


REV	Description	DATE	BY
C	1. Improved layout for the USB PHY. 2. Removed unused parts from the design. 3. Added current measurement function to the TWL4030. 4. Added filter caps to the VBUS rail input and output. 5.Changed U9 & U11 package to the QFN..	8/14/08	GC
C1	1. Added J12 and J13 to provide access to the RGB TTL signals on the LCD. 2. Added 5 filter caps. 3. Moved the USB Host port from Port1 to Port2. 4. Deleted R1. 5. Added 10K pulldown to USB reset signal. 6. Added 10K pulldown resistors as ID function to determine board type by reading these pins. 7. Added series resistor, R53, in the CLK line of the HSUSB clock line. May be removed after testing.	10/1/08	GC
C2	1. Moved the McBSP3_DX signal to pin AB26. 2. Moved the McBSP3_DR signal to pin AB25. 3. Moved the McBSP3_CLKX signal to pin AD25. 4. Changes were to allow access to three PWM signals from OMAP3530.	12/16/08	GC
C3	1. Added series resistor to BKBAT. 2. Added TP to BKBAT to allow access for battery. 3. Added a 47pf CAP and 3.3uH inductor to the S-Video feedback resistors.	2/11/2009	GC
C3A	1. Switched to TPS65950 based on the availability of the parts. 2. Made the battery an installed component. Removed parallell resistor.	4/21/2009	GC
C3B	1. Corrected J4 and J5 symbol for the RGB interface.No electrical changes were made. 2. Made the battery an optional component and is not instaled on the board.	5/6/2009	GC

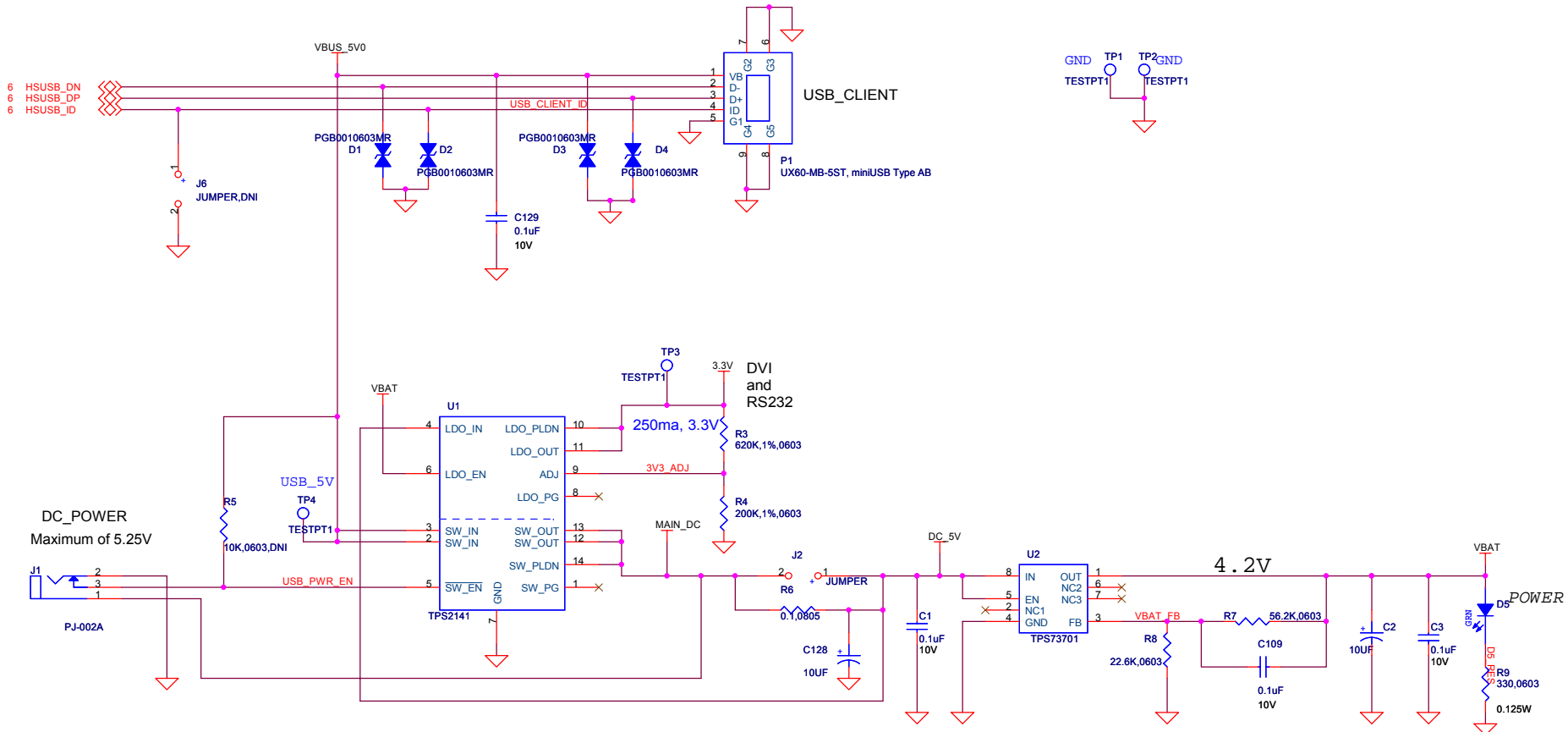
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- × H10 SDR\_C\_BA0
- × H9 SDR\_C\_BA0
- × E1 SDR\_C\_A14
- × E2 SDR\_C\_A13
- × D1 SDR\_C\_A12
- × D3 SDR\_C\_A11
- × D4 SDR\_C\_A10
- × A9 SDR\_C\_A9
- × C1 SDR\_C\_A8
- × C2 SDR\_C\_A7
- × C3 SDR\_C\_A6
- × D5 SDR\_C\_A5
- × C4 SDR\_C\_A4
- × C5 SDR\_C\_A3
- × B3 SDR\_C\_A2
- × B4 SDR\_C\_A1
- × A4 SDR\_C\_A0
- × H14 SDR\_C\_nRAS
- × H13 SDR\_C\_nCAS
- × H15 SDR\_C\_nWE
- × A13 SDR\_C\_CLK
- × A14 SDR\_C\_nCLK
- × H17 SDR\_C\_CKE1
- × H18 SDR\_C\_CKE0
- × H12 SDR\_C\_nCS0
- × H11 SDR\_C\_nCS0
- × C20 SDR\_C\_DM3
- × B11 SDR\_C\_DM2
- × A16 SDR\_C\_DM1
- × E7 SDR\_C\_DM0
- × A20 SDR\_C\_DQS3
- × A10 SDR\_C\_DQS2
- × A17 SDR\_C\_DQS1
- × A6 SDR\_C\_DQS0



- 10 DSS\_D0
- 10 DSS\_D1
- 10 DSS\_D2
- 10 DSS\_D3
- 10 DSS\_D4
- 10 DSS\_D5
- 10 DSS\_D6
- 10 DSS\_D7
- 10 DSS\_D8
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- 10 DSS\_D15
- 10 DSS\_D16
- 10 DSS\_D17
- 10 DSS\_D18
- 10 DSS\_D19
- 10 DSS\_D20
- 10 DSS\_D21
- 10 DSS\_D22
- 10 DSS\_D23
- 10 DSS\_PCLK
- 10 DSS\_HSYNC
- 10 DSS\_VSYNC
- 10 DSS\_ACBIAS

- AG22 DSS\_D0/DX0/UART1\_CTS/DSSVENC656\_DATA0/GPIO\_70
- AH22 DSS\_D1/DY0/UART1\_RTS/DSSVENC656\_DATA1/GPIO\_71
- AG23 DSS\_D2/DX1/DSSVENC656\_DATA2/GPIO\_72
- AH23 DSS\_D3/DY1/DSSVENC656\_DATA3/GPIO\_73
- AG24 DSS\_D4/DX2/UART3\_RX\_IRRX/DSSVENC656\_DATA4/GPIO\_74
- AH24 DSS\_D5/DY2/UART3\_TX\_IRTX/DSSVENC656\_DATA5/GPIO\_75
- E26 DSS\_D6/UART1\_TX/DSSVENC656\_DATA6/GPIO\_76/HW\_DBG14
- F28 DSS\_D7/UART1\_RX/DSSVENC656\_DATA7/GPIO\_77/HW\_DBG15
- E27 DSS\_D8/GPIO\_78/HW\_DBG16
- G26 DSS\_D9/GPIO\_79/HW\_DBG17
- AD28 DSS\_D10/SDI\_DAT1N/GPIO\_80
- AD27 DSS\_D11/SDI\_DAT1P/GPIO\_81
- AB28 DSS\_D12/SDI\_DAT2N/GPIO\_82
- AB27 DSS\_D13/SDI\_DAT2P/GPIO\_83
- AA27 DSS\_D14/SDI\_DAT3N/GPIO\_84
- AA27 DSS\_D15/SDI\_DAT3P/GPIO\_85
- G25 DSS\_D16/GPIO\_86
- H27 DSS\_D17/GPIO\_87
- H26 DSS\_D18/SDI\_VSYNC/McSPI3\_CLK/DSS\_D0/GPIO\_88
- H25 DSS\_D19/SDI\_HSYNC/McSPI3\_SIMO/DSS\_D1/GPIO\_89
- E28 DSS\_D20/SDI\_DEN/McSPI3\_SOMI/DSS\_D2/GPIO\_90
- J26 DSS\_D21/SDI\_STP/McSPI3\_CS0/DSS\_D3/GPIO\_91
- AC27 DSS\_D22/SDI\_CLKP/McSPI3\_CS1/DSS\_D4/GPIO\_92
- AC28 DSS\_D23/SDI\_CLKN/DSS\_D5/GPIO\_93
- D28 DSS\_PCLK/GPIO\_66/HW\_DBG12
- D26 DSS\_HSYNC/GPIO\_67/HW\_DBG13
- D27 DSS\_VSYNC/GPIO\_68
- E27 DSS\_ACBIAS/GPIO\_69

- 9 MMC1\_CLK0
- 9 MMC1\_CMD
- 9 MMC1\_DAT0
- 9 MMC1\_DAT1
- 9 MMC1\_DAT2
- 9 MMC1\_DAT3
- 9 MMC1\_DAT4
- 9 MMC1\_DAT5
- 9 MMC1\_DAT6
- 9 MMC1\_DAT7

- R10 33V N261 MMC1\_CLK/MS\_CLK/GPIO\_120
- M27 MMC1\_CMD/MS\_BS/GPIO\_121
- N27 MMC1\_DAT0/MS\_DAT0/GPIO\_122
- N26 MMC1\_DAT1/MS\_DAT1/GPIO\_123
- P28 MMC1\_DAT2/MS\_DAT2/GPIO\_124
- P28 MMC1\_DAT3/MS\_DAT3/GPIO\_125
- P27 MMC1\_DAT4/SIM\_IO/GPIO\_126
- P26 MMC1\_DAT5/SIM\_CLK/GPIO\_127
- R27 MMC1\_DAT6/SIM\_PWRCTRL/GPIO\_128
- R25 MMC1\_DAT7/SIM\_RST/GPIO\_129

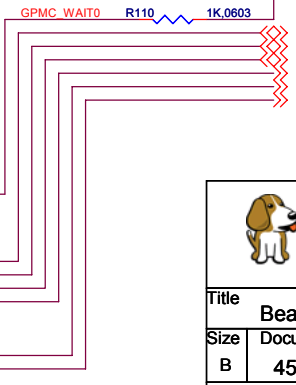
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- 8 MMC2\_CMD
- 8 MMC2\_DAT0
- 8 MMC2\_DAT1
- 8 MMC2\_DAT2
- 8 MMC2\_DAT3
- 8 MMC2\_DAT4
- 8 MMC2\_DAT5
- 8 MMC2\_DAT6
- 8 MMC2\_DAT7

- AE2 MMC2\_CLK/McSPI3\_CLK/GPIO\_130
- AG5 MMC2\_CMD/McSPI3\_SIMO/GPIO\_131
- AH5 MMC2\_DAT0/McSPI3\_SOMI/GPIO\_132
- AH4 MMC2\_DAT1/GPIO\_133
- AG4 MMC2\_DAT2/McSPI3\_CS1/GPIO\_134
- AE4 MMC2\_DAT3/McSPI3\_CS0/GPIO\_135
- AE4 MMC2\_DAT4/McSPI3\_CS0/GPIO\_135
- AH3 MMC2\_DAT5/McSPI3\_CS0/GPIO\_135
- AF3 MMC2\_DAT6/McSPI3\_CS0/GPIO\_135
- AE3 MMC2\_DAT7/McSPI3\_CS0/GPIO\_135

- GPMC\_A10/SYS\_nDMAREQ3/GPIO\_43
- GPMC\_A9/SYS\_nDMAREQ2/GPIO\_42
- GPMC\_A8/GPIO\_41
- GPMC\_A7/GPIO\_40
- GPMC\_A6/GPIO\_39
- GPMC\_A5/GPIO\_38
- GPMC\_A4/GPIO\_37
- GPMC\_A3/GPIO\_36
- GPMC\_A2/GPIO\_35
- GPMC\_A1/GPIO\_34
- GPMC\_D15/GPIO\_51
- GPMC\_D14/GPIO\_50
- GPMC\_D13/GPIO\_49
- GPMC\_D12/GPIO\_48
- GPMC\_D11/GPIO\_47
- GPMC\_D10/GPIO\_46
- GPMC\_D9/GPIO\_45
- GPMC\_D8/GPIO\_44
- GPMC\_D7
- GPMC\_D6
- GPMC\_D5
- GPMC\_D4
- GPMC\_D3
- GPMC\_D2
- GPMC\_D1
- GPMC\_D0
- GPMC\_nCS0
- GPMC\_nCS1/GPIO\_52
- GPMC\_nCS2/GPIO\_53
- GPMC\_nCS3/SYS\_nDMAREQ0/GPIO\_54
- GPMC\_nCS4/SYS\_nDMAREQ1/McBSP4\_CLKX/GPT9\_PWM\_EVT/GPIO\_55
- GPMC\_nCS5/SYS\_nDMAREQ2/McBSP4\_DR/GPT10\_PWM\_EVT/GPIO\_56
- GPMC\_nCS6/SYS\_nDMAREQ3/McBSP4\_DX/GPT11\_PWM\_EVT/GPIO\_57
- GPMC\_nCS7/GPMC\_IODIR/McBSP4\_FSX/GPT8\_PWM\_EVT/GPIO\_58
- GPMC\_CLK/GPIO\_59
- GPMC\_nWE
- GPMC\_nOE
- GPMC\_nADV\_ALE
- GPMC\_nBE0\_CLE/GPIO\_60
- GPMC\_nBE1/GPIO\_61
- GPMC\_nWP/GPIO\_62
- GPMC\_WAIT0
- GPMC\_WAIT1/GPIO\_63
- GPMC\_WAIT2/GPIO\_64
- GPMC\_WAIT3/SYS\_nDMAREQ1/GPIO\_65
- UART2\_CTS/McBSP3\_DX/GPT9\_PWM\_EVT/GPIO\_144
- UART2\_RTS/McBSP3\_DR/GPT10\_PWM\_EVT/GPIO\_145
- UART2\_TX/McBSP3\_CLKX/GPT11\_PWM\_EVT/GPIO\_146
- UART2\_RX/McBSP3\_FSX/GPT8\_PWM\_EVT/GPIO\_147
- UART3\_CTS\_RCTX/GPIO\_163
- UART3\_RTS\_SD/GPIO\_164
- UART3\_RX\_IRRX/GPIO\_165
- UART3\_TX\_IRTX/GPIO\_166

- C21 SDR\_C\_D31
- B21 SDR\_C\_D30
- A21 SDR\_C\_D29
- D20 SDR\_C\_D28
- B20 SDR\_C\_D27
- B19 SDR\_C\_D26
- A19 SDR\_C\_D25
- C18 SDR\_C\_D24
- D14 SDR\_C\_D23
- B13 SDR\_C\_D22
- A11 SDR\_C\_D21
- C12 SDR\_C\_D20
- C11 SDR\_C\_D19
- B10 SDR\_C\_D18
- D11 SDR\_C\_D17
- D18 SDR\_C\_D16
- B17 SDR\_C\_D15
- C17 SDR\_C\_D14
- D17 SDR\_C\_D13
- B16 SDR\_C\_D12
- C15 SDR\_C\_D11
- B14 SDR\_C\_D10
- C14 SDR\_C\_D9
- A9 SDR\_C\_D8
- B9 SDR\_C\_D7
- A7 SDR\_C\_D6
- C9 SDR\_C\_D5
- C8 SDR\_C\_D4
- B6 SDR\_C\_D3
- C6 SDR\_C\_D2
- D6 SDR\_C\_D1
- D6 SDR\_C\_D0

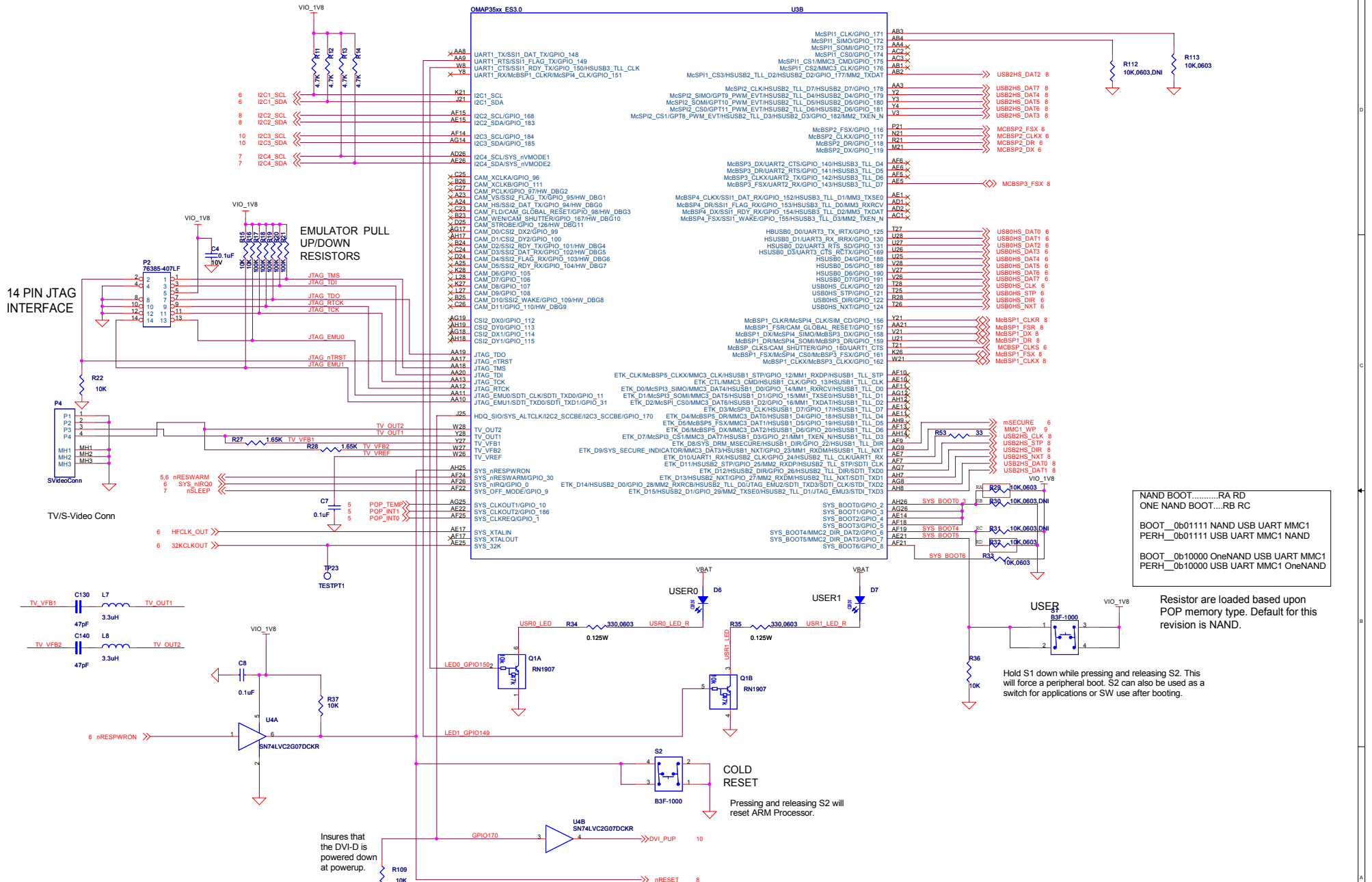
- K3
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- M3
- N3
- R3
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- K4
- L4
- M4
- N4
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- W1
- T2
- R2
- R1
- P1
- K2
- H2
- W2
- V2
- GPMC\_D6
- GPMC\_D5
- GPMC\_D4
- GPMC\_D3
- GPMC\_D2
- GPMC\_D1
- GPMC\_D0
- G4
- H3
- V8
- T8
- R8
- P8
- F4
- G2
- E3
- G3
- U3
- H1
- M8
- L8
- K8
- J8
- AB26
- AB25
- AA25
- AD25
- H18
- H18
- H20
- H21



- MCBSP3\_DX 8
- MCBSP3\_DR 8
- MCBSP3\_CLKX 8
- USB2HS\_nRST 9
- UART3\_RX 9
- UART3\_TX 9



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NAND BOOT.....RA RD  
 ONE NAND BOOT....RB RC  
 BOOT\_0b01111 NAND USB UART MMC1  
 PERH\_0b01111 USB UART MMC1 NAND  
 BOOT\_0b10000 OneNAND USB UART MMC1  
 PERH\_0b10000 USB UART MMC1 OneNAND

Resistor are loaded based upon POP memory type. Default for this revision is NAND.

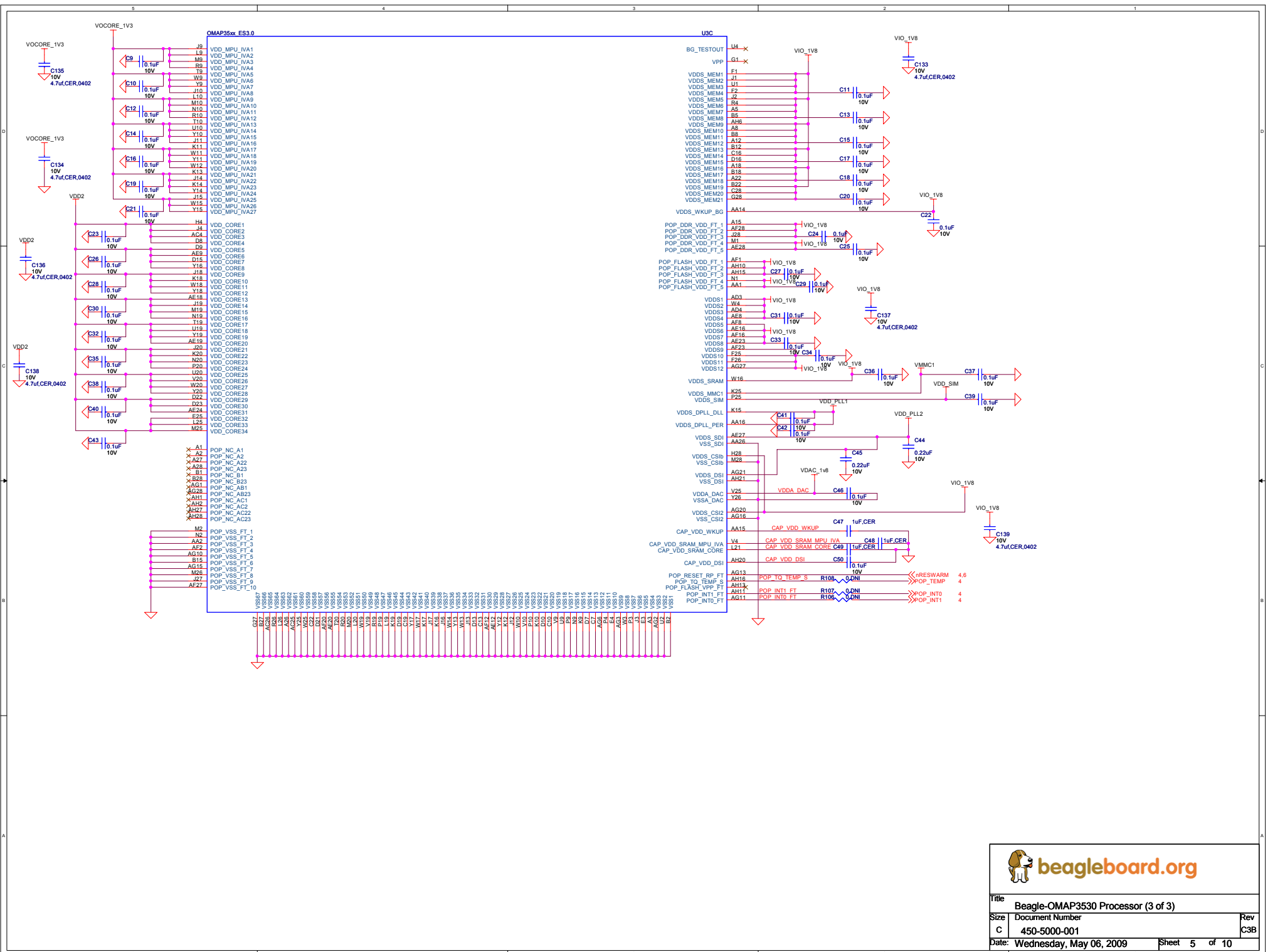
Hold S1 down while pressing and releasing S2. This will force a peripheral boot. S2 can also be used as a switch for applications or SW user after booting.

**COLD RESET**  
 Pressing and releasing S2 will reset ARM Processor.

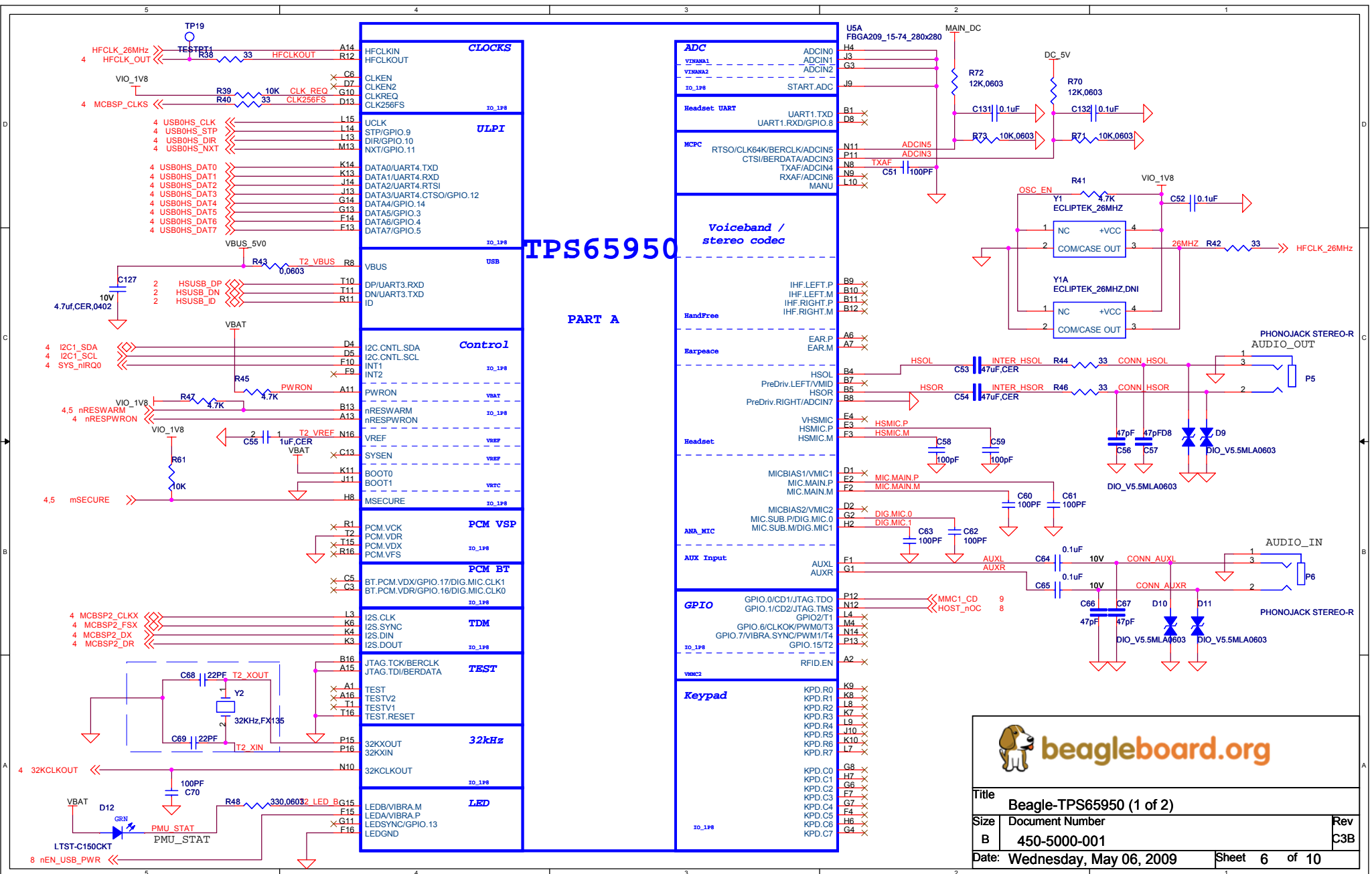
Insures that the DVI-D is powered down at powerup.



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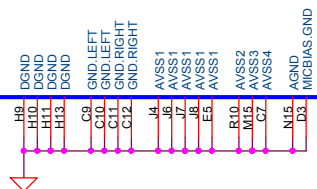
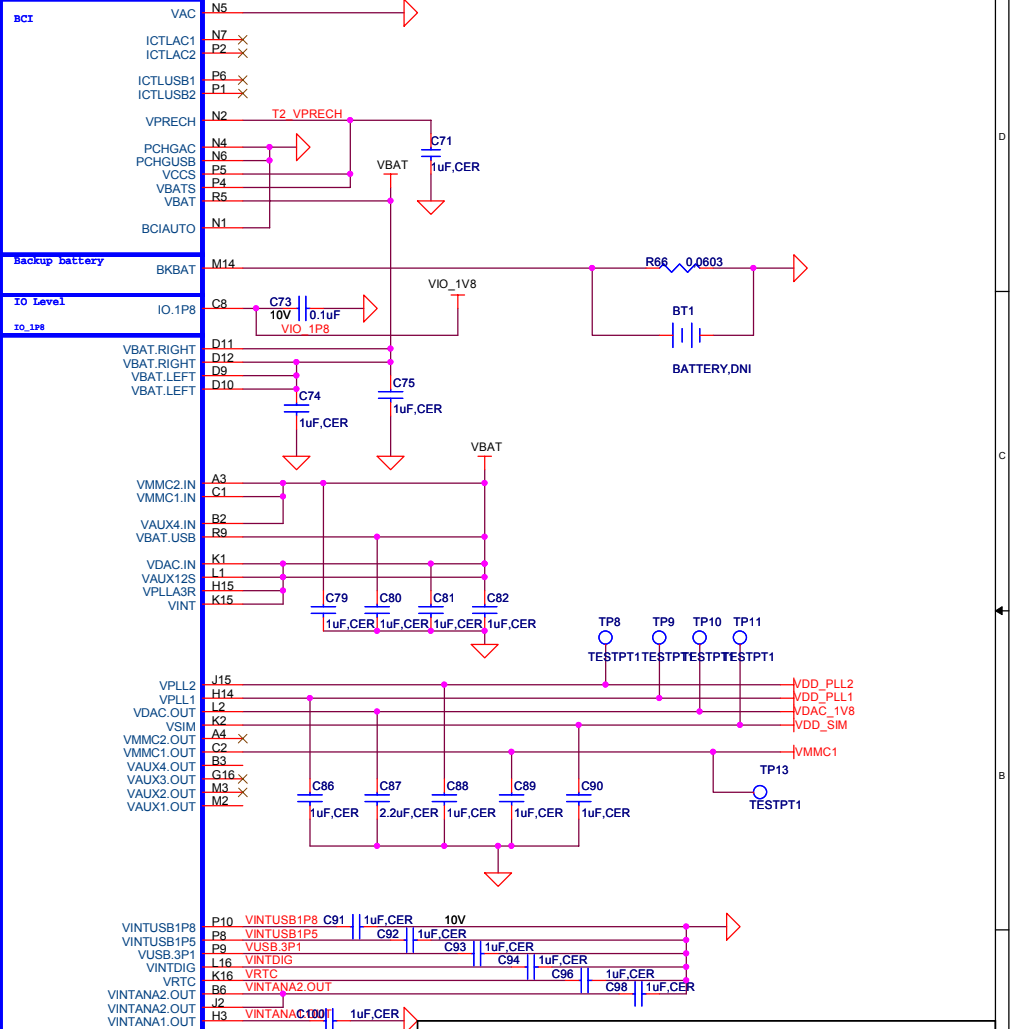
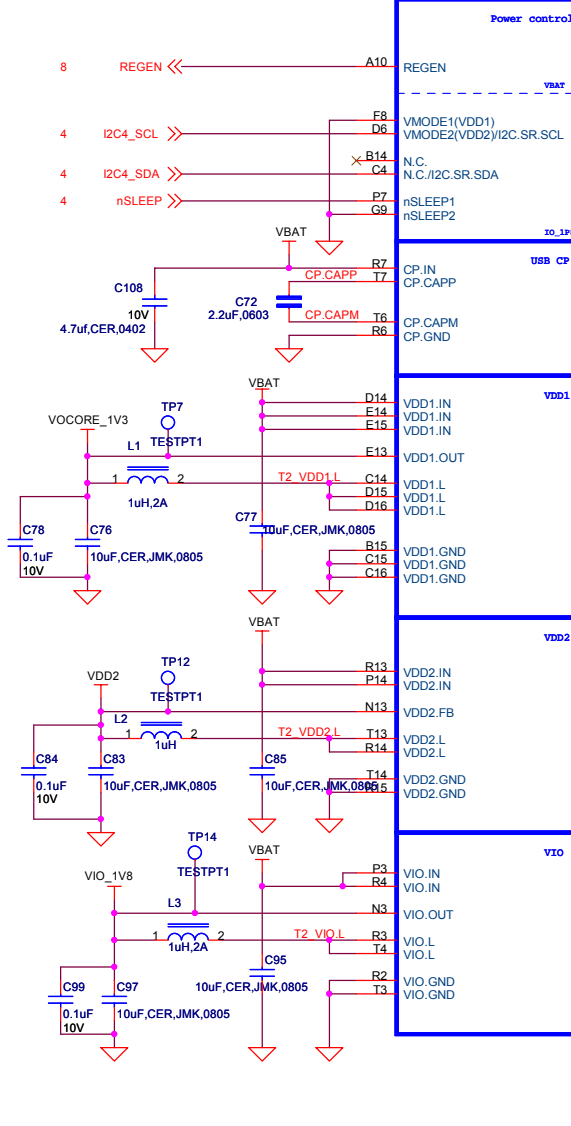
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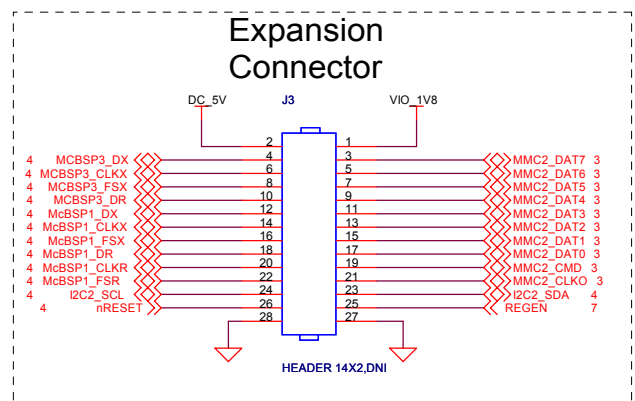
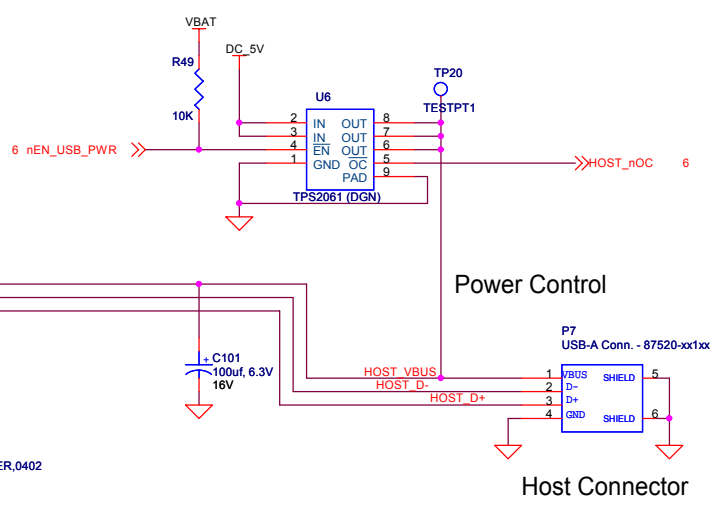
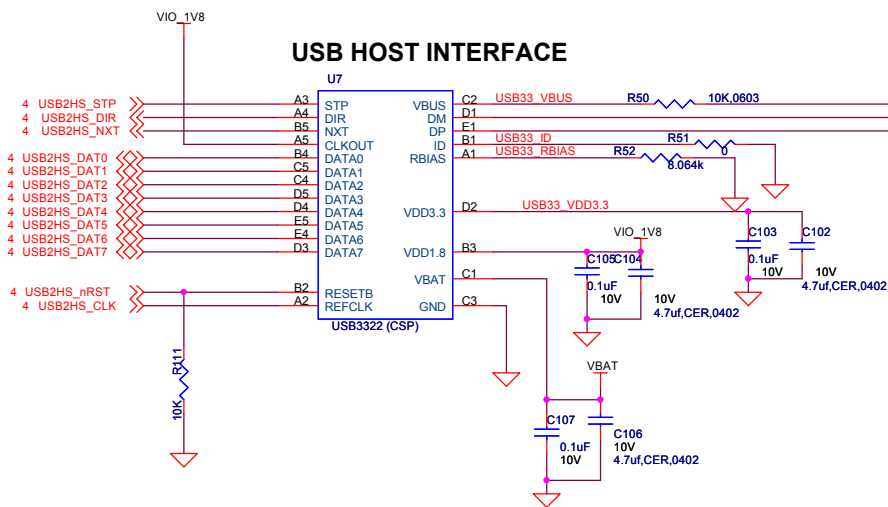

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# TPS65950

## Part B Power

Domain	Type	Voltage	Current
<b>External</b>			
VDD1	SMPS	0.6V to 1.45V	1100mA
VDD2	SMPS	0.6V to 1.45V/1.5V	600mA
VIO	SMPS	1.8V /1.85V	600mA
VBUS	CP	4.8V	100mA
VAUX1	LDO	2.5V/2.8V/3.0V	200mA
VAUX2	LDO	1.0V/1.2V/1.5V/1.8V/2.5V/2.8V	100mA
VAUX3	LDO	1.5V/1.8V/2.5V/2.8V	200mA
VAUX4	LDO	0.7V/1.0V/1.2V/1.5V/1.8V/2.5V/2.8V	100mA
VMMC1	LDO	1.85V/2.85V/3.0V/3.15V	220mA
VMMC2	LDO	1.85V/2.6V/2.85V/3.0V/3.15V	100mA
VVIC1	LDO	1.8V	10mA
VVIC2	LDO	1.8V	10mA
VSIM	LDO	1.8V/2.8V/3.0V	50mA
VDAC	LDO	1.2V/1.3V/1.8V	65mA
VPDLL1	LDO	1.0V/1.2V/1.3V/1.8V	40mA
VPDLL2	LDO	0.7V/1.0V/1.2V/1.3V/1.8V	60mA
<b>Internal</b>			
VUSB	LDO	3.1V	15mA
VUSB_1P5	LDO	1.5V	30mA
VUSB_1P8	LDO	1.8V	30mA
VINTDIG	LDO	1.5V	50mA
VINANA1	LDO	1.5V	50mA
VINANA2	LDO	2.5V/2.75V	250mA
VTRC	LDO	1.5V	



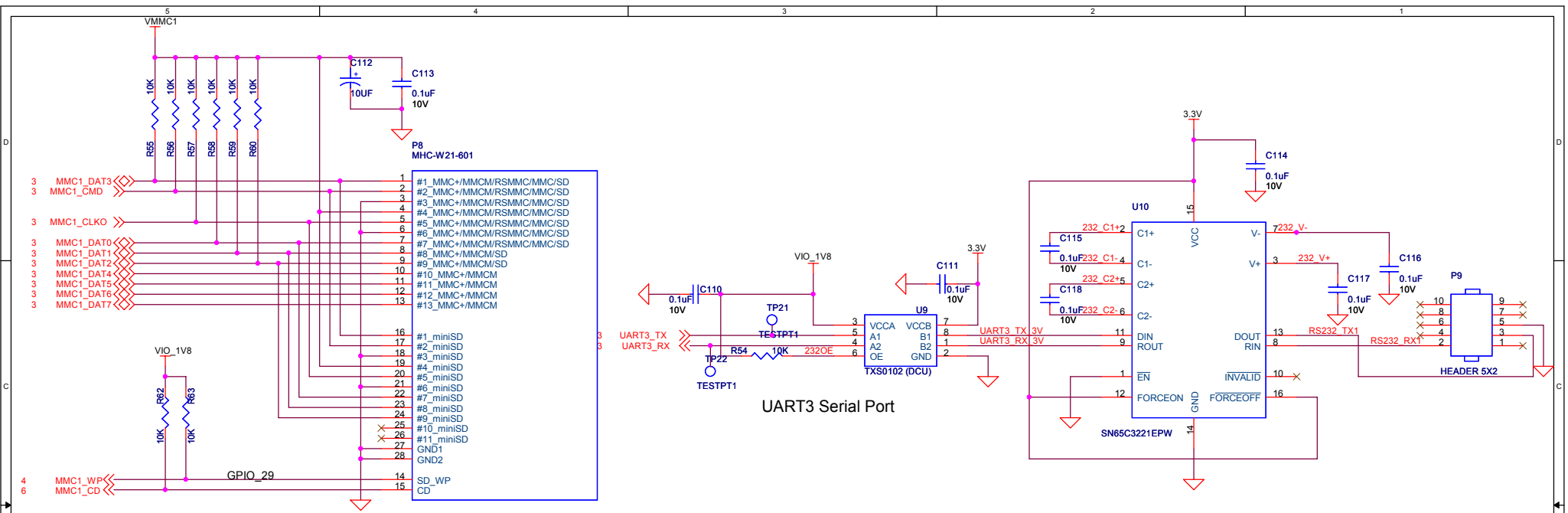
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Title Beagle-USB Host and Expansion Connector.

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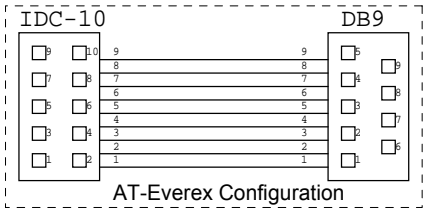
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**SD/MMC Connector 6 in 1**  
**MMC+, MMCMobile, SD,**  
**MMC, miniSD, RS-MMC**

**UART3 Serial Port**



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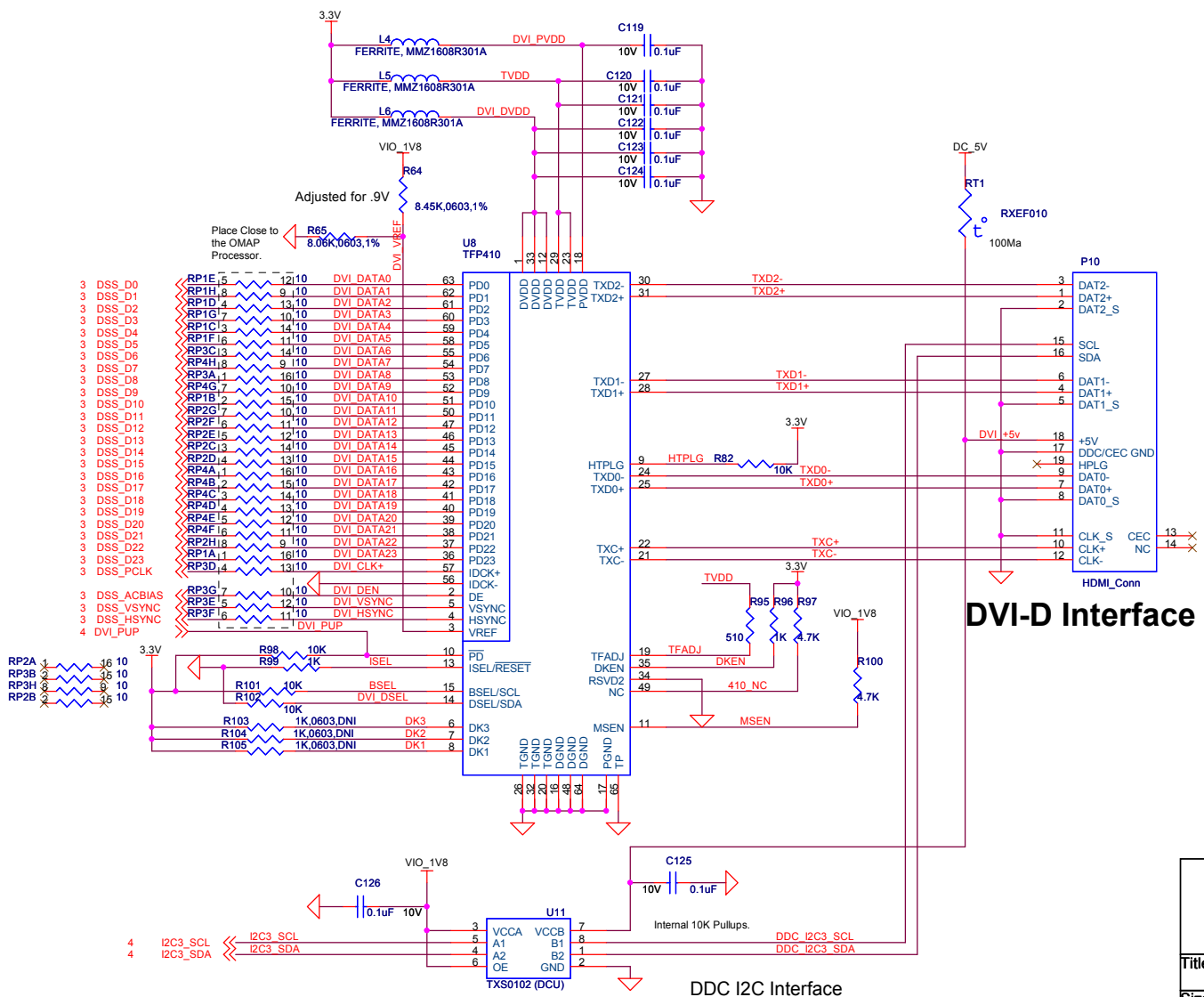
Title **Beagle-RS232 and SD/MMC Connector**

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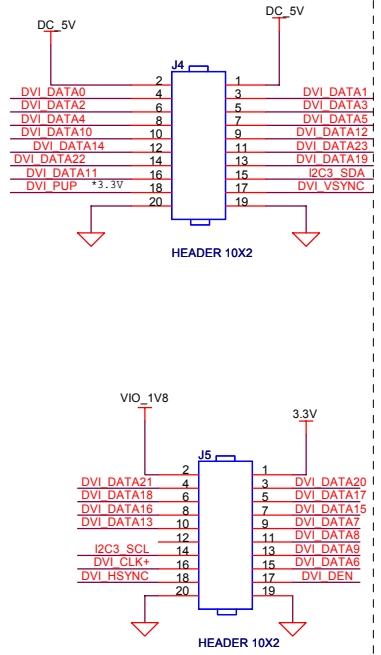
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## LCD RGB Interface



## DVI-D Interface

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