REV	DESCRIPTION	DATE	BY
A	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 rmanagement capabilities to allow shut dowm 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.	8/31/09	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. Disables HUB reset due to a timing issue with SW. When active the LAN9514 would not work correctly and the Ethernet function is broken.	5/13/10	GC
A2	1. Changed C9 to DNI and changed R34, 4.7K to installed to enable the S-Video operation.	6/15/10	GC
A3	NO MAJOR FEATURE CHANGES. 1. PCB Layout changes. 2. Added R157 in series with MMC2_CLK. 3. Added R158 to isolate shunt FET to reduce power in DC mode. 4. Added optional pullup resistors on I2C2_SCL and I2C_SDA into the layout. 5. Moved DVI_PUP signal to TPS65950. Previous location could not be used due to a conflict with the MMC function on the pins.	6/23/10	GC

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beagleboard.org

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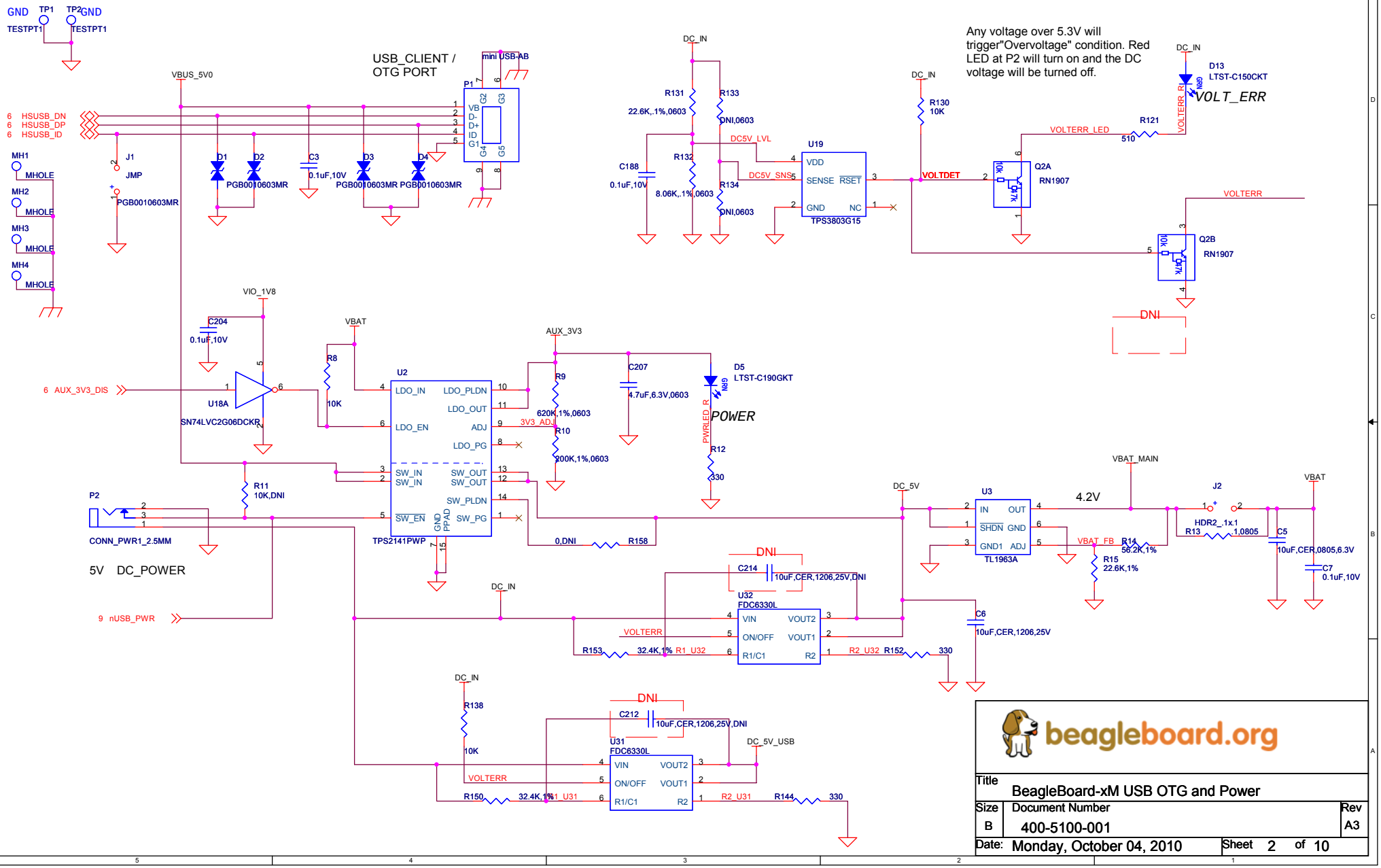
GND
TP1
TESTPT1
TP2
GND
TESTPT1
USB_CLIENT / OTG PORT
mini USB-AB
P1
VBUS_5V0
6 HSUSB_DN
6 HSUSB_DP
6 HSUSB_ID
MH1
MHOLE
MH2
MHOLE
MH3
MHOLE
MH4
MHOLE
J1
JMP
PGB0010603MR
D1
PGB0010603MR
D2
C3
0.1uF,10V
D3
PGB0010603MR
D4
PGB0010603MR
DC_IN
R131
22.6K,.1%,0603
R133
DNI,0603
DC5V_LVL
C188
0.1uF,10V
R132
8.06K,.1%,0603
R134
DNI,0603
DC5V_SNS
U19
VDD
SENSE
RSET
GND
NC
TPS3803G15
R130
10K
VOLTDET
Q2A
RN1907
VOLTERR_LED
R121
510
D13
LTST-C150CKT
VOLT_ERR
Any voltage over 5.3V will trigger"Overvoltage" condition. Red LED at P2 will turn on and the DC voltage will be turned off.
VOLTERR
Q2B
RN1907
DNI
VIO_1V8
C204
0.1uF,10V
VBAT
R8
10K
6 AUX_3V3_DIS
U18A
SN74LVC2G06DCKR
U2
LDO_IN
LDO_PLDN
LDO_OUT
LDO_EN
ADJ
LDO_PG
SW_IN
SW_IN
SW_OUT
SW_OUT
SW_PLDN
SW_EN
GND PPAD
SW_PG
TPS2141PWP
AUX_3V3
R9
620K,1%,0603
3V3_ADJ
R10
200K,1%,0603
C207
4.7uF,6.3V,0603
D5
LTST-C190GKT
POWER
PWRLED_R
R12
330
R11
10K,DNI
P2
CONN_PWR1_2.5MM
5V DC_POWER
9 nUSB_PWR
0,DNI
R158
DC_5V
U3
IN
OUT
SHDN
GND
GND1
ADJ
TL1963A
4.2V
VBAT_MAIN
VBAT_FB
R14
56.2K,1%
R15
22.6K,1%
J2
HDR2_.1x.1
R13
1.0805
C5
10uF,CER,0805,6.3V
C7
0.1uF,10V
C6
10uF,CER,1206,25V
DNI
C214
10uF,CER,1206,25V,DNI
U32
FDC6330L
VIN
VOUT2
ON/OFF
VOUT1
R1/C1
R2
VOLTERR
R153
32.4K,1%
R1_U32
R2_U32
R152
330
DC_IN
R138
10K
DNI
C212
10uF,CER,1206,25V,DNI
U31
FDC6330L
DC_5V_USB
VOLTERR
R150
32.4K,1%
R1_U31
R2_U31
R144
330
beagleboard.org
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BeagleBoard-xM USB OTG and Power
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B
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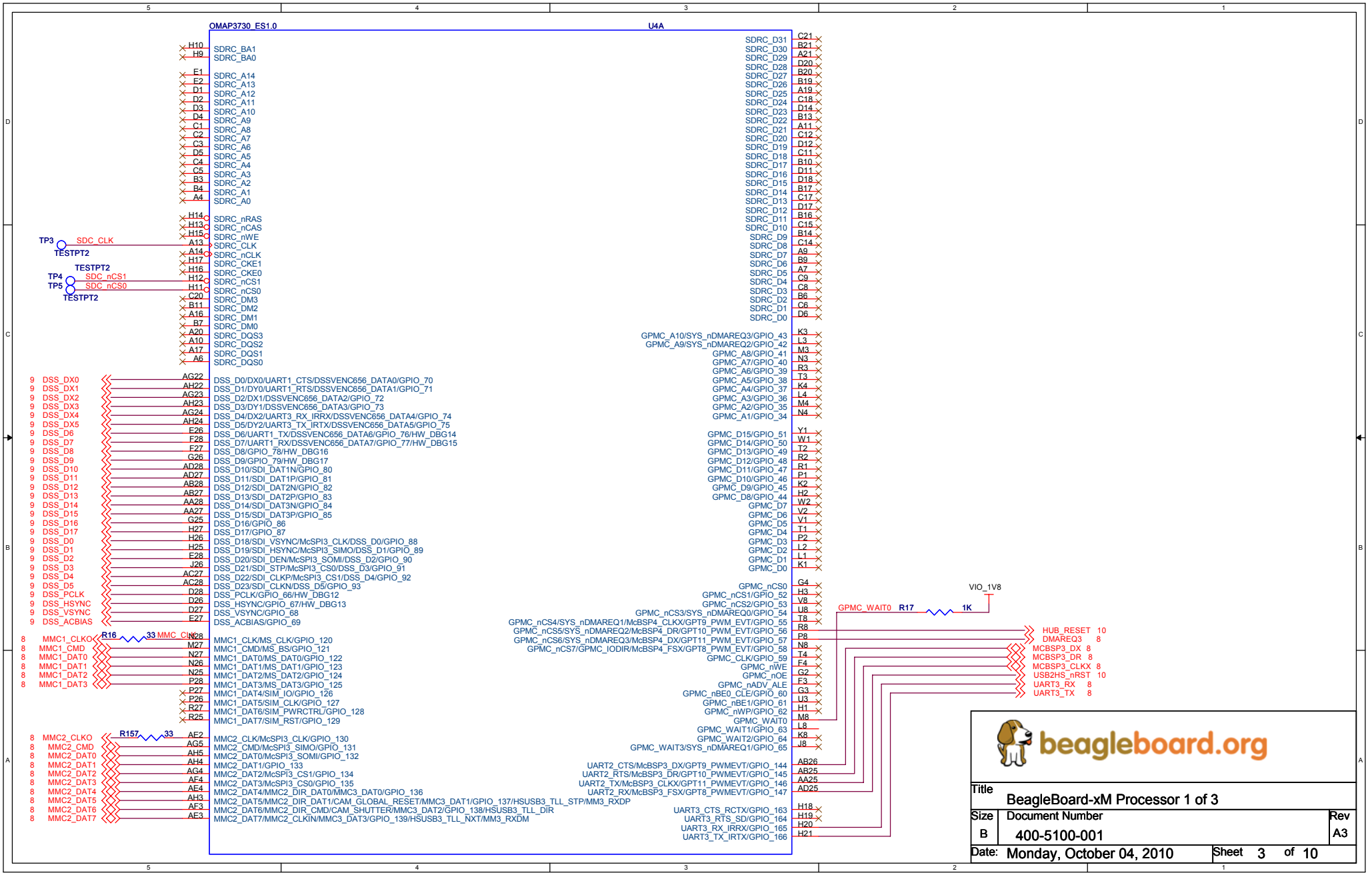
OMAP3730_ES1.0
U4A
SDRC_BA1
SDRC_BA0
SDRC_A14
SDRC_A13
SDRC_A12
SDRC_A11
SDRC_A10
SDRC_A9
SDRC_A8
SDRC_A7
SDRC_A6
SDRC_A5
SDRC_A4
SDRC_A3
SDRC_A2
SDRC_A1
SDRC_A0
SDRC_nRAS
SDRC_nCAS
SDRC_nWE
SDRC_CLK
SDRC_nCLK
SDRC_CKE1
SDRC_CKE0
SDRC_nCS1
SDRC_nCS0
SDRC_DM3
SDRC_DM2
SDRC_DM1
SDRC_DM0
SDRC_DQS3
SDRC_DQS2
SDRC_DQS1
SDRC_DQS0
TP3
SDC_CLK
TESTPT2
TP4
SDC_nCS1
TP5
SDC_nCS0
TESTPT2
TESTPT2
DSS_D0/DX0/UART1_CTS/DSSVENC656_DATA0/GPIO_70
DSS_D1/DY0/UART1_RTS/DSSVENC656_DATA1/GPIO_71
DSS_D2/DX1/DSSVENC656_DATA2/GPIO_72
DSS_D3/DY1/DSSVENC656_DATA3/GPIO_73
DSS_D4/DX2/UART3_RX_IRRX/DSSVENC656_DATA4/GPIO_74
DSS_D5/DY2/UART3_TX_IRTX/DSSVENC656_DATA5/GPIO_75
DSS_D6/UART1_TX/DSSVENC656_DATA6/GPIO_76/HW_DBG14
DSS_D7/UART1_RX/DSSVENC656_DATA7/GPIO_77/HW_DBG15
DSS_D8/GPIO_78/HW_DBG16
DSS_D9/GPIO_79/HW_DBG17
DSS_D10/SDI_DAT1N/GPIO_80
DSS_D11/SDI_DAT1P/GPIO_81
DSS_D12/SDI_DAT2N/GPIO_82
DSS_D13/SDI_DAT2P/GPIO_83
DSS_D14/SDI_DAT3N/GPIO_84
DSS_D15/SDI_DAT3P/GPIO_85
DSS_D16/GPIO_86
DSS_D17/GPIO_87
DSS_D18/SDI_VSYNC/McSPI3_CLK/DSS_D0/GPIO_88
DSS_D19/SDI_HSYNC/McSPI3_SIMO/DSS_D1/GPIO_89
DSS_D20/SDI_DEN/McSPI3_SOMI/DSS_D2/GPIO_90
DSS_D21/SDI_STP/McSPI3_CS0/DSS_D3/GPIO_91
DSS_D22/SDI_CLKP/McSPI3_CS1/DSS_D4/GPIO_92
DSS_D23/SDI_CLKN/DSS_D5/GPIO_93
DSS_PCLK/GPIO_66/HW_DBG12
DSS_HSYNC/GPIO_67/HW_DBG13
DSS_VSYNC/GPIO_68
DSS_ACBIAS/GPIO_69
R16
33
MMC_CLK
MMC1_CLK/MS_CLK/GPIO_120
MMC1_CMD/MS_BS/GPIO_121
MMC1_DAT0/MS_DAT0/GPIO_122
MMC1_DAT1/MS_DAT1/GPIO_123
MMC1_DAT2/MS_DAT2/GPIO_124
MMC1_DAT3/MS_DAT3/GPIO_125
MMC1_DAT4/SIM_IO/GPIO_126
MMC1_DAT5/SIM_CLK/GPIO_127
MMC1_DAT6/SIM_PWRCTRL/GPIO_128
MMC1_DAT7/SIM_RST/GPIO_129
R157
33
MMC2_CLK/McSPI3_CLK/GPIO_130
MMC2_CMD/McSPI3_SIMO/GPIO_131
MMC2_DAT0/McSPI3_SOMI/GPIO_132
MMC2_DAT1/GPIO_133
MMC2_DAT2/McSPI3_CS1/GPIO_134
MMC2_DAT3/McSPI3_CS0/GPIO_135
MMC2_DAT4/MMC2_DIR_DAT0/MMC3_DAT0/GPIO_136
MMC2_DAT5/MMC2_DIR_DAT1/CAM_GLOBAL_RESET/MMC3_DAT1/GPIO_137/HSUSB3_TLL_STP/MM3_RXDP
MMC2_DAT6/MMC2_DIR_CMD/CAM_SHUTTER/MMC3_DAT2/GPIO_138/HSUSB3_TLL_DIR
MMC2_DAT7/MMC2_CLKIN/MMC3_DAT3/GPIO_139/HSUSB3_TLL_NXT/MM3_RXDM
SDRC_D31
SDRC_D30
SDRC_D29
SDRC_D28
SDRC_D27
SDRC_D26
SDRC_D25
SDRC_D24
SDRC_D23
SDRC_D22
SDRC_D21
SDRC_D20
SDRC_D19
SDRC_D18
SDRC_D17
SDRC_D16
SDRC_D15
SDRC_D14
SDRC_D13
SDRC_D12
SDRC_D11
SDRC_D10
SDRC_D9
SDRC_D8
SDRC_D7
SDRC_D6
SDRC_D5
SDRC_D4
SDRC_D3
SDRC_D2
SDRC_D1
SDRC_D0
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_PWMEVT/GPIO_144
UART2_RTS/McBSP3_DR/GPT10_PWMEVT/GPIO_145
UART2_TX/McBSP3_CLKX/GPT11_PWMEVT/GPIO_146
UART2_RX/McBSP3_FSX/GPT8_PWMEVT/GPIO_147
UART3_CTS_RCTX/GPIO_163
UART3_RTS_SD/GPIO_164
UART3_RX_IRRX/GPIO_165
UART3_TX_IRTX/GPIO_166
VIO_1V8
GPMC_WAIT0
R17
1K
HUB_RESET
DMAREQ3
MCBSP3_DX
MCBSP3_DR
MCBSP3_CLKX
USB2HS_nRST
UART3_RX
UART3_TX
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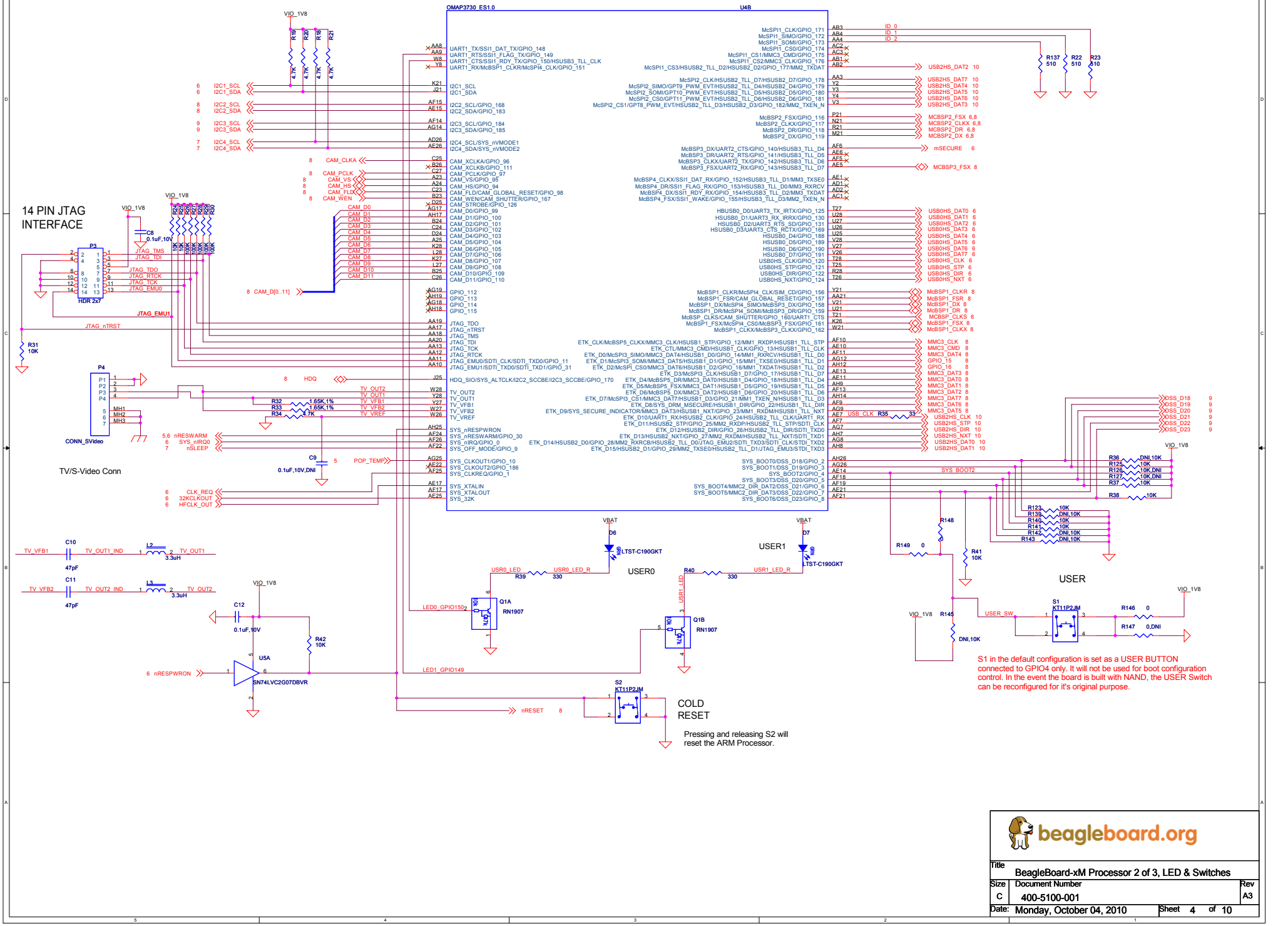
14 PIN JTAG INTERFACE
HDR 2x7
TV/S-Video Conn
CONN_SVideo
OMAP3730_ES1.0
U4B
COLD RESET
Pressing and releasing S2 will reset the ARM Processor.
USER
USER0
USER1
S1 in the default configuration is set as a USER BUTTON connected to GPIO4 only. It will not be used for boot configuration control. In the event the board is built with NAND, the USER Switch can be reconfigured for it's original purpose.
beagleboard.org
Title
BeagleBoard-xM Processor 2 of 3, LED & Switches
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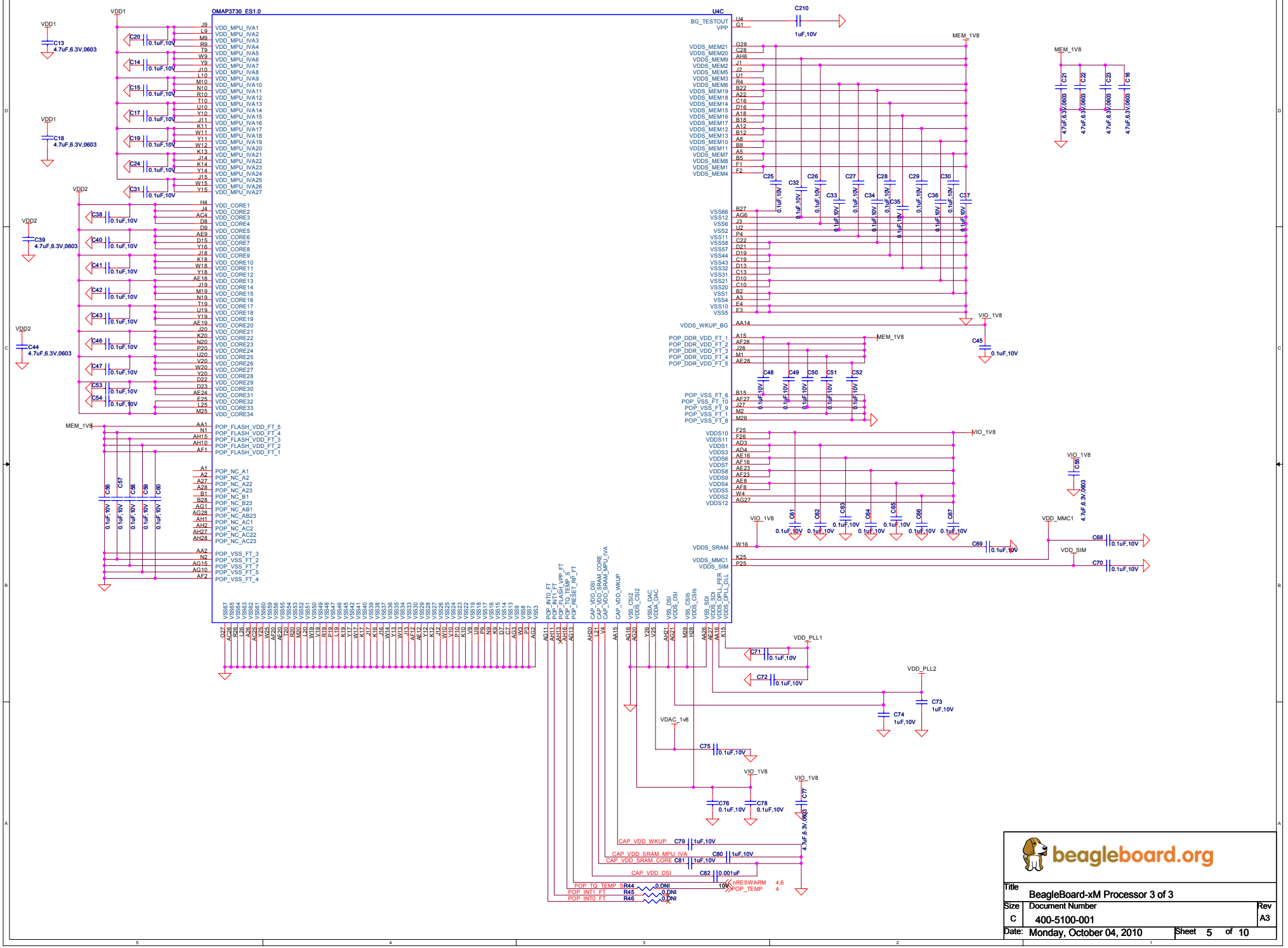
OMAP3730_ES1.0
U4C
VDD1
VDD2
MEM_1V8
VIO_1V8
VDD_PLL1
VDD_PLL2
VDAC_1v8
VDD_MMC1
VDD_SIM
beagleboard.org
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BeagleBoard-xM Processor 3 of 3
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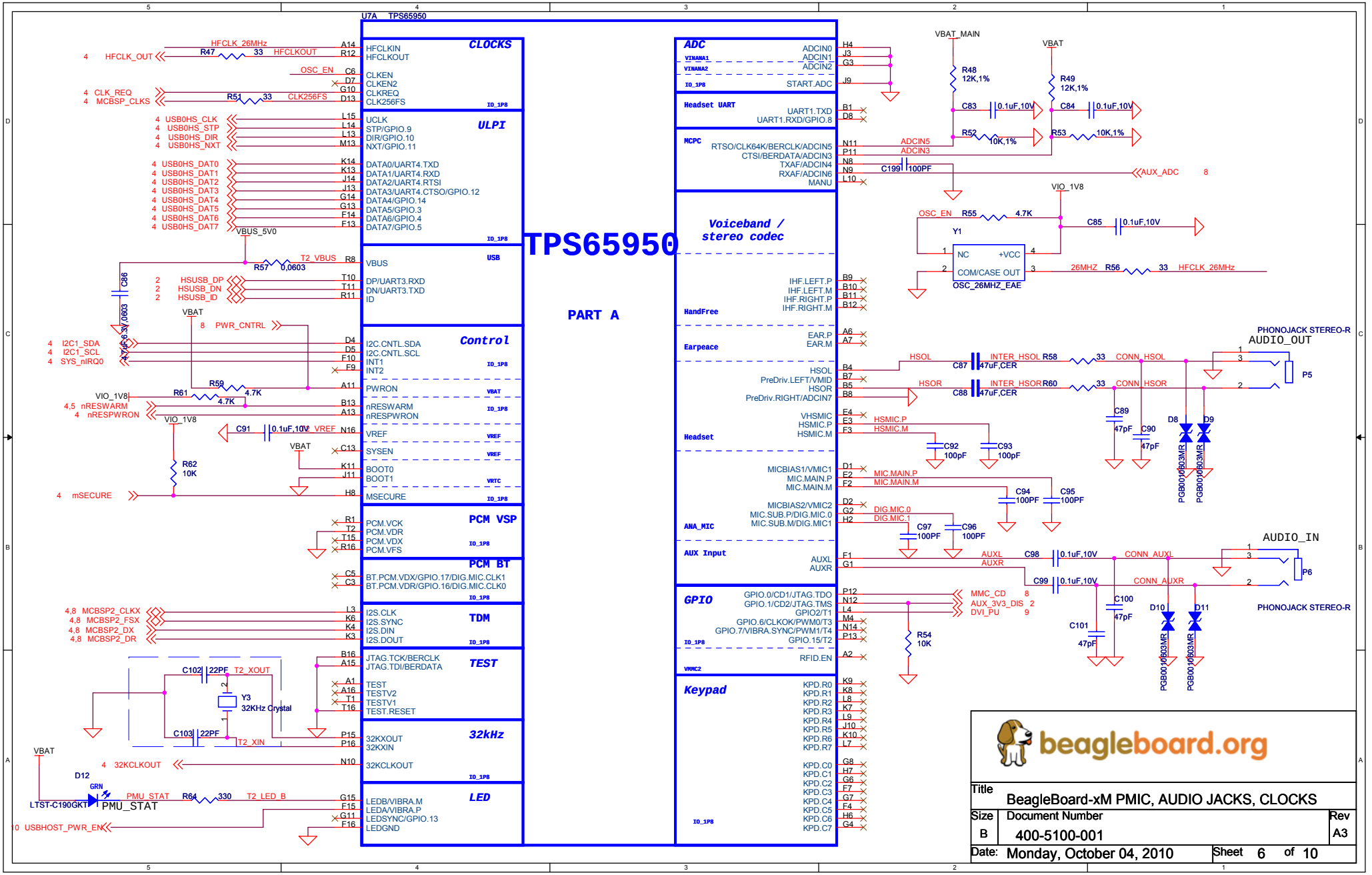
U7A TPS65950
TPS65950
PART A
CLOCKS
HFCLKIN
HFCLKOUT
CLKEN
CLKEN2
CLKREQ
CLK256FS
ULPI
UCLK
STP/GPIO.9
DIR/GPIO.10
NXT/GPIO.11
DATA0/UART4.TXD
DATA1/UART4.RXD
DATA2/UART4.RTSI
DATA3/UART4.CTSO/GPIO.12
DATA4/GPIO.14
DATA5/GPIO.3
DATA6/GPIO.4
DATA7/GPIO.5
USB
VBUS
DP/UART3.RXD
DN/UART3.TXD
ID
Control
I2C.CNTL.SDA
I2C.CNTL.SCL
INT1
INT2
PWRON
nRESWARM
nRESPWRON
VREF
SYSEN
BOOT0
BOOT1
MSECURE
PCM VSP
PCM.VCK
PCM.VDR
PCM.VDX
PCM.VFS
PCM BT
BT.PCM.VDX/GPIO.17/DIG.MIC.CLK1
BT.PCM.VDR/GPIO.16/DIG.MIC.CLK0
TDM
I2S.CLK
I2S.SYNC
I2S.DIN
I2S.DOUT
TEST
JTAG.TCK/BERCLK
JTAG.TDI/BERDATA
TEST
TESTV2
TESTV1
TEST.RESET
32kHz
32KXOUT
32KXIN
32KCLKOUT
LED
LEDB/VIBRA.M
LEDA/VIBRA.P
LEDSYNC/GPIO.13
LEDGND
ADC
ADCIN0
ADCIN1
ADCIN2
START.ADC
Headset UART
UART1.TXD
UART1.RXD/GPIO.8
MCPC
RTSO/CLK64K/BERCLK/ADCIN5
CTSI/BERDATA/ADCIN3
TXAF/ADCIN4
RXAF/ADCIN6
MANU
Voiceband / stereo codec
HandFree
IHF.LEFT.P
IHF.LEFT.M
IHF.RIGHT.P
IHF.RIGHT.M
Earpeace
EAR.P
EAR.M
Headset
HSOL
PreDriv.LEFT/VMID
HSOR
PreDriv.RIGHT/ADCIN7
VHSMIC
HSMIC.P
HSMIC.M
ANA_MIC
MICBIAS1/VMIC1
MIC.MAIN.P
MIC.MAIN.M
MICBIAS2/VMIC2
MIC.SUB.P/DIG.MIC.0
MIC.SUB.M/DIG.MIC1
AUX Input
AUXL
AUXR
GPIO
GPIO.0/CD1/JTAG.TDO
GPIO.1/CD2/JTAG.TMS
GPIO2/T1
GPIO.6/CLKOK/PWM0/T3
GPIO.7/VIBRA.SYNC/PWM1/T4
GPIO.15/T2
RFID.EN
Keypad
KPD.R0
KPD.R1
KPD.R2
KPD.R3
KPD.R4
KPD.R5
KPD.R6
KPD.R7
KPD.C0
KPD.C1
KPD.C2
KPD.C3
KPD.C4
KPD.C5
KPD.C6
KPD.C7
HFCLK_26MHz
HFCLK_OUT
HFCLKOUT
OSC_EN
CLK_REQ
MCBSP_CLKS
CLK256FS
USB0HS_CLK
USB0HS_STP
USB0HS_DIR
USB0HS_NXT
USB0HS_DAT0
USB0HS_DAT1
USB0HS_DAT2
USB0HS_DAT3
USB0HS_DAT4
USB0HS_DAT5
USB0HS_DAT6
USB0HS_DAT7
VBUS_5V0
T2_VBUS
HSUSB_DP
HSUSB_DN
HSUSB_ID
VBAT
PWR_CNTRL
I2C1_SDA
I2C1_SCL
SYS_nIRQ0
VIO_1V8
nRESWARM
nRESPWRON
VREF
mSECURE
MCBSP2_CLKX
MCBSP2_FSX
MCBSP2_DX
MCBSP2_DR
32KCLKOUT
PMU_STAT
LTST-C190GKT
USBHOST_PWR_EN
VBAT_MAIN
VBAT
ADCIN5
ADCIN3
AUX_ADC
OSC_EN
Y1
NC
+VCC
COM/CASE OUT
OSC_26MHZ_EAE
26MHZ
HFCLK_26MHz
PHONOJACK STEREO-R
AUDIO_OUT
HSOL
HSOR
INTER_HSOL
INTER_HSOR
CONN_HSOL
CONN_HSOR
HSMIC.P
HSMIC.M
MIC.MAIN.P
MIC.MAIN.M
DIG.MIC.0
DIG.MIC.1
AUXL
AUXR
CONN_AUXL
CONN_AUXR
AUDIO_IN
MMC_CD
AUX_3V3_DIS
DVI_PU
PGB0010603MR
32KHz Crystal
beagleboard.org
Title
BeagleBoard-xM PMIC, AUDIO JACKS, CLOCKS
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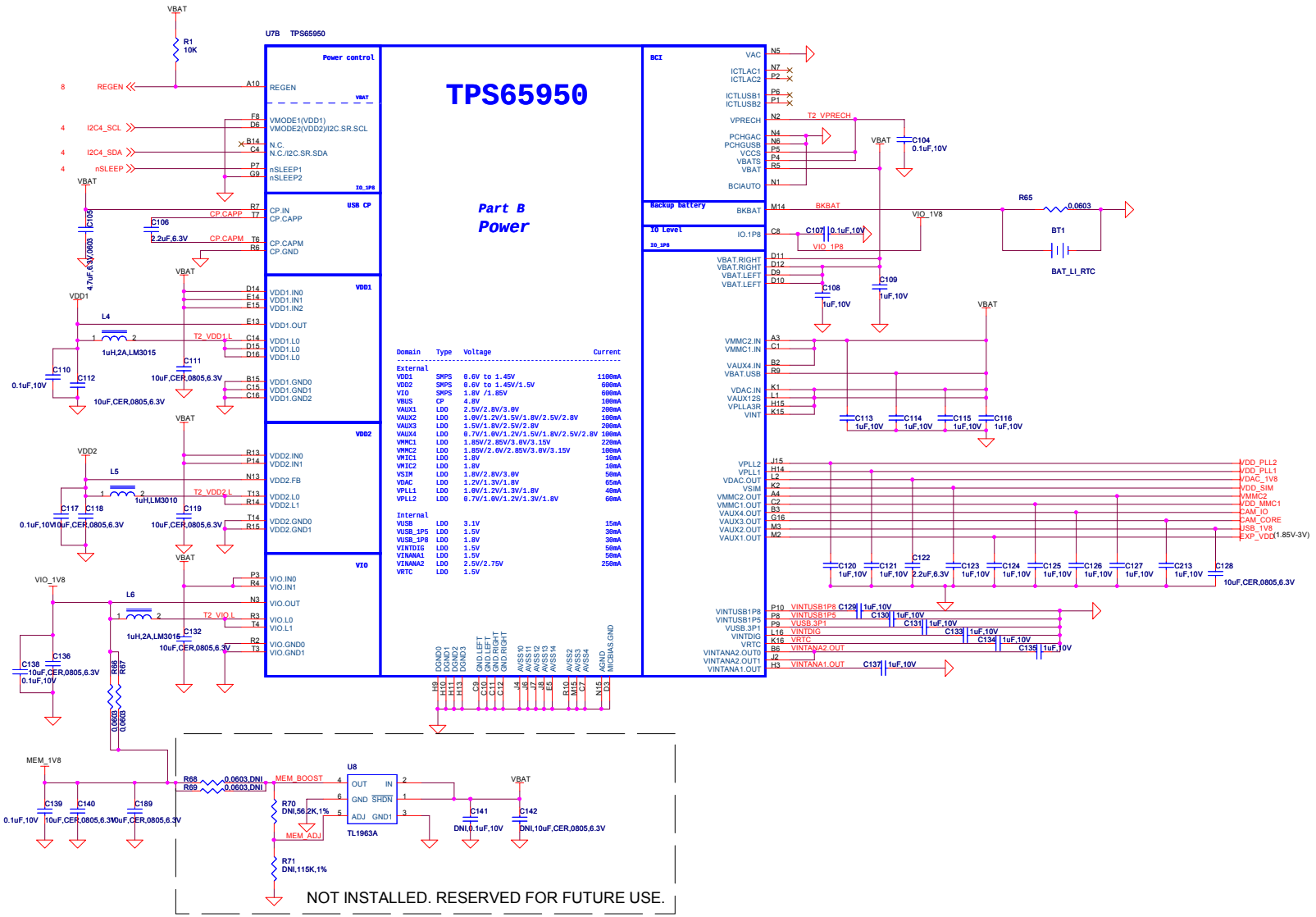
TPS65950
Part B
Power
U7B TPS65950
Power control
USB CP
VDD1
VDD2
VIO
BCI
Backup battery
IO Level
Domain Type Voltage Current
External
VDD1 SMPS 0.6V to 1.45V 1100mA
VDD2 SMPS 0.6V to 1.45V/1.5V 600mA
VIO SMPS 1.8V /1.85V 600mA
VBUS CP 4.8V 100mA
VAUX1 LDO 2.5V/2.8V/3.0V 200mA
VAUX2 LDO 1.0V/1.2V/1.5V/1.8V/2.5V/2.8V 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
VMIC1 LDO 1.8V 10mA
VMIC2 LDO 1.8V 10mA
VSIM LDO 1.8V/2.8V/3.0V 50mA
VDAC LDO 1.2V/1.3V/1.8V 65mA
VPLL1 LDO 1.0V/1.2V/1.3V/1.8V 40mA
VPLL2 LDO 0.7V/1.0V/1.2V/1.3V/1.8V 60mA
Internal
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
VRTC LDO 1.5V
NOT INSTALLED. RESERVED FOR FUTURE USE.
TL1963A
BAT_LI_RTC
beagleboard.org
Title
BeagleBoard-xM PMIC POWER RAILS
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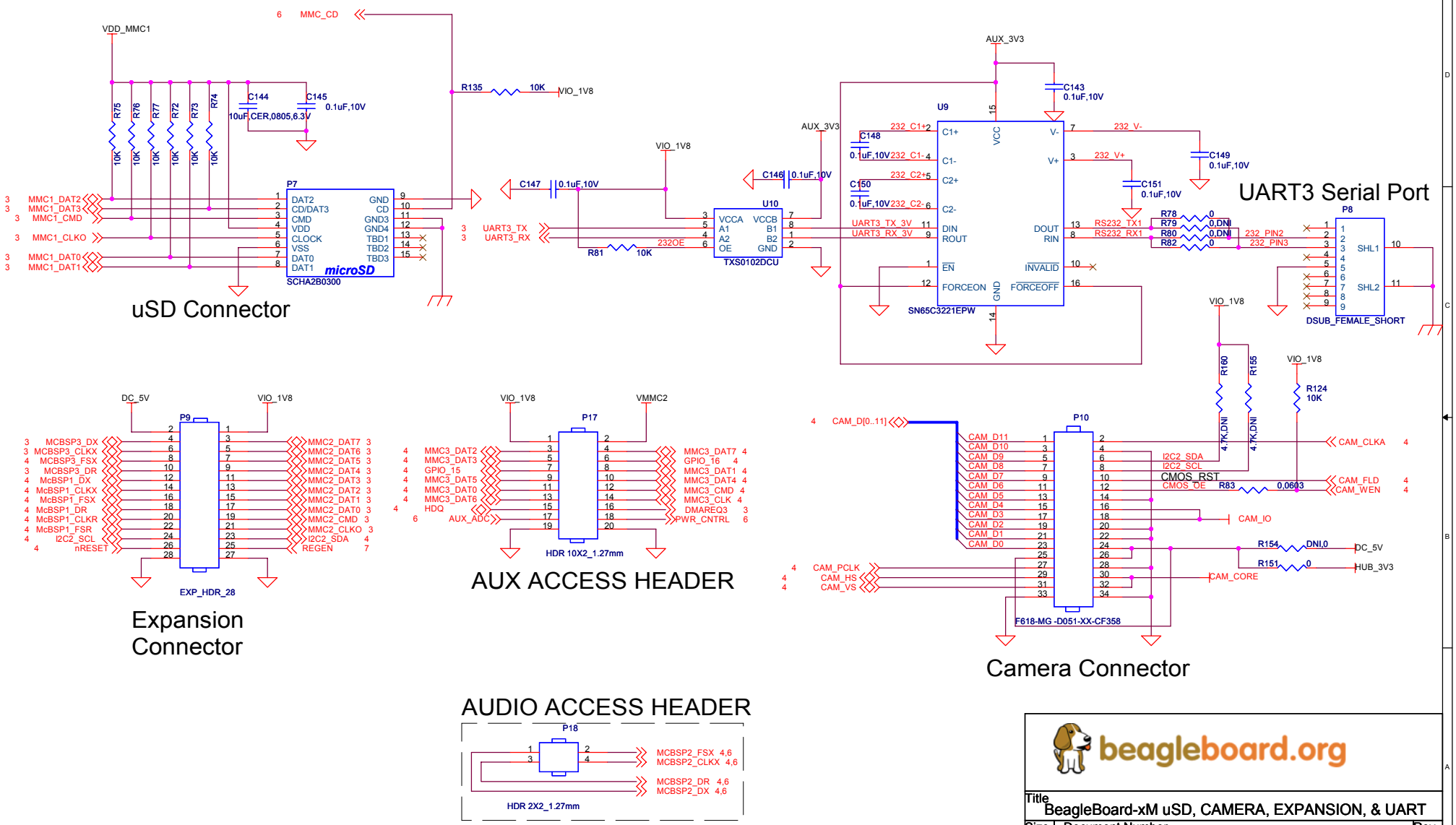

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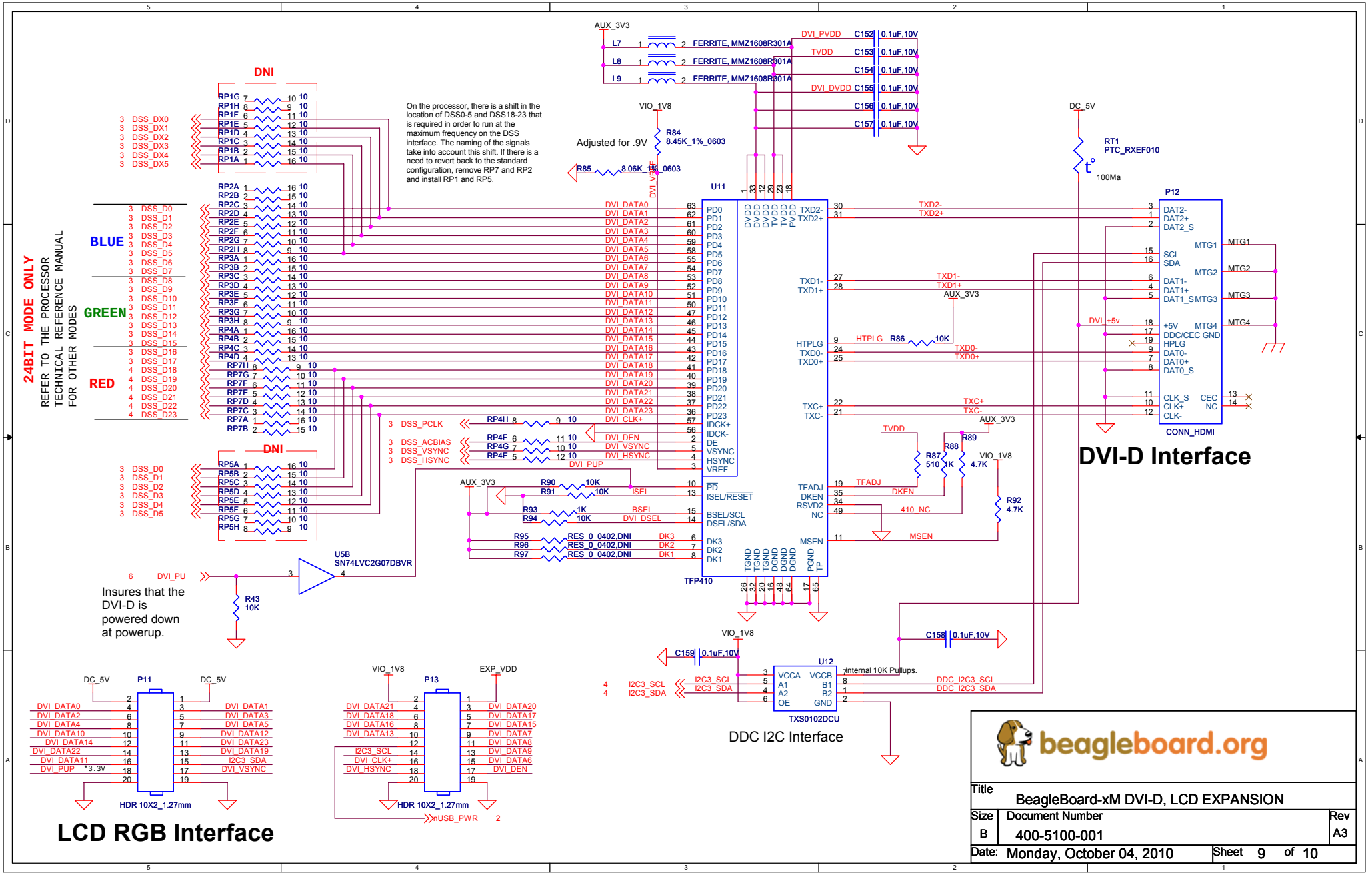
24BIT MODE ONLY
REFER TO THE PROCESSOR TECHNICAL REFERENCE MANUAL FOR OTHER MODES
BLUE
GREEN
RED
DNI
On the processor, there is a shift in the location of DSS0-5 and DSS18-23 that is required in order to run at the maximum frequency on the DSS interface. The naming of the signals take into account this shift. If there is a need to revert back to the standard configuration, remove RP7 and RP2 and install RP1 and RP5.
Adjusted for .9V
Insures that the DVI-D is powered down at powerup.
U11
TFP410
U5B
SN74LVC2G07DBVR
U12
TXS0102DCU
Internal 10K Pullups.
DDC I2C Interface
DVI-D Interface
CONN_HDMI
LCD RGB Interface
HDR 10X2_1.27mm
Title
BeagleBoard-xM DVI-D, LCD EXPANSION
Size
B
Document Number
400-5100-001
Rev
A3
Date:
Monday, October 04, 2010
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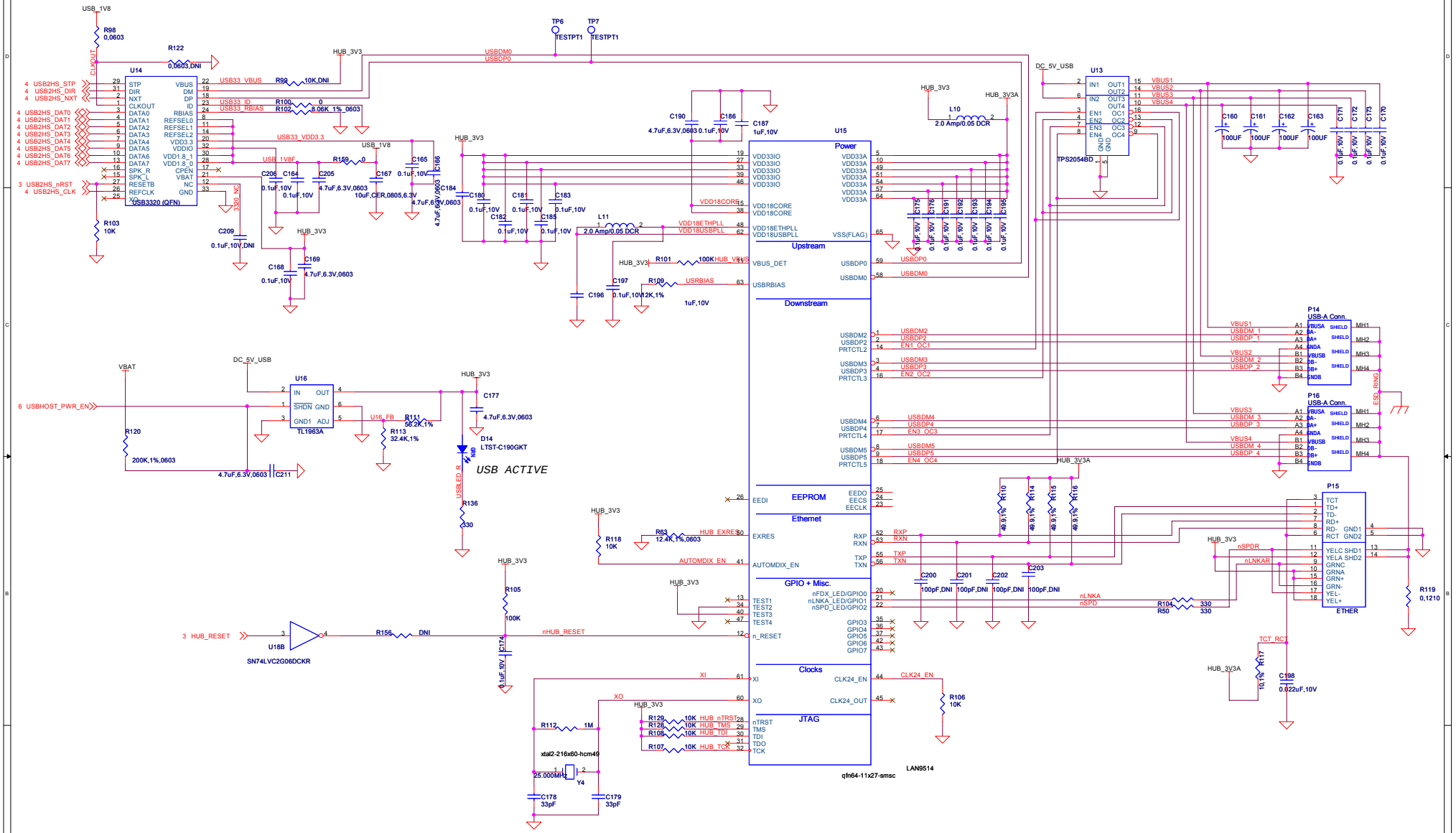
USB_1V8
R98 0,0603
R122 0,0603,DNI
CLKOUT
U14
USB3320 (QFN)
STP
DIR
NXT
CLKOUT
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
SPK_R
SPK_L
RESETB
REFCLK
VBUS
DM
DP
ID
RBIAS
REFSEL0
REFSEL1
REFSEL2
VDD3.3
VDDIO
VDD1.8_1
VDD1.8_0
CPEN
VBAT
NC
GND
USB2HS_STP
USB2HS_DIR
USB2HS_NXT
USB2HS_DAT0
USB2HS_DAT1
USB2HS_DAT2
USB2HS_DAT3
USB2HS_DAT4
USB2HS_DAT5
USB2HS_DAT6
USB2HS_DAT7
USB2HS_nRST
USB2HS_CLK
USB33_VBUS
USB33_ID
USB33_RBIAS
USB33_VDD3.3
USB_1V8F
R99 10K,DNI
R100 0
R102 8.06K,1%,0603
R150 0
C165 0.1uF,10V
C166 4.7uF,6.3V,0603
C184 4.7uF,6.3V,0603
C206 0.1uF,10V
C164 0.1uF,10V
C205 4.7uF,6.3V,0603
C167 10uF,CER,0805,6.3V
C209 0.1uF,10V,DNI
C168 0.1uF,10V
C169 4.7uF,6.3V,0603
R103 10K
3300_NC
HUB_3V3
TP6 TESTPT1
TP7 TESTPT1
USBDM0
USBDP0
C190 4.7uF,6.3V,0603
C186 0.1uF,10V
C187 1uF,10V
U15
Power
VDD33IO
VDD18CORE
VDD18ETHPLL
VDD18USBPLL
VSS(FLAG)
VDD33A
Upstream
VBUS_DET
USBDP0
USBDM0
USBRBIAS
C180 0.1uF,10V
C181 0.1uF,10V
C183 0.1uF,10V
C182 0.1uF,10V
C185 0.1uF,10V
L11 2.0 Amp/0.05 DCR
C196 1uF,10V
C197 0.1uF,10V
R101 100K
HUB_VBUS
R109 12K,1%
USRBIAS
Downstream
USBDM2
USBDP2
EN1_OC1
USBDM3
USBDP3
EN2_OC2
USBDM4
USBDP4
EN3_OC3
USBDM5
USBDP5
EN4_OC4
PRTCTL2
PRTCTL3
PRTCTL4
PRTCTL5
EEPROM
EEDI
EEDO
EECS
EECLK
Ethernet
EXRES
HUB_EXRES
R63 12.4K,1%,0603
R118 10K
RXP
RXN
TXP
TXN
AUTOMDIX_EN
GPIO + Misc.
nFDX_LED/GPIO0
nLNKA_LED/GPIO1
nSPD_LED/GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
TEST1
TEST2
TEST3
TEST4
n_RESET
Clocks
XI
XO
CLK24_EN
CLK24_OUT
JTAG
nTRST
TMS
TDI
TDO
TCK
R129 10K,HUB_nTRST
R128 10K,HUB_TMS
R108 10K,HUB_TDI
R107 10K,HUB_TCK
R106 10K
R112 1M
xtal2-216x60-hcm49
25.000MHz
Y4
C178 33pF
C179 33pF
LAN9514
qfn64-11x27-smsc
DC_5V_USB
U13
TPS2054BD
L10 2.0 Amp/0.05 DCR
C160 100UF
C161 100UF
C162 100UF
C163 100UF
C171 0.1uF,10V
C172 0.1uF,10V
C173 0.1uF,10V
C170 0.1uF,10V
C175 0.1uF,10V
C176 0.1uF,10V
C191 0.1uF,10V
C192 0.1uF,10V
C193 0.1uF,10V
C194 0.1uF,10V
C195 0.1uF,10V
P14
USB-A Conn.
P16
USB-A Conn.
ESD_RING
VBUS1
VBUS2
VBUS3
VBUS4
USBDM_1
USBDP_1
USBDM_2
USBDP_2
USBDM_3
USBDP_3
USBDM_4
USBDP_4
VBUSA
VBUSB
DA-
DA+
DB-
DB+
GNDA
GNDB
SHIELD
MH1
MH2
MH3
MH4
P15
ETHER
TCT
TD+
TD-
RD+
RD-
RCT
GND1
GND2
YELC SHD1
YELA SHD2
GRNC
GRNA
GRN+
GRN-
YEL-
YEL+
R10 49.9,1%
R14 49.9,1%
R15 49.9,1%
R16 49.9,1%
C200 100pF,DNI
C201 100pF,DNI
C202 100pF,DNI
C203 100pF,DNI
nLNKA
nSPD
R104 330
R50 330
nSPDR
nLNKAR
R119 0,1210
TCT_RC
R117 10,1%
C198 0.022uF,10V
VBAT
DC_5V_USB
U16
TL1963A
IN
OUT
SHDN
GND
GND1
ADJ
6 USBHOST_PWR_EN
R120 200K,1%,0603
C211 4.7uF,6.3V,0603
U16_FB
R111 56.2K,1%
R113 32.4K,1%
C177 4.7uF,6.3V,0603
D14 LTST-C190GKT
USB ACTIVE
USBLED_R
R136 330
3 HUB_RESET
U18B
SN74LVC2G06DCKR
R156 DNI
R105 100K
C174 0.1uF,10V
nHUB_RESET
beagleboard.org
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BeagleBoard-xM USB HOST, HUB, ETHERNET
Size C
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