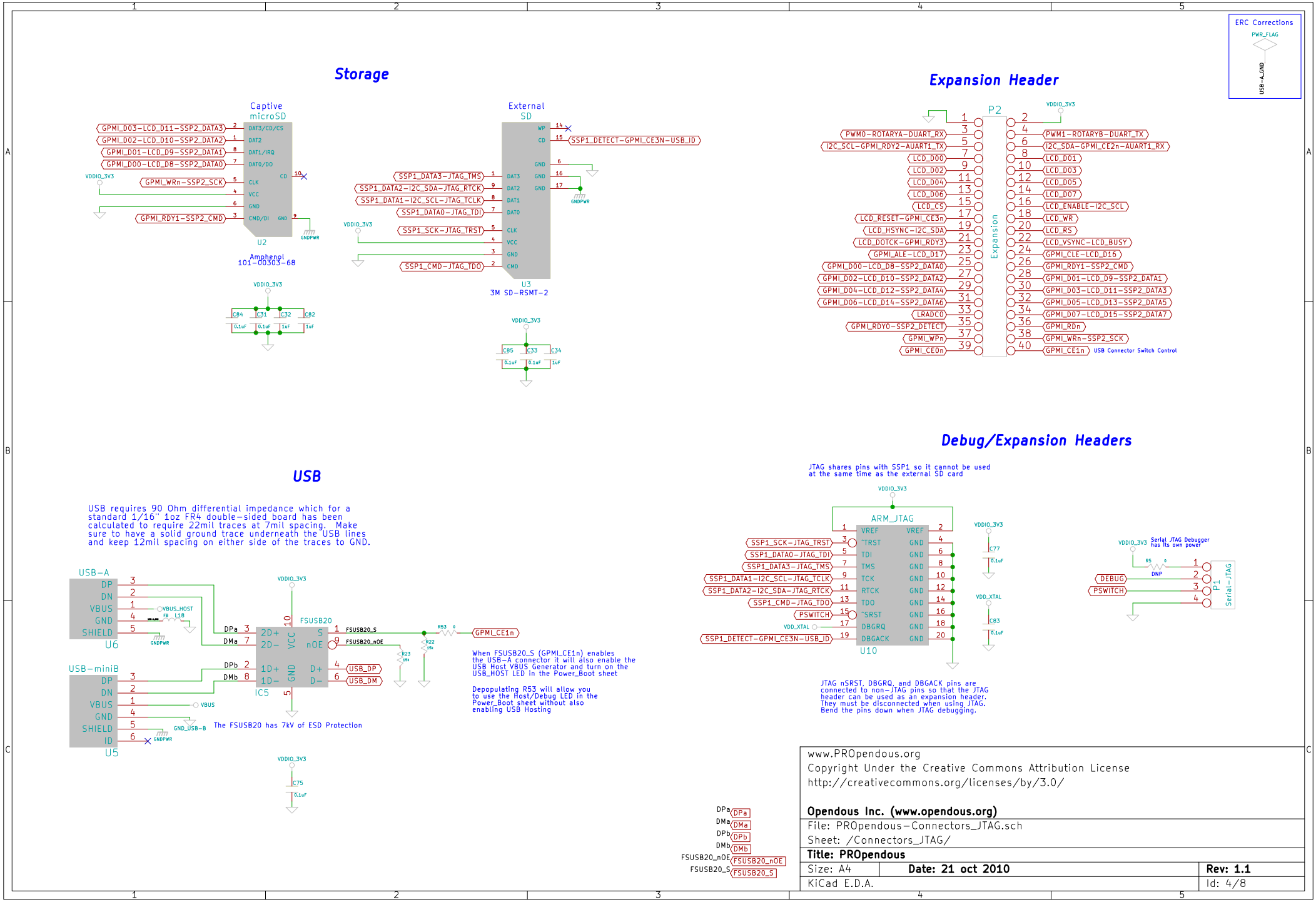
ERC Corrections
PWR_FLAG
USB-A_GND
Storage
Captive microSD
GPMI_D03-LCD_D11-SSP2_DATA3
GPMI_D02-LCD_D10-SSP2_DATA2
GPMI_D01-LCD_D9-SSP2_DATA1
GPMI_D00-LCD_D8-SSP2_DATA0
GPMI_WRn-SSP2_SCK
GPMI_RDY1-SSP2_CMD
DAT3/CD/CS
DAT2
DAT1/IRQ
DAT0/DO
CLK
VCC
GND
CMD/DI
CD
VDDIO_3V3
GNDPWR
U2
Amphenol
101-00303-68
External SD
SSP1_DETECT-GPMI_CE3N-USB_ID
SSP1_DATA3-JTAG_TMS
SSP1_DATA2-I2C_SDA-JTAG_RTCK
SSP1_DATA1-I2C_SCL-JTAG_TCLK
SSP1_DATA0-JTAG_TDI
SSP1_SCK-JTAG_TRST
SSP1_CMD-JTAG_TDO
WP
CD
DAT3
DAT2
DAT1
DAT0
CLK
VCC
GND
CMD
U3
3M SD-RSMT-2
C84 C31 C32 C82
0.1uF 0.1uF 1uF 1uF
C85 C33 C34
0.1uF 0.1uF 1uF
Expansion Header
P2
Expansion
PWM0-ROTARYA-DUART_RX
I2C_SCL-GPMI_RDY2-AUART1_TX
LCD_D00
LCD_D02
LCD_D04
LCD_D06
LCD_CS
LCD_RESET-GPMI_CE3n
LCD_HSYNC-I2C_SDA
LCD_DOTCK-GPMI_RDY3
GPMI_ALE-LCD_D17
GPMI_D00-LCD_D8-SSP2_DATA0
GPMI_D02-LCD_D10-SSP2_DATA2
GPMI_D04-LCD_D12-SSP2_DATA4
GPMI_D06-LCD_D14-SSP2_DATA6
LRADC0
GPMI_RDY0-SSP2_DETECT
GPMI_WPn
GPMI_CE0n
PWM1-ROTARYB-DUART_TX
I2C_SDA-GPMI_CE2n-AUART1_RX
LCD_D01
LCD_D03
LCD_D05
LCD_D07
LCD_ENABLE-I2C_SCL
LCD_WR
LCD_RS
LCD_VSYNC-LCD_BUSY
GPMI_CLE-LCD_D16
GPMI_RDY1-SSP2_CMD
GPMI_D01-LCD_D9-SSP2_DATA1
GPMI_D03-LCD_D11-SSP2_DATA3
GPMI_D05-LCD_D13-SSP2_DATA5
GPMI_D07-LCD_D15-SSP2_DATA7
GPMI_RDn
GPMI_WRn-SSP2_SCK
GPMI_CE1n
USB Connector Switch Control
USB
USB requires 90 Ohm differential impedance which for a standard 1/16" 1oz FR4 double-sided board has been calculated to require 22mil traces at 7mil spacing. Make sure to have a solid ground trace underneath the USB lines and keep 12mil spacing on either side of the traces to GND.
USB-A
DP
DN
VBUS
GND
SHIELD
U6
VBUS_HOST
FB
L18
USB-miniB
ID
U5
VBUS
GND_USB-B
DPa
DMa
DPb
DMb
FSUSB20
2D+
2D-
1D+
1D-
VCC
GND
S
nOE
D+
D-
IC5
FSUSB20_S
FSUSB20_nOE
USB_DP
USB_DM
R53
R22
R23
GPMI_CE1n
When FSUSB20_S (GPMI_CE1n) enables the USB-A connector it will also enable the USB Host VBUS Generator and turn on the USB_HOST LED in the Power_Boot sheet
Depopulating R53 will allow you to use the Host/Debug LED in the Power_Boot sheet without also enabling USB Hosting
The FSUSB20 has 7kV of ESD Protection
C75
0.1uF
Debug/Expansion Headers
JTAG shares pins with SSP1 so it cannot be used at the same time as the external SD card
ARM_JTAG
VREF
TRST
TDI
TMS
TCK
RTCK
TDO
SRST
DBGRQ
DBGACK
GND
U10
SSP1_SCK-JTAG_TRST
SSP1_DATA0-JTAG_TDI
SSP1_DATA3-JTAG_TMS
SSP1_DATA1-I2C_SCL-JTAG_TCLK
SSP1_DATA2-I2C_SDA-JTAG_RTCK
SSP1_CMD-JTAG_TDO
PSWITCH
VDD_XTAL
SSP1_DETECT-GPMI_CE3N-USB_ID
C77
C83
0.1uF
JTAG nSRST, DBGRQ, and DBGACK pins are connected to non-JTAG pins so that the JTAG header can be used as an expansion header. They must be disconnected when using JTAG. Bend the pins down when JTAG debugging.
Serial JTAG Debugger has its own power
R5
DNP
DEBUG
PSWITCH
P1
Serial-JTAG
DPa
DMa
DPb
DMb
FSUSB20_nOE
FSUSB20_S
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Opendous Inc. (www.opendous.org)
File: PROpendous-Connectors_JTAG.sch
Sheet: /Connectors_JTAG/
Title: PROpendous
Size: A4
Date: 21 oct 2010
Rev: 1.1
KiCad E.D.A.
Id: 4/8