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REVISION HISTORY:

23/01/2014 – V1.0

18/02/2014 – V1.1

10/04/2014 – V1.2 – Production Version

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Raspberry Pi

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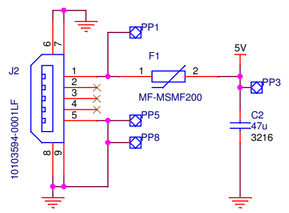
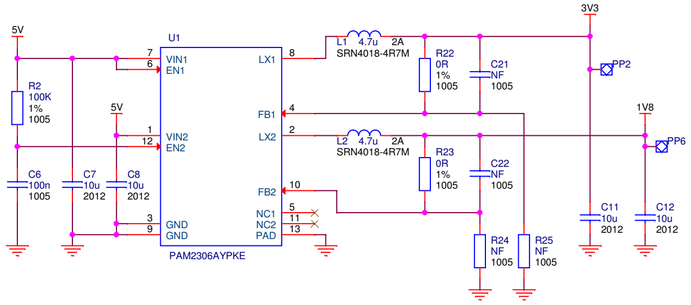
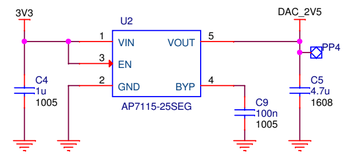
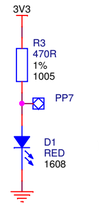
Title: Raspberry Pi Compute Module IO Board		Drawn By: James Adams	
Size: A3	Ref: RPI-CMIO		Rev: 1.2
Date: Thursday, April 10, 2014	Sheet 1 of 3		

POWER IN

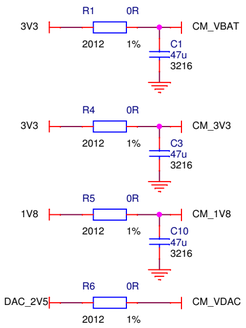






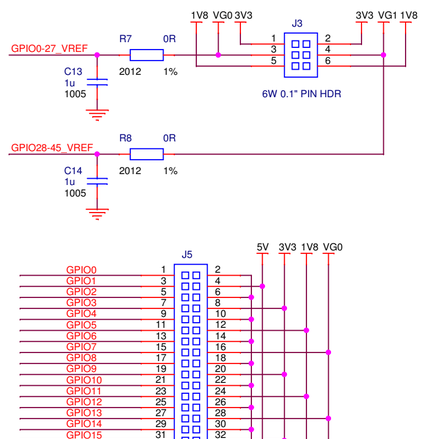


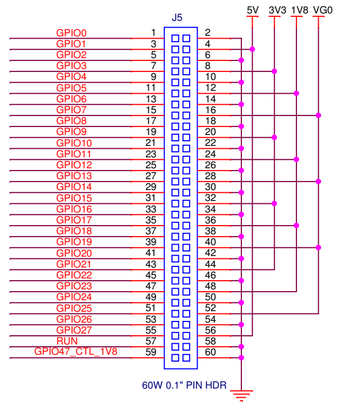
POWER LED

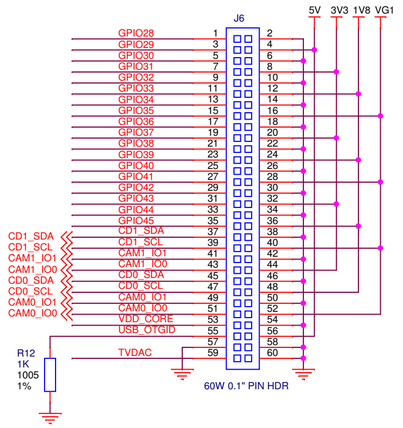


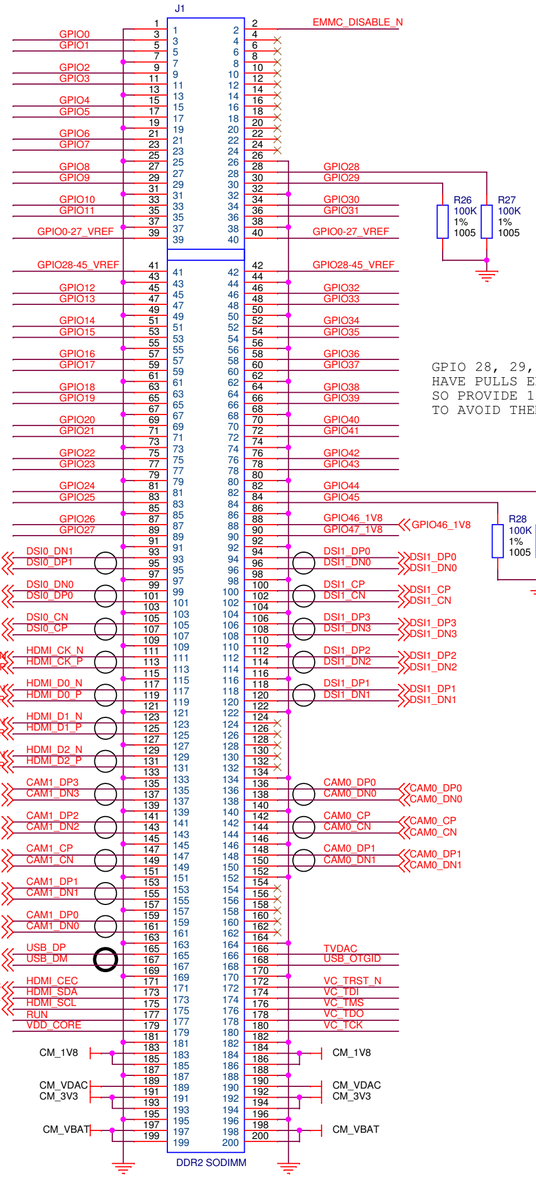
GPIO BANK 0/1 VOLTAGE SELECT:

Jumper Positions VG0 / VG1:
1-3 / 2-4 = 3V3
3-5 / 4-6 = 1V8
NC = external source









GPIO 28, 29, 44, 45 DO NOT HAVE PULLS ENABLED AT BOOT SO PROVIDE 100K PULL DOWNS TO AVOID THEM FLOATING

Route ringed signals as matched length 100R differential pairs

Route bold-ringed signals as matched length 90R differential pair

VDD_CORE used for module test only (do not use in normal operation, do not draw current from this pin!)

MODULE BOOT OPTIONS:

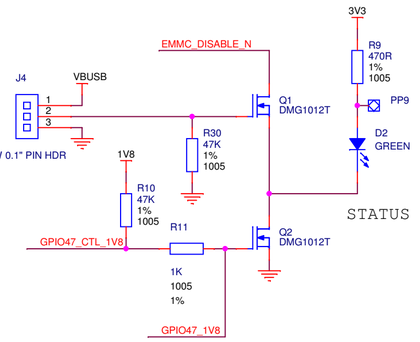
BCM2835 BootROM boot from USB:
- J4 set to enable USB boot
- Plug host into micro USB socket J15 (VBUSB=5V)
- GPIO47_1V8 high at boot (input with 50k pullup)
- EMMC_DISABLE_N therefore LOW
- On power up BCM2835 can't access eMMC so boots from USB
- Once booted, 2835 USB boot SW forces GPIO47_1V8 LOW to enable access to eMMC

BCM2835 BootROM boot from eMMC:
- Nothing plugged into micro USB socket J15 (VBUSB=0V)
  OR J4 set to disable USB Boot
- EMMC_DISABLE_N therefore HIGH
- On power up BCM2835 boots from eMMC
- GPIO47_1V8 used as status LED

BCM2835 BootROM boot from eMMC with GPIO boot select:
- Set J4 to disable USB boot
- EMMC_DISABLE_N therefore always HIGH
- On power up BCM2835 boots from eMMC
- BCM2835 boot SW reads GPIO47_1V8 (GPIO47_CTL_1V8) if low perform 'alternate' boot (e.g. can boot into safe mode, or USB mass storage...)
- Once booted GPIO47_1V8 used as status LED

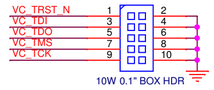
USB BOOT ENABLE:

Jumper Positions:
1-2 = USB BOOT ENABLED
2-3 = USB BOOT DISABLED



STATUS "ACT" LED

VIDEOCORE JTAG



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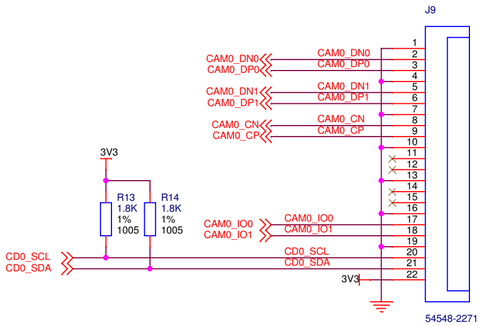
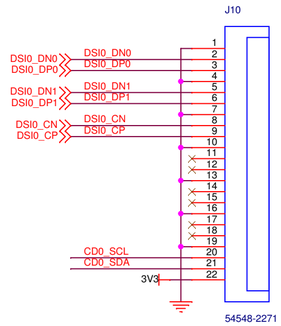
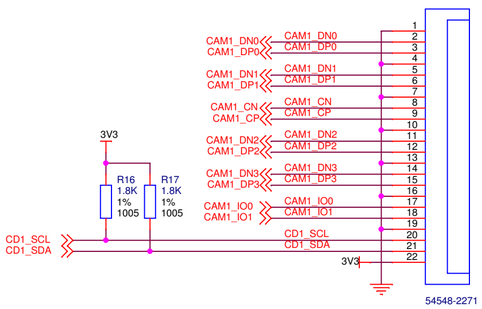
CAM0



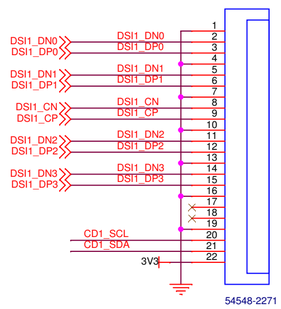
DISP0

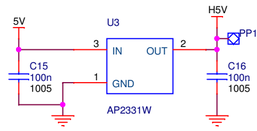


CAM1

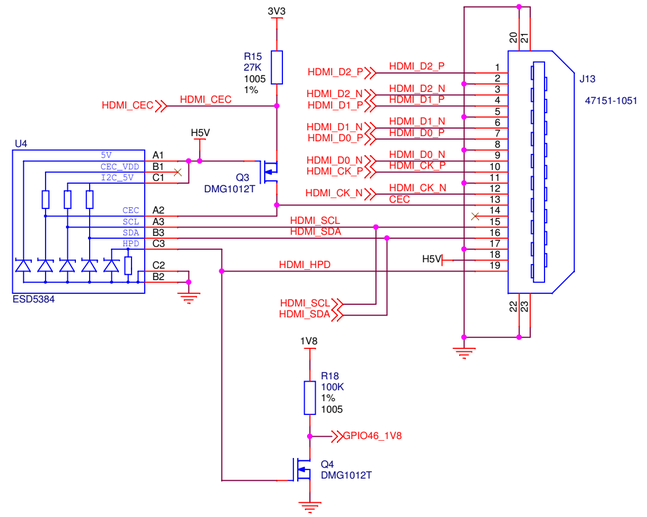


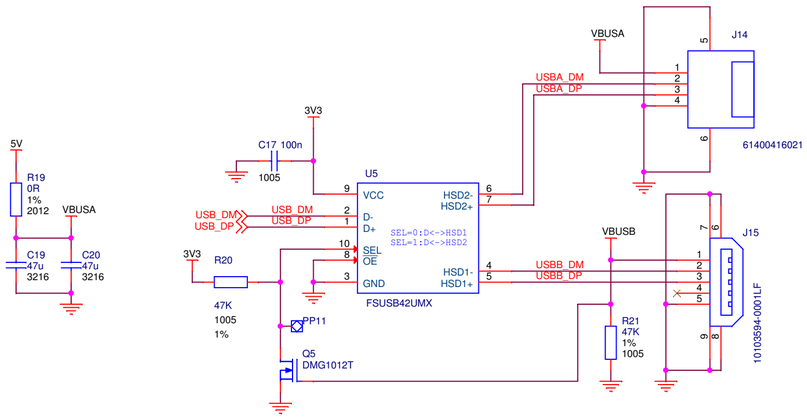
DISP1





HDMI





USB A (HOST)

uUSB B (SLAVE, USB BOOT)

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