

# DA1453x DevKit Pro Mainboard

Design Name	da1453xdevkt-p
Ref. Number	610-01-B
Version	B5
Date	Mar 14, 2024
Designer	PR
<b>NOTE</b>	This board is based to da145xxdevkt-p rev.B2 [376-18-B] original design, customized for the DA1453x family (D2632, D3081)

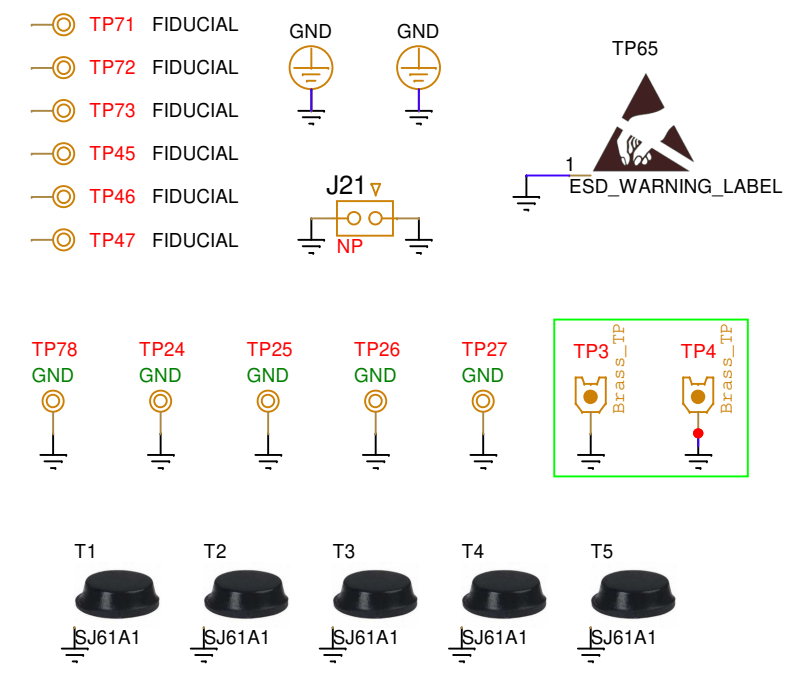
## History Table

Version	Date	Comments
	09 / Dec / 2022	This design is a customized version based on the da145xx pro development kit mainboard, with the following modifications: <ul style="list-style-type: none"> <li>changed GPIO names to reflect only DA1453x family pinout</li> <li>removed MikroBUS (1) and Arduino connectors</li> <li>added a PMOD socket connector</li> <li>replaced difficult to find parts with alternatives</li> <li>replaced the power measurement block with a pmm socket</li> <li>added option to issue a reset from UART</li> <li>added option to power-cycle controlled by RESET</li> </ul> Internal release for review
A	14 / Dec / 2022	Additional modifications after sch & layout review <ul style="list-style-type: none"> <li>[1]Added testpoints (nRST_OB, V_FL, 3.3V)</li> <li>[2]Modified footprint of U25 (QFN/TQFP now have separated mask/paste)</li> <li>[3]Move testpoints TP7/TP8 at the bottom</li> <li>[4]Moved the index hole to avoid collision in the test jig with a placed J20 connector</li> <li>[5]Connected the center pad below U25/U25x to GND</li> <li>[6]Increased the clearance between crystal Y1 and neighboring passives</li> <li>[7]Added resistor R5 as alternative feedback loop for the LDO</li> <li>[8]Removed U17/U18 and related passives (5.0VA connected to VBUS_HUB through LP12)</li> </ul> Released to manufacturing
B	15 / Mar / 2023	Modifications for 1.2V LDO option: <ul style="list-style-type: none"> <li>changed R23 to 16.9k</li> <li>changed R354 to 4.42k</li> <li>changed R355 to 31.6k</li> <li>changed R357 to 2.26k</li> </ul> Modifications to the circuit for power-cycle from reset: <ul style="list-style-type: none"> <li>changed R347 to 10k</li> <li>changed R363 to 10k</li> <li>added 10k resistor (R36) between U21.4 to U26.B2</li> <li>removed U27, R21, R22</li> <li>removed alternative VF path option (R4/C4)</li> <li>changed supply of U21, U24, R30, R346/SW1 to V_LDO</li> <li>added pull-down (R31) at U21.3</li> <li>added a series schottky diode (D1) to RESET</li> </ul> Modifications related to PMM socket: <ul style="list-style-type: none"> <li>changed R81 to 51 ohm (from NP)</li> <li>removed TRIG_0 from J7.52</li> <li>changed J7.46 from VLED to VF (buffered VLDO)</li> <li>assigned J7.3 to TRIG_0, J7.5 to TRIG_3, removed J25</li> </ul> Changed LP12 from NP to BLM18EG471SN1D Added testpoint (MD_OB) at U25.21 Added termination resistor (R33) on MISO Changed U24 part number to SN74AUP1G04DBVR Replaced TP28/29 with TP3/4 (Through-hole testpoint) Added option (R89) to drive U_RSTn from U12.27 (ACBUS1) Added testpoints TP55..TP59 for testing UART from U25 Added the jumper options at J1 and J10 for single-pin UART Released to manufacturing
B1	22 / Mar / 2023	Changed U2 part# from AT25DF021A-MAHNR-T to AT25DF021A-MAHN-T
	08 / May / 2023	Modifications for 1.25V LDO option (U5): <ul style="list-style-type: none"> <li>changed R354 to 4.75k</li> <li>changed R355 to 28k</li> <li>changed R356 to 19.1k</li> <li>changed R357 to 2.05k</li> </ul> Jumper modifications for J9 and J23 header
B2	21 / Sep / 2023	Cleanup schematics and fixed missing modifications to BOM (modifications dated 08/05/23)
B3	21 / Nov / 2023	Changed configuration for PMM2 (added jumper on J9)
B4	09 / Feb / 2024	Removed jumpers (configuration for the module daughterboard) <ul style="list-style-type: none"> <li>JS1, JS11, JS12, JS13, JS14 on J1 (SPI Flasn)</li> <li>JS2 on J8 (LED)</li> <li>JS10 on J5 (LDO default at 3.0V)</li> </ul> Changed C3, C5, C20, C21, C65, C75, C77, C79, C80 to GRM155C81A105KA12J (cost/performance optimization)
B5	14 / Mar / 2024	Added jumpers JS1, JS2, JS11, JS12, JS13, JS14 (on-board SPI/LED) - i.e. default configuration for DA14535 daughterboard -

Configuration note

NOTE box

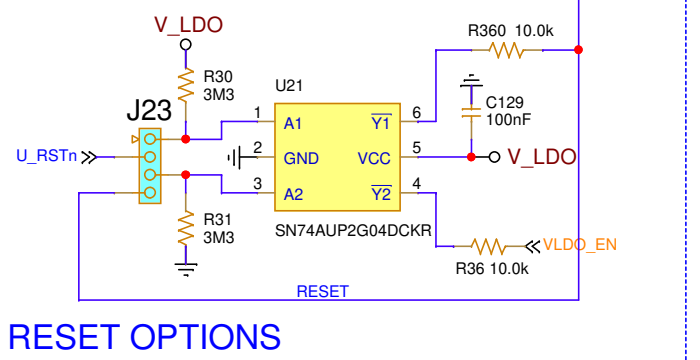
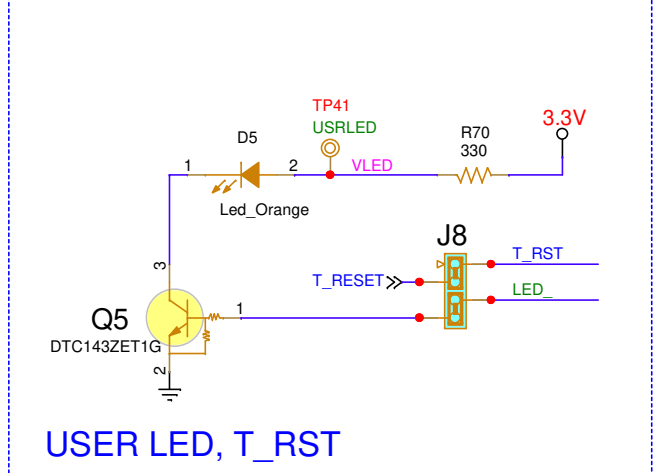
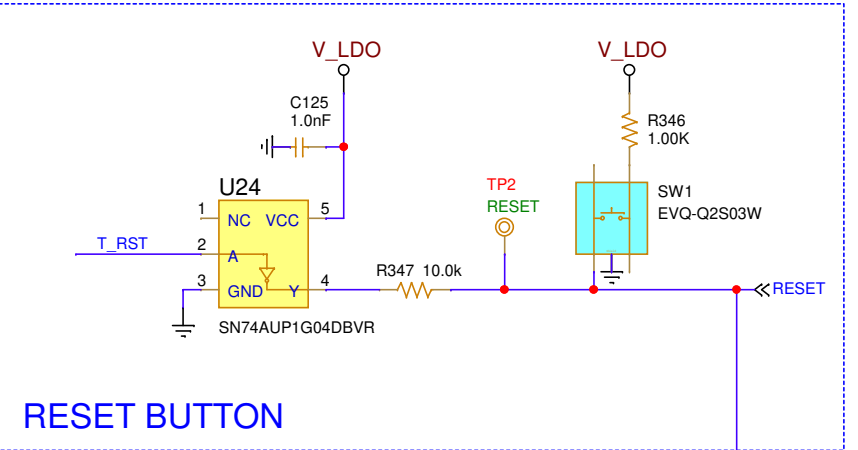
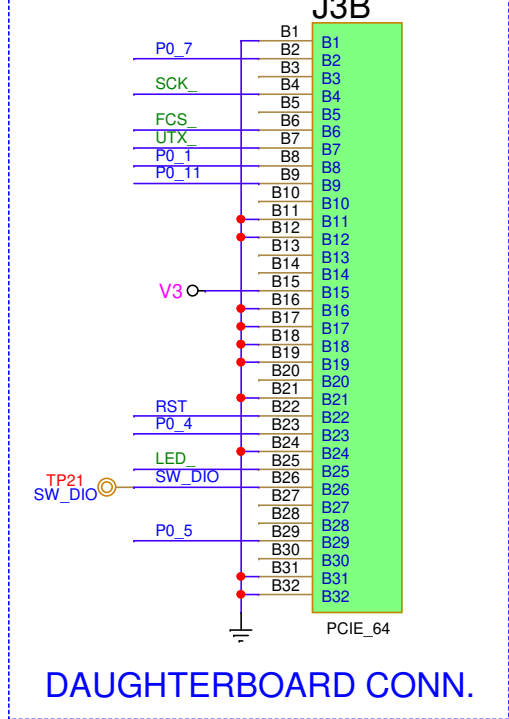
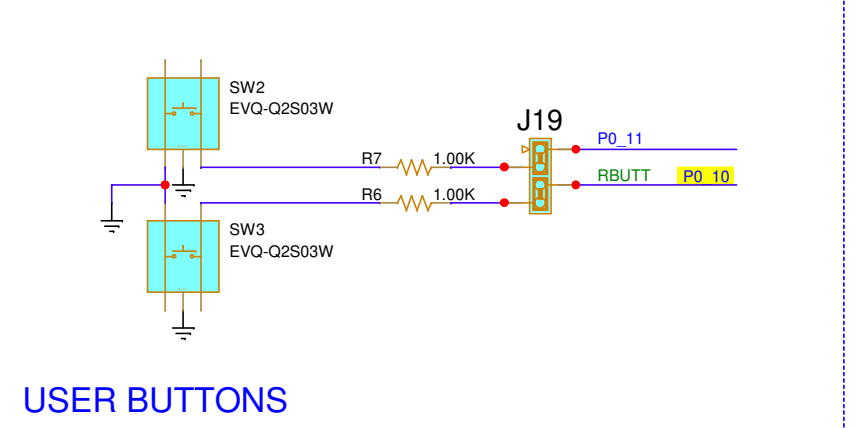
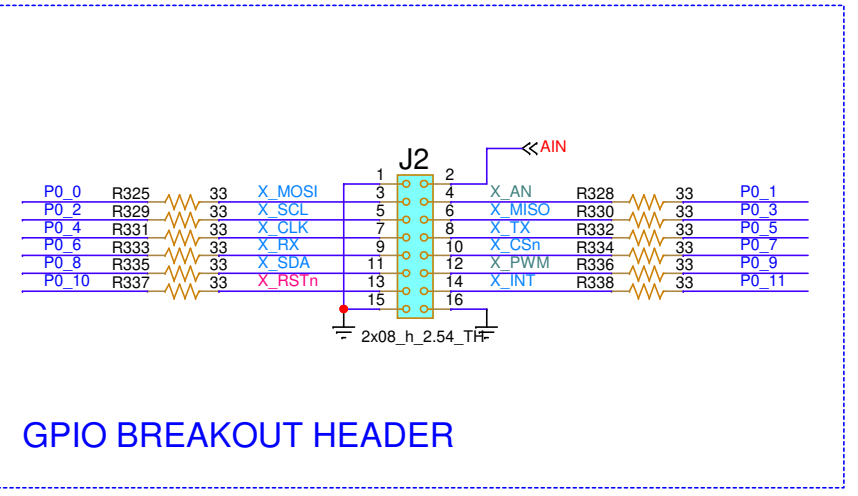
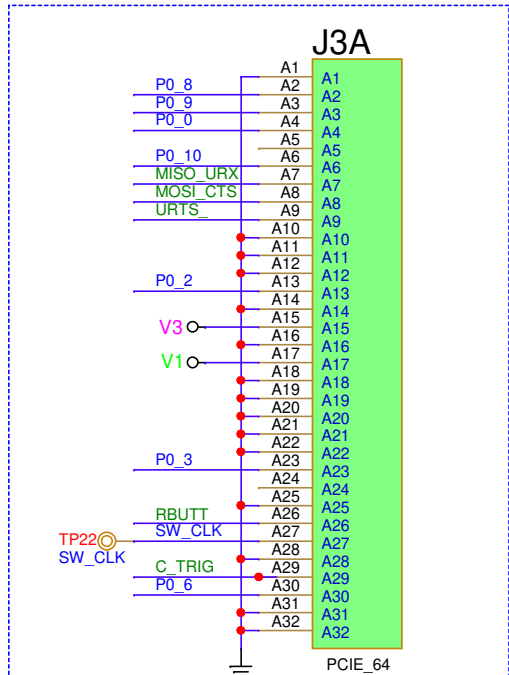
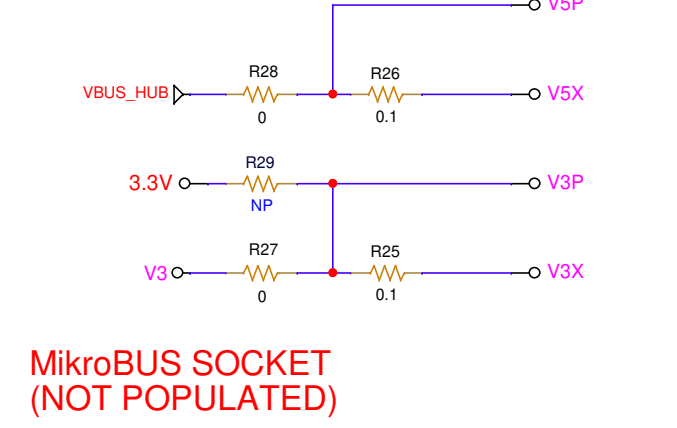
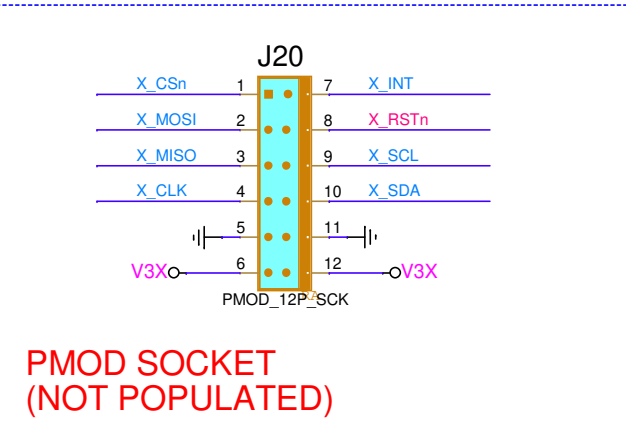
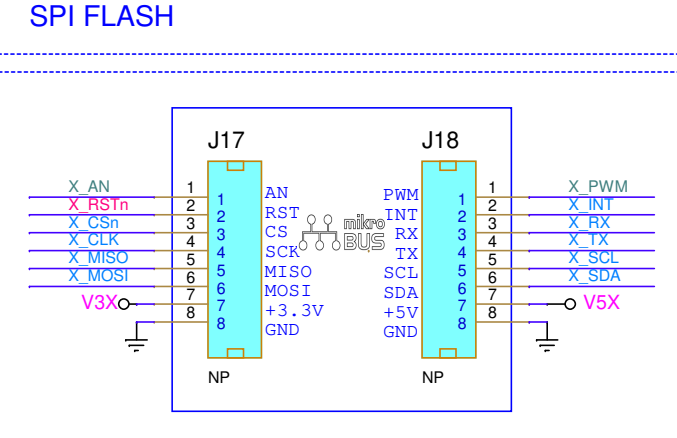
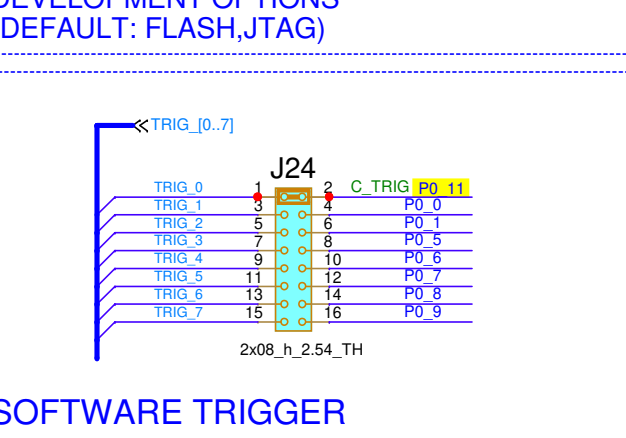
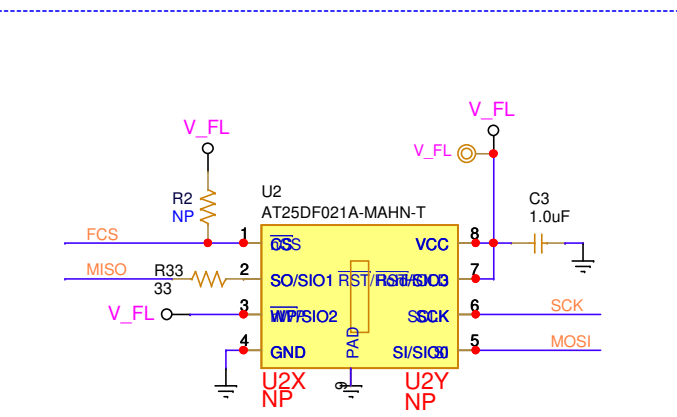
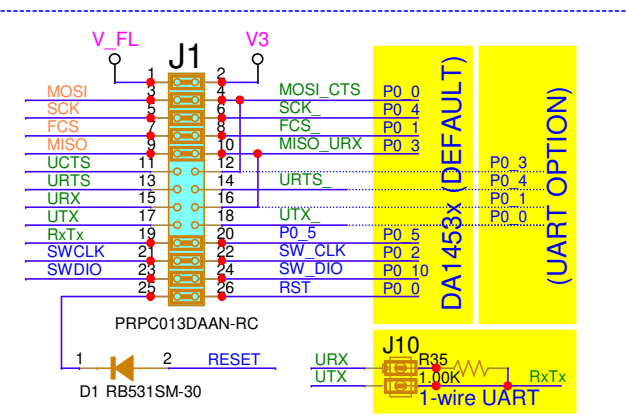
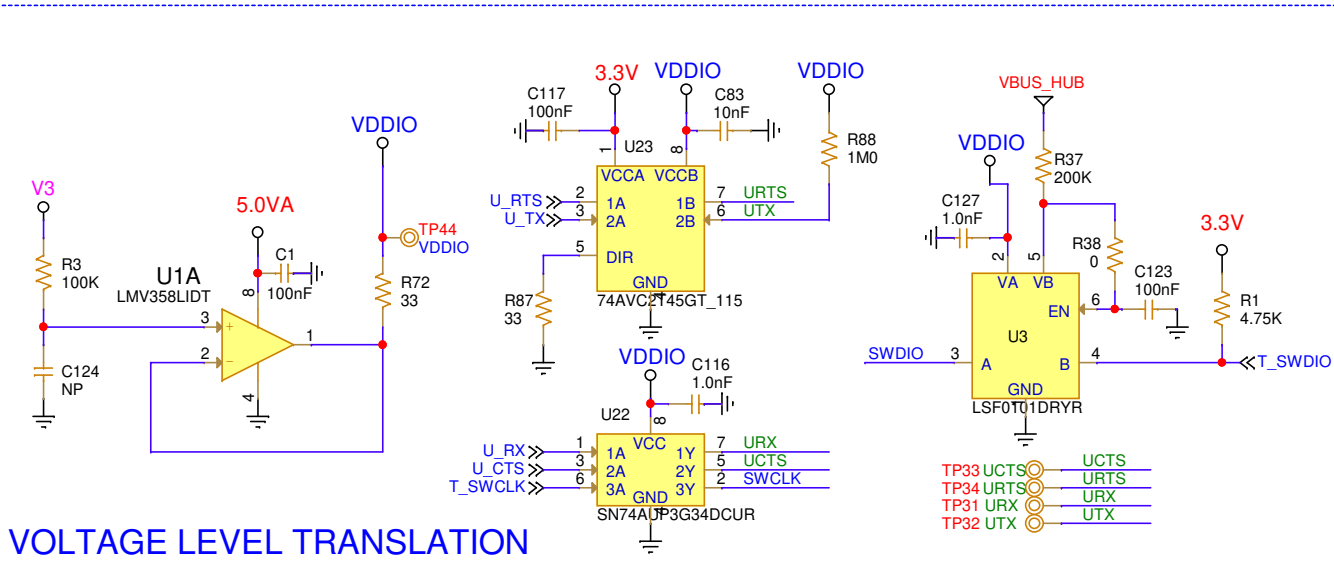
Changes in this Version.



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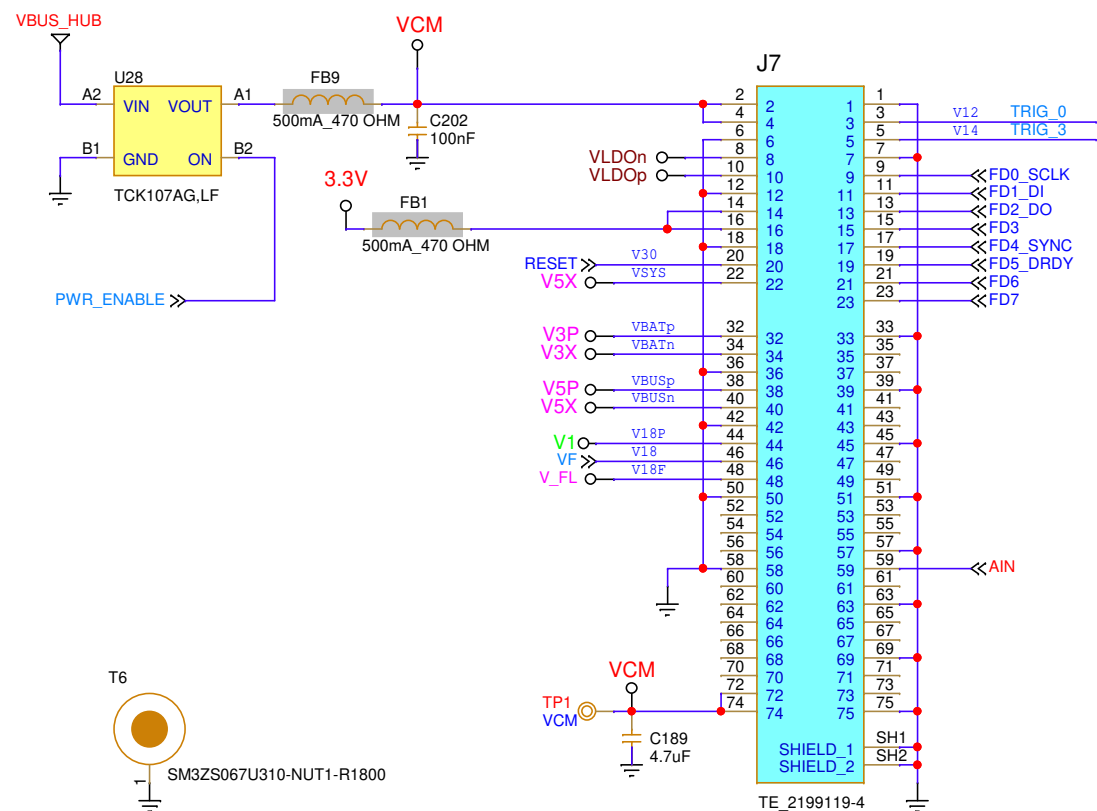
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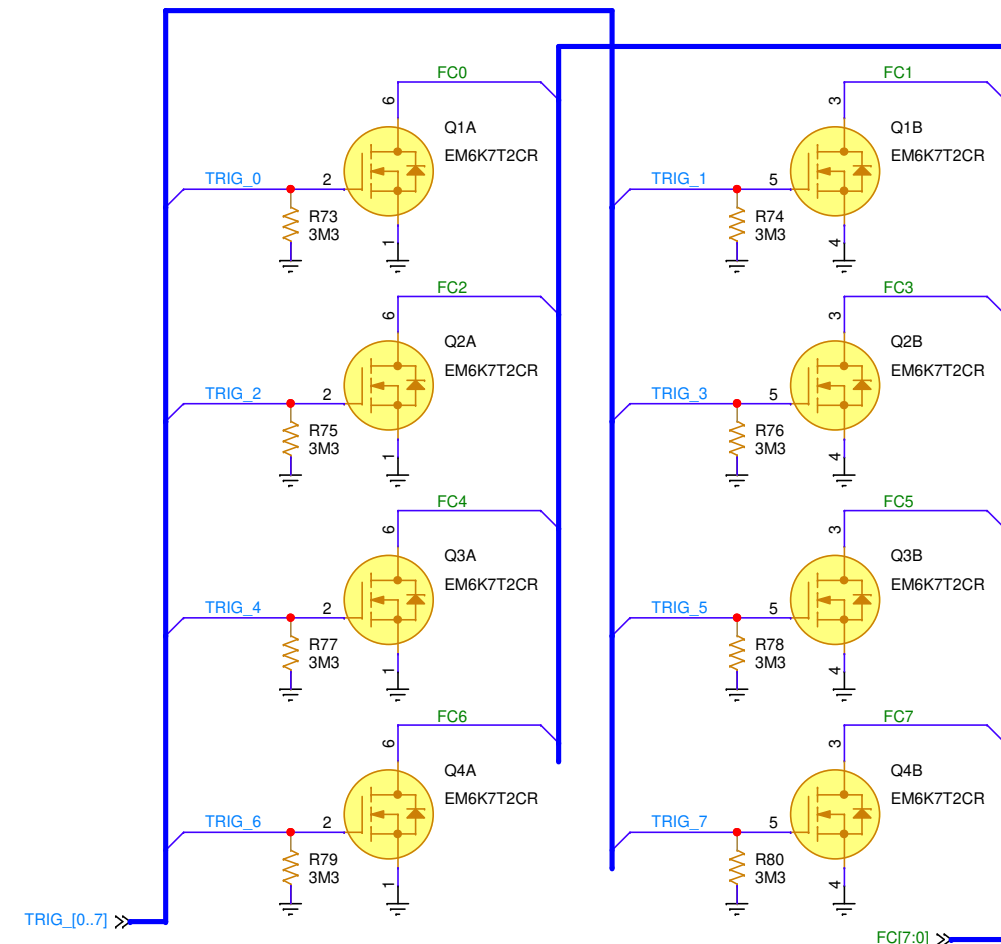


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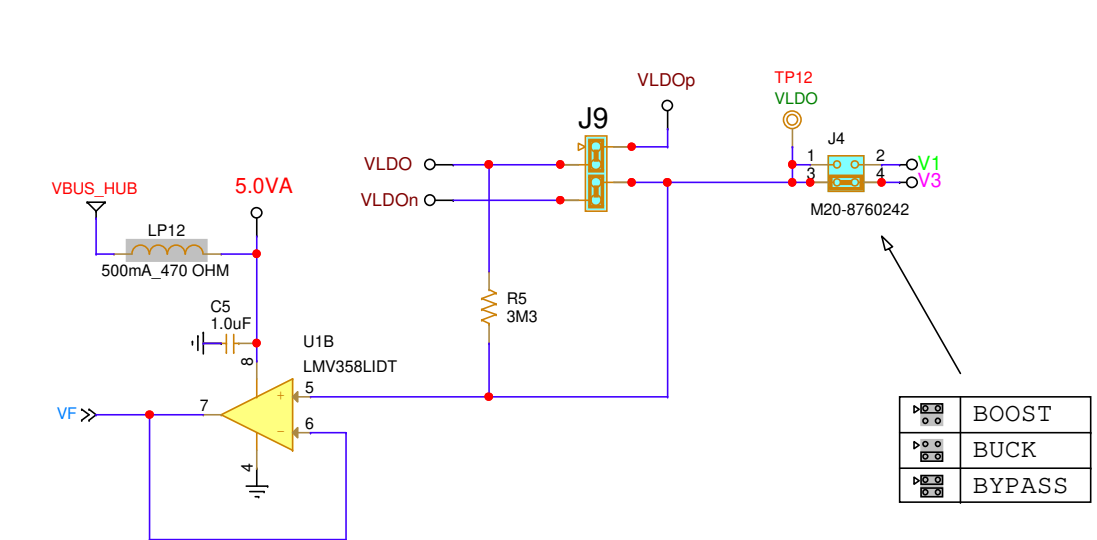


CURRENT MEASUREMENT SOCKET (M.2)



SOFTWARE TRIGGER OPTIONS

B



POWER MODE SELECTION

D

C

B

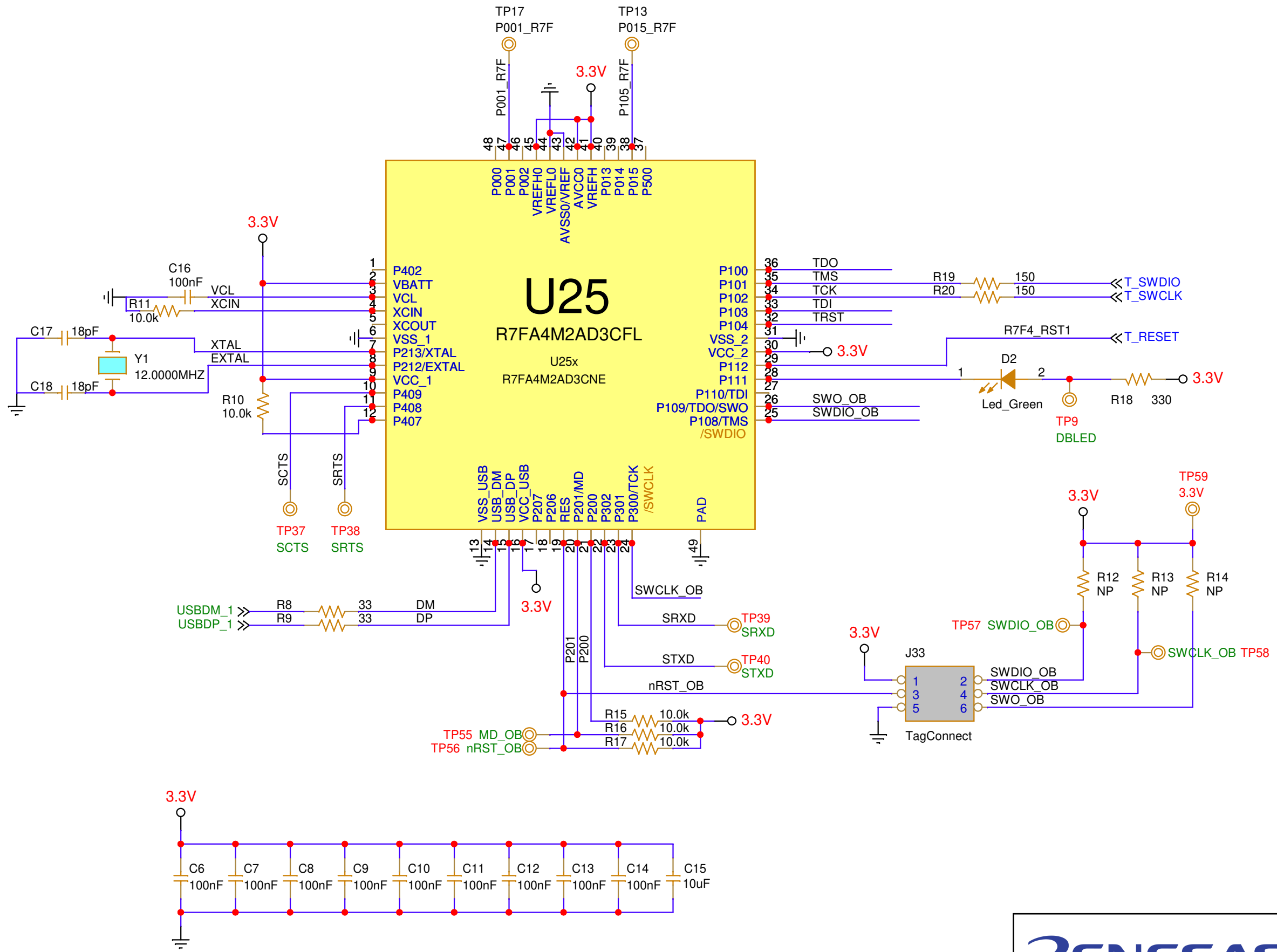
A

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