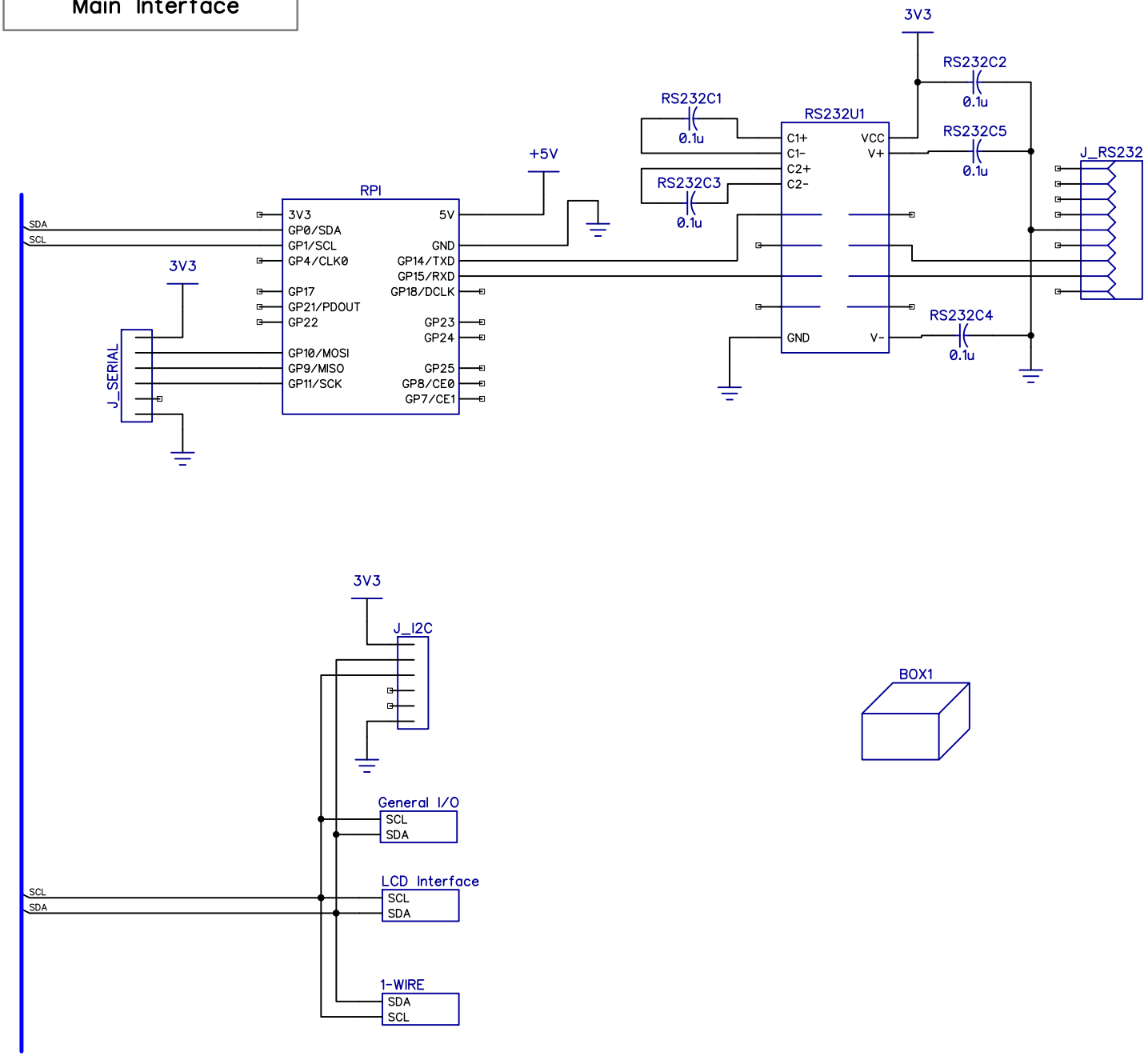
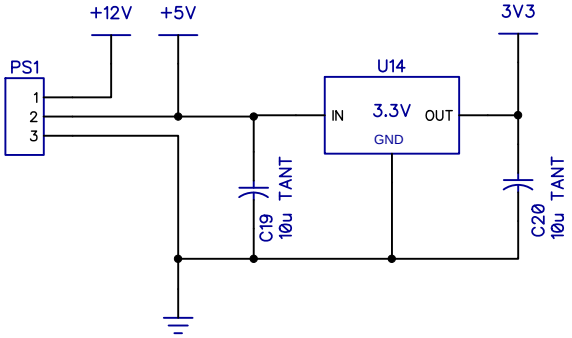
HotPi Raspberry Pi Main Interface

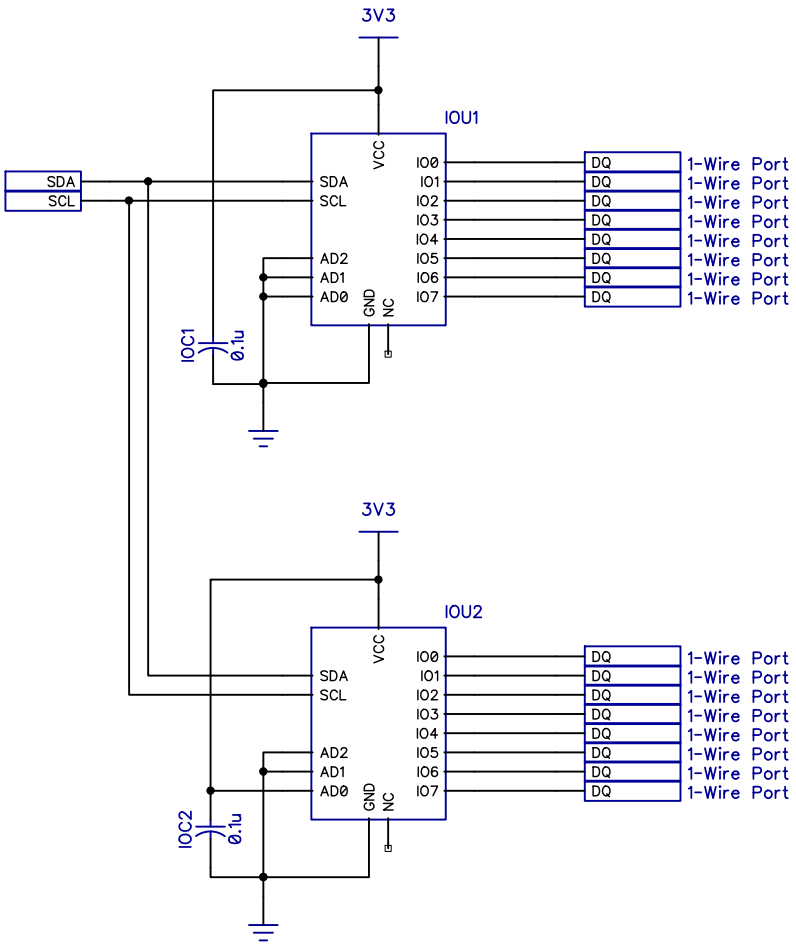


Power Supply Section

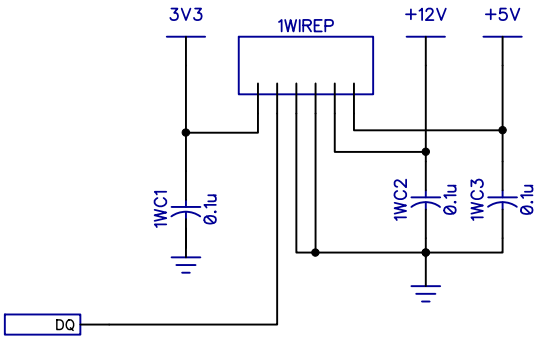


1-Wire Sensor I/O
Input Section

Recommend DS18B20 and other 1-Wire sensors. It is acceptable to daisy-chain from one device to the next with splices. Limit each branch to 100m if possible.

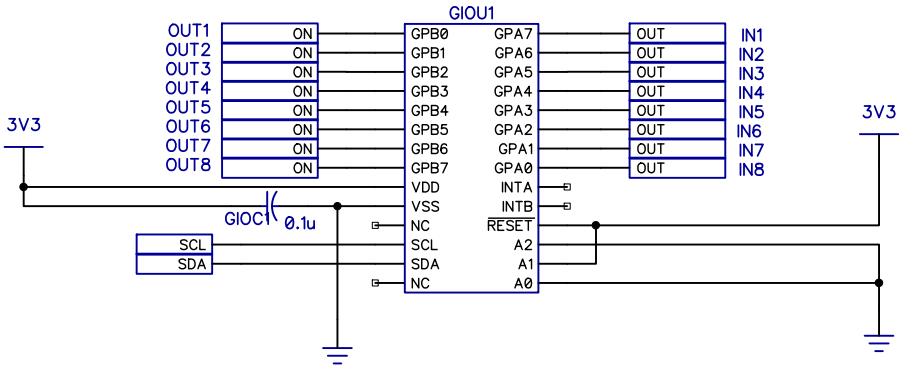


Individual 1-Wire Port



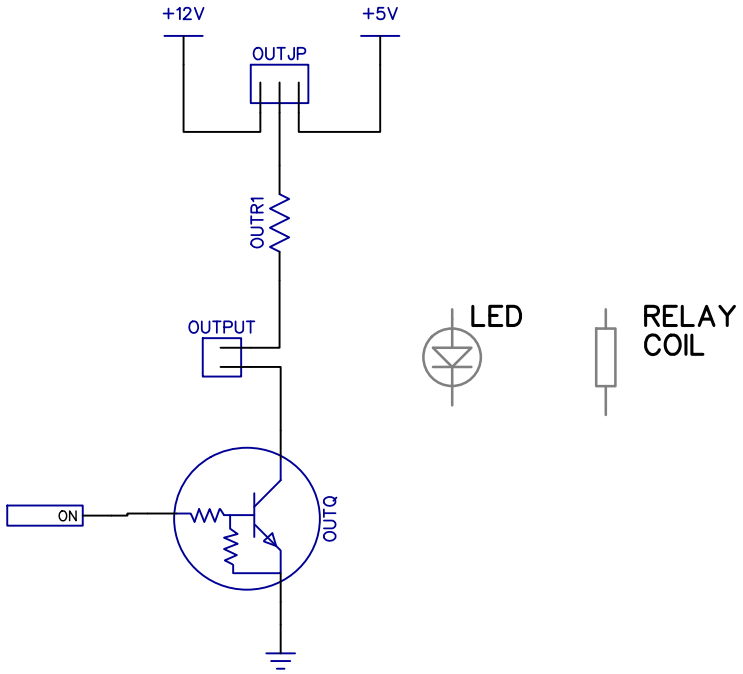
General I/O Module

Two banks of eight I/O channels each. Bank "A" provides additional circuitry for switch/button inputs. Bank "B" provides circuitry for driving LEDs or relays.



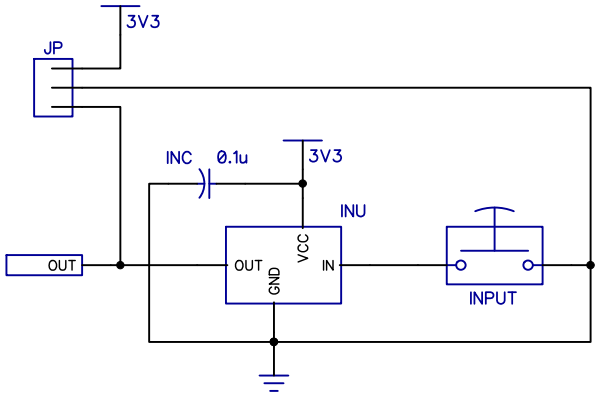
Output Driver

User-selectable D1 and R1 values for flexibility. Short or jumper JPR to select supply voltage. May also drive a relay or other device if LEDR1 is jumpered. Limit output current to 50-80mA. If using relays, use snubber diodes across them.



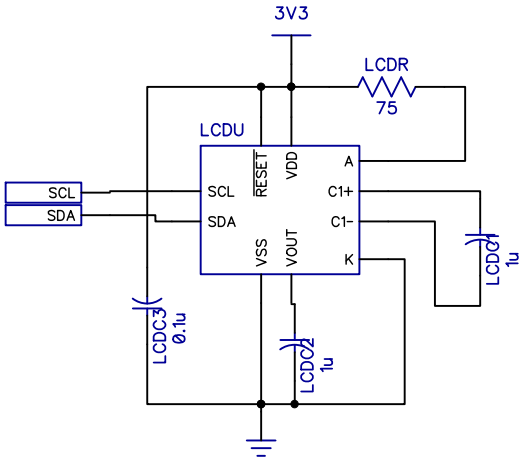
Input Driver w/
Switch Debounce

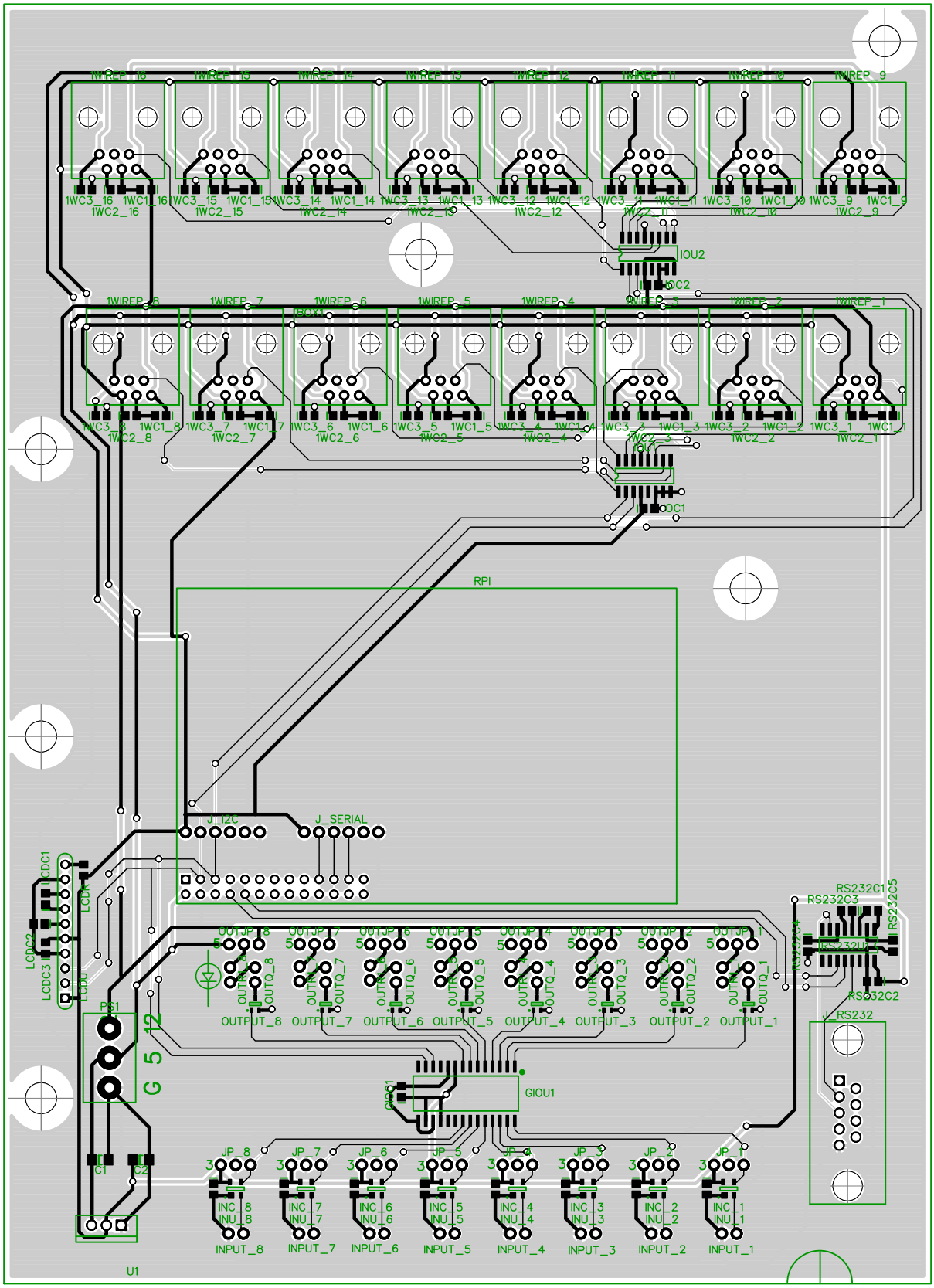
Hardware debounce circuit provides some advantages over software. Can also leave SWU/SWC unpopulated and use JP for a direction connection to an external device. Watch your input currents!



LCD Interface

Optional LCD interface. Designed for the NHD-C0220BiZ 2x20 LED-backlight unit, but may be able to control others as well.




1WREP_16
1WREP_15
1WREP_14
1WREP_13
1WREP_12
1WREP_11
1WREP_10
1WREP_9
1WC3_16 1WC1_16 1WC2_16
1WC3_15 1WC1_15 1WC2_15
1WC3_14 1WC1_14 1WC2_14
1WC3_13 1WC1_13 1WC2_13
1WC3_12 1WC1_12 1WC2_12
1WC3_11 1WC1_11 1WC2_11
1WC3_10 1WC1_10 1WC2_10
1WC3_9 1WC1_9 1WC2_9
IOU2
IOC2
1WREP_8
1WREP_7
1WREP_6
1WREP_5
1WREP_4
1WREP_3
1WREP_2
1WREP_1
IOU1
1WC3_8 1WC1_8 1WC2_8
1WC3_7 1WC1_7 1WC2_7
1WC3_6 1WC1_6 1WC2_6
1WC3_5 1WC1_5 1WC2_5
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1WC3_3 1WC1_3 1WC2_3
1WC3_2 1WC1_2 1WC2_2
1WC3_1 1WC1_1 1WC2_1
IOC1
RPI
J_I2C
J_SERIAL
LCDC1
LCDR
LCDC2
LCDC3
LCDD
PS1
G 5 12
OUTJP_8
OUTJP_7
OUTJP_6
OUTJP_5
OUTJP_4
OUTJP_3
OUTJP_2
OUTJP_1
OUTP_8
OUTP_7
OUTP_6
OUTP_5
OUTP_4
OUTP_3
OUTP_2
OUTP_1
OUTQ_8
OUTQ_7
OUTQ_6
OUTQ_5
OUTQ_4
OUTQ_3
OUTQ_2
OUTQ_1
OUTPUT_8
OUTPUT_7
OUTPUT_6
OUTPUT_5
OUTPUT_4
OUTPUT_3
OUTPUT_2
OUTPUT_1
RS232C1
RS232C3
RS232C5
RS232C4
RS232C2
J_RS232
GIOC1
GIOU1
C1
C2
JP_8
JP_7
JP_6
JP_5
JP_4
JP_3
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INU_2
INC_1
INU_1
INPUT_8
INPUT_7
INPUT_6
INPUT_5
INPUT_4
INPUT_3
INPUT_2
INPUT_1
U1