

Project HumiMainboard.PrjPcb			
Title Overview	[No Variations]		Revision Rev.01
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Drawn By Sandro Pedrett	Autor Sandro Pedrett		

ESP

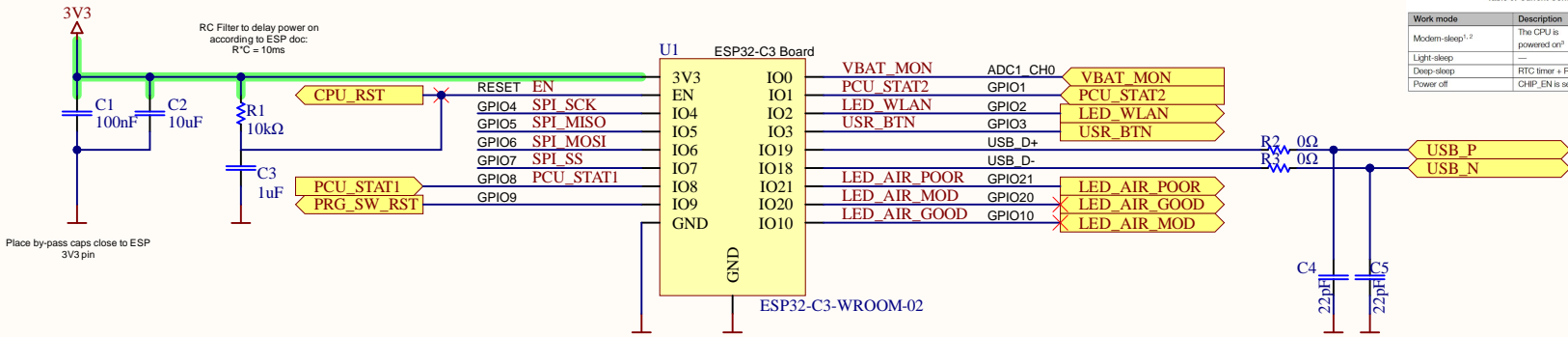
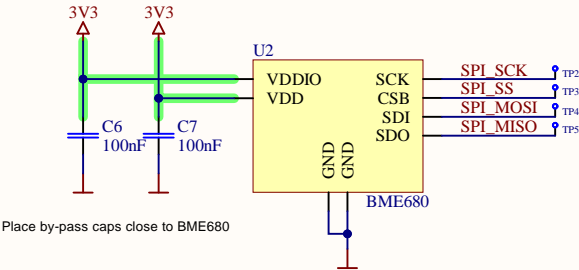


Table 8: Current Consumption Depending on RF Modes		
Work mode	Description	Peak (mA)
Active (RF working)	TX 802.11b, 1 Mbps, @20.5 dBm	345
	802.11g, 54 Mbps, @18 dBm	285
	802.11n, HT20, MCS7, @17.5 dBm	280
	802.11n, HT40, MCS7, @17 dBm	280
RX	802.11b/g/n, HT20	82
	802.11n, HT40	84

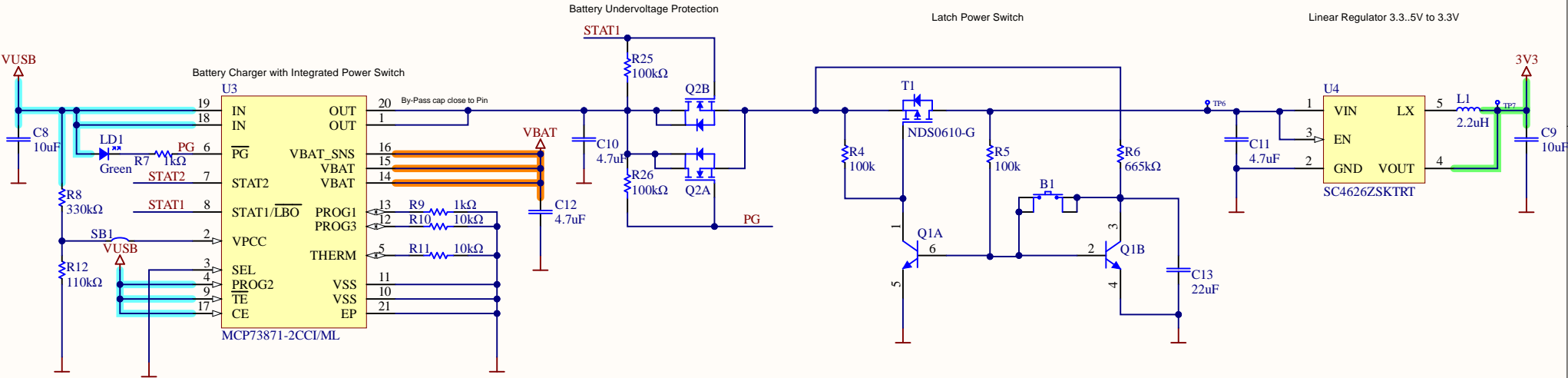
Table 9: Current Consumption Depending on Work Modes		
Work mode	Description	Typ Unit
Modem-sleep ^{1, 2}	The CPU is powered on ³ 160 MHz	20 mA
Light-sleep	80 MHz	15 mA
Deep-sleep	RTC timer + RTC memory	130 μA
Power off	CHP_EN is set to low level, the chip is powered off	5 μA
		1 μA

Sensors



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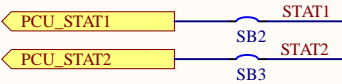
Power Management



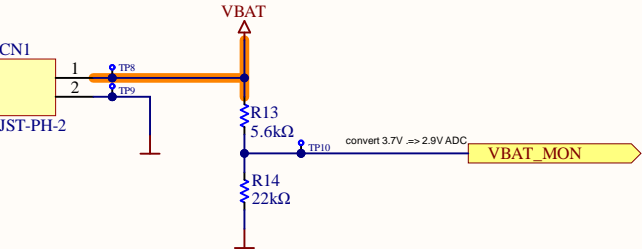
PROG1 --> Charge Current Regulation
1kΩ = 1A --> 1000V/1kΩ
PROG2 --> Input Current Selection (Low = 100mA | High = 500mA)
PROG3 --> Charge Termination
10k = 100mA --> Longer Battery Life
100k = 10mA --> More Capacity
SEL --> Input type Selection (Low for USB | High for AC Adapter)
CE --> Charge Enable when High

TABLE 5-1: STATUS OUTPUTS

CHARGE CYCLE STATE	STAT1	STAT2	PG
Shutdown (V _{DD} = V _{BAT})	High-Z	High-Z	High-Z
Shutdown (V _{DD} = IN)	High-Z	High-Z	L
Shutdown (CE = L)	High-Z	High-Z	L
Preconditioning	L	High-Z	L
Constant Current	L	High-Z	L
Constant Voltage	L	High-Z	L
Charge Complete - Standby	High-Z	L	L
Temperature Fault	L	L	L
Timer Fault	L	L	L
Low Battery Output	L	High-Z	High-Z
No Battery Present	High-Z	High-Z	L
No Input Power Present	High-Z	High-Z	High-Z



Battery Management



No.	Item	Characteristics	Remarks
1	Nominal Capacity	Minimum: 1900mAh Typical: 2000mAh	Standard discharge (0.2C) after Standard charge
2	Nominal Voltage	3.7V	—
3	Charging Cut-off Voltage	4.2V	—
4	Discharge Cut-off Voltage	3.0V	—
5	Standard Charge	Constant Current 0.5C Constant Voltage 4.2V 0.01 C cut-off	Charge Time : Approx 4.0h
6	Maximum Constant Charging Current	2000mA	—
7	Standard Discharge	Discharge at 0.2 C to 3.0V	—
8	Maximum Continuous Discharging Current	2000mA	—



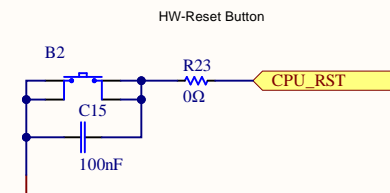
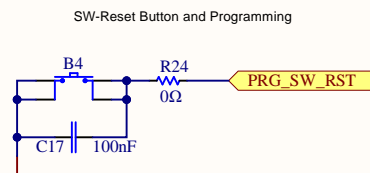
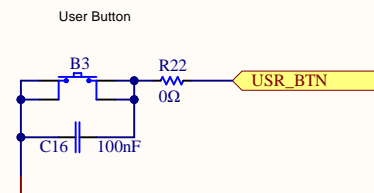
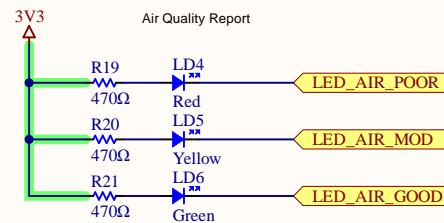
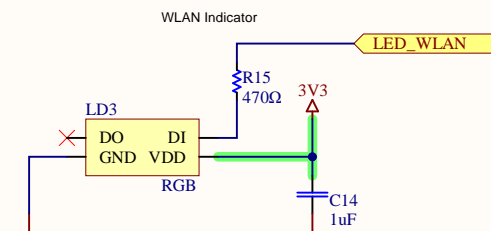
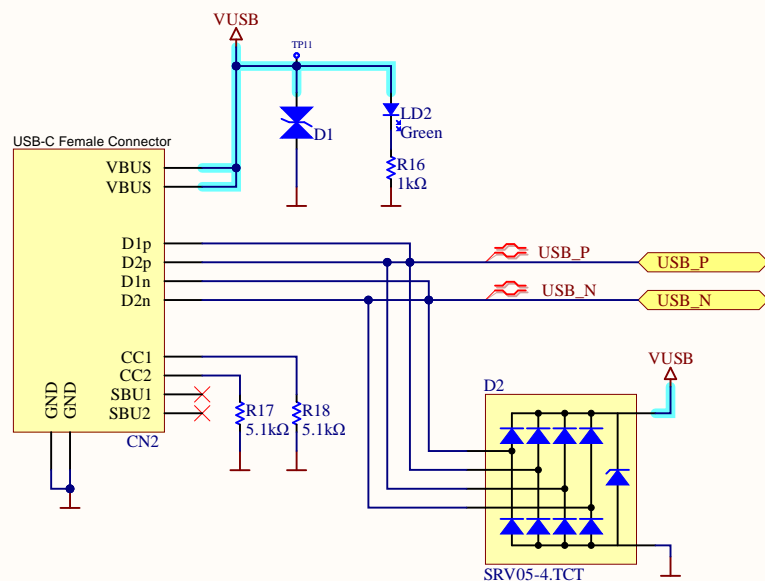
Project
HumiMainboard.PrjPcb

Title
Power

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