Example Interfaces to LPC4088 QuickStart Board

- I2C
- SPI
- UART
- RS232
- RS422/485
- CAN
- Memory card MCI
- Memory card SPI
- USB Device
- USB Host
- Power Supplies
- Display Expansion

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 PA1
First revision

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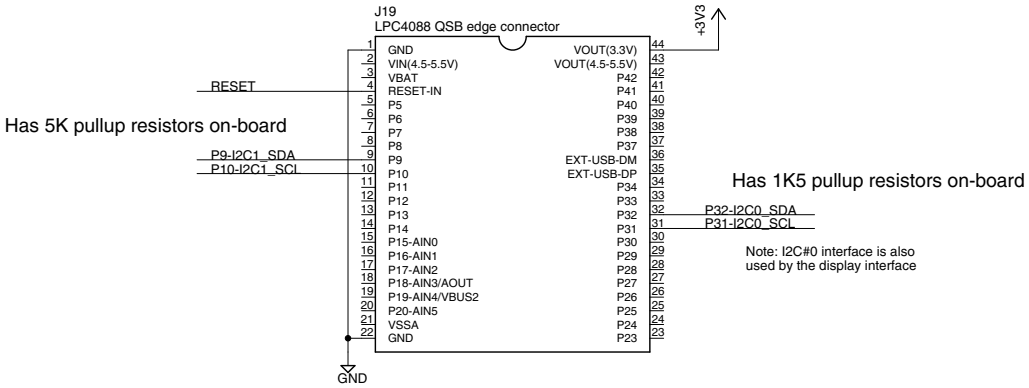
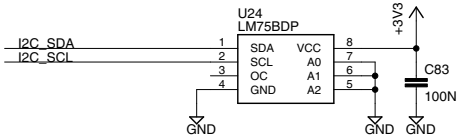
I2C Interface Examples



I2C Temperature Sensor (LM75)

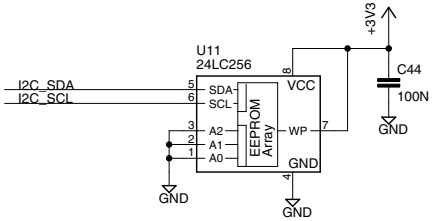
Connect to any of the two I2C interfaces



I2C address (0x90/91): 1.0.0.1.0.0.0.RW

256kbit I2C-E2PROM

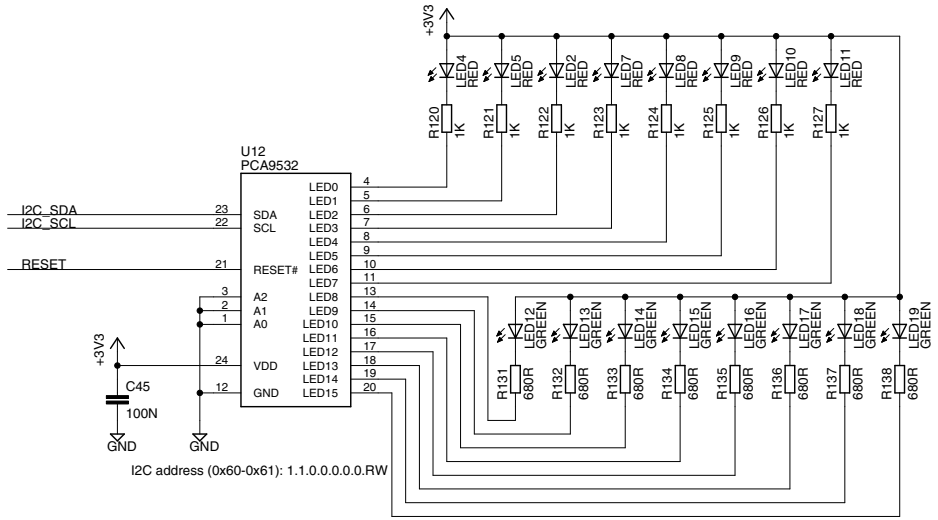
Connect to any of the two I2C interfaces



I2C address (0x50-0x5F): 1.0.1.0.A2.A1.A0.RW
A2-A0 value depends on address of byte to access.

PCA9532 I2C 16-bit Port Expander

Connect to any of the two I2C interfaces



I2C address (0x60-0x61): 1.1.0.0.0.0.0.RW

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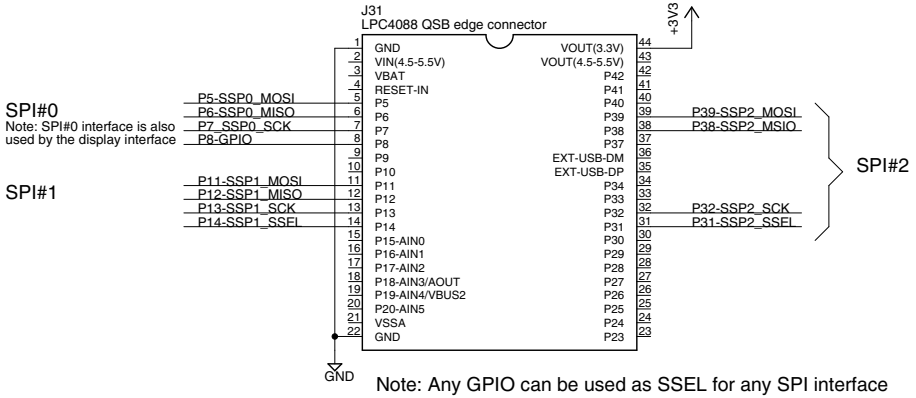
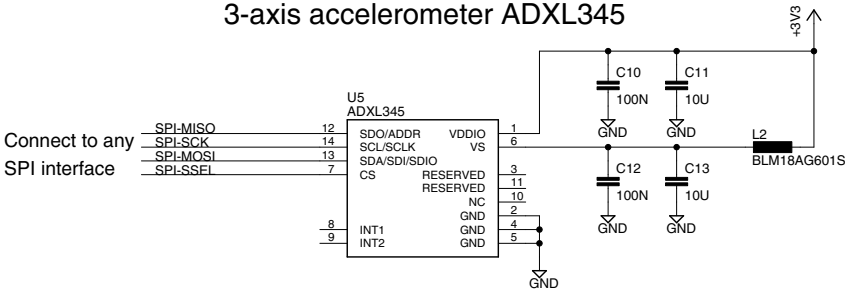
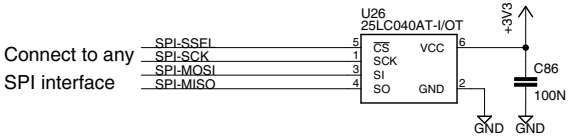
SPI Interface Examples



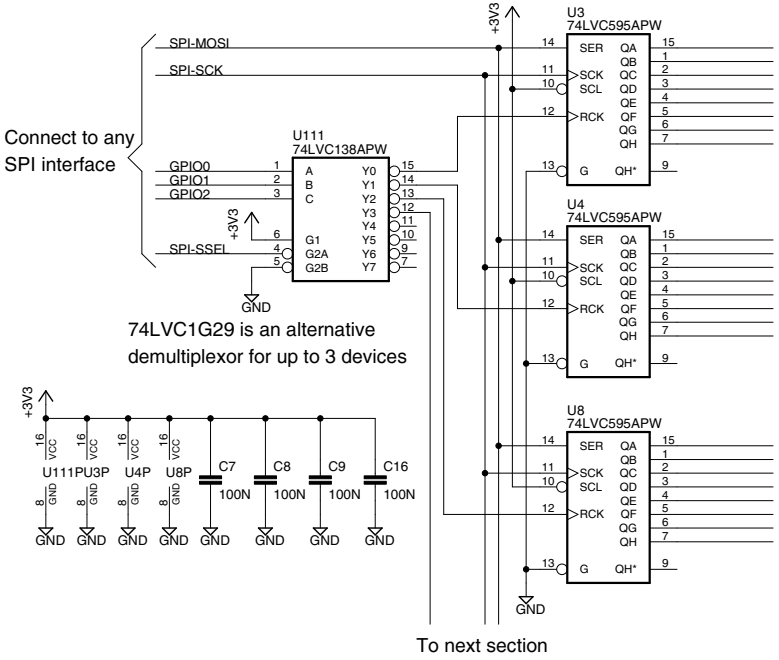
3-axis accelerometer ADXL345



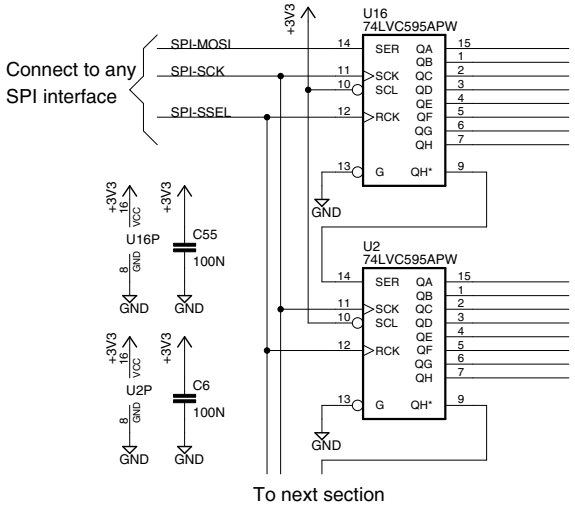
SPI E2PROM



Parallel connected registers



Cascaded shift registers



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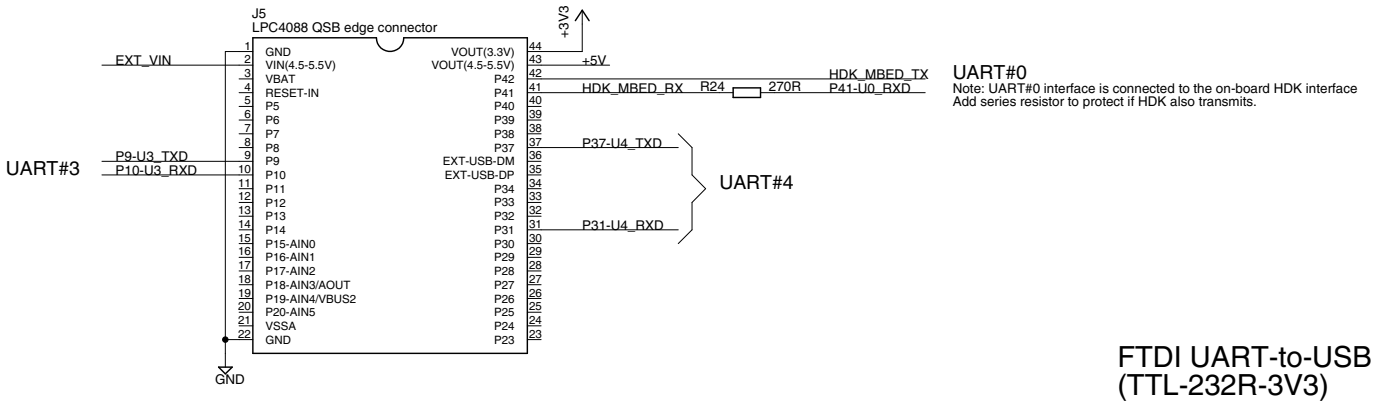
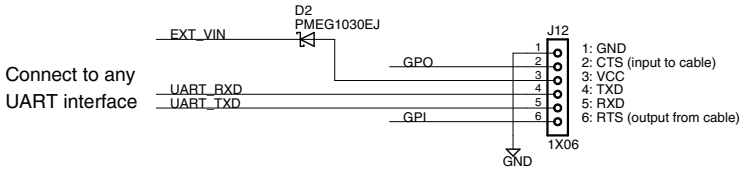
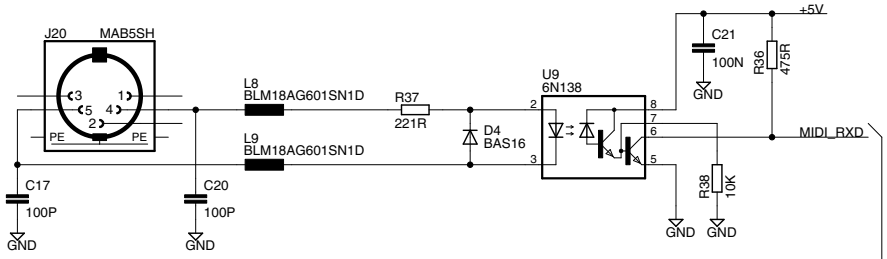
UART Interface Examples



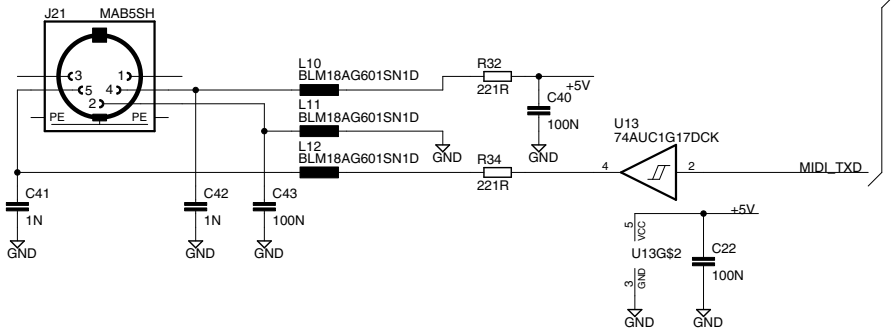
FTDI UART-to-USB Connector (TTL-232R-3V3)



MIDI In



MIDI Out



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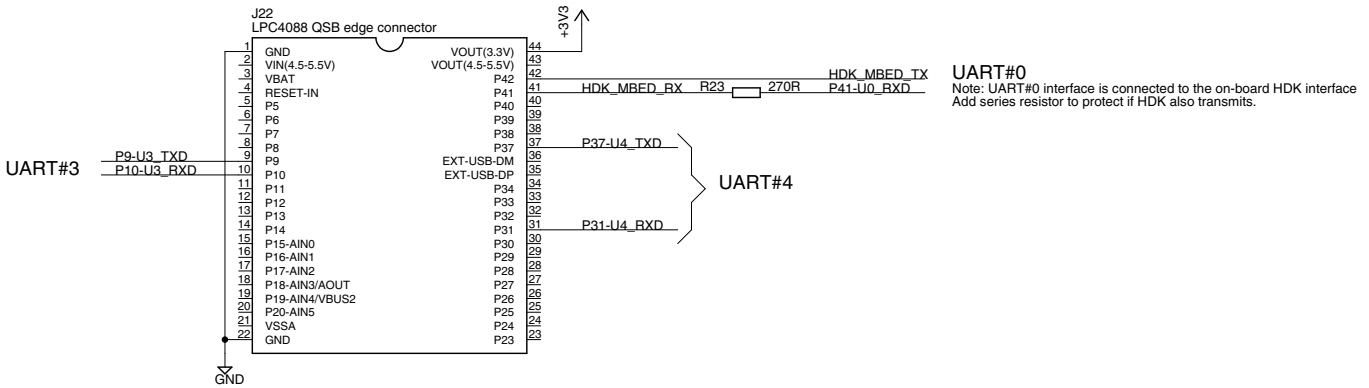
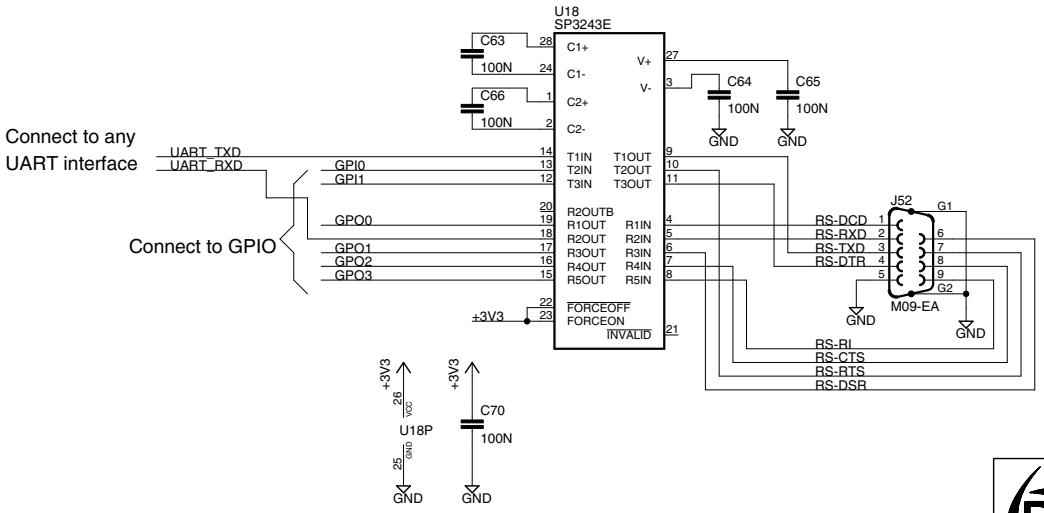
RS232 Interface Example



UART RS232 Full Modem



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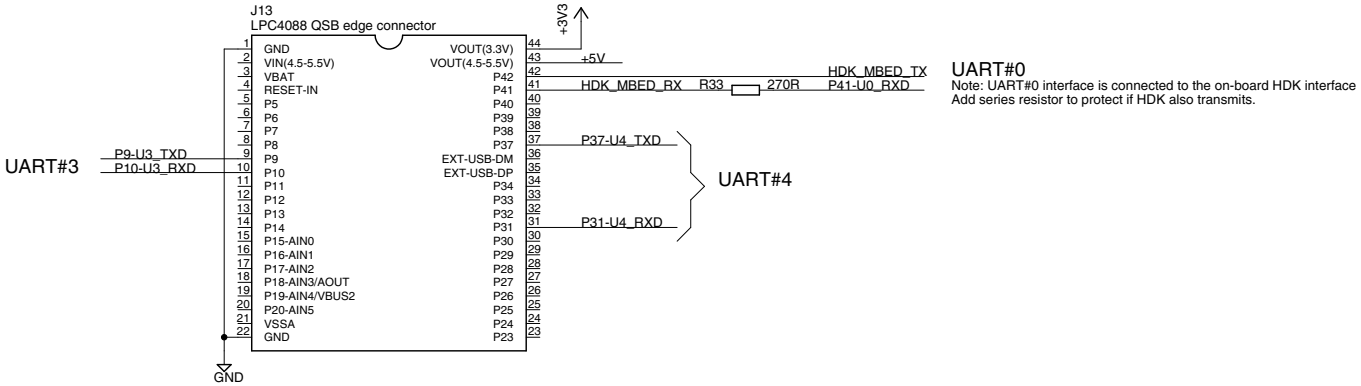
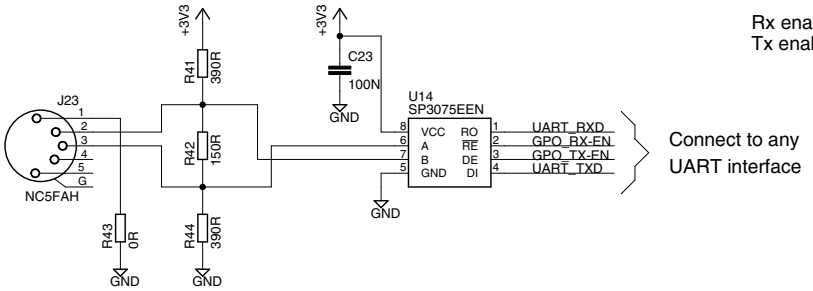
RS422/485 Interface Examples

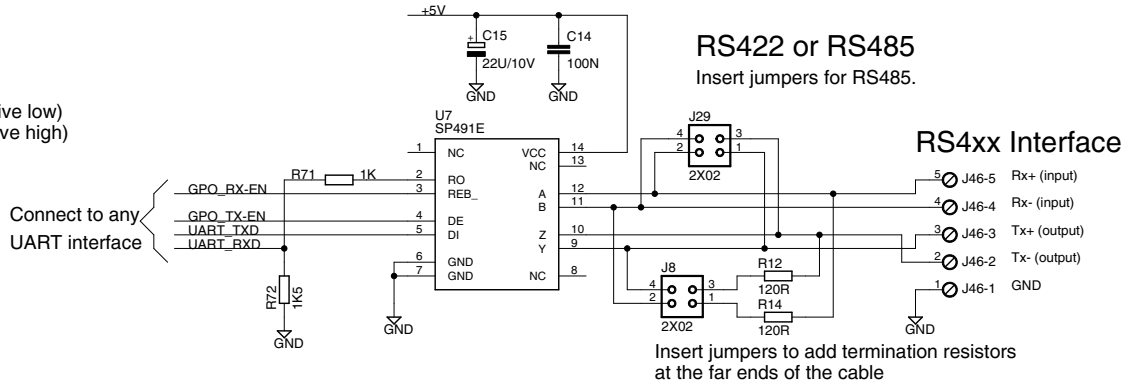


DMX Master (out) Interface



RS422/RS485 transceiver

Rx enable (active low)
Tx enable (active high)



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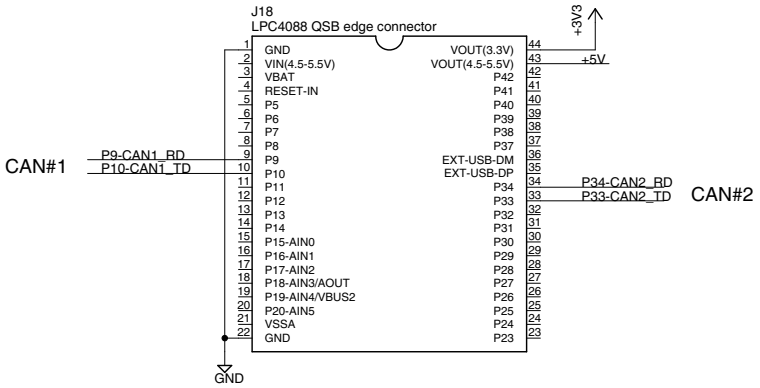
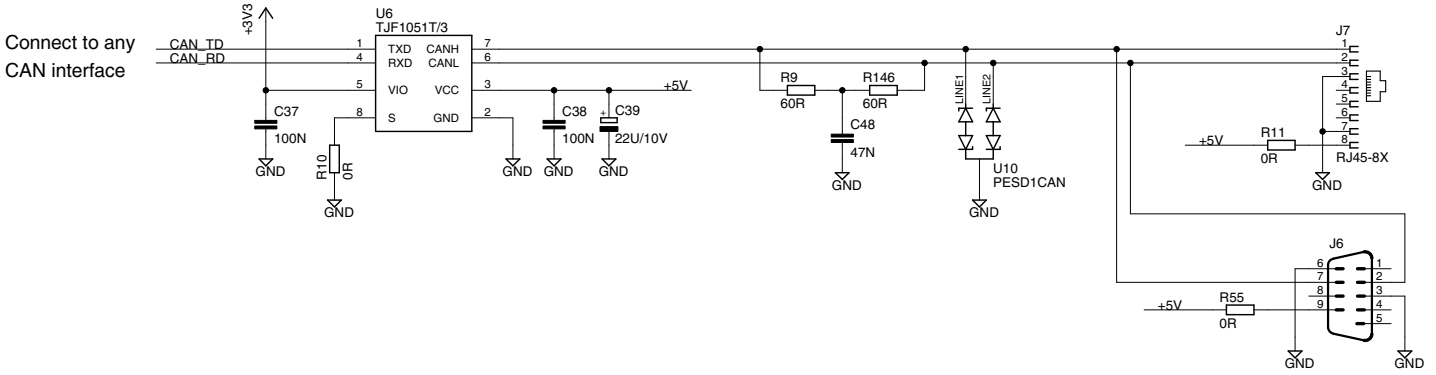
CAN Interface Example



CAN interface
CAN connectors (RJ45 & DSUB9)



TE Connectivity, no. 5556416-1
(Digikey no. A31428-ND)

TE Connectivity, no. 1734351-1
(Digikey no. A35105-ND)

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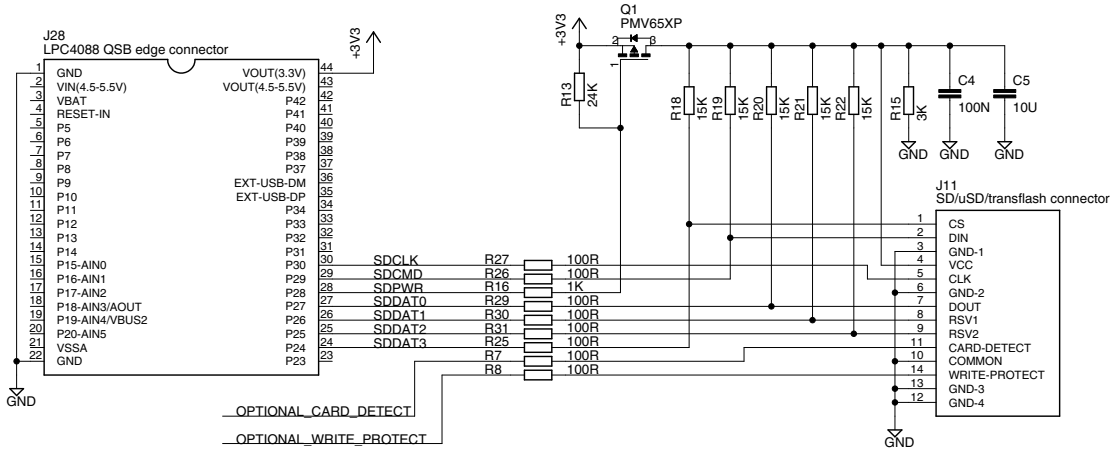
SD Memory Card Interface Example

SD Memory Card Interface Example - MCI Pheriperal



Note: ESD protection might be needed

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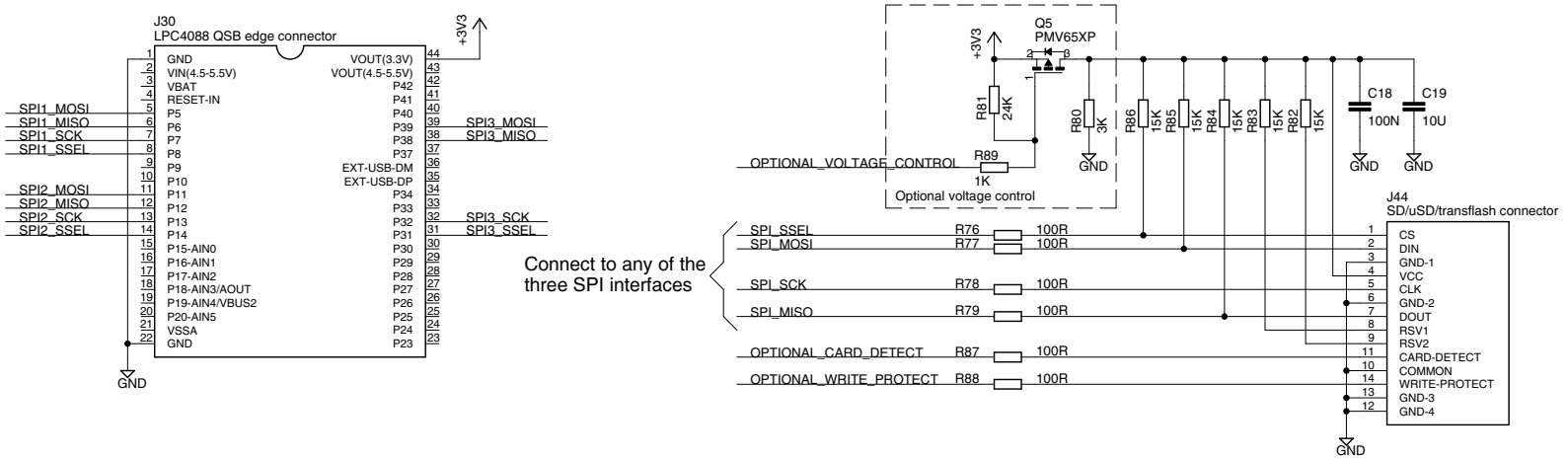
SD Memory Card Interface Example

Simplified SD Memory Card Interface Example - SPI



Note: ESD protection might be needed

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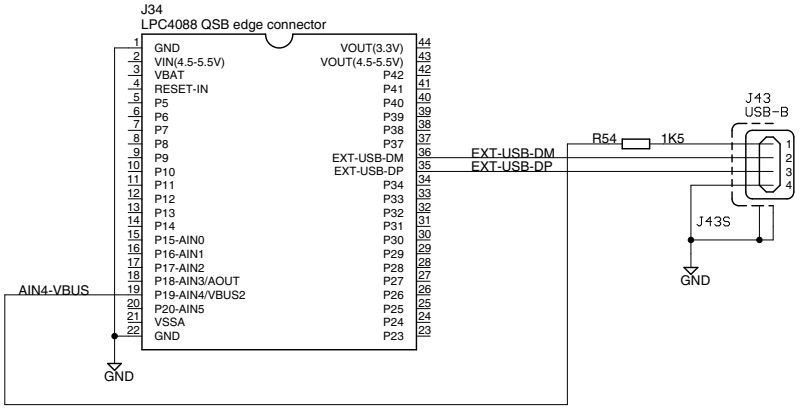
USB Device Interface Example



USB Device

Note: JP1/JP2 jumpers on LPC4088 QSB must be in 2-3 position!

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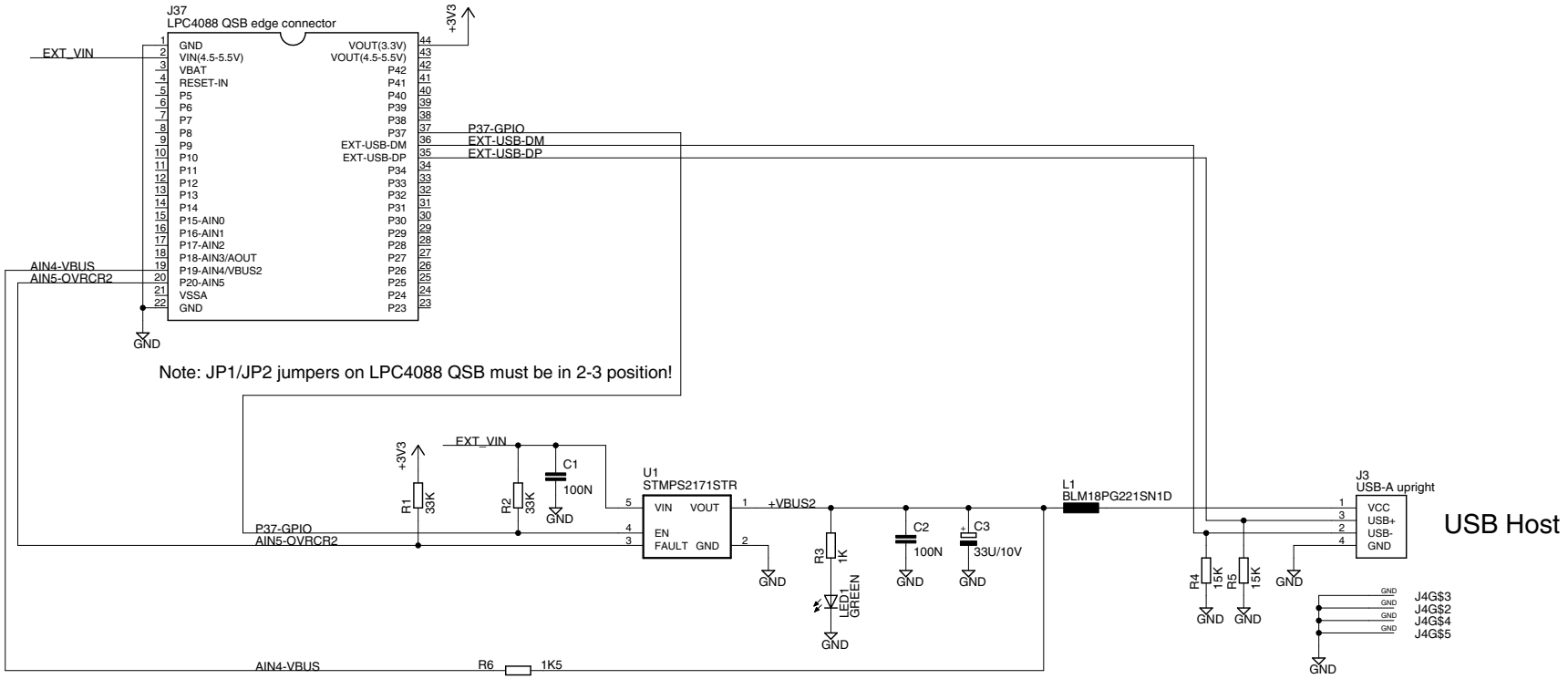
USB Host Interface Example



USB Host

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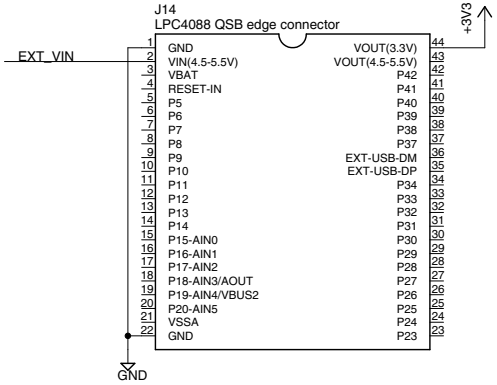
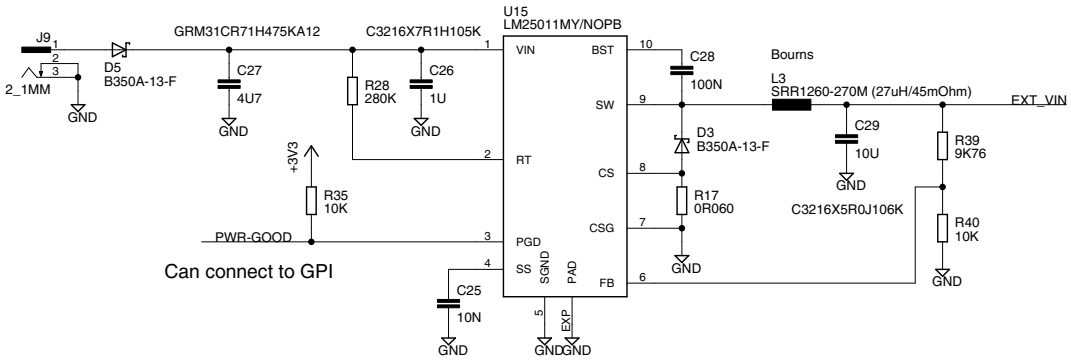
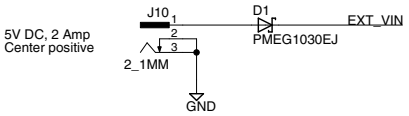
Power Supply Examples



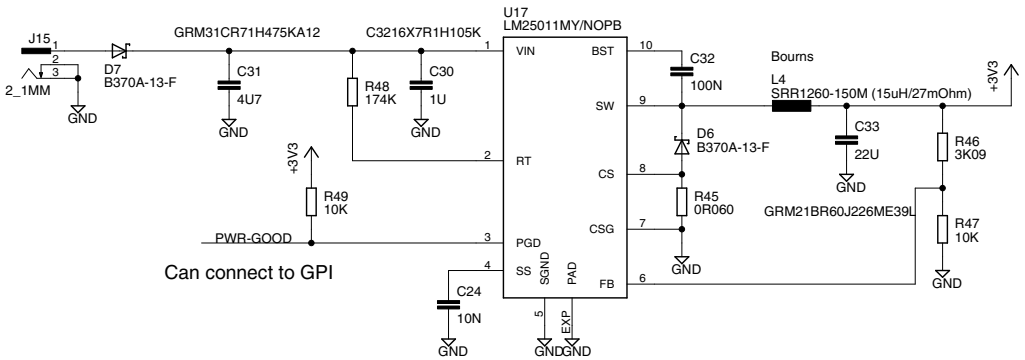
WEBENCH design from TI.COM
5V/2A supply with 7-30V input range



Simple Power Supply



WEBENCH design from TI.COM
3.3V/2A supply with 7-30V input range



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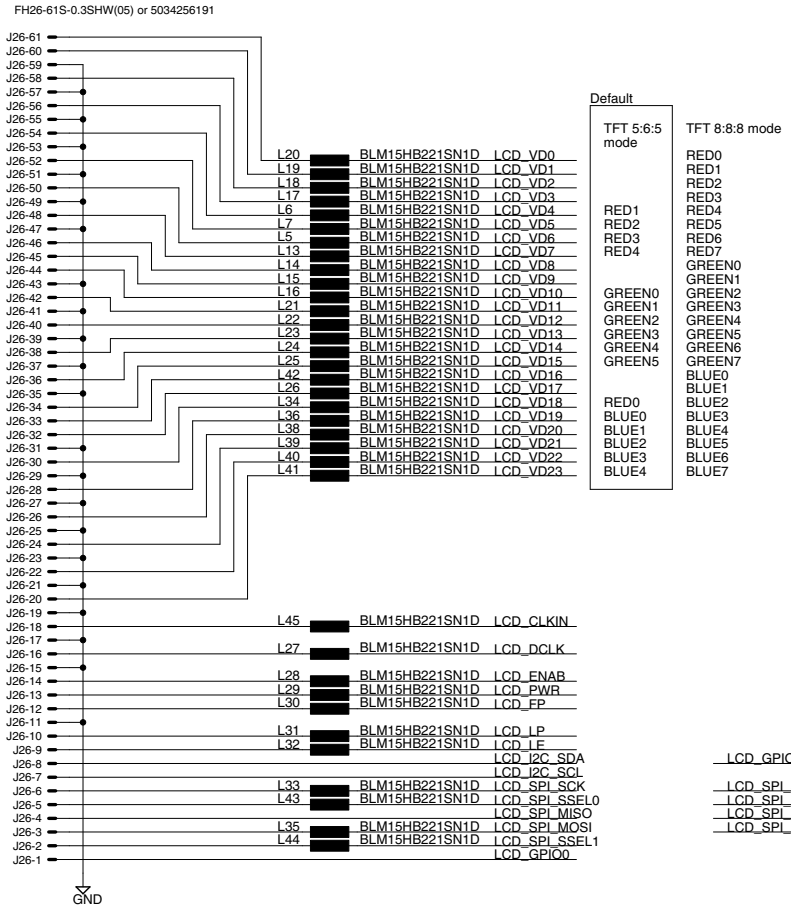
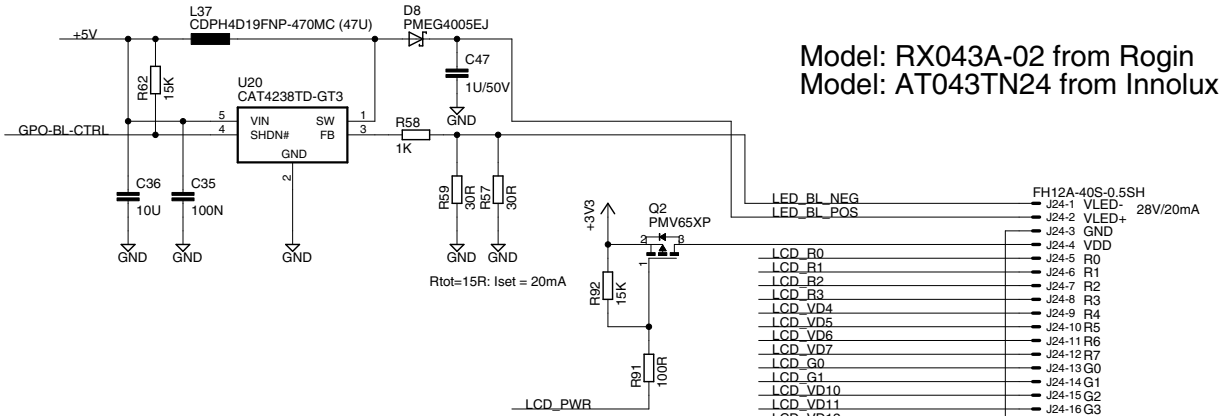
Display Expansion to 4.3" 480x272 pixel LCD

Display Interface from LPC4088 QuickStart Board

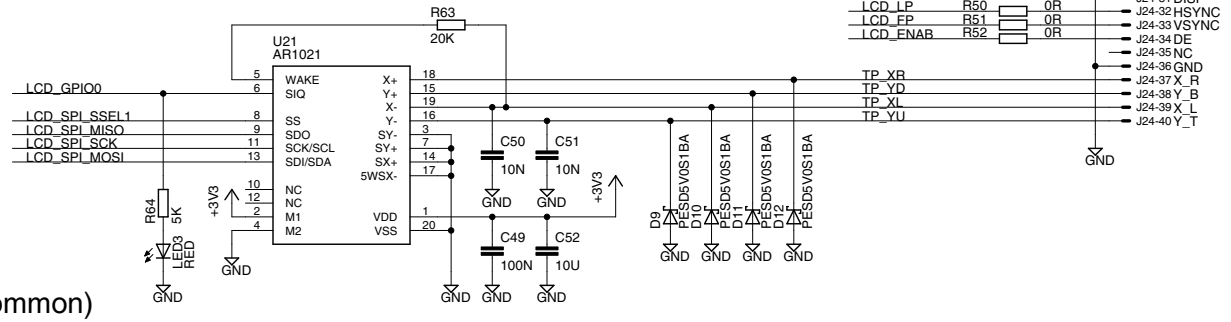


Backlight Voltage Generator

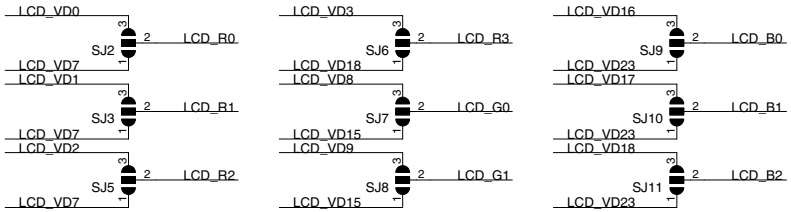


Model: RX043A-02 from Rogin
Model: AT043TN24 from Innolux

Touch Screen Controller



Mount in 1-2 position for 16-bit color depth (most common)
Mount in 2-3 position for 24-bit color depth



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