


REV	DESCRIPTION	DATE	BY
P8	FEATURE CHANGES 1. Added 4 port LS/FS/HS HUB to provide four USB Host ports. 2. Made connection for the 1.8V rail on the USB PHY to go to VAUX2. 3. Added camera connector that is compatible to the Leopard Imaging Camera modules. 4. Added power management capabilities to allow shut down of serial port, DVI-D, and power LED. 5. Switched to DM3730 processor and 512MB memory. 6. Added ability to turn off 26MHZ oscillator. 7. Increased overall board size to accomodate the changes. 8. Changed serial connector to a female DB9. 9. Added a 10/100 Ethernet port.	12/15/09	GC
A	1. Second spin of board. Redesigned overvoltage protection scheme. 2. Added slow turn on circuit to USB Host power. 3. Changed power scheme for serial port level translator.	3/13/10	GC
A1	1. Disabled the DVI-D powerdown due to use of wrong GPIO pin. Pin is in the MMC group and it cannot be switched to 1.8V without impacting the SD card slot. 2. Disabled HUB reset due to a timing issue with SW. When active the LAN9514 would not work correctly and the Ethernet function is broken. 3. Removed CAP C212 and C214. Turn on was to slow.	5/13/10	GC
A2	1. Deleted C9 and added R34 to enable S-Video.	6/15/10	GC

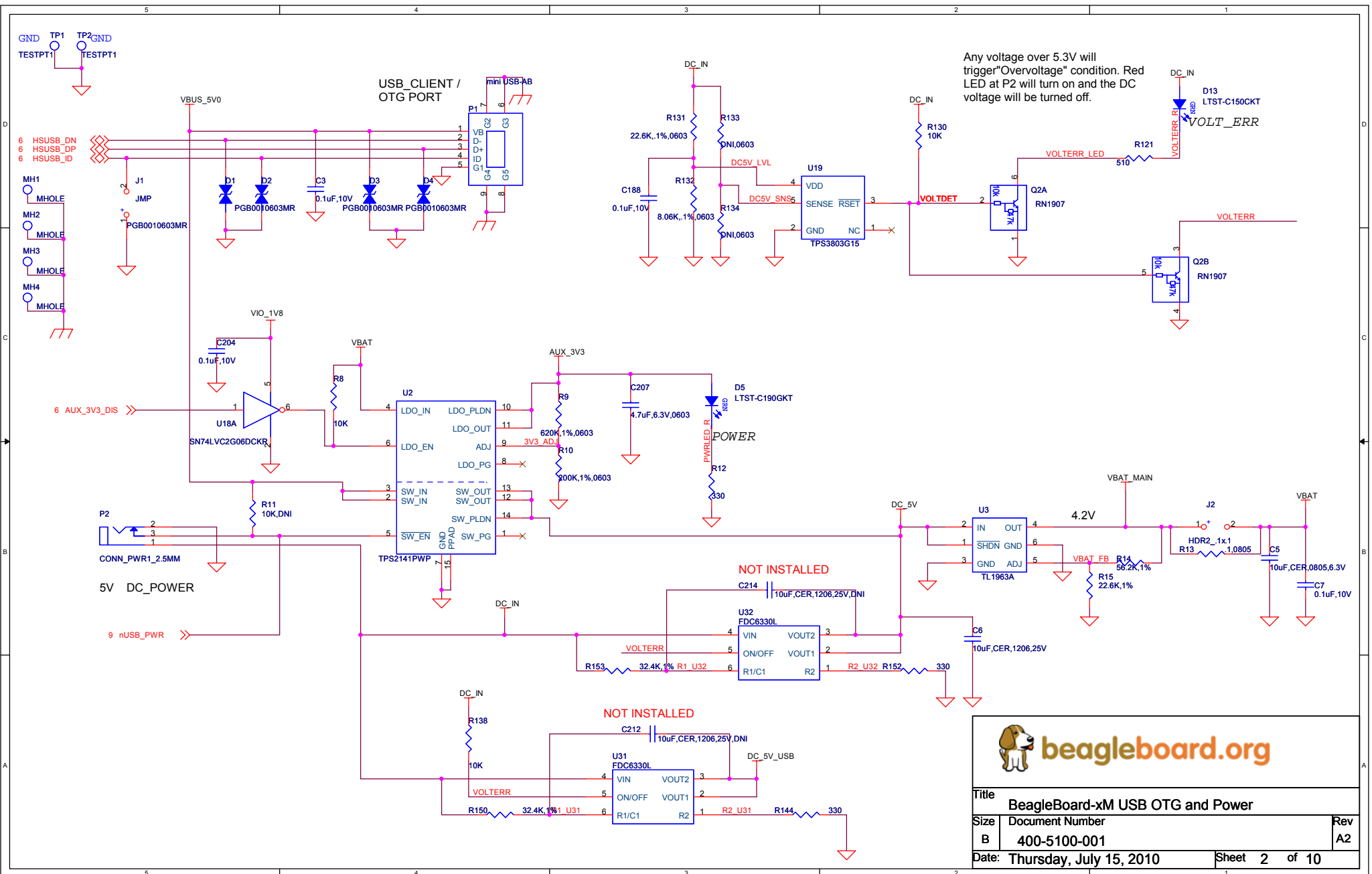
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5	PROCESSOR 3 OF 3
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7	PMIC, POWER RAILS
8	MICROSD, RS232,CAMERA,EXPANSION
9	DVI-D, LCD EXPANSION
10	USB HOST, HUB, ETHERNET

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Any voltage over 5.3V will trigger "Overvoltage" condition. Red LED at P2 will turn on and the DC voltage will be turned off.



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- × H10 NA32
- × H9 NA33
- × E1 NA34
- × E2 NA35
- × D1 NA36
- × D2 NA37
- × D3 NA38
- × D4 NA39
- × C1 NA40
- × C2 NA41
- × C3 NA42
- × C4 NA43
- × C5 NA44
- × B3 NA45
- × B4 NA46
- × A4 NA47
- × A4 NA48
- × H14 NA49
- × H13 NA50
- × H15 NA51
- × A13 NA52
- × A14 NA53
- × H17 NA54
- × H16 NA55
- × H12 NA56
- × H11 NA57
- × C20 NA58
- × B11 NA59
- × A16 NA60
- × B7 NA61
- × A20 NA62
- × A10 NA63
- × A17 NA64
- × A6 NA65

TP3 SDC_CLK
TESTPT2
TP4 SDC_nCS1
TP5 SDC_nCS0
TESTPT2

- 9 DSS_DX0
- 9 DSS_DX1
- 9 DSS_DX2
- 9 DSS_DX3
- 9 DSS_DX4
- 9 DSS_DX5
- 9 DSS_D6
- 9 DSS_D7
- 9 DSS_D8
- 9 DSS_D9
- 9 DSS_D10
- 9 DSS_D11
- 9 DSS_D12
- 9 DSS_D13
- 9 DSS_D14
- 9 DSS_D15
- 9 DSS_D16
- 9 DSS_D17
- 9 DSS_D0
- 9 DSS_D1
- 9 DSS_D2
- 9 DSS_D3
- 9 DSS_D4
- 9 DSS_D5
- 9 DSS_PCLK
- 9 DSS_HSYNC
- 9 DSS_VSYNC
- 9 DSS_ACBIAS

- 8 MMC1_CLK0
- 8 MMC1_CMD
- 8 MMC1_DAT0
- 8 MMC1_DAT1
- 8 MMC1_DAT2
- 8 MMC1_DAT3

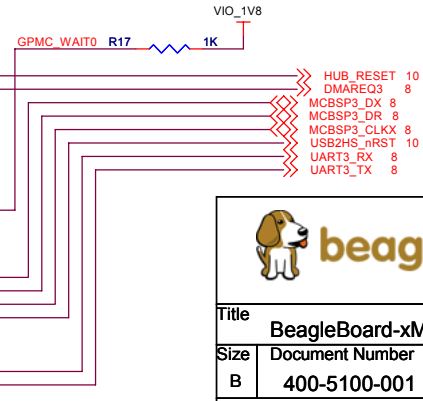
- 9 DVI_UP
- 8 MMC2_CLK0
- 8 MMC2_CMD
- 8 MMC2_DAT0
- 8 MMC2_DAT1
- 8 MMC2_DAT2
- 8 MMC2_DAT3
- 8 MMC2_DAT4
- 8 MMC2_DAT5
- 8 MMC2_DAT6
- 8 MMC2_DAT7

- 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
- F26 DSS_D6/UART1_TX/DSSVENC656_DATA6/GPIO_76/HW_DBG14
- F27 DSS_D7/UART1_RX/DSSVENC656_DATA7/GPIO_77/HW_DBG15
- F28 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
- G25 DSS_D15/SDI_DAT3P/GPIO_85
- H27 DSS_D16/GPIO_86
- H26 DSS_D17/GPIO_87
- H25 DSS_D18/SDI_VSYNC/McSPI3_CLK/DSS_D0/GPIO_88
- E28 DSS_D19/SDI_HSYNC/McSPI3_SIMO/DSS_D1/GPIO_89
- J26 DSS_D20/SDI_DEN/McSPI3_SOMI/DSS_D2/GPIO_90
- AC27 DSS_D21/SDI_STP/McSPI3_CS0/DSS_D3/GPIO_91
- AC28 DSS_D22/SDI_CLKP/McSPI3_CS1/DSS_D4/GPIO_92
- D28 DSS_D23/SDI_CLKN/DSS_D5/GPIO_93
- D26 DSS_PCLK/GPIO_66/HW_DBG12
- D27 DSS_HSYNC/GPIO_67/HW_DBG13
- E27 DSS_VSYNC/GPIO_68
- E27 DSS_ACBIAS/GPIO_69
- M27 MMC1_CLK/MS_CLK/GPIO_120
- N27 MMC1_CMD/MS_BS/GPIO_121
- N26 MMC1_DAT0/MS_DAT0/GPIO_122
- N25 MMC1_DAT1/MS_DAT1/GPIO_123
- P28 MMC1_DAT2/MS_DAT2/GPIO_124
- P27 MMC1_DAT3/MS_DAT3/GPIO_125
- P26 MMC1_DAT4/SIM_IO/GPIO_126
- P25 MMC1_DAT5/SIM_CLK/GPIO_127
- R27 MMC1_DAT6/SIM_PWRCTRL/GPIO_128
- R25 MMC1_DAT7/SIM_RST/GPIO_129
- 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
- AE3 MMC2_DAT6/McSPI3_CS0/GPIO_135
- AE3 MMC2_DAT7/McSPI3_CS0/GPIO_135
- MMC2_DIR_DAT0/MMC3_DAT0/GPIO_136
- MMC2_DIR_DAT1/CAM_GLOBAL_RESET/MMC3_DAT1/GPIO_137/HSUBS3_TLL_STP/MM3_RXDP
- MMC2_DIR_CAM_SHUTTER/MMC3_DAT2/GPIO_138/HSUBS3_TLL_DIR
- MMC2_DIR/MMC3_DAT3/GPIO_139/HSUBS3_TLL_NXT/MM3_RXDM

- NA31 C21
- NA30 B21
- NA29 A21
- NA28 D20
- NA27 B20
- NA26 B19
- NA25 A19
- NA24 C18
- NA23 D14
- NA22 B13
- NA21 A11
- NA20 C12
- NA19 D12
- NA18 C11
- NA17 B10
- NA16 D11
- NA15 B18
- NA14 B17
- NA13 D17
- NA12 B16
- NA11 C15
- NA10 B14
- NA9 C14
- NA8 A9
- NA7 B9
- NA6 A7
- NA5 C9
- NA4 C8
- NA3 B6
- NA2 C6
- NA1 D6
- NA0

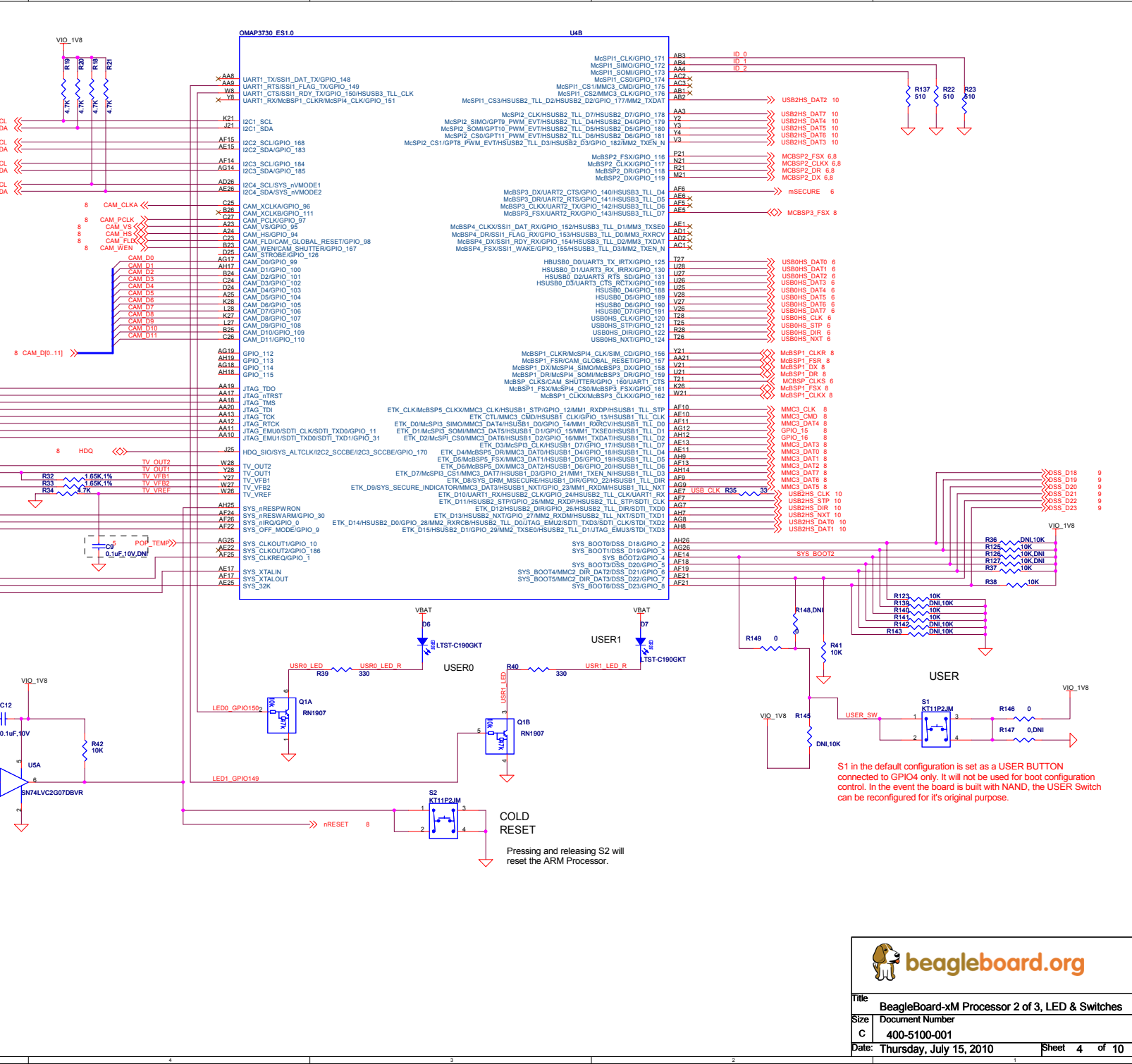
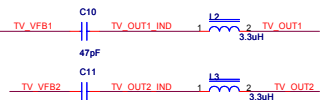
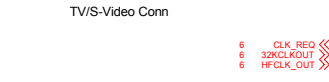
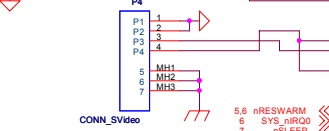
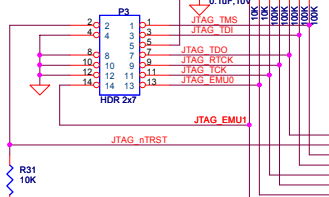
- GPMC_A10/SYS_nDMAREQ3/GPIO_43 K3
- GPMC_A9/SYS_nDMAREQ2/GPIO_42 L3
- GPMC_A8/GPIO_41 M3
- GPMC_A7/GPIO_40 N3
- GPMC_A6/GPIO_39 R3
- GPMC_A5/GPIO_38 T3
- GPMC_A4/GPIO_37 K4
- GPMC_A3/GPIO_36 L4
- GPMC_A2/GPIO_35 M4
- GPMC_A1/GPIO_34 N4
- GPMC_D15/GPIO_51 Y1
- GPMC_D14/GPIO_50 W1
- GPMC_D13/GPIO_49 T2
- GPMC_D12/GPIO_48 R2
- GPMC_D11/GPIO_47 P1
- GPMC_D10/GPIO_46 K2
- GPMC_D9/GPIO_45 H2
- GPMC_D8/GPIO_44 W2
- GPMC_D7 V2
- GPMC_D6 V1
- GPMC_D5 T1
- GPMC_D4 P2
- GPMC_D3 L2
- GPMC_D2 L1
- GPMC_D1 K1
- GPMC_D0


- GPMC_nCS0 G4
- GPMC_nCS1/GPIO_52 H3
- GPMC_nCS2/GPIO_53 V8
- GPMC_nCS3/SYS_nDMAREQ0/GPIO_54 U8
- GPMC_nCS4/SYS_nDMAREQ1/McBSP4_CLKX/GPT9_PWM_EVT/GPIO_55 T8
- GPMC_nCS5/SYS_nDMAREQ2/McBSP4_DR/GPT10_PWM_EVT/GPIO_56 R8
- GPMC_nCS6/SYS_nDMAREQ3/McBSP4_DX/GPT11_PWM_EVT/GPIO_57 P8
- GPMC_nCS7/GPMC_IODIR/McBSP4_FSX/GPT8_PWM_EVT/GPIO_58 N8
- GPMC_CLK/GPIO_59 F4
- GPMC_nWE F2
- GPMC_nOE F3
- GPMC_nADV_ALE F3
- GPMC_nBE0_CLE/GPIO_60 G3
- GPMC_nBE1/GPIO_61 U3
- GPMC_nWP/GPIO_62 H1
- GPMC_WAIT0 M8
- GPMC_WAIT1/GPIO_63 L8
- GPMC_WAIT2/GPIO_64 K8
- GPMC_WAIT3/SYS_nDMAREQ1/GPIO_65 J8
- UART2_CTS/McBSP3_DX/GPT9_PWM_EVT/GPIO_144 AB26
- UART2_RTS/McBSP3_DR/GPT10_PWM_EVT/GPIO_145 AB25
- UART2_TX/McBSP3_CLKX/GPT11_PWM_EVT/GPIO_146 AA25
- UART2_RX/McBSP3_FSX/GPT8_PWM_EVT/GPIO_147 AD25
- UART3_CTS_RCTX/GPIO_163 H18
- UART3_RTS_SD/GPIO_164 H18
- UART3_RX_IRRX/GPIO_165 H20
- UART3_TX_IRTX/GPIO_166 H21



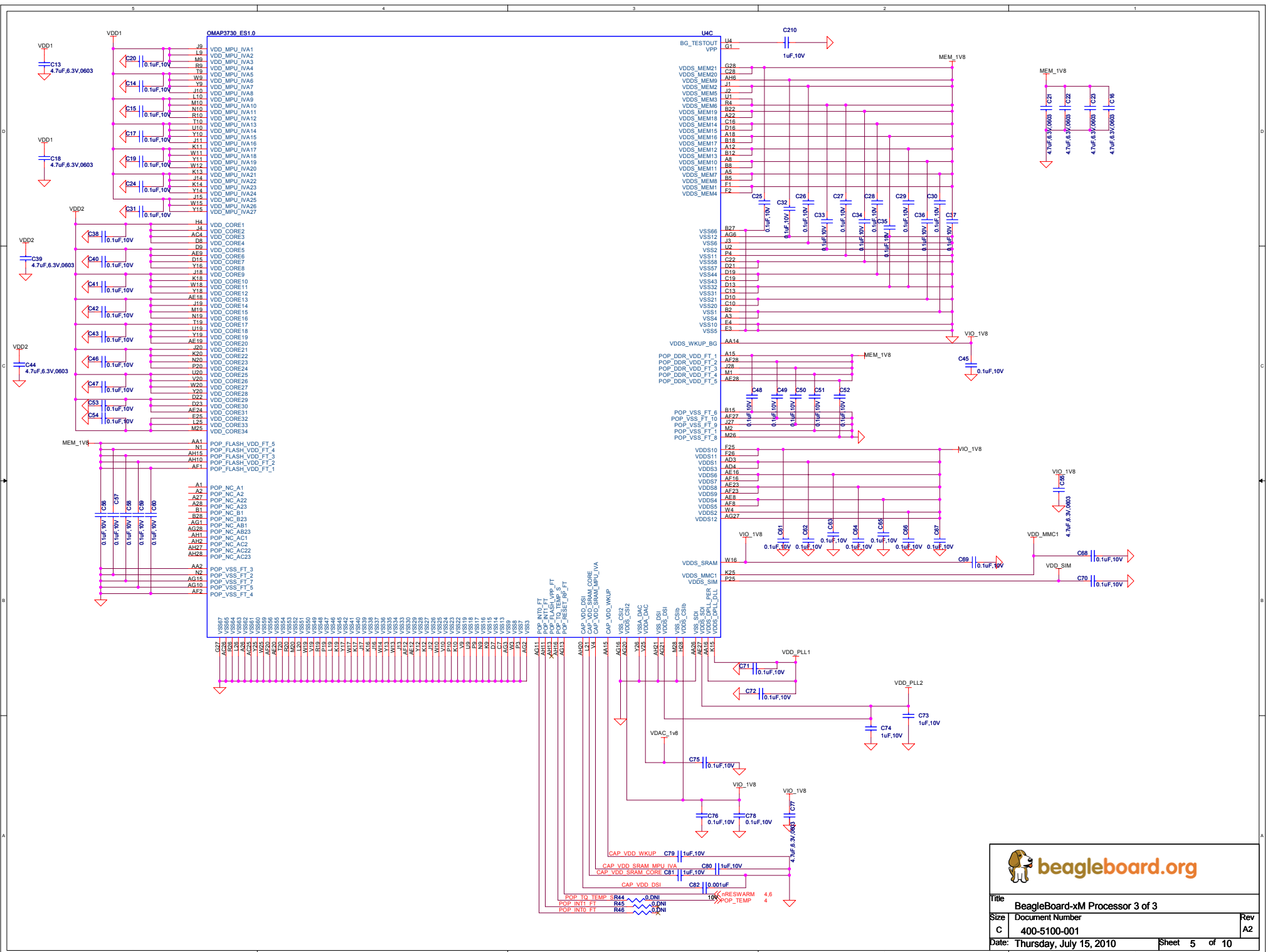
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14 PIN JTAG INTERFACE

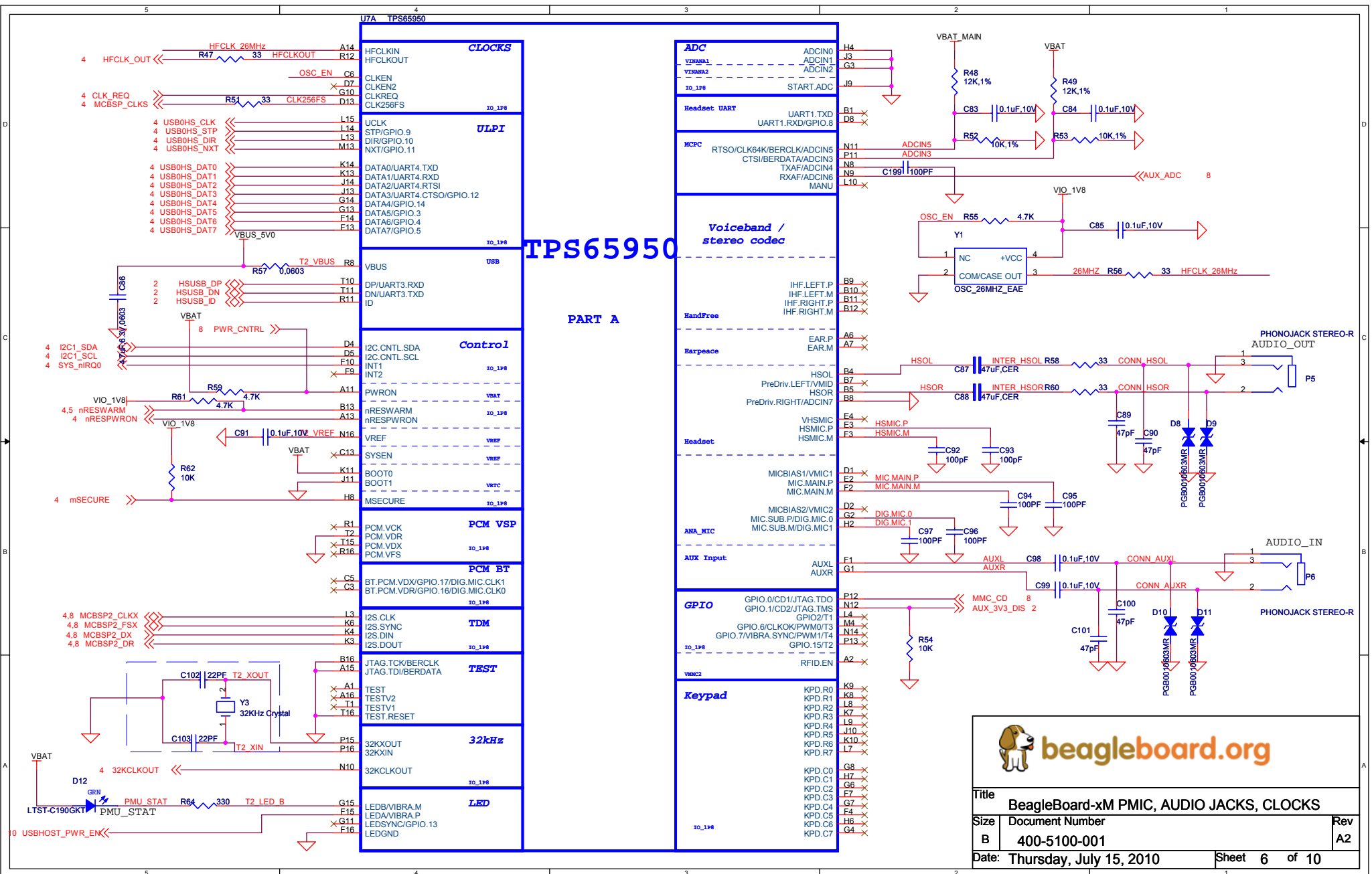





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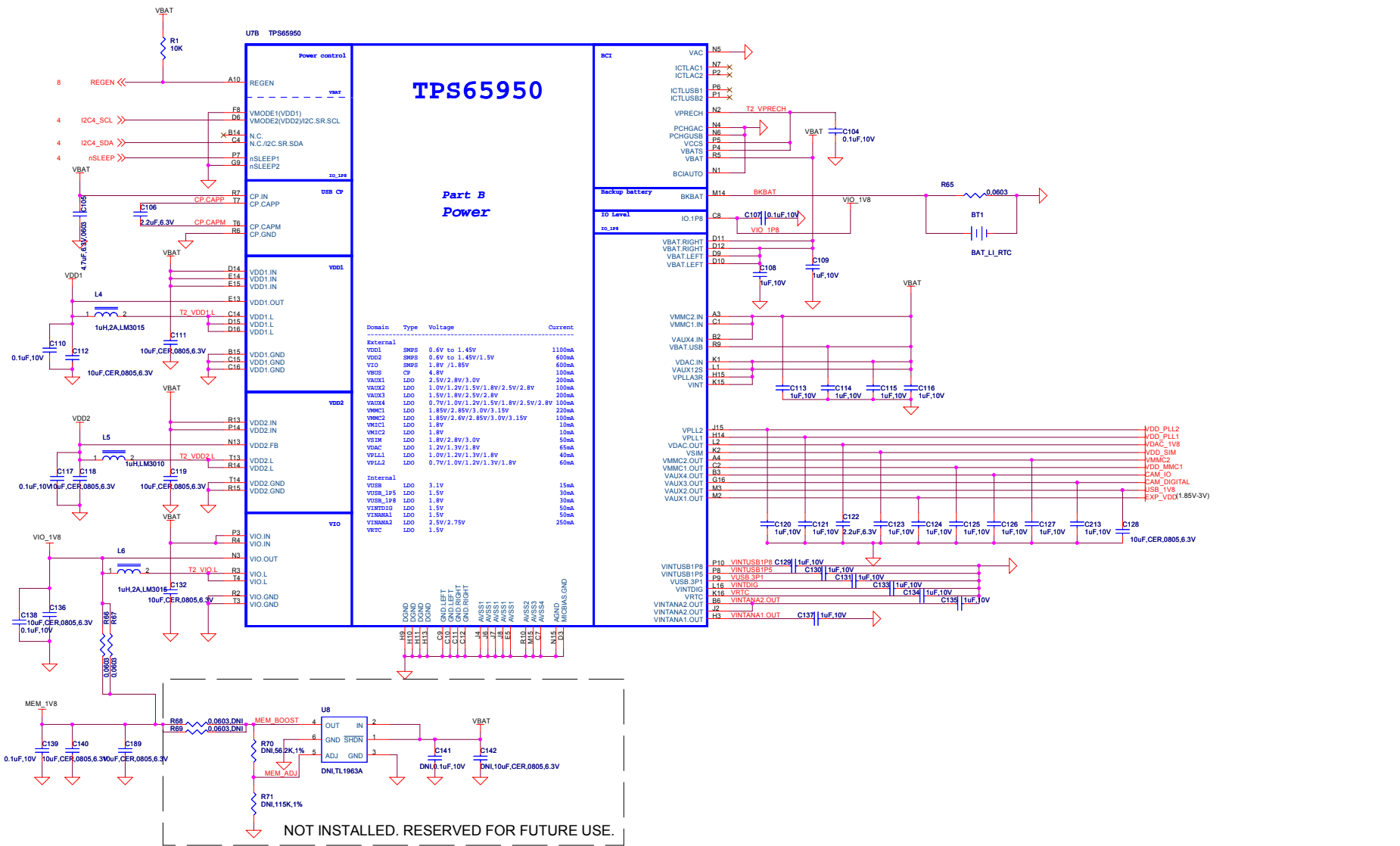


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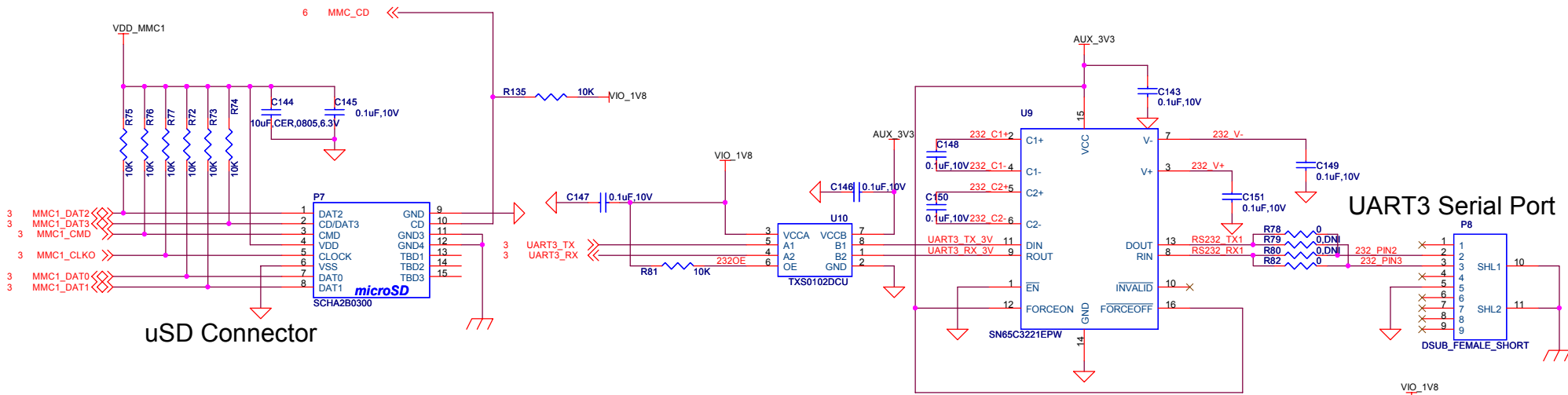

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Title		
BeagleBoard-xM PMIC, AUDIO JACKS, CLOCKS		
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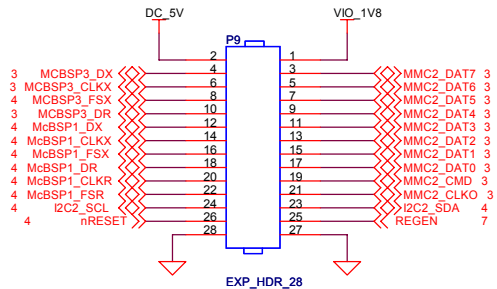
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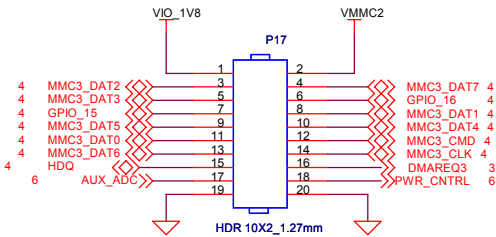


uSD Connector

UART3 Serial Port

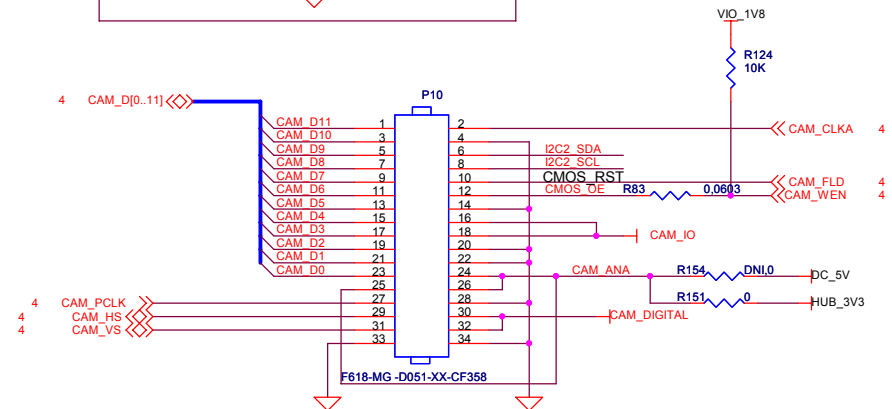
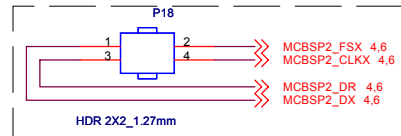


Expansion Connector



AUX ACCESS HEADER

AUDIO ACCESS HEADER



Camera Connector

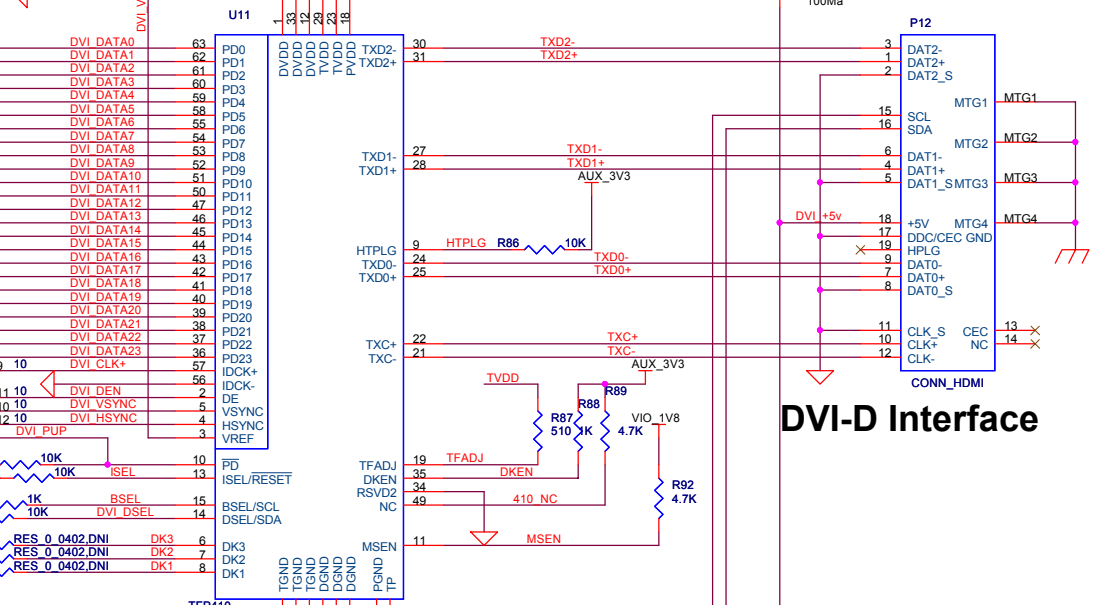
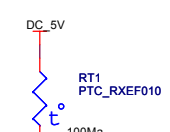
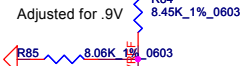
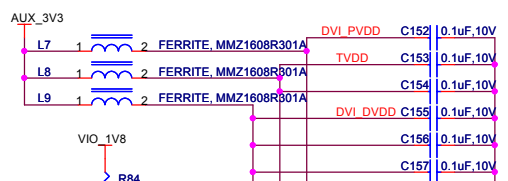
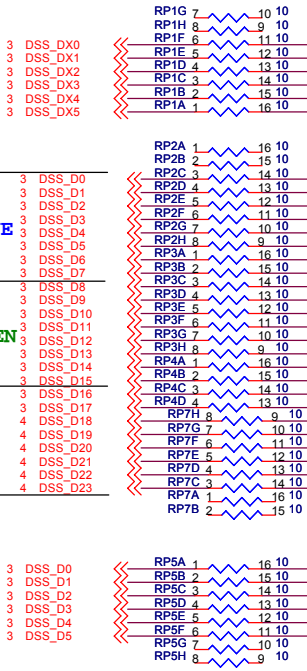


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24BIT MODE ONLY

REFER TO SECTION 15.2 OF THE PROCESSOR TECHNICAL REFERENCE MANUAL FOR OTHER MODES

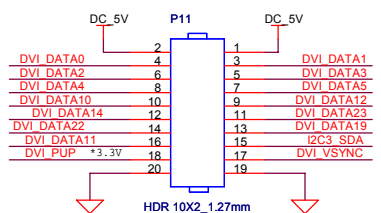
On the DM/AM3730, there is a shift in the location of DSS0-5 and DSS18-23 that is required in order to run at the maximum frequency on the DSS interface. The naming of the signals take into account this shift. If there is a need to revert back to the standard configuration, remove RP7 and RP2 and install RP1 and RP5.



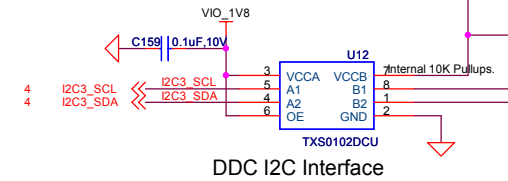
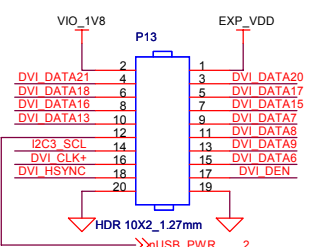
DVI-D Interface

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

Lifted pin 4 to disable.



LCD RGB Interface



DDC I2C Interface



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BeagleBoard-xM DVI-D, LCD EXPANSION		
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