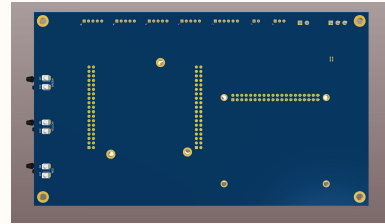
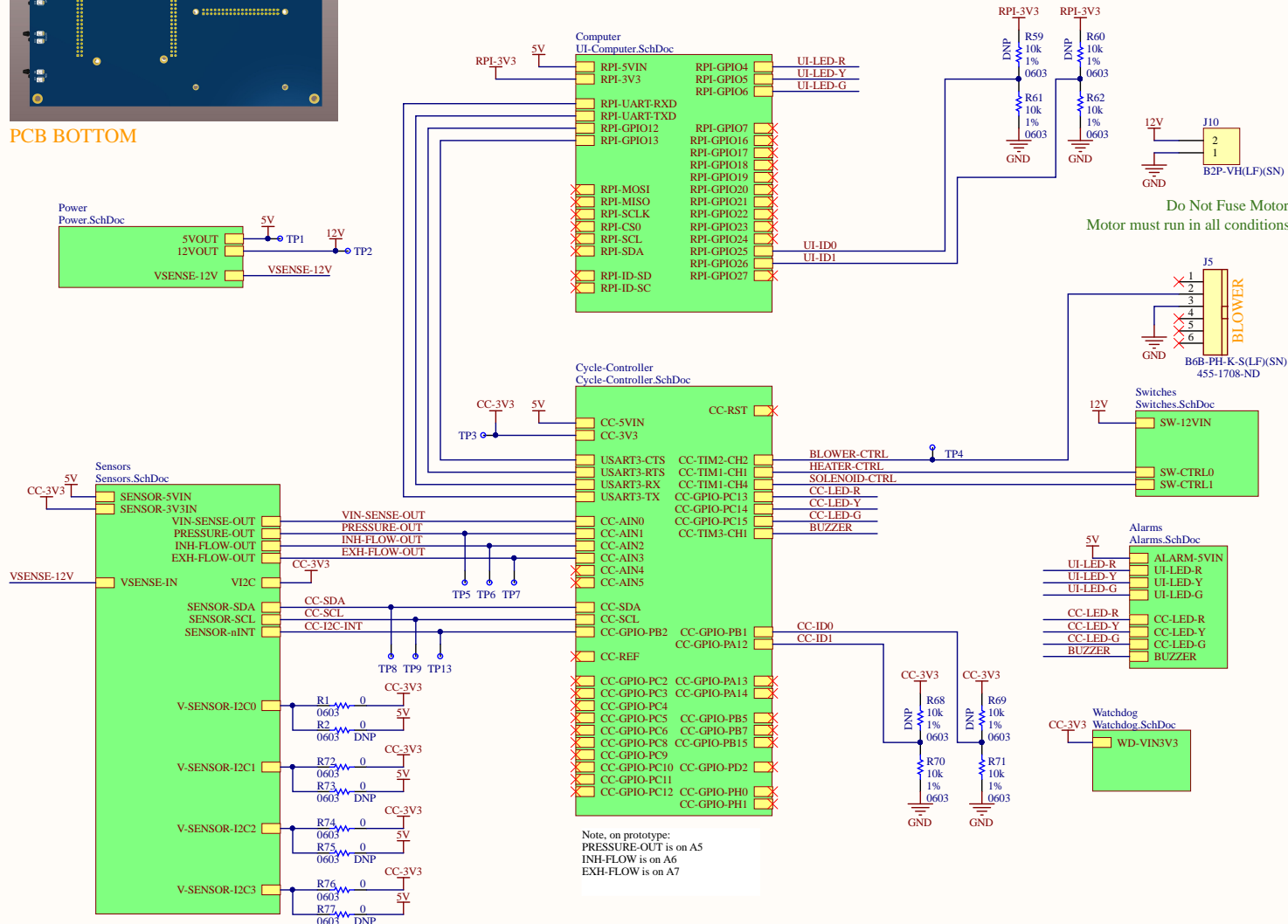


PCB TOP



PCB BOTTOM

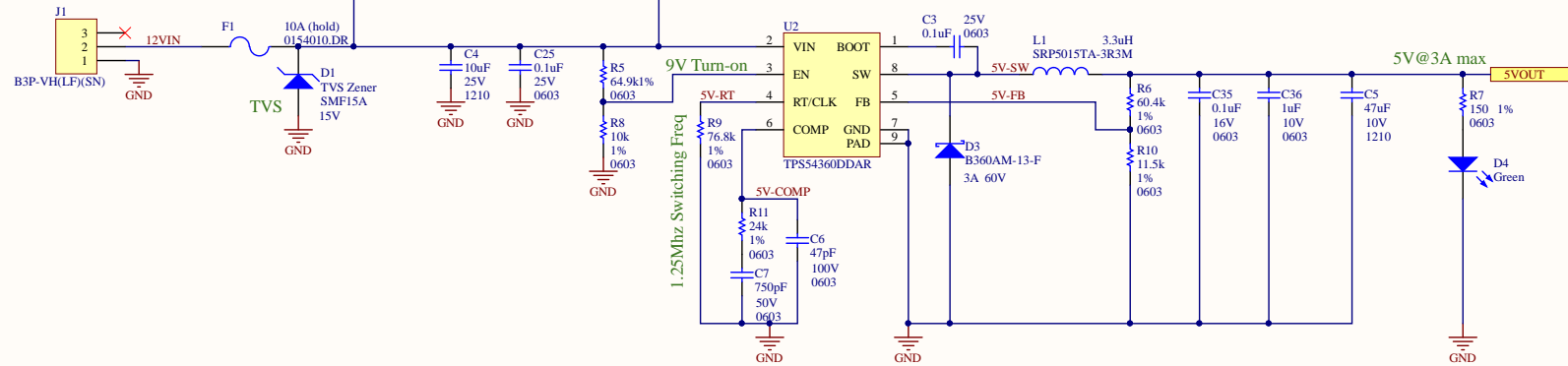
# RespiraWorks Ventilator Mainboard Rev 1.0




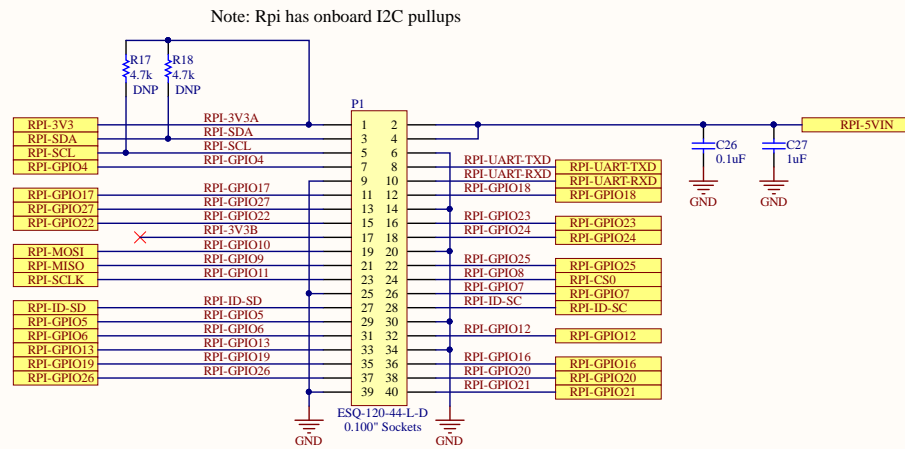
|                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|
| M1                      | M2                      | M3                      | M4                      |
| BOM Item 24335 DNP      | BOM Item 24335 DNP      | BOM Item 24335 DNP      | BOM Item 24335 DNP      |
| M2.5 x 20mm + 4mm       | M2.5 x 20mm + 4mm       | M2.5 x 20mm + 4mm       | M2.5 x 20mm + 4mm       |
| M5                      | M6                      | M7                      | M8                      |
| BOM Item M2.5 x 4mm DNP | BOM Item M2.5 x 4mm DNP | BOM Item M2.5 x 4mm DNP | BOM Item M2.5 x 4mm DNP |
| M9                      | M10                     | M11                     | M12                     |
| BOM Item M3 x 6mm DNP   | BOM Item M3 x 6mm DNP   | BOM Item M3 x 6mm DNP   | BOM Item M3 x 6mm DNP   |
| M13                     | M14                     | M15                     | M16                     |
| BOM Item 971090151 DNP  | BOM Item 971090151 DNP  | BOM Item 971090151 DNP  | BOM Item 971090151 DNP  |
| M2.5 x 20mm + 6mm       | M2.5 x 20mm + 6mm       | M2.5 x 20mm + 6mm       | M2.5 x 20mm + 6mm       |
| M17                     | M18                     | M19                     | M20                     |
| BOM Item M2.5 x 4mm DNP | BOM Item M2.5 x 4mm DNP | BOM Item M2.5 x 4mm DNP | BOM Item M2.5 x 4mm DNP |
| M21                     | M22                     | M23                     | M24                     |
| BOM Item M2.5           | BOM Item M2.5           | BOM Item M2.5           | BOM Item M2.5           |

These are placeholders - final mech parts TBD

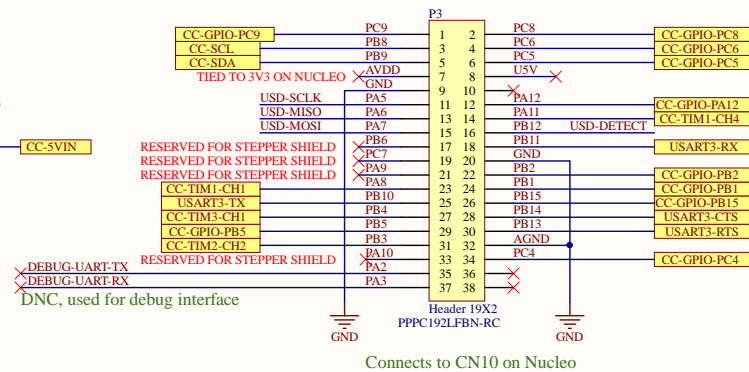
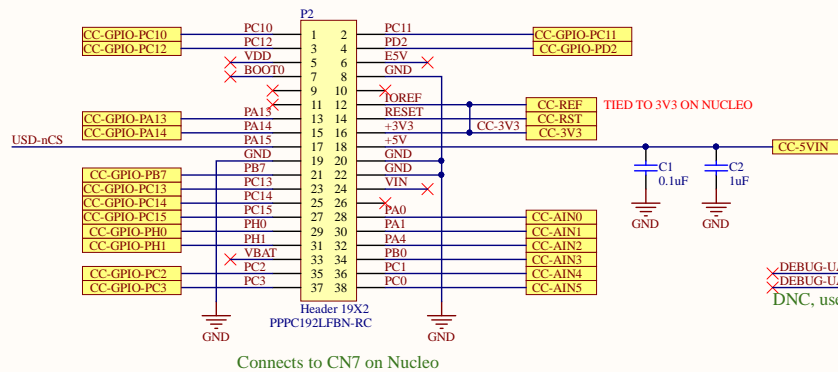
|                  |                         |                   |                 |  |
|------------------|-------------------------|-------------------|-----------------|--|
| Project:         | RespiraWorks Ventilator |                   |                 |  |
| Title:           | RespiraWorks            |                   |                 |  |
| Sheet: 1 of 8    | Size: A4                | Revision: A1      | Date: 4/25/2020 |  |
| File: TOP.SchDoc |                         | Drawn By: E. Chiu | Altium          |  |



|   |          |   |                 |
|---|----------|---|-----------------|
| Project: <i>RespiraWorks Ventilator</i> |          |  <b>RespiraWorks</b> |                 |
| Title: <i>RespiraWorks</i>              |          |   |                 |
| Sheet: 2 of 8                           | Size: A4 | Revision: A1  | Date: 4/25/2020 |
| File: Power.SchDoc                      |          | Drawn By: E. Chiu   |                 |



U8  
Raspberry Pi B+ Mechanical Footprint  
Upside down direct socket  
Separately placed ESQ-120-44-L-D  
connector required!  
RpiB+Footprint-UpsideDown-Direct DNP



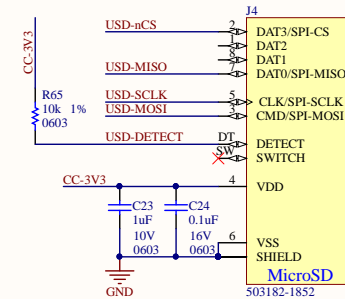
NUCLEO-64 Mechanical Footprint Only

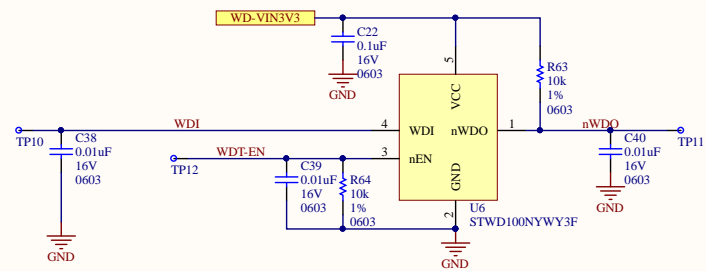
Separately placed PPPC192LFBN-RC connectors required!


Text frames below can be Copy/Paste Special... into net names

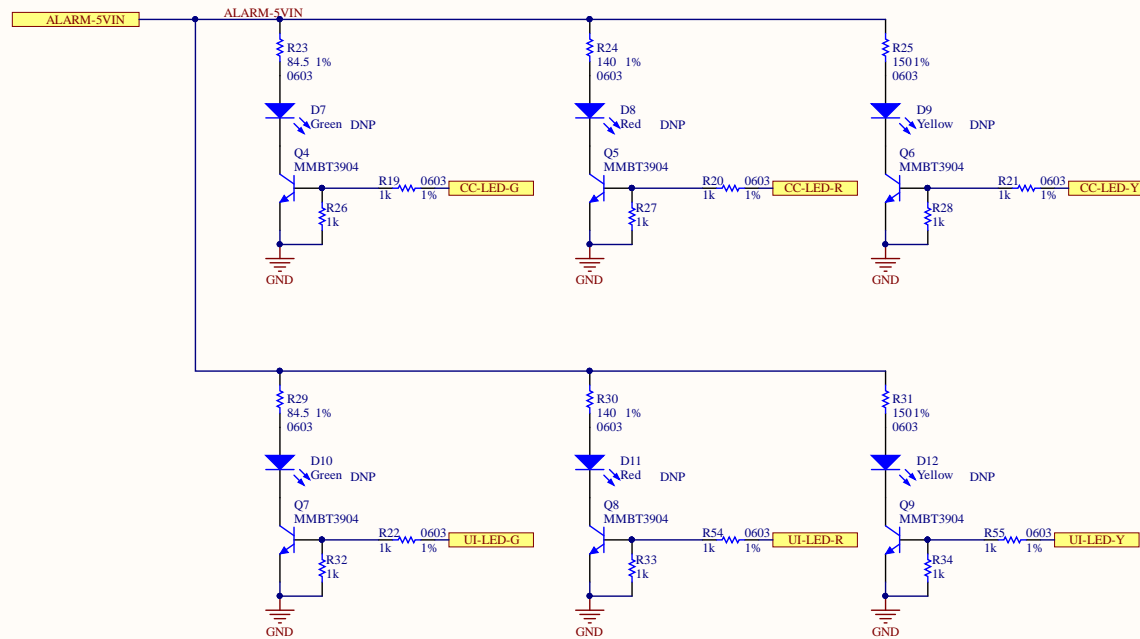
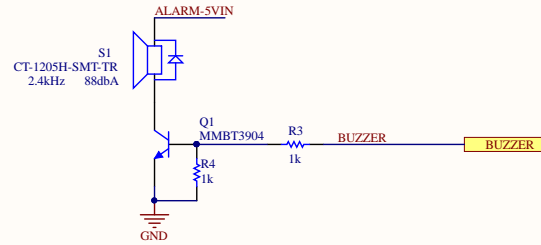
| CN7   | CN7   | CN10 | CN10  |
|-------|-------|------|-------|
| ODD:  | EVEN: | ODD: | EVEN: |
| PC10  | PC11  | PC9  | PC8   |
| PC12  | PD2   | PB8  | PC6   |
| VDD   | ESV   | AVDD | PC5   |
| BOOT0 | GND   | GND  | U5V   |
| NC    | NC    | PA5  | NC    |
| NC    | IOREF | PA6  | PA12  |
| PA13  | RESET | PA7  | PA11  |
| PA14  | +3V3  | PB6  | NC    |
| PA15  | +5V   | PC7  | GND   |
| GND   | GND   | PA9  | PB2   |
| PB7   | GND   | PA8  | PB1   |
| PC13  | VIN   | PB10 | PB15  |
| PC14  | NC    | PB4  | PB14  |
| PC15  | PA0   | PB5  | PB13  |
| PH0   | PA1   | PB3  | AGND  |
| PH1   | PA4   | PA10 | PC4   |
| VBAT  | PB0   | PA2  | NC    |
| PC2   | PC1   | PA3  | NC    |
| PC3   | PC0   | PB9  | PB12  |

NUCLEO-L452RE  
DNP






|   |                 |   |                        |
|---|-----------------|---|------------------------|
| Project: <i>RespiraWorks Ventilator</i> |                 |  Respira Works |                        |
| Title: <i>RespiraWorks</i>              |                 |   |                        |
| Sheet: <u>5</u> of <u>8</u>             | Size: <u>A4</u> | Revision: <u>A1</u>   | Date: <u>4/25/2020</u> |
| File: <u>Watchdog.SchDoc</u>            |                 | Drawn By: <u>E. Chiu</u><br><i>Altium</i>   |                        |



backside LED are DNP'd to expedite assembly - hand solder upon receipt

|   |          |   |                 |
|---|----------|---|-----------------|
| Project: <b>RespiraWorks Ventilator</b> |          |  |                 |
| Title: <b>RespiraWorks</b>              |          |   |                 |
| Sheet: 6 of 8                           | Size: A4 | Revision: <b>A1</b>   | Date: 4/25/2020 |
| File: Alarms.SchDoc                     |          | Drawn By: E. Chiu   |                 |

