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Power supplies

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USB 2.0 interface, LPC4370 USB, reset, crystal, jtag/swd

Page 4

Boot mode, LPC4370 IOs, external spi flash

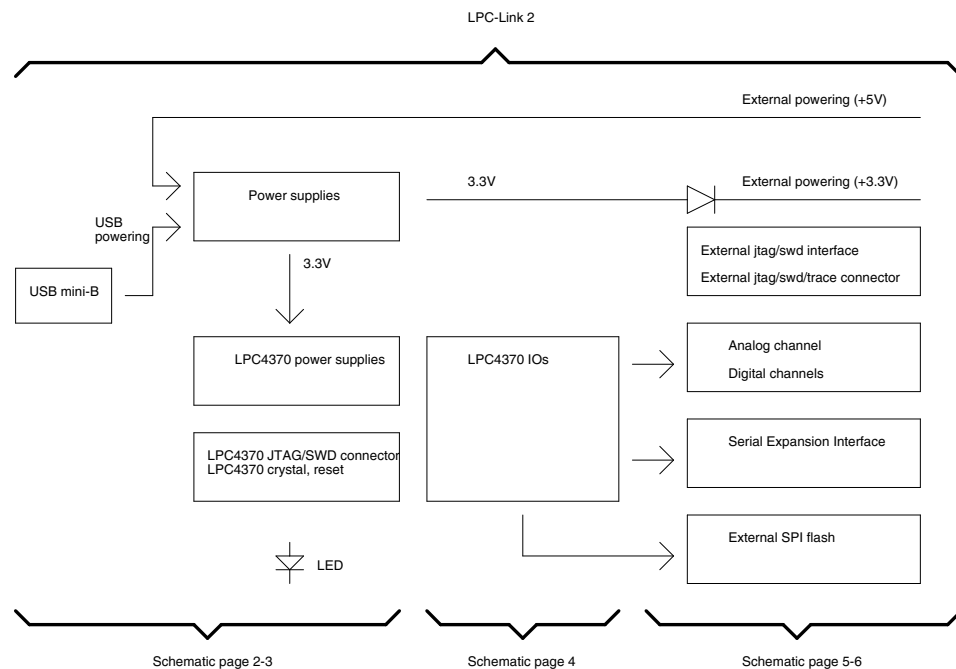
Page 5

External JTAG/Cortex debug interface

Page 6

Analog channel, digital channels, jtag/swd/trace interface

Design Overview



UL = UnLoaded = normally not mounted component.

Default jumper settings are indicated in the schematic.
However, always check jumper positions on actual boards
since there is no guarantee that all jumpers are in default place.

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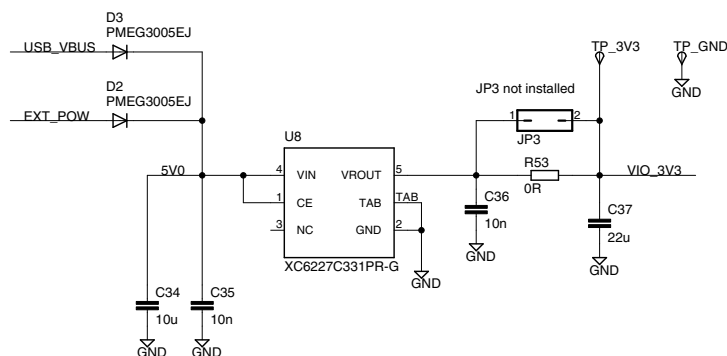
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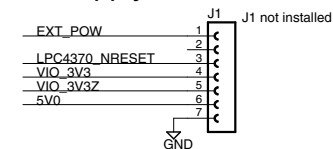
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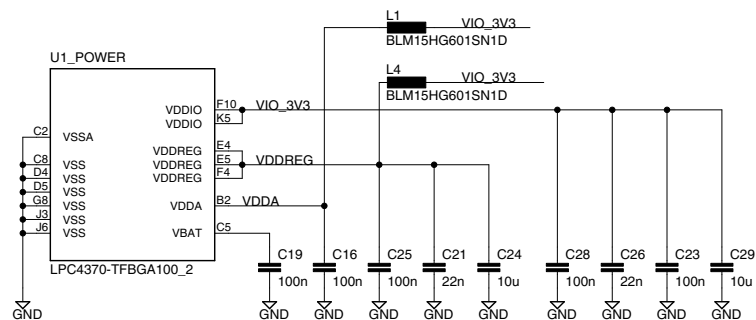
Power supply



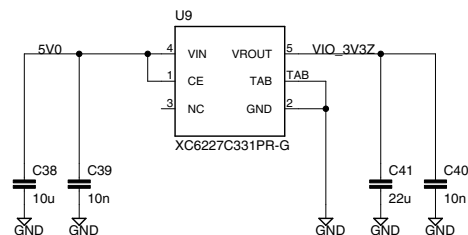
Power Supply Access connector



LPC4370 power supplies



Target Power supply



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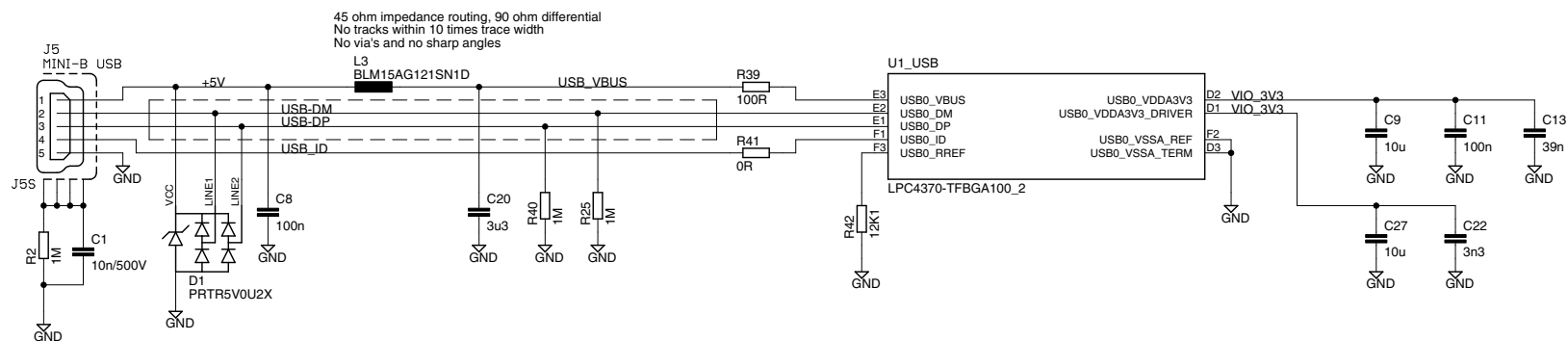
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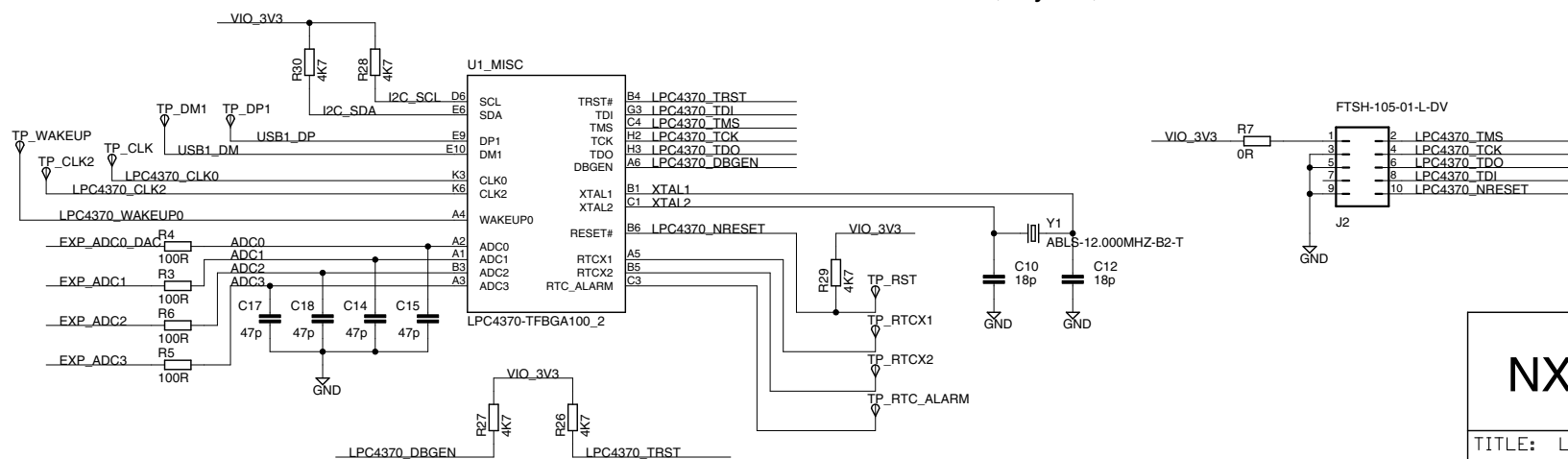
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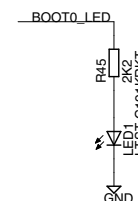
LPC4370 USB



LPC4370 reset, crystal, JTAG/SWD



LED



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[illegible]

U1_PORT

Internal Pin	External Pin	Signal
SGPIO0_SGPIO4_TRACEDATA0 G2	P0_0	TP_P1_19
SGPIO1_SGPIO5_TRACEDATA1 G1	P0_1	
SGPIO3_SGPIO7_TRACEDATA3 H1	P1_0	TP_P6_0
BOOT0_I_FED K2	P1_1	
BOOT1 K1	P1_2	TP_P3_0
SSP1_MISO J1	P1_3	
SSP1_MOSI J2	P1_4	VIO_3V3
SGPIO15_TMS_SWDIO_TXEN J4	P1_5	
SGPIO14_TMS_SWDIO K4	P1_6	TP_ISF
GPIO1_0 G4	P1_7	
GPIO1_1 H5	P1_8	TP_P6_0
GPIO1_2 J5	P1_9	
GPIO1_3 H6	P1_10	TP_P3_0
GPIO1_4 J7	P1_11	
SGPIO8_TRACECLK_RTCK K7	P1_12	VIO_3V3
SGPIO_9 H8	P1_13	
SGPIO10_TDO_SWO J8	P1_14	TP_ISF
SGPIO2_SGPIO6_TRACEDATA2 K9	P1_15	
SGPIO3_SGPIO7_TRACEDATA3 K9	P1_16	TP_P6_0
SGPIO11_TCK_SWCLK H10	P1_17	
SGPIO12_IJTAG_TDI J10	P1_18	TP_P3_0
CGU_CLKOUT K9	P1_19	
SSP1_SEL K10	P1_20	VIO_3V3
SGPIO0_SGPIO4_TRACEDATA0 G10	P2_0	
SGPIO1_SGPIO5_TRACEDATA1 G7	P2_1	TP_ISF
SGPIO2_SGPIO6_TRACEDATA2 F9	P2_2	
ISP_CTRL D8	P2_3	TP_P6_0
SGPIO_13 D9	P2_4	
	P2_5	TP_P3_0
	P2_6	
	P2_7	VIO_3V3
	P2_8	
	P2_9	TP_ISF
	P2_10	
	P2_11	TP_P6_0
	P2_12	
	P2_13	TP_P3_0
	P2_14	

LPC4370-FTBGA100_2

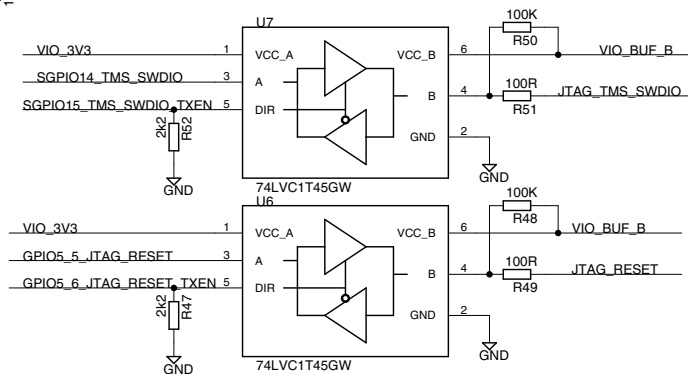
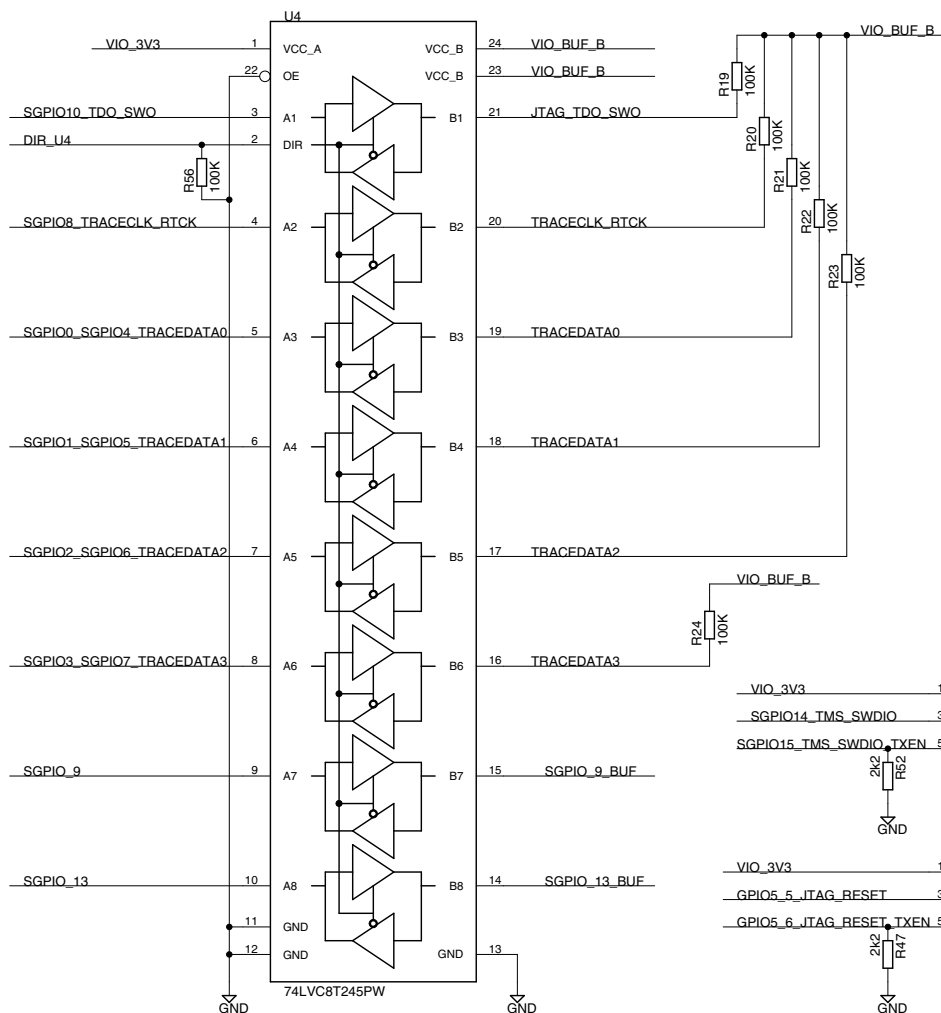
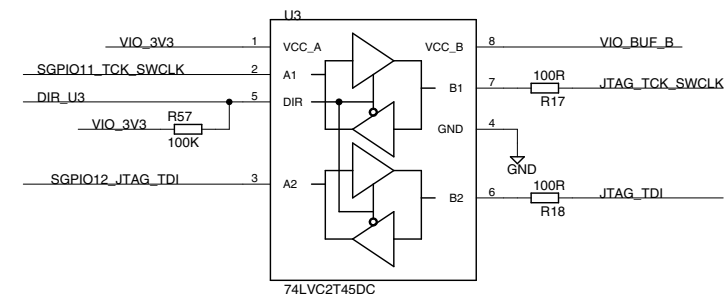
External SPI Flash

The diagram shows the connection of an external SPI flash memory (U2, W25Q80BVSSIG) to the VIO_3V3 supply and ground. The chip's pins are connected as follows:

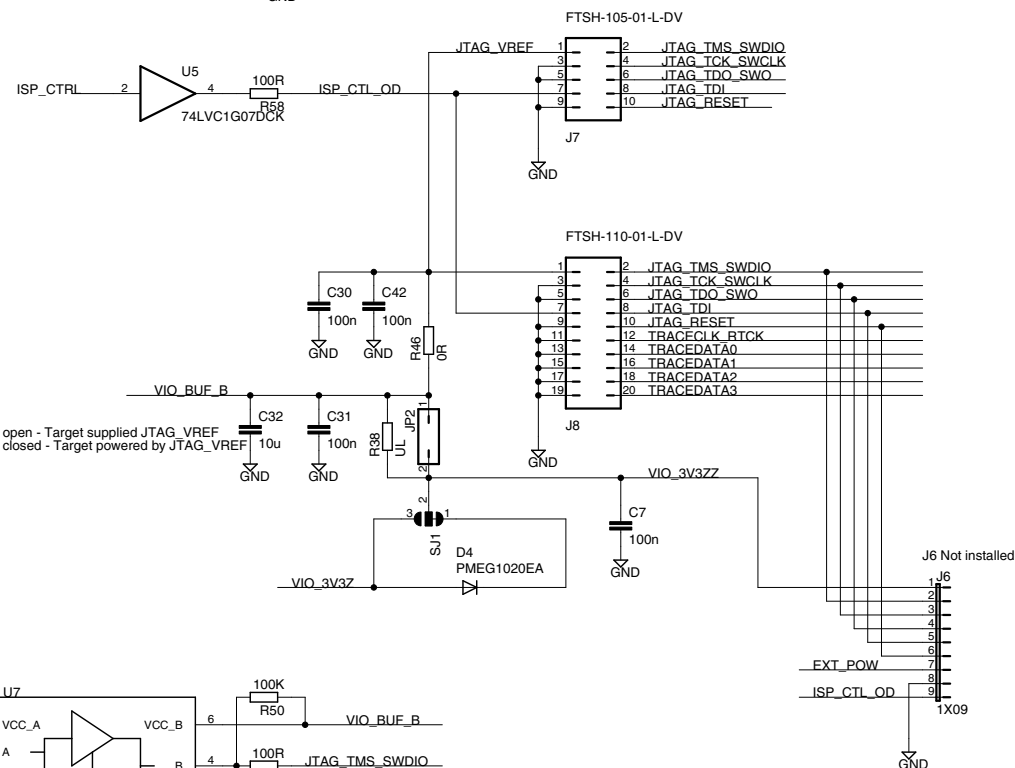
- Pin 1 (CE#) to SPIFL_CS
- Pin 2 (SO/SIO1) to SPIFL_MISO
- Pin 3 (SIO2) to SPIFL_SIO2
- Pin 4 (VSS) to GND
- Pin 5 (SI/SIO0) to SPIFL_MOSI
- Pin 6 (SCK) to SPIFL_SCK
- Pin 7 (SIO3) to SPIFL_SIO3
- Pin 8 (VDD) to VIO_3V3

Decoupling capacitors C4 (10uF) and C3 (100nF) are connected between VIO_3V3 and GND.

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JTAG/SWD/TRACE Interface



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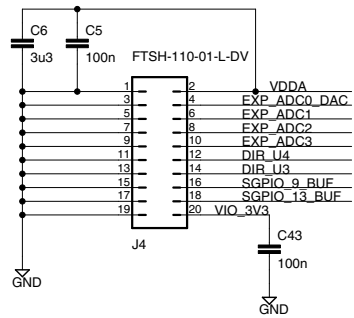
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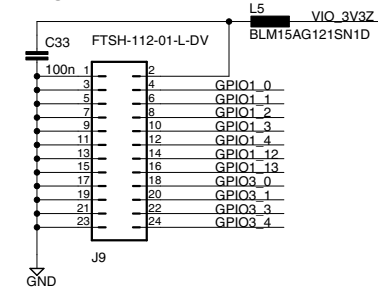
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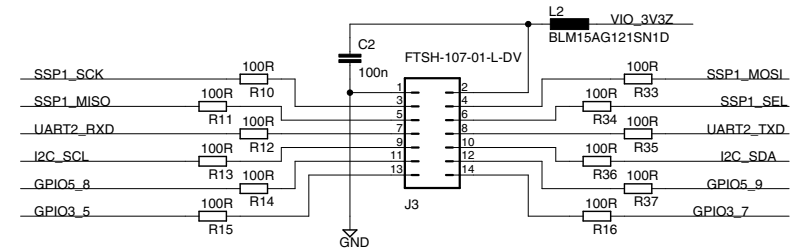
Analog + Digital channels



Digital channels



Serial Expansion Interface



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