open file Z:\jackwalker On My Mac\Documents \Misc
Size: Orcad A	Number: LM-003	Revision: 3.0		
Date: 11/1/2017	Time: 10:33:44 AM Sheet 8 of 11			
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003-Production\Real Time Clock.SchDoc				

CB-OBS418i-4
<https://www.u-blox.com/en/product/obs418-obs419-series>



Title **RS232**

Size: Orcad A

Number: LM-003

Revision: 3.0

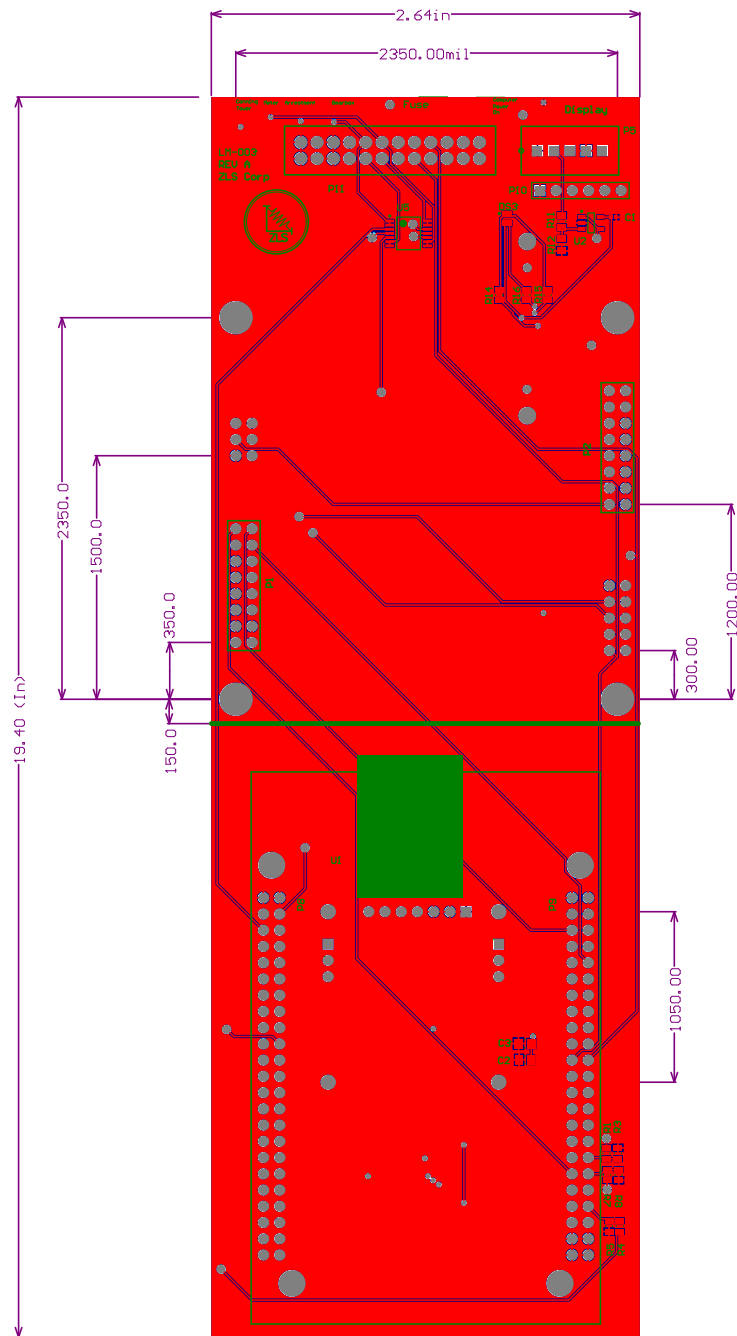
Date: 11/1/2017 Time: 10:33:44 AM Sheet 9 of 11

File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003-Production\RS232.SchDoc

ZLS Corporation
7801 North Lamar Blvd
Suite E-184
Austin, TX 78752
Phone: (512) 453-0288

Cannot open
file
Z:\jackwalker
On My
Mac\Documents
\Misc

Check placement of LEDs



[illegible]