

nuvoTon Technology Corp.			
Title			
NK-980IOTG2			
Size	Document Number		Rev
A	Block Diagram		1.0
Date:	Wednesday, April 12, 2023	Sheet	1 of 14

PIN	FUNCTION
PA0	I2C0_SDA CAN3_RXD
PA1	I2C0_SCL CAN3_TXD
PA2	I2S_LRCK
PA3	I2S_BCLK
PA4	I2S_DI
PA5	I2S_DO
PA6	I2S_MCLK
PA7	EBI_nWE
PA8	EBI_nRE
PA9	EBI_nCS0
PA10	EBI_ADDR10 (LCD_RS)
PA11	EBI_ADDR9 (LCD_RESET)
PA12	EBI_ADDR8 (LCD_BL)

PIN	FUNCTION
PB0	ADC_AIN[0]
PB1	ADC_AIN[1] UART9_TXD
PB2	ADC_AIN[2]
PB3	ADC_AIN[3] UART9_RXD
PB4	I2C1_SCL ADC_AIN[4] UART7_RXD
PB5	I2C2_SCL ADC_AIN[5]
PB6	I2C1_SDA ADC_AIN[6] UART7_TXD
PB7	I2C2_SDA ADC_AIN[7]
PB8	LED_Y CAN2_RXD
PB13	LED_R

PIN	FUNCTION
PC0	EBI_DATA0 CAN2_TXD
PC1	EBI_DATA1
PC2	EBI_DATA2
PC3	EBI_DATA3 CAN0_RXD
PC4	EBI_DATA4 CAN0_TXD
PC5	EBI_DATA5
PC6	EBI_DATA6
PC7	EBI_DATA7
PC8	EBI_DATA8
PC9	EBI_DATA9
PC10	EBI_DATA10
PC11	EBI_DATA11
PC12	EBI_DATA12
PC13	EBI_DATA13
PC14	EBI_DATA14
PC15	EBI_DATA15

PIN	FUNCTION
PD2	QSPI0_SS0
PD3	QSPI0_CLK
PD4	QSPI0_DO
PD5	QSPI0_DI
PD6	QSPI0_D2
PD7	QSPI0_D3
PD8	SPI0_SS0
PD9	SPI0_CLK
PD10	SPI0_DO UART6_TXD
PD11	SPI0_DI UART6_RXD
PD12	UART4_TXD PWM00
PD13	UART4_RXD PWM01
PD14	I2C3_SCL PWM02
PD15	I2C3_SDA PWM03

PIN	FUNCTION
PE0	RMII0_RXERR
PE1	RMII0_CRSDV
PE2	RMII0_RXD1
PE3	RMII0_RXD0
PE4	RMII0_REFCLK
PE5	RMII0_TXEN
PE6	RMII0_TXD1
PE7	RMII0_TXD0
PE8	RMII0_MDIO
PE9	RMII0_MDC
PE10	Key1
PE11	USB0_VBUSVLD
PE12	Key2

PIN	FUNCTION
PF0	SD1_CMD eMMC1_CMD
PF1	SD1_CLK eMMC1_CLK
PF2	SD1_DATA0 eMMC1_DATA0
PF3	SD1_DATA1 eMMC1_DATA1
PF4	SD1_DATA2 eMMC1_DATA2
PF5	SD1_DATA3 eMMC1_DATA3
PF6	SD1_nCD
PF7	PWM02
PF8	PWM03
PF9	UART1_RXD PWM10
PF10	UART1_TXD PWM11
PF11	UART0_RXD
PF12	UART0_TXD

PIN	FUNCTION
PG0	CFG[0]
PG1	CFG[1]
PG3	CFG[3]
PG5	CFG[5]
PG6	UART5_RXD PWM10
PG7	UART5_TXD PWM11
PG8	CFG[8]
PG9	CFG[9]
PG11	JTAG0_TDO SPI1_SS0 PWM10
PG12	JTAG0_TCK SPI1_CLK PWM11
PG13	JTAG0_TMS SPI1_DO PWM12 UART5_RXD CAN1_RXD
PG14	JTAG0_TDI SPI1_DI PWM13 UART5_TXD CAN1_TXD
PG15	JTAG0_NTRST LED_G

**nuvoTon Technology Corp.**

Title

**NK-980IOTG2**

Size  
A

Document Number

**GPIO List**

Rev  
1.0

Date: Monday, March 20, 2023

Sheet 2 of 14



## U5

USBD0\_ID

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32K\_IN

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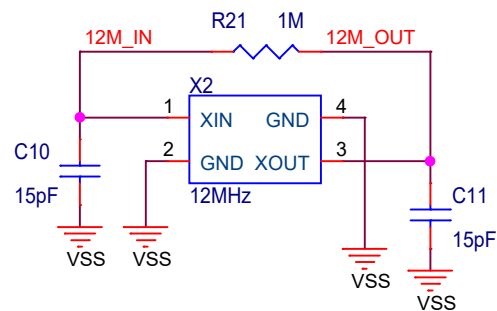
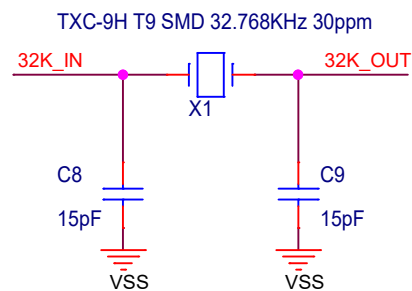
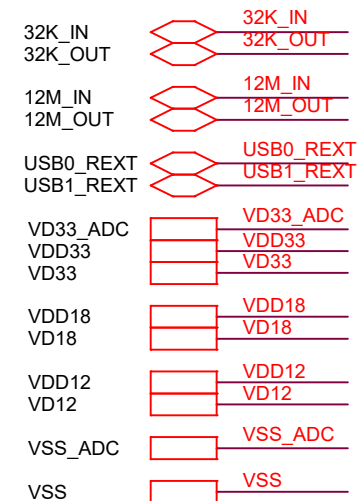
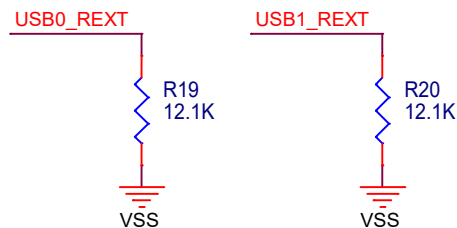
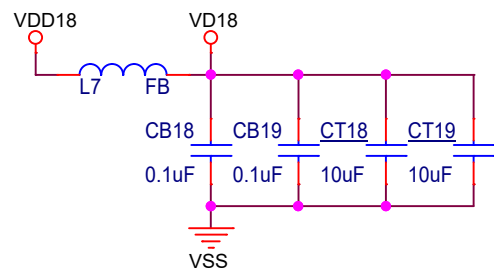
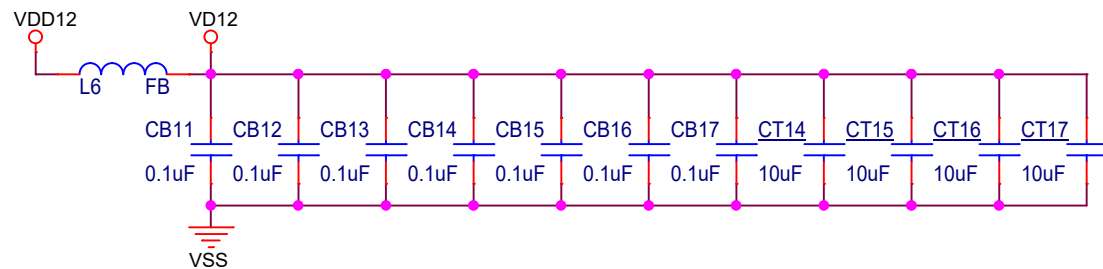
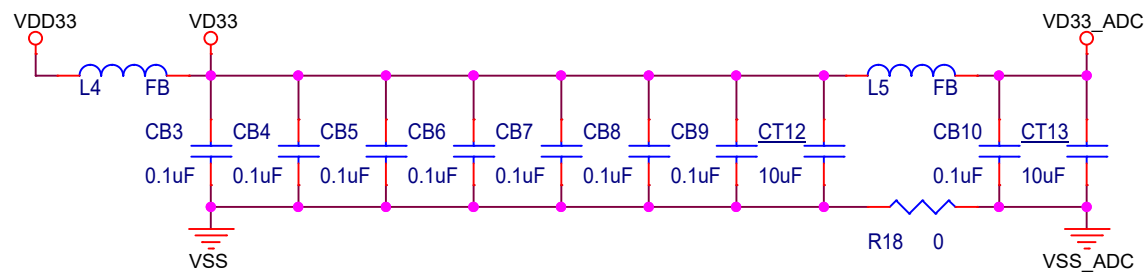
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PC3

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PC4</



**nuvoTon Technology Corp.**

Title  
**NK-980IOTG2**

Size A Document Number  
**Power Filter**

Rev  
1.0

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PG1	PG0	Booting from
ON(0)	ON(0)	USB
ON(0)	OFF(1)	SD/eMMC
OFF(1)	ON(0)	NAND Flash
OFF(1)	OFF(1)	OSPI Flash 0

PG3	Watch Dog
ON(0)	OFF
OFF(1)	ON

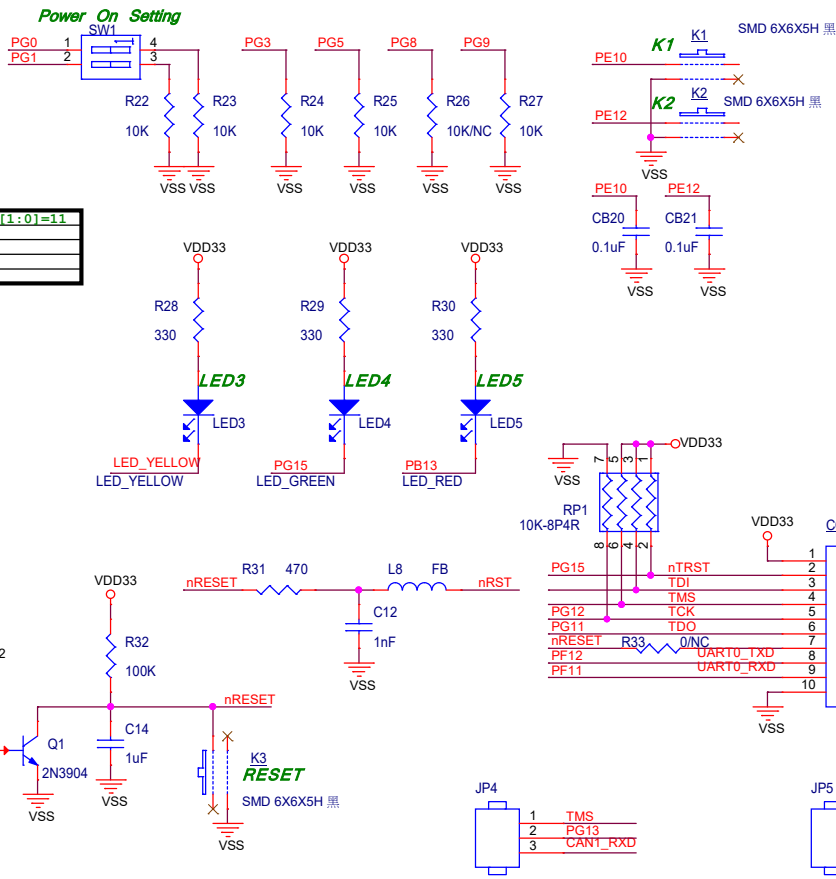
PG5	UART0 Message
ON(0)	ON
OFF(1)	OFF

PG9	PG8	OSPI Source if PG[1:0]=11
ON(0)	ON(0)	SPI-NAND, 1-bit
ON(0)	OFF(1)	SPI-NAND, 4-bit
OFF(1)	ON(0)	SPI-NOR, 4-bit
OFF(1)	OFF(1)	SPI-NOR, 1-bit

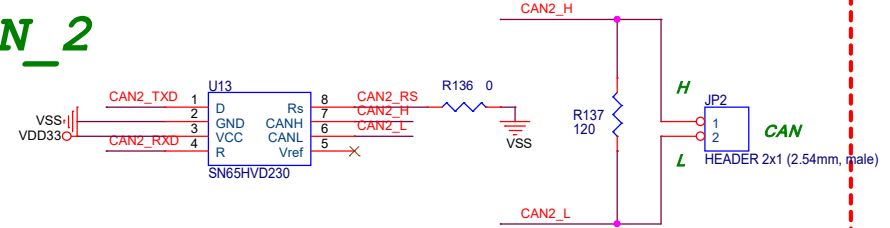
PG15	PG15
PB8	PB8
PB13	PB13
PG[1:0]	PG[1:0]
PG3	PG3
PG5	PG5
PG[9:8]	PG[9:8]
PE10	PE10
PE12	PE12

PF[12:11]	PF[12:11]
PG[15:11]	PG[15:11]
nRESET	nRESET
nRST	nRST
VDD33	VDD33
VDD12	VDD12
VSS	VSS

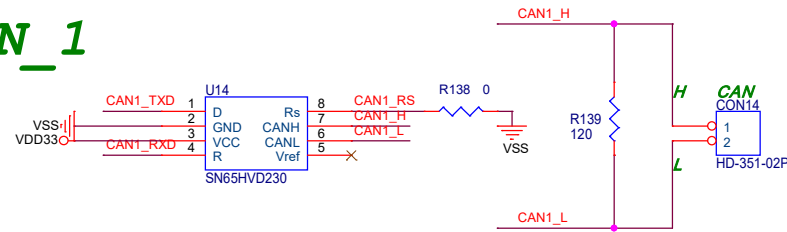
CAN2_TXD	CAN2_TXD
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## CAN\_2



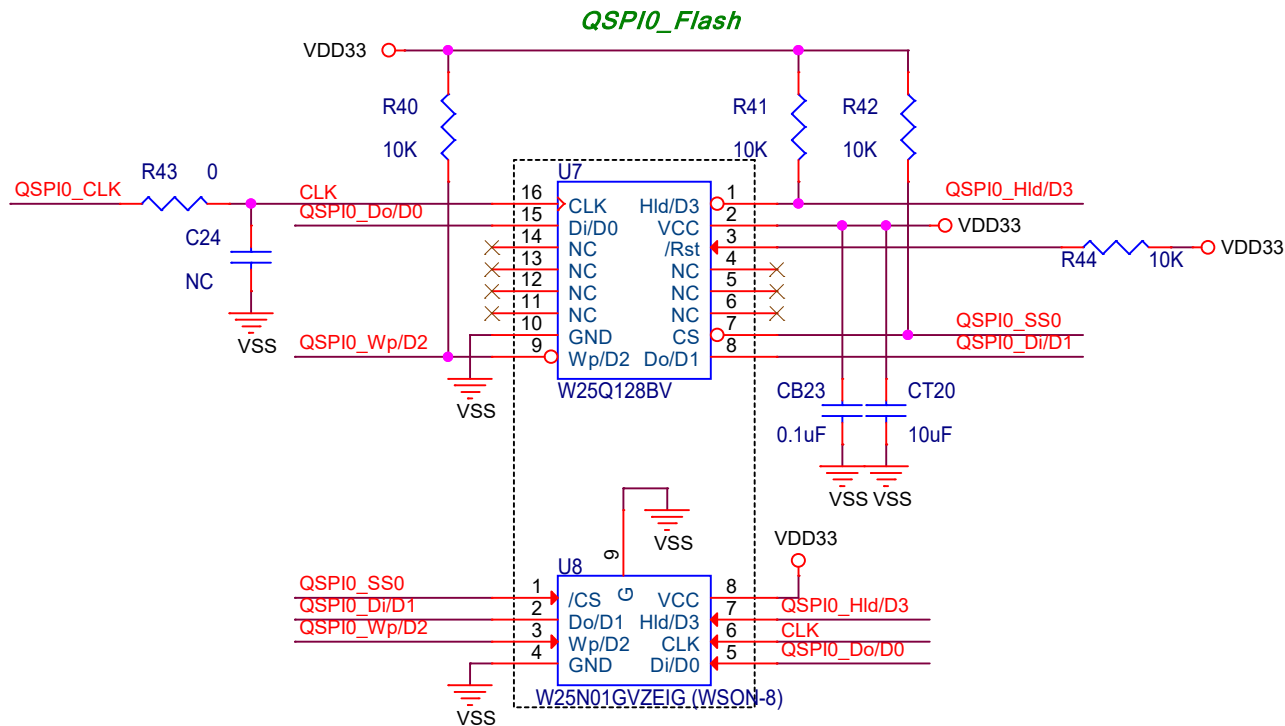
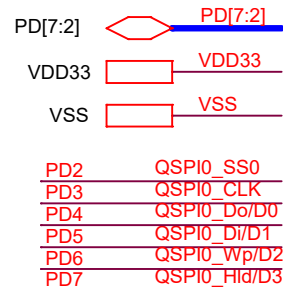
## CAN\_1



**nuvoTon Technology Corp.**

Title			<b>NK-980IOTG2</b>
Size	Document Number	Rev	
B	<b>Configure</b>	1.0	
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**nuvoTon Technology Corp.**

Title

**NK-980IOTG2**

Size  
A

Document Number

**SPI Nand Flash**

Rev  
1.0

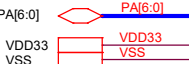
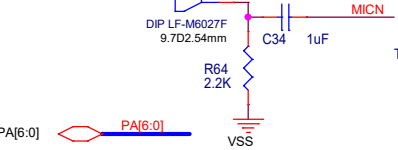
Date: Thursday, March 02, 2023

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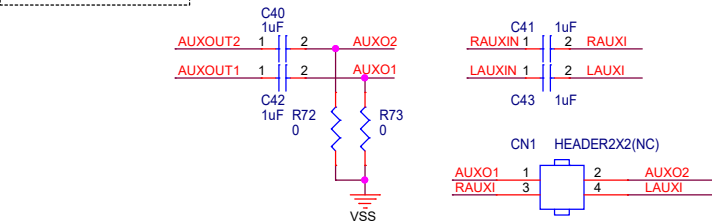


## Microphone

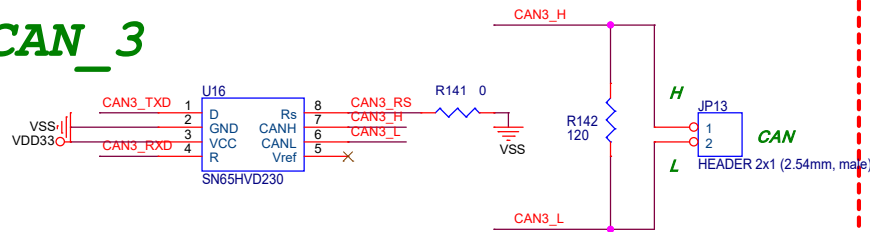


## I2S

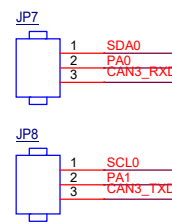
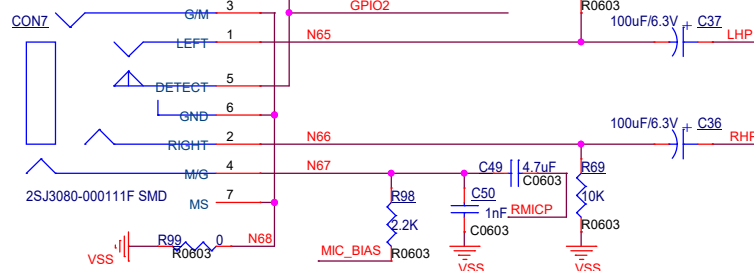
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PA5	I2S_DO
PA4	I2S_DI
PA3	I2S_BCLK
PA2	I2S_LRCK



## CAN\_3



## Speaker



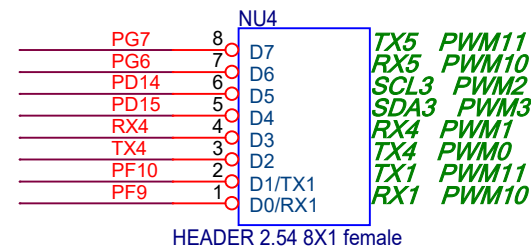
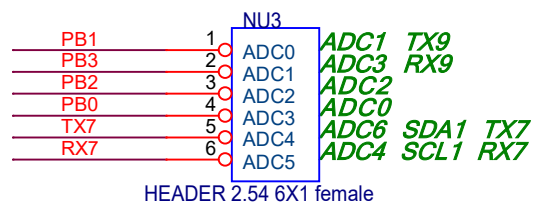
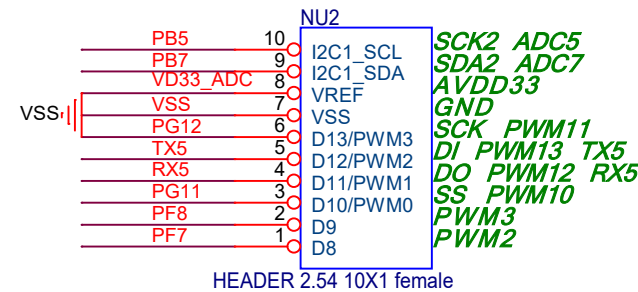
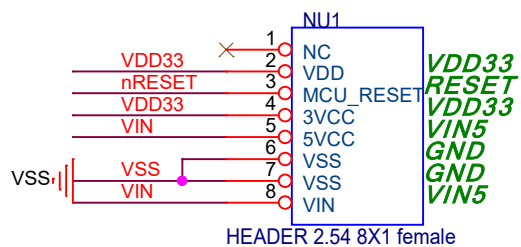
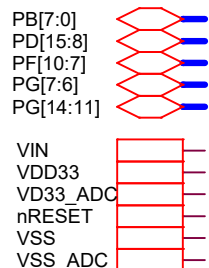
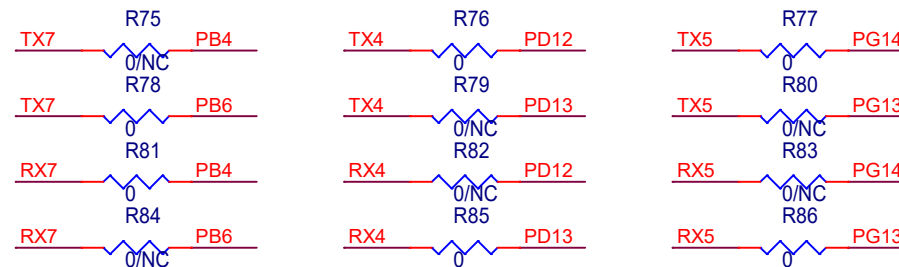
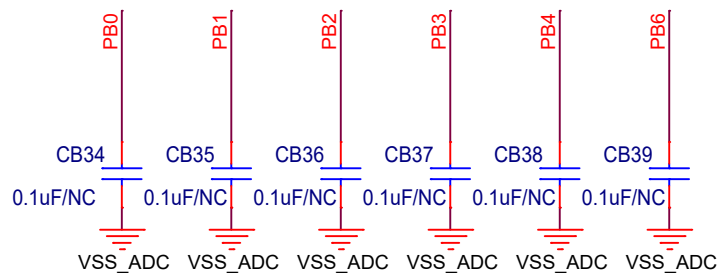
**nuvoTon Technology Corp.**

Title			<b>NK-980IOTG2</b>
Size	Document Number	Rev	
B	<b>I2S, I2C_0</b>	1.0	
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PF0	SD1_CMD
PF1	SD1_CLK
PF2	SD1_D0
PF3	SD1_D1
PF4	SD1_D2
PF5	SD1_D3
PF6	SD1_nCD

<b>nuvoTon Technology Corp.</b>			
Title <b>NK-980IOTG2</b>			
Size A	Document Number <b>SD_Card</b>		Rev 1.0
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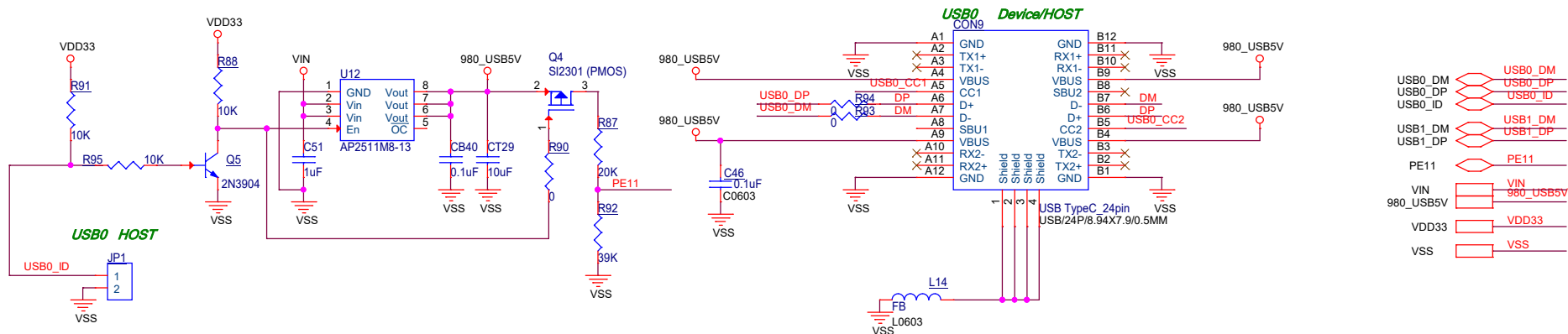
**nuvoTon Technology Corp.**

Title  
**NK-980IOTG2**

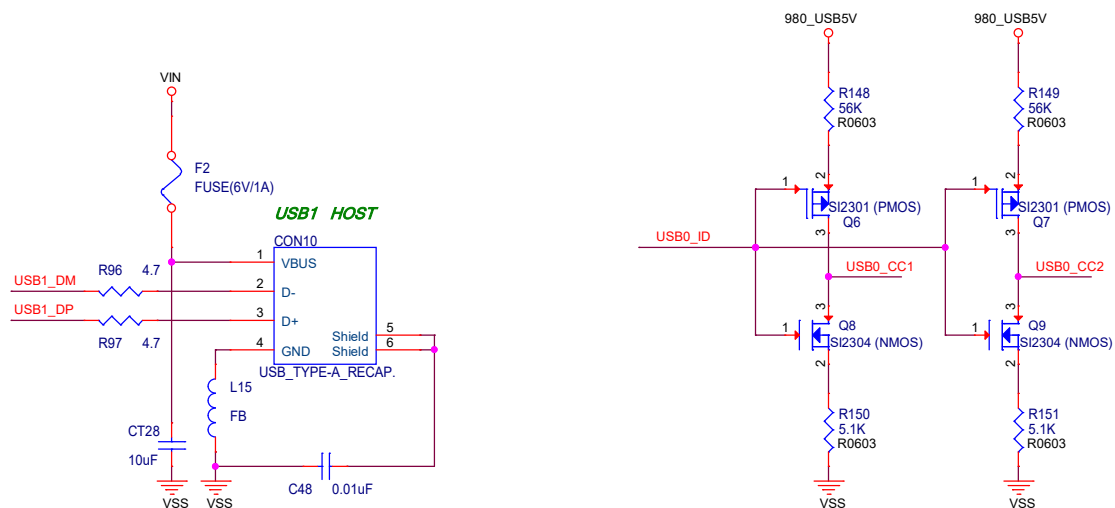
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**Arduino Uno**

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1.0

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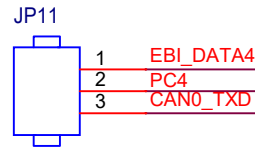
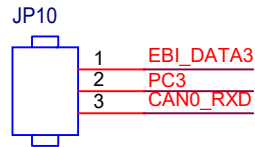
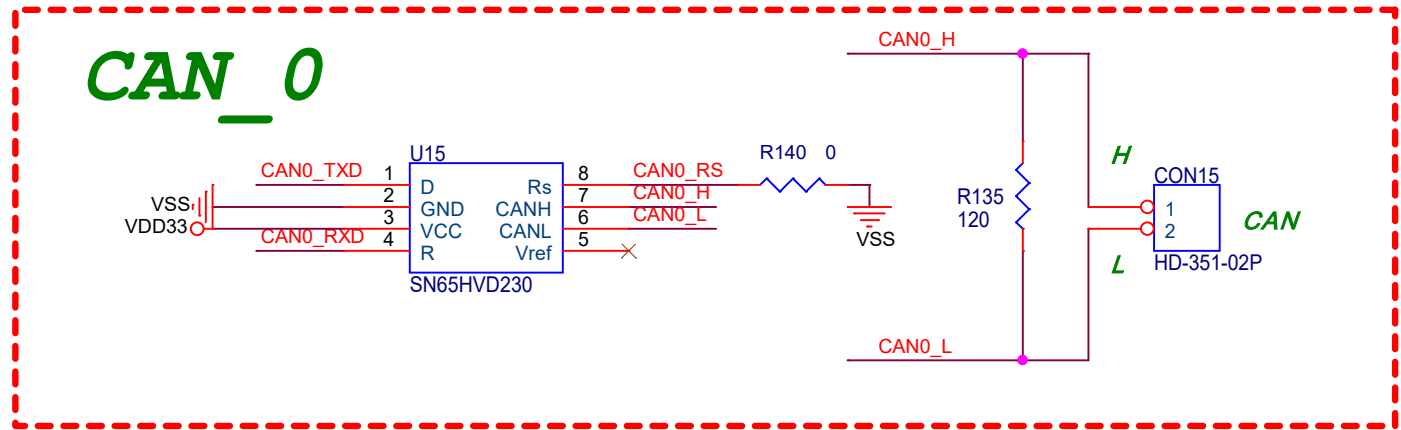
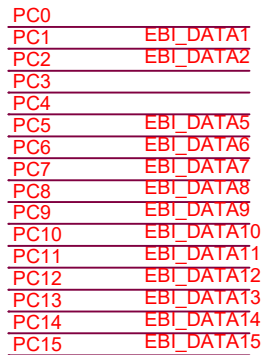
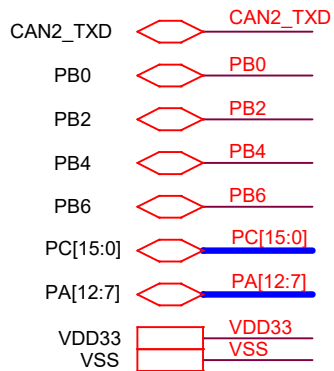


## USB 2.0 HIGH SPEED DEVICES Type C Connector

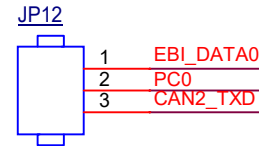
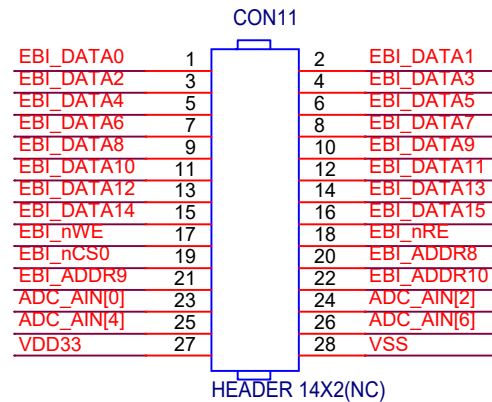


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EBI\_Connect



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