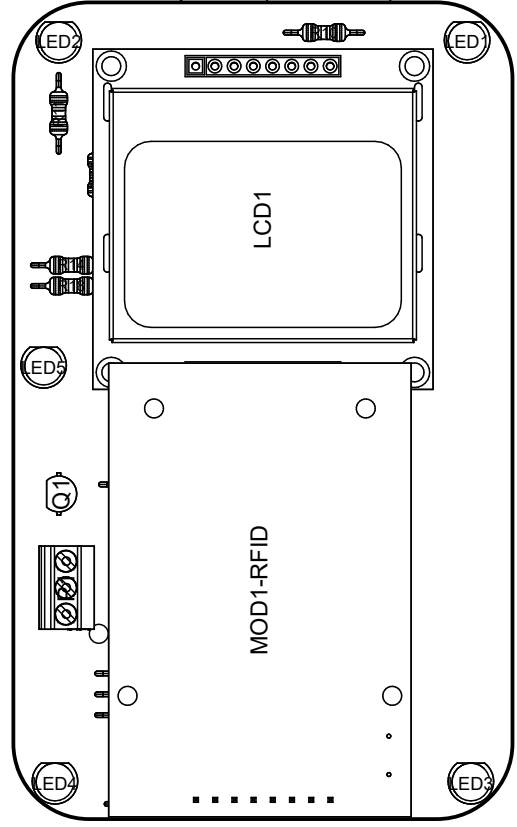
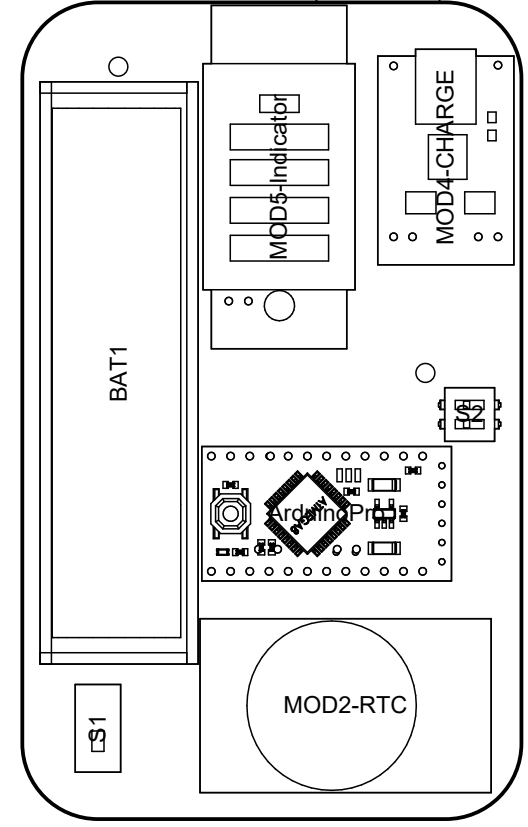


	1	2	3	4																															
A	Links to Component				A																														
	LCD	https://www.aliexpress.com/item/84-48-LCD-Module-White-backlight-adapter-pcb-for-Nokia-5110/1859113549.html?spm=a2g0s.9042311.0.0.fpwn1h																																	
	Ardunio	https://www.aliexpress.com/item/2PCS-New-Pro-Mini-Atmega328-3-3V-8M-Replace-ATmega128-For-Arduino-Compatible-Nano/2037934450.html?spm=a2g0s.9042311.0.0.wP2Mco																																	
	RTC	https://www.aliexpress.com/item/DS3231-AT24C32-IIC-High-Precision-RTC-Module-Clock-Timer-Memory-Module/2037934408.html?spm=a2g0s.9042311.0.0.wP2Mco																																	
	Bluetooth	https://www.aliexpress.com/item/Wireless-Serial-6-Pin-Bluetooth-RF-Transceiver-Module-HC-05-RS232-Master-Slave/2038549888.html?spm=a2g0s.9042311.0.0.wP2Mco																																	
	RFID	https://www.aliexpress.com/item/13-56MHz-RFID-MF-RC522-RC-522-Reader-Writer-Module-I2C-Interface-2-Pins-Sensor-Card/32785550279.html?spm=a2g0s.9042311.0.0.wP2Mco LEDs in bottom Corners																																	
	Slide Switch	http://www.communica.co.za/Catalog/Details/P2077750286 http://www.communica.co.za/catalog/Details/P2624616678																																	
	LEDs	5mm rount through hole http://www.communica.co.za/Catalog/Details/P2732841061 http://www.communica.co.za/Catalog/Details/P4141732095 http://www.communica.co.za/Catalog/Details/P3165777451																																	
	Transistor	2n3904 npn Bipolar 200mA 60V http://www.communica.co.za/Catalog/Details/P0173638625																																	
	Screw Terminal	3 pin / 2 pin 3.5mm pitch https://www.netram.co.za/2955-screw-terminal-35mm-2-pin-5-pk.html																																	
B	Resistors	Axial Carbon Film resisor 1/4W			B																														
C					C																														
D					D																														
				iRide Africa																															
				<table><tr><td colspan="3">Title</td><td colspan="3">iTime Africa</td></tr><tr><td>Size</td><td colspan="3">Number</td><td colspan="2">Revision</td></tr><tr><td>A4</td><td colspan="3"></td><td colspan="2">V2</td></tr><tr><td>Date:</td><td colspan="3">2018-02-08</td><td>Sheet 2 of</td><td></td></tr><tr><td>File:</td><td colspan="3">C:\Users\...\Notes.SchDoc</td><td>Drawn By:</td><td>P Henning</td></tr></table>		Title			iTime Africa			Size	Number			Revision		A4				V2		Date:	2018-02-08			Sheet 2 of		File:	C:\Users\...\Notes.SchDoc			Drawn By:	P Henning
Title			iTime Africa																																
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	1	2	3	4																															

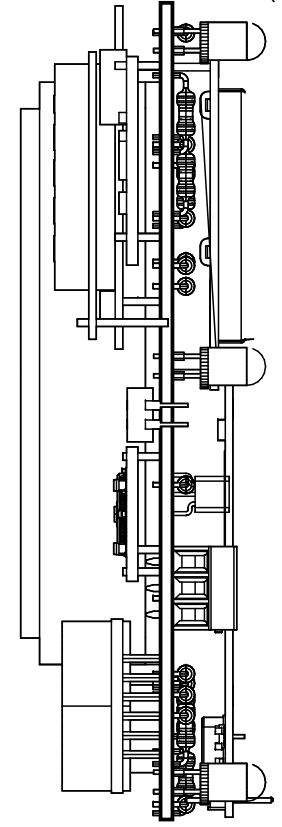
View from Top side (Scale 1:1)



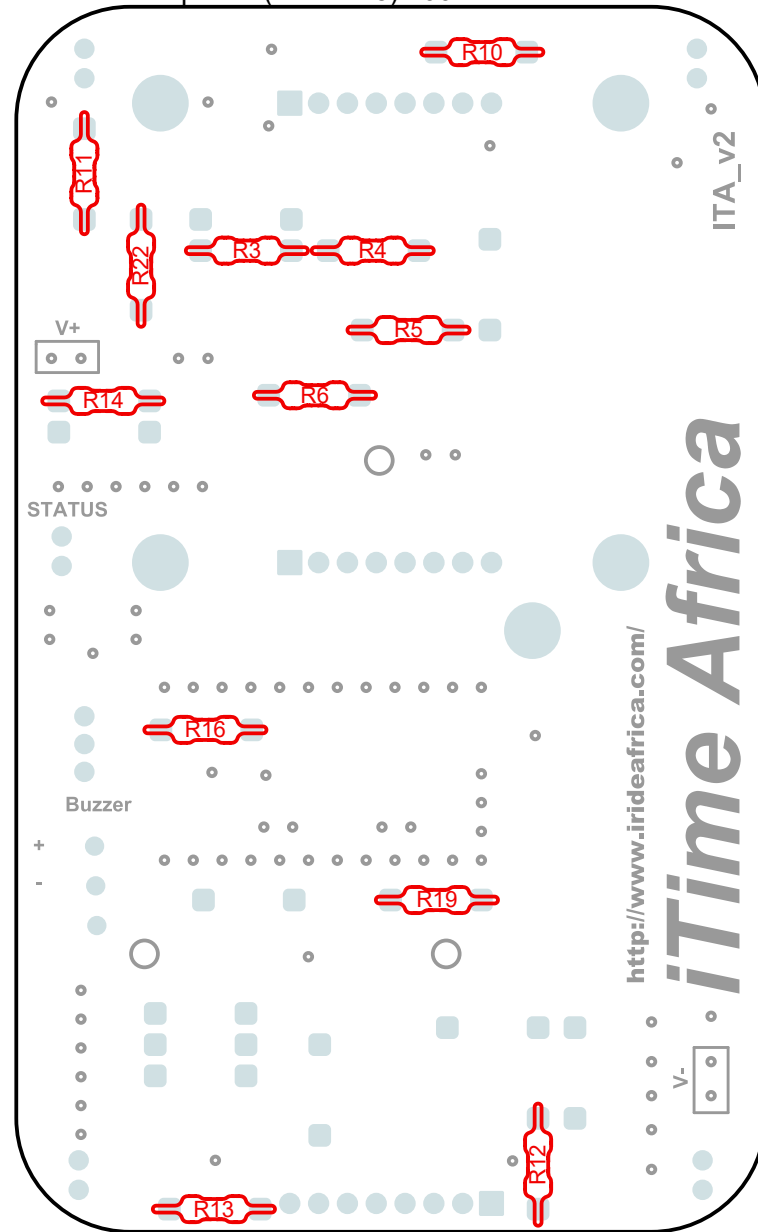
View from Bottom side (Scale 1:1)



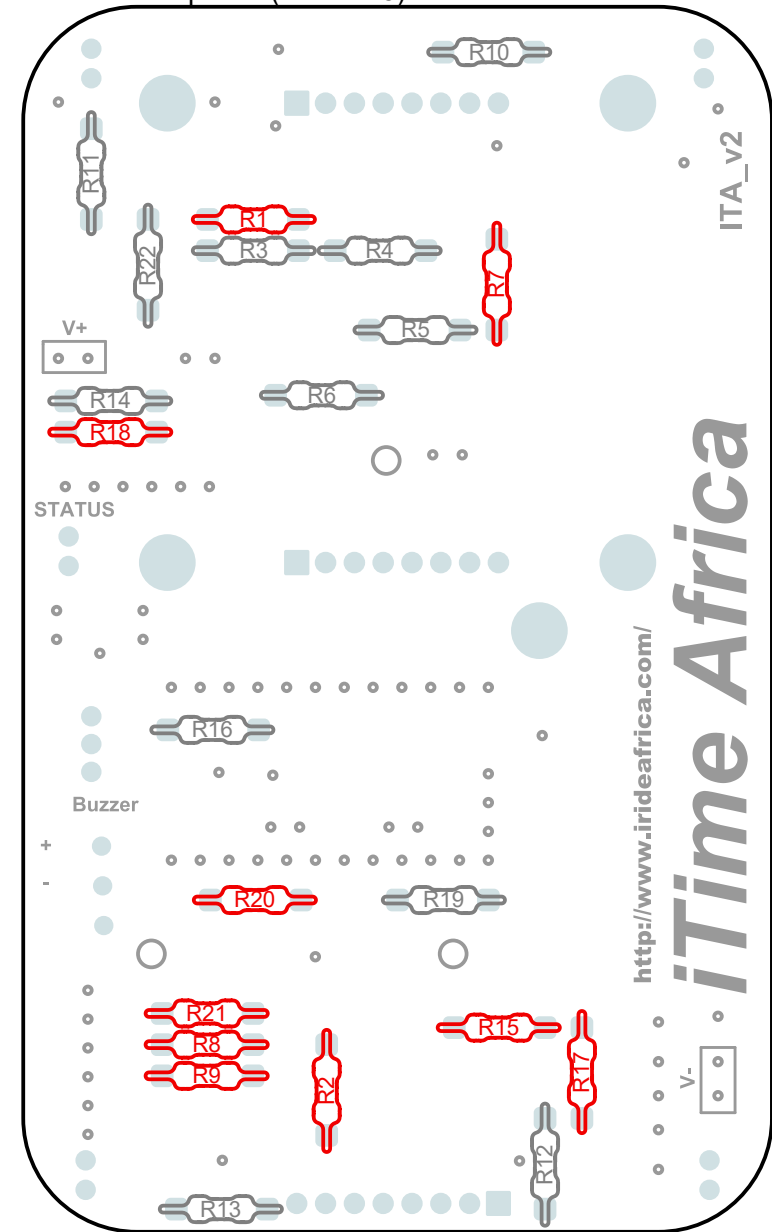
View from Left side (Scale 1:1)



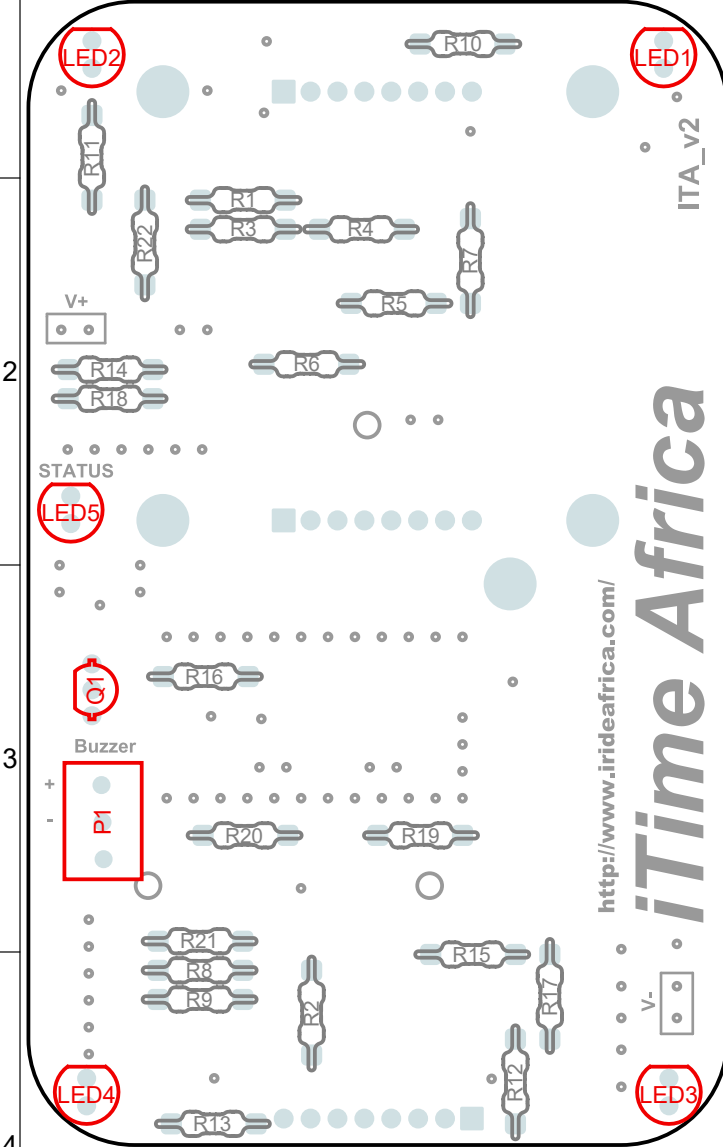
View from Top side (Scale 1.5) 100R



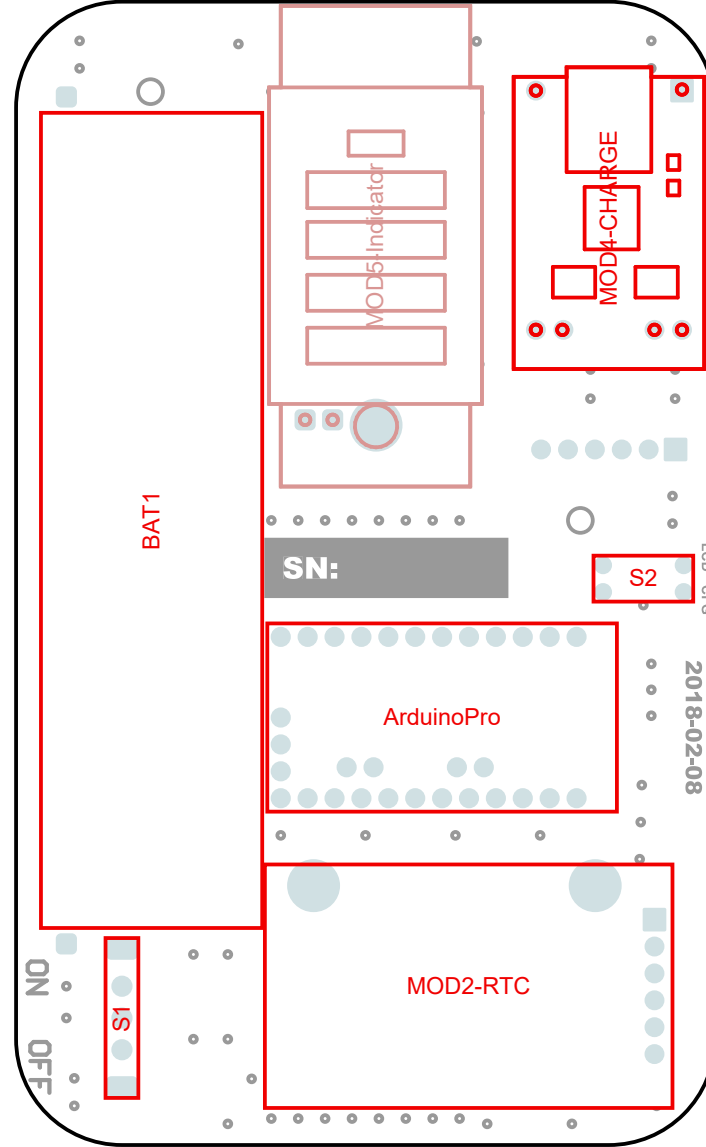
View from Top side (Scale 1.5) 4k7



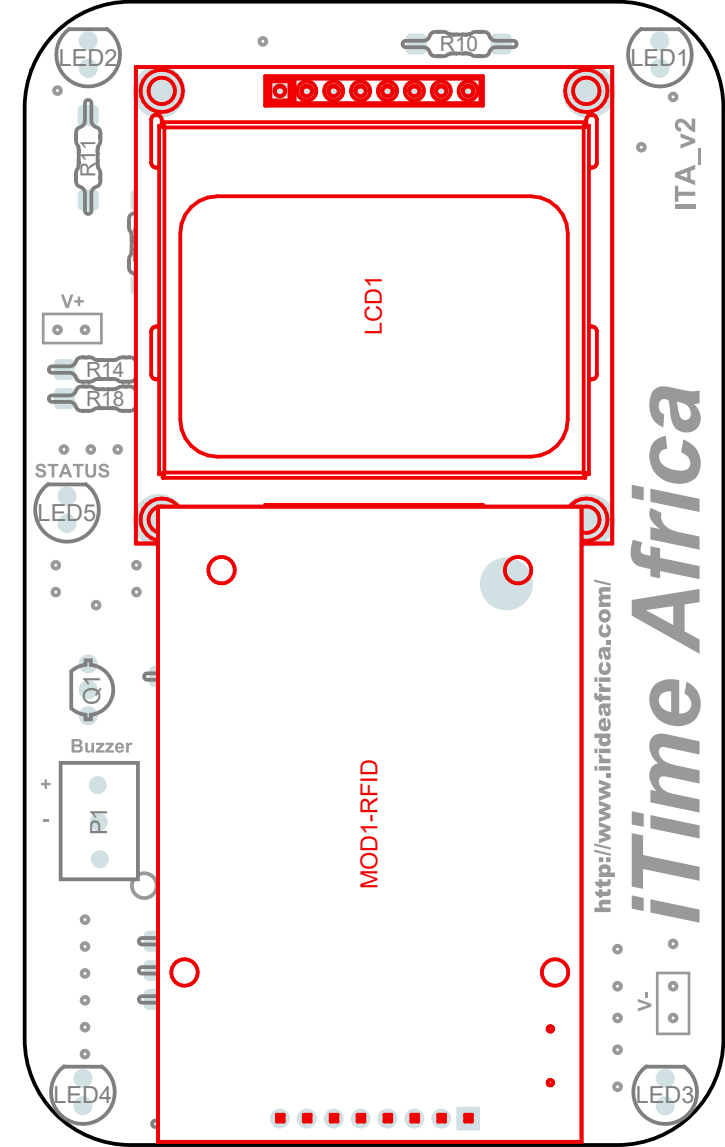
1 View from Top side (Scale 1.4) 4k7



View from Bottom side (Scale 1.4) 4k7



View from Top side (Scale 1.4) 4k7



A		B		C		D		E	
Pinouts									
Arduino	OTHER	MFRC522	NOKIA 5110	RTC	HC-05		itime Africa	itime Africa	
Pro Mini	COMPONENTS	Reader	LCD	DS3231	Bluetooth		V1.1	V2	
Pin	Pin	Pin	Pin	Pin	Pin				
-----	-----	-----	-----	-----	-----		-----	-----	
RAW	(BATTERY charger)	***	***	***	***		***	Vraw	
GND	***	GND	GND	GND	GND		***	gnd	
Reset	***	***	***	***	***		***		
VCC	***	3.3V	Vraw	Vraw	VCC		***	3v3	
A5	***	***	***	SCL	***		scl	scl	
A4	***	***	***	SDA	***		sda	sda	
A3	Dip swich	***	***	***	***		config	config	
A2		***	***	SQW	***		V_meas	Square	
A1	***	***	rst	***	***		LCD backlight	LCD_reset	
A0	(LED1)	***	***	***	***		LED	LED	
A6	***	***	***	***	***		****	****	
A7	Resistor divider	***	***	***	***		****	V_MEAS	
D13	***	SCK	***	***	***		sck	sck	
D12	***	MISO	***	***	***		miso	miso	
D11	***	MOSI	***	***	***		mosi	mosi	
D10	***	SDA(SS)	***	***	***		SS	SS	
D9	***	***	***	***	TXO		rst	uart_BT2A	
D8	***	***	***	***	rxd		CE	uart_A2BT	
D7	***	***	CE	***	***		rst	LCD_CE	
D6	***	***	DC	***	***		dc	dc	
D5	***	***	Din	***	***		Din	Din	
D4	***	***	CLK	***	***		clk	clk	
D3	(LED)	***	***	***	***		led	led	
D2	(BUZZER)	***	***	***	***		buzzer	buzzer	
GND	***	***	***	***	***		***	***	
RST	***	***	***	***	***		***	***	
RXI	***	***	***	***	***		***	***	
TXD	Status LED	***	***	***	***		***	Status LED	
***	pull up	nReset	***	***	***		***	***	
***	Dip Switch	***	Blacklight	***	***		***	***	
	pullup	***	***	***	Enable		***	***	
A		B		C		D		E	

A

B

C

D

E

1

1

Bill Of Materials

Line #	Designator	Comment	Quantity
--------	------------	---------	----------

2

2

3

3

4

4

A

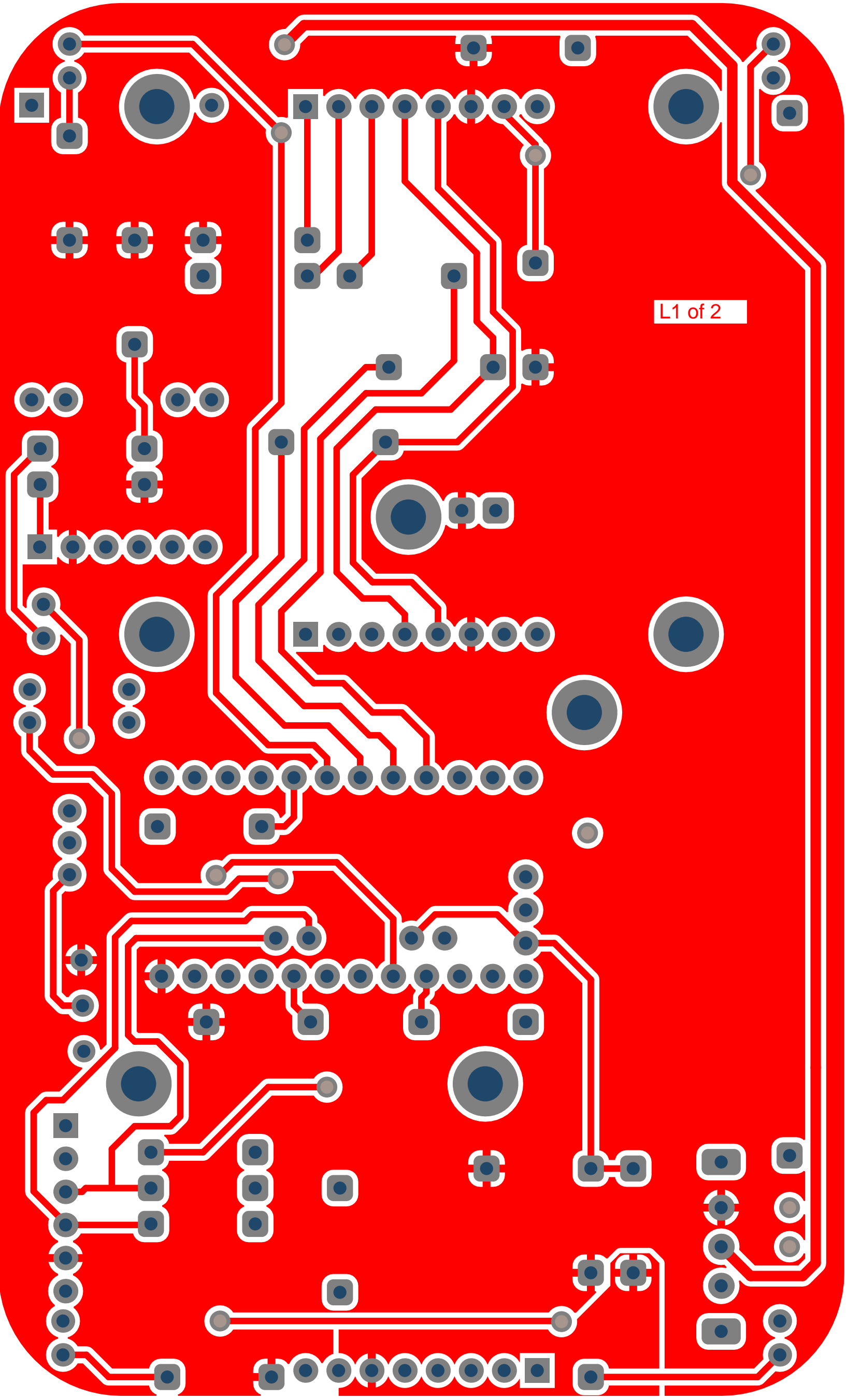
B

C

D

E

Item #	mn Name Error:Manufa	#Column Name Error:Manufacturer No	Quantity	#Column Name Error:Note	Designator	Description	Column Name Error:Footpri	#Column Name Error:Comment	LibRef
1			1		ArduinoPro	Arduino Pro Mini			Arduino Pro Mini
2			1		BA11	Battery Holder			Battery Holder
3			1		LCD1	nokia 5110 lcd v2			nokia 5110 lcd v2
4			5		LED1, LED2, LED3, LED4, LED5	Red LED, 5mm THP			Red LED THP
5			1		MOD1-RFID	RFID module			RFID module
6			1		MOD2-RTC	Real Time Clock DS3231			Real Time Clock DS3231
7			1		MOD3-BT	Bluetooth module			Bluetooth module
8			1		MOD4-CHARGE	LIPO charger and prttection 03962A			Charger / Protection
9			1		MOD5-Indicator	1S 3.7V Lithium Battery Capacity Indicator Module 4.2V			Battery Indicator
10			1		P1	3 pin Screw Terminal 3.5mm			3 pin Screw Terminal 3.5mm
11			1		Q1	NPN Transistor			NPN Transistor
12			10		R1, R2, R7, R8, R9, R15, R17, R18, R20, R21	Resistor			4k7
13			12		R3, R4, R5, R6, R10, R11, R12, R13, R14, R16, R19, R22	Resistor			100R
14			1		S1	Slide Switch 3mm pitch			Slide Switch 3mm pitch
15			1		S2	2way DIP Switch 2.54mm pitch			2way DIP Switch 2.54mm pitch



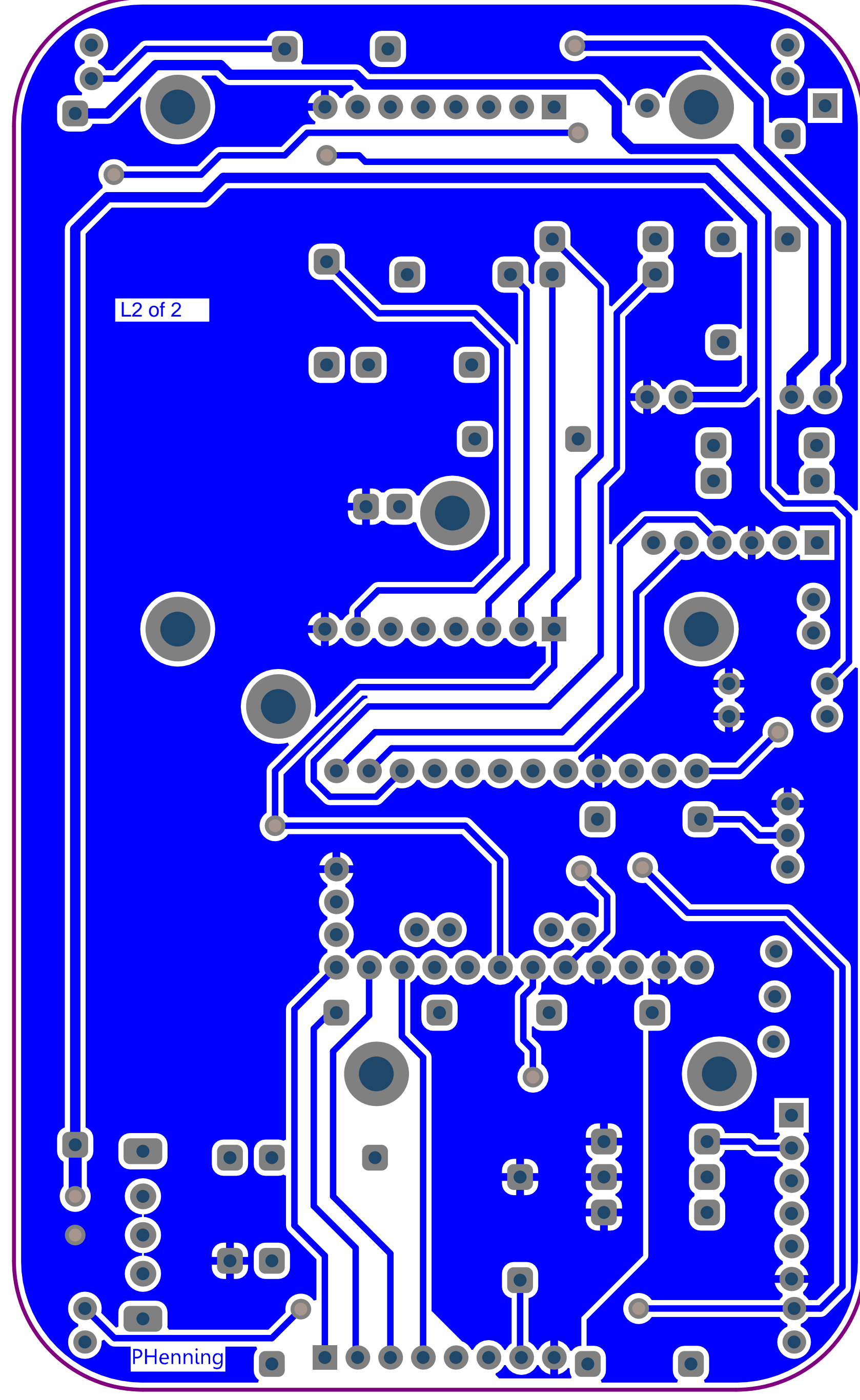
Top Layer



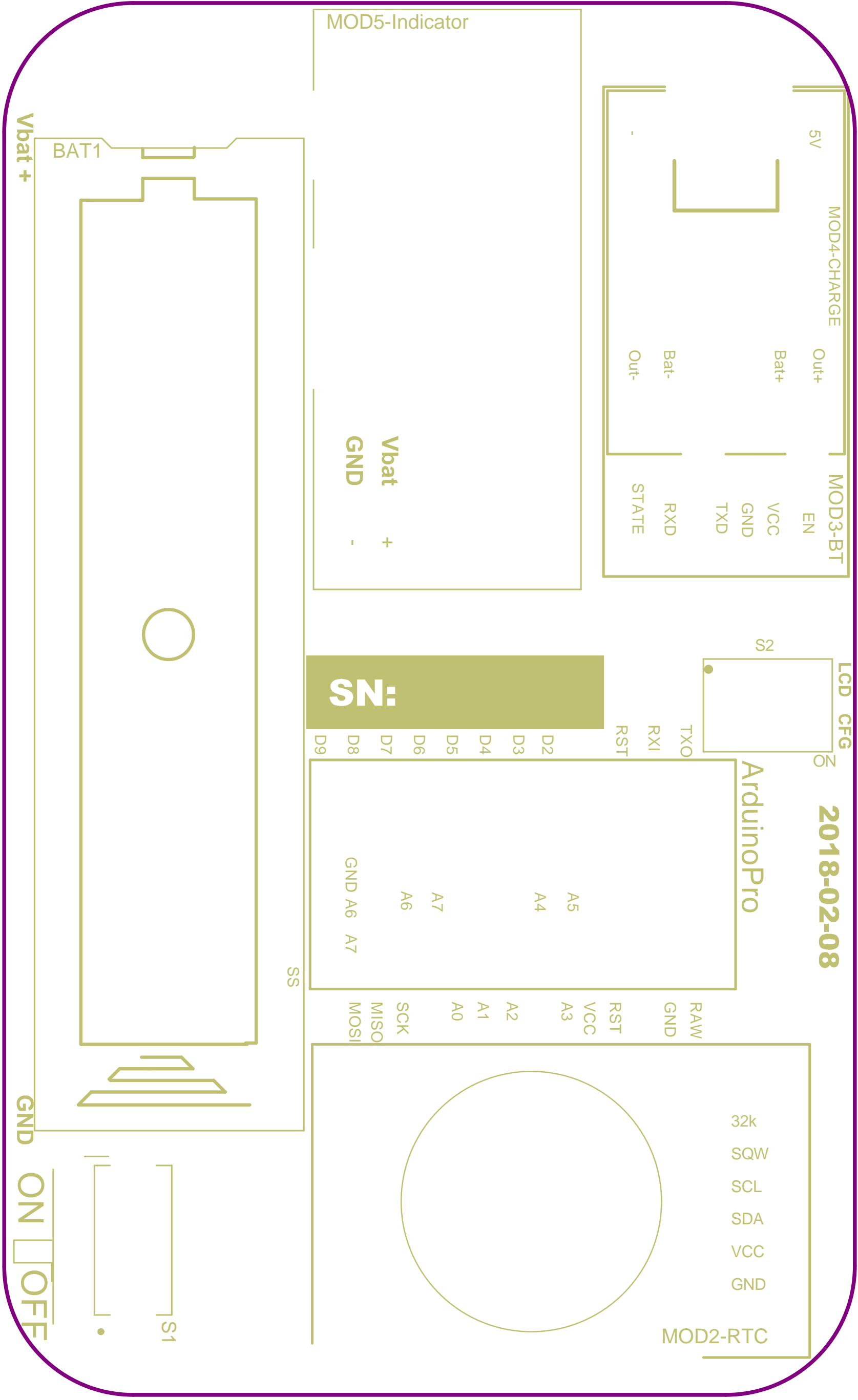
ITA v2

Top Overlay

Bottom Layer



Bottom Overlay



CONSTRUCTION

LAYER STACK-UP	<input checked="" type="checkbox"/> MECHANICAL LAYER	<input type="checkbox"/> FILENAME _____
ALLOW PCB ROTATION	<input type="checkbox"/> NO	<input type="checkbox"/> YES - 90 / 270 DEGREES
IMPEDANCE CONTROL	<input type="checkbox"/> NO	<input type="checkbox"/> YES
SUPPLY TEST COUPONS	<input type="checkbox"/> NO	<input type="checkbox"/> YES
BOARD EDGE	<input checked="" type="checkbox"/> NO EXPOSED COPPER	<input type="checkbox"/> PER STACKUP

CONDUCTIVE MATERIAL

INTERCONNECTS

COSMETICS

MANUFACTURING DEVIATIONS

ADDITIONAL REQUIREMENTS

FINGER EDGE CONNECTOR

Layer	Name
1	Top Overl
2	Top Solder
3	Component
4	Dielectric
5	Bottom Lay
6	Solder Sld
7	Bottom Over

PCB ASSEMBLY INSTRUCTIONS		
1: RoHS BUILD	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
2: WASH PCB	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
3: THL COMPONENT LEGS	<input checked="" type="checkbox"/> < 2mm CUT BEFORE ASSEMBLY	
4: BREAK PCB FROM PANEL	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
5: X-RAY PCB	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
6: OPTICAL INSPECTION	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
7: BASIC ELECTRICAL TEST	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
8: ASSEMBLY CALIBRATION	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
9: PRODUCTION PROGRAMMING	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
10: CONFORMAL COATING	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
11: STATIC SENSITIVE	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES

[No Variations]						[Assembly Variations]					
<div>DATE/TIME OF THIS PRINT: 2018-02-08 11:09:17 AM</div>						<div>DATE/TIME OF THIS PRINT: 2018-02-08 11:09:17 AM</div>					
MANUFACTURING DRAWING						ASSEMBLY DRAWING					
PRJ_Title						PRJ_Title					
PCB PROJECT NUMBER						PCB PROJECT NUMBER					
SHEET 1 OF 2						SHEET 1 OF 2					