VAR-OM44CustomBoard v1.0A

CONTENT

PAGE NO.	SCHEMATIC PAGE
1	Cover
2	Bloack Diagram
3	VAR-SOM-OM44
4	HDMI & SATA
5	USB
6	Peripherals
7	DVK Display ,Touch
8	DVK Debug Ethernet & Serial
9	DVK Exp. Connectors
10	Power & Mechanics

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

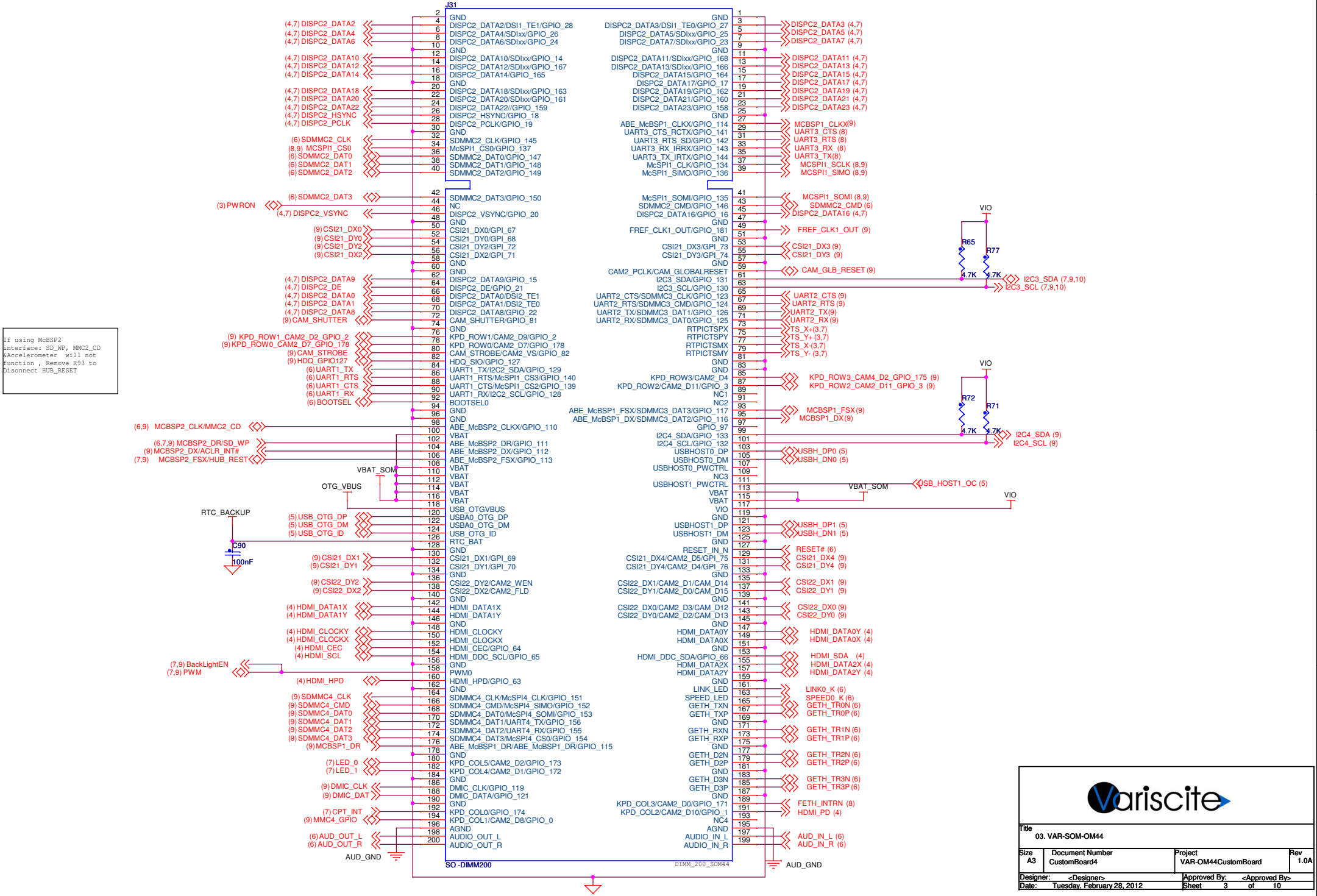
Rev 1.0	Initial
Rev 1.0 A	USB Port 3&4 Power Distributionn Source Set to 5V (Doesn't affects v0.9/0.91/0.95)

Title: 01. Cover			
Size: A3	Document Number: CustomBoard4	Project: VAR-OM44CustomBoard	Rev: 1.0A
Designer: <Designer>		Approved By: <Approved By>	
Date: Tuesday, February 28, 2012		Sheet 1 of 10	

02 - Bloack Diagram

Title: 02. Bloack Diagram			
Size: A3	Document Number: CustomBoard4	Project: VAR-OM44CustomBoard	Rev: 1.0A
Designer: <Designer>		Approved By: <Approved By>	
Date: Tuesday, February 28, 2012		Sheet 2 of 10	

03. VAR-SOM-OM44

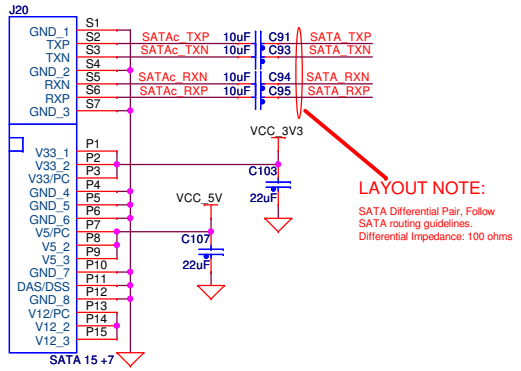


Title	03. VAR-SOM-OM44		
Size	Document Number	Project	Rev
A3	CustomBoard4	VAR-OM44CustomBoard	1.0A
Designer:	<Designer>	Approved By:	<Approved By>
Date:	Tuesday, February 28, 2012	Sheet 3	of 10

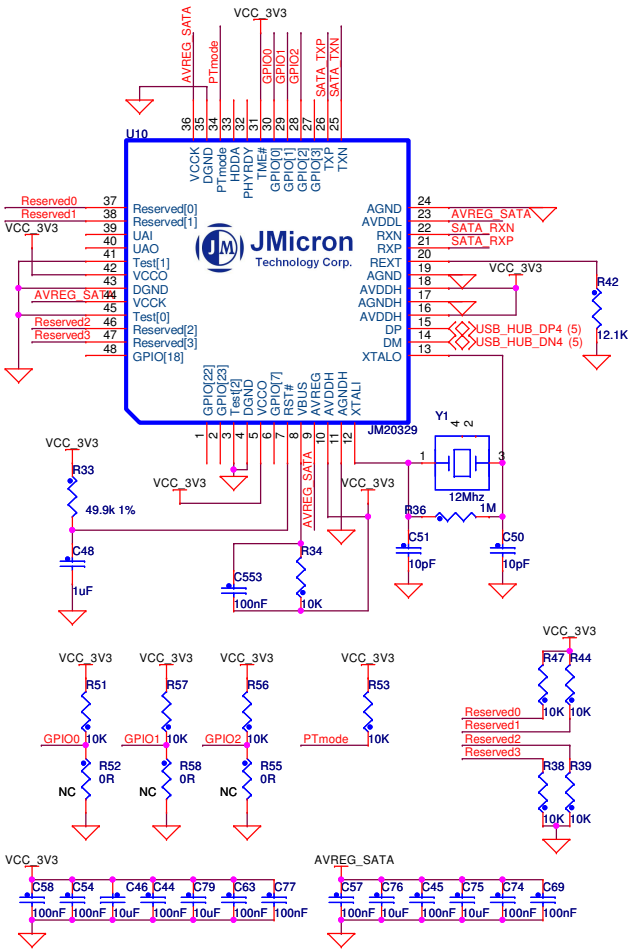
4. HDMI & SATA

SATA

SATA Connector - Receptacle

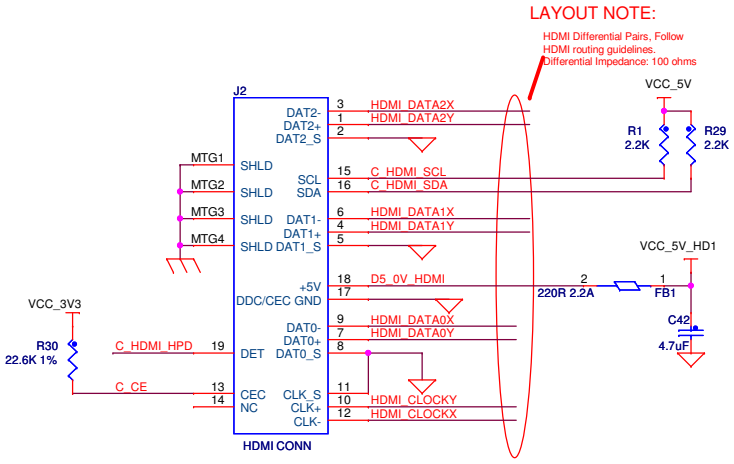


USB To SATA

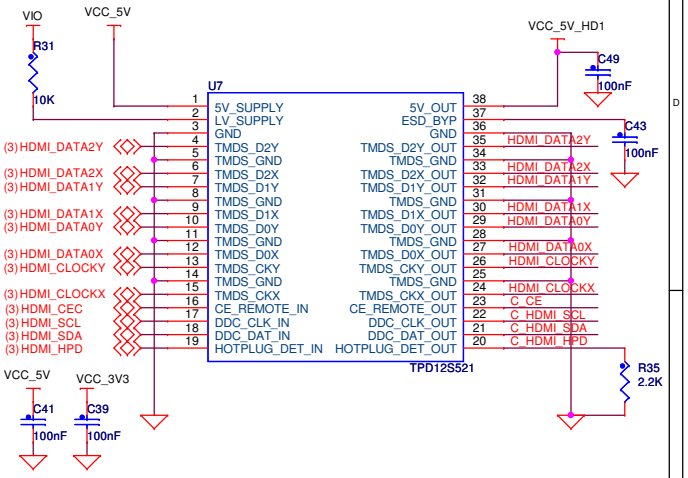


HDMI 0 (VAR-SOM-OM44 HDMI)

HDMI Connector



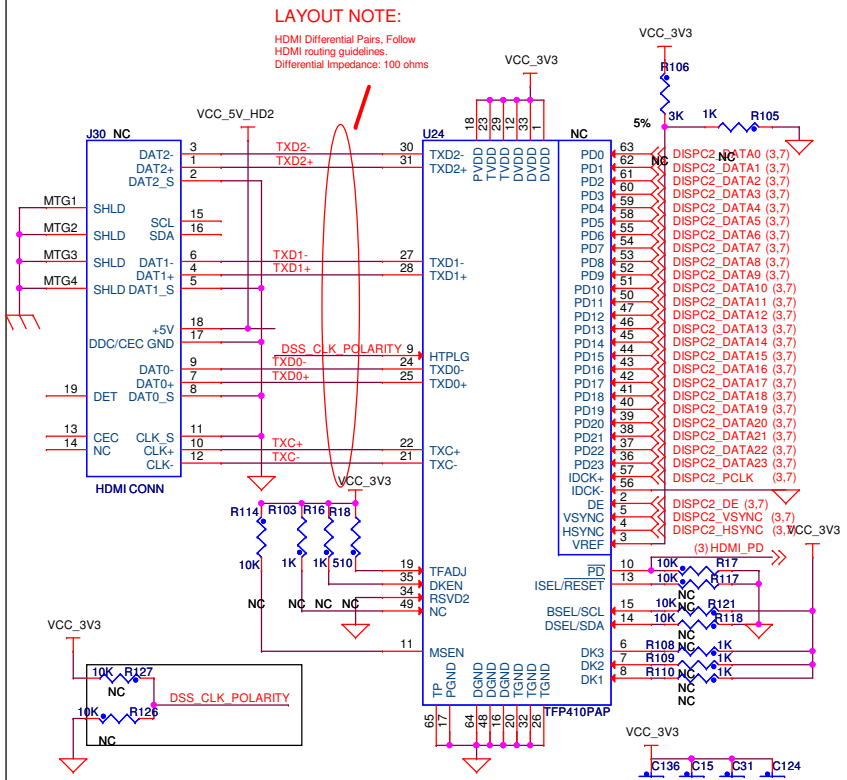
HDMI ESD



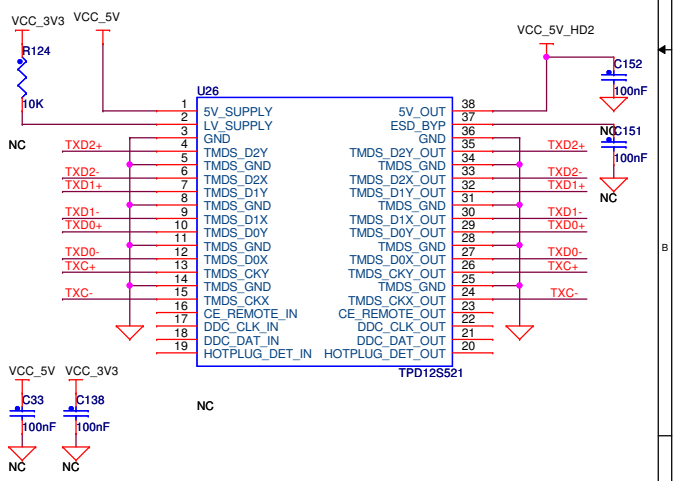
HDMI 1 (DVI) - NC

HDMI Connector

Parallel To DVI



HDMI ESD



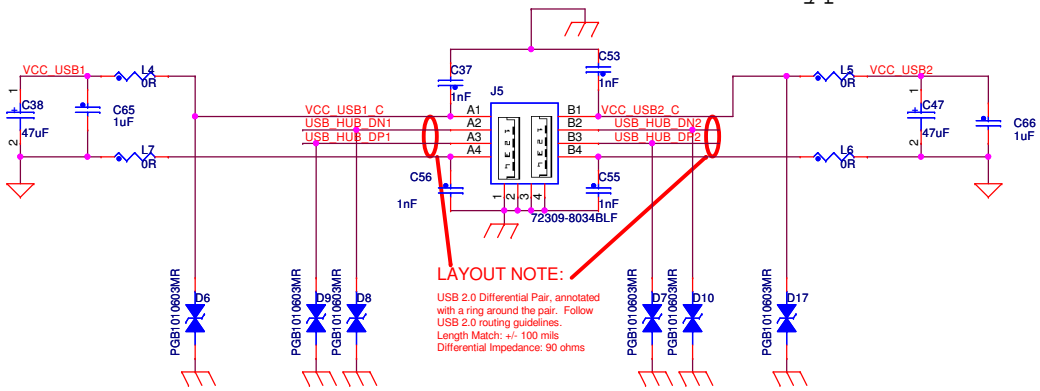
Assembly option:
VCC3_3 - DSS sampled at rising edge
0 - DSS sampled at falling edge

Variscite

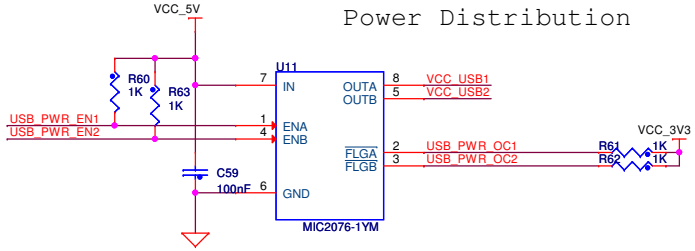
Title: 04. HDMI & SATA			
Size: A3	Document Number: CustomBoard4	Project: VAR-OM44CustomBoard	Rev: 1.0A
Designer: <Designer>		Approved By: <Approved By>	
Date: Tuesday, February 28, 2012		Sheet 4 of 10	

5. USB

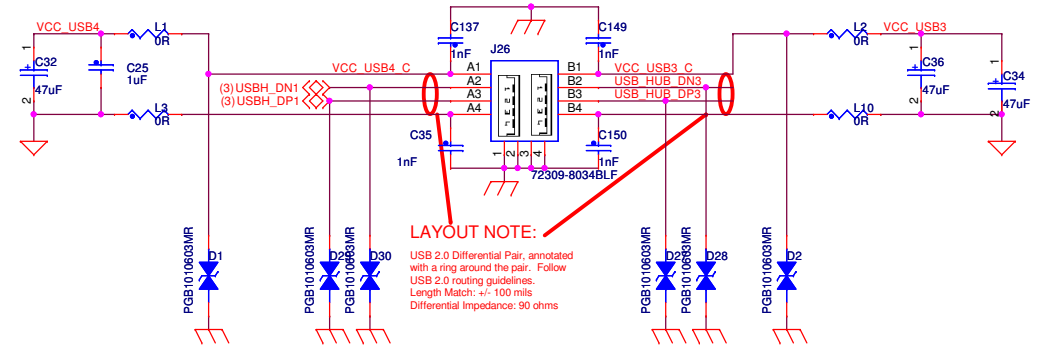
USB PORT 1-2 : 2 x USB 2.0 Host-Dual Type A Rair Panel



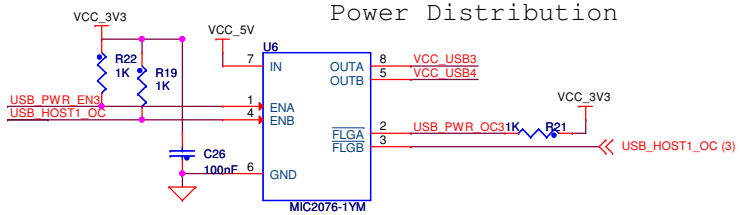
Power Distribution



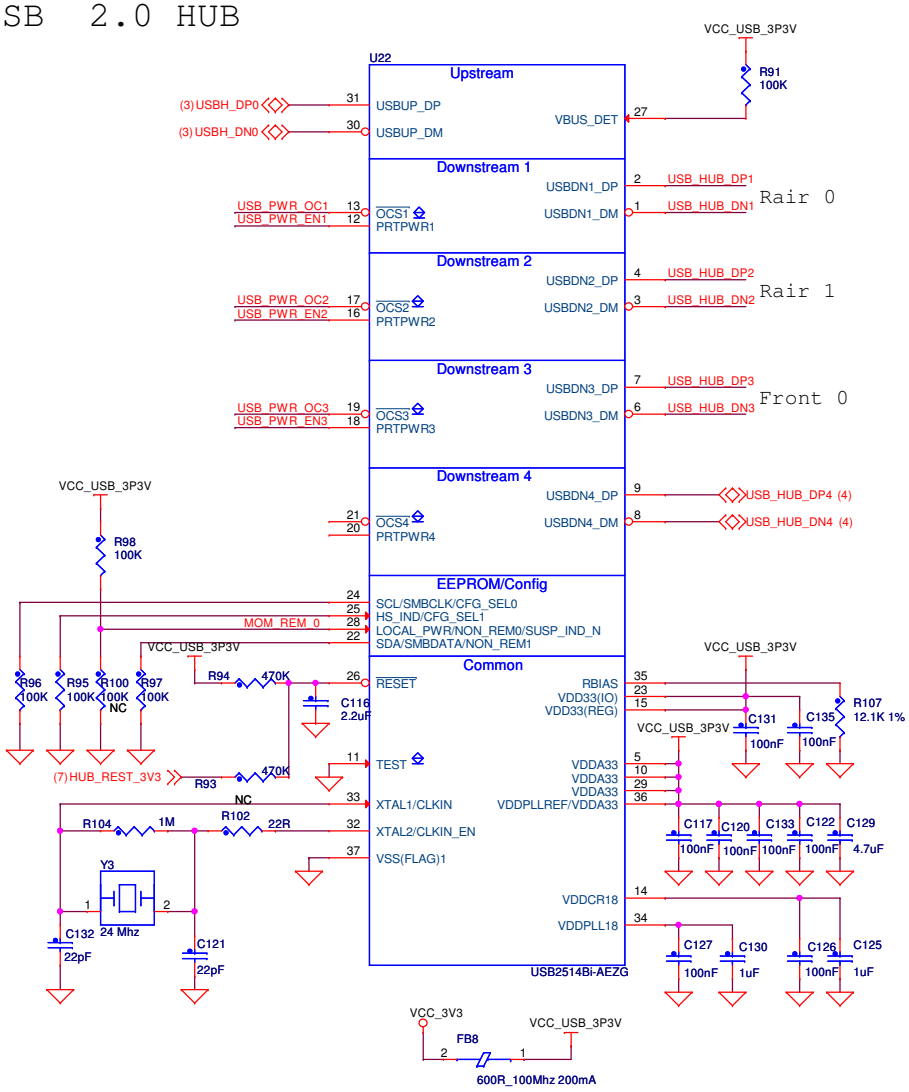
USB PORT 3-4 : 2 x USB 2.0 Host-Dual Type A Front Panel



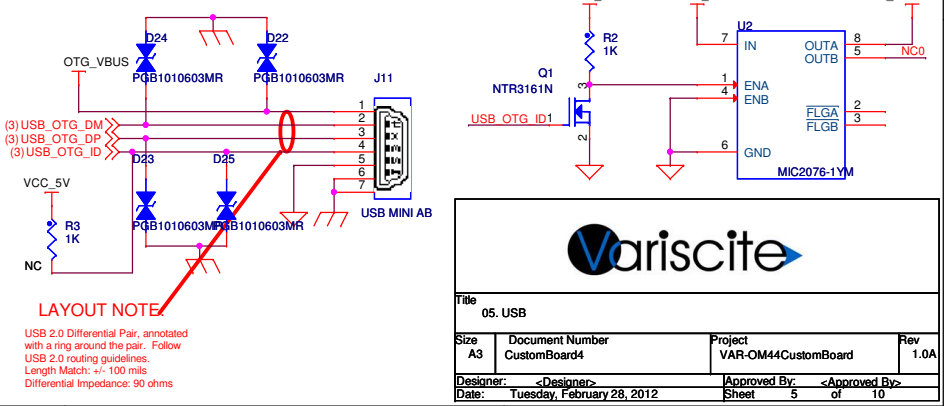
Power Distribution



USB 2.0 HUB



USB 2.0 OTG



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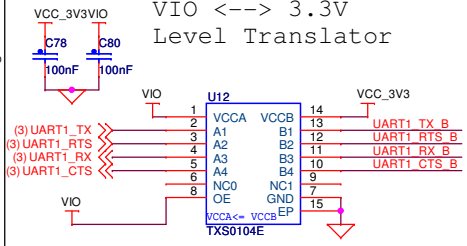
Title: 05. USB			
Size: A3	Document Number: CustomBoard4	Project: VAR-OM44CustomBoard	Rev: 1.0A
Designer: <Designer>		Approved By: <Approved By>	
Date: Tuesday, February 28, 2012		Sheet 5 of 10	

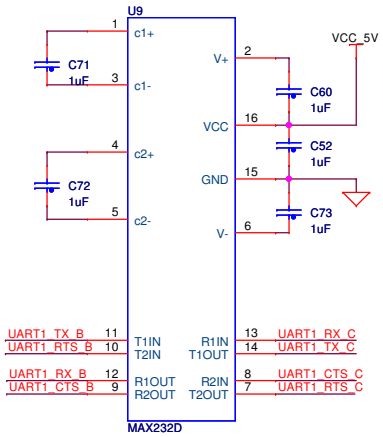
6. Peripherals

UART1 - DB9 - RS232

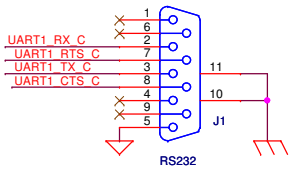
VIO <--> 3.3V Level Translator



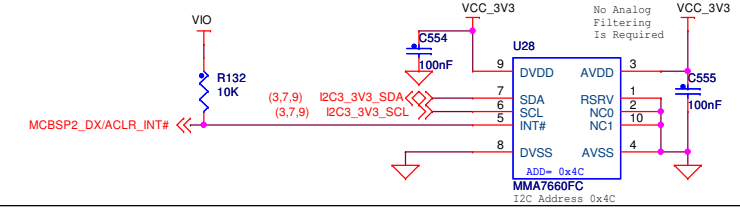
RS-232 TRX



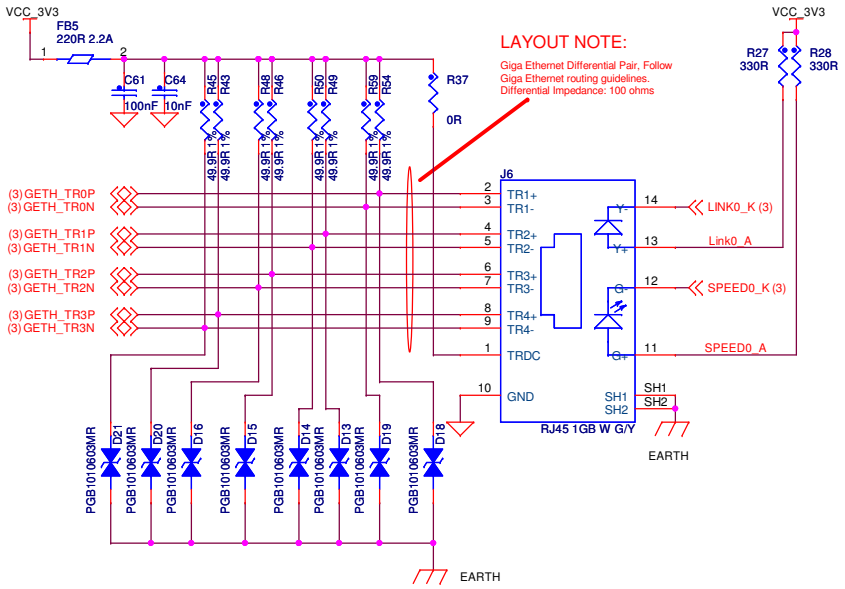
D-Type - Male



Accelerometer

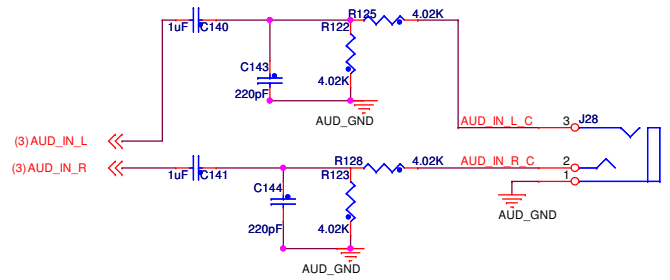


Giga Ethernet

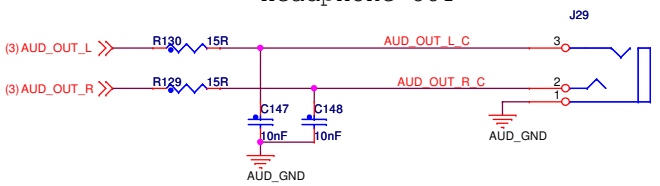


AUDIO

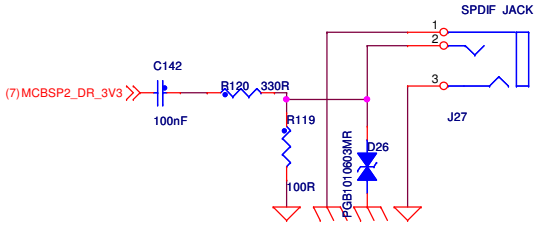
Line In

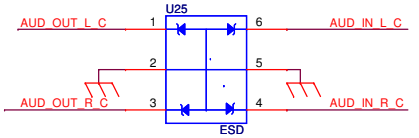


Headphone OUT

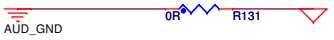


S/PDIF Out

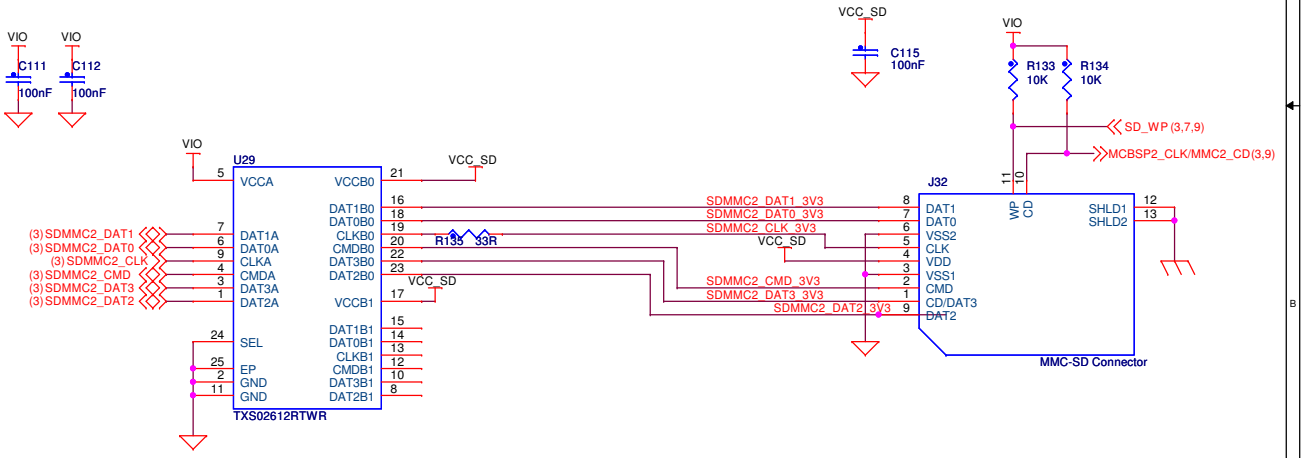




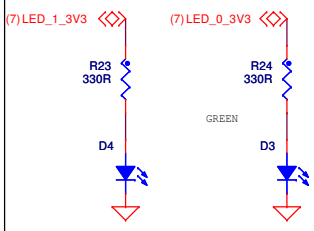
AUDIO GND



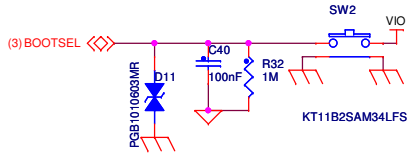
SD-Card



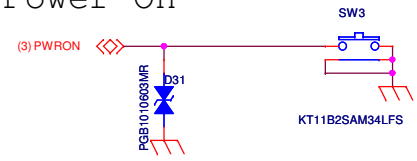
GP_LED



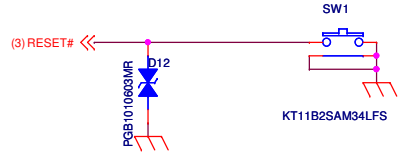
Sys-boot



Power On



Reset



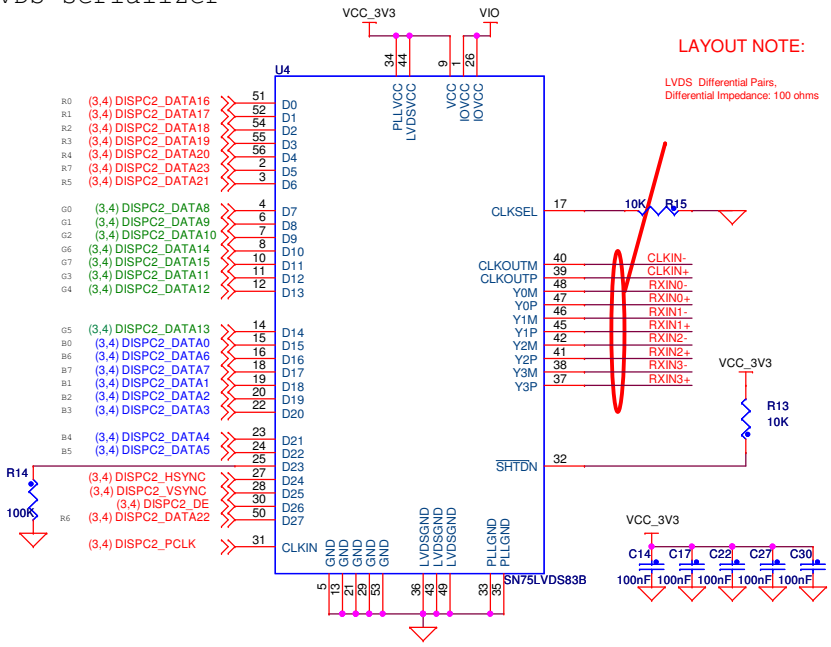
Variscite

Title: 06. Peripherals			
Size: A3	Document Number: CustomBoard4	Project: VAR-OM44CustomBoard	Rev: 1.0A
Designer: <Designer>		Approved By: <Approved By>	
Date: Tuesday, February 28, 2012		Sheet 6 of 10	

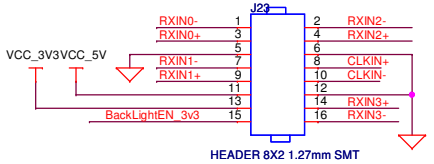
07. DVK Display ,TOUCH

LVDS

24BIT LVDS serializer

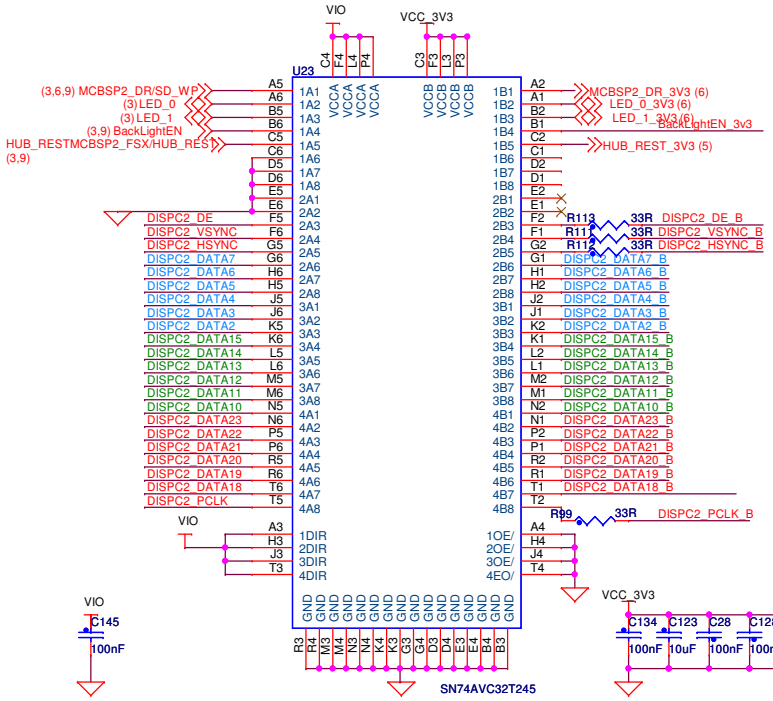


LVDS HEADER

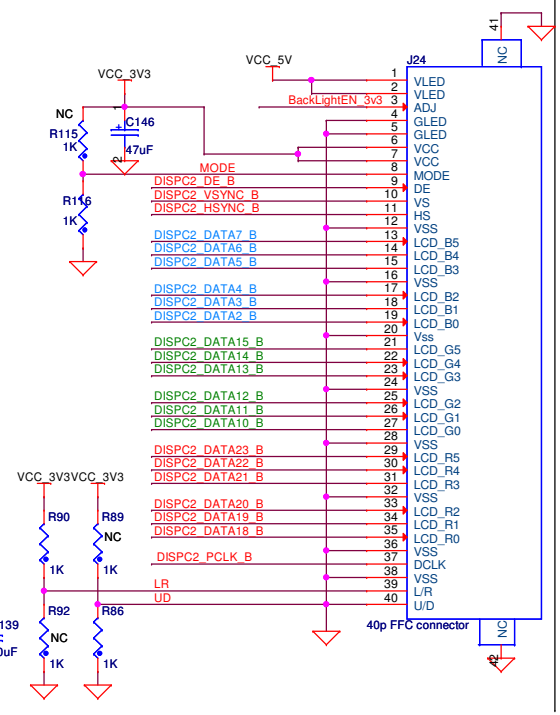


Parallel RGB

VIO > 3.3V Level Translator

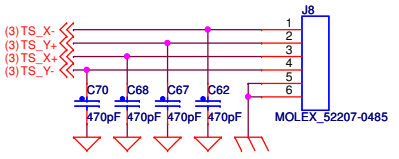


Parallel BUS FCC Connector

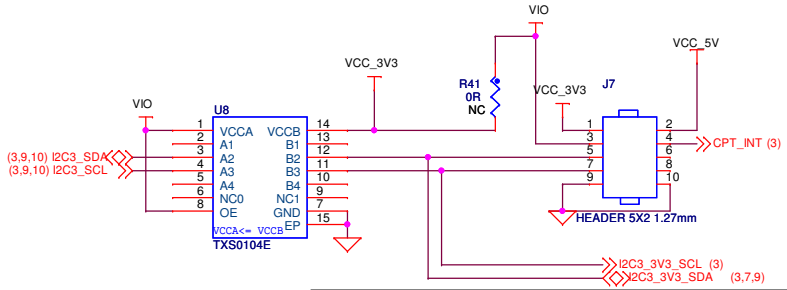


Touch Panel

Resistive



Capactive

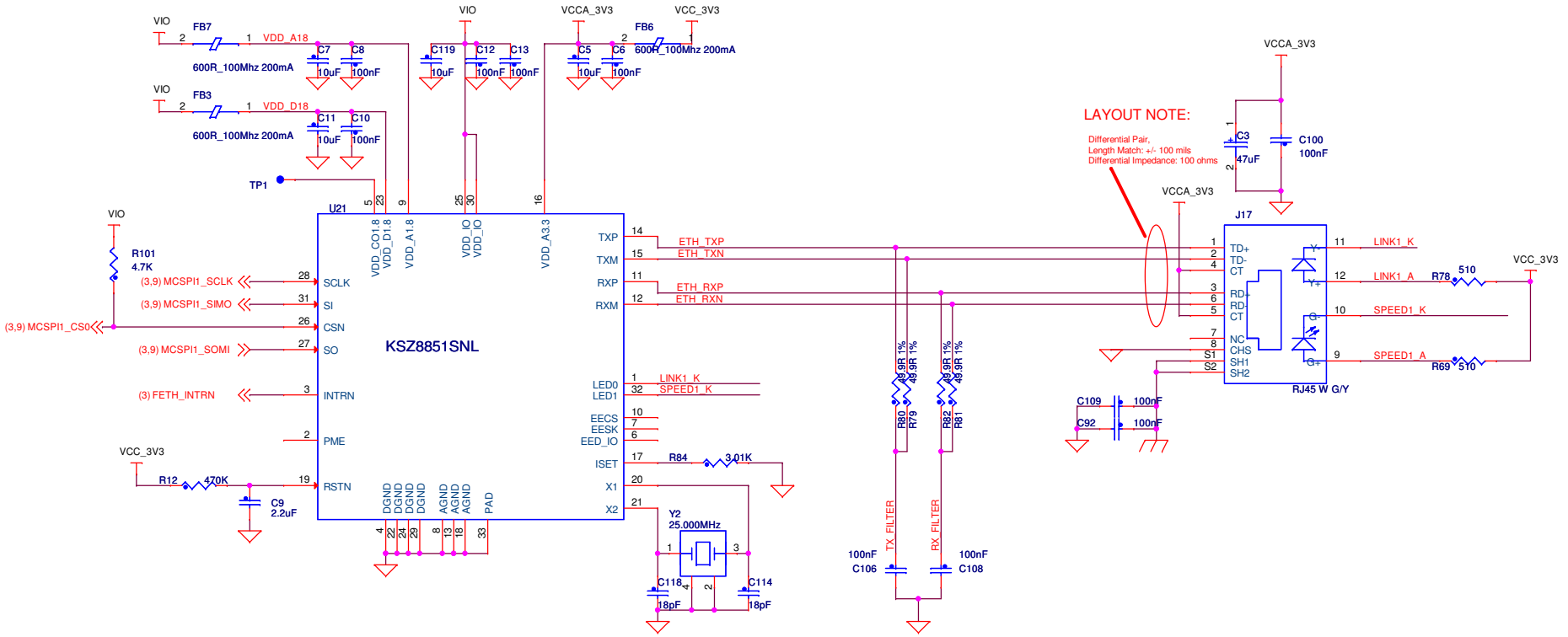


Variscite

Title: 07. DVK Display ,TOUCH			
Size: A3	Document Number: CustomBoard4	Project: VAR-OM44CustomBoard	Rev: 1.0A
Designer: <Designer>		Approved By: <Approved By>	
Date: Tuesday, February 28, 2012		Sheet 7 of 10	

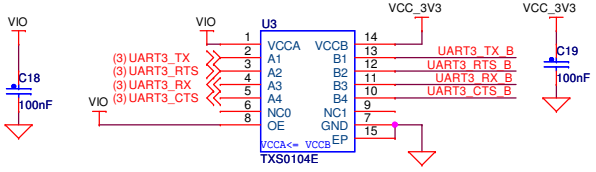
08. DVK Debug Ethernet & Serial

SPI to Ethernet

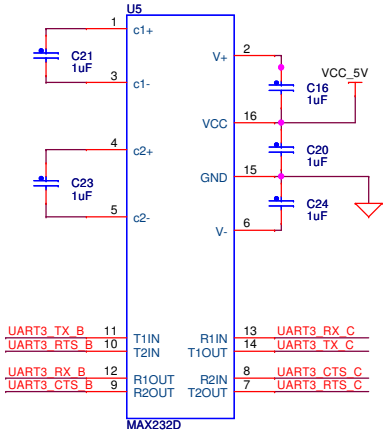


UART3 – RS232 Debug

3.3V Level Shifter



RS232 Transceiver



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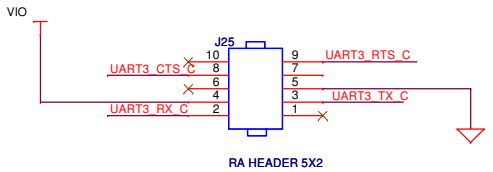
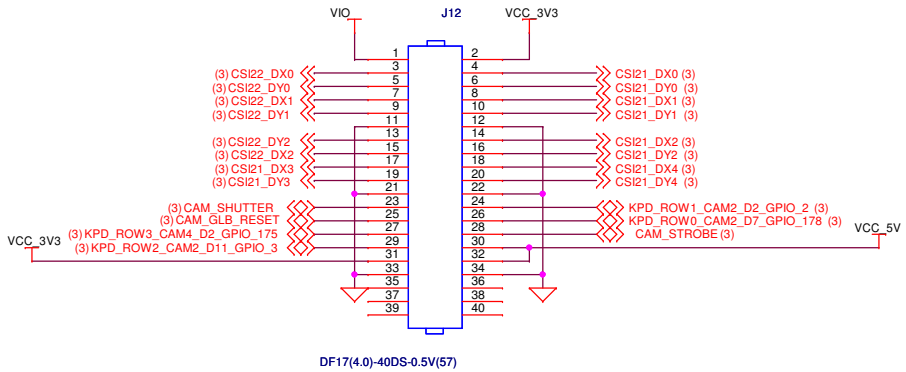


Variscite

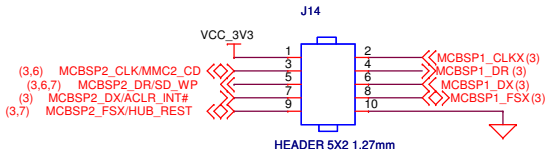
Title: 08. DVK Debug Ethernet & Serial			
Size: A3	Document Number: CustomBoard4	Project: VAR-OM44CustomBoard	Rev: 1.0A
Designer: <Designer>		Approved By: <Approved By>	
Date: Tuesday, February 28, 2012		Sheet 8 of 10	

09. DVK Exp. Connectors

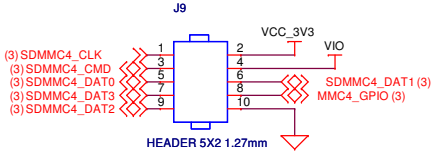
Camera IF



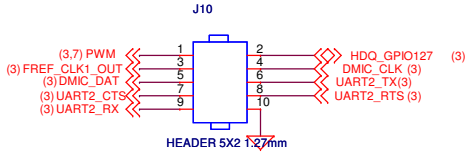
McBSPx/ SPI2



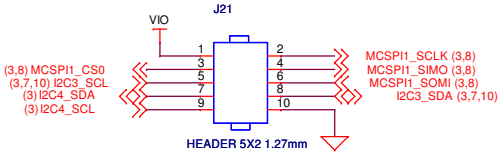
SD/MMC



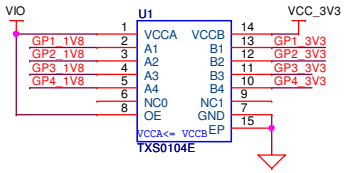
MISC



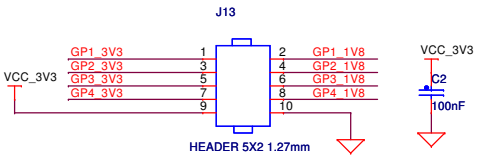
SPI/I2C



GP Level Translation

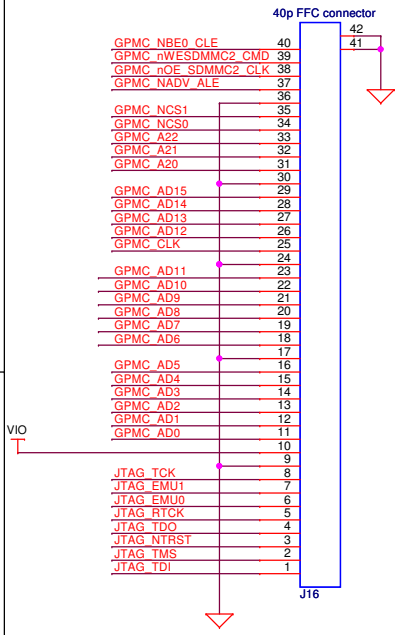


Header

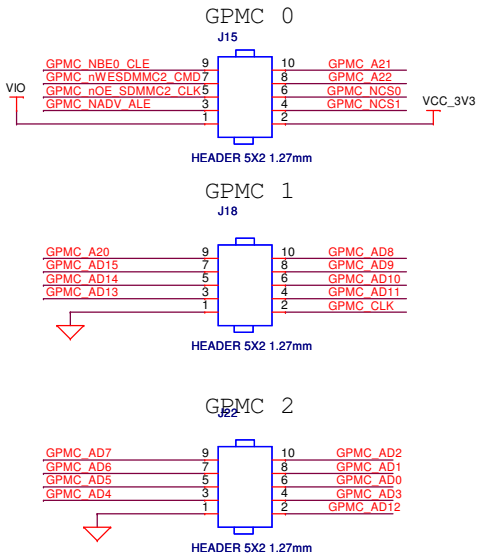


GPMC & JTAG Fanout

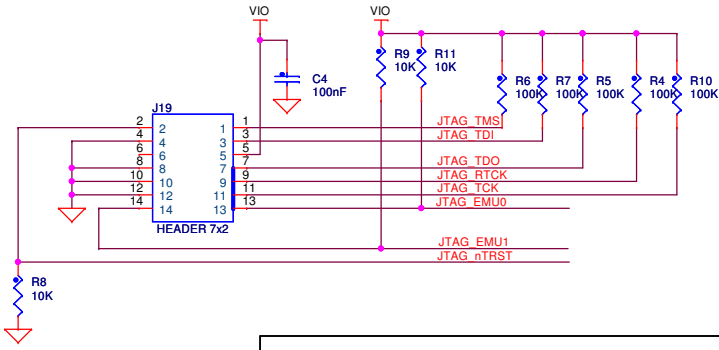
VAR-SOM-OM44 Expansion



CPU BUS



14 PIn JTAG Connector

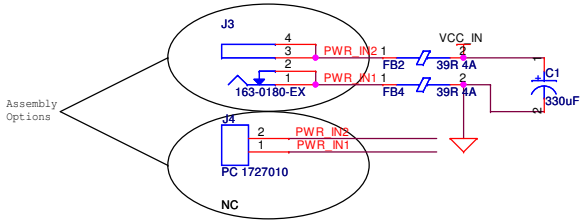


Variscite

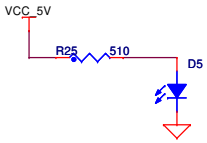
Title: 09. DVK Exp. Connectors			
Size: A3	Document Number: CustomBoard4	Project: VAR-OM44CustomBoard	Rev: 1.0A
Designer: <Designer>		Approved By: <Approved By>	
Date: Tuesday, February 28, 2012		Sheet 9 of 10	

10. Power & Mechanics

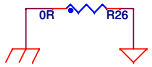
VCC-IN - 7.5- 12V



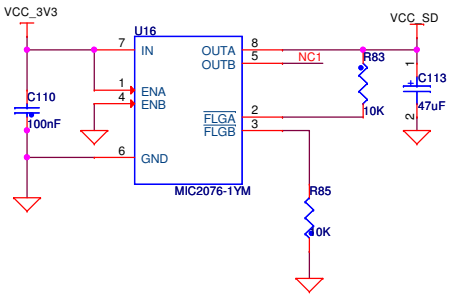
Main Power LED



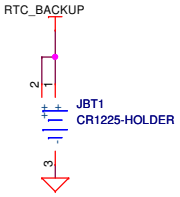
EARTH



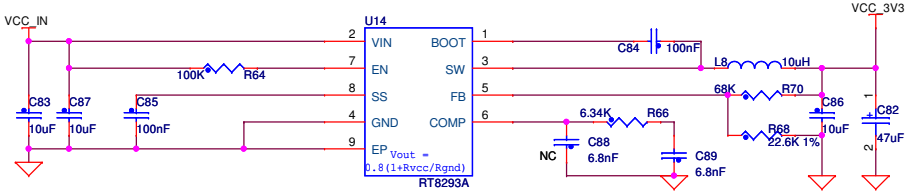
SD card Power supply



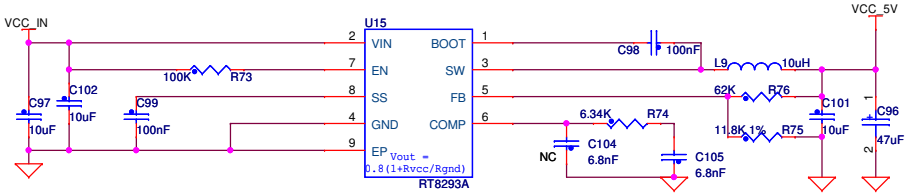
RTC Backup Battery



3.3V Digital 3A



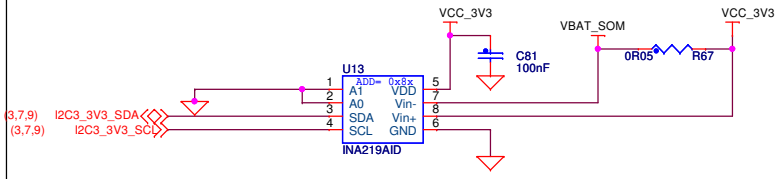
5V Digital 3A



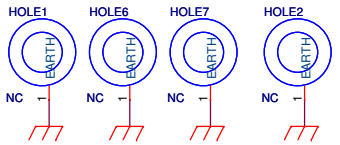
RT8250 Option (VIC0176)

C84 - C98 - 10nF , 0402 ,VCC0008
R75 - 10k ,0402 ,VRS0030
R76 - 45.3K ,0402,VRS0040
R68 - 8.45K,0402,VRS0028
R70- 22K,0402,VRS0104

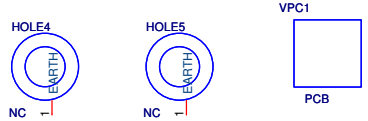
VAR-SOM OM44 Current Monitor



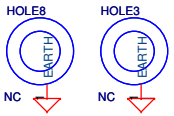
4 X Chassis Holes



2 X SATA HDD Holes



2 X SOM Holes



Variscite

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Date: Tuesday, February 28, 2012		Sheet 10 of 10	