

Regarding the usage of our schematics and alike documentation for Trenz baseboard TE0703.

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Schematics and other handouts serve for informational purposes only!

Drawn by	ED
Checked by	MT
Assembly variant	Default
Created by	ED
Modified by	ED
Modified at	2023-09-07



Title: TE0703 – Legal Notices		Rev. 07
A4	Number: TE0703 Default	
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	REV	DATE	Description
A	-05	2017-11-23	<p>1. [J5] changed to 3 pin jumper to select 3.3V or 1.8V, added 3pin jumpers for each bank</p> <p>2. PWR connector type changed THT-&gt;SMD</p> <p>3. changed FT2232 different IC package (56pins)</p> <p>4. changed micro SD-card slot</p> <p>5. changed micro-USB</p> <p>6. added series resistors 10K to FLED0, FLED1 and connect to CPLD</p> <p>7. added serial number (traceability pad)</p> <p>8. U8 MP5010ADQ-LF-Z replaced to MP5010BDQ-LF-Z</p>
B	-06	2019-08-29 2022-05-04	<p>1. microSD card connector ([J3]) changed to industrial</p> <p>2. changed PB ([S1]) to industrial</p> <p>3. replaced input power protection</p> <p>4. added jumper ([J11]) to select SD level shifter voltage on FPGA side</p> <p>5. added power switch for SD level shifter supply voltages to ensure power sequencing of level shifter</p> <p>6. replaced [R5] and VBUS capacitors, add 00hm resistors to OTG-ID</p> <p>7. replaced jumpers by SMD versions, moved VBAT to other position</p> <p>8. routing lenght of diff pairs B34_L17, B34_L15, B34_L21, B34_L13, B34_L10, B34_L20 changed</p> <p>9. Replaced [R31] by 953K and [R25] by 147K</p> <p>10. Set S/N Track-it pad not fitted</p>
C	-07	2023-09	<p>1. Changed DCDC EN6347QI ([U3]) to MPM3860GQW-Z.</p> <p>2. Changed load switch TPS27081ADDCR ([Q1]) to MP5077GG-Z.</p> <p>3. Changed clock SIT808AI-73-XXS-12.000000E ([U6]) to SIT8008BI-73-XXS-12.000000E.</p> <p>4. Changed SD Card connector ([J3]) from 504077-1891 to MEM2052-00-195-00-A.</p> <p>5. Changed USB connector ([J12]) from 629105150521 to 629105150921.</p> <p>6. Changed pin header ([J7]) from two pins to three pins and added jumper [J20].</p> <p>7. Added testpoints [TP1]...[TP30].</p> <p>8. Changed voltage rating for 1 uF capacitors ([C38], [C39]) from 6.3 V to 16 V.</p> <p>9. Changed voltage rating for 47 uF capacitor ([C48]) from 6.3 V to 10 V and size from 1206 to 0805.</p> <p>10. Changed tolerance for 22 uF capacitor ([C22]) from 10 % to 20 % and size from 1206 to 0805.</p> <p>11. Changed resistor values for 10 kOhm resistors ([R10], [R14], [R24], [R27], [R37], [R38]) to 12 kOhm.</p> <p>12. Changed resistor values from 4.7 kOhm to 5.1 kOhm for resistors [R17]...[R20].</p> <p>13. Changed fiducials.</p> <p>14. Named [Q1] enable signal to "EN_3.3V_SD".</p> <p>15. Added decoupling capacitors:</p> <p>15.1 [C55], [C57]...[C61] for U5.</p> <p>15.2 [C62]...[C64] for [J3].</p> <p>15.3 [C65] for [U1].</p> <p>16. Added pull-up resistor [R43] for "USB_OC".</p> <p>17. Removed VG96 from BOM.</p> <p>18. Removed S/N Track-it pad.</p> <p>19. Added UKCA logo.</p> <p>20. Changed address on silkscreen.</p> <p>21. Updated components from library.</p> <p>22. Updated revision history.</p> <p>23. Updated documentation.</p> <p>24. Updated power overview.</p>
D			ED

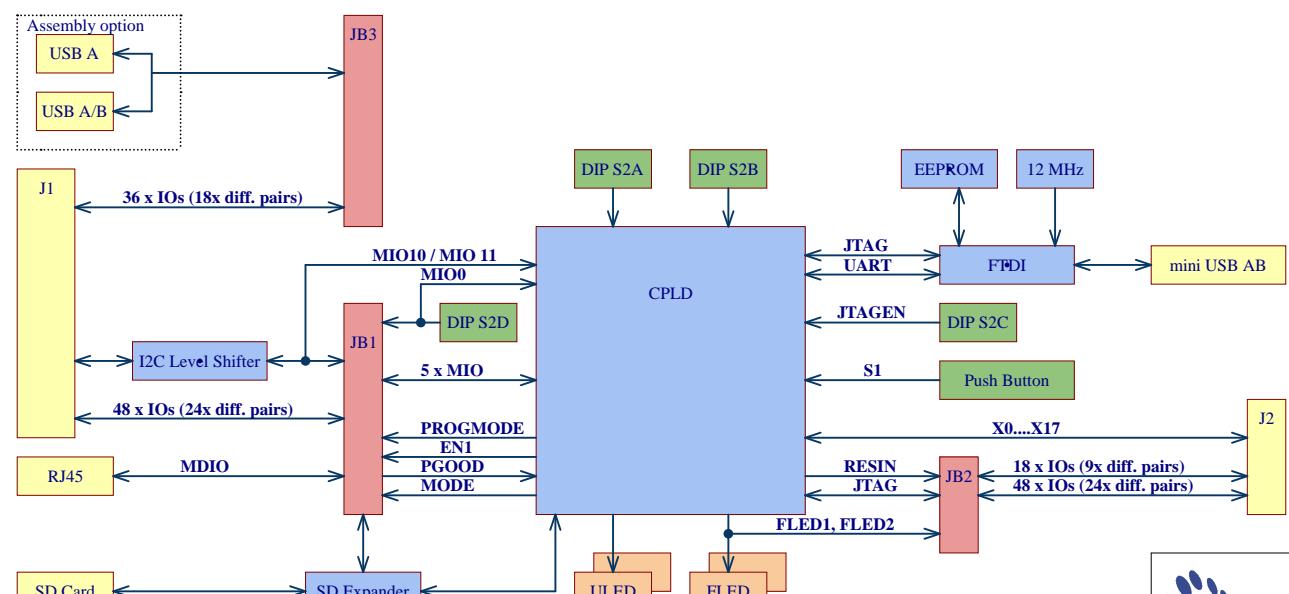


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## Supported Voltage Ranges:

Power Rail	Direction*	Range	Tolerance	Description	Note
5VIN	IN/OUT	5.0 V	+/- 5 %	Baseboard Power	Baseboard Power Supply.
VCCIOA	IN/OUT	-	-	Micromodule Power	Dependent on baseboard/module combination, on baseboard settings and VG96 requirements.
VCCIOB	IN/OUT	-	-	Micromodule Power	Dependent on baseboard/module combination, on baseboard settings and VG96 requirements.
VCCIOC	IN/OUT	1.2 V - 3.3V	-	Micromodule Power	Range based on baseboard. Dependent on baseboard/module combination, on baseboard settings and VG96 requirements.
VCCIOD	IN/OUT	-	-	Micromodule Power	Dependent on baseboard/module combination, on baseboard settings and VG96 requirements.
VCCJTAG	IN	1.2 V - 3.3V	-	JTAG Reference	JTAG Reference Voltage from module. Consult module documentation.
M1.8VOUT	IN	1.8 V	+/- 3 %	Baseboard Power	Range based on baseboard. Consult module requirements.
M3.3VOUT	IN	3.3 V	+/- 3 %	Baseboard Power	Range based on baseboard. Consult module and VG96 requirements.
ETH-VCC	IN	-	-	RJ45 Power	Consult module requirements.
3.3V	OUT	3.3 V	+/- 3 %	Power for System	Range based on baseboard. Consult module and VG96 requirements.
VBAT	OUT	-	-	Power for Module.	Consult module requirements.

\* IN/OUT dependent on usage mode.



### Legend:

  B2B Connector  
   Connector  
   LED Interface  
   Switchable Interface  
   On-board Components

### I2C Address:

Device	I2C ADDR	Note
CPLD (USB)	-	Firmware dependent.
VG96 (J1A)	-	Depends on connection.

Title: TE0703 – System Overview

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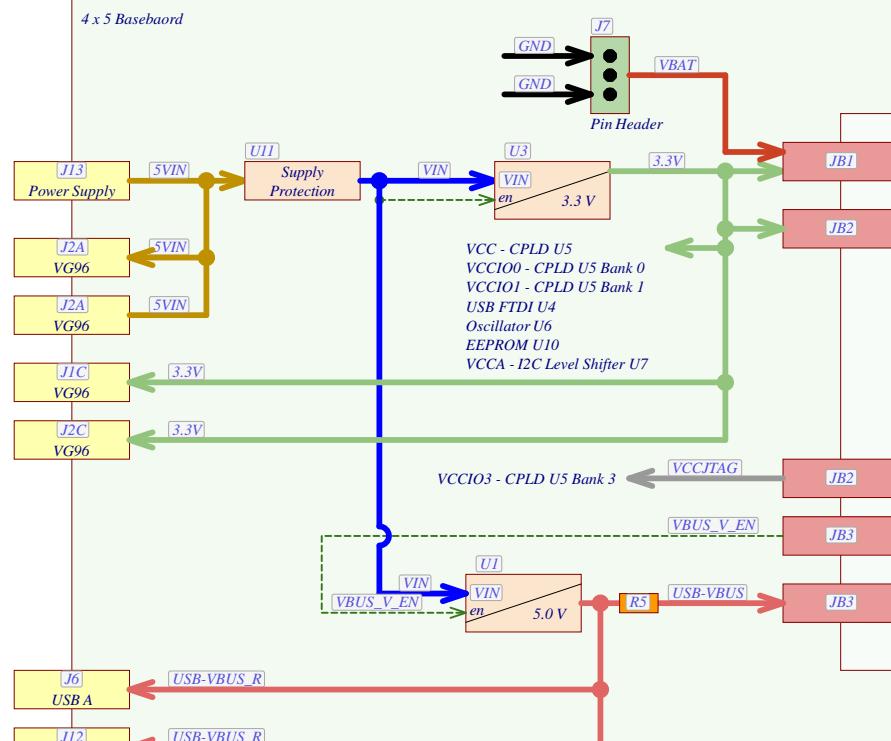
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Filename: TE0703-Overview.SchDoc



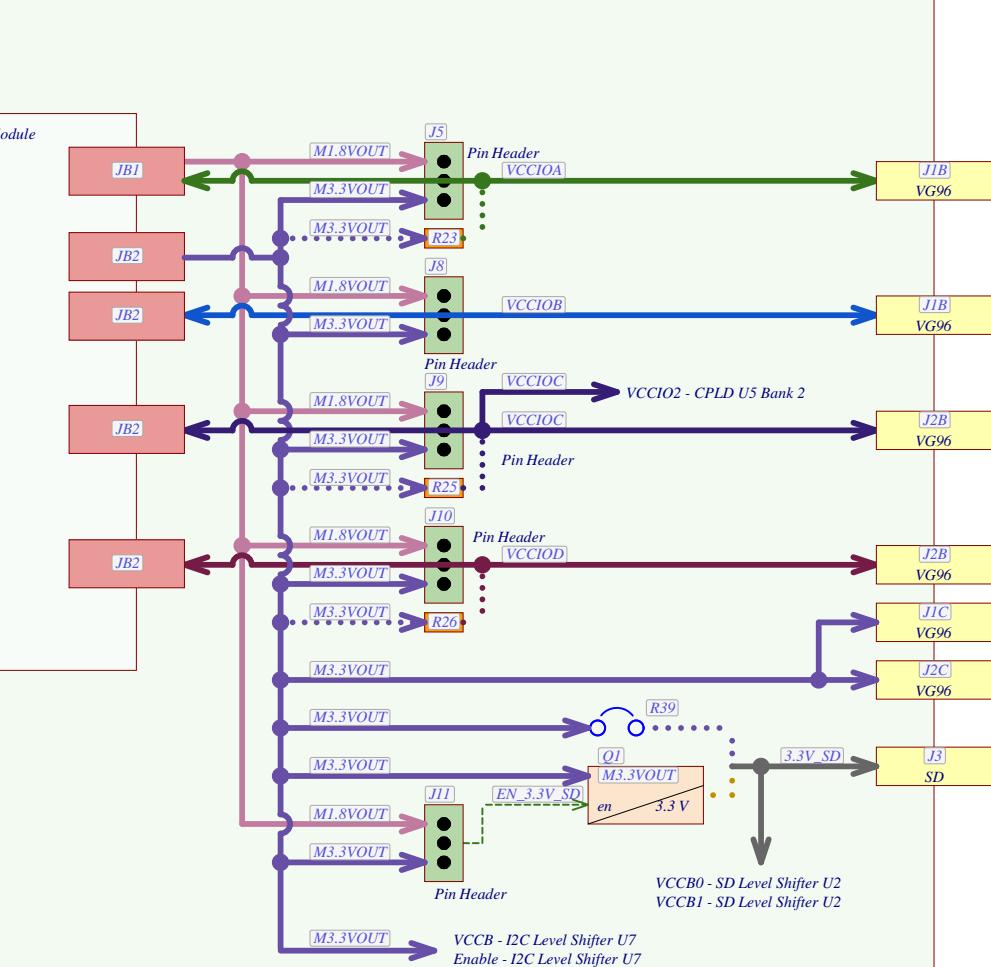
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Special notes:

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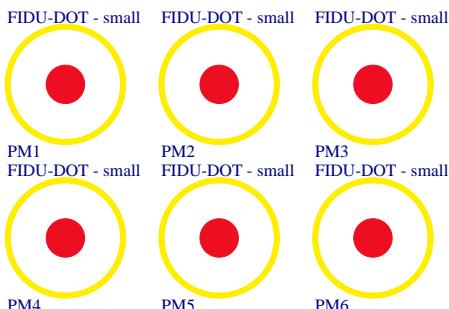
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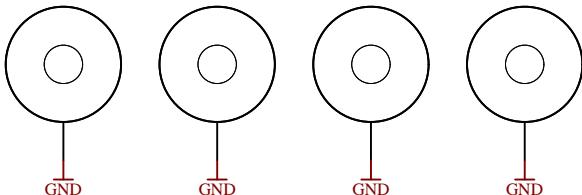
D

D



Serial  
Serial  
Serialnumber 6,3 x 6.3mm  
MISC1  
Digilent Serialnumber  
Digilent\_SN

Mount.Hole 3.2mm Mount.Hole 3.2mm Mount.Hole 3.2mm Mount.Hole 3.2mm



UKCA1  
UKCA Logo on Top Overlay  
UKCA-TOPOVERLAY

CE1  
CE Logo on Top Overlay  
CE-TOPOVERLAY

MECH10  
TE Address Overlay  
LOGO ADDRESS

LOGO1  
TE Logo PRINT Layer  
LOGO PRINT



Title: TE0703 – Overview

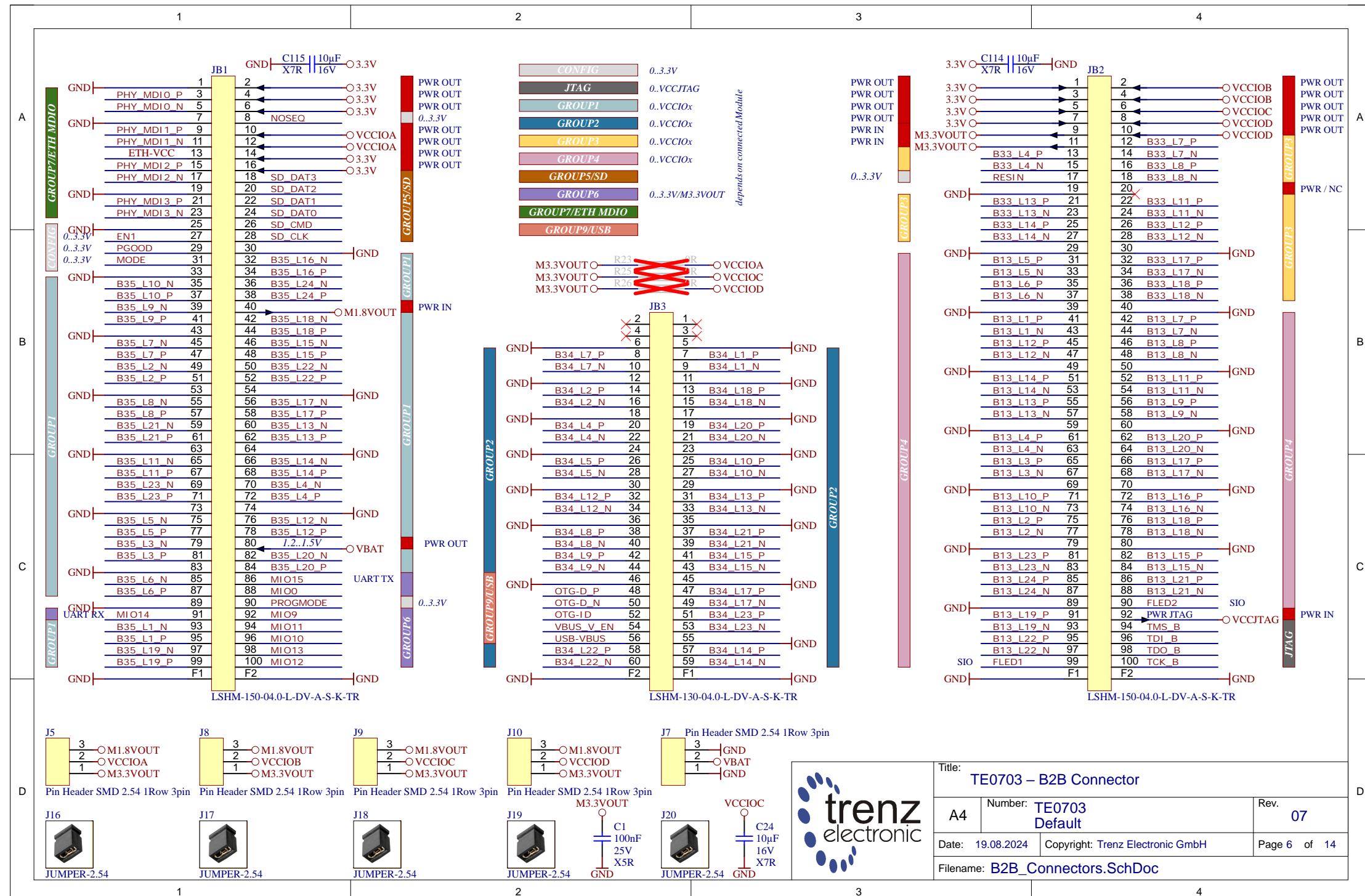
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Default

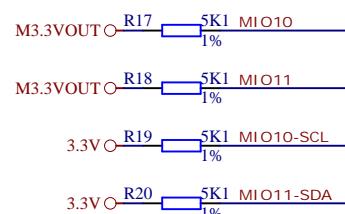
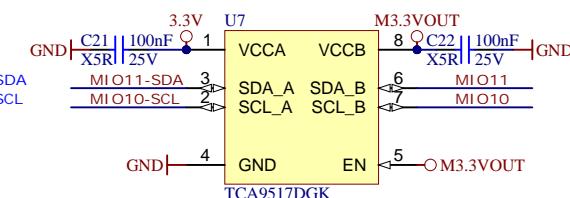
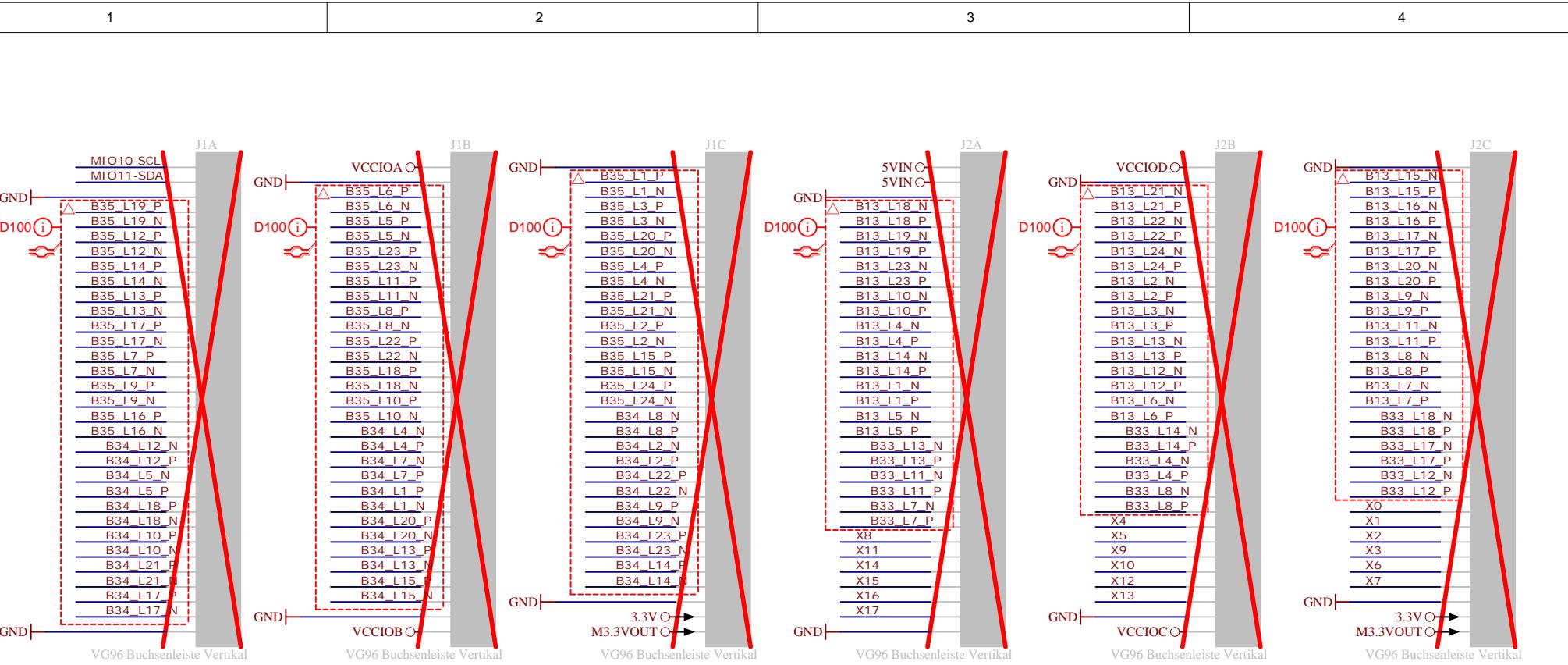
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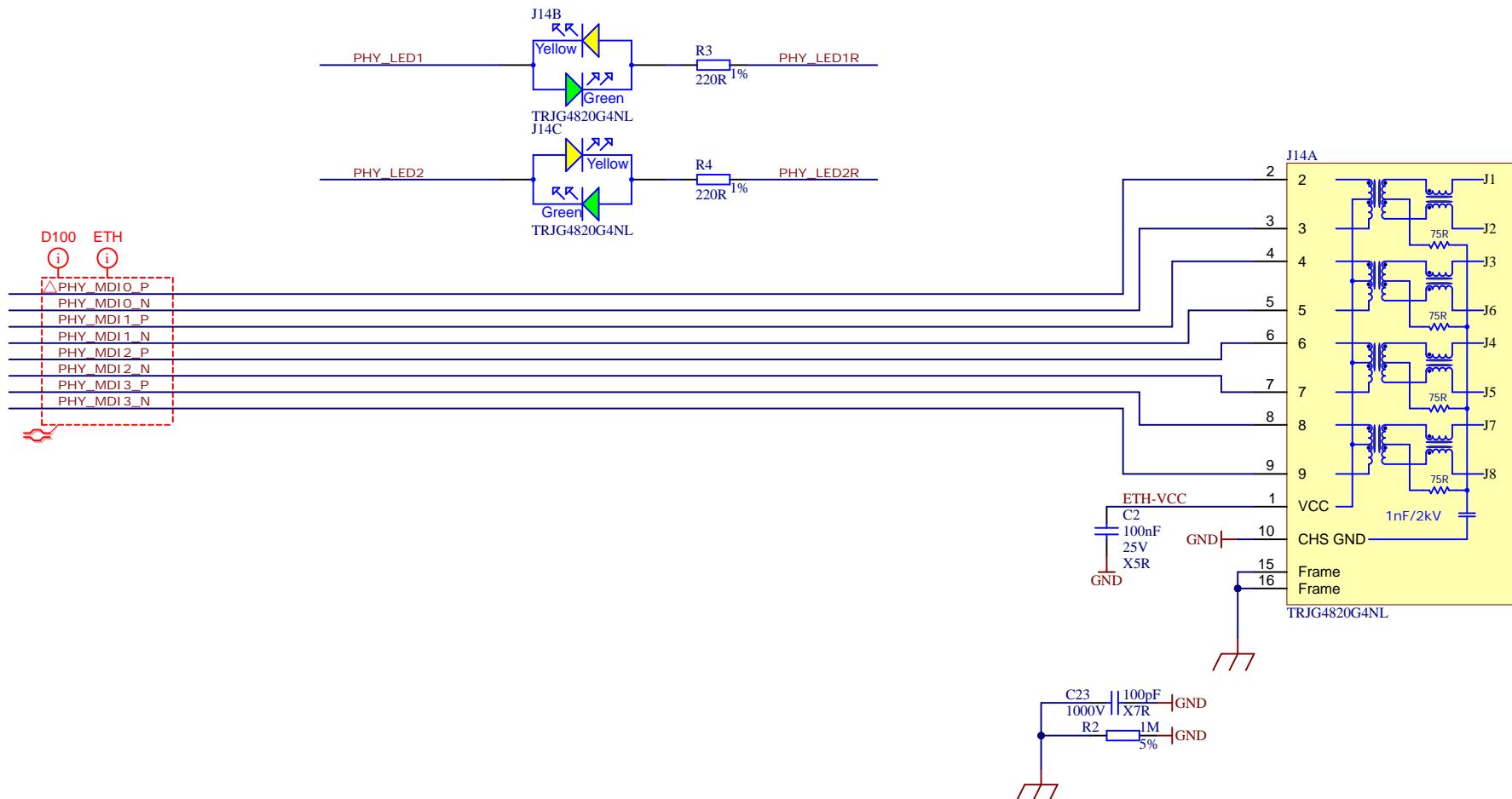
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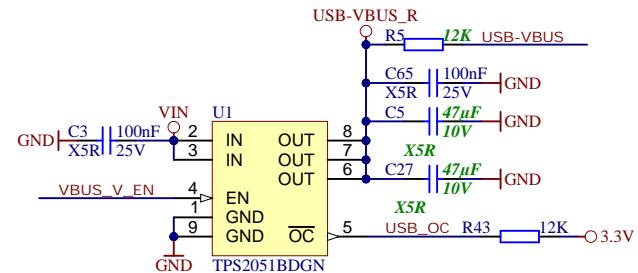


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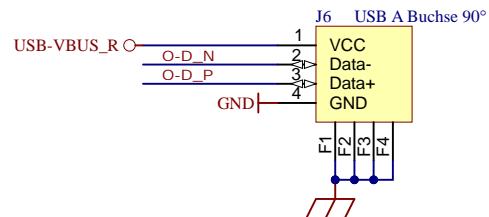
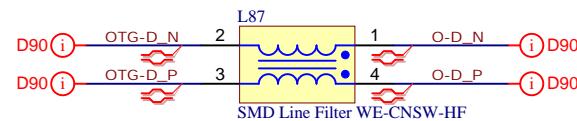
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Variant	USB
Default	HOST
D	OTG



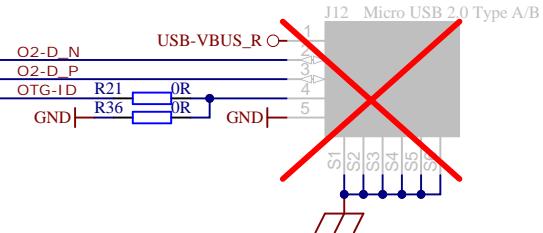
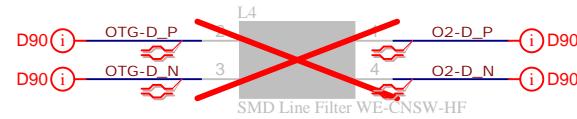
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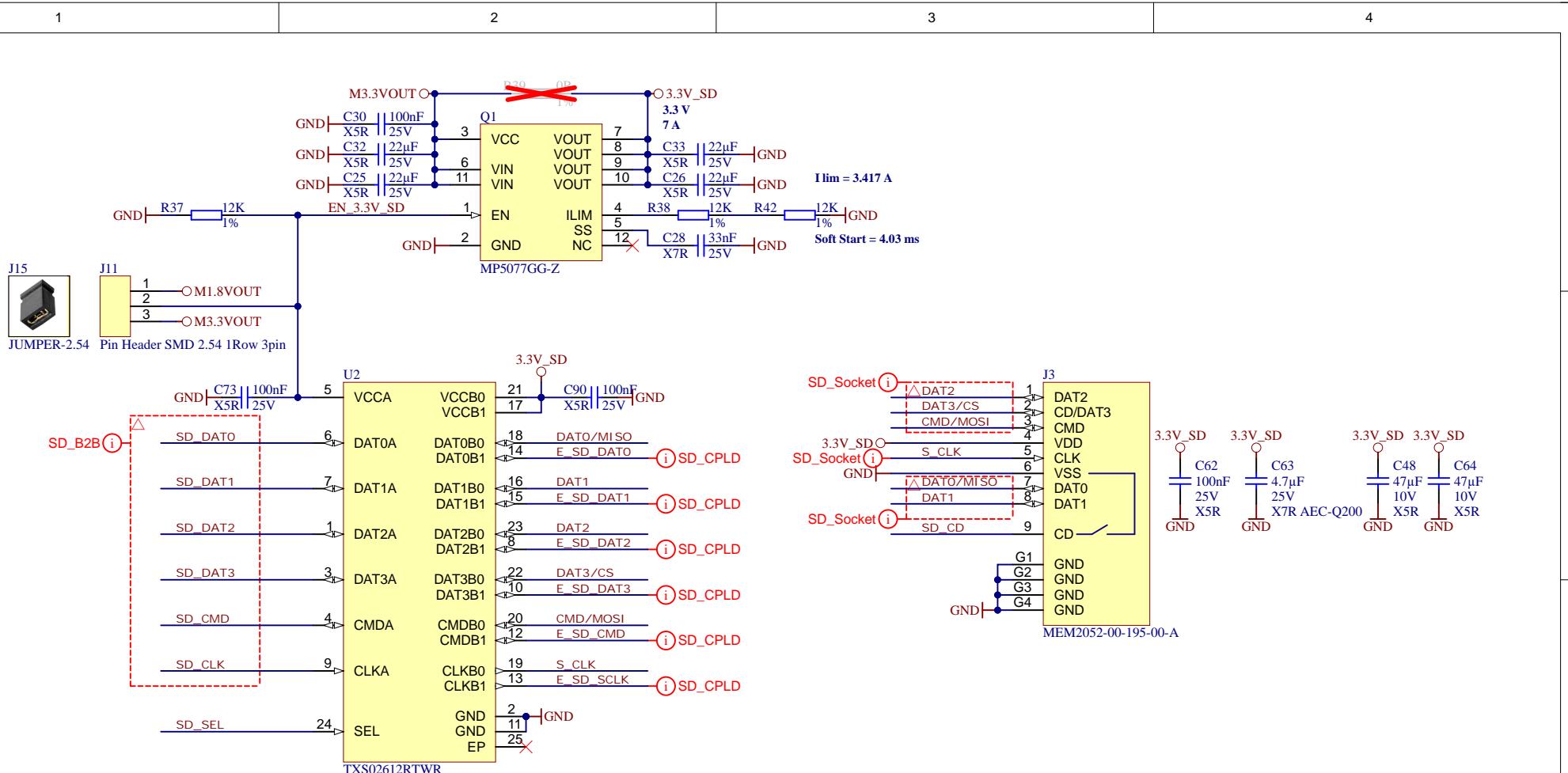


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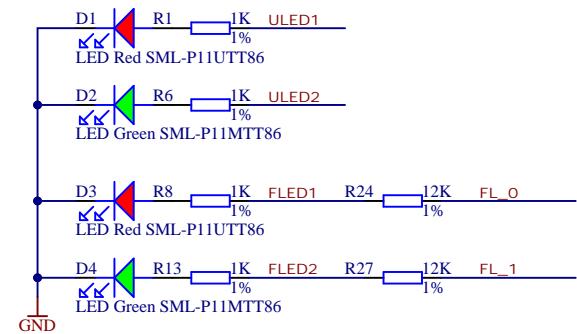
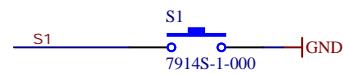
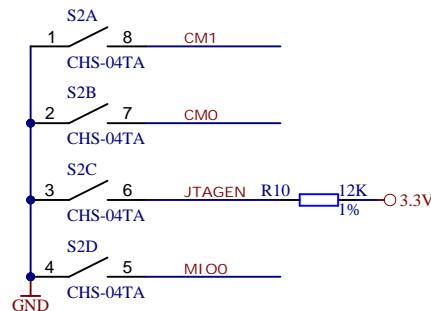
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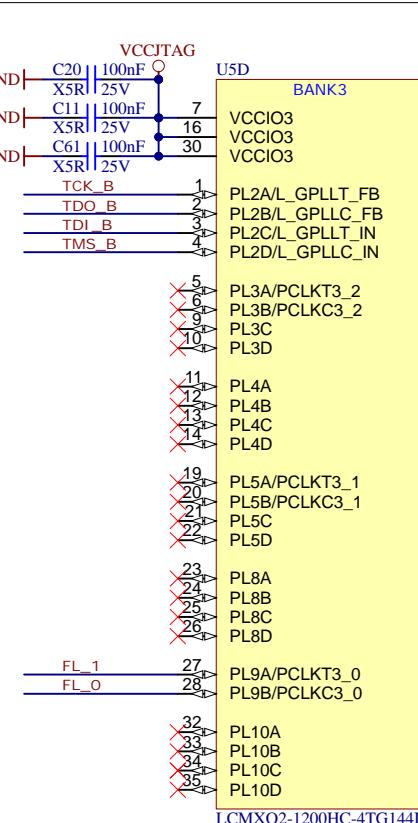
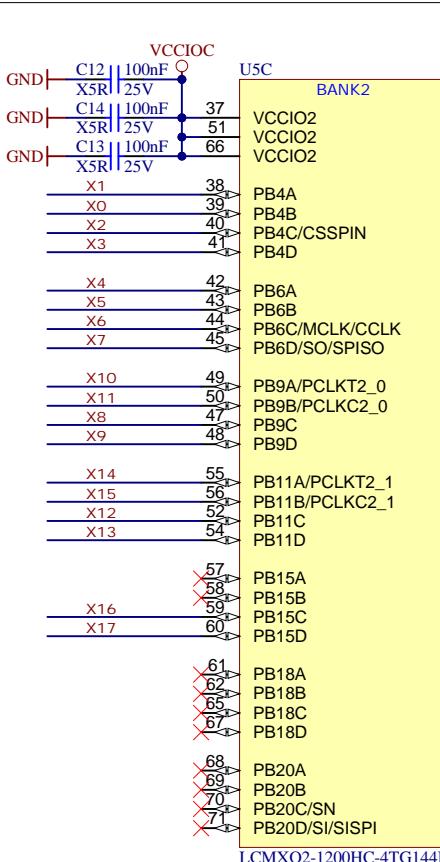
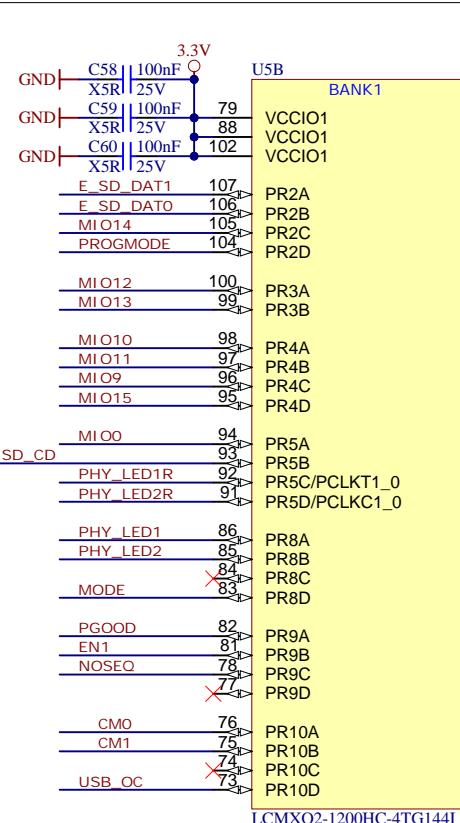
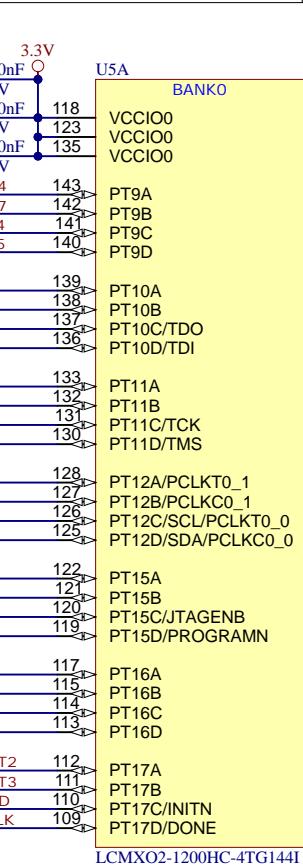
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Title: TE0703 – System Controller

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