

VAR-MX6CustomBoard



CONTENT

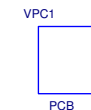
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Disclaimer:

SchematicS are for reference only.
 Variscite LTD provides no warranty for the use of
 these schematics.
 Schematics are subject to change without notice.

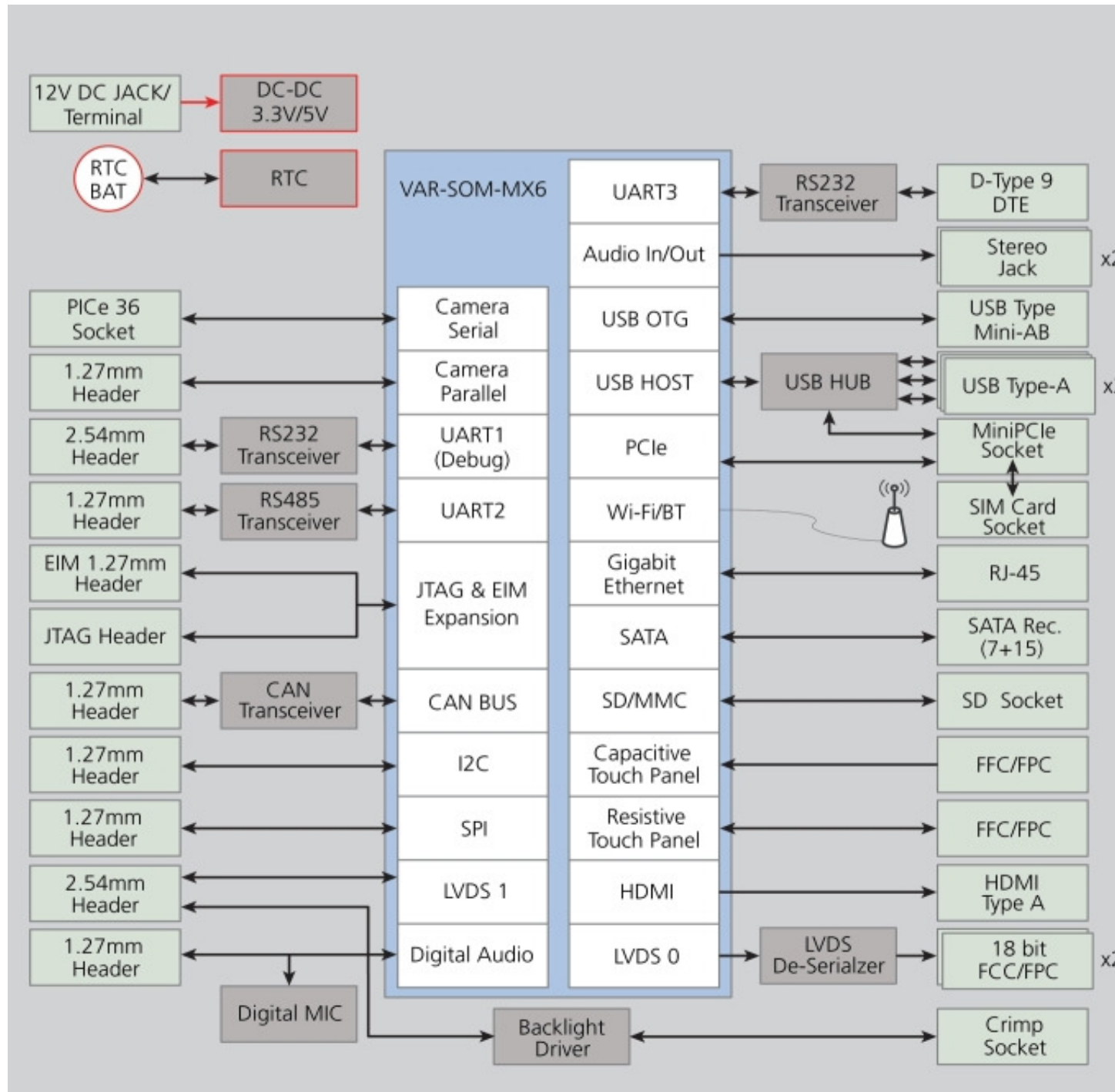

Revision History

Rev 1.02	Initial
Rev 1.02A	U22- NC, short pin 7,8 U17- NC (Accelerometer) SATA Power Limitation Note
Rev 1.1	SD card is powred directly form BASE_PER_3V3 Accelerometer - Removed USB OTG - Connector Changed to Micro USB
Rev 1.1A	USB hub power distribution pull ups removed RX1, RX2 resistor added on L14
Rev 1.1B	Inductor L9 changed to 15uH
Rev 1.1C	Changed: SOM Pin 52: GPIO3(26) SOM Pin 56: GPIO3(24)
Rev 1.1D	Changed: SOM Pin 94: GPIO1(4)
Rev 1.1E	CTS and RTS direction switch UART1, UART3
Rev 1.2	UART1 & UART3 Disable on reset added.
Rev 1.3	U27 PN and connection change R8 Pulled down
Rev 1.3A	R63 Assembled
Rev 1.3B	R63 removed Q2 changed
Rev 1.3B2	J25: pins: 40, 68-73 signal & pin rename according to SOM Rev 2.X



Title: 01. Cover
 Size: A3 | Document Number: VAR-MX6CustomBoard | Project: VAR-MX6CustomBoard | Rev: 1.3B2
 Designer: <Designer> | Approved By: <Approved By>
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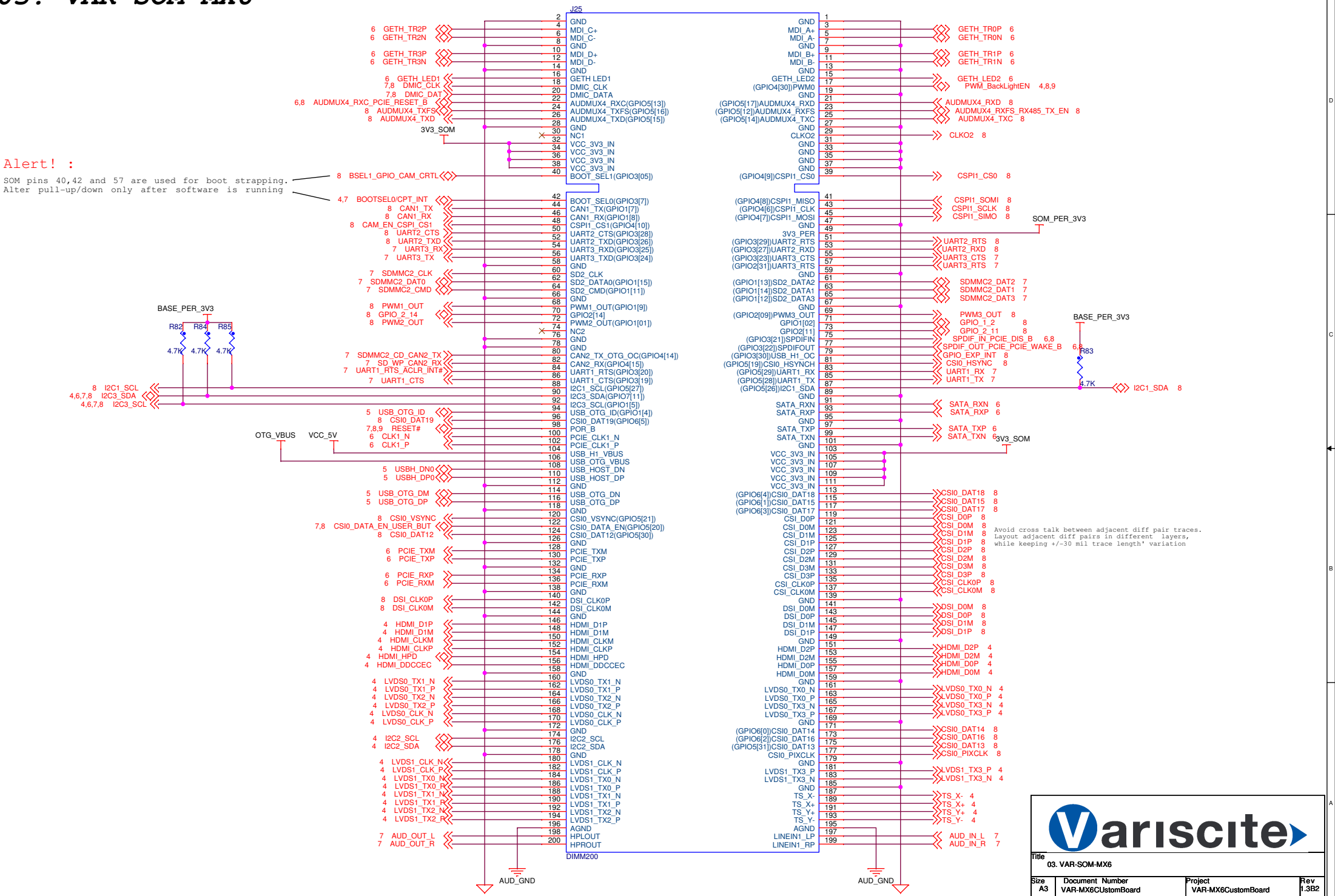
02 - Block Diagram





Title: 02. Block Diagram
 Size: A3 Document Number: VAR-MX6CustomBoard Project: VAR-MX6CustomBoard Rev: 1.3B2
 Designer: <Designer> Approved By: <Approved By>
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03. VAR-SOM-MX6

Alert! :
 SOM pins 40,42 and 57 are used for boot strapping.
 Alter pull-up/down only after software is running



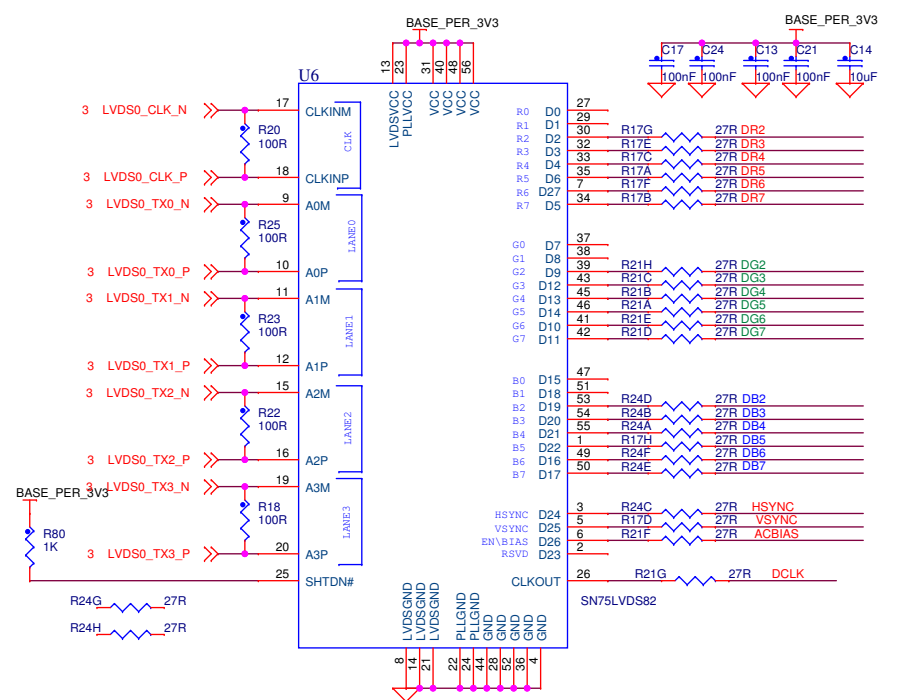
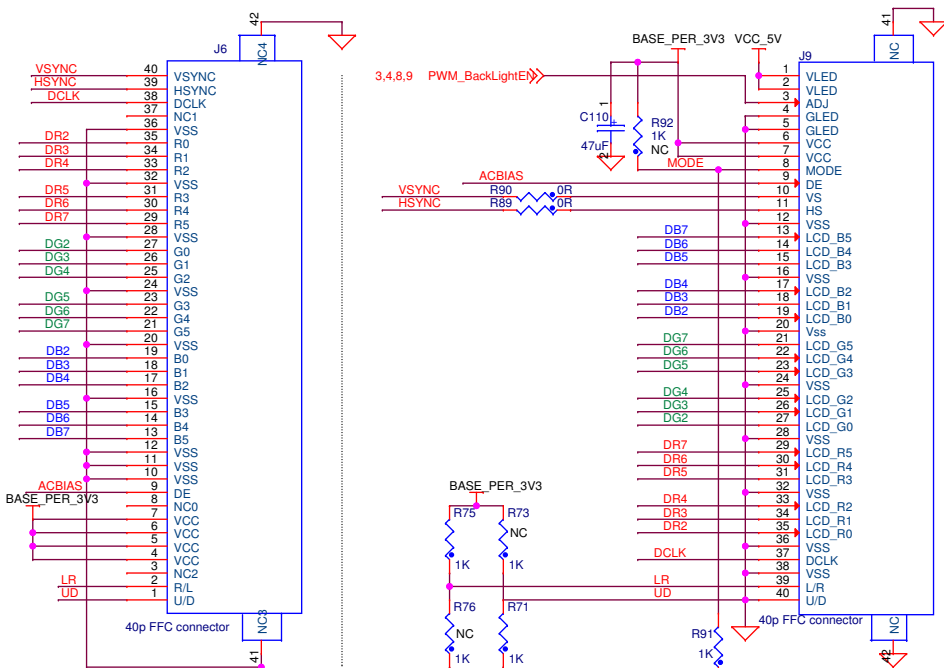


Title 03. VAR-SOM-MX6			
Size A3	Document Number VAR-MX6CustomBoard	Project VAR-MX6CustomBoard	Rev 1.3B2
Designer: <u> </u> Designer		Approved By: <u> </u> Approved By	
Date: <u> </u> Tuesday, October 07, 2014		Sheet <u> </u> of <u> </u>	

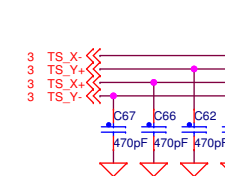
04. Display , Touch

Parallel RGB (LVDS0)

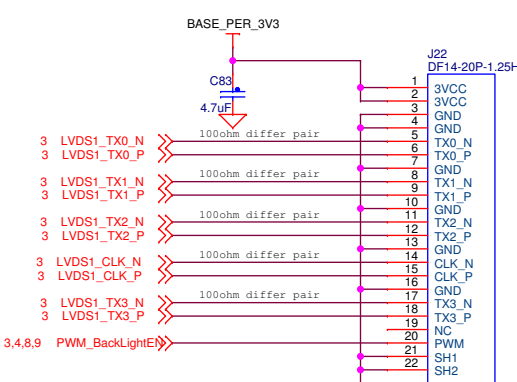
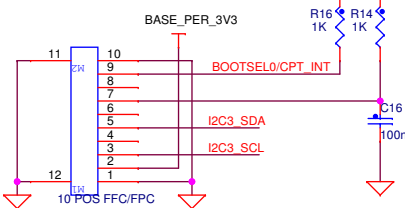
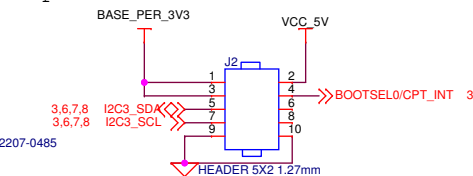
Parallel BUS FCC Connectors



Touch Panel

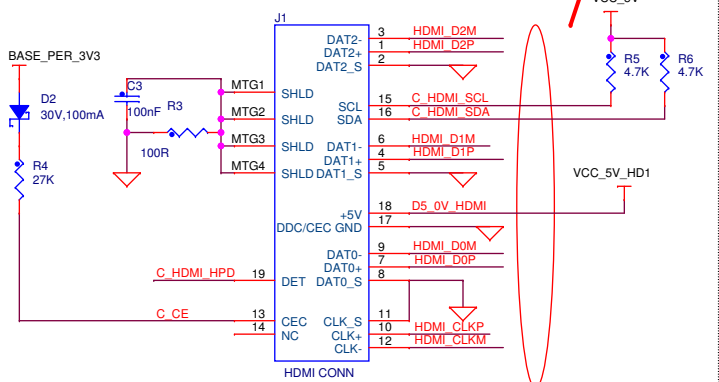


Capacitive



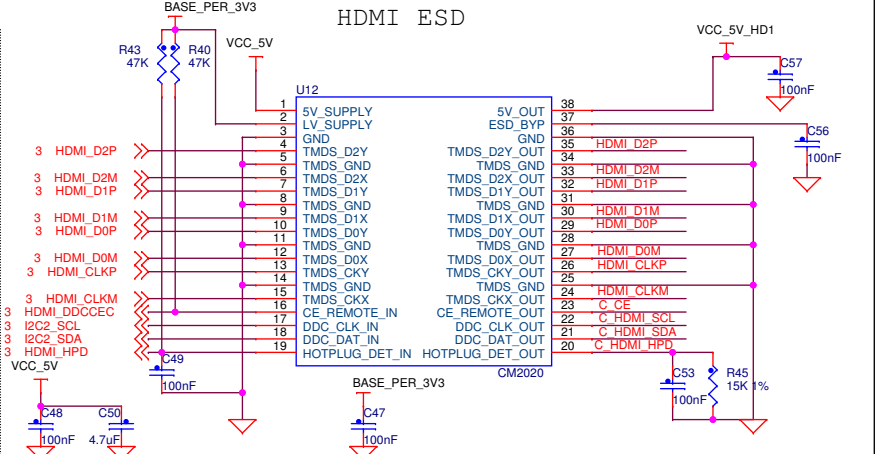
HDMI

HDMI Connector



LAYOUT NOTE:
HDMI Differential Pairs, Follow HDMI routing guidelines. Differential Impedance: 100 ohms

HDMI ESD



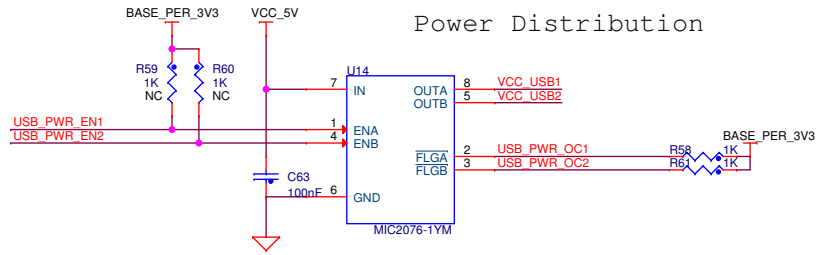
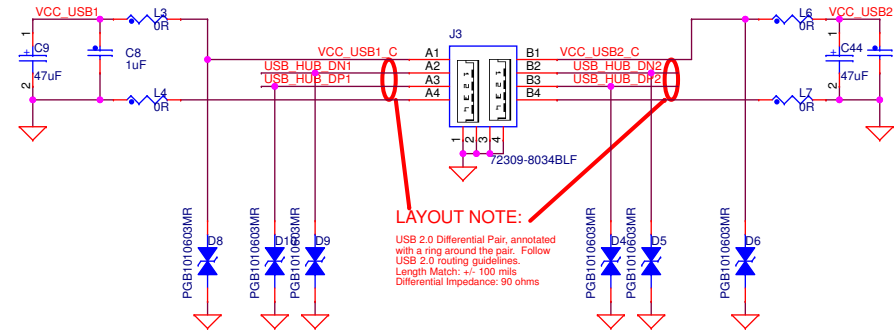
Variscite

Title: 04. Display , Touch

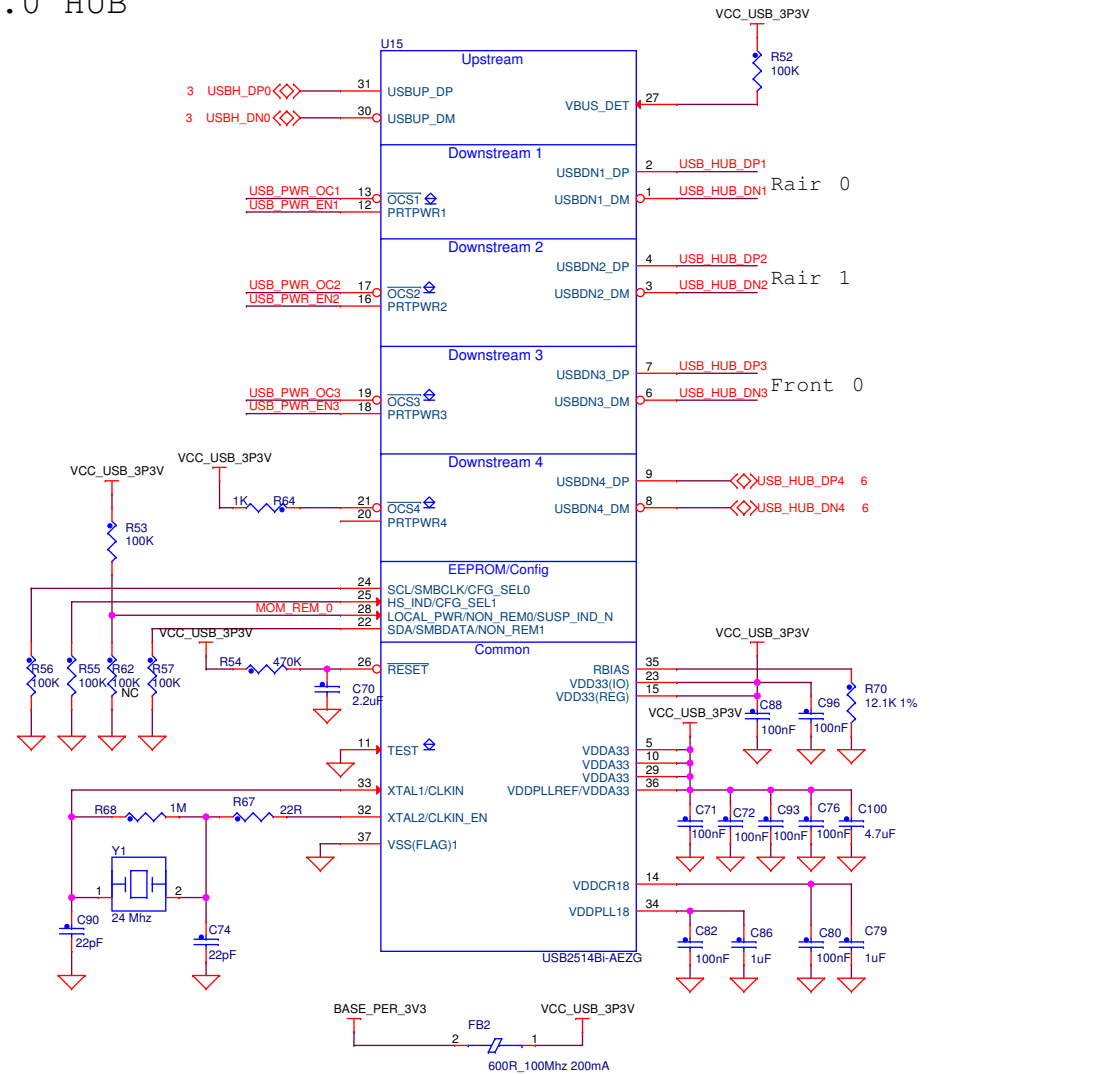
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5. USB

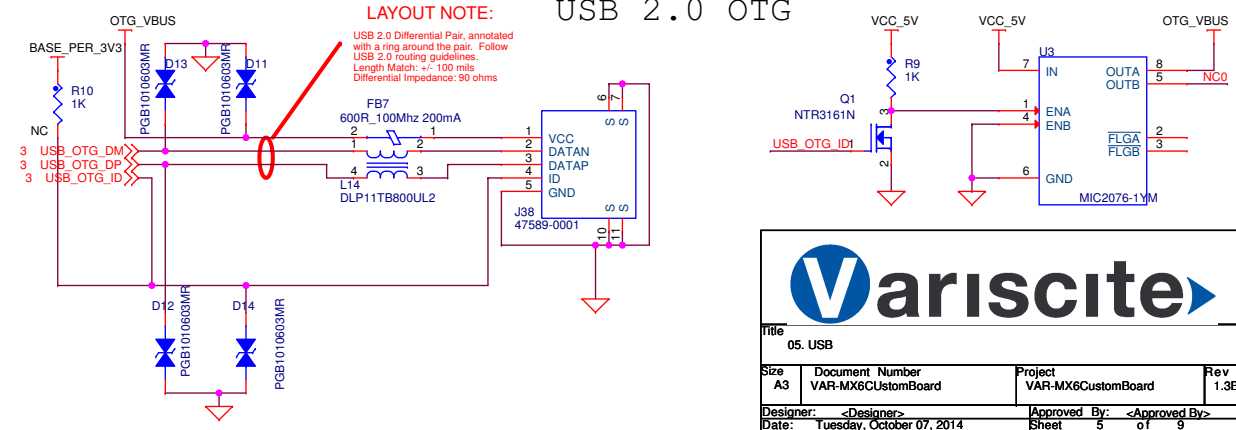
USB PORT 1-2 : 2 x USB 2.0 Host Dual Type A Rear Panel



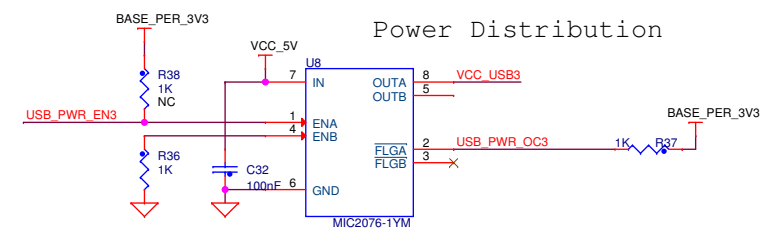
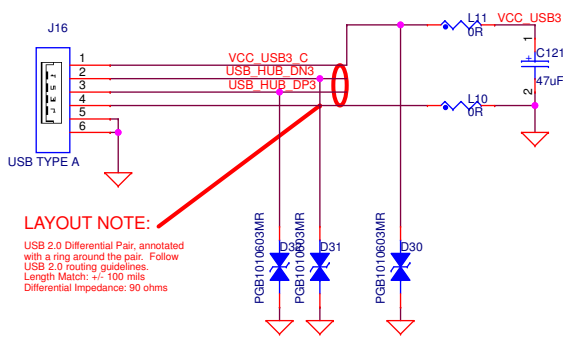
USB 2.0 HUB



USB 2.0 OTG



USB PORT 3 : 1 x USB 2.0 Type A Front Panel



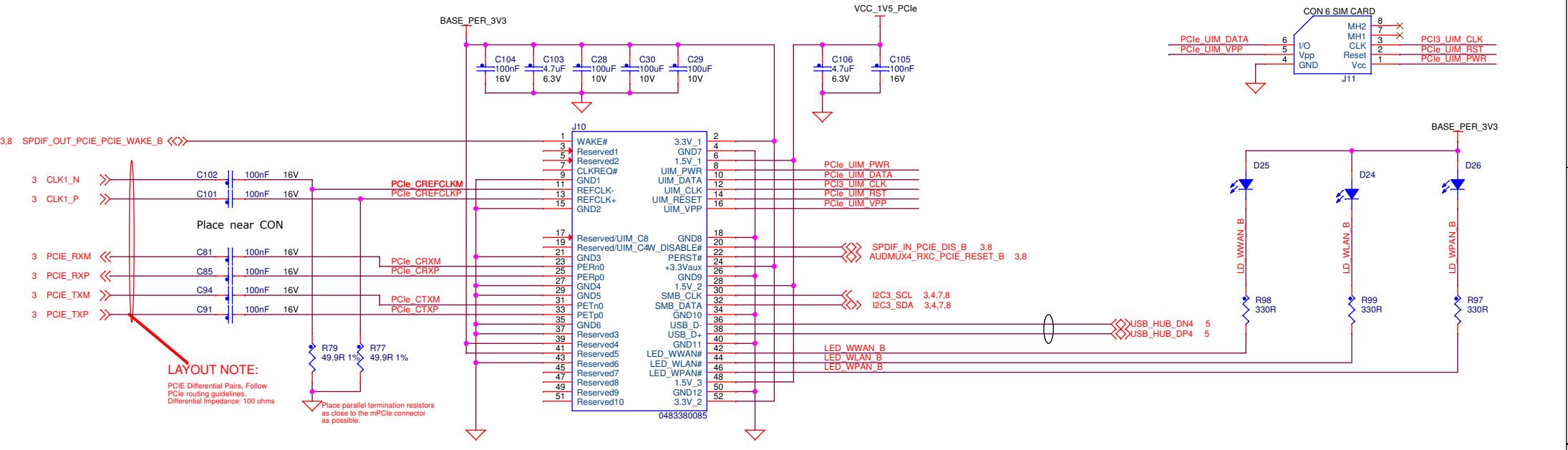
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Size: A3	Document Number: VAR-MX6CustomBoard	Project: VAR-MX6CustomBoard	Rev: 1.3B2
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06. SATA , PCIe, G.ETH

Mini-PCIE

1.5V Current is limited to 300mA

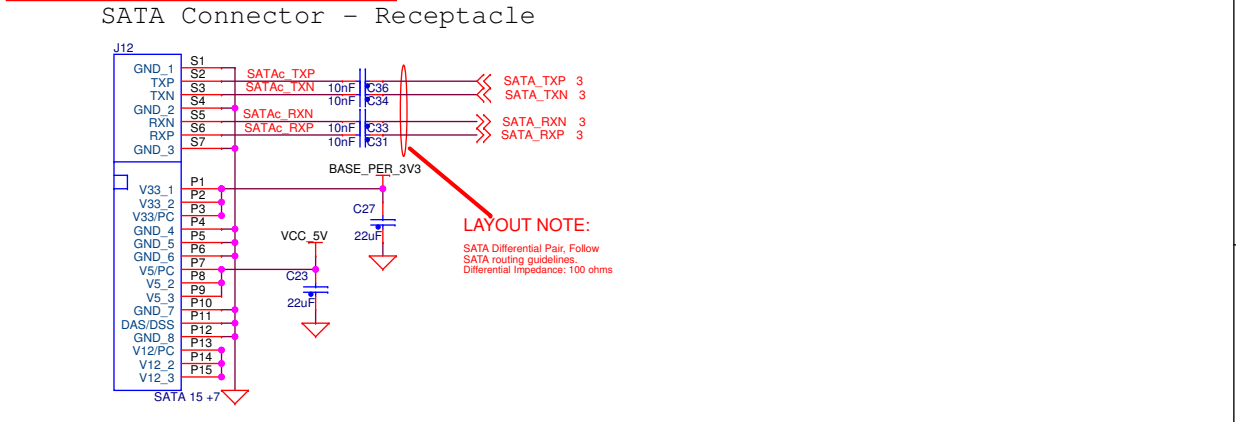
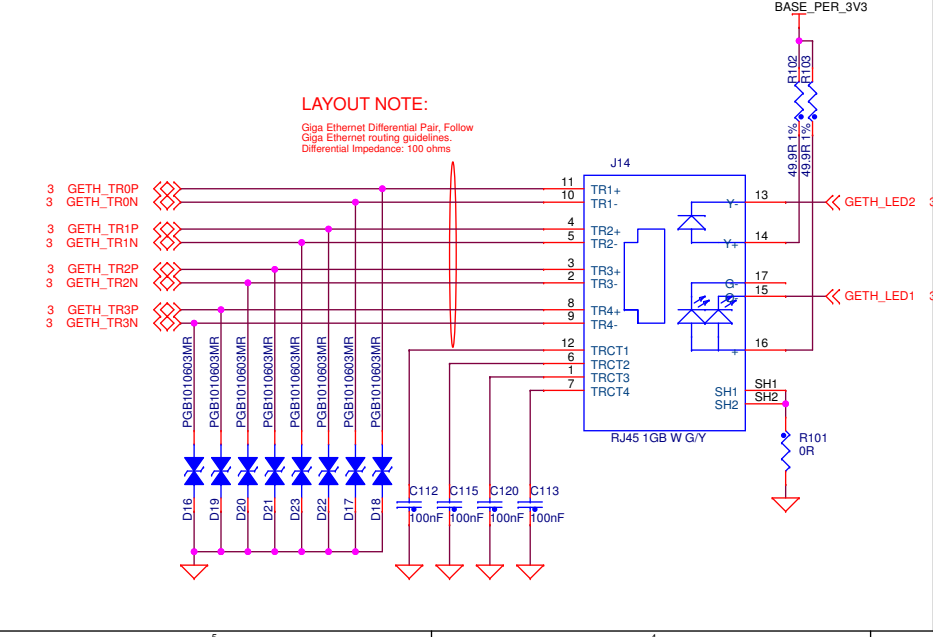
USIM Card



Giga Ethernet

SATA

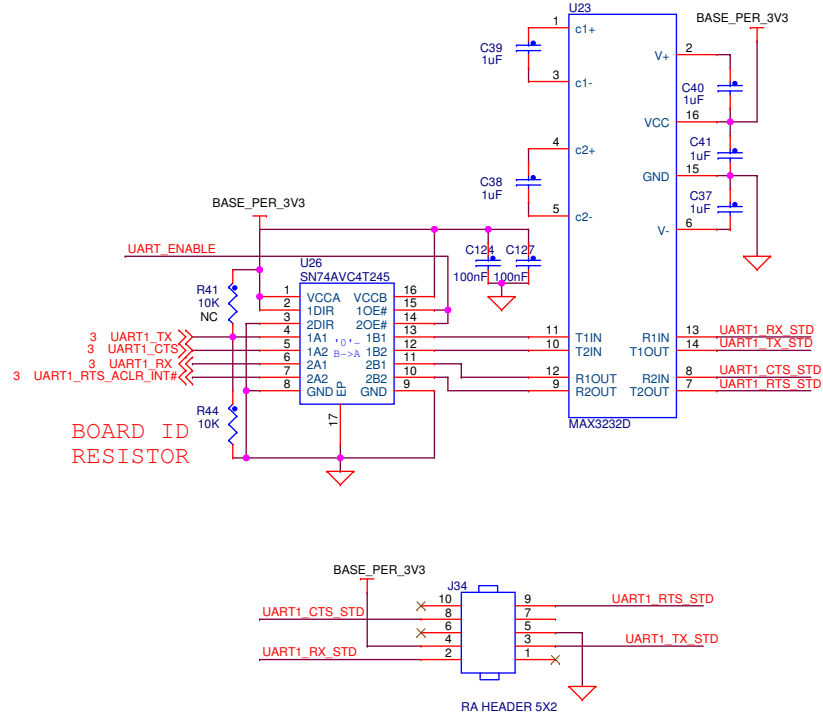
Customboard's 5V power supply is limited to 3A, shared with Board's USB and SATA devices. Do not connect devices which exceed current limitation.



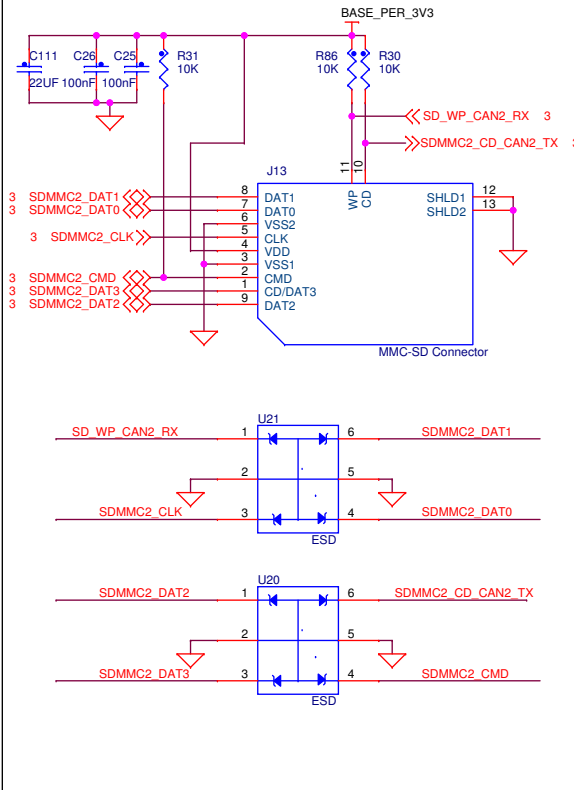
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07. Peripherals

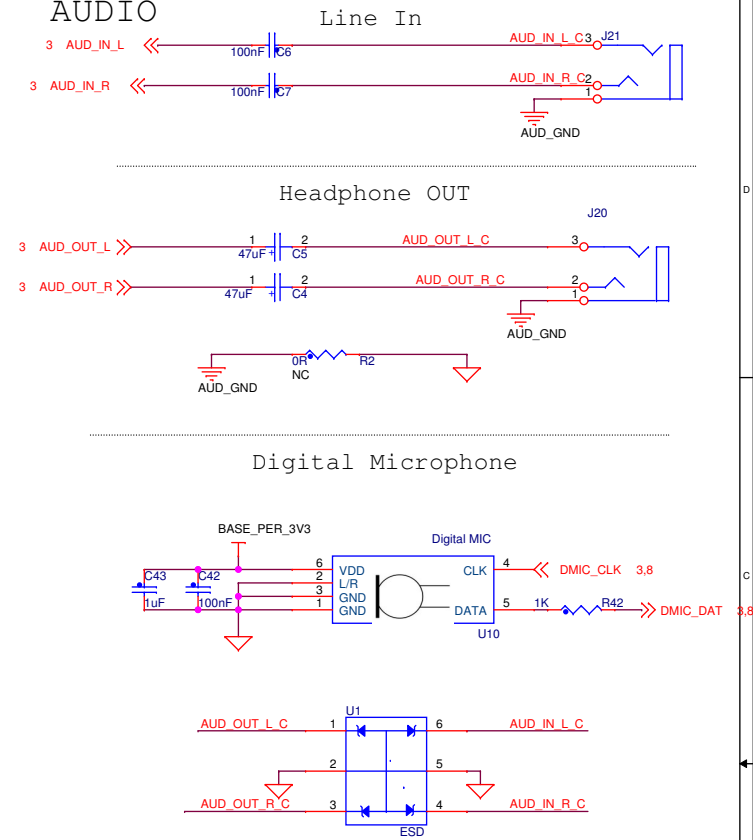
UART1- RS232 Debug



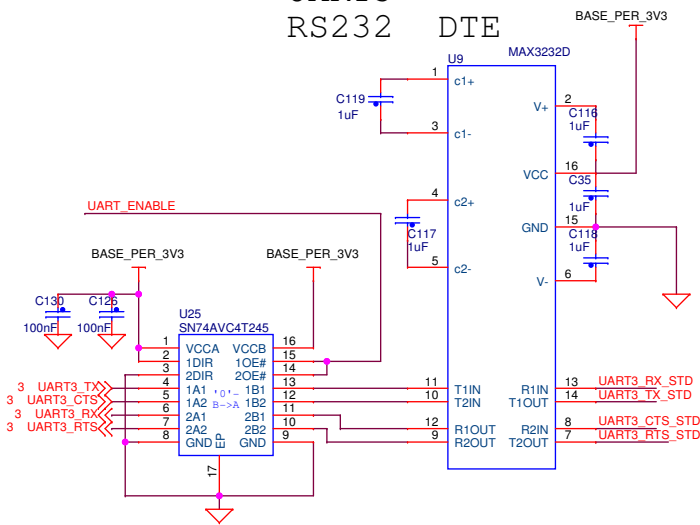
SD-Card



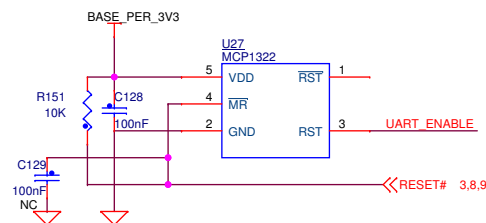
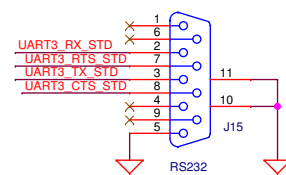
AUDIO



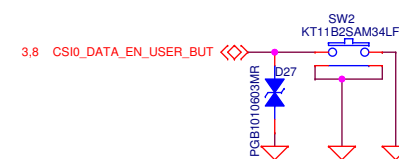
UART3 - RS232 DTE



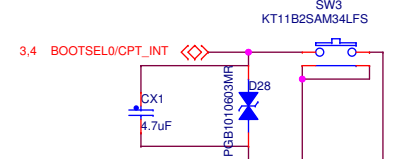
D-Type - Male



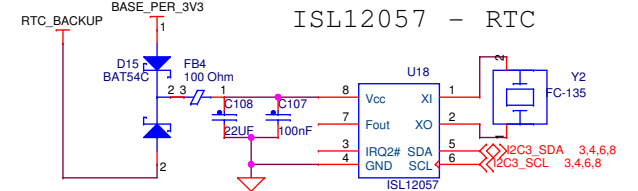
USER



Sys-boot



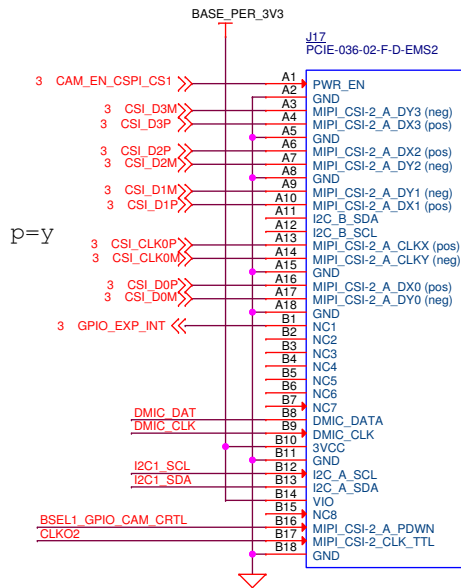
ISL12057 - RTC



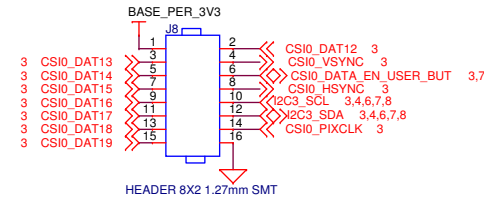
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08. DVK Exp. Connectors

Serial

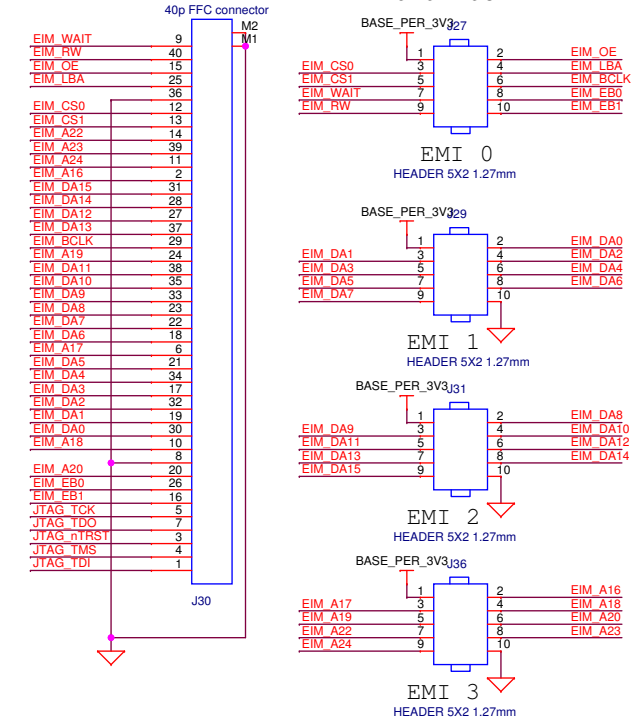


Camera Interface Parallel

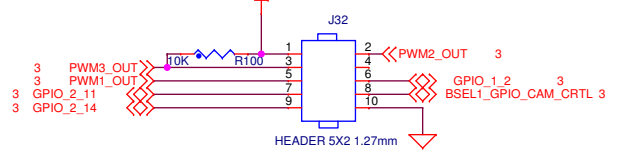


EMI & JTAG Fanout

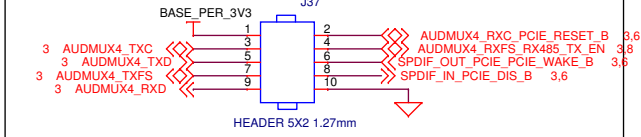
VAR-SOM-MX6 Expansion



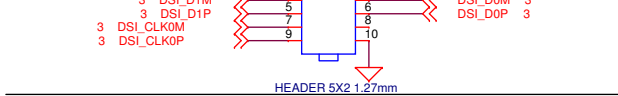
SD/MMC



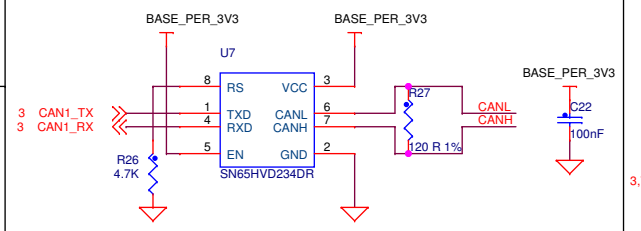
Digital AUDIO (AUDMUX4 /SPDIF)



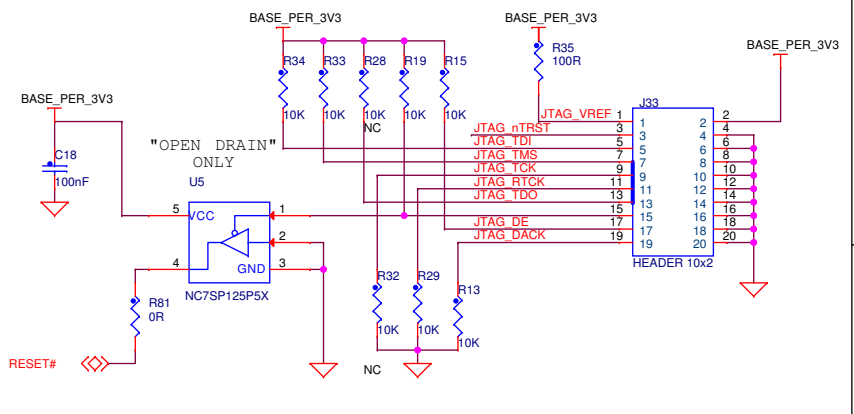
DSI



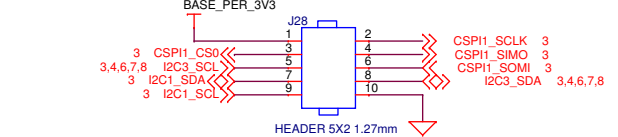
CAN TRX



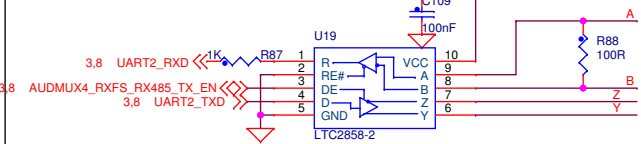
JTAG Connector



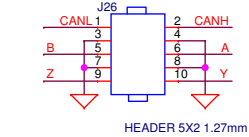
SPI/I2C



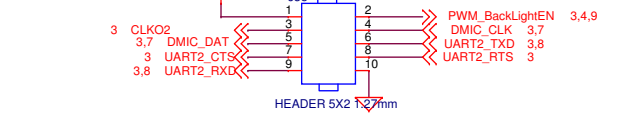
RS-485



Header



MISC



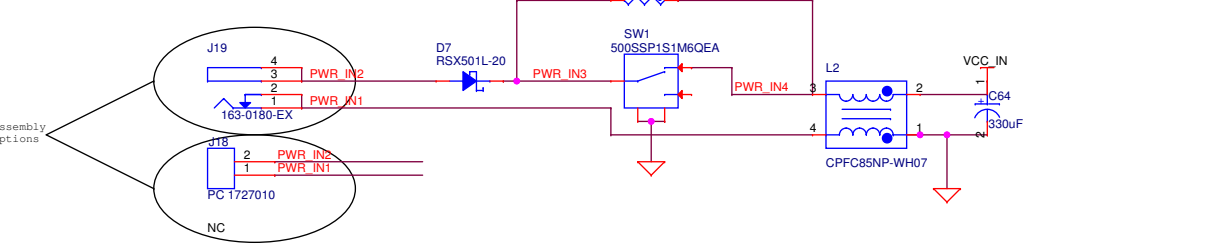
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Title: 08. DVK Exp. Connectors

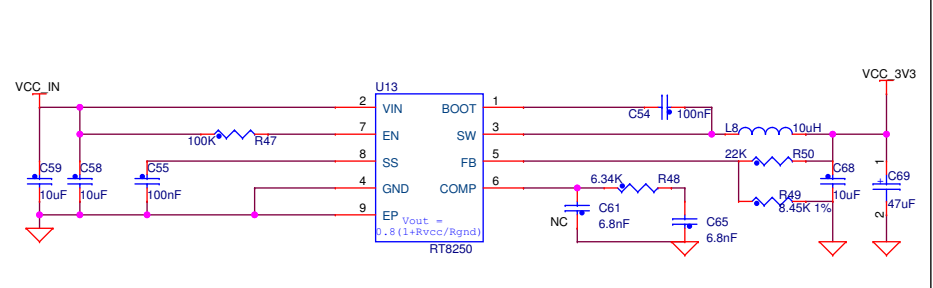
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09. Power & Mechanics

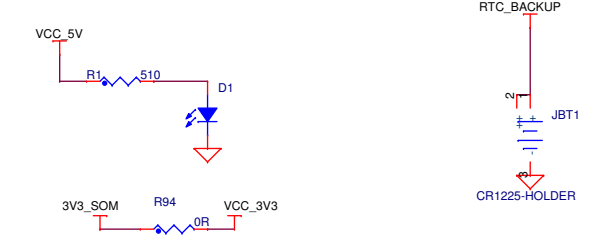
VCC-IN - 7.5- 12V



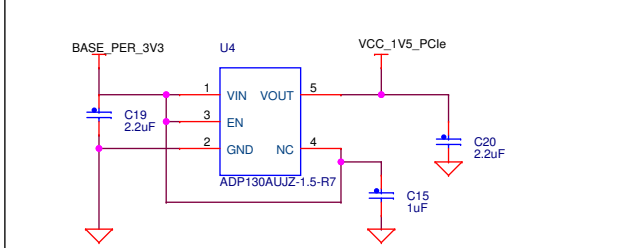
3.3V Digital 3A



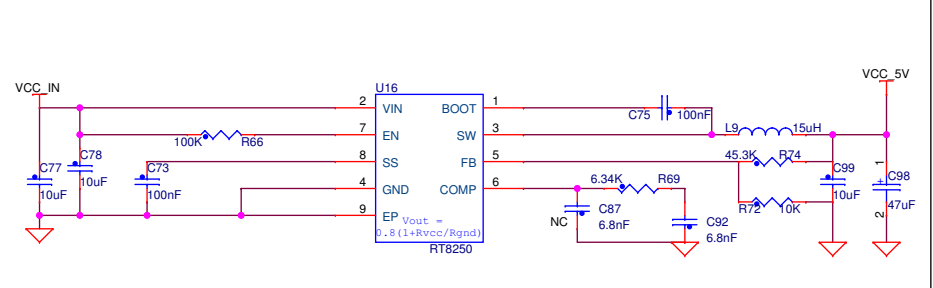
Main Power LED



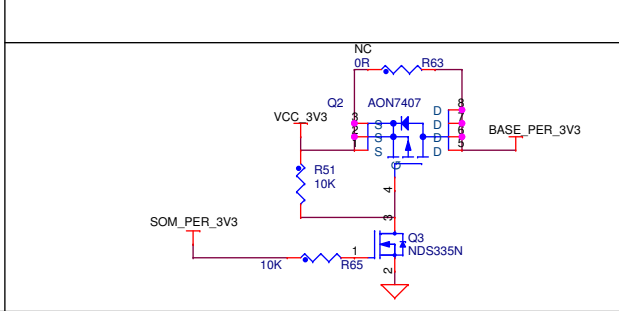
PCIe 1V5 300mA



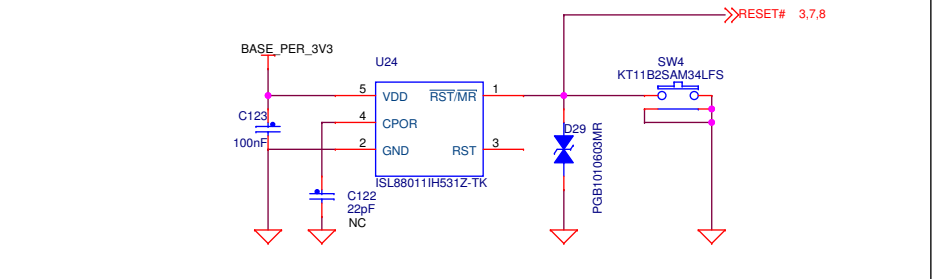
5V Digital 3A



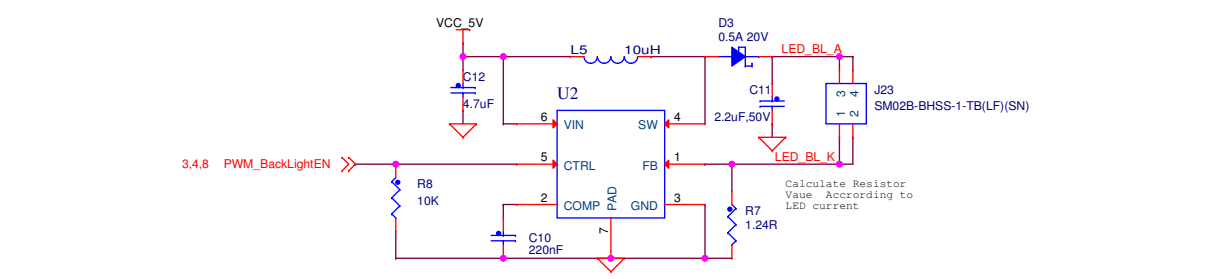
Peripherals Power Control



Reset



LCD Backlight



2 X SOM Holes

4 X Chassis Holes



Variscite

09. Power & Mechanics

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