

A

A

B

B

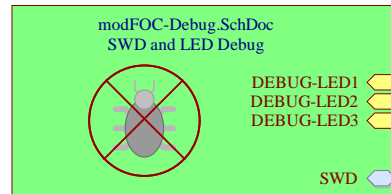
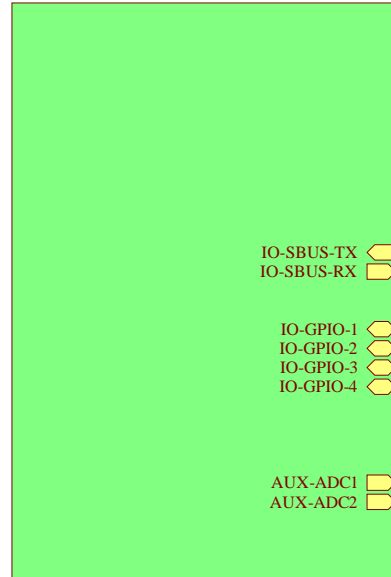
C

C

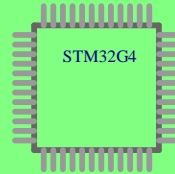
D

D

Designator
modFOC-RC-Interface.SchDoc



modFOC-MCU.SchDoc
STM32 MCU and Peripherals



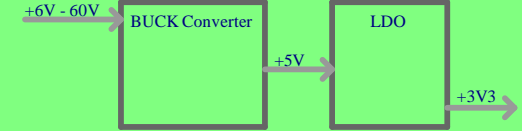
SCLK_H
MOSI_H
MISO_H
CS_0
CS_1
CS_2
CS_HRange

IO-UART-TX
IO-UART-RX
IO-SPI-NCS
IO-SPI-SCL
IO-SPI-MISO
IO-SPI-MOSI

IO-I2C-SCL
IO-I2C-SDA

USB-MCU

modFOC-Buck-Supply.SchDoc
Integrated Inductor Buck Supply



modFOC-ESC-Interface.SchDoc
ESC Interface



modFOC Peripheral Interfaces
modFOC-IO.SchDoc



Title **modFOC-Top MCU**

Size: **A4**

Number: **1**

Revision: **2.0**

Date: **28.03.2022**

Time: **14:34:39**

Sheet **1** of **7**

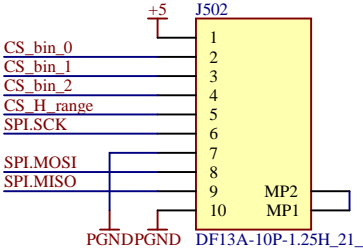
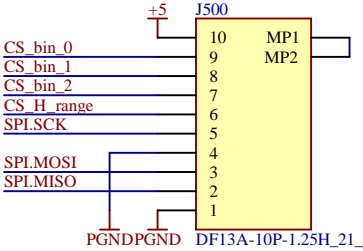
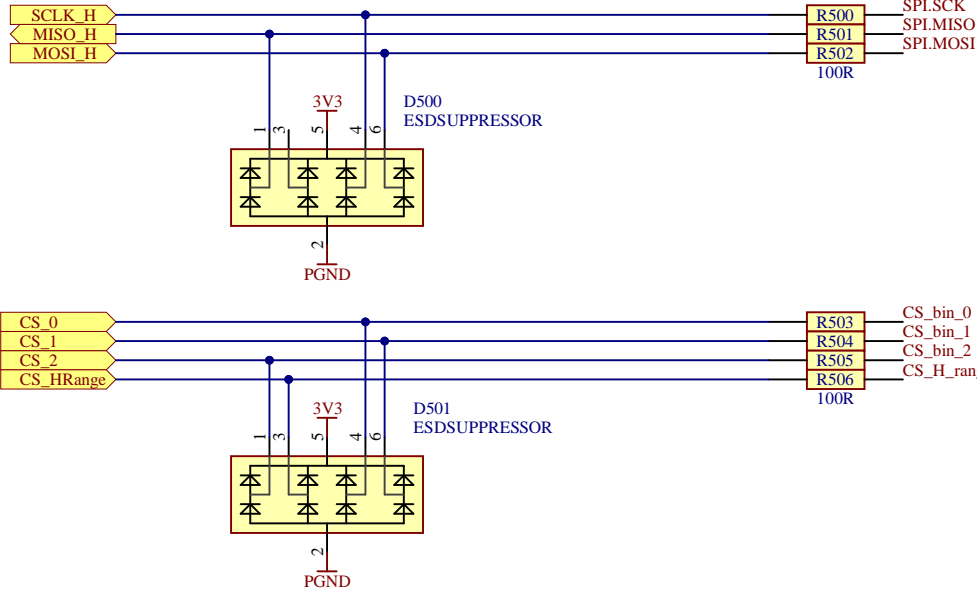
File: **modFOC-Top.SchDoc**

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Thomas Hofmann



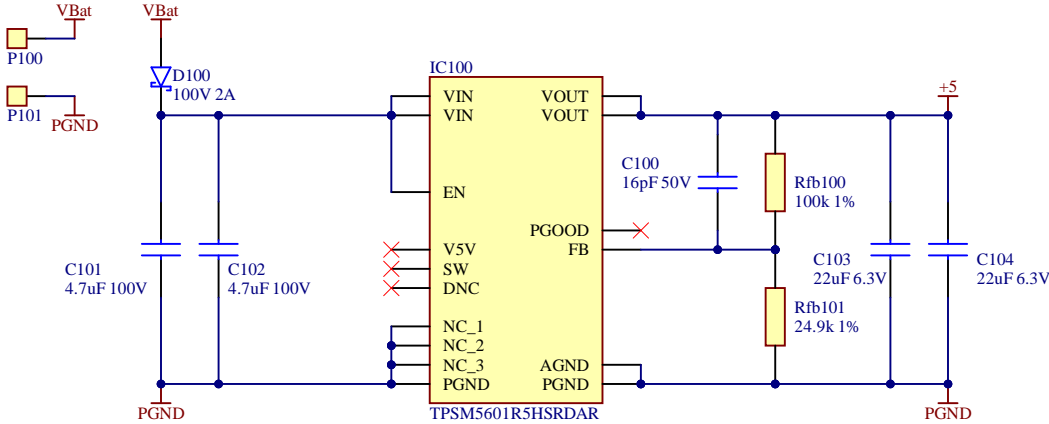
modFOC

Board Interconnect
RcMPPT-BMS

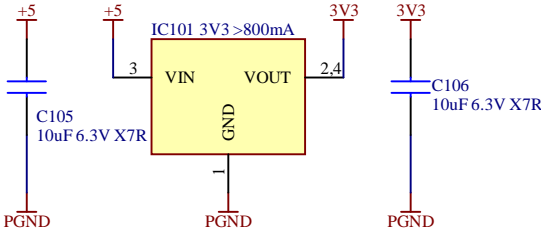


5V Buck Regulator
Integrated Inductor

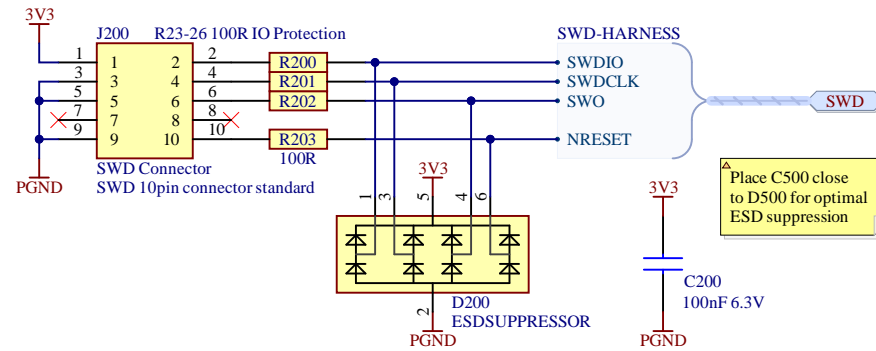
VBat: 3-12S Lipo/Lilon/LiFePo
VPanel: 6-60V



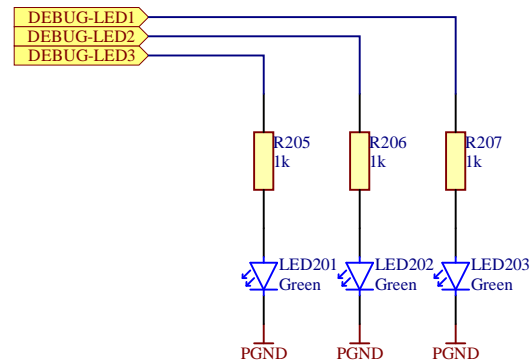
3.3V Linear Regulator



SWD



Indicator LEDs



Title **modFOC-Debug**

Size: A4

Number: 6

Revision: 2.0

Date: 28.03.2022 Time: 14:34:41

Sheet 4 of 7

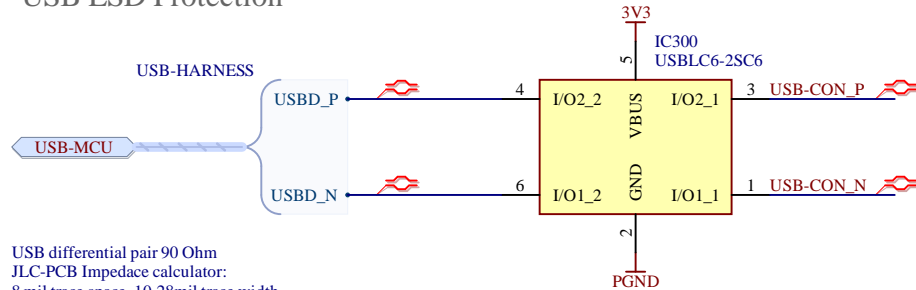
File: modFOC-Debug.SchDoc

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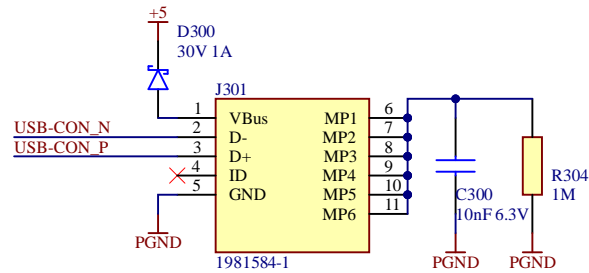


modFOC

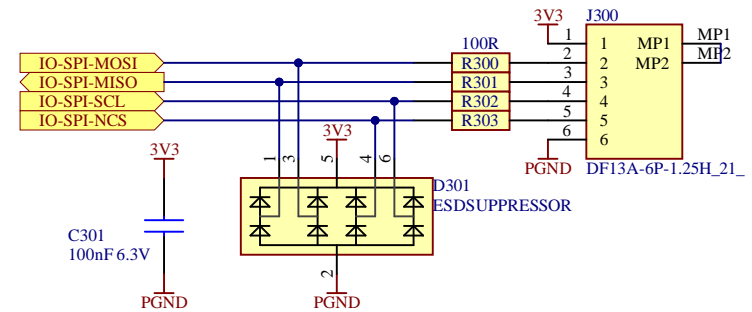
USB ESD Protection



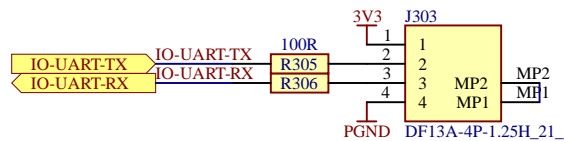
USB



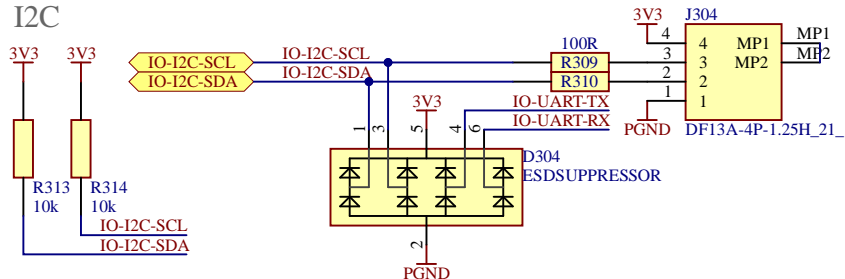
SPI



UART



I2C



Title **modFOC-IO**

Size: **A4**

Number: **5**

Revision: **2.0**

Date: **28.03.2022** Time: **14:34:41**

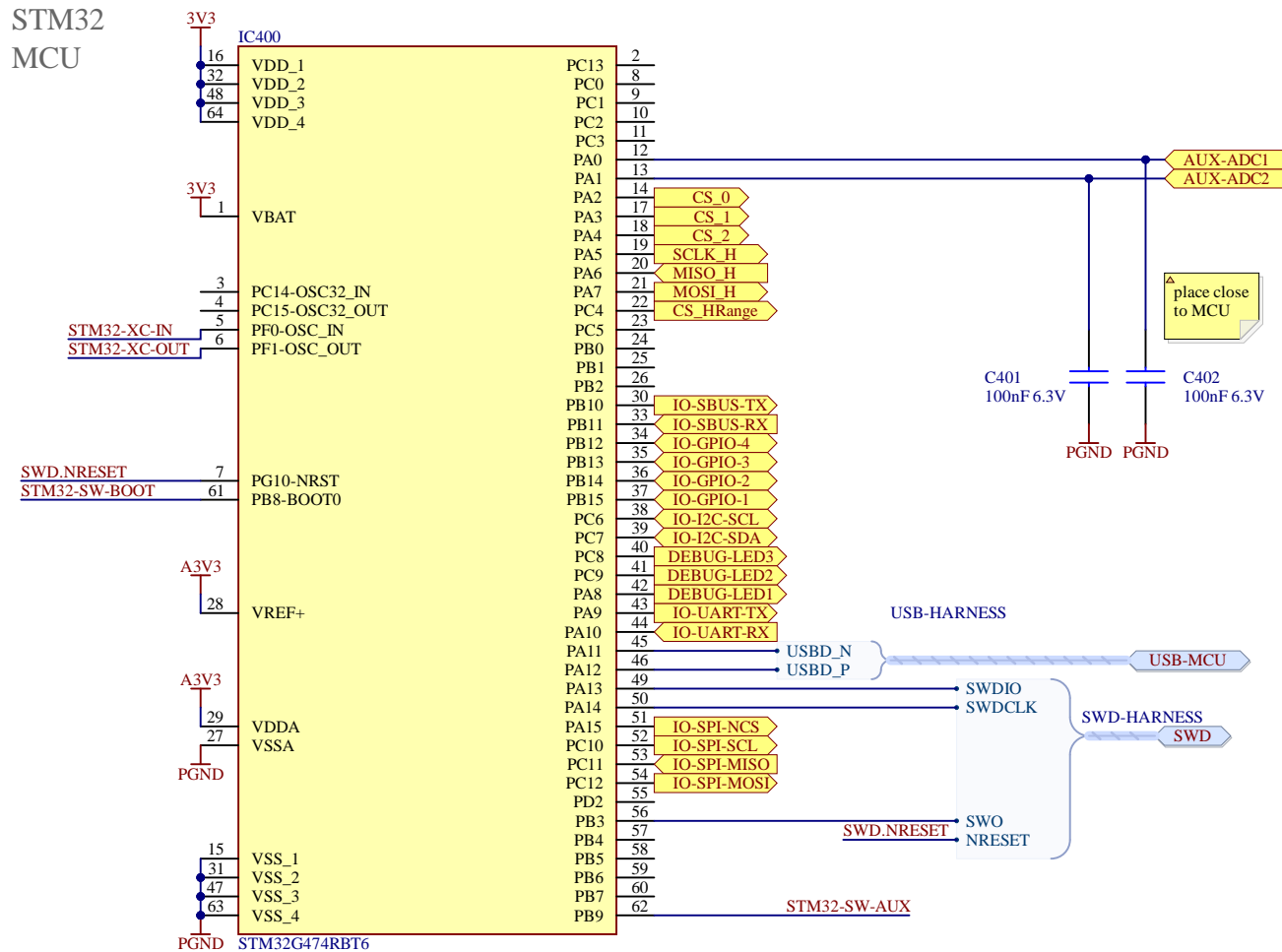
Sheet **5** of **7**

File: **modFOC-IO.SchDoc**

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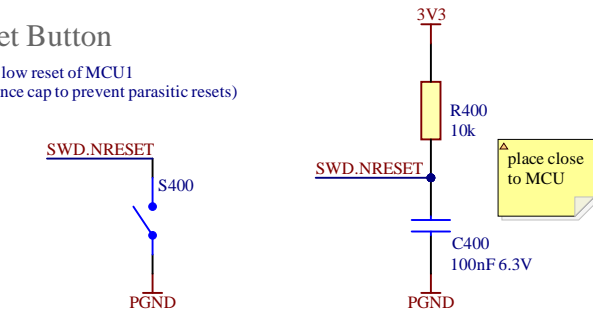


STM32 MCU

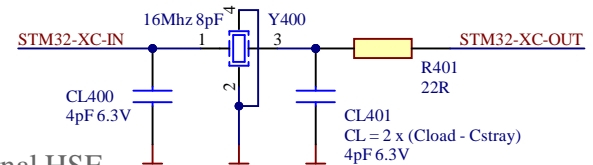


Reset Button

Active low reset of MCU1
(debounce cap to prevent parasitic resets)

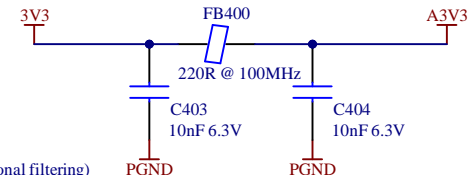


External HSE

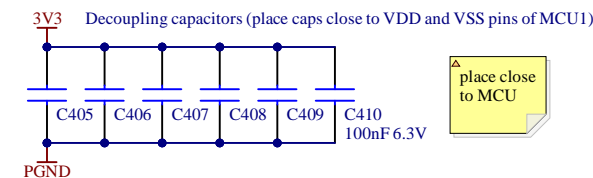


Analog Supply Filtering

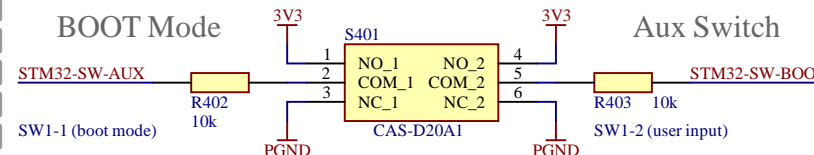
Analog VDD (additional filtering)



Decoupling Capacitors



BOOT Mode



Title **modFOC-MCU**

Size: **A4**

Number: **1**

Revision: **2.0**

Date: **28.03.2022**

Time: **14:34:41**

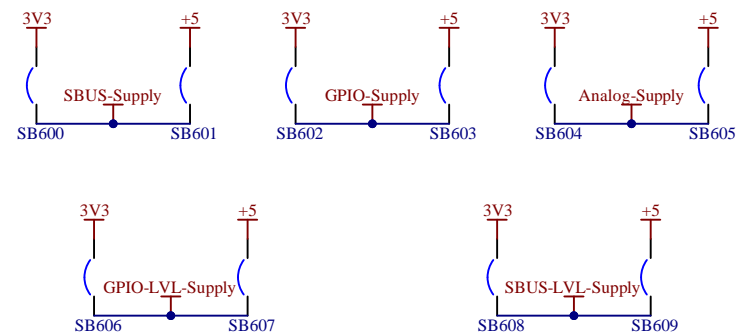
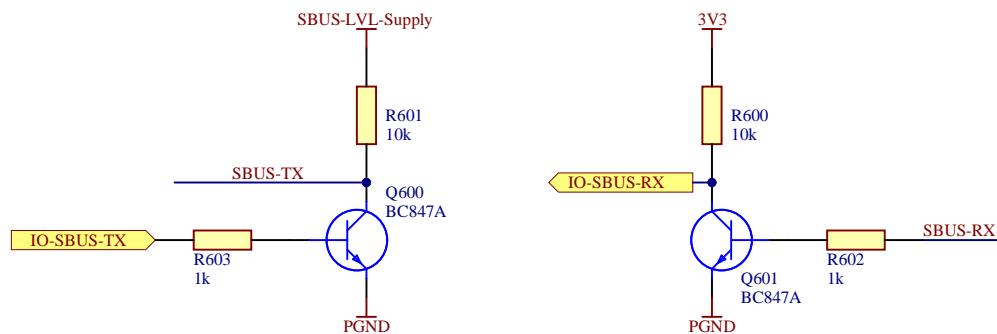
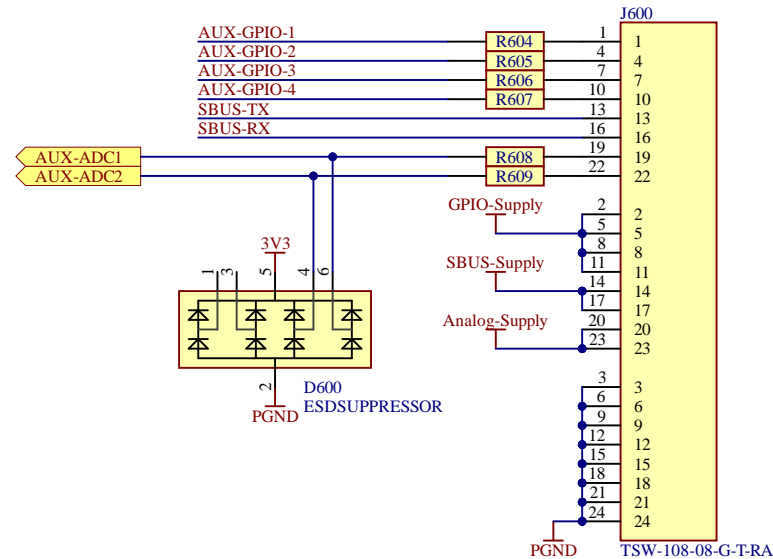
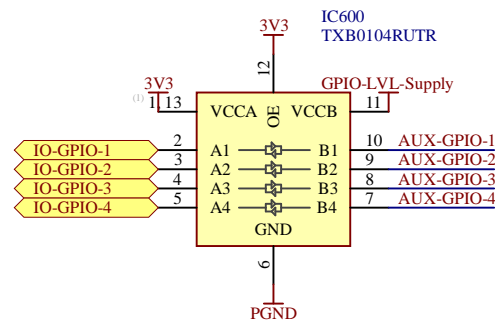
Sheet **6** of **7**

File: **modFOC-MCU.SchDoc**

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GPIO Level Shift



Title **modFOC-RC-Interface**

Size: **A4**

Number: **7**

Revision: **2.0**

Date: **28.03.2022**

Time: **14:34:42**

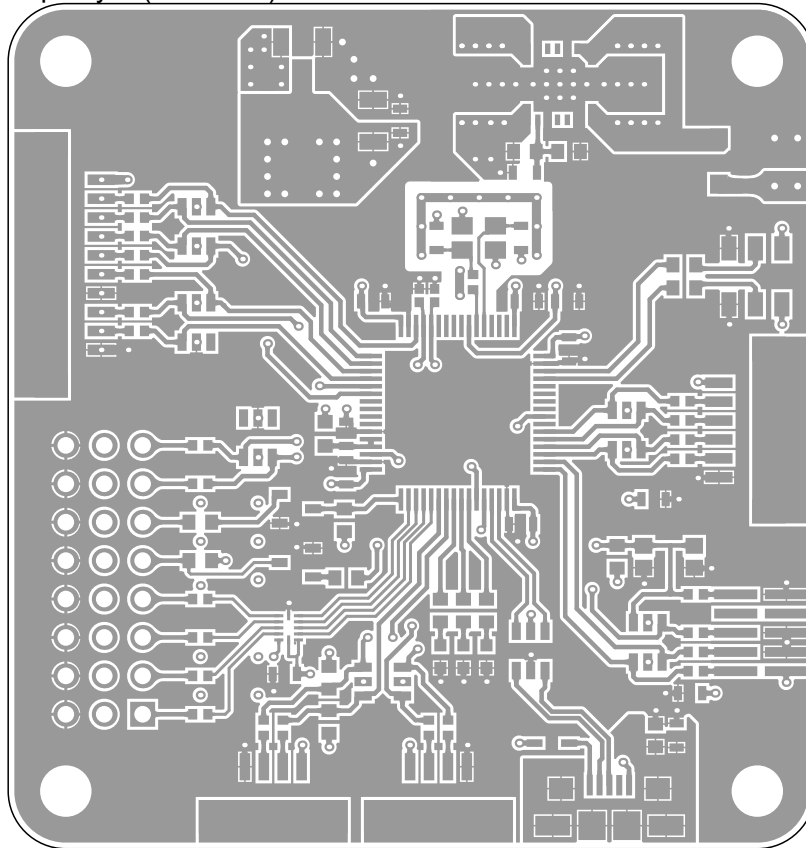
Sheet **7** of **7**

File: **modFOC-RC-Interface.SchDoc**

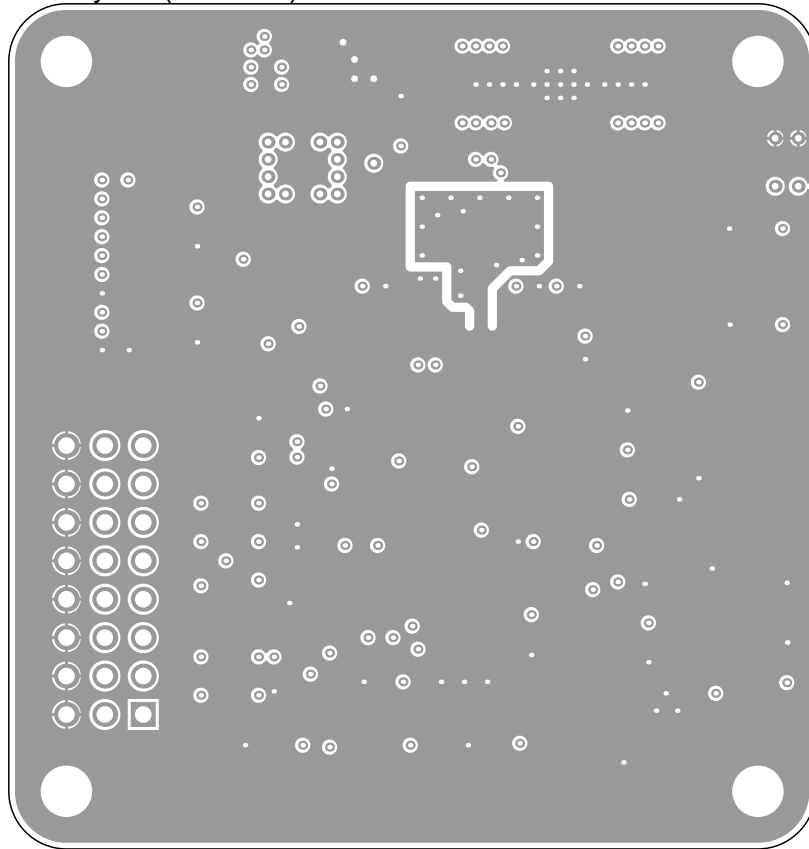
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Thomas Hofmann



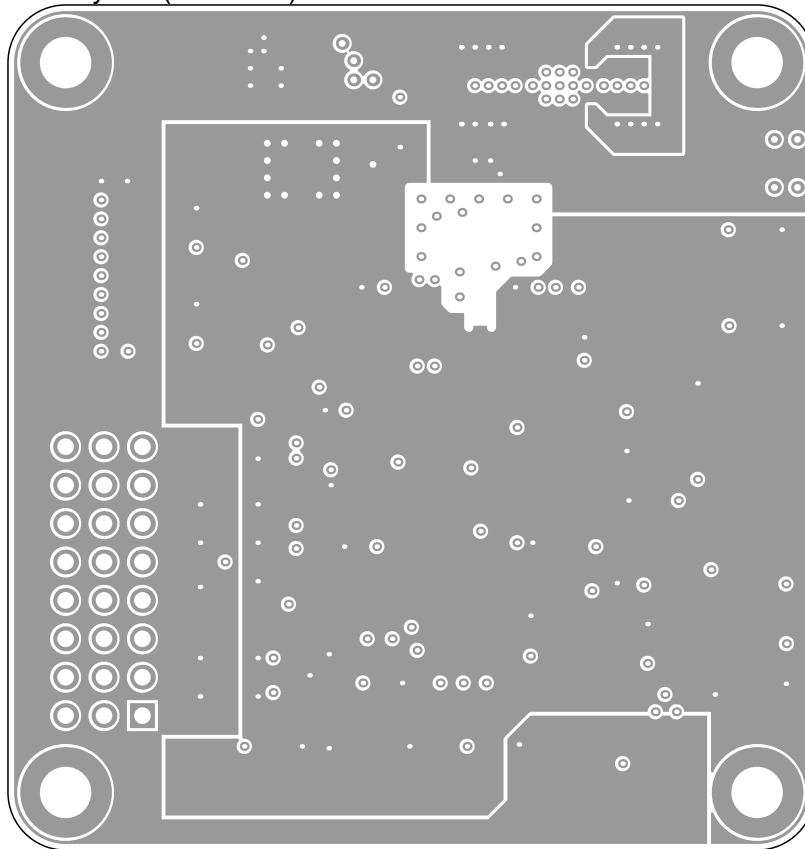
Top Layer (Scale 2:1)



Mid Layer 1 (Scale 2:1)



Mid Layer 2 (Scale 2:1)



Bottom Layer (Scale 2:1)

