

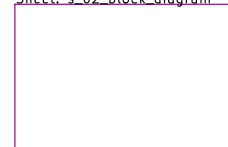
RF Canopy/Wi-SUN Border Router Base Board

Sheet: s_01_revision_history



File: s_01_revision_history.sch

Sheet: s_02_block_diagram



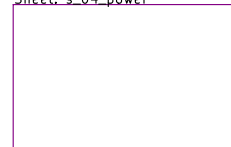
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Sheet: s_03_power_tree



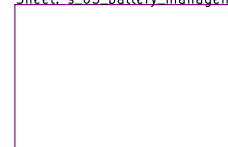
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Sheet: s_04_power



File: s_04_power.sch

Sheet: s_05_battery_management



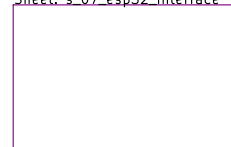
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Sheet: s_06_ec20_addon



File: s_06_ec20_addon.sch

Sheet: s_07_esp32_interface



File: s_07_esp32_interface.sch

Sheet: s_08_efr_addon_and_connectors



File: s_08_efr_addon_and_connectors.sch

Sheet: s_09_manufacturing



File: s_09_manufacturing.sch

Release Date: 2020-11-25	
Designed By: APC	Date: 19/11/2020
Verified By: JP,NV,FM,HMG	Date: 20/11/2020
Approved By: HMG	Date: 24/11/2020
Customer:	



System Level Solutions Inc.
Plot#32, Phase 1, Zone D/4,
G.I.D.C. Estate,
V.U.Nagar - 388121,
Gujarat, INDIA

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Sheet Name: /			
Title: RF Canopy/Wi-SUM Boarder Router Base Board			
Size: A4	Document Number: PCB-RFCNPYBB-2044-1A-01	Revision: 1A	Version: 01
Date: 2020-11-25			Sheet: 1/10

Revision History

Sr. No.	Revision	Sub Version	Date	Description
1	1A	01	19-11-2020	Released Initial Version of Schematics

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Sheet Name: /s_01_revision_history/

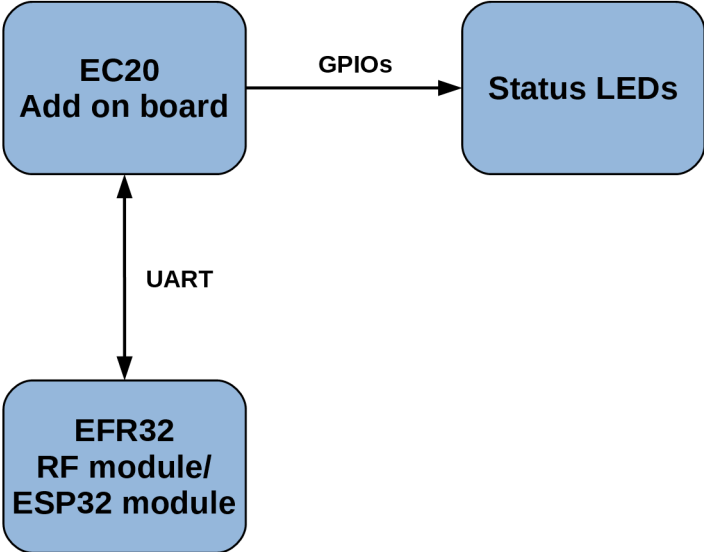
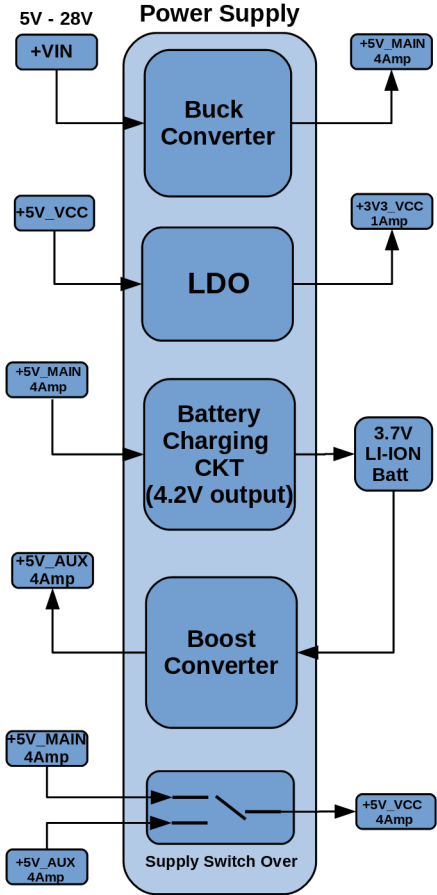
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Size: A4 Document Number: PCB-RFCNPYBB-2044-1A-01 Revision: 1A Version: 01

Date: 2020-11-25

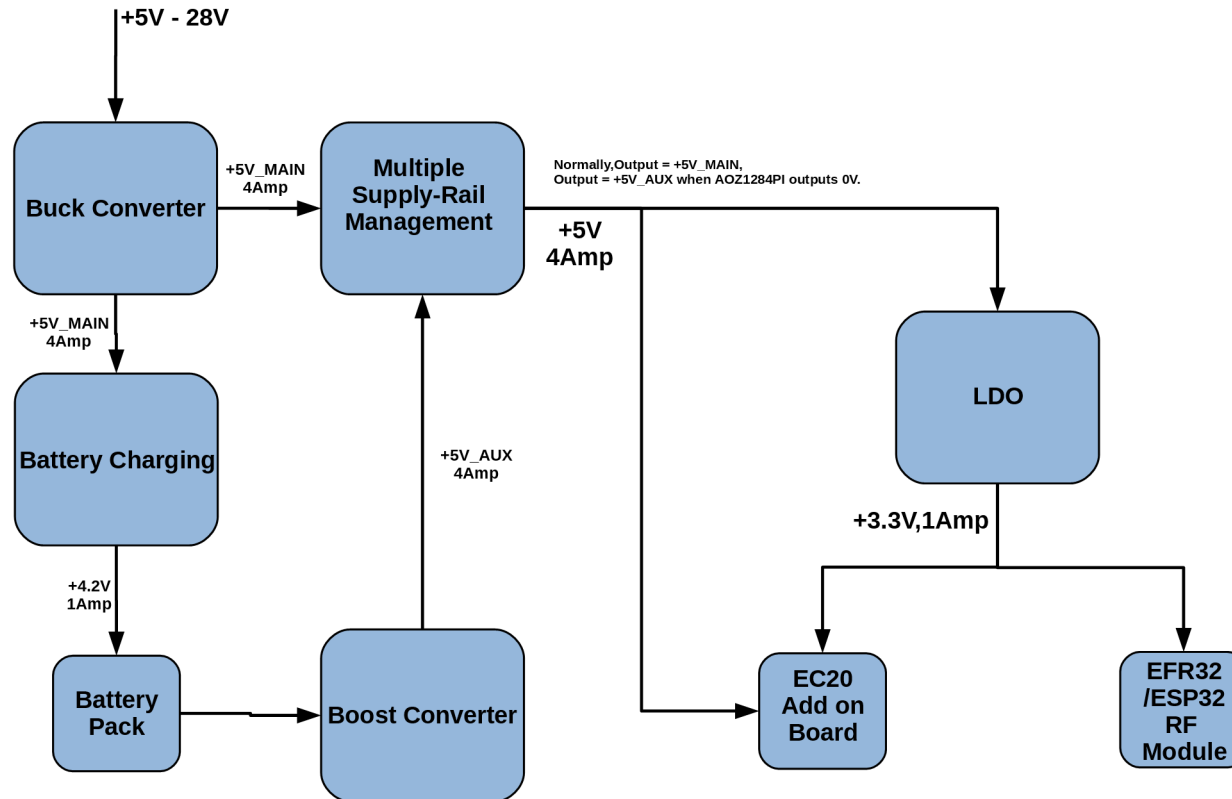
Sheet: 2/10

Block Diagram



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Sheet Name: /s_02_block_diagram/			
Title: RF Canopy/WI-SUM Boarder Router Base Board			
Size: A4	Document Number: PCB-RFCNPYBB-2044-1A-01	Revision: 1A	Version: 01
Date: 2020-11-25			Sheet: 3/10

Power Tree



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Sheet Name: /s_03_power_tree/

Title: RF Canopy/Wi-SUM Boarder Router Base Board

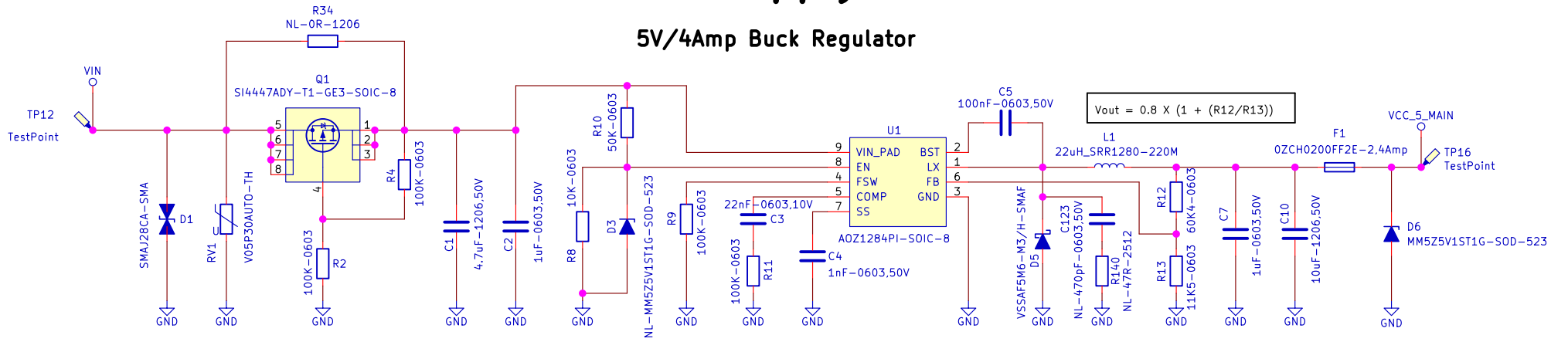
Size: A4 | Document Number: PCB-RFCNPYBB-2044-1A-01 | Revision: 1A | Version: 01

Date: 2020-11-25

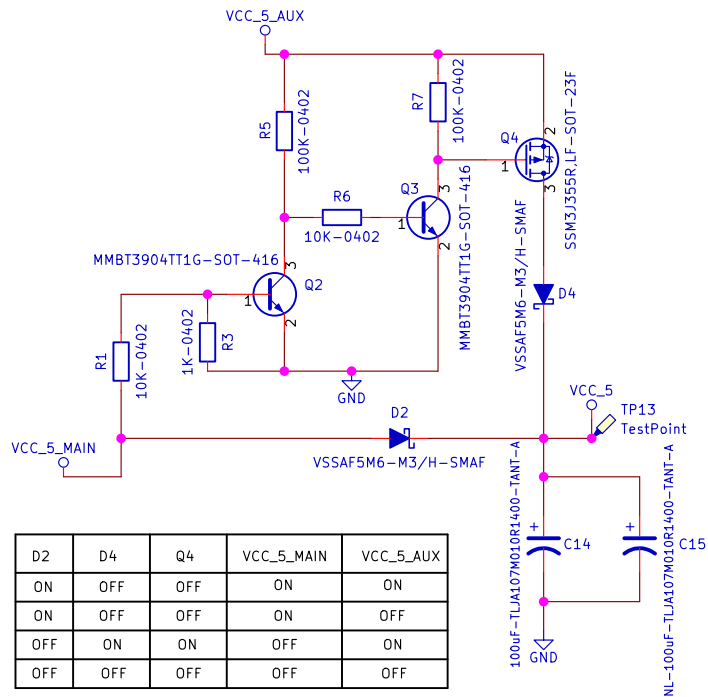
Sheet: 4/10

Power Supply Section

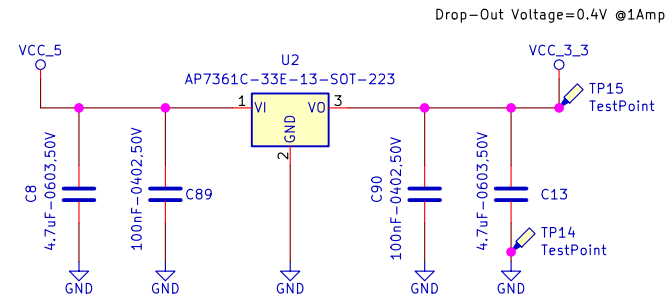
5V/4Amp Buck Regulator



Multiple Power Supply-Rail Management



3.3V/1Amp LDO



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Title: RF Canopy/WI-SUM Boarder Router Base Board

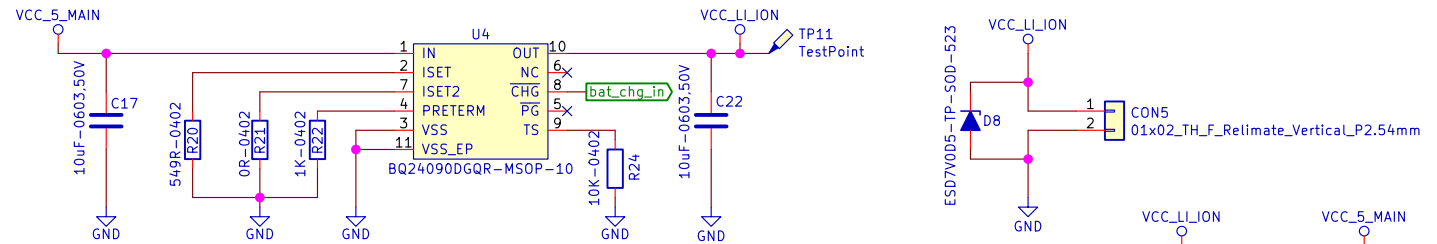
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Date: 2020-11-25

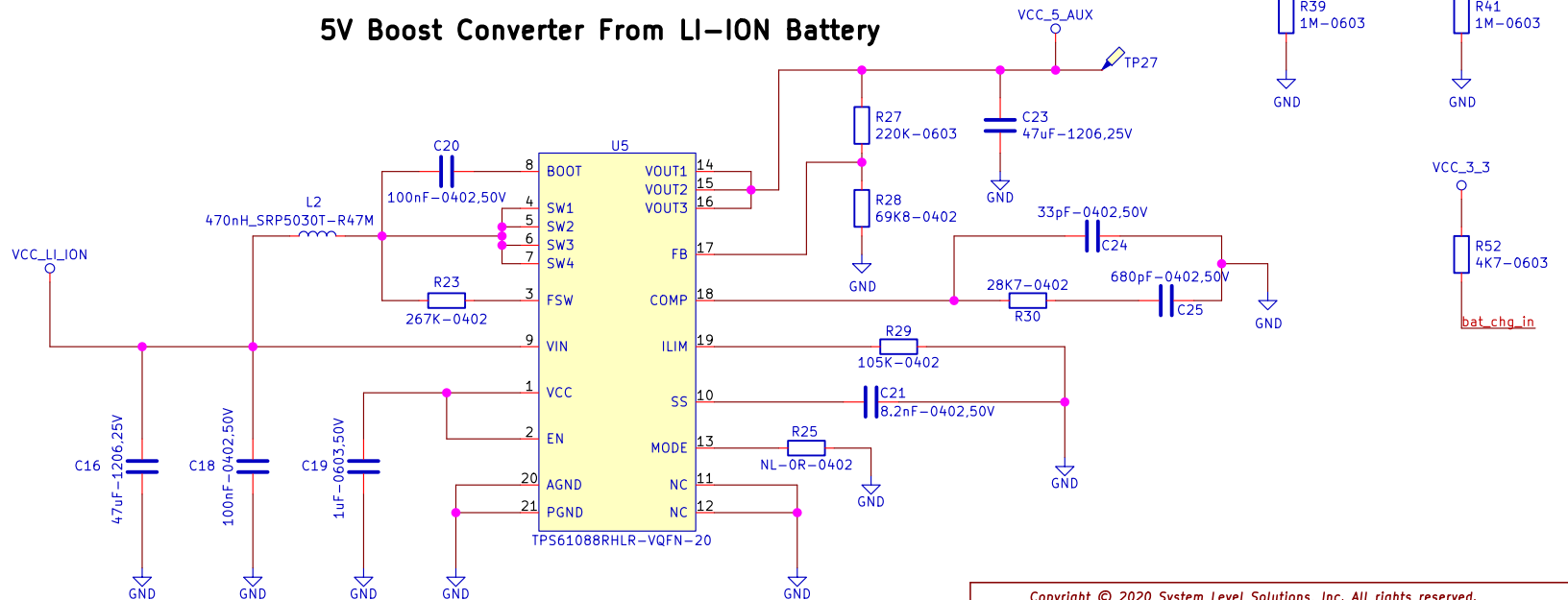
Sheet: 5/10

Battery Management

Battery Charging Circuit



5V Boost Converter From LI-ION Battery



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Sheet Name: /s_05_battery_management/

Title: RF Canopy/WI-SUM Boarder Router Base Board

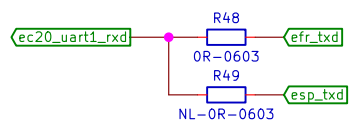
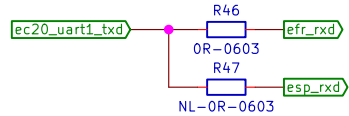
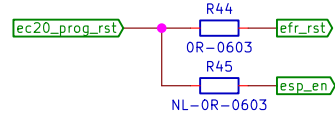
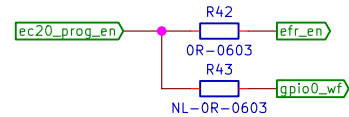
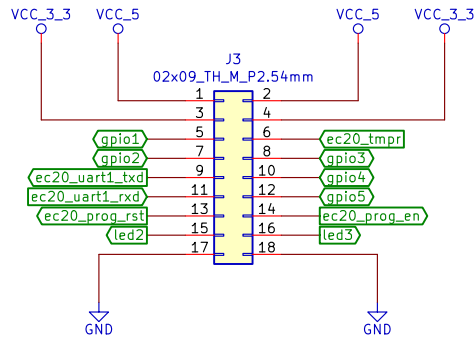
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Date: 2020-11-25

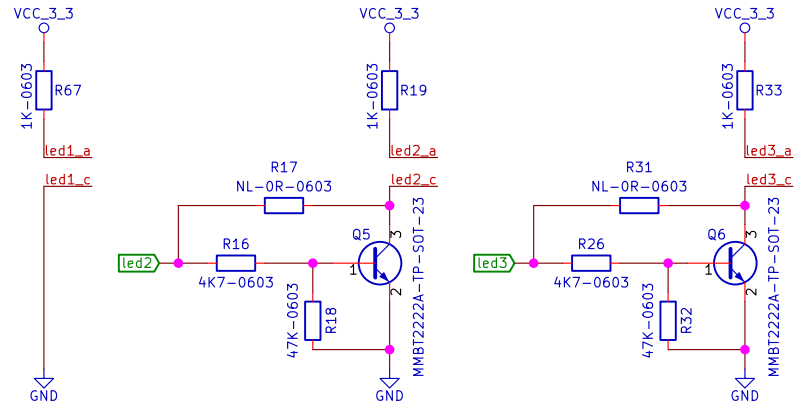
Sheet: 6/10

EC20 Add on and Status LEDs

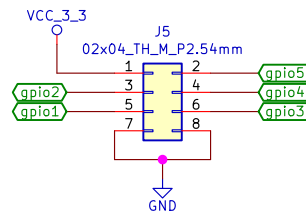
EC20 Add On Interface header



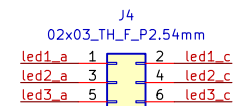
Status LEDs



EC20 GPIO header



Interface header for LED Add on board



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Sheet Name: /s_06_ec20_addon/

Title: RF Canopy/WI-SUM Boarder Router Base Board

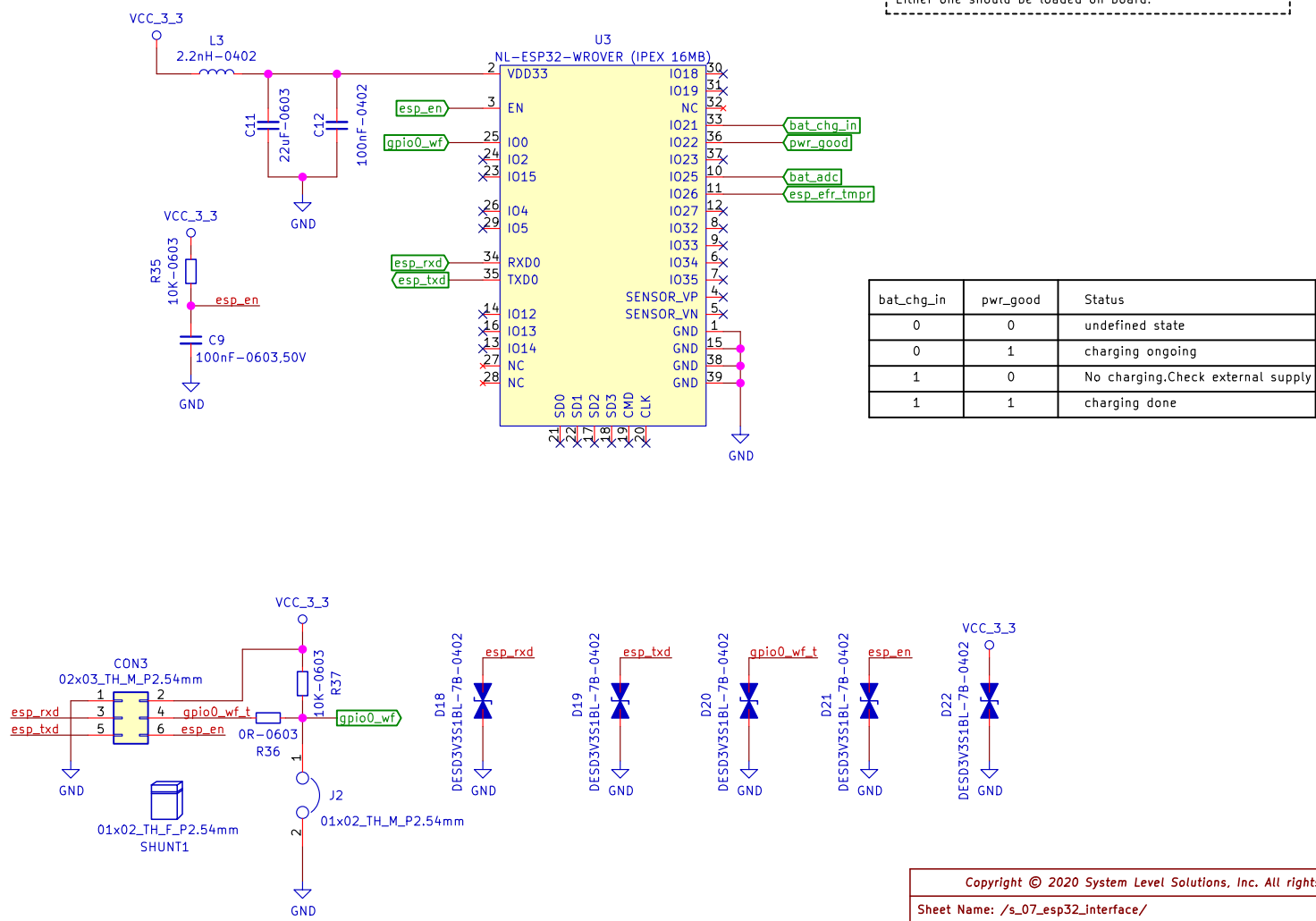
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Date: 2020-11-25

Sheet: 7/10

ESP32 Interface

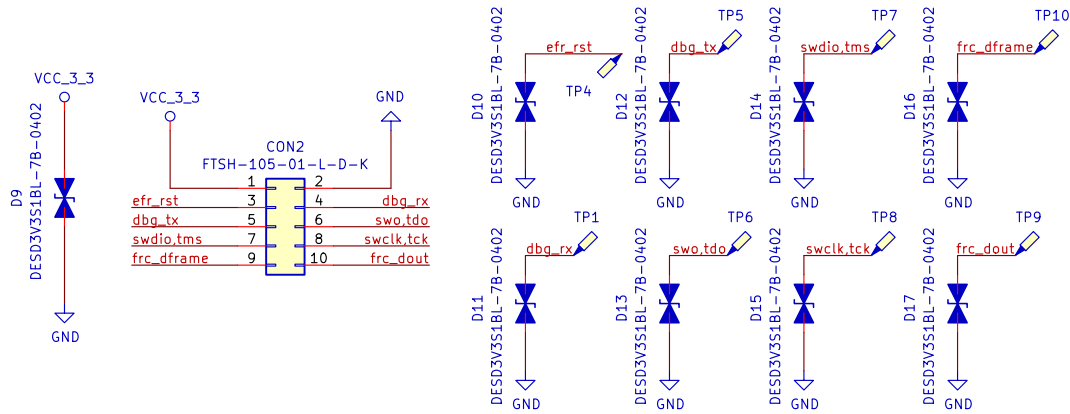
Note : ESP32 can be used as alternate of EFR32 module. Either one should be loaded on board.



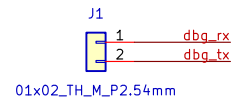
bat_chg_in	pwr_good	Status
0	0	undefined state
0	1	charging ongoing
1	0	No charging.Check external supply
1	1	charging done

EFR32 RF Module interface

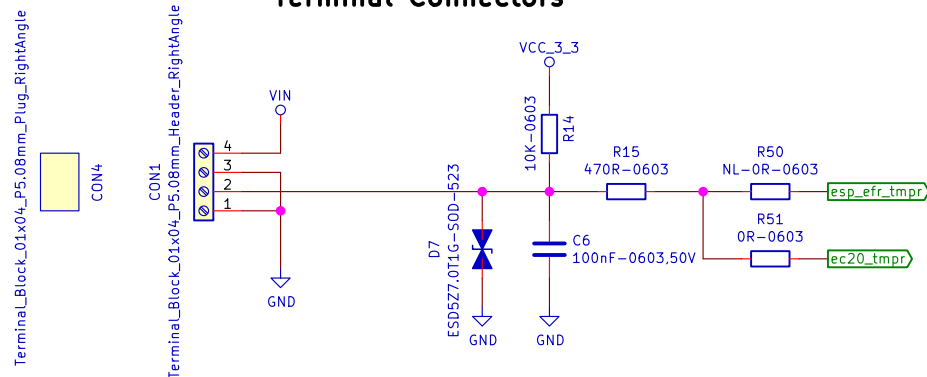
Programming Socket



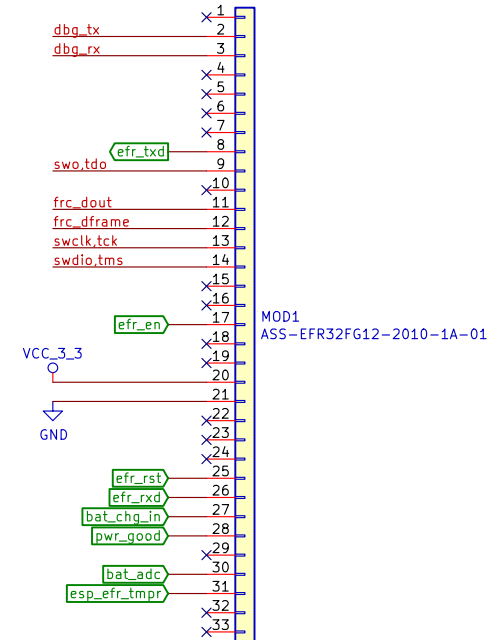
Debug Header



Terminal Connectors



EFR32FG12 RF Module



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Sheet Name: /s_08_efr_addon_and_connectors/

Title: RF Canopy/WI-SUM Boarder Router Base Board

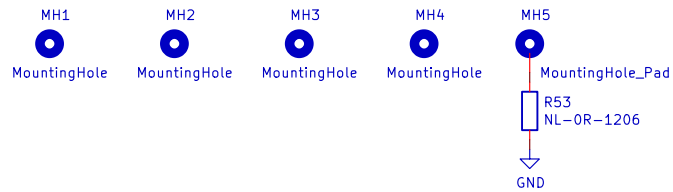
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Date: 2020-11-25

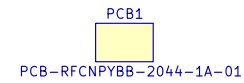
Sheet: 9/10

Manufacturing

Mounting Holes



PCB Code



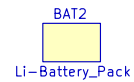
Fiducials



SLS Logo



Battery Pack



Plastic Case



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Sheet Name: /s_09_manufacturing/

Title: RF Canopy/WI-SUM Boarder Router Base Board

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Sheet: 10/10