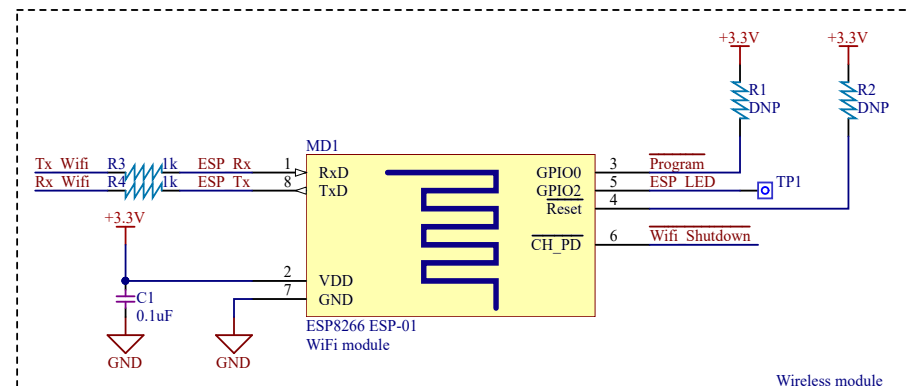
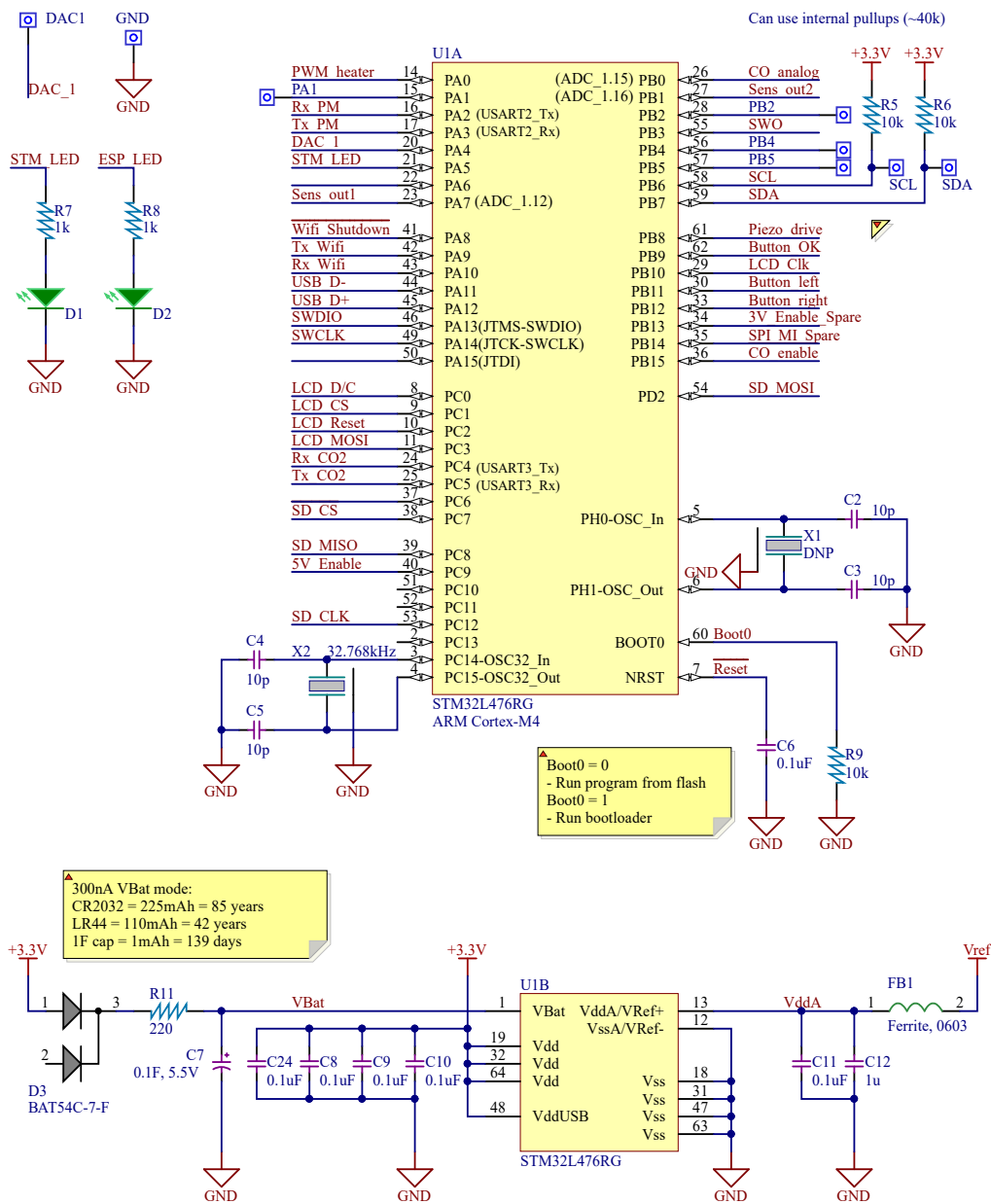


1

2

3

4

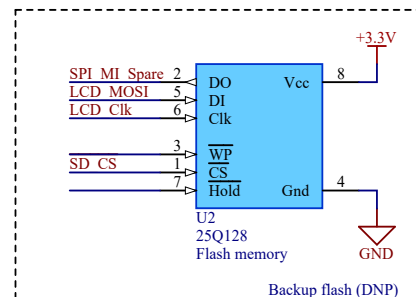
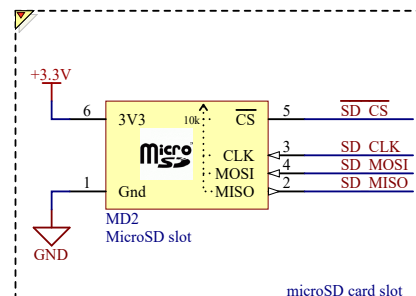


▲ Pull GPIO0 low to program, float or pullup to run.

Reset should have pullup on module (can measure)

CH_PD used for powering on/off module

LEDs on module:
- red = power



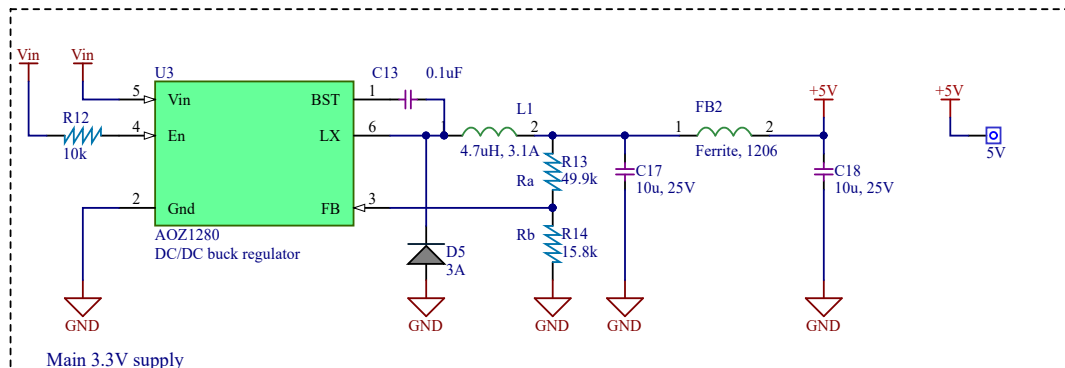
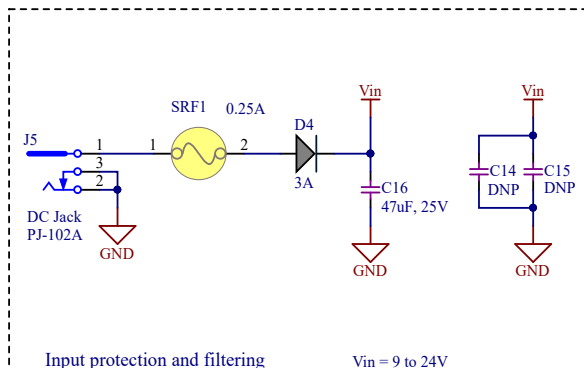
Title <i>CPU and storage</i>			Thomas Price	
Size: A4	Number: 1	Revision: 1.1		
Date: 12/31/2016	Time: 3:16:08 PM	Sheet 1 of 4		
File: G:\PCBs\STM32L4 main cpu\stm32 cpu.SchDoc				

1

2

3

4

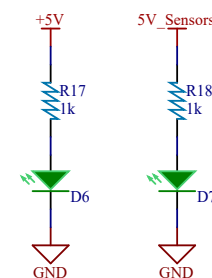
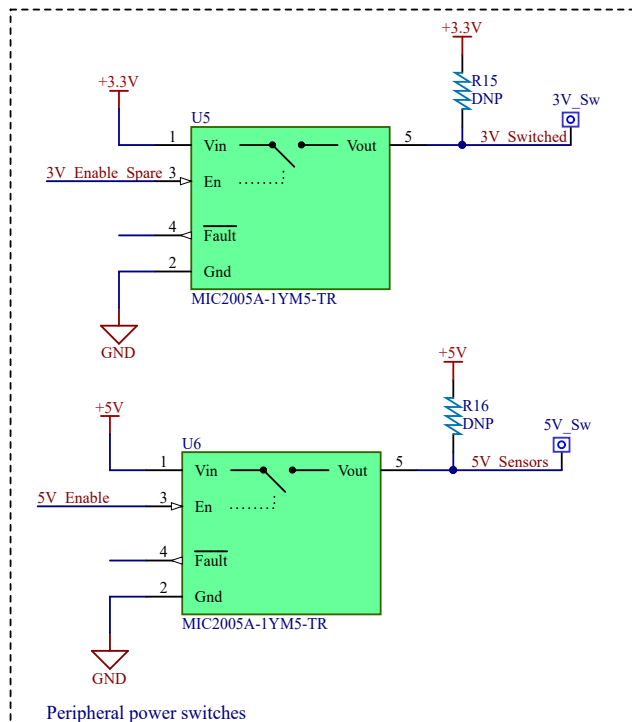
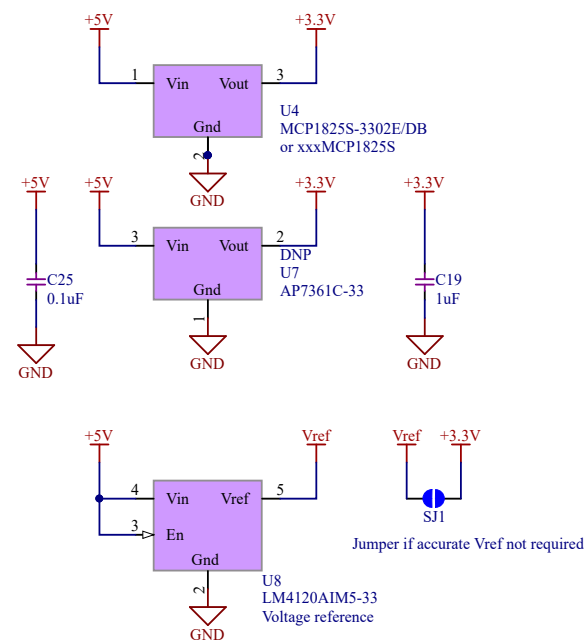


$$V_o = 0.8 \times (1 + R_a/R_b)$$

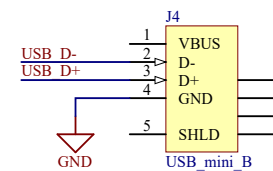
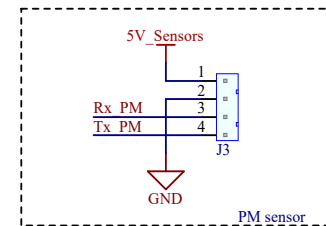
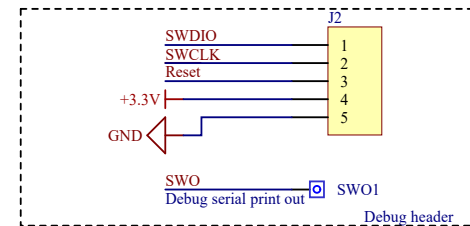
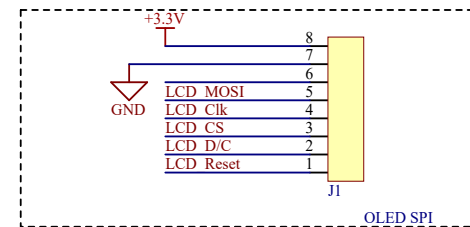
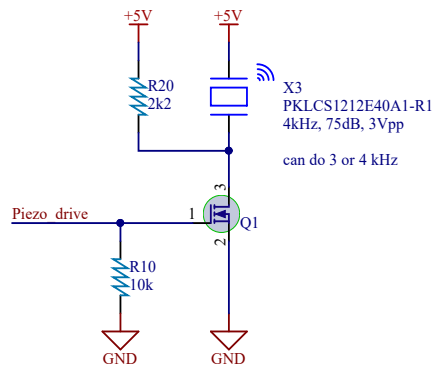
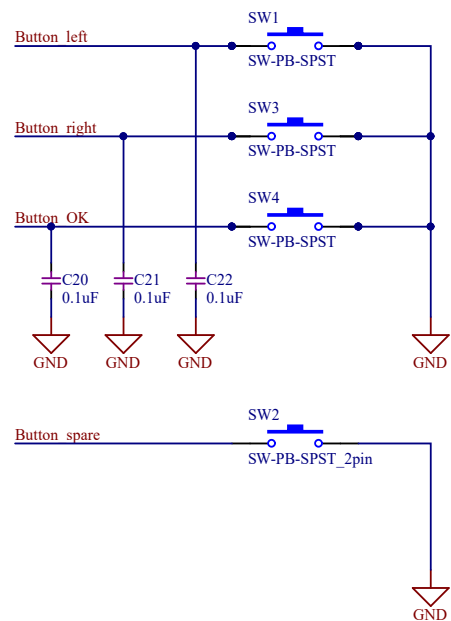
$$V_o = 3.327V$$

3.3V device currents

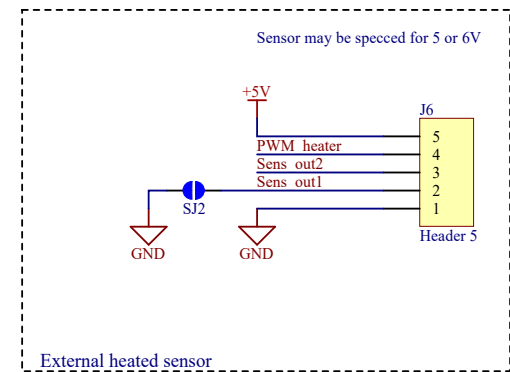
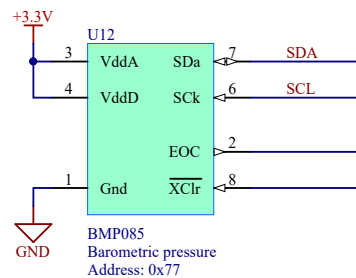
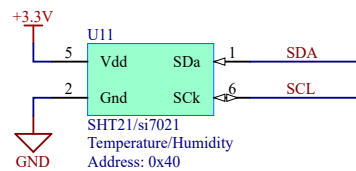
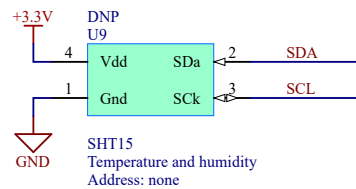
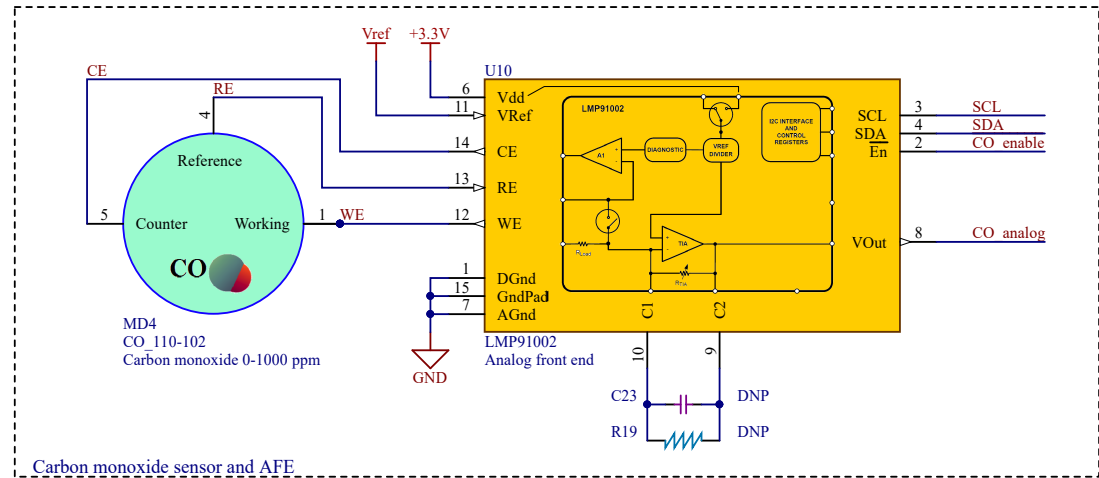
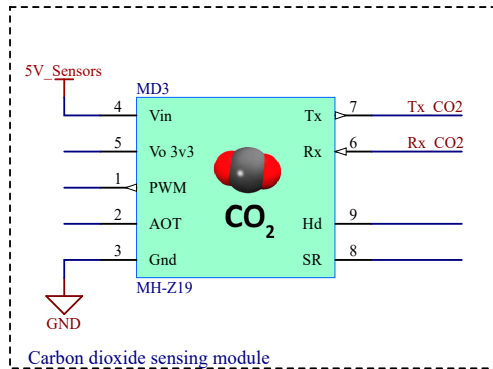
ESP: 170mA (0.5A peak)
 L476: 29mA
 SD: 20mA
 LEDs: <20mA
 Piezo: <20mA



Title <i>Power supply</i>			Thomas Price	
Size: A4	Number: 2	Revision: 1.1		
Date: 12/31/2016	Time: 3:16:08 PM	Sheet 2 of 4		
File: G:\PCBs\STM32L4_main_cpu\stm32_psu.SchDoc				



Title <i>Interface: buttons, speaker, connectors</i>			Thomas Price	
Size: A4	Number: 3	Revision: 1.1		
Date: 12/31/2016	Time: 3:16:08 PM	Sheet 3 of 4		
File: G:\PCBs\STM32L4_main_cpu\stm32_interface.SchDoc				



Title <i>Sensors and AFE</i>			Thomas Price	
Size: A4	Number: 4	Revision: 1.1		
Date: 12/31/2016	Time: 3:16:08 PM	Sheet 4 of 4		
File: G:\PCBs\STM32L4_main_cpu\stm32_sensors.SchDoc				

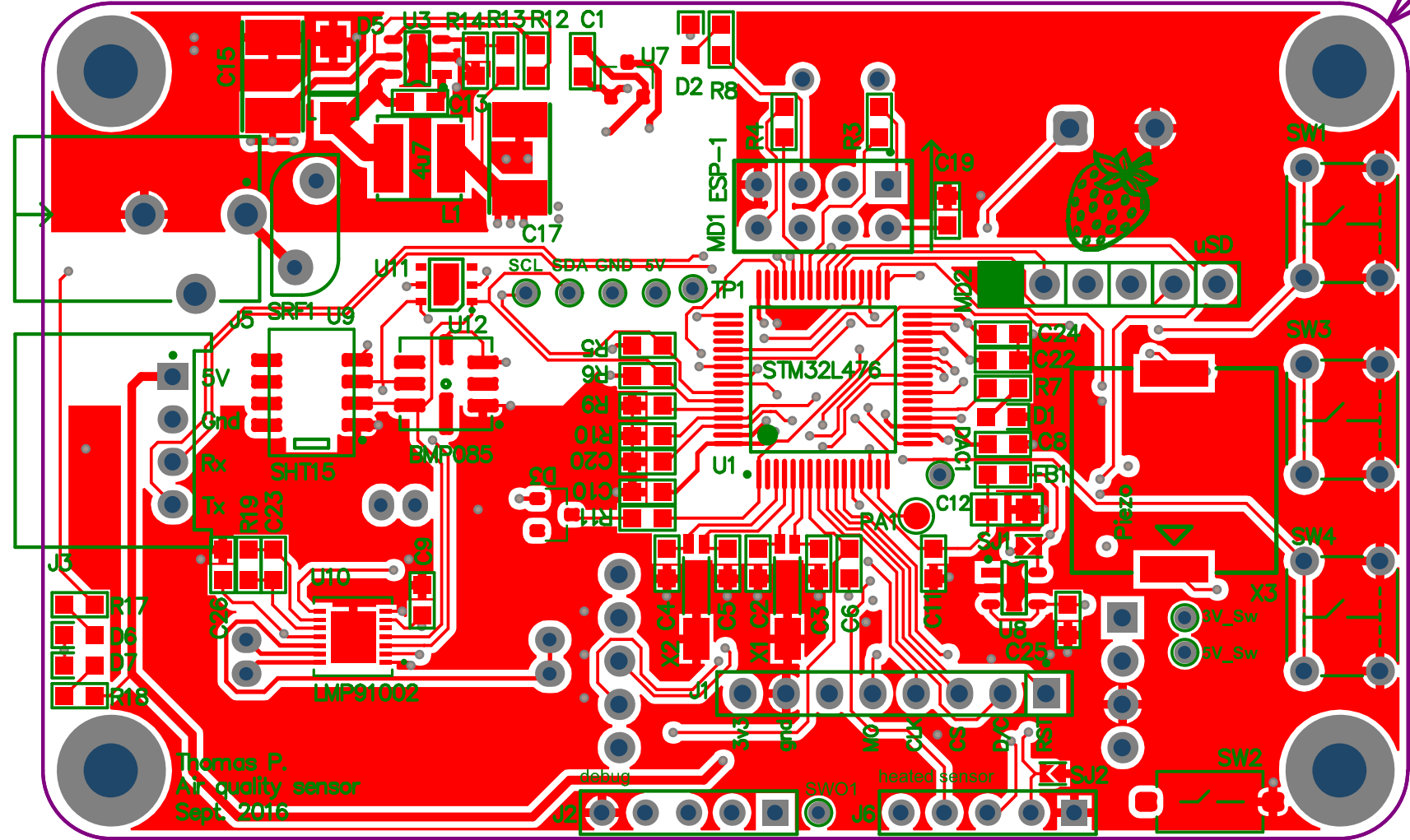


Diagram illustrating a 1D convolution operation:

- Input: 1D vector of size 80.00 (labeled "Top Layer").
- Kernel: 1D vector of size 3.00.
- Output: 1D vector of size 78.00.

Top Layer

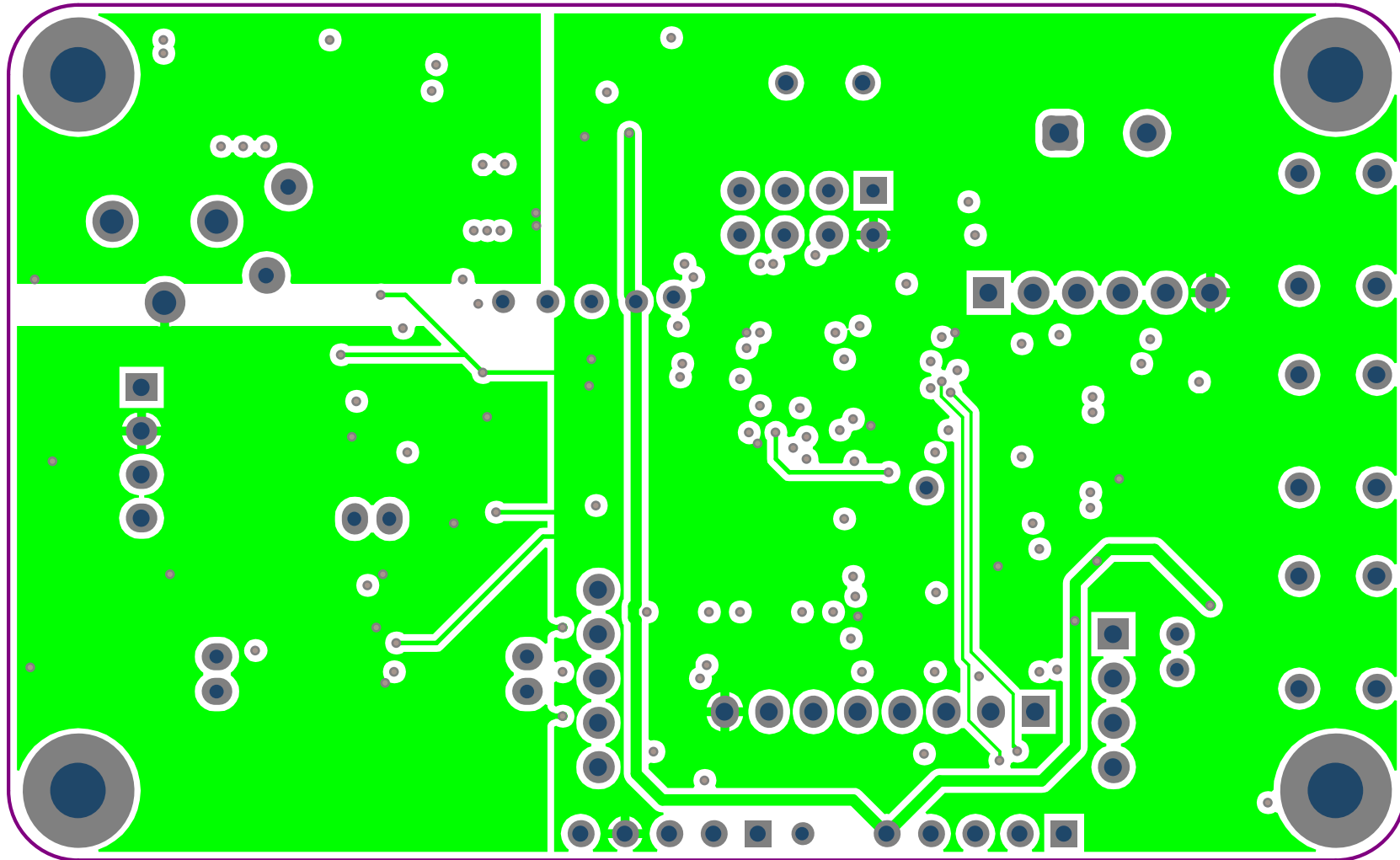
 R 4.00



Thomas P.
Air quality sensor
Sept. 2016

thmpcb.wordpress.com

Mid Layer 2



Mid Layer 1

