

Page 2

LPC3154 Powering and Unused parts

Page 3

LPC3154 Digital I/O

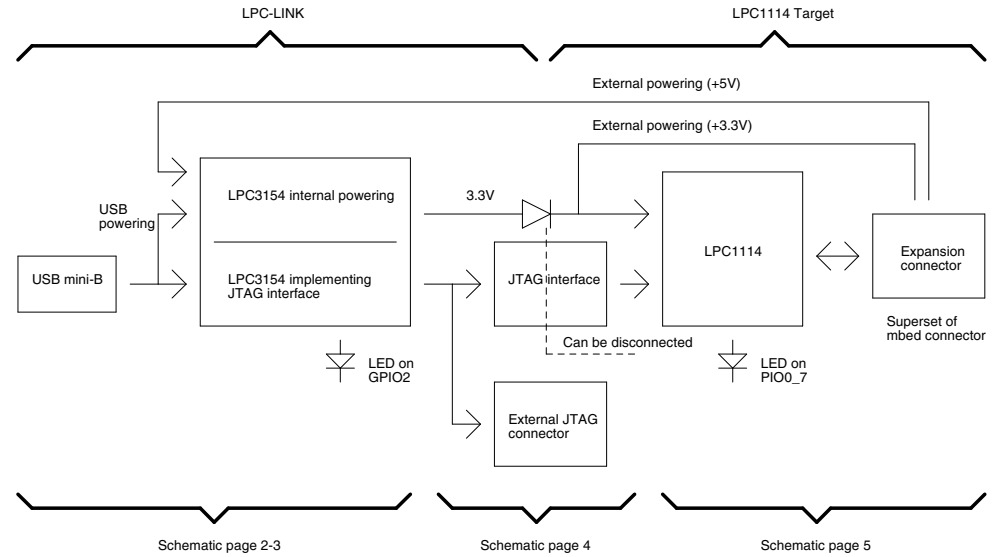
Page 4

JTAG Interface

Page 5

LPC1343 with Expansion connector

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.

Rev A

Official release



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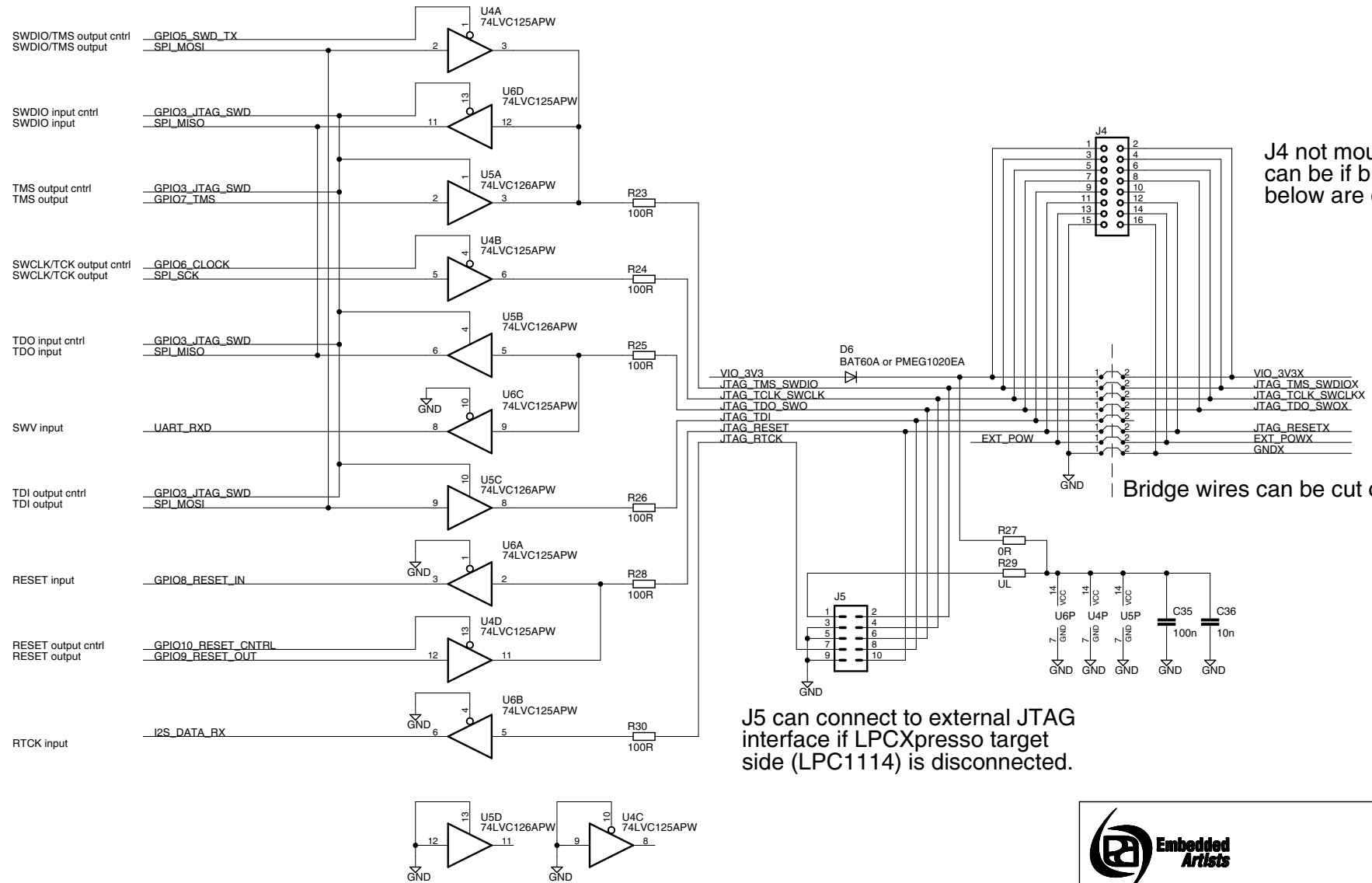
Document Number:

REV:

Date: 2009-12-04 16:28:08

Sheet: 1/5

JTAG Interface



J4 not mounted, but can be if bridge wires below are cut.

Bridge wires can be cut on pcb

J5 can connect to external JTAG interface if LPCXpresso target side (LPC1114) is disconnected.



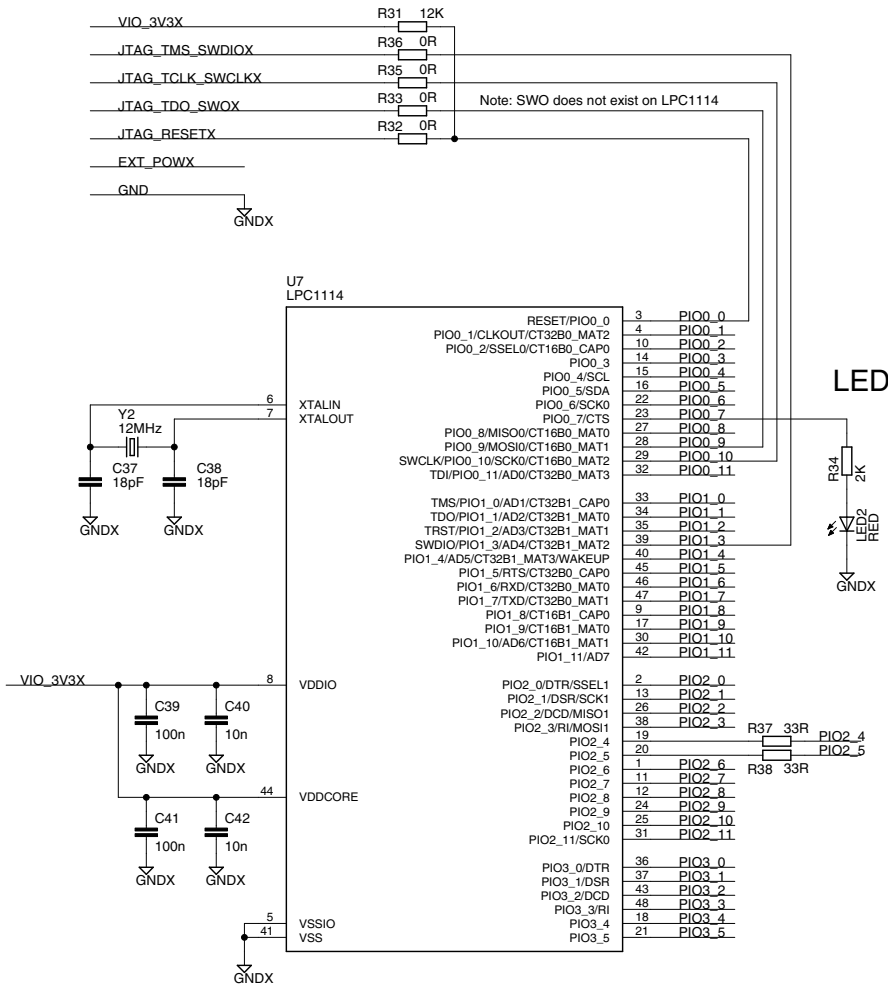
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TITLE: LPCXpresso LPC1114 rev A

Document Number: REV:

Date: 2009-12-04 16:28:08 Sheet: 4/5

From LPC-LINK Side



LPC1114 Target Side

| mbed | LPCXpresso |
|---------------------|------------------|
| GND | GND |
| VIN (4.5-14V) | VIN (4.5-5.5V) |
| VB (battery supply) | not used |
| nR (reset) | PIO0_0 RESET |
| SPI1-MOSI | PIO0_9 MOSI/SWO |
| SPI1-MISO | PIO0_8 MISO |
| SPI1-SCK | PIO2_11 SCK |
| GPIO | PIO0_2 SSEL |
| UART1-TX / I2C1-SDA | PIO1_7 TXD |
| UART1-RX / I2C1-SCL | PIO1_6 RXD |
| SPI2-MOSI | PIO0_7 |
| SPI2-MISO | PIO2_0 |
| SPI2-SCL / UART2-TX | PIO2_1 |
| UART2-RX | PIO2_2 |
| AIN0 | PIO0_11 AD0 |
| AIN1 | PIO1_0 AD1 |
| AIN2 | PIO1_1 AD2 |
| AIN3 / AOUT | PIO1_2 AD3 |
| AIN4 | PIO1_3 AD4/SWDIO |
| AIN5 | PIO1_4 AD5 |
| | PIO1_5 |
| | PIO1_8 |
| | PIO0_6 |
| | PIO0_10 SWCLK |
| | PIO3_0 |
| | PIO3_1 |
| | PIO3_2 |

Expansion Connector (superset of mbed pinning)

| Dual row holes (2x27), 100 mil spacing | | LPCXpresso | mbed |
|--|-------|------------|-------|
| —GNDX— | J6-1 | —VIO_3V3X— | J6-28 |
| —EXT_POWX— | J6-2 | | J6-29 |
| | J6-3 | | J6-30 |
| —PIO0_0— | J6-4 | | J6-31 |
| —PIO0_9— | J6-5 | | J6-32 |
| —PIO0_8— | J6-6 | | J6-33 |
| —PIO2_11— | J6-7 | | J6-34 |
| —PIO0_2— | J6-8 | | J6-35 |
| —PIO1_7— | J6-9 | —PIO2_4— | J6-36 |
| —PIO1_6— | J6-10 | —PIO2_5— | J6-37 |
| —PIO0_7— | J6-11 | —PIO0_1— | J6-38 |
| —PIO2_0— | J6-12 | —PIO0_3— | J6-39 |
| —PIO2_1— | J6-13 | —PIO0_5— | J6-40 |
| —PIO2_2— | J6-14 | —PIO0_4— | J6-41 |
| —PIO0_11— | J6-15 | —PIO1_9— | J6-42 |
| —PIO1_0— | J6-16 | —PIO1_10— | J6-43 |
| —PIO1_1— | J6-17 | —PIO1_11— | J6-44 |
| —PIO1_2— | J6-18 | —PIO2_3— | J6-45 |
| —PIO1_3— | J6-19 | —PIO2_4— | J6-46 |
| —PIO1_4— | J6-20 | —PIO3_5— | J6-47 |
| —PIO1_5— | J6-21 | —PIO2_6— | J6-48 |
| —PIO1_8— | J6-22 | —PIO2_7— | J6-49 |
| —PIO0_6— | J6-23 | —PIO2_8— | J6-50 |
| —PIO0_10— | J6-24 | —PIO2_9— | J6-51 |
| —PIO3_0— | J6-25 | —PIO2_10— | J6-52 |
| —PIO3_1— | J6-26 | —PIO3_3— | J6-53 |
| —PIO3_2— | J6-27 | —GNDX— | J6-54 |

| LPCXpresso | mbed |
|--|---------------------|
| VOUT (+3.3V out) if self powered, else +3.3V input | VOUT (3.3V out) |
| not used | VU (5.0V USB out) |
| not used | IF+ |
| not used | IF- |
| not used | RD- (Ethernet) |
| not used | RD+ (Ethernet) |
| not used | TD- (Ethernet) |
| not used | TD+ (Ethernet) |
| USB_DM Note wrong text in silkscreen | D- (USB) |
| USB_DP Note wrong text in silkscreen | D+ (USB) |
| PIO0_1 | CAN-RD |
| PIO0_3 | CAN-TD |
| PIO0_5 I2C-SDA | UART3-TX / I2C2-SDA |
| PIO0_4 I2C-SCL | UART3-RX / I2C2-SCL |
| PIO1_9 | PWMOUT0 |
| PIO1_10 | PWMOUT1 |
| PIO1_11 | PWMOUT2 |
| PIO2_3 | PWMOUT3 |
| PIO2_4 Note wrong text in silkscreen | PWMOUT4 |
| PIO2_5 Note wrong text in silkscreen | PWMOUT5 |
| PIO2_6 | |
| PIO2_7 | |
| PIO2_8 | |
| PIO2_9 | |
| PIO2_10 | |
| PIO3_3 | |
| GND | |

Note: Design and layout compatible with LPC1343 version.
 Therefore PIO2_4/5 and PIO3_4/5 swap.
 LPC1114 does not have USB, but LPC1343 has. Therefore R37/38.
 LPC1114 does not have SWO, but PIO0_9 is connected (since LPC1343 has SWO there).



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Document Number: _____ REV: _____

Date: 2009-12-04 16:28:08 Sheet: 5/5