

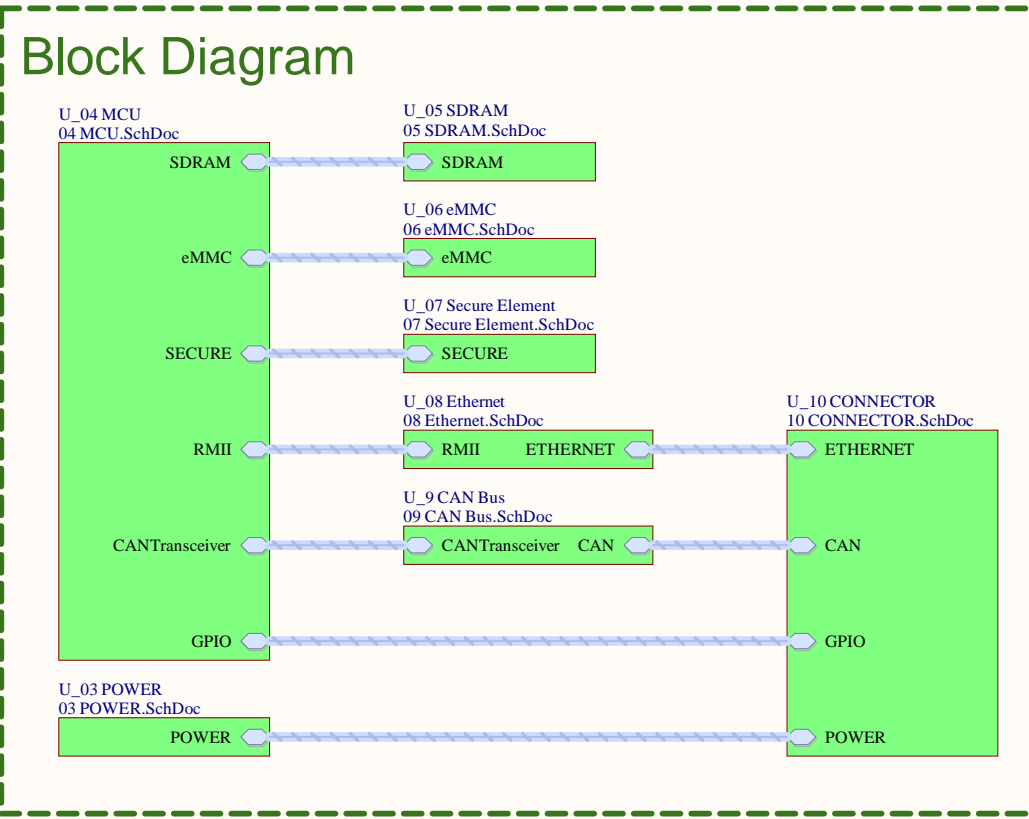
SoM-STM32F4.PrjPcb

Version 1.0
Variant [No Variations]

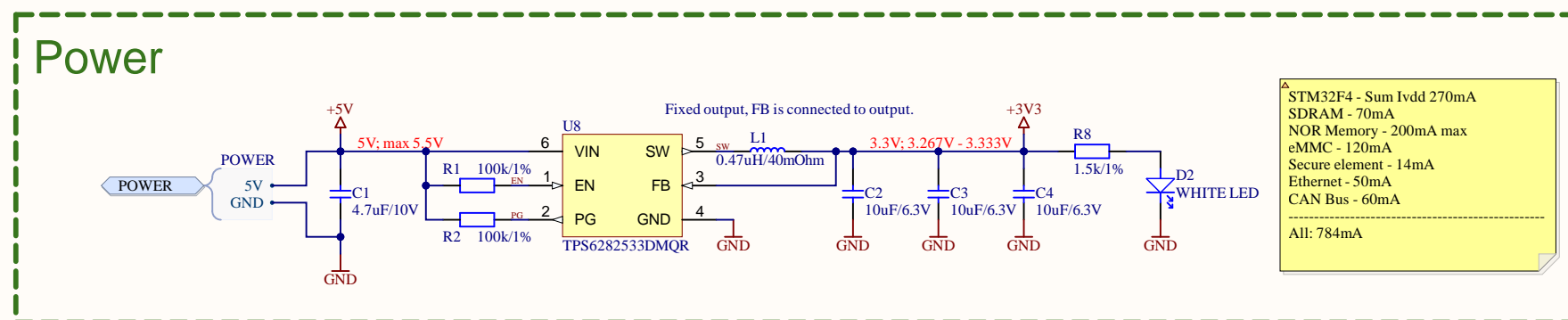
#	PAGE NAME	PAGE FUNCTIONALITY
1	COVER PAGE	This page.
2	BLOCK DIAGRAM	Block diagram of the system.
3	POWER	Power regulator to provide 3.3V to the SoM.
4	MCU	Microcontroller and the connections to it.
5	SDRAM	SDRAM connected via FMC to the STM32.
6	eMMC	eMMC connected to the STM32 through MMC.
7	Secure Element	Secure Element connected via I2C to the STM32.
8	Ethernet	Ethernet connected to STM32 through RMII.
9	CAN Bus	CAN Bus connection to the connector and the STM32.
10	CONNECTOR	Connector to the outside world.

DATE	VERSION	DESCRIPTION
	V1.0	Initial

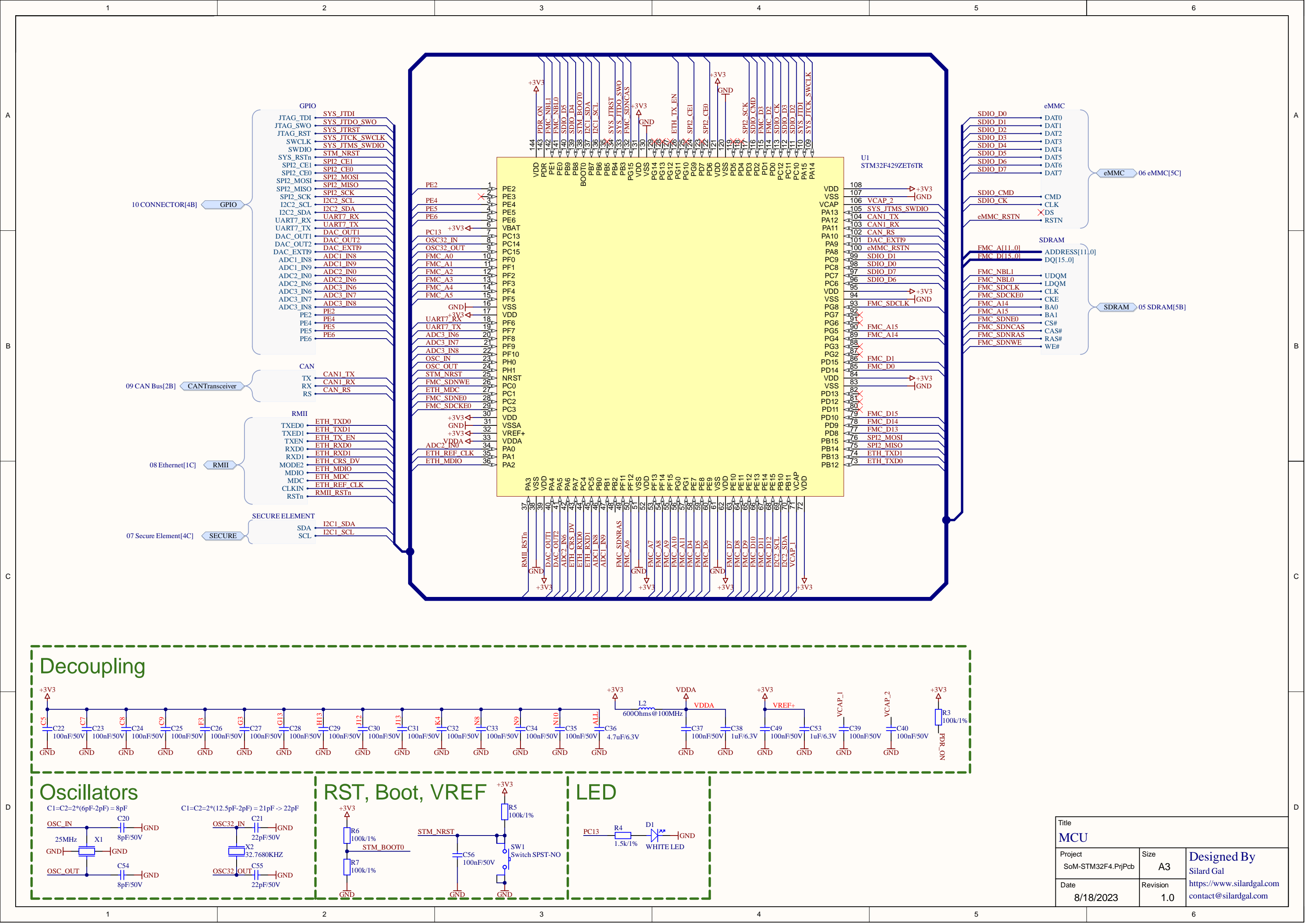
Title COVER PAGE		
Project SoM-STM32F4.PrjPcb	Size A3	Designed By Silard Gal https://www.silardgal.com contact@silardgal.com
Date 8/18/2023	Revision 1.0	

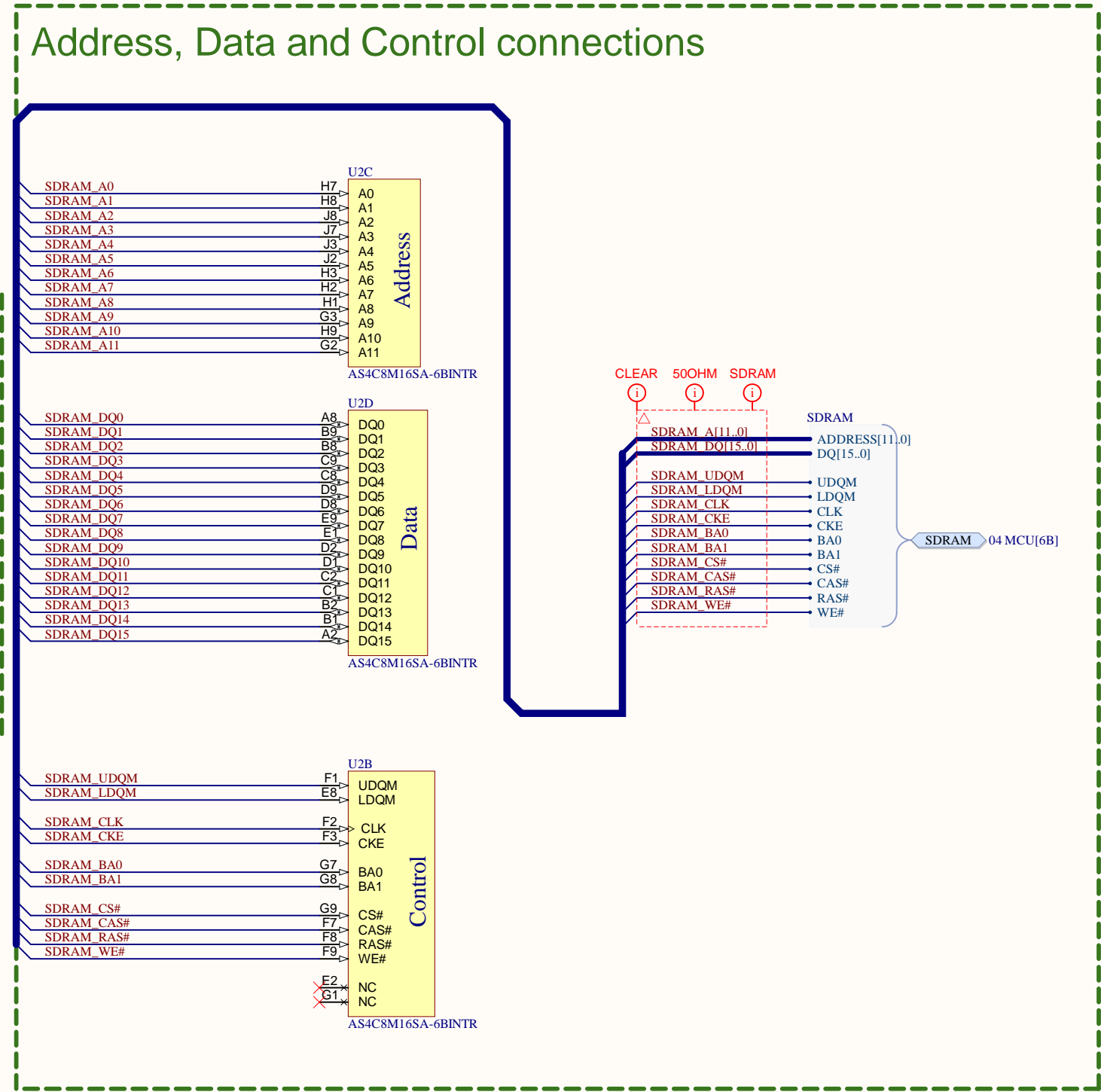
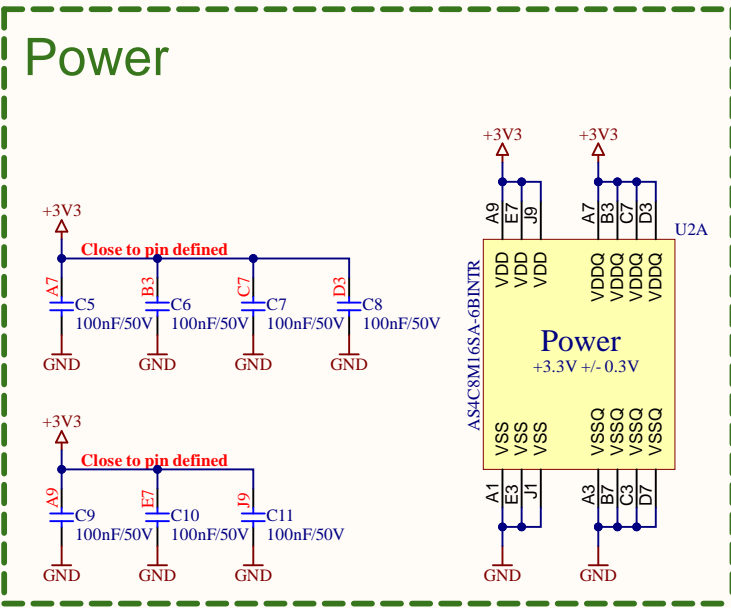


Title		
BLOCK DIAGRAM		
Project	Size	Designed By Silard Gal https://www.silardgal.com contact@silardgal.com
SoM-STM32F4.PrjPcb	A3	
Date	Revision	
8/18/2023	1.0	

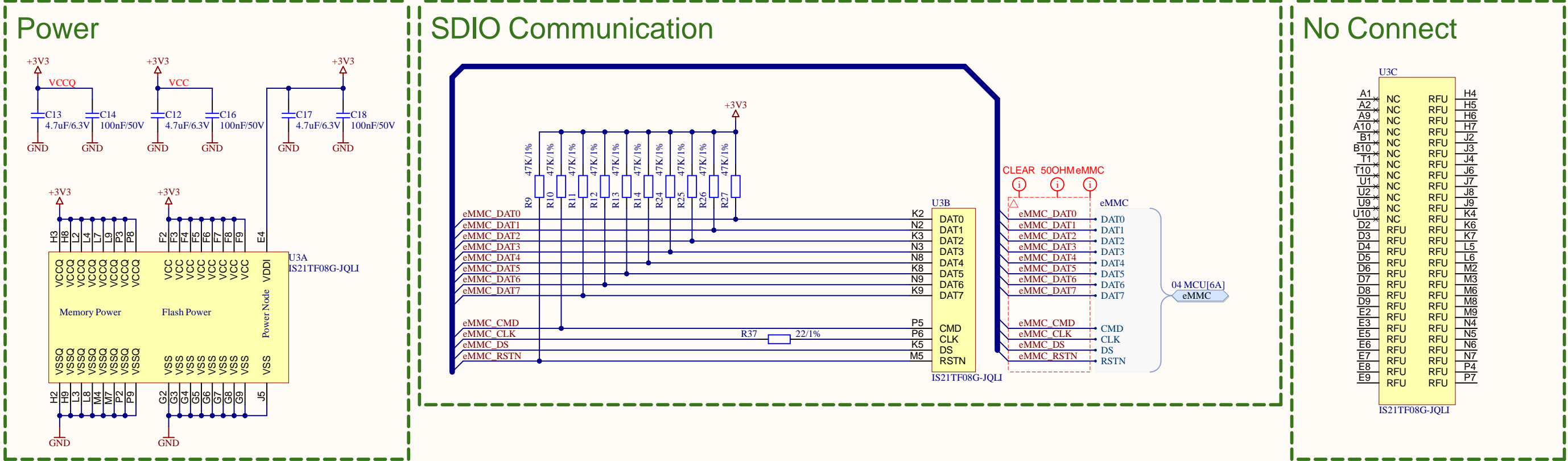


Title POWER		
Project SoM-STM32F4.PrjPcb	Size A3	Designed By Silard Gal https://www.silardgal.com contact@silardgal.com
Date 8/18/2023	Revision 1.0	

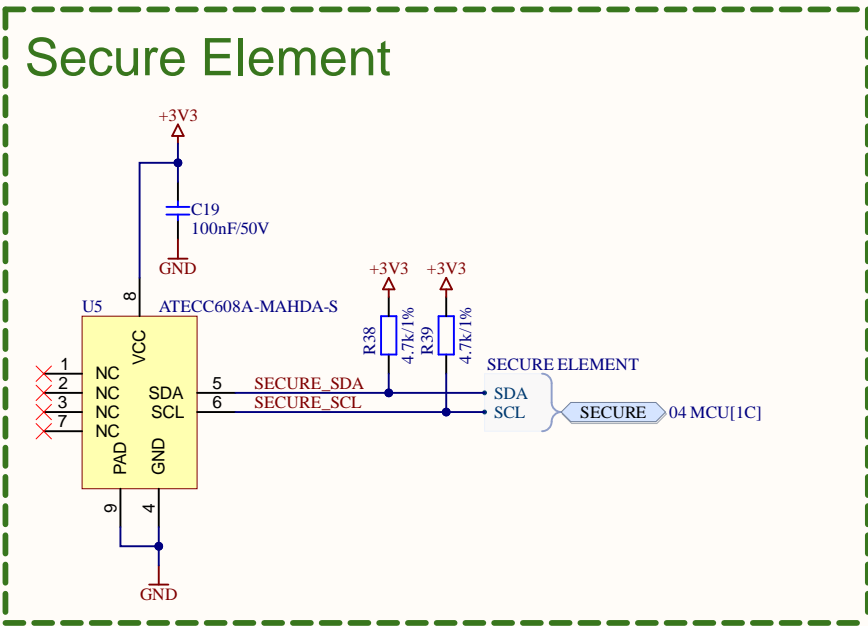




Title SDRAM		
Project SoM-STM32F4.PrjPcb	Size A3	Designed By Silard Gal
Date 8/18/2023	Revision 1.0	https://www.silardgal.com contact@silardgal.com



Title eMMC		
Project SoM-STM32F4.PrjPcb	Size A3	Designed By Silard Gal
Date 8/18/2023	Revision 1.0	https://www.silardgal.com contact@silardgal.com



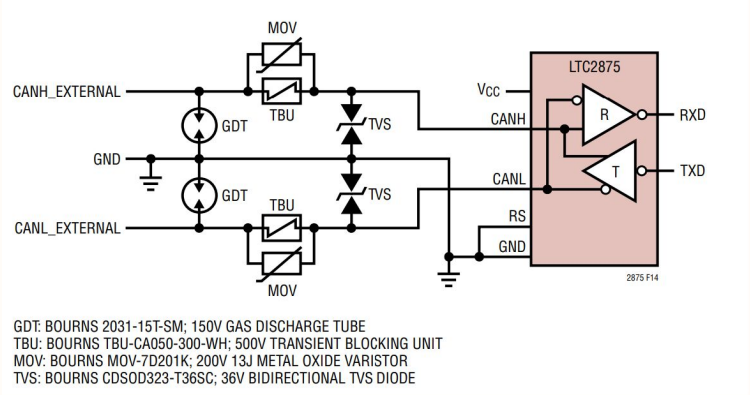
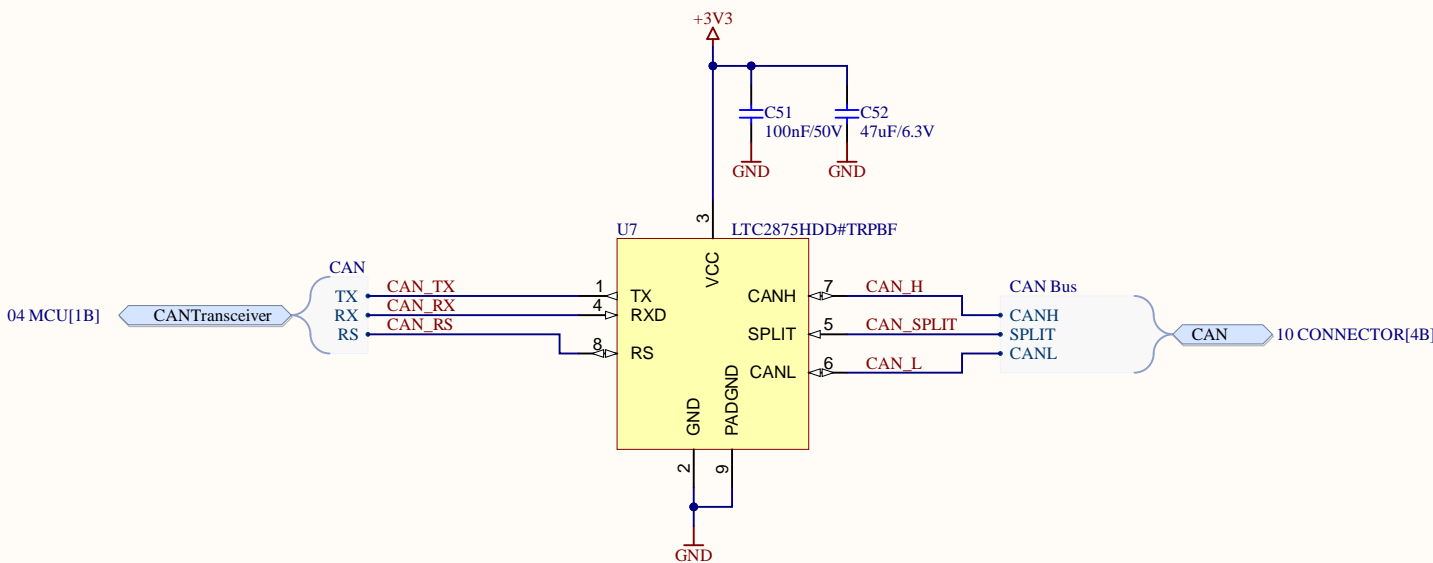
Title		
Secure Element		
Project	Size	Designed By Silard Gal https://www.silardgal.com contact@silardgal.com
SoM-STM32F4.PrjPcb	A3	
Date	Revision	
8/18/2023	1.0	

Ethernet

The schematic diagram illustrates the Ethernet interface circuit for the LAN8720A-CP-ABC (U6). The circuit is powered by +3V3 and +3V3ETH. The LAN8720A-CP-ABC is connected to the Ethernet 10 CONNECTOR[4A] via its RXP, RXN, TXP, TXN, LED1, and LED2 pins. The RMIi signals from the 04 MCU[1C] are connected to the LAN8720A-CP-ABC pins: TXED0, TXED1, TXEN, RXD0, RXD1, MODE2, MDIO, CLKIN, RSTn, and RMIi. The LAN8720A-CP-ABC is also connected to the Ethernet 10 CONNECTOR[4A] via its RXP, RXN, TXP, TXN, LED1, and LED2 pins.

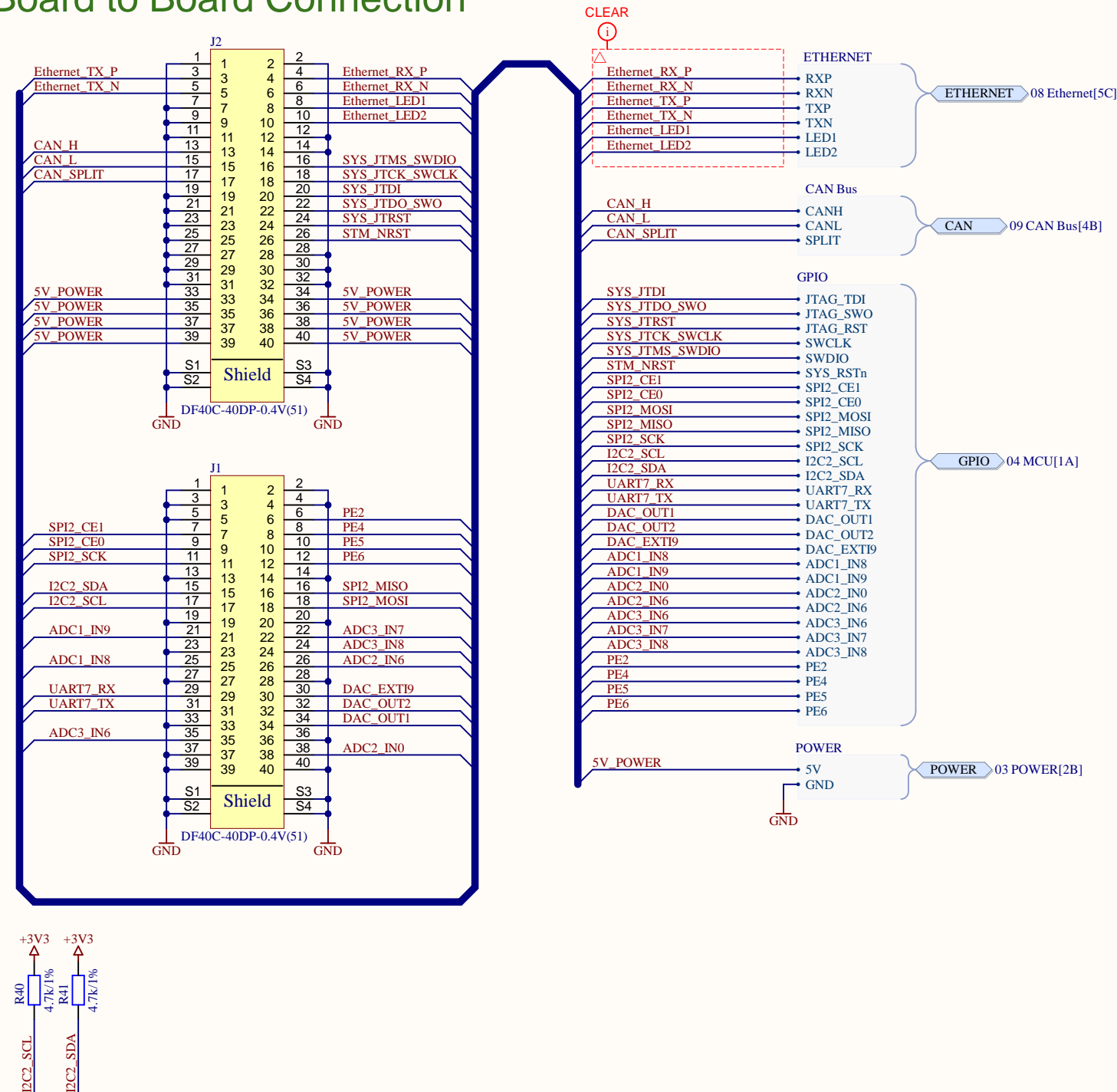
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Ethernet		
Project SoM-STM32F4.PrjPcb	Size A3	Designed By Silard Gal https://www.silardgal.com contact@silardgal.com
Date 8/18/2023	Revision 1.0	

CAN Bus



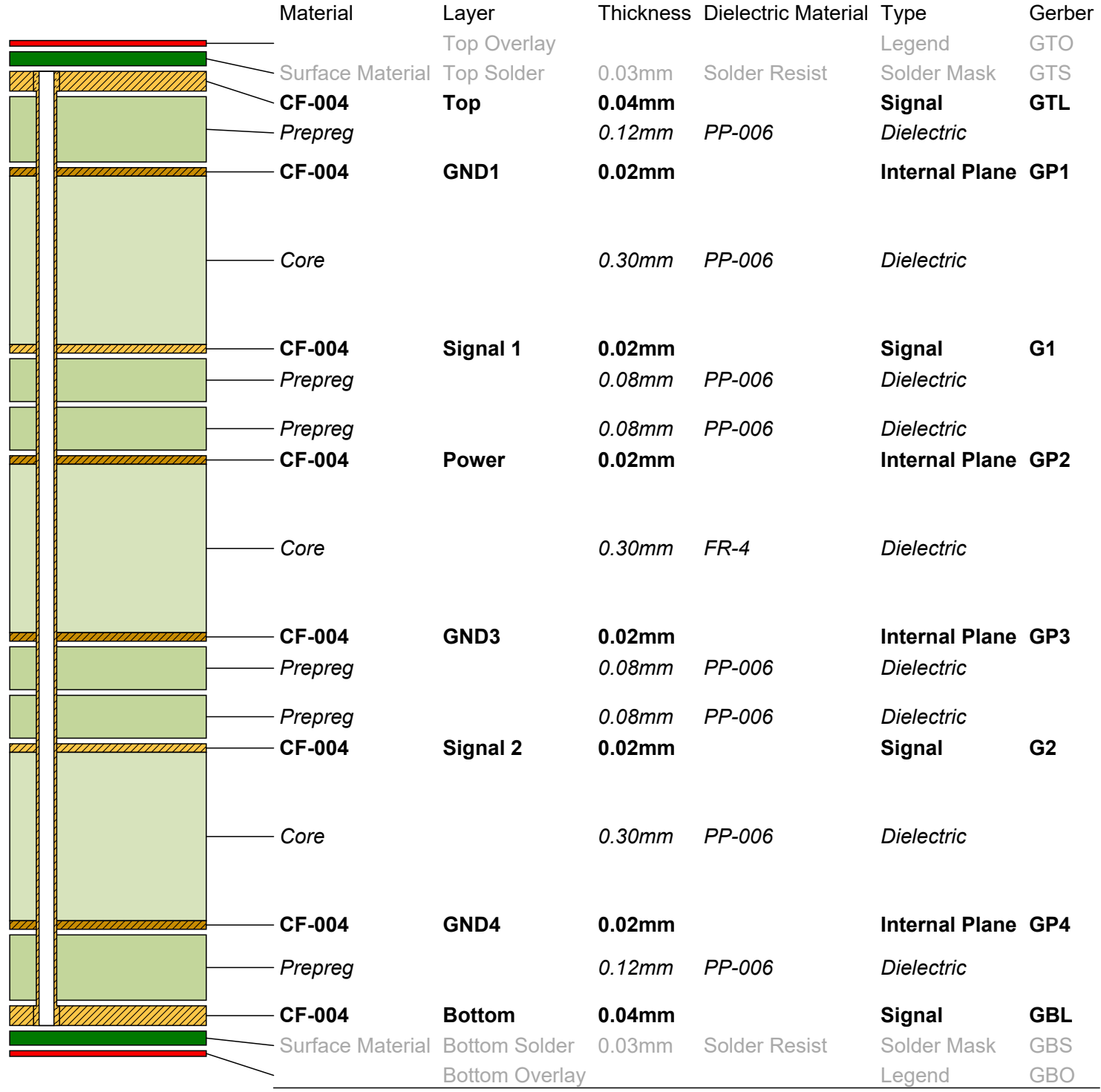
Title CAN Bus		
Project SoM-STM32F4.PrjPcb	Size A3	Designed By Silard Gal
Date 8/18/2023	Revision 1.0	https://www.silardgal.com contact@silardgal.com

Board to Board Connection



Title Connector		
Project SoM-STM32F4.PrjPcb	Size A3	Designed By Silard Gal https://www.silardgal.com
Date 8/18/2023	Revision 1.0	contact@silardgal.com

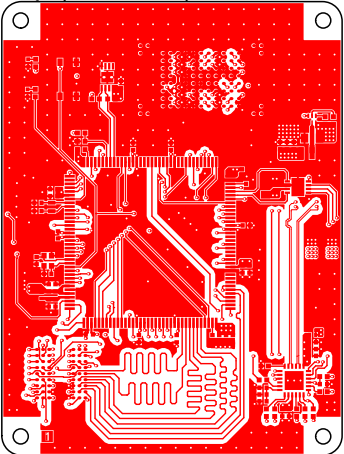
Layer Stack Legend



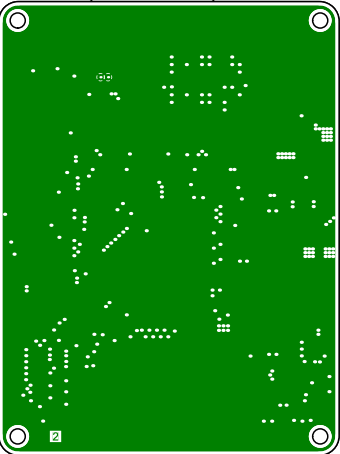
We are using JLC08161H-2116 stackup

Total thickness: 1.65mm

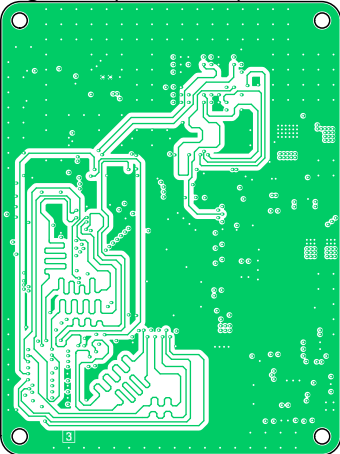
Top (Scale 1:1)



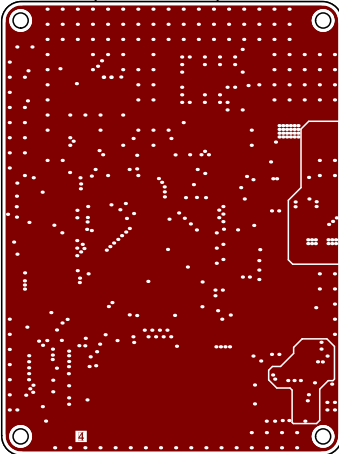
GND1 (Scale 1:1)



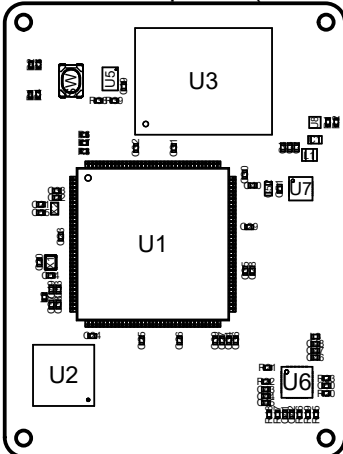
Signal 1 (Scale 1:1)



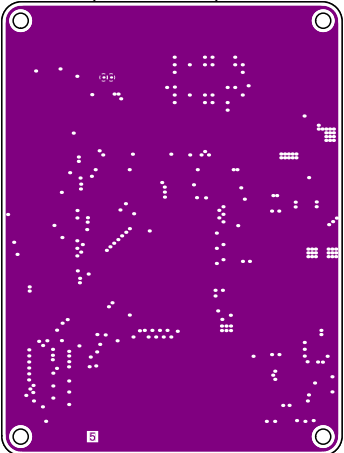
Power (Scale 1:1)



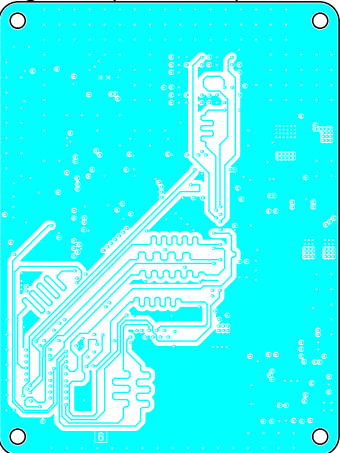
View from Top side (Scale 1:1)



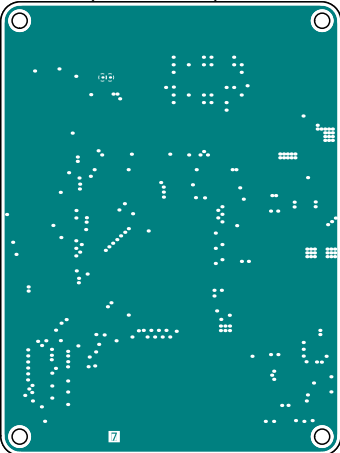
GND3 (Scale 1:1)



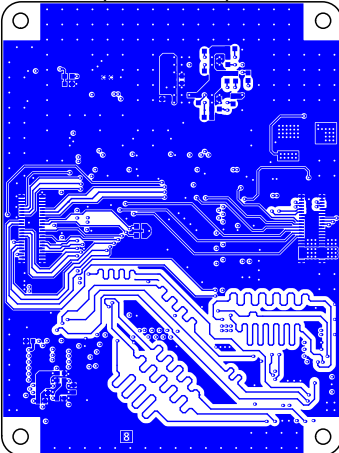
Signal 2 (Scale 1:1)



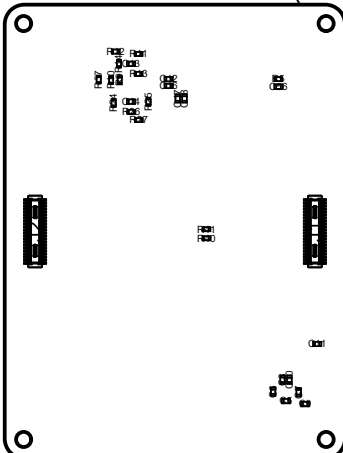
GND4 (Scale 1:1)



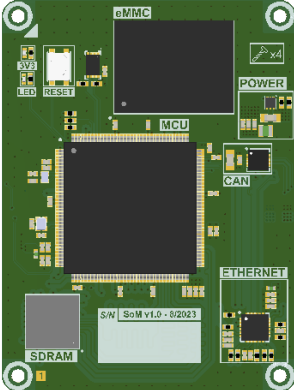
Bottom (Scale 1:1)



View from Bottom side (Scale 1:1)



Realistic View



Realistic View

