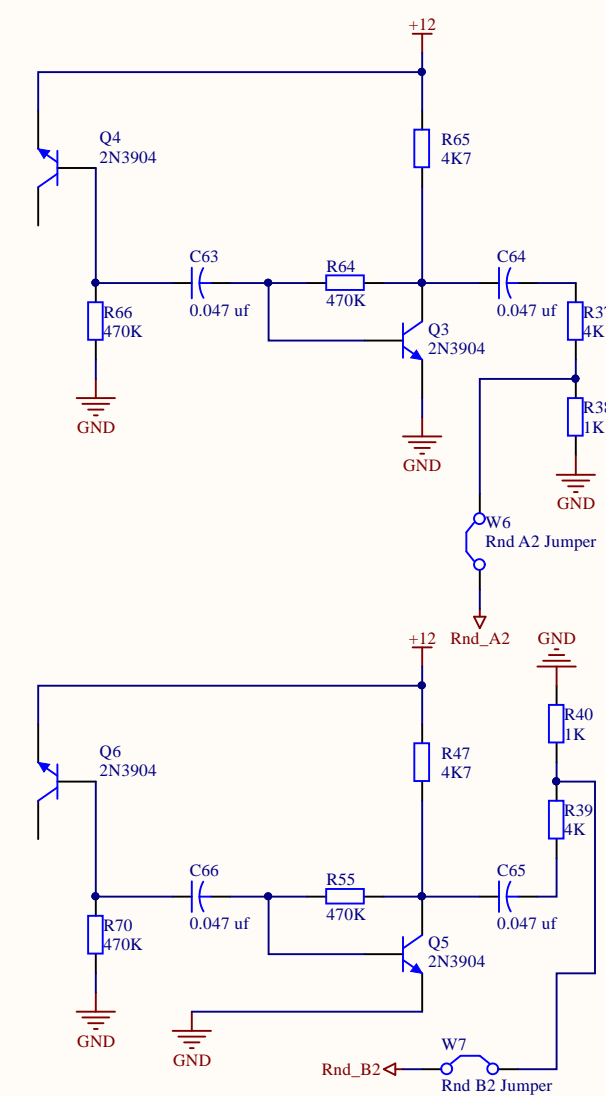
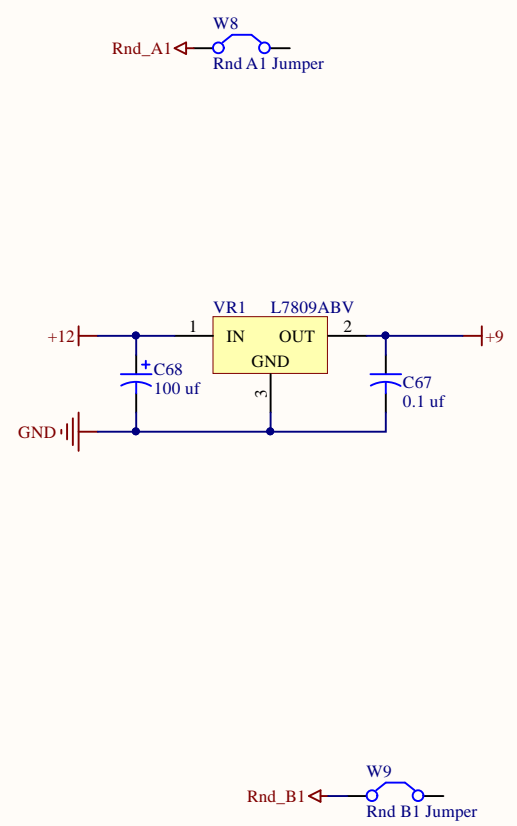
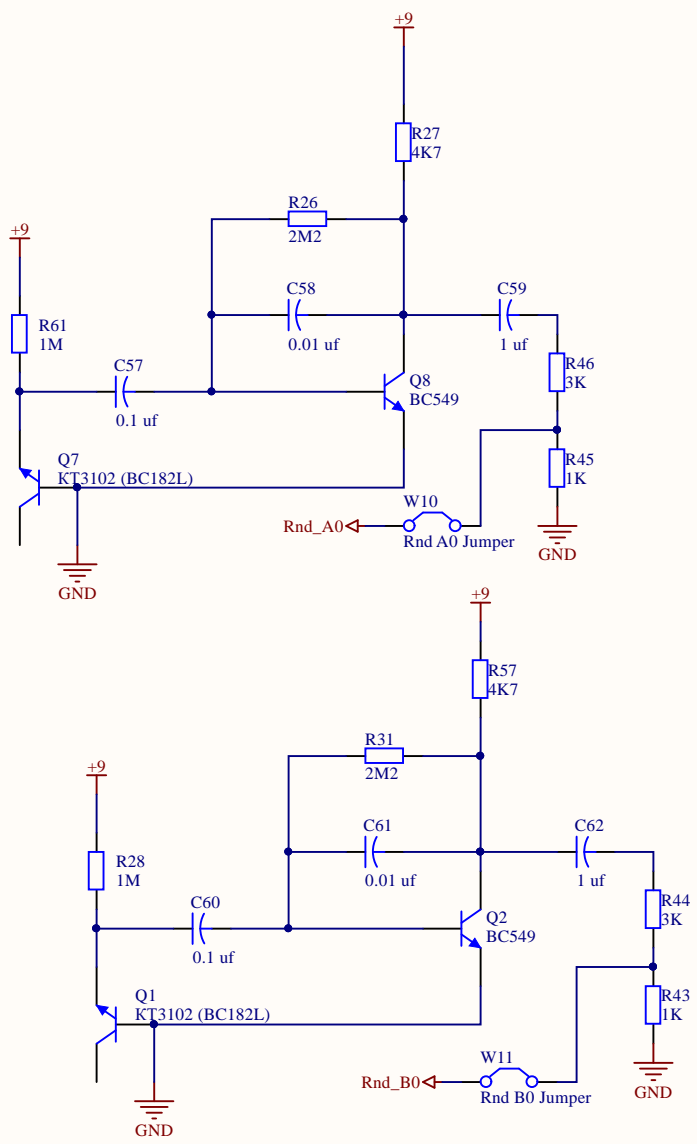
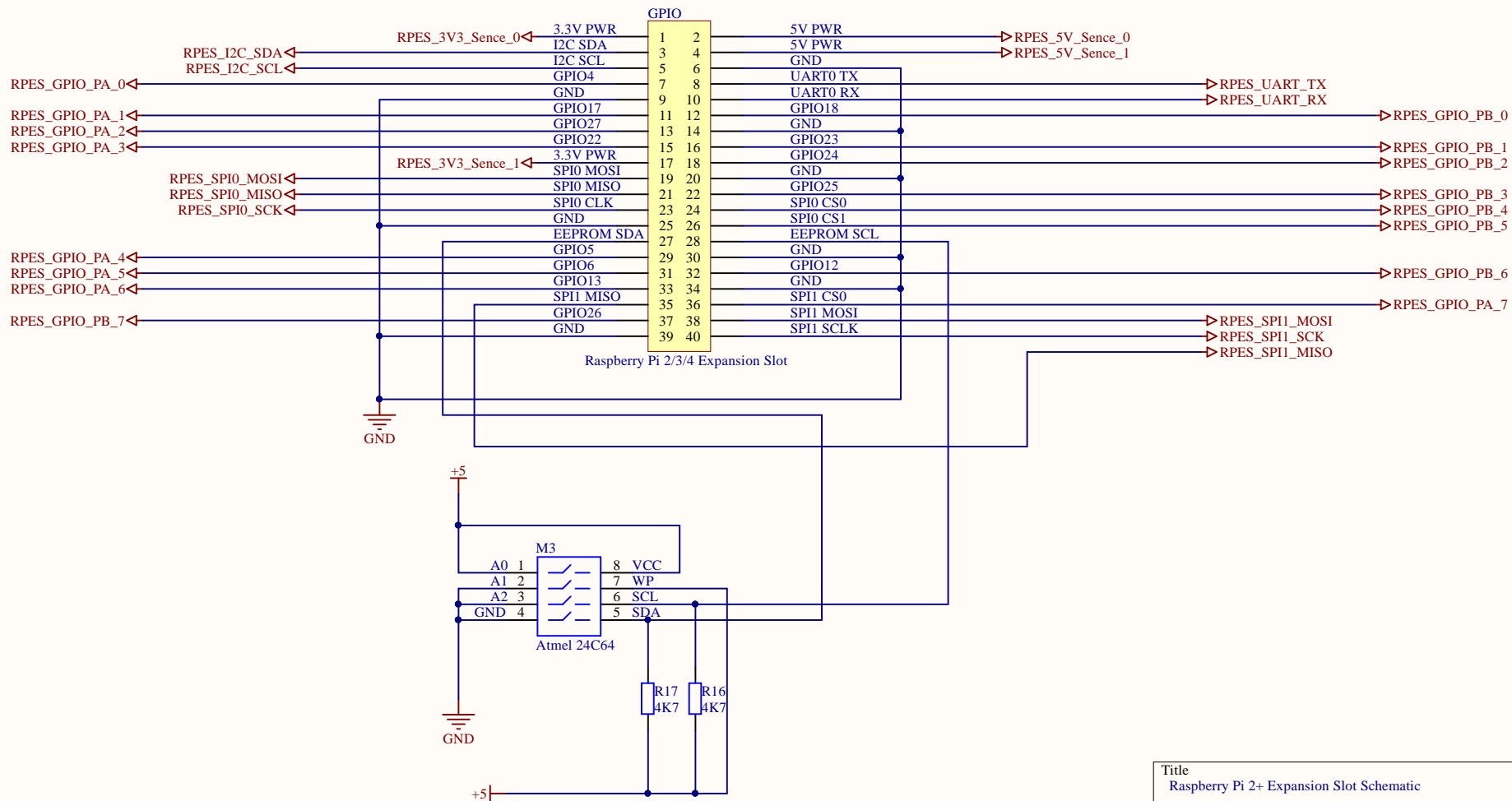


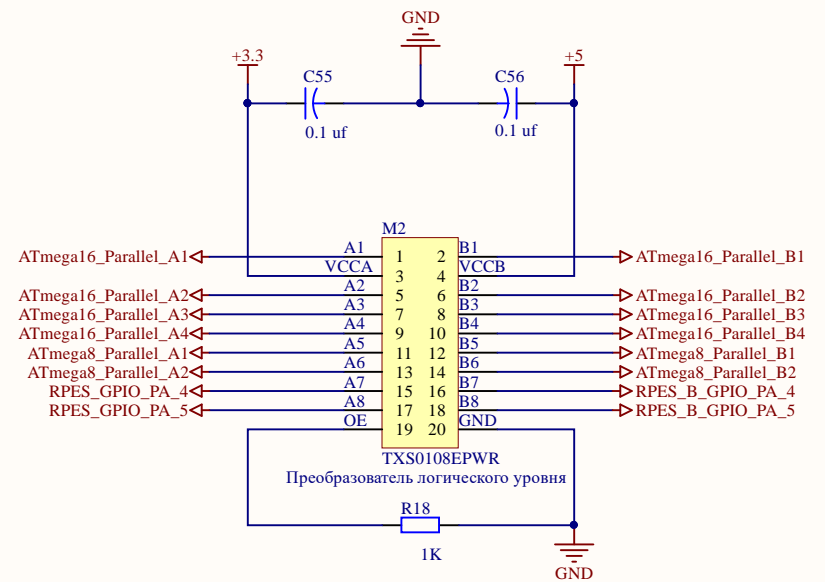
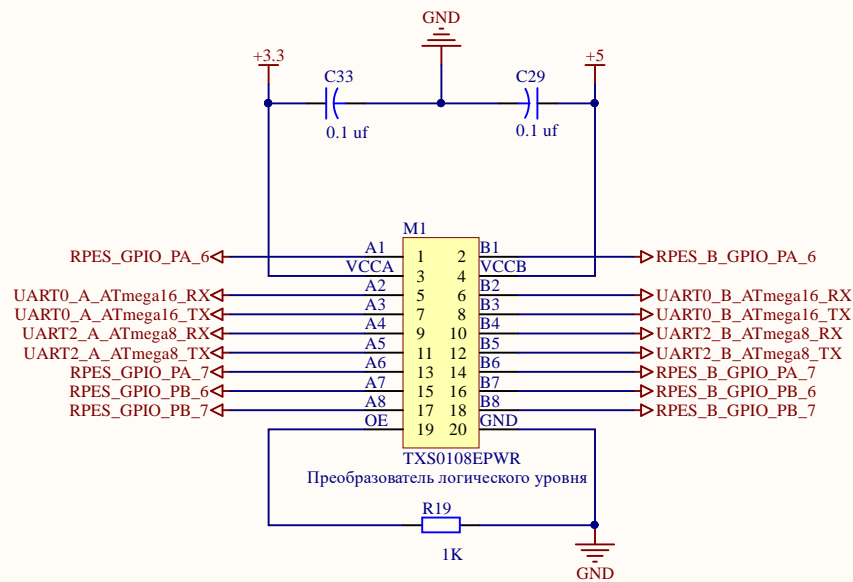
Title		
Atmel ATmega16 & Atmel ATmega8 AVR Motherboard Schematic		
Size	Number	Revision
A4	Prod	Rev. A
Date:	28.06.2021	Sheet 3 of 9
File:	C:\Users\...\ATmega Motherboard.SchDoc	Drawn By: Nikita Shaparenko



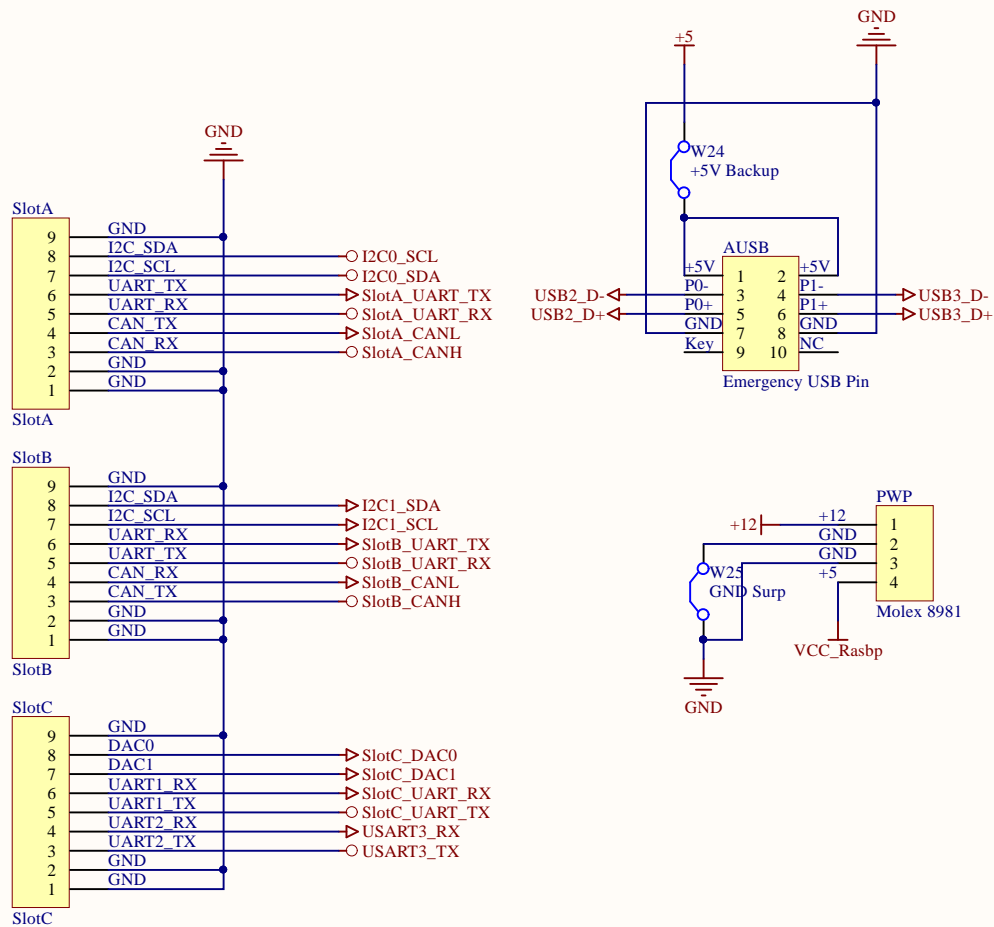
Title Random Number Generator Schematic		
Size A4	Number Prod	Revision Rev. A
Date: 28.06.2021	Sheet 6 of 9	Drawn By: Nikita Shaparenko
File: C:\Users\...\RandomNumberGenerator.Sch		



Title Raspberry Pi 2+ Expansion Slot Schematic		
Size A4	Number Prod	Revision Rev. A
Date: 28.06.2021	Sheet 7 of 9	
File: C:\Users\...\Raspberry Pi2+ Expansion Slot Schematic	Drawn by: Nikita Shaparenko	



Title Shifters Schematic		
Size A4	Number Prod	Revision Rev. A
Date: 28.06.2021	Sheet 8 of 9	
File: C:\Users\...\Shifters.SchDoc	Drawn By: Nikita Shaparenko	



Title External Peripheral Connection Sockets Schematic		
Size A4	Number Prod	Revision Rev. A
Date: 28.06.2021	Sheet 9 of 9	
File: C:\Users\...\Sockets.SchDoc	Drawn By: Nikita Shaparenko	

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CPU #3: STM32F415RGT6 @ 168 mhz

CPU-1, 32-bit ARM MCPUP

CAN1 = [CAN1]: STM32-1 <=> SlotB (3.3V LL)

I2C2 = [I2C1]: STM32-1 <=> STM32-0 (3.3V LL)

I2C3 = [I2C2]: STM32-1 <=> Raspberry Pi GPIO Slot (3.3V LL)

SPI1 = [SPI2]: STM32-1 <=> Raspberry Pi GPIO Slot (3.3V LL)

SPI3 = [SPI1]: STM32-1 <=> STM32-0 (3.3V LL)

SPI5 = [SPI3]: STM32-1 <=> SD CARD (3.3V LL)

UART2 = [USART2]: STM32-1 <=> ATmega8 (3.3V - 5V LL)

UART5 = [USART6]: STM32-1 <=> SlotB (3.3V LL)

UART6 = [USART1]: STM32-1 <=> STM32-0 (3.3V LL)

UART8 = [USART3]: STM32-1 <=> SlotC (3.3V LL)

USB3 = [USB Device]: STM32-1 <=> VT6121L (Port #3)

USB5 = [USB Device]: STM32-1 <=> Raspberry Pi USB (Master Key)

UART2: [USART2]:
 USART2_TX {PA2} ==> UART2_A_ATmega8_RX
 USART2_RX {PA3} ==> UART2_A_ATmega8_TX

UART5: [USART6]:
 USART6_TX {PC6} ==> SlotB_UART_RX
 USART6_RX {PC7} ==> SlotB_UART_TX

UART6: [USART1]:
 USART1_TX {PA9} ==> CPU1_UART6_TX
 USART1_RX {PA10} ==> CPU1_UART6_RX

UART8: [USART3]:
 USART3_TX {PC10} ==> SlotC_UART_RX
 USART3_RX {PC11} ==> SlotC_UART_TX

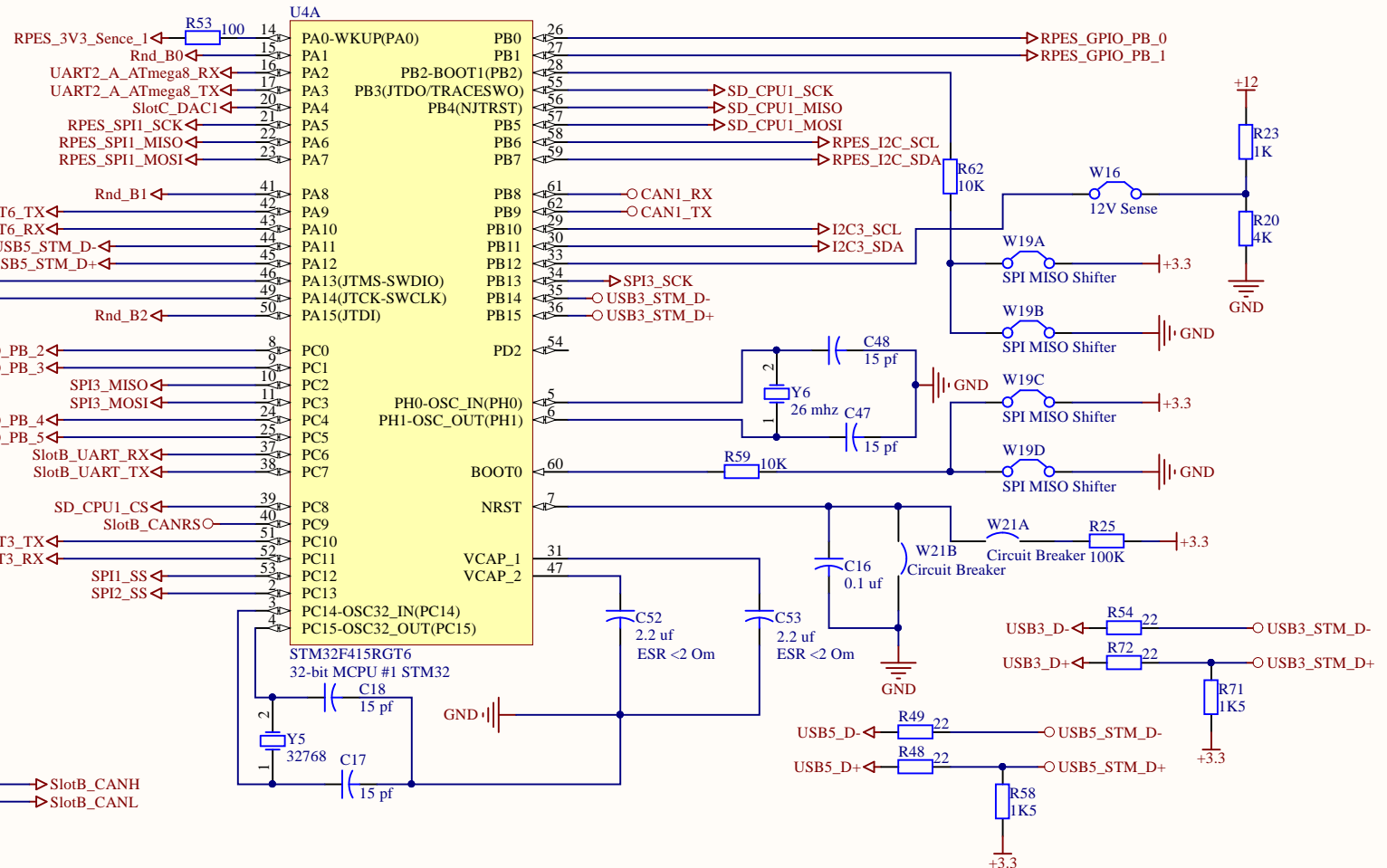
I2C2: [I2C1]
 I2C1_SCL {PB6} ==> CPU0_I2C2_SCL
 I2C1_SDA {PB7} ==> CPU0_I2C2_SDA

I2C3: [I2C2]
 I2C2_SCL {PB10} ==> RPES_I2C_SCL
 I2C2_SDA {PB11} ==> RPES_I2C_SDA

SPI5: [SPI3]
 SPI3_MOSI {PB5} ==> SD_CPU1_MOSI
 SPI3_MISO {PB4} ==> SD_CPU1_MISO
 SPI3_SCK {PB3} ==> SD_CPU1_SCK
 SPI3_SS {PC8} ==> SD_CPU1_CS

SPI2: [SPI1]
 SPI1_MOSI {PA7} ==> RPES_SPI0_MOSI
 SPI1_MISO {PA6} ==> RPES_SPI0_MISO
 SPI1_SCK {PA5} ==> RPES_SPI0_SCK
 SPI1_SS {PC6}

SPI3: [SPI2]
 SPI2_MOSI {PA7} ==> SPI3_MOSI
 SPI2_MISO {PA6} ==> SPI3_MISO
 SPI2_SCK {PA5} ==> SPI3_SCK
 SPI2_SS {PC7}



Title STM32F415RGTx Motherboard 2 Schematic		
Size A4	Number Prod	Revision Rev. A
Date: 28.06.2021	Sheet 5 of 9	
File: C:\Users\...\STM32 Motherboard 2.SchDoc	Drawn By: Nikita Shaparenko	

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Title STM32F415RGTx Motherboard I Schematic		
Size A4	Number Prod	Revision Rev. A
Date:	28.06.2021	Sheet 4 of 9
File:	C:\Users\...\STM32 Motherboard.SchDoc	Drawn By: Nikita Shaparenko

VT6212

PCI 4-Port

USB2 Host

Controller

PQFP-128

Title USB 2.0 UHCI & EHCI VIA VT6212L PCI Chipset Schematic			
Size A4	Number Prod	Revision Rev. A	
Date:	28.06.2021	Sheet	2 of 9
File:	C:\Users\...\VT6212 Chipset.SchDoc	Drawn By:	Nikita Shaparenko