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Revisions			
Rev	Description	Date	Approved
X1	Initial release	Mar 5, 2024	William Jiang
X2	BOM optimzation	Mar 6, 2024	William Jiang
A	SCH optimzation	Mar 12, 2024	William Jiang

FRDM-MCXC444

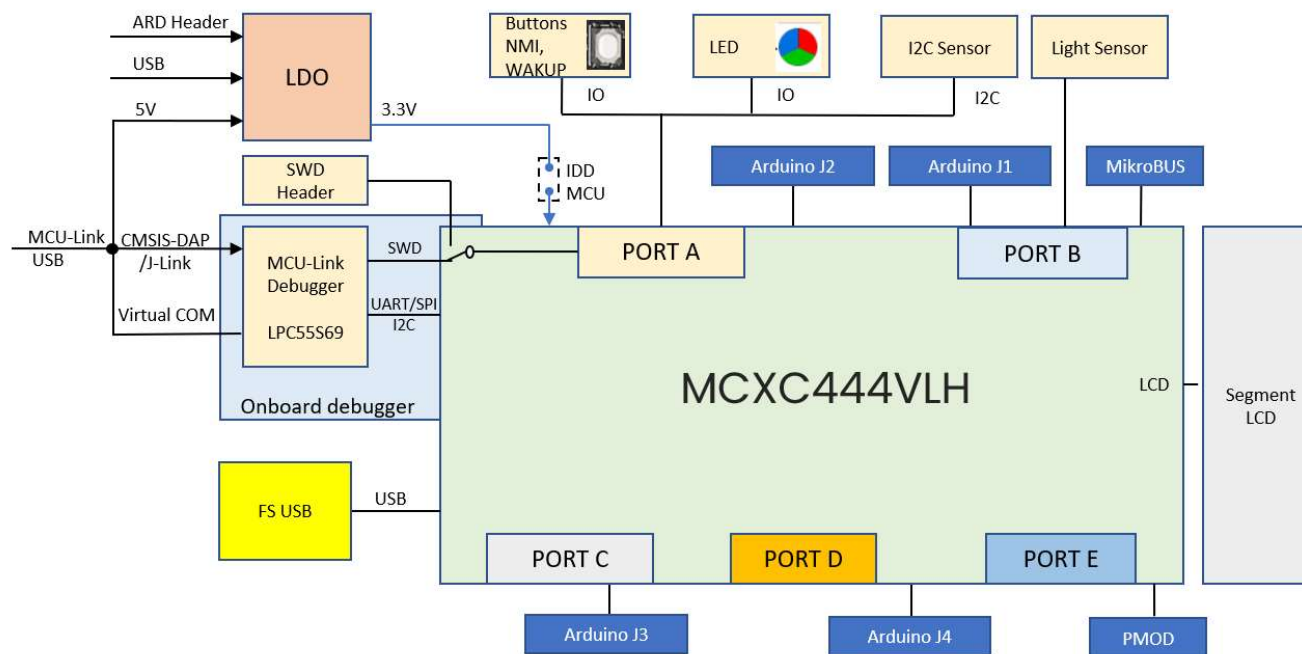


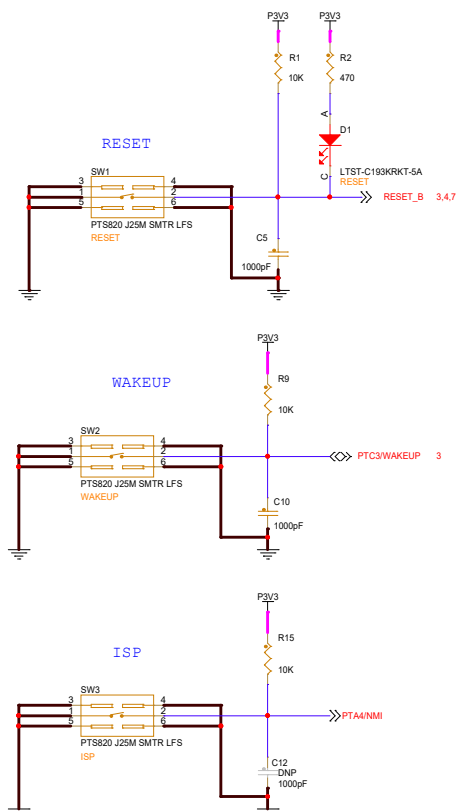
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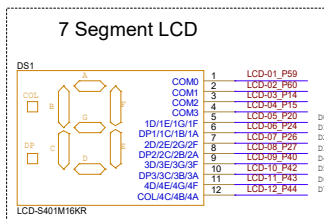
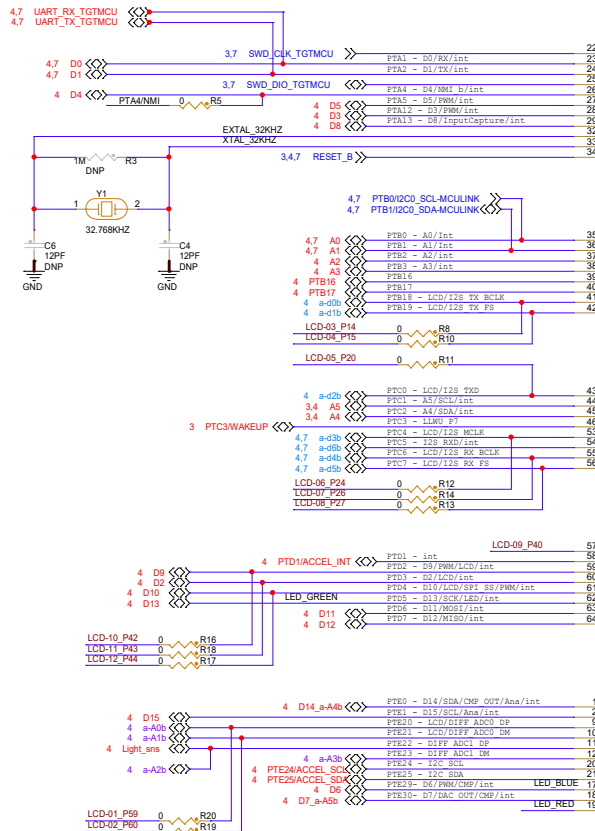
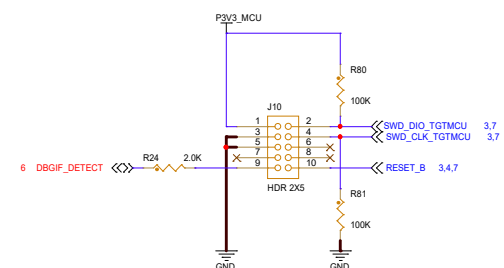
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Designer: Alex Yang	Drawing Title: FRDM-MCXC444		
Drawn by: Alex Yang	Page Title: TITLE PAGE		
Approved: William Jiang	Size C	Document Number SCH-93440 PDF: SPF-93440	Rev A
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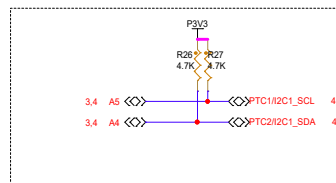
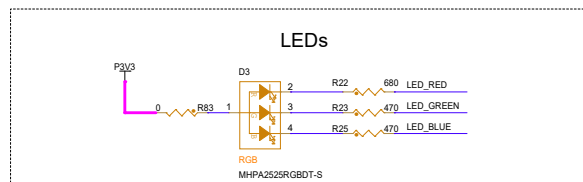
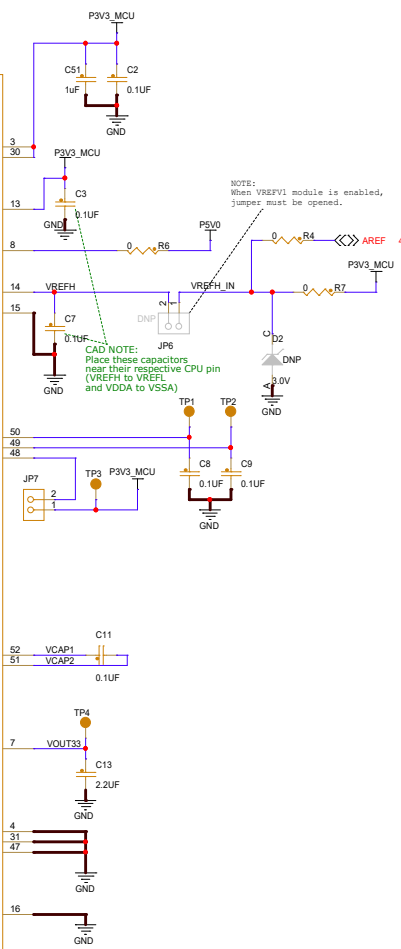
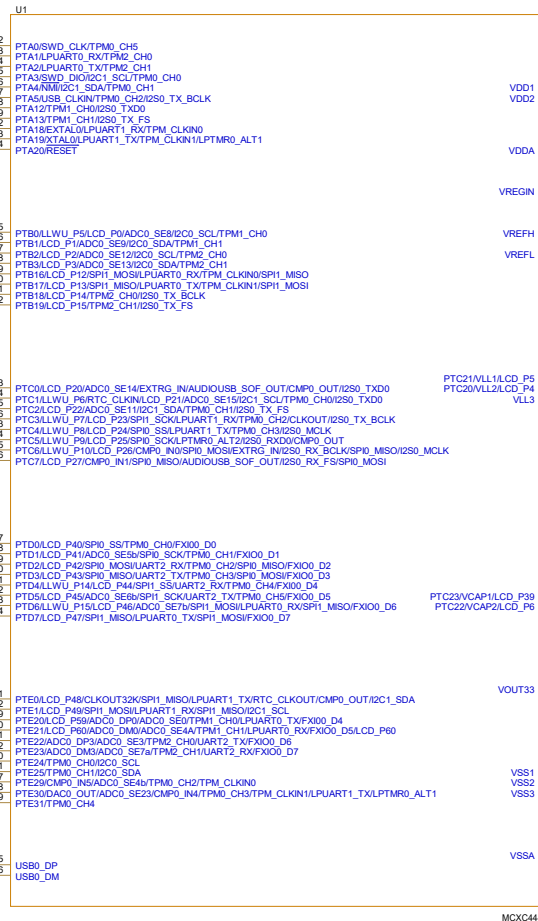


SWD CONNECTOR



SLCD Pin Table

nCS	D0	D1	D2	D3	D4	D5	D6	D7
COM0	1	10	2	20	3	30	4	40
COM1	11	11	21	21	31	31	41	41
COM2	12	12	22	22	32	32	42	42
COM3	13	13	23	23	33	33	43	43
COM4	14	14	24	24	34	34	44	44
COM5	15	15	25	25	35	35	45	45



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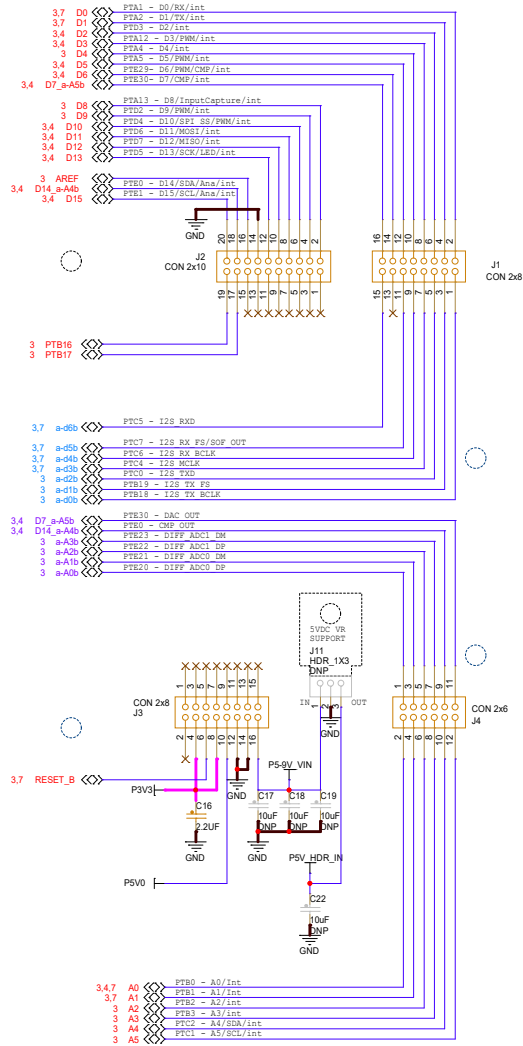
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Page Title: **MCU MCX444**

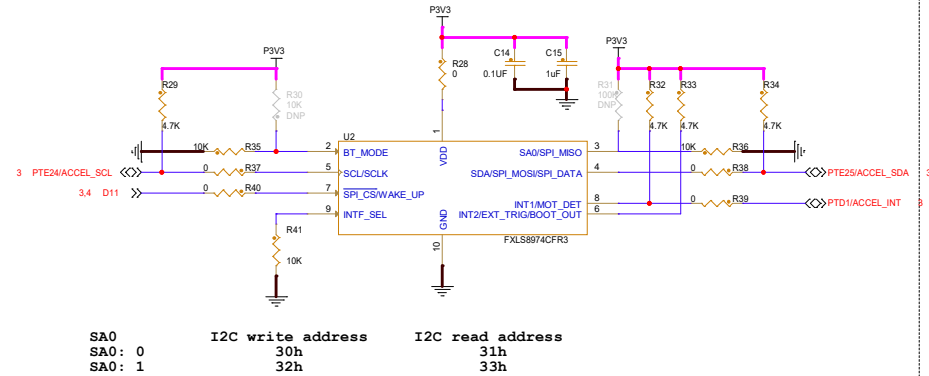
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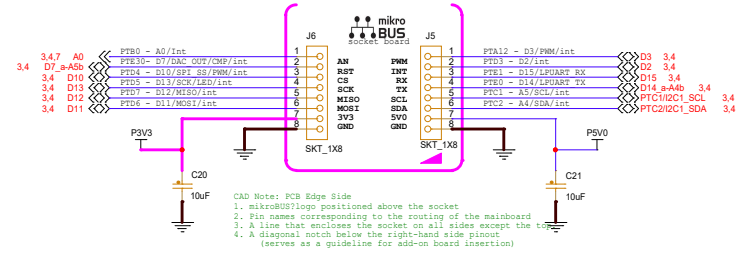
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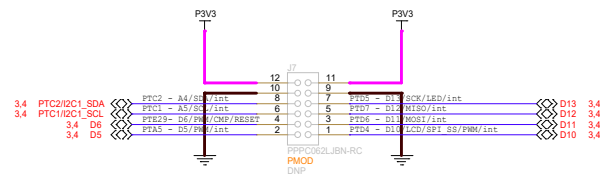
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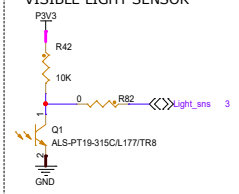
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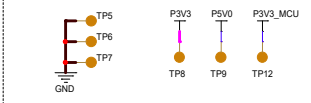
PMOD



VISIBLE LIGHT SENSOR



IN CIRCUIT TEST



MOUNTING HOLE



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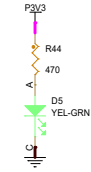
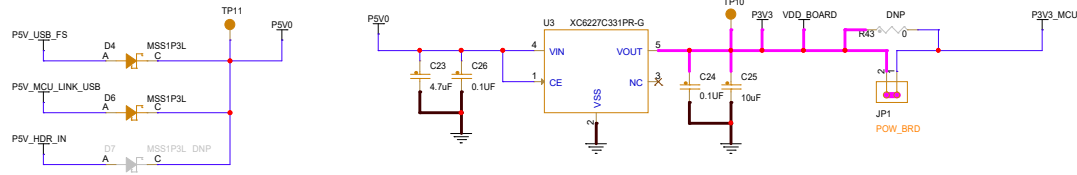
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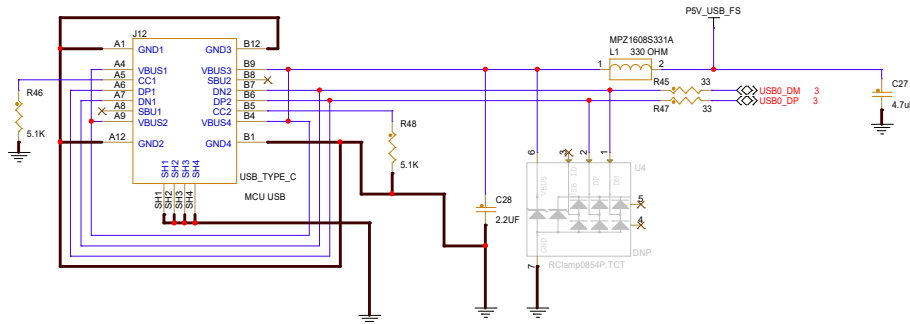
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POWER



USB FULL SPEED USB Type C



Note:
900ohms differential impedance
Differential signal routing



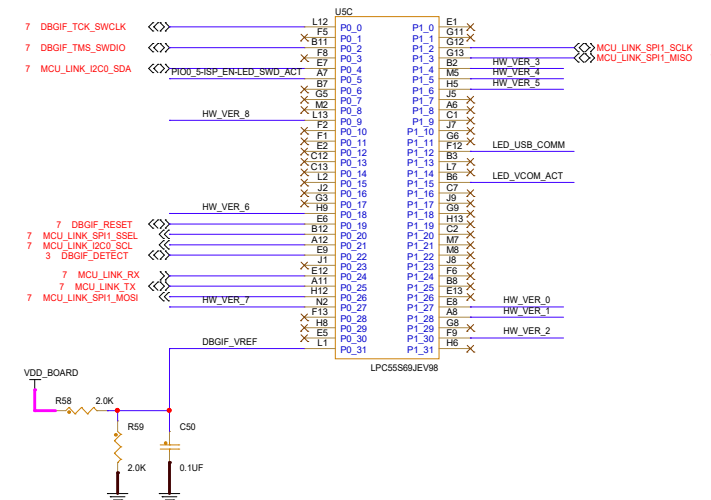
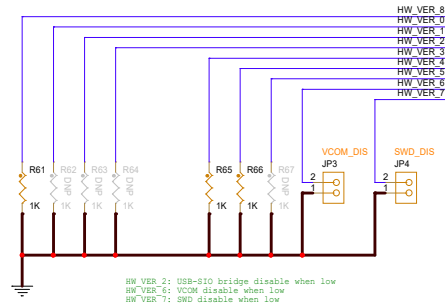
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Drawing Title: FRDM-MCXC444			
Page Title: USB & PWR			
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The diagram illustrates the PCB layout for the MCU-Link Powering and USB interface. It features a top layer with a purple power plane and a bottom layer with a blue ground plane. The layout includes various components and their connections:

- Power Input:** VDD_BOARD is connected to the top layer via a 10uF capacitor (C3) and a 600OHM resistor (L2).
- MCU Link Powering:** MCU_LINK_3V3 is connected to the top layer via a 600OHM resistor (L3). The bottom layer has a 600OHM resistor (L5) connected to VBAT_DCCD/VBAT_PMU.
- Decoupling Capacitors:** Numerous capacitors are placed throughout the layout, including C29 (10uF), C34 (0.1uF), C30 (0.1uF), C31 (0.1uF), C32 (0.1uF), C36 (0.1uF), C37 (47pF), C41 (22uF), C42 (0.1uF), C43 (47pF), C38 (47pF), and C39 (0.1uF).
- Crystal Oscillator:** A 16MHz crystal (Y2) is connected to the bottom layer via 12pF capacitors (C44, C45).
- USB Interface:** The USB connector (J6) is connected to the top layer via a 100k resistor (R50). The bottom layer has a 4.7uH inductor (L4) connected to VBAT_DCCD/VBAT_PMU.
- Component Footprints:** Various component footprints are shown, including M1 (USA), M2 (VDD1, VDD2, VDD3, VDD4), M3 (XTAL32M_N, XTAL32M_P), M4 (VSS1, VSS2, VSS3, VSS4), M5 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M6 (LPC5569JEV98), M7 (VSS1, VSS2, VSS3, VSS4), M8 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M9 (VSS1, VSS2, VSS3, VSS4), M10 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M11 (VSS1, VSS2, VSS3, VSS4), M12 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M13 (VSS1, VSS2, VSS3, VSS4), M14 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M15 (VSS1, VSS2, VSS3, VSS4), M16 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M17 (VSS1, VSS2, VSS3, VSS4), M18 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M19 (VSS1, VSS2, VSS3, VSS4), M20 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M21 (VSS1, VSS2, VSS3, VSS4), M22 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M23 (VSS1, VSS2, VSS3, VSS4), M24 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M25 (VSS1, VSS2, VSS3, VSS4), M26 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M27 (VSS1, VSS2, VSS3, VSS4), M28 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M29 (VSS1, VSS2, VSS3, VSS4), M30 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M31 (VSS1, VSS2, VSS3, VSS4), M32 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M33 (VSS1, VSS2, VSS3, VSS4), M34 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M35 (VSS1, VSS2, VSS3, VSS4), M36 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M37 (VSS1, VSS2, VSS3, VSS4), M38 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M39 (VSS1, VSS2, VSS3, VSS4), M40 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M41 (VSS1, VSS2, VSS3, VSS4), M42 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M43 (VSS1, VSS2, VSS3, VSS4), M44 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M45 (VSS1, VSS2, VSS3, VSS4), M46 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M47 (VSS1, VSS2, VSS3, VSS4), M48 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M49 (VSS1, VSS2, VSS3, VSS4), M50 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M51 (VSS1, VSS2, VSS3, VSS4), M52 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M53 (VSS1, VSS2, VSS3, VSS4), M54 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M55 (VSS1, VSS2, VSS3, VSS4), M56 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M57 (VSS1, VSS2, VSS3, VSS4), M58 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M59 (VSS1, VSS2, VSS3, VSS4), M60 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M61 (VSS1, VSS2, VSS3, VSS4), M62 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M63 (VSS1, VSS2, VSS3, VSS4), M64 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M65 (VSS1, VSS2, VSS3, VSS4), M66 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M67 (VSS1, VSS2, VSS3, VSS4), M68 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M69 (VSS1, VSS2, VSS3, VSS4), M70 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M71 (VSS1, VSS2, VSS3, VSS4), M72 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M73 (VSS1, VSS2, VSS3, VSS4), M74 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M75 (VSS1, VSS2, VSS3, VSS4), M76 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M77 (VSS1, VSS2, VSS3, VSS4), M78 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M79 (VSS1, VSS2, VSS3, VSS4), M80 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M81 (VSS1, VSS2, VSS3, VSS4), M82 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M83 (VSS1, VSS2, VSS3, VSS4), M84 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M85 (VSS1, VSS2, VSS3, VSS4), M86 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M87 (VSS1, VSS2, VSS3, VSS4), M88 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M89 (VSS1, VSS2, VSS3, VSS4), M90 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M91 (VSS1, VSS2, VSS3, VSS4), M92 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M93 (VSS1, VSS2, VSS3, VSS4), M94 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M95 (VSS1, VSS2, VSS3, VSS4), M96 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M97 (VSS1, VSS2, VSS3, VSS4), M98 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU), M99 (VSS1, VSS2, VSS3, VSS4), M100 (VSS_DCCD_1, VSS_DCCD_2, VSS_PMU).

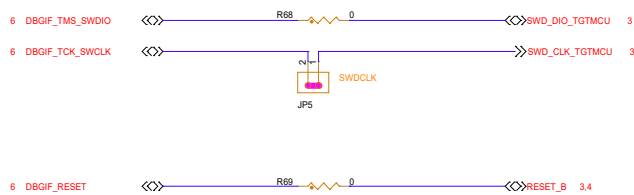
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Note:
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Closed: Enable ISP mode

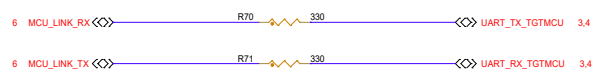


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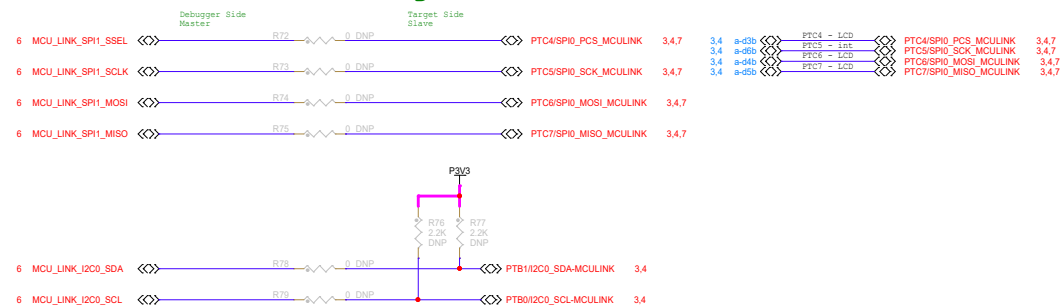
MCU-Link Debug Interface



MCU-Link UART



USB Bridge



REF DES	JUMPER	PAGE NAME
JP6,JP7	1-2	03-MCU MCXC444
JP1	1-2	05 USB & PWR
JP2,JP3,JP4	OPEN	06 MCU LINK USB
JP5	1-2	07 MCU_LINK_DEBUG

REF DES	ASSY_OPT	PAGE NAME
C17,C18,C19,C22,J7,J11,R30,R31	DNP	04-Headers
C4,C6,C12,D2,JP6,R3	DNP	03-MCU MCXC444
D7,R43,U4	DNP	05 USB & PWR
C44,C45,R57,R62,R63,R64,R67,U6	DNP	06 MCU_LINK_USB
R72,R73,R74,R75,R76,R77,R78,R79	DNP	07 MCU_LINK_DEBUG



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