

I2C Pullups 1/2 nominal (10K)
and RESET-pulldown
ONLY last panel on daisy chain!
Calc Rpullup from cable length and clock frequency

TERM_SDA JP1
TERM_SCL JP2

I2C daisy chain IN

+5V +3.3V

J9

SDA SCL RESET_L

GND

I2C daisy chain OUT

+5V +3.3V

J18

SDA SCL RESET_L

GND

TERM_RESET JP3

R3

R3: > 1K, voltage divider with 220 on UniBone.

Inline: L or R

SDA SCL RESET_L

R6 R7 R8

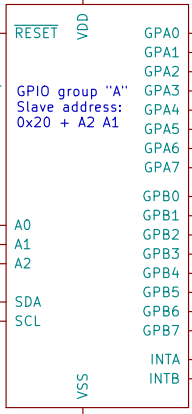
Optional anti-noise filter
c for cut-off 400kHz:
© 10kOhm: 27pF

C4 27pF C5 27pF C6 1nF

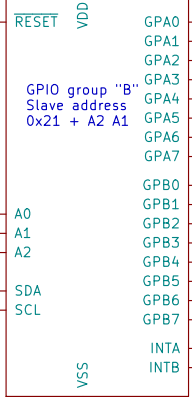
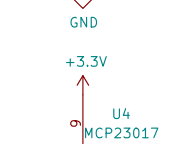
R4 R5

+3.3V

U2 MCP23017



Inputs: configure 100kOhm pullup



+3.3V

A0 A1 A2

SDA SCL

VSS

VLAMP

J1 A0 RL0-LOAD J2 A1 RL0-RDY J3 A2 RL0-FAULT J4 A3 RL0-WPROT J5 A4 RL1-LOAD J6 A5 RL1-RDY J7 A6 RL1-FAULT J8 A7 RL1-WPROT

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw-

A0DRV A1DRV A2DRV A3DRV A4DRV A5DRV A6DRV A7DRV

GND GND GND GND GND GND GND GND

COM 18 17 16 15 14 13 12 11

10 11 12 13 14 15 16 17 18

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw-

A0DRV A1DRV A2DRV A3DRV A4DRV A5DRV A6DRV A7DRV

GND GND GND GND GND GND GND GND

COM 18 17 16 15 14 13 12 11

10 11 12 13 14 15 16 17 18

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw-

A0DRV A1DRV A2DRV A3DRV A4DRV A5DRV A6DRV A7DRV

GND GND GND GND GND GND GND GND

COM 18 17 16 15 14 13 12 11

10 11 12 13 14 15 16 17 18

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw-

B0DRV B1DRV B2DRV B3DRV B4DRV B5DRV B6DRV B7DRV

GND GND GND GND GND GND GND GND

COM 18 17 16 15 14 13 12 11

10 11 12 13 14 15 16 17 18

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw-

B0DRV B1DRV B2DRV B3DRV B4DRV B5DRV B6DRV B7DRV

GND GND GND GND GND GND GND GND

COM 18 17 16 15 14 13 12 11

10 11 12 13 14 15 16 17 18

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw-

B0DRV B1DRV B2DRV B3DRV B4DRV B5DRV B6DRV B7DRV

GND GND GND GND GND GND GND GND

COM 18 17 16 15 14 13 12 11

10 11 12 13 14 15 16 17 18

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw-

B0DRV B1DRV B2DRV B3DRV B4DRV B5DRV B6DRV B7DRV

GND GND GND GND GND GND GND GND

COM 18 17 16 15 14 13 12 11

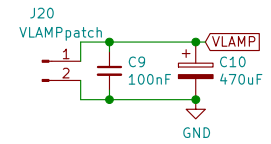
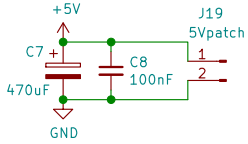
10 11 12 13 14 15 16 17 18

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw- LED+ LED- Sw+ Sw-

RL02: No switch function on RDY and FAULT, "Sw+" unconnected

VLAMP: individual power solution for lamps or LEDs to be placed on breadboard area. (+5V pass through, 5V -> 12V DC/DC converter)



Sheet: /
File: i2cpanel.sch

Title:

Size: A4 Date:
KiCad E.D.A. kicad (5.1.0)-1

Rev:
Id: 1/1