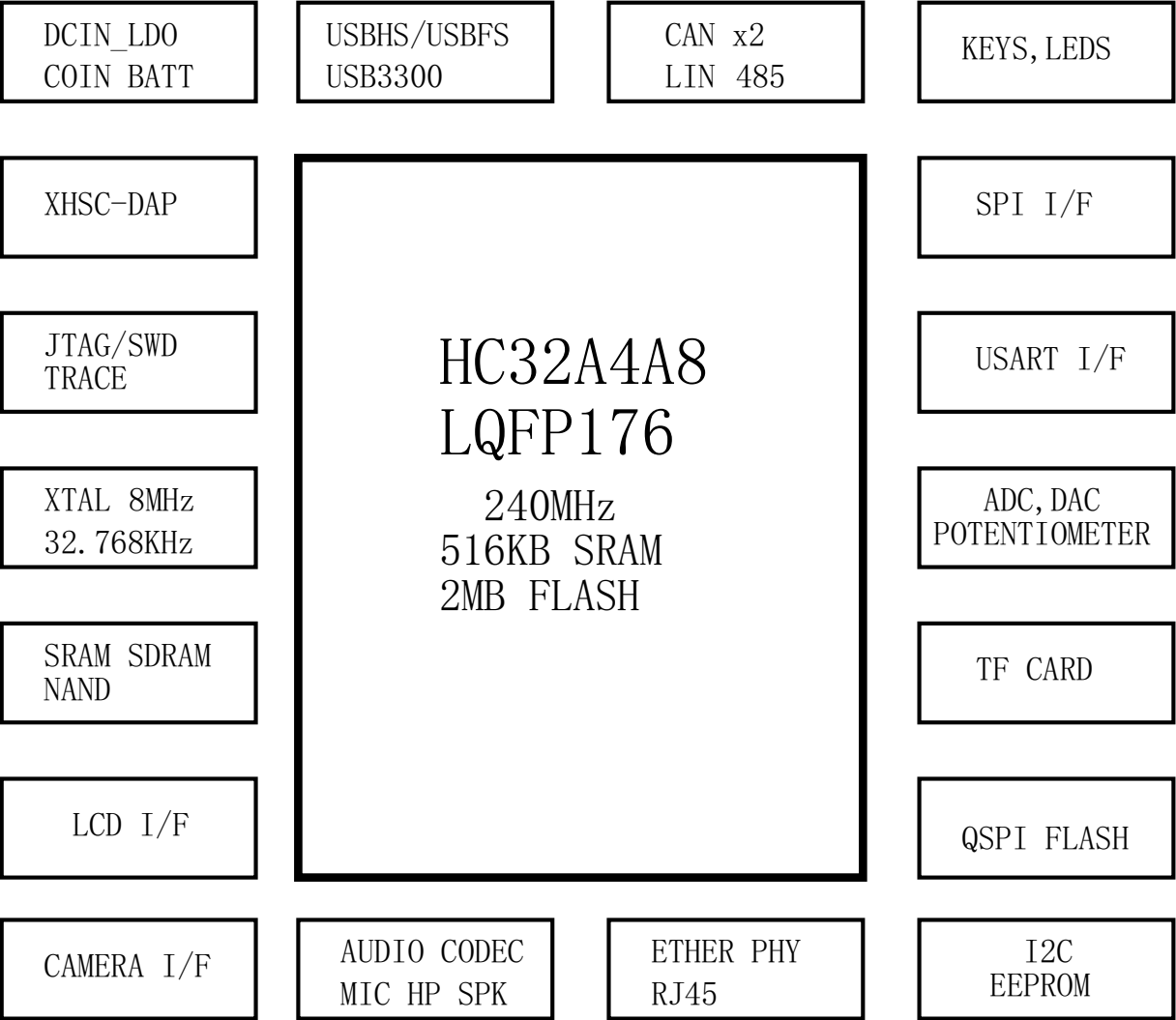


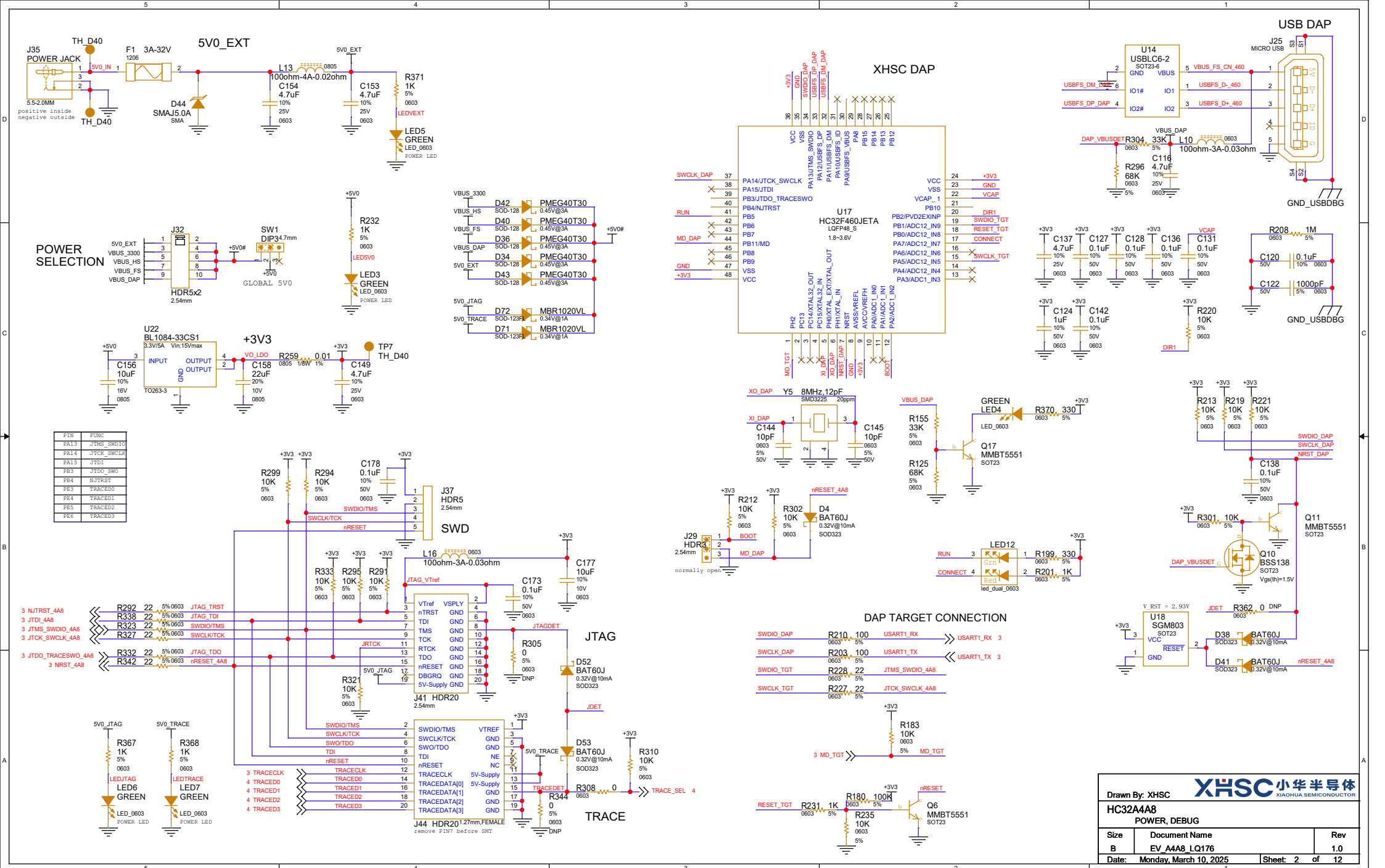
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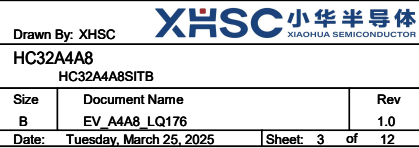
Page 01	TITLE PAGE
Page 02	POWER, DEBUG
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Page 04	PIN MUX, IO EXPANDER
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Page 06	AUDIO
Page 07	SRAM, SDRAM, NAND,LCD
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Page 12	USART,SPI,I2C,SMART CARD

Revision History

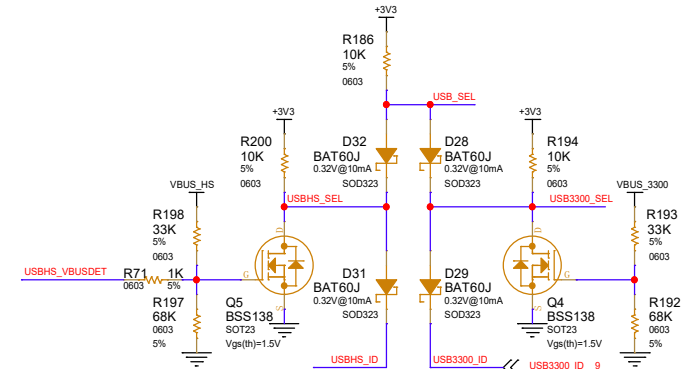
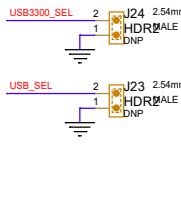
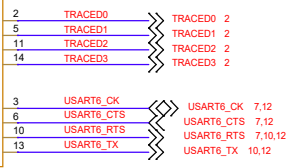
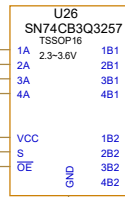
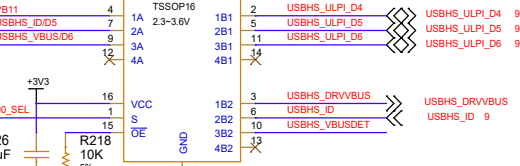
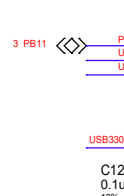
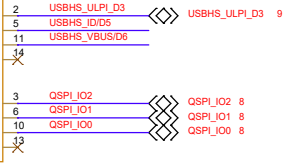
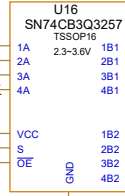
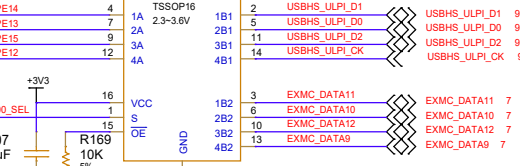
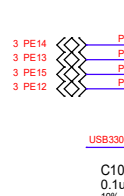
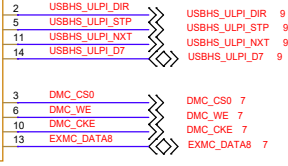
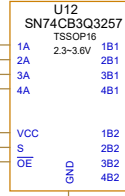
Rev	Date	Description
1.0	03/12/2025	- Initial release.





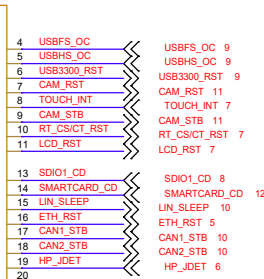
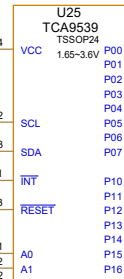
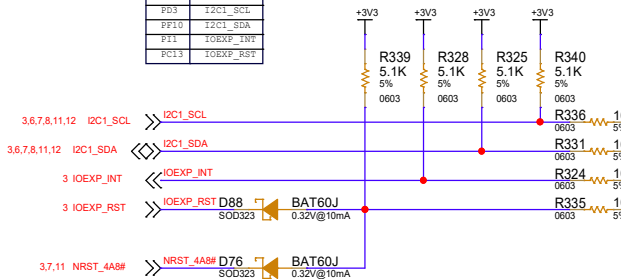


PIN MUX

SPDT
V_{IH} > 2V, V_{IL} < 0.8V
L → A=B1
H → A=B2 (default)

IO-EXPANDER

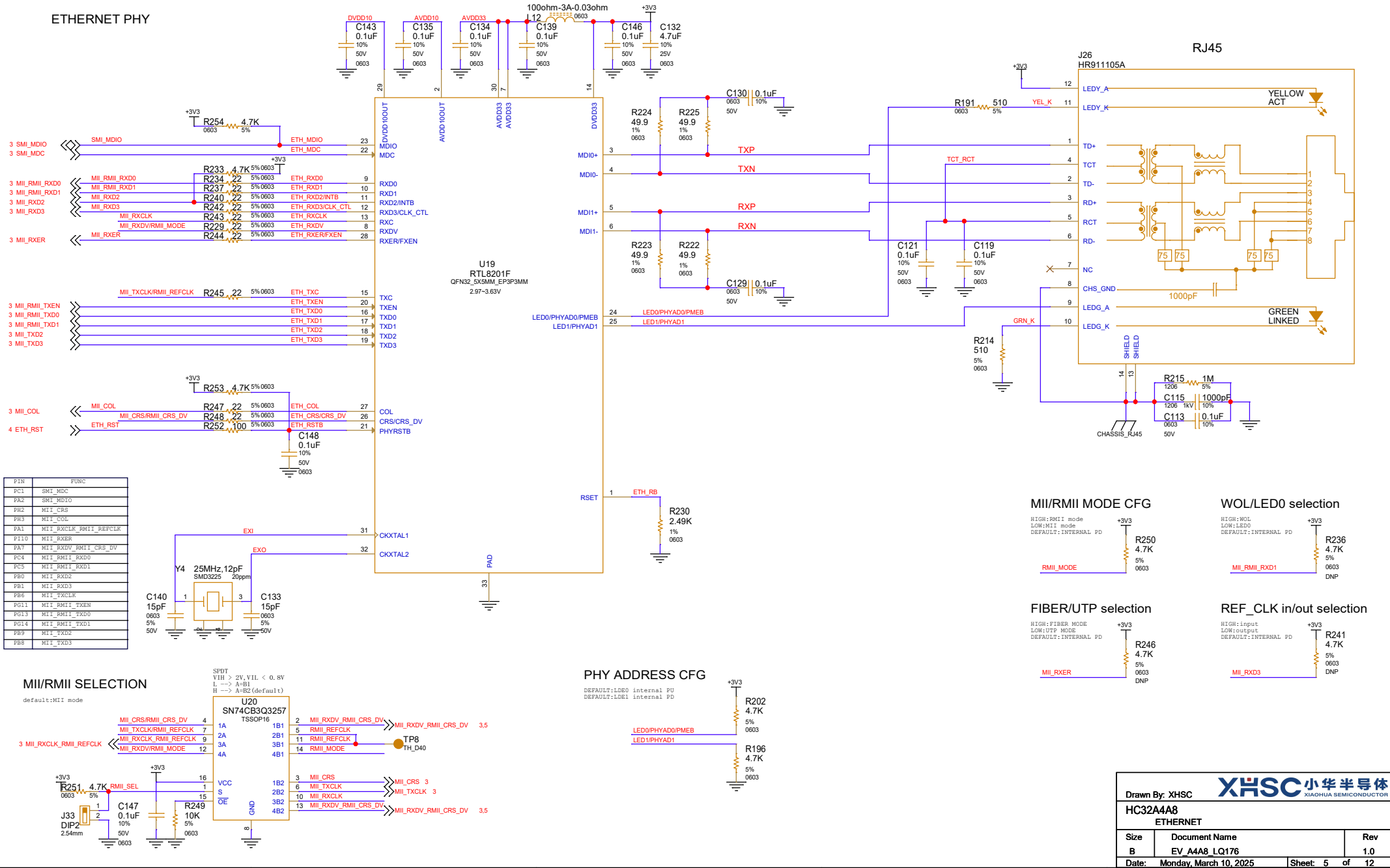
PIN	FUNC
PD3	I2C1_SCL
PF10	I2C1_SDA
PI1	IOEXP_INT#
PC13	IOEXP_RST



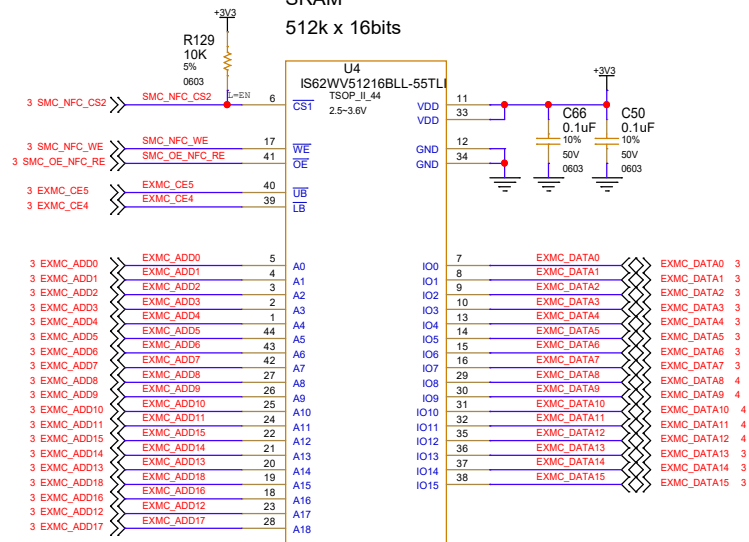
I2C ADDRESS:1110 100

PIN	DEFAULT	USB3300 DETECTED	USBHS DETECTED
PC0	DMC_WE	USBHS_ULPI_STP	
PC2	DMC_CS0	USBHS_ULPI_DIR	
PC3	DMC_CKE	USBHS_ULPI_NXT	
PE12	EXMC_DATA8	USBHS_ULPI_D7	
PE13	EXMC_DATA9	USBHS_ULPI_D6	
PE14	EXMC_DATA10	USBHS_ULPI_D5	
PE15	EXMC_DATA11	USBHS_ULPI_D4	
PE16	EXMC_DATA12	USBHS_ULPI_D3	
PE17	EXMC_DATA13	USBHS_ULPI_D2	
PE18	EXMC_DATA14	USBHS_ULPI_D1	
PE19	EXMC_DATA15	USBHS_ULPI_D0	
PE20	EXMC_DATA16	USBHS_ULPI_D7	
PE21	EXMC_DATA17	USBHS_ULPI_D6	
PE22	EXMC_DATA18	USBHS_ULPI_D5	
PE23	EXMC_DATA19	USBHS_ULPI_D4	
PE24	EXMC_DATA20	USBHS_ULPI_D3	
PE25	EXMC_DATA21	USBHS_ULPI_D2	
PE26	EXMC_DATA22	USBHS_ULPI_D1	
PE27	EXMC_DATA23	USBHS_ULPI_D0	
PE28	EXMC_DATA24	USBHS_ULPI_D7	
PE29	EXMC_DATA25	USBHS_ULPI_D6	
PE30	EXMC_DATA26	USBHS_ULPI_D5	
PE31	EXMC_DATA27	USBHS_ULPI_D4	
PE32	EXMC_DATA28	USBHS_ULPI_D3	
PE33	EXMC_DATA29	USBHS_ULPI_D2	
PE34	EXMC_DATA30	USBHS_ULPI_D1	
PE35	EXMC_DATA31	USBHS_ULPI_D0	
PE36	EXMC_DATA32	USBHS_ULPI_D7	
PE37	EXMC_DATA33	USBHS_ULPI_D6	
PE38	EXMC_DATA34	USBHS_ULPI_D5	
PE39	EXMC_DATA35	USBHS_ULPI_D4	
PE40	EXMC_DATA36	USBHS_ULPI_D3	
PE41	EXMC_DATA37	USBHS_ULPI_D2	
PE42	EXMC_DATA38	USBHS_ULPI_D1	
PE43	EXMC_DATA39	USBHS_ULPI_D0	
PE44	EXMC_DATA40	USBHS_ULPI_D7	
PE45	EXMC_DATA41	USBHS_ULPI_D6	
PE46	EXMC_DATA42	USBHS_ULPI_D5	
PE47	EXMC_DATA43	USBHS_ULPI_D4	
PE48	EXMC_DATA44	USBHS_ULPI_D3	
PE49	EXMC_DATA45	USBHS_ULPI_D2	
PE50	EXMC_DATA46	USBHS_ULPI_D1	
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PE220			

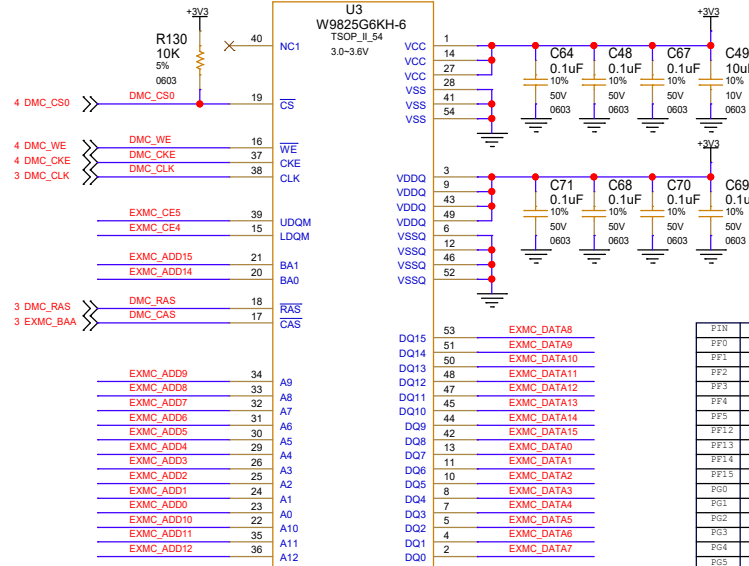
ETHERNET PHY



SRAM 512k x 16bits

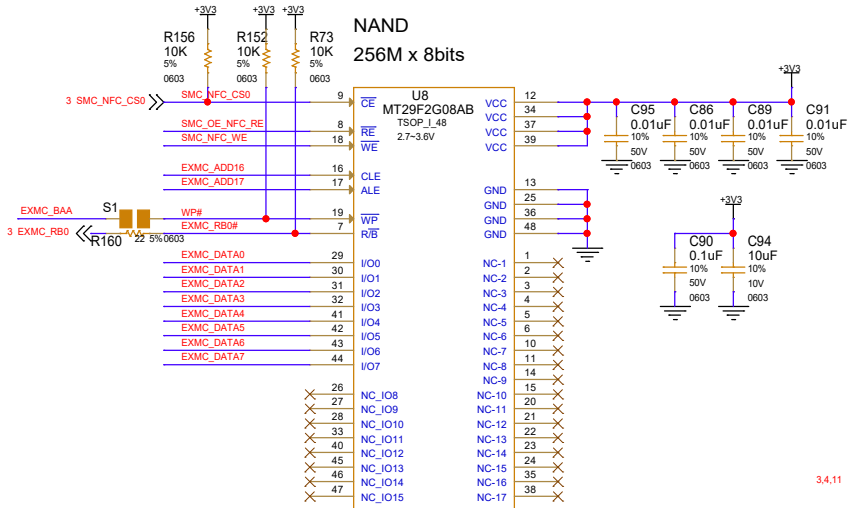


SDRAM 4M x 16bits x 4Banks

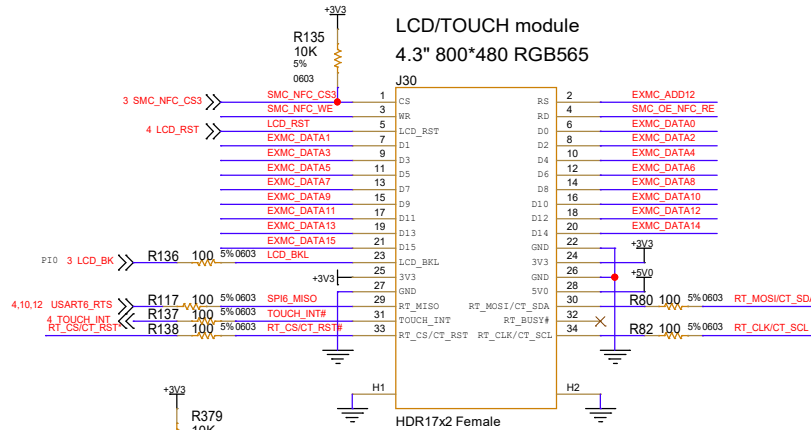


PIN	FUNC	PIN	FUNC	PIN	FUNC
PF0	EXMC_ADD0	PD14	EXMC_DATA0	PC0	DMC_WE
PF1	EXMC_ADD1	PD15	EXMC_DATA1	PC2	DMC_CS0
PF2	EXMC_ADD2	PD0	EXMC_DATA2	PC3	DMC_CKE
PF3	EXMC_ADD3	PD1	EXMC_DATA3	PF11	DMC_RAS
PF4	EXMC_ADD4	PE7	EXMC_DATA4	PG6	EXMC_RB0
PF5	EXMC_ADD5	PE8	EXMC_DATA5	PG8	EXMC_CLR
PF12	EXMC_ADD6	PE9	EXMC_DATA6	PD4	SMC_OE_NFC_RE
PF13	EXMC_ADD7	PE10	EXMC_DATA7	PD5	SMC_NFC_WE
PF14	EXMC_ADD8	PE11	EXMC_DATA8	PD7	SMC_NFC_CS0
PF15	EXMC_ADD9	PE12	EXMC_DATA9	PG9	SMC_NFC_CS2
PG0	EXMC_ADD10	PE13	EXMC_DATA10	PG12	SMC_NFC_CS3
PG1	EXMC_ADD11	PE14	EXMC_DATA11	PG15	DMC_CAS/EXMC_BA0
PG2	EXMC_ADD12	PE15	EXMC_DATA12	PE0	EXMC_CE4
PG3	EXMC_ADD13	PD8	EXMC_DATA13	PE1	EXMC_CE5
PG4	EXMC_ADD14 DMC_BA0	PD9	EXMC_DATA14		
PG5	EXMC_ADD15 DMC_BA1	PD10	EXMC_DATA15		
PD11	EXMC_ADD16 NFC_CLB				
PD12	EXMC_ADD17 NFC_ALB				
PD13	EXMC_ADD18				

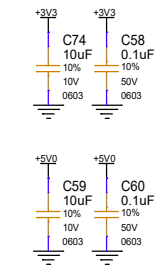
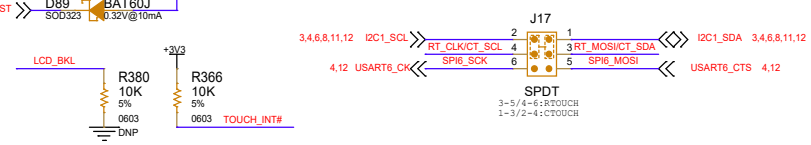
NAND 256M x 8bits



LCD/TOUCH module 4.3" 800*480 RGB565

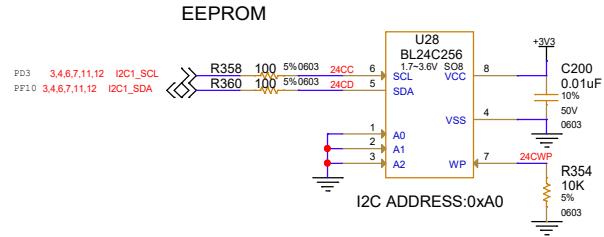
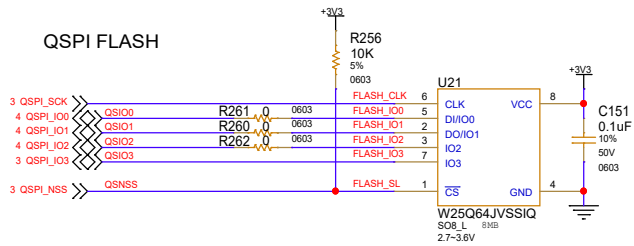


TOUCH selection

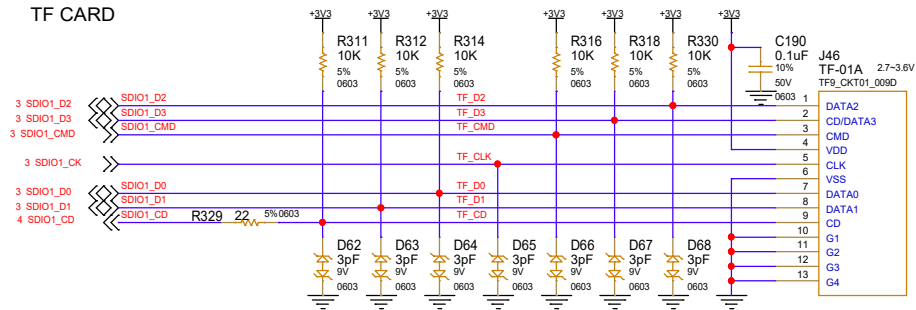


Drawn By: XHSC		XHSC 小华半导体 XIAOHUA SEMICONDUCTOR	
HC32A4A8			
SRAM, SDRAM, NAND, LCD			
Size	Document Name	Rev	
B	EV_A4A8_LQ176	1.0	
Date:	Monday, March 10, 2025	Sheet:	7 of 12

PIN	FUNC
PB13	QSPI_FIO0
PB12	QSPI_FIO1
PB10	QSPI_FIO2
PB2	QSPI_FIO3
PC6	QSPI_SCK
PC7	QSPI_NSS

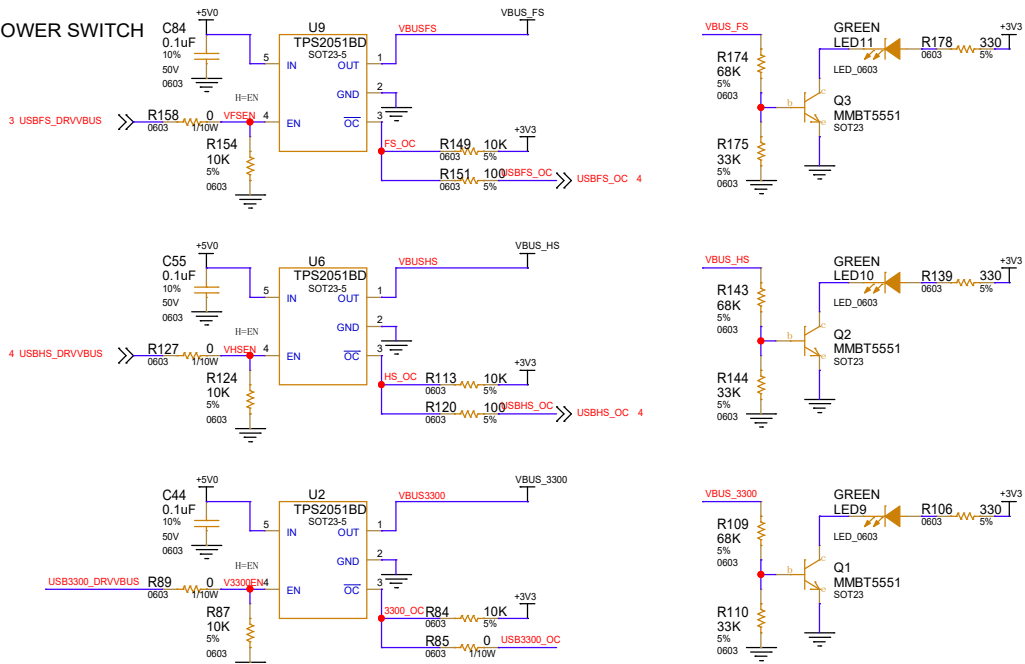


PIN	FUNC
PA7	SDIO1_D0
PA8	SDIO1_D1
PC10	SDIO1_D2
PA5	SDIO1_D3
PD2	SDIO1_CMD
PC12	SDIO1_CLK

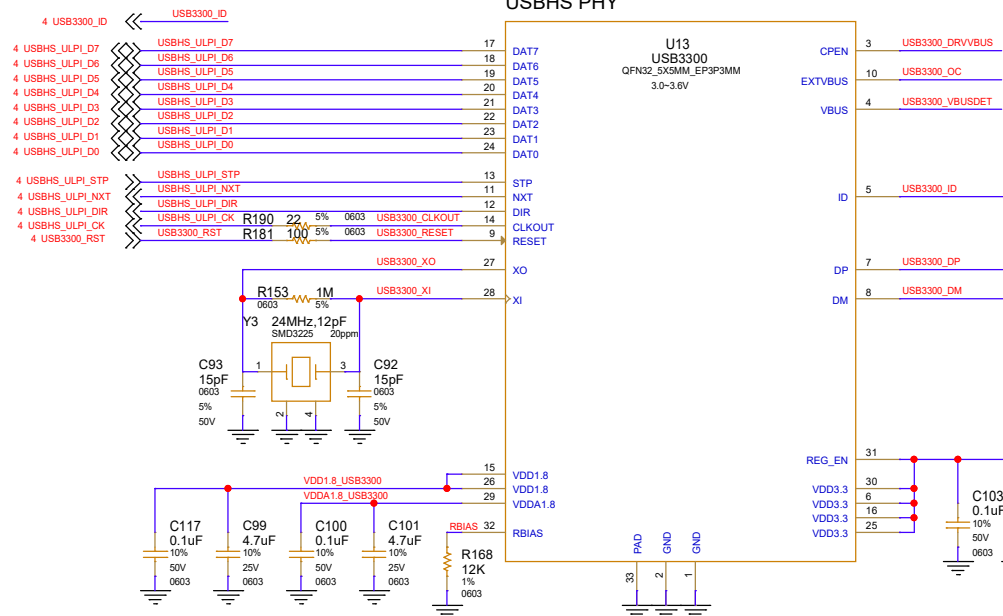


Drawn By: XHSC		
HC32A4A8		
QSPI FLASH, EEPROM, TF CARD		
Size	Document Name	Rev
B	EV_A4A8_LQ176	1.0
Date:	Monday, March 10, 2025	Sheet: 8 of 12

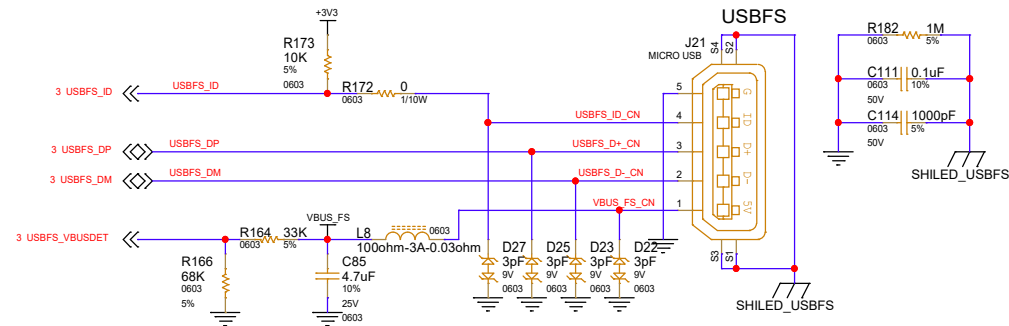
POWER SWITCH



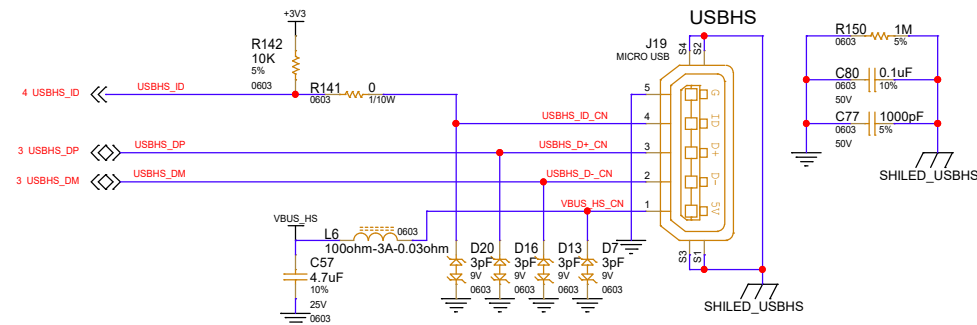
USBHS PHY



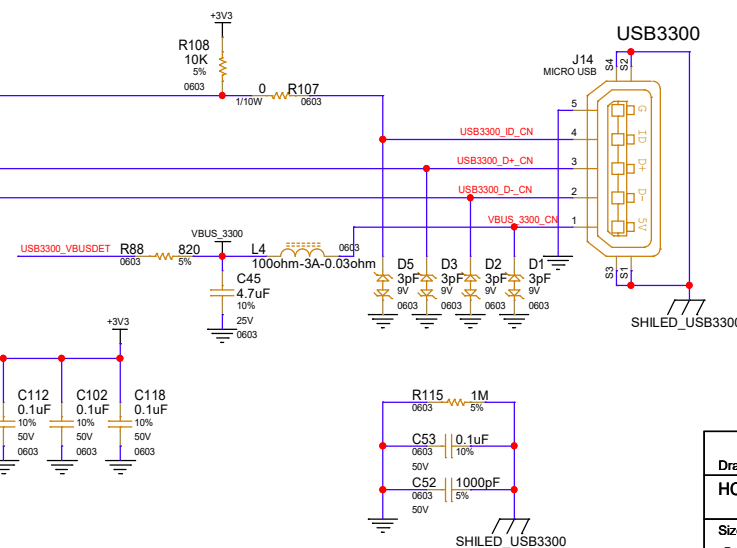
USBFS



USBHS



USB3300



PIN	FUNC	PIN	FUNC
PC0	USBHS_ULPI_STP	PA11	USBFS_DM
PC2	USBHS_ULPI_DIR	PA12	USBFS_DP
PC3	USBHS_ULPI_NXT	PC9	USBFS_DRVVBUS
PE12	USBHS_ULPI_CK	PA9	USBFS_VBUSDET
PE13	USBHS_ULPI_D0	PA10	USBFS_ID
PE14	USBHS_ULPI_D1	PA14	USBHS_DM
PE15	USBHS_ULPI_D2	PA15	USBHS_DP
PE10	USBHS_ULPI_D3	PA11	USBHS_DRVVBUS
PE11	USBHS_ULPI_D4	PA12	USBHS_ID
PE12	USBHS_ULPI_D5	PA13	USBHS_VBUSDET
PE13	USBHS_ULPI_D6		
PE11	USBHS_ULPI_D7		

Drawn By: XHSC

XHSC 小华半导体
XIAOHUA SEMICONDUCTOR

HC32A4A8

USBFS, USBHS, USB3300

Size

Document Name

Rev

B

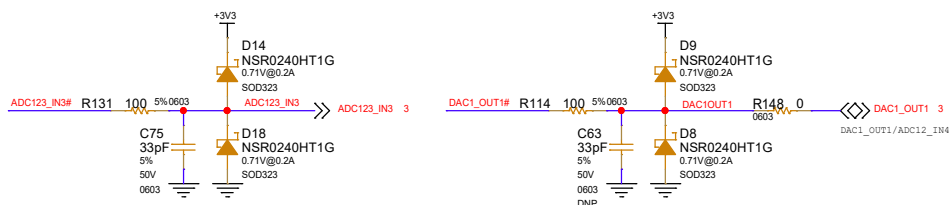
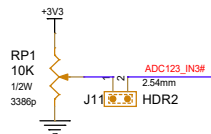
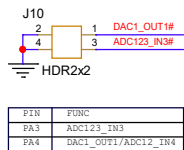
EV_A4A8_LQ176

1.0

Date: Monday, March 10, 2025

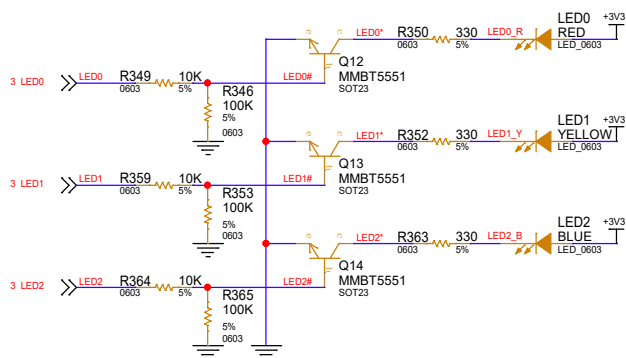
Sheet: 9 of 12

ADC,DAC

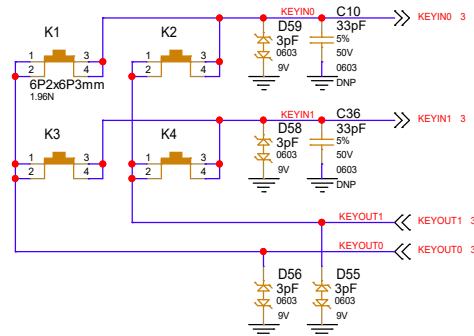


LEDS

PIN	FUNC
PI8	LED0
PI5	LED1
PA6	LED2

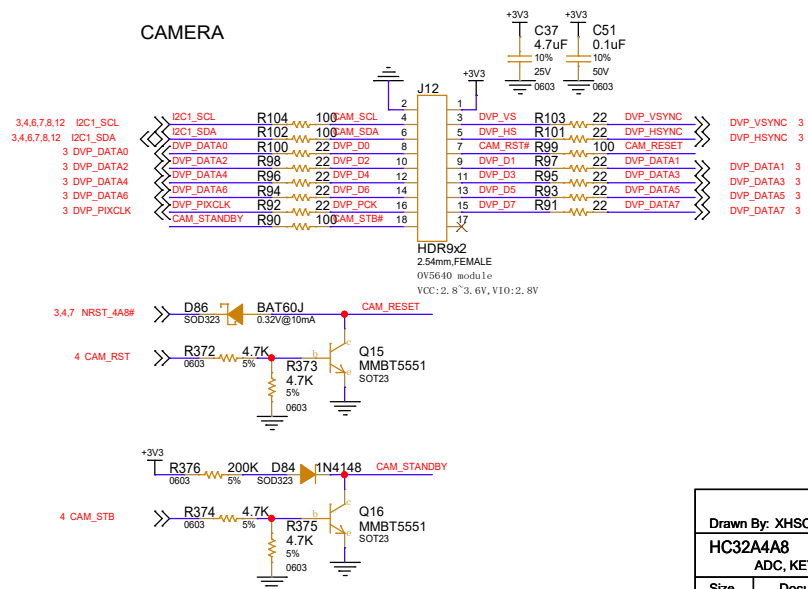


MATRIX KEYBOARD



PIN	FUNC
PI6	KEYIN0
PI7	KEYIN1
PI11	KEYOUT0
PI8	KEYOUT1

CAMERA



PIN	FUNC
PI9	DVP_PIXCLK
PI5	DVP_VSYNC
PI8	DVP_HSYNC
PI9	DVP_DATA0
PI10	DVP_DATA1
PI11	DVP_DATA2
PI12	DVP_DATA3
PI14	DVP_DATA4
PI14	DVP_DATA5
PI6	DVP_DATA6
PI7	DVP_DATA7
PI3	I2C1_SCL
PI10	I2C1_SDA

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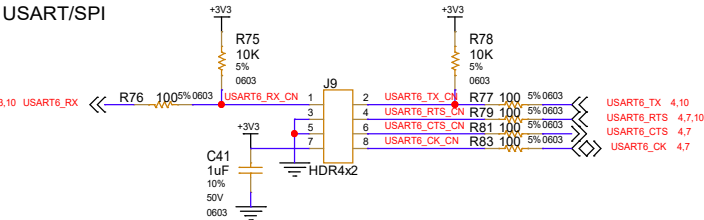
XHSC 小华半导体
XIAOHUA SEMICONDUCTOR

HC32A4A8

ADC, KEYS, LEDS, CAMERA

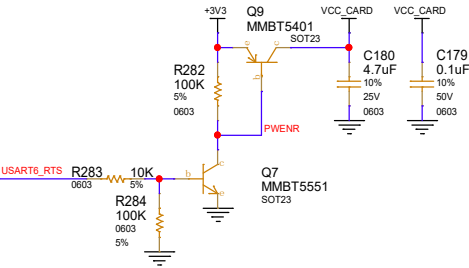
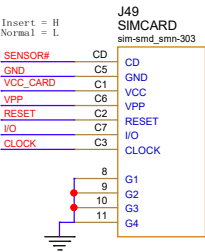
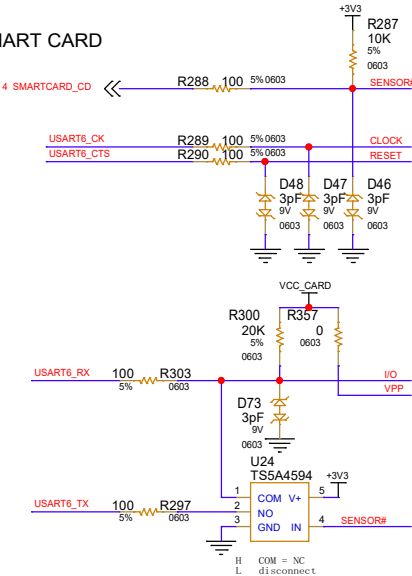
Size	Document Name	Rev
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USART/SPI

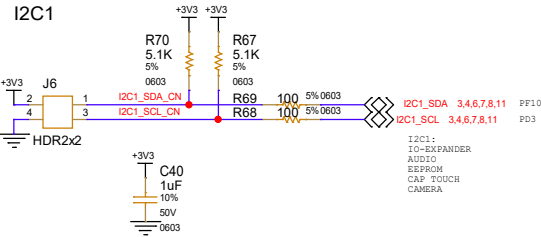


PIN	USART6	SMART_CARD	RS485	SPI6	TRACE
PE3 (PG2)	CK	CLK	SDA	SDI	TRACED0
PE4 (PG2)	CTS	RESET	SDI	SDO	TRACED1
PE5 (PG2)	RTS	PWR_EN	DE	MISO	TRACED2
PE6 (PG2)	TX	TX	TX	SS0	TRACED3
PD6 (PG2)	RX	RX			

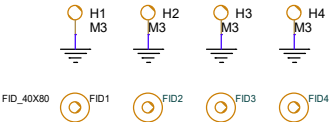
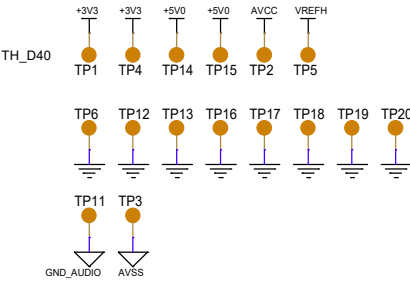
SMART CARD



I2C1



TP/FID/FAB HOLES



Drawn By: XHSC		
HC32A4A8		
USART,SPI,I2C,SMART CARD		
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B	EV_A4A8_LQ176	1.0
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