

nuvoTon
NuDesign
Order No. NK-980ETH2P

<http://www.nuvoton.com/board/numaker-nuc980-serial-server>

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Title		
NK-980ETH2P		
Size	Document Number	Rev
A	Block Diagram	1.2
Date:	Friday, February 14, 2020	Sheet 1 of 14

PIN	FUNCTION
PA0	UART1_RXD
PA1	UART1_TXD
PA2	UART6_CTS
PA3	UART6_RTS
PA4	UART6_RXD
PA5	UART6_TXD
PA6	EBI_nCS1
PA7	EBI_nWE
PA8	EBI_nRE
PA9	UART2_RXD
PA10	UART2_TXD
PA11	UART8_RXD
PA12	UART8_TXD

PIN	FUNCTION
PB0	ADC_AIN[0]
PB1	ADC_AIN[1]
PB2	ADC_AIN[2]
PB3	ADC_AIN[3]
PB4	UART7_RXD
PB5	UART7_RTS
PB6	UART7_TXD
PB7	UART7_CTS
PB8	CAN2_RXD
PB13	LED2

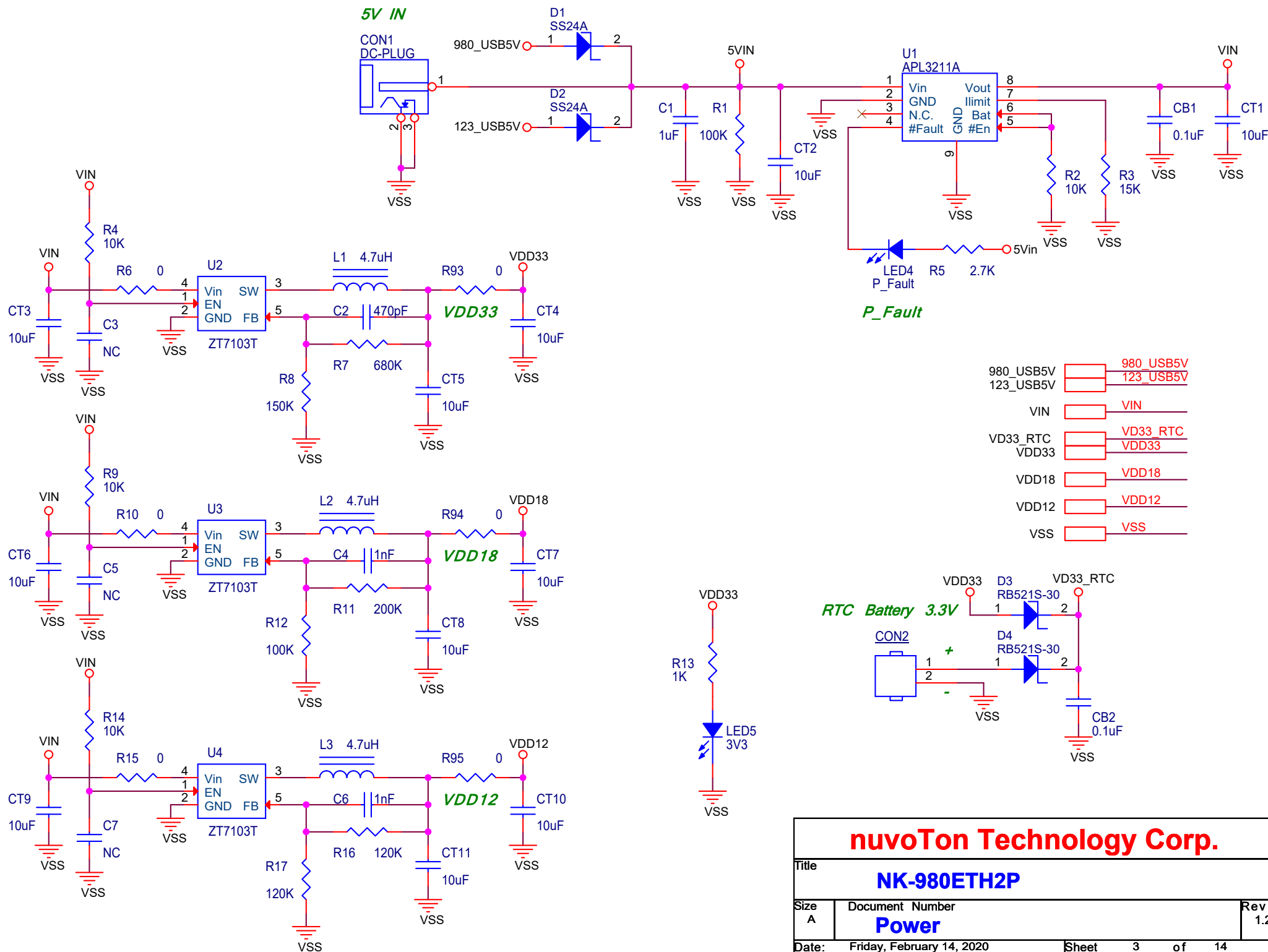
PIN	FUNCTION
PC0	CAN2_TXD
PC1	EBI_DATA0
PC2	EBI_DATA1
PC3	EBI_DATA2
PC4	EBI_DATA3
PC5	EBI_DATA4
PC6	EBI_DATA5
PC7	EBI_DATA6
PC8	EBI_DATA7
PC9	EBI_DATA8
PC10	EBI_DATA9
PC11	EBI_DATA10
PC12	EBI_DATA11
PC13	EBI_DATA12
PC14	EBI_DATA13
PC15	EBI_DATA14
PC16	EBI_DATA15

PIN	FUNCTION
PD2	QSPI0_SS0
PD3	QSPI0_CLK
PD4	QSPI0_D0
PD5	QSPI0_D1
PD6	QSPI0_D2
PD7	QSPI0_D3
PD8	SPI0_SS0
PD9	SPI0_CLK
PD10	SPI0_DO
PD11	SPI0_DI
PD12	UART4_TXD
PD13	UART4_RXD
PD14	UART4_RTS
PD15	UART4_CTS

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	I2C0_SDA
PE11	USB0_VBUSVLD
PE12	I2C0_SCL

PIN	FUNCTION
PF0	RMII1_RXERR
PF1	RMII1_CRSDV
PF2	RMII1_RXD1
PF3	RMII1_RXD0
PF4	RMII1_REFCLK
PF5	RMII1_TXEN
PF6	RMII1_TXD1
PF7	RMII1_TXD0
PF8	RMII1_MDIO
PF9	RMII1_MDC
PF10	LED3
PF11	UART0_RXD
PF12	UART0_TXD

PIN	FUNCTION
PG0	EBI_ADDR0
PG1	EBI_ADDR1
PG3	EBI_ADDR3
PG5	CFG[5]
PG6	PWM10
PG7	PWM11
PG8	PWM12
PG9	PWM13
PG11	UART5_CTS
PG12	UART5_RTS
PG13	UART5_RXD
PG14	UART5_TXD
PG15	UART5_TDO



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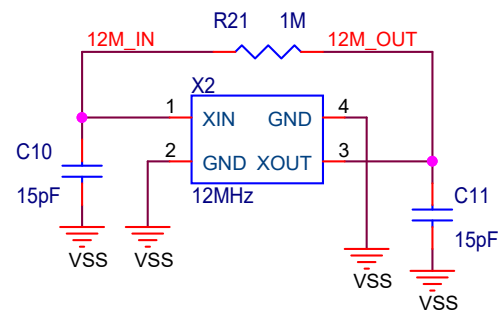
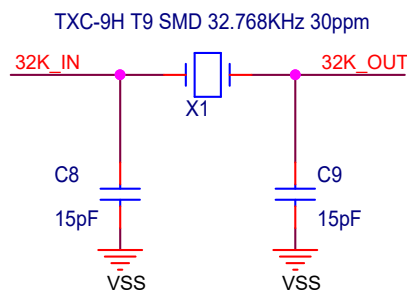
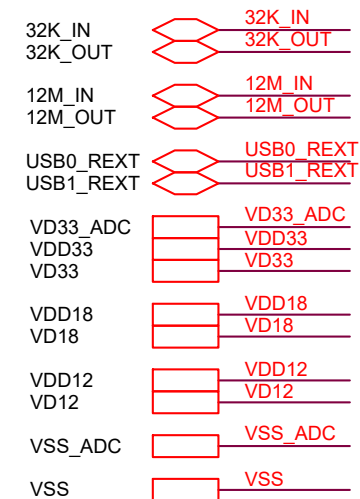
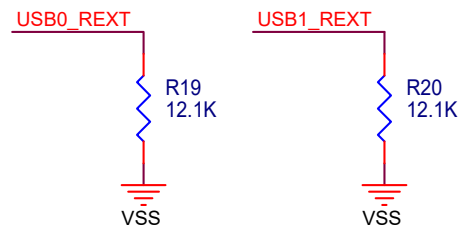
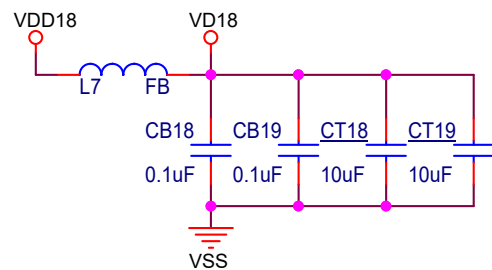
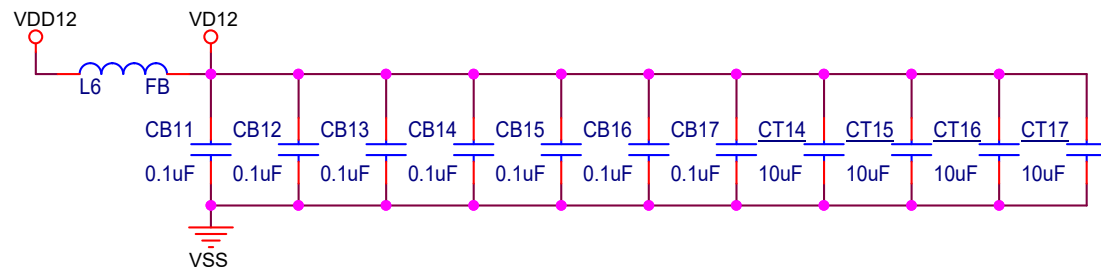
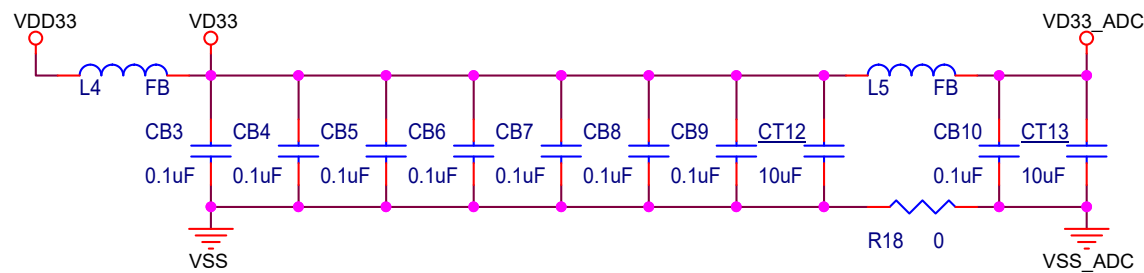
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PA0	2	PA.0/QSPI0_SS1/I2C0_SDA/UART1_RXD/EINT0/TM0_ECNT/CAN3_RXD	127	USB0_REXT
PA1	3	PA.1/EBI_nCS2/EBI_MCLK/I2C0_SCL/UART1_TXD/EINT1/TM1_ECNT/CAN3_TXD	126	VD33
PA2	4	PA.2/UART6_CTS/I2S_LRCK/SC0_CD/JTAG1_TDO/TM2_ECNT	125	USB0_DP
PA3	5	PA.3/UART6_RTS/I2S_BCLK/SC0_PWR/JTAG1_TCK/TM3_ECNT	124	USB0_DM
PA4	6	PA.4/UART6_RXD/I2S_DI/SC0_DAT/JTAG1_TMS/TM4_ECNT	123	VD12
PA5	7	PA.5/UART6_TXD/I2S_DO/SC0_CLK/JTAG1_TDI/TM5_ECNT	122	USB1_REXT
PA6	8	PA.6/EBI_nCS1/I2S_MCLK/SC0_RST/JTAG1_nTRST	121	VD33
VD33	9	VDDIO	120	USB1_DP
VD12	10	VDD	119	USB1_DM
VD18	11	MVDD	118	VD12
VD18	12	MVDD	117	PE12
VD12	13	VDD	116	PE11
PA7	14	PA.7/EBI_nWE/UART2_CTS/TM3_EXT	115	PE10
PA8	15	PA.8/EBI_nRE/UART2_RTS/TM3_TGL	114	PE9
PA9	16	PA.9/EBI_nCS0/UART2_RXD/TM2_EXT	113	PE8
PA10	17	PA.10/EBI_ADDR10/UART2_TXD/TM2_TGL	112	PE7
PA11	18	PA.11/EBI_ADDR9/UART8_RXD/TM4_EXT	111	PE6
PA12	19	PA.12/EBI_ADDR8/UART8_TXD/TM4_TGL	110	PE5
VD33	20	VDDIO	109	PE4
PG9	21	PG.9/EBI_ADDR7/UART8_CTS/PWM13/CFG.9_PwrOnSet9	108	PE3
PG8	22	PG.8/EBI_ADDR6/UART8_RTS/PWM12/CFG.8_PwrOnSet8	107	PE2
PG7	23	PG.7/EBI_ADDR5/UART5_TXD/PWM11/CFG.7_PwrOnSet7	106	PE1
PG6	24	PG.6/EBI_ADDR4/UART5_RXD/PWM10/CFG.6_PwrOnSet6	105	PE0
PG5	25	PG.5/EBI_ADDR12/UART5_RTS/CFG.5_PwrOnSet5	104	12M_OUT
PG3	26	PG.3/EBI_ADDR3/UART2_RTS/PWM03/CFG.3_PwrOnSet3	103	XT_OUT
PG1	27	PG.1/EBI_ADDR1/UART2_TXD/PWM01/CFG.1_PwrOnSet1	102	VD33
PG0	28	PG.0/EBI_ADDR0/UART2_RXD/CLK_OUT/PWM00/CFG.0_PwrOnSet0	101	PF12
PB0	29	PB.0/EBI_ADDR12/UART2_CTS/ADC_AIN0	100	PF11
PB6	30	PB.6/EBI_ADDR13/I2C1_SDA/I2S_LRCK/USBHL0_DM/UART7_TXD/SP1_SS0/ADC_AIN6	99	PF10
PB4	31	PB.4/EBI_ADDR14/I2C1_SCL/I2S_BCLK/USBHL0_DP/UART7_RXD/SP1_CLK/ADC_AIN4	98	PF9
VSS_ADC	32	AVSSADC	97	PF8
VD33_ADC	33	AVDDADC	96	PF7
PB7	34	PB.7/EBI_ADDR15/I2C2_SDA/I2S_DI/USBHL0_DM/UART7_CTS/SP1_MOSI/ADC_AIN7	95	VSS
PB5	35	PB.5/EBI_ADDR16/I2C2_SCL/I2S_DO/USBHL0_DP/UART7_RTS/SP1_MISO/ADC_AIN5	94	VD12
PB1	36	PB.1/EBI_ADDR17/I2C3_SDA/I2S_MCLK/CAN2_RXD/TM0_EXT/SP1_SS1/UART9_TXD/ADC_AIN1	93	PB13
PB3	37	PB.3/EBI_ADDR18/I2C3_SCL/EINT2/CAN2_TXD/TM0_TGL/SP1_SS1/UART9_RXD/ADC_AIN3	92	PF6
PB2	38	PB.2/EBI_ADDR2/UART9_RTS/ADC_AIN2	91	PF5
VD33_RTC	39	VBAT33	90	PF4
32K_IN	40	X32_IN	89	PF3
32K_OUT	41	X32_OUT	88	PF2
PB8	42	PB.8/EBI_ADDR11/I2C2_SCL/CAN2_RXD/UART8_TXD/SD0_nCD/TM0_EXT	87	PF1
VD12	43	VDD	86	PF0
PC0	44	PC.0/EBI_DATA0/I2C2_SDA/CAN2_TXD/UART8_RXD/SPI0_SS1/TM0_TGL	85	VD33
PC1	45	PC.1/EBI_DATA1/NAND_nCS0/UART7_TXD	84	VD18
PC2	46	PC.2/EBI_DATA2/NAND_nWP/UART7_RXD	83	VD18
PC3	47	PC.3/EBI_DATA3/VCAPO_CLK0/NAND_ALE/I2C1_SCL/UART3_TXD/CAN0_RXD	82	VD12
PC4	48	PC.4/EBI_DATA4/VCAPO_PCLK/NAND_CLE/I2C1_SDA/UART3_RXD/SPI0_MOSI/CAN0_TXD	81	nRST
PC5	49	PC.5/EBI_DATA5/VCAPO_HSYNC/NAND_nWE/SPI0_SS0/SD0_CMD/UART1_TXD/eMMC0_CMD	80	PG15
PC6	50	PC.6/EBI_DATA6/VCAPO_VSYNC/NAND_nRE/SC1_RST/SPI0_CLK/SD0_CLK/UART1_RXD/eMMC0_CLK	79	PG14
PC7	51	PC.7/EBI_DATA7/VCAPO_FIELD/NAND_RDY0/SC1_CLK/SPI0_MOSI/SD0_DATA0/UART1_RTS/eMMC0_DATA0	78	PG13
PC8	52	PC.8/EBI_DATA8/VCAPO_DATA0/NAND_DATA0/SC1_DAT/SPI0_MISO/SD0_DATA1/UART1_CTS/eMMC0_DATA0	77	PG12
PC9	53	PC.9/EBI_DATA9/VCAPO_DATA1/NAND_DATA1/SC1_PWR/SD0_DATA2/UART4_TXD/eMMC0_DATA2	76	PG11
PC10	54	PC.10/EBI_DATA10/VCAPO_DATA2/NAND_DATA2/SC1_CD/SD0_DATA3/UART4_RXD/eMMC0_DATA3	75	PD15
PC11	55	PC.11/EBI_DATA11/VCAPO_DATA3/NAND_DATA3/SC0_RST	74	PD14
PC12	56	PC.12/EBI_DATA12/VCAPO_DATA4/NAND_DATA4/SC0_CLK/SD0_nCD/UART8_TXD	73	PD13
PC13	57	PC.13/EBI_DATA13/VCAPO_DATA5/NAND_DATA5/SC0_DAT/UART8_RXD	72	PD12
PC14	58	PC.14/EBI_DATA14/VCAPO_DATA6/NAND_DATA6/SC0_PWR/SPI0_MOSI/UART8_RTS	71	PD11
PC15	59	PC.15/EBI_DATA15/VCAPO_DATA7/NAND_DATA7/SC0_CD/UART8_CTS	70	PD10
VD33	60	VDDIO	69	PD9
PD2	61	PD.2/QSPI0_SS0/UART3_TXD/TM4_EXT	68	PD8
PD3	62	PD.3/QSPI0_CLK/UART3_RXD/TM4_TGL	67	PD7
PD4	63	PD.4/QSPI0_MOSI0/UART3_RTS/TM5_EXT	66	PD6
VSS	64	VSS	65	PD5

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PA[12:0]	PA[12:0]
PB[8:0]	PB[8:0]
PB13	PB13
PC[15:0]	PC[15:0]
PD[15:2]	PD[15:2]
PE[12:0]	PE[12:0]
PF[12:0]	PF[12:0]
PG[1:0]	PG[1:0]
PG3	PG3
PG[9:5]	PG[9:5]
PG[15:11]	PG[15:11]
32K_IN	32K_IN
32K_OUT	32K_OUT
12M_IN	12M_IN
12M_OUT	12M_OUT
USB0_DM	USB0_DM
USB0_DP	USB0_DP
USB0_REXT	USB0_REXT
USB0_ID	USB0_ID
USB1_DM	USB1_DM
USB1_DP	USB1_DP
USB1_REXT	USB1_REXT
nRST	nRET
VD33_ADC	VD33_ADC
VD33_RTC	VD33_RTC
VD33	VD33
VD18	VD18
VD12	VD12
VSS_ADC	VSS_ADC
VSS	VSS

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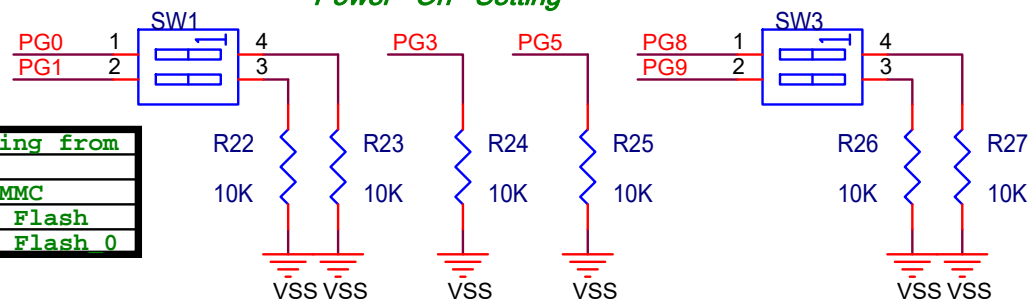
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Size	Document Number	Rev
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Title		
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A	Power Filter	1.2
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Power On Setting



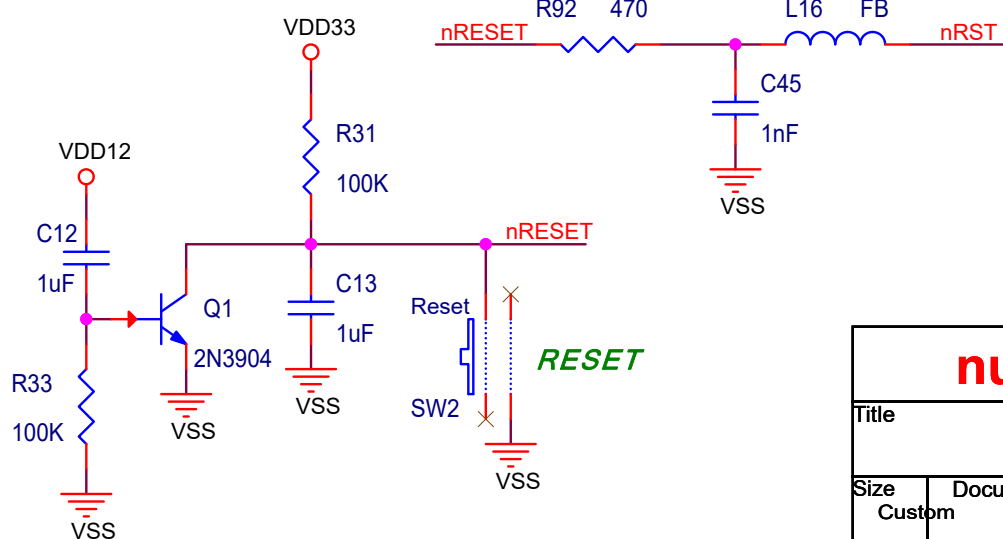
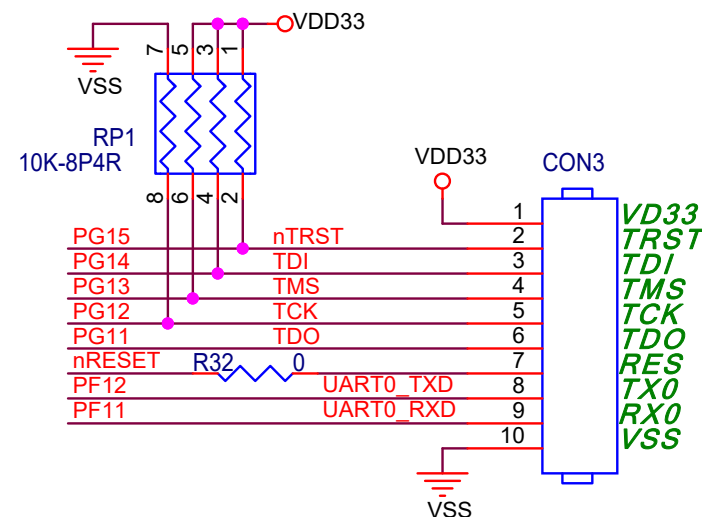
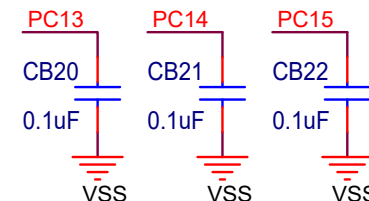
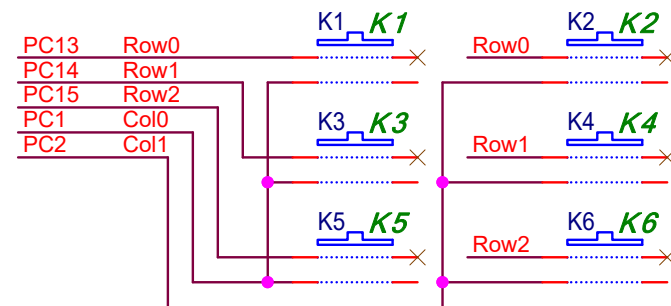
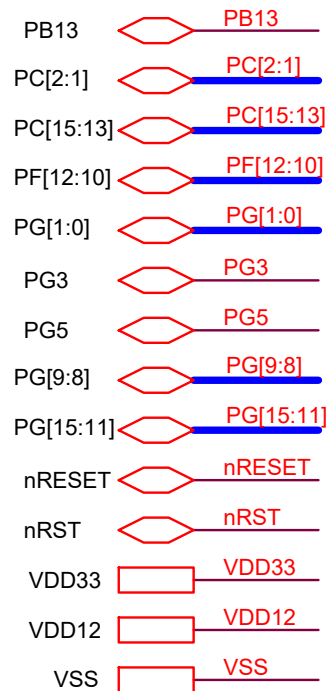
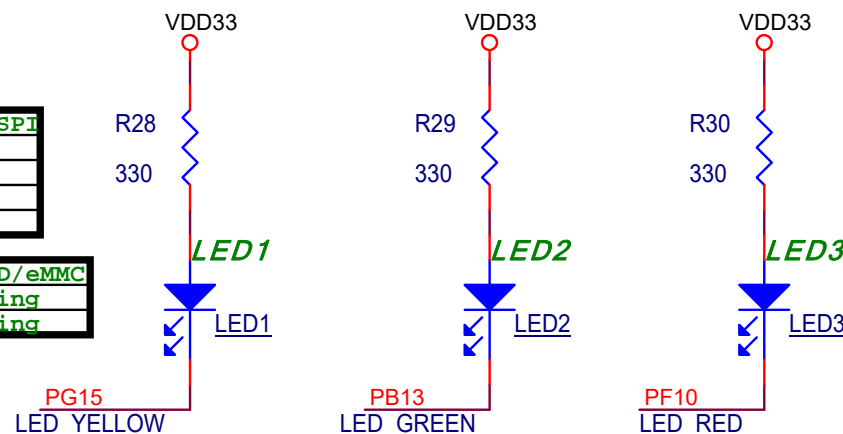
PG1	PG0	Booting from
ON(0)	ON(0)	USB
ON(0)	OFF(1)	SD/eMMC
OFF(1)	ON(0)	NAND Flash
OFF(1)	OFF(1)	QSPI Flash 0

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

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

PG9	PG8	If botting from QSPI
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

PG9	PG8	If votting from SD/eMMC
OFF(1)	OFF(1)	SD0/eMMC0 PC booting
Others		SD1/eMMC1 PF booting



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Title

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Size

Custom

Document Number

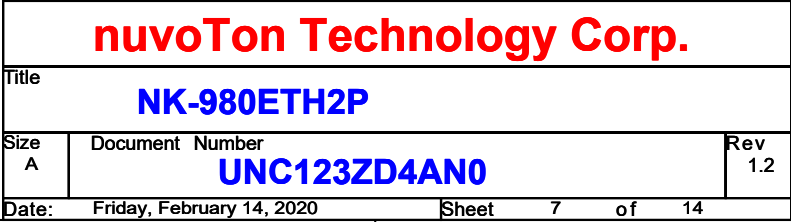
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Rev

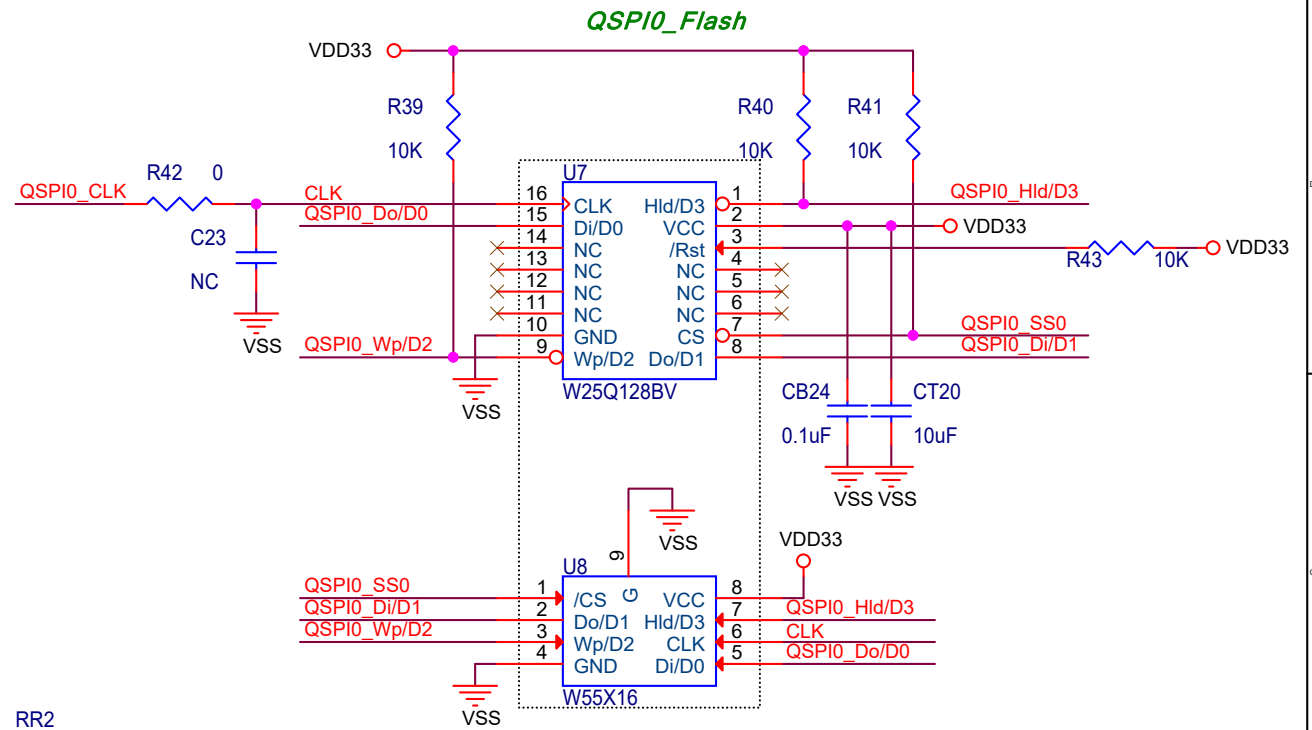
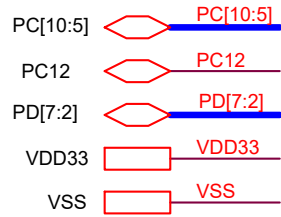
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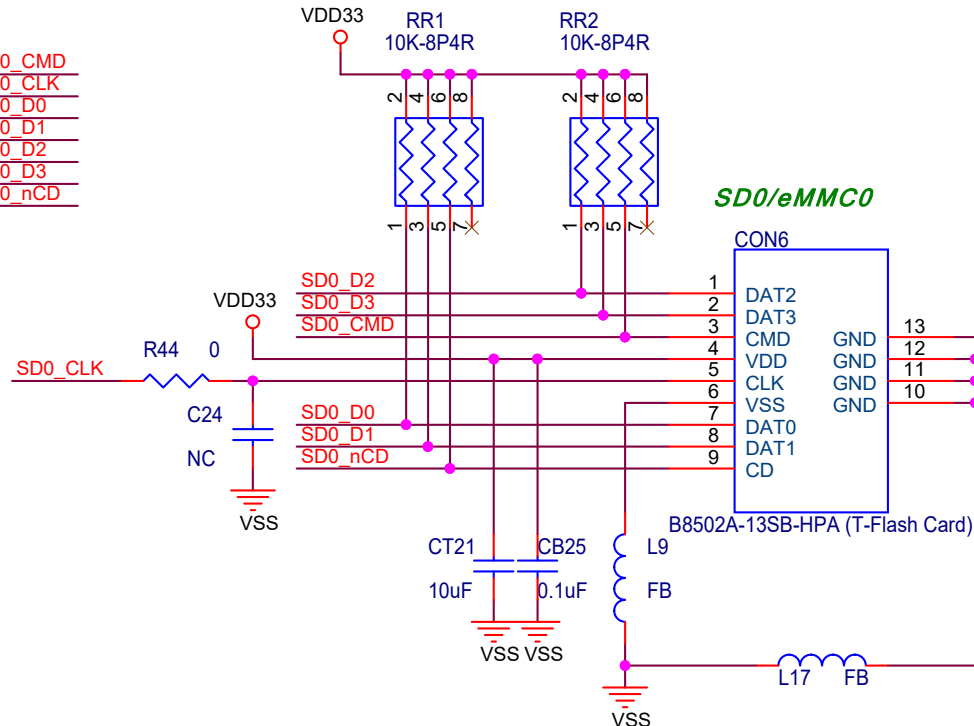
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PD2	QSPI0_SS0
PD3	QSPI0_CLK
PD4	QSPI0_Do/D0
PD5	QSPI0_Di/D1
PD6	QSPI0_Wp/D2
PD7	QSPI0_Hid/D3

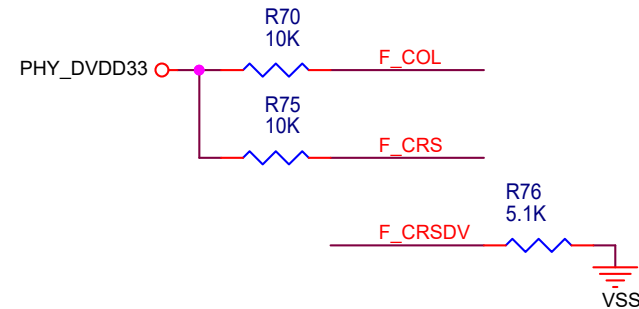
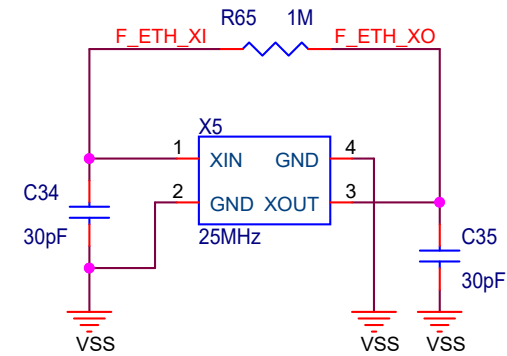
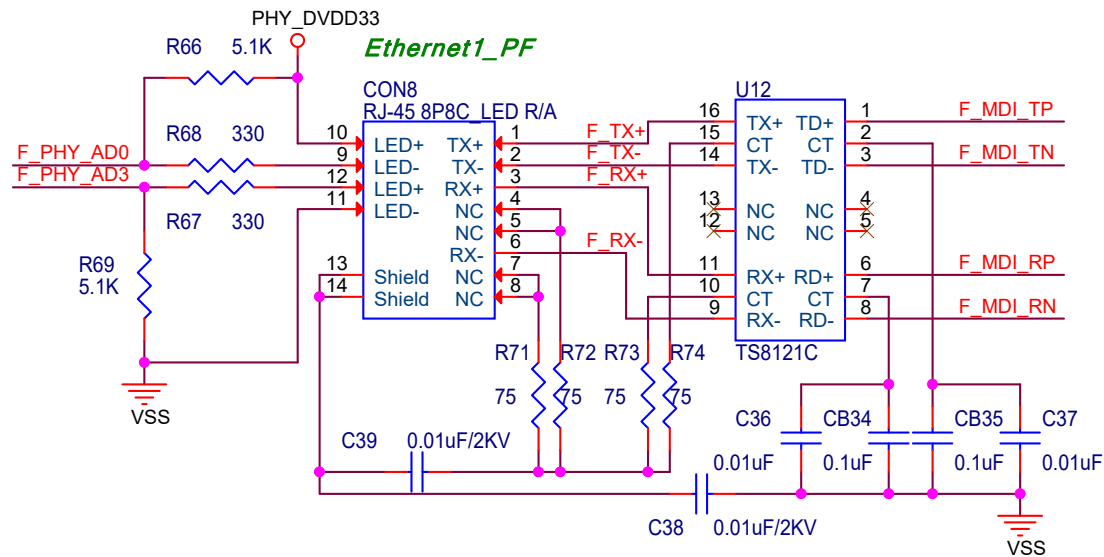
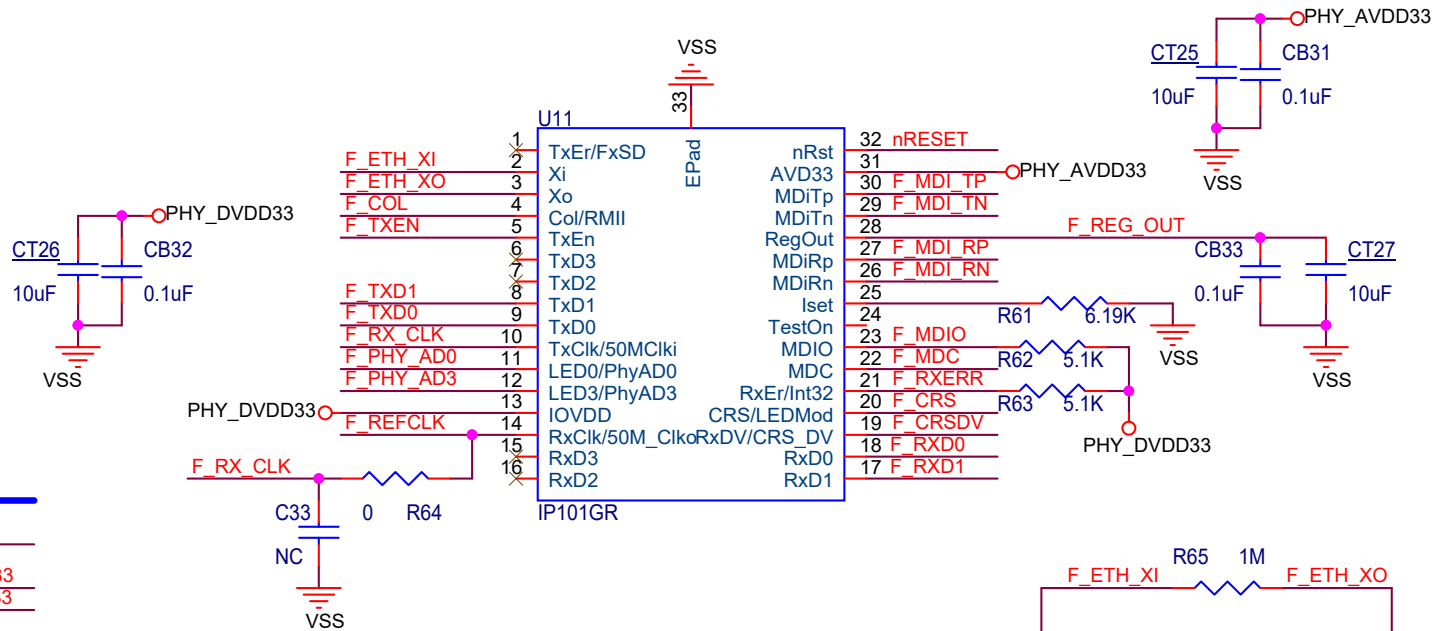


PC5	SD0_CMD
PC6	SD0_CLK
PC7	SD0_D0
PC8	SD0_D1
PC9	SD0_D2
PC10	SD0_D3
PC12	SD0_nCD



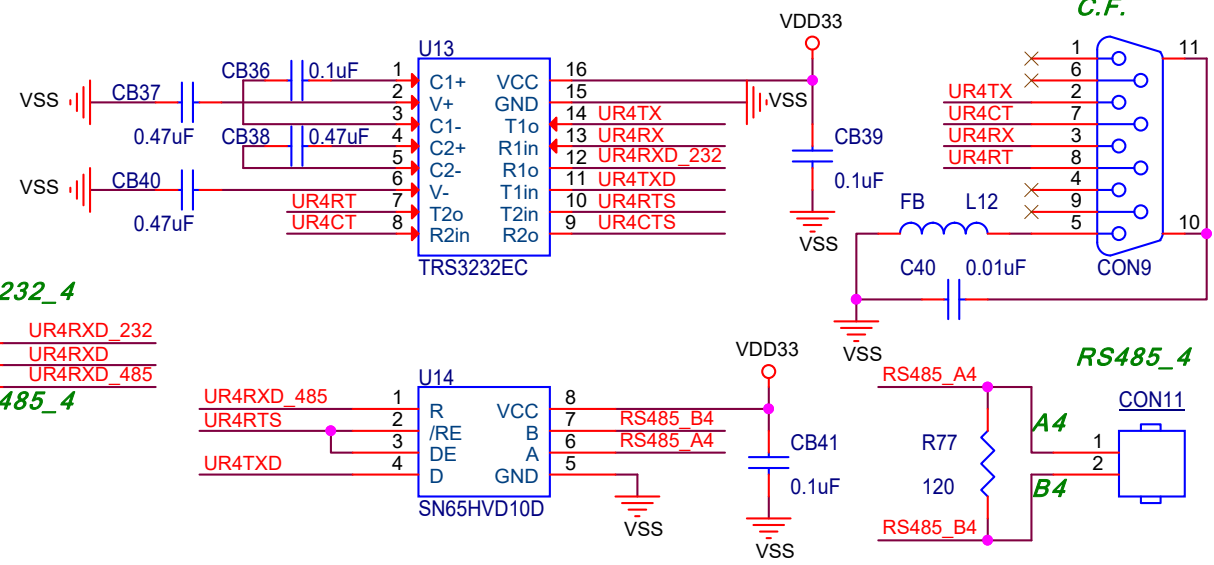
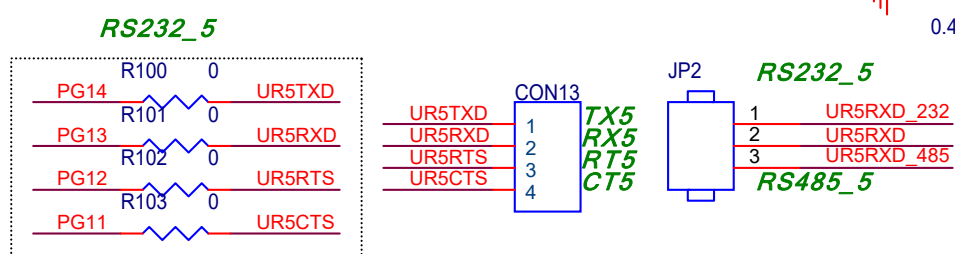
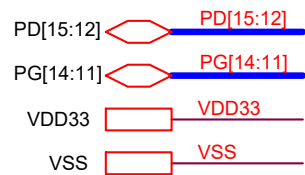
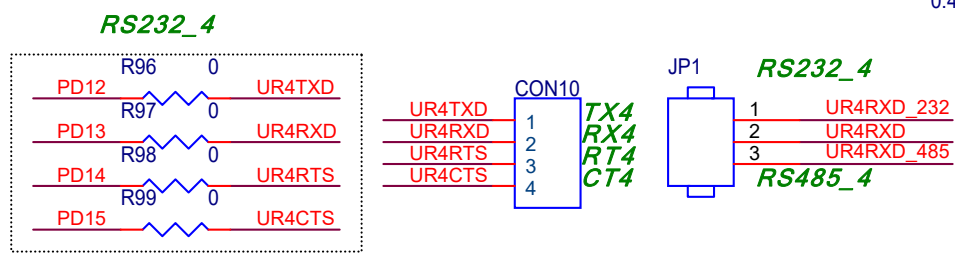
PF9	F_MDC
PF8	F_MDIO
PF7	F_TXD0
PF6	F_TXD1
PF5	F_TXEN
PF4	F_REFCLK
PF3	F_RXD0
PF2	F_RXD1
PF1	F_CRSDV
PF0	F_RXERR

PF[9:0]	PF[9:0]
nRESET	nRESET
PHY_DVDD33	PHY_DVDD33
PHY_AVDD33	PHY_AVDD33
VSS	VSS

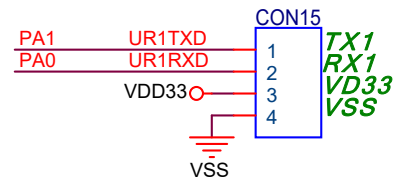


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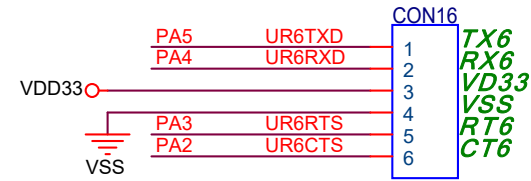
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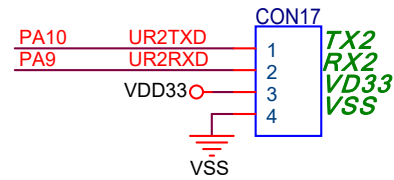
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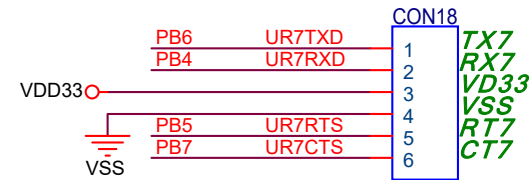
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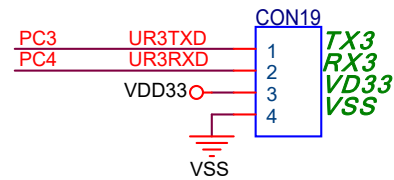
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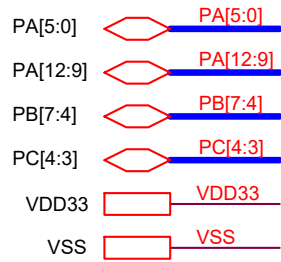
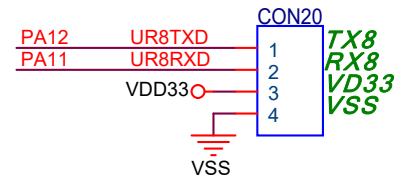
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RS232_3



RS232_8



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Title
NK-980ETH2P

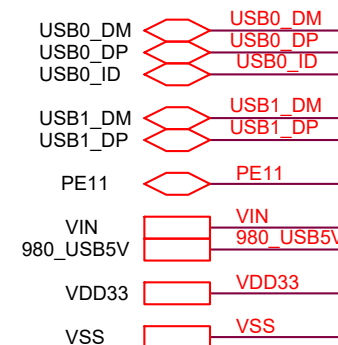
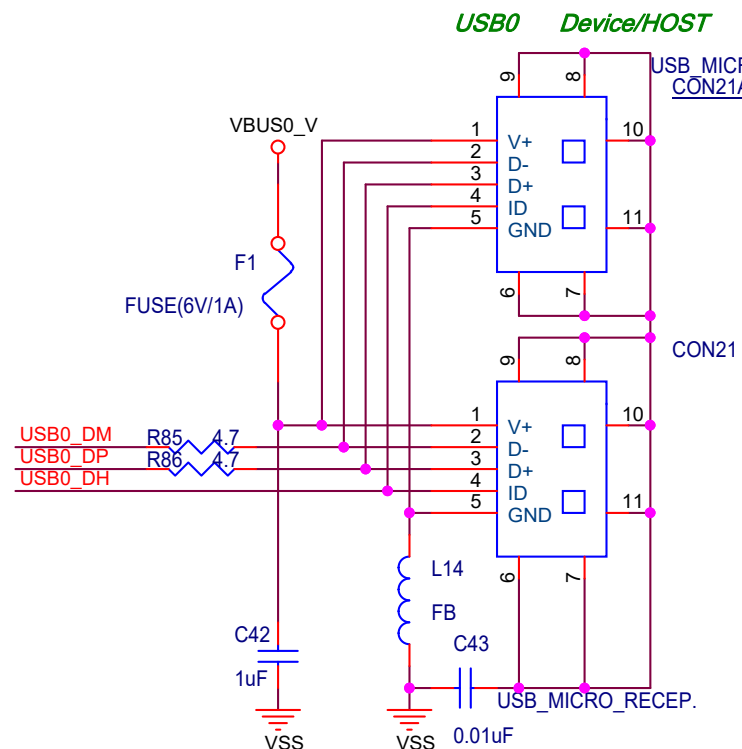
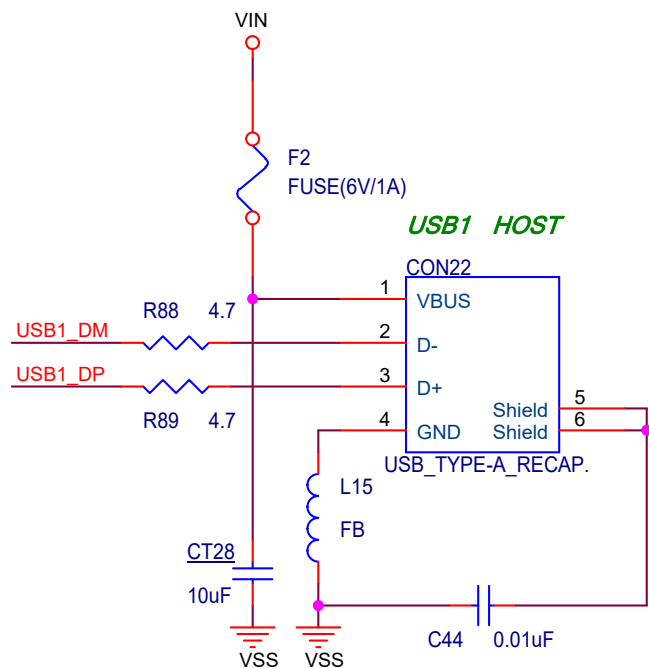
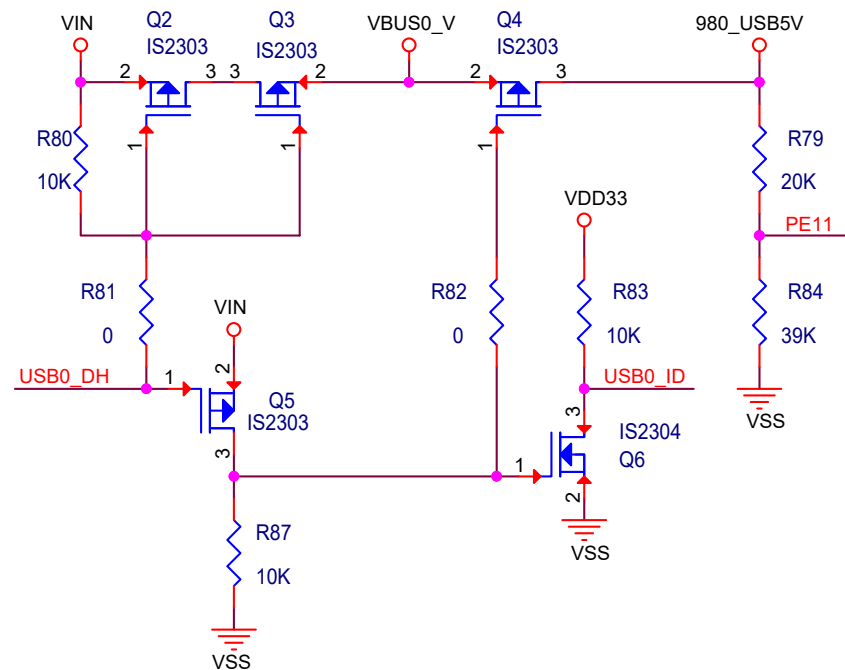
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UART_B

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1.2

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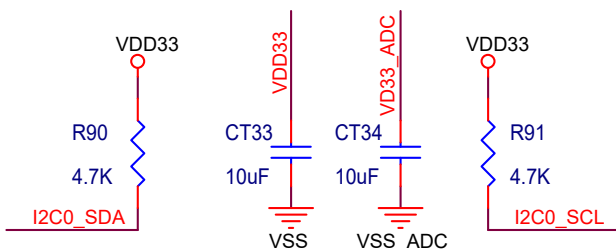
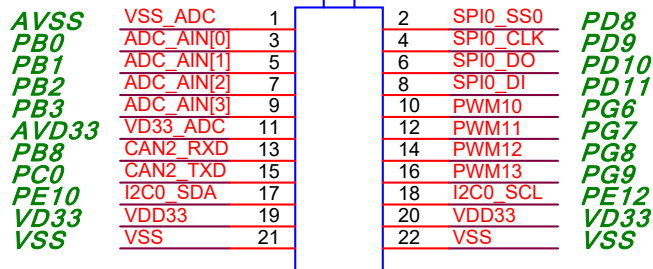
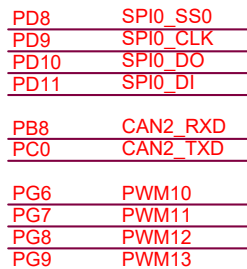
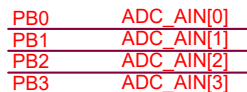
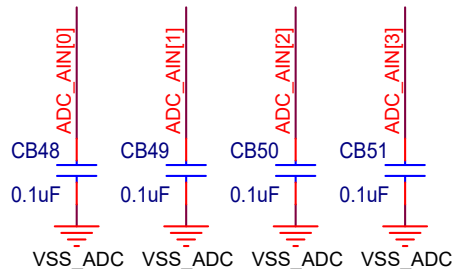
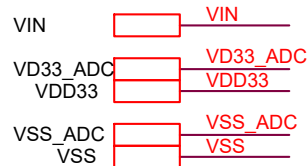
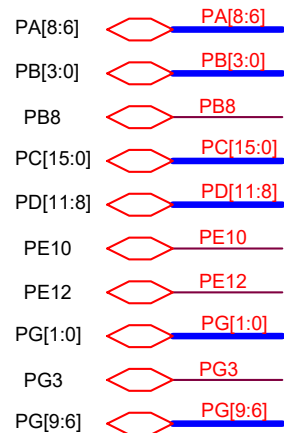
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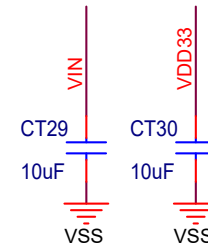
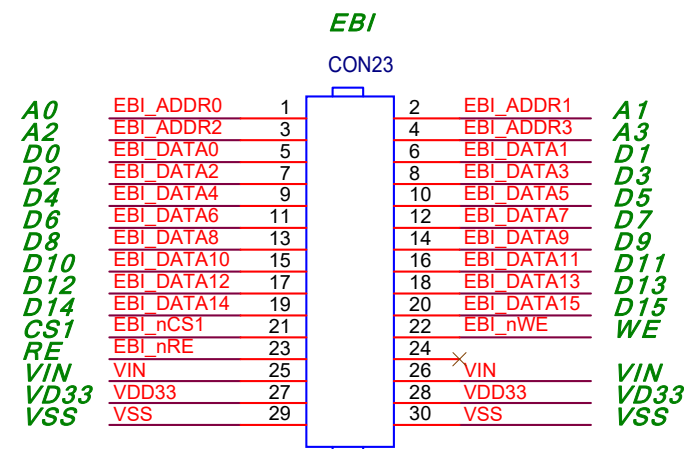
Date: Friday, February 14, 2020

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PG1	EBI_ADDR1
PB2	EBI_ADDR2
PG3	EBI_ADDR3
PC0	EBI_DATA0
PC1	EBI_DATA1
PC2	EBI_DATA2
PC3	EBI_DATA3
PC4	EBI_DATA4
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

PA6	EBI_nCS1
PA7	EBI_nWE
PA8	EBI_nRE



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