

Version: 1.0

Version code: 7001

Date: 2021-11-02

First edition

注意事项：

1、在为核心板绘制底板时，为避免静电损坏，USB/HDMI/MIPI/GPIO等接口如需在底板扩展，请在信号线上添加对应的ESD或TVS保护二极管。

2、请确保输入电源电压不超过5.4V（绝对最大值），否则有可能造成核心板永久损坏。

3、在设计底板时，尽量不要使用PC4/PC5，否则可能会影响启动。如果确定需要使用，请参阅全志D1芯片手册。

NOTICE:

1. While designing base board for this core board, please add ESD or TVS diodes on signal wires which has external connectors, such as USB/HDMI/MIPI/GPIO.

2. Make sure that the input power voltage below 5.4V (absolute max), or the core board would be damaged by the too high voltage.

3. PC4/PC5 controls boot mode, don't use them as GPIO would be better, or please refer to the user manual of ALLWINNERTECH D1.

P01_D1_Core_Power
File: P01_D1_Core_Power.kicad_sch

P02_D1_Core_SYS
File: P02_D1_Core_SYS.kicad_sch

P03_D1_Core_DDR
File: P03_D1_Core_DDR.kicad_sch

P04_D1_Core_HDMI
File: P04_D1_Core_HDMI.kicad_sch

P05_D1_Core_USB
File: P05_D1_Core_USB.kicad_sch

P06_D1_Core_TV_AUDIO_ADC
File: P06_D1_Core_TV_AUDIO_ADC.kicad_sch

P07_D1_Core_GPIO_LCD
File: P07_D1_Core_GPIO_LCD.kicad_sch

P08_D1_Core_PORTD_MIPI_DSI
File: P08_D1_Core_PORTD_MIPI_DSI.kicad_sch

P09_D1_Core_PORTE_RGMII
File: P09_D1_Core_PORTE_RGMII.kicad_sch

P10_D1_Core_PORTF_SDCARD
File: P10_D1_Core_PORTF_SDCARD.kicad_sch

P11_D1_Core_PORTG_WIFI_BT
File: P11_D1_Core_PORTG_WIFI_BT.kicad_sch

P12_D1_Core_CONNECTOR
File: P12_D1_Core_CONNECTOR.kicad_sch



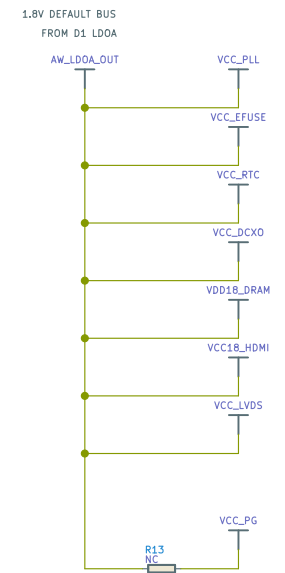
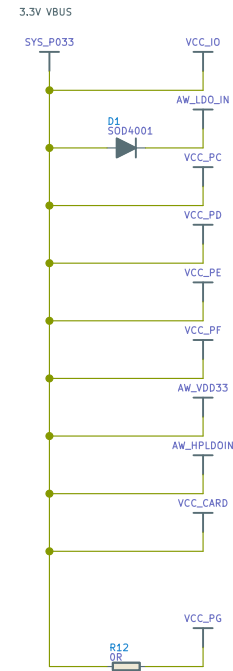
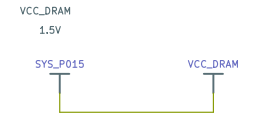
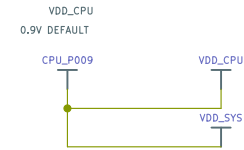
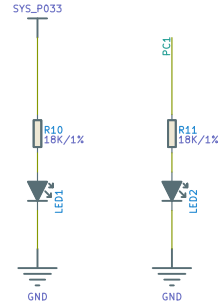
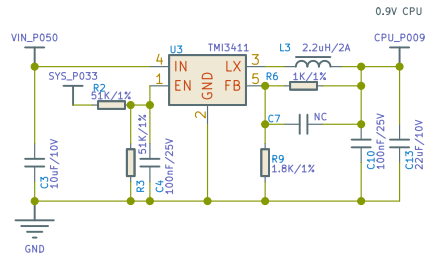
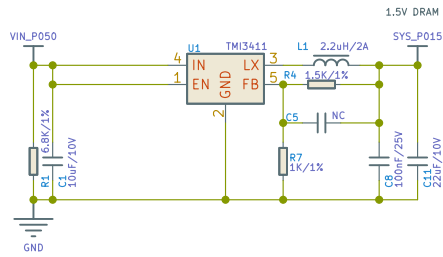
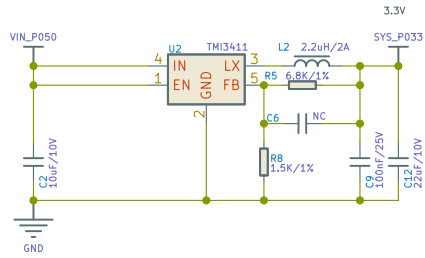
Sheet: /
File: AW_D1_CORE.kicad_sch

Title: Lichee_RV_V1.0

Size: A4 Date: 2021-11-02
KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

Rev: 1.0
Id: 1/13

NOTE:
VIN_P050: 5V INPUT

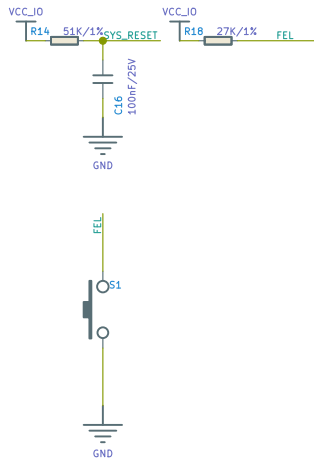


Sheet: /P01_D1_Core_Power/
File: P01_D1_Core_Power.kicad_sch

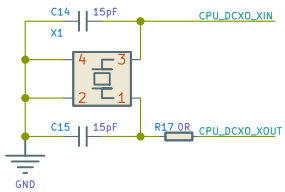
Title: Page01_Power

Size: A4 Date: 2021-11-02
KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

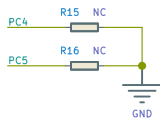
Rev: 1.0
Id: 2/13



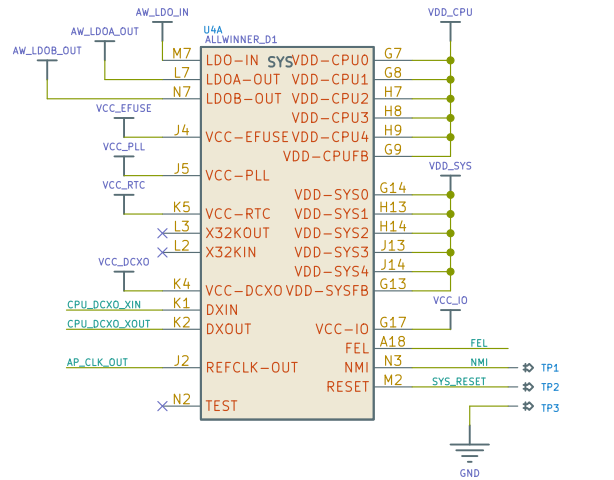
RESET_AND_FEL



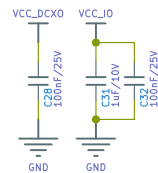
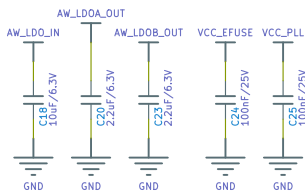
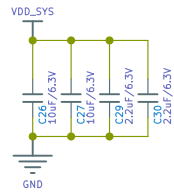
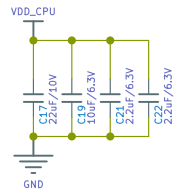
24M_DCXO



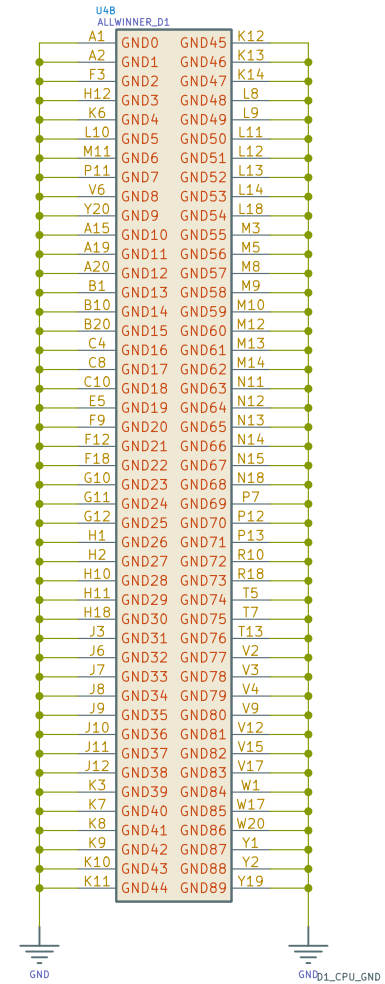
BOOT_SEL



D1_CPU



CLOSE TO CPU

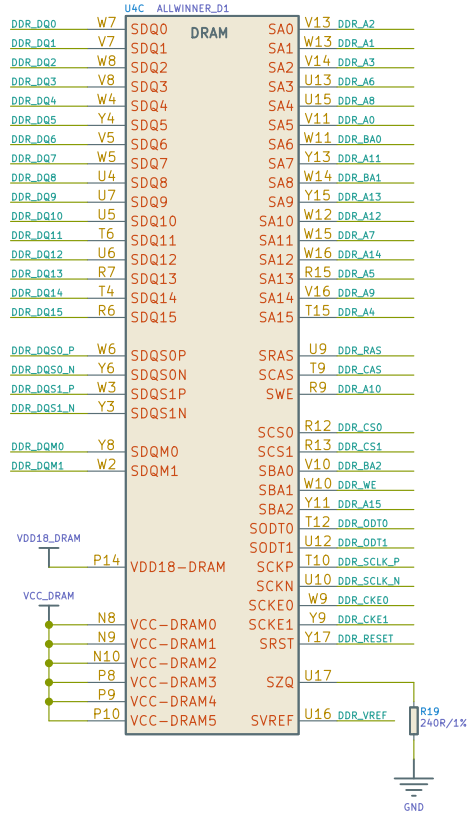


Sheet: /P02_D1_Core_SYS/
File: P02_D1_Core_SYS.kicad_sch

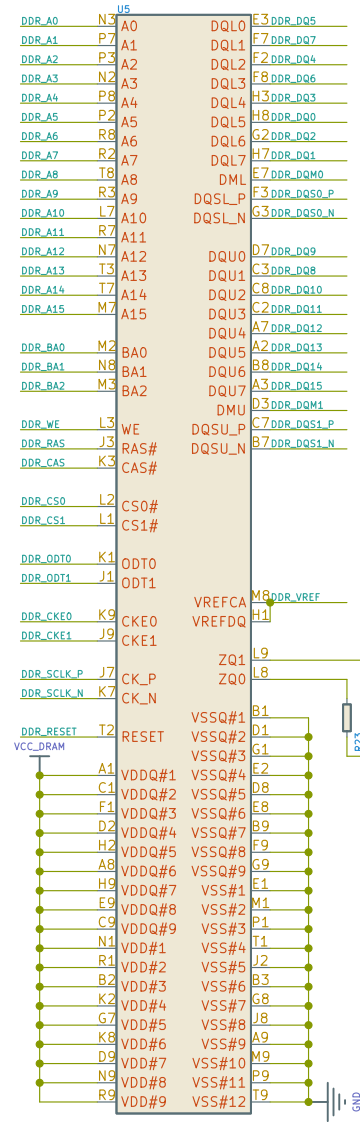
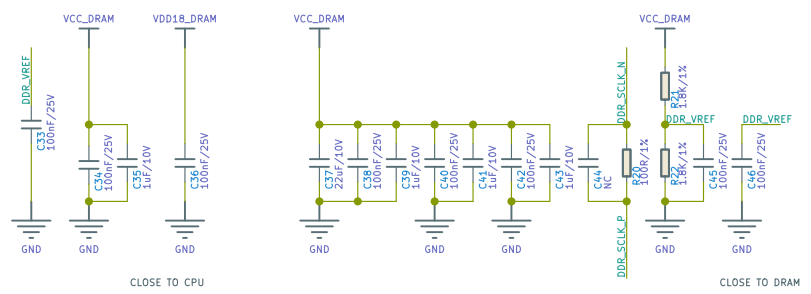
Title: Page02_SYS

Size: A4 Date: 2021-11-02
KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

Rev: 1.0
Id: 3/13



D1_CPU



DRAM

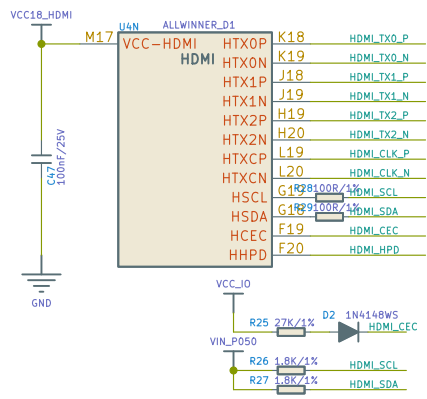


Sheet: /P03_D1_Core_DDR/
File: P03_D1_Core_DDR.kicad_sch

Title: Page03_DDR

Size: A4 Date: 2021-11-02
KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

Rev: 1.0
Id: 4/13



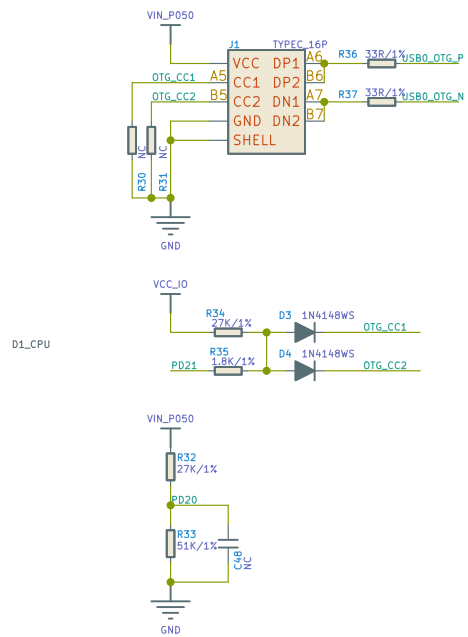
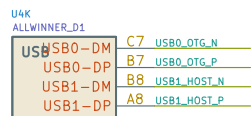
D1_CPU



Sheet: /P04_D1_Core_HDMI/
 File: P04_D1_Core_HDMI.kicad_sch

Title: Page04_HDMI

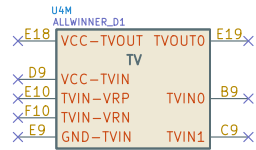
Size: A4	Date: 2021-11-02	Rev: 1.0
KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)		Id: 5/13



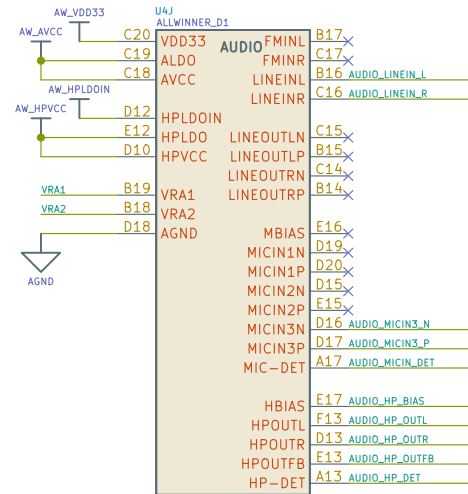
Sheet: /P05_D1_Core_USB/
File: P05_D1_Core_USB.kicad_sch

Title: Page05_USB

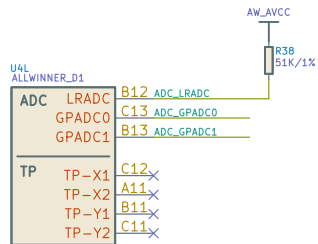
Size: A4	Date: 2021-11-02	Rev: 1.0
KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)		Id: 6/13



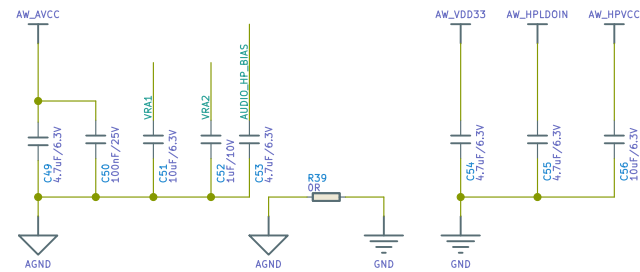
D1_CPU



D1_CPU



D1_CPU



CLOSE TO CPU



Sheet: /P06_D1_Core_TV_AUDIO_ADC/
File: P06_D1_Core_TV_AUDIO_ADC.kicad_sch

Title: Page06_TV_AUDIO_ADC

Size: A4 Date: 2021-11-02

KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

Rev: 1.0

Id: 7/13

U4D

ALLWINNER_D1

PortB	PB0/PWM3/IR-TX/TWI2-SCK/SPI1-WP/DBI-TE/UART0-TX/UART2-TX/SPDIF-OUT/PB-EINT0	J16 PB0
	PB1/PWM4/I2S2-DOUT3/TWI2-SDA/I2S2-DIN3/UART0-RX/UART2-RX/IR-RX/PB-EINT1	J17 PB1
	PB2/LCD0-D0/I2S2-DOUT2/TWI0-SDA/I2S2-DIN2/LCD0-D18/UART4-TX/PB-EINT2	M16 PB2
	PB3/LCD0-D1/I2S2-DOUT1/TWI0-SCK/I2S2-DIN0/LCD0-D19/UART4-RX/PB-EINT3	M15 PB3
	PB4/LCD0-D8/I2S2-DOUT0/TWI1-SCK/I2S2-DIN1/LCD0-D20/UART5-TX/PB-EINT4	K16 PB4
	PB5/LCD0-D9/I2S2-BCLK/TWI1-SDA/PWM0/LCD0-D21/UART5-RX/PB-EINT5	K15 PB5
	PB6/LCD0-D16/I2S2-LRCK/TWI3-SCK/PWM1/LCD0-D22/UART3-TX/CPUBIST0/PB-EINT6	K17 PB6
	PB7/LCD0-D17/I2S2-MCLK/TWI3-SDA/IR-RX/LCD0-D23/UART3-RX/CPUBIST1/PB-EINT7	J15 PB7
	PB8/DMIC-DATA3/PWM5/TWI2-SCK/SPI1-HOLD/DBI-DCX/DBI-WRX/UART0-TX/UART1-TX/PB-EINT8	G15 PB8
	PB9/DMIC-DATA2/PWM6/TWI2-SDA/SPI1-MISO/DBI-SDI/DBI-TE/DBI-DCX/UART0-RX/UART1-RX/PB-EINT9	G16 PB9
	PB10/DMIC-DATA1/PWM7/TWI0-SCK/SPI1-MOSI/DBI-SDO/CLK-FANOUT0/UART1-RTS/PB-EINT10	F17 PB10
	PB11/DMIC-DATA0/PWM2/TWI0-SDA/SPI1-CLK/DBI-SCLK/CLK-FANOUT1/UART1-CTS/PB-EINT11	F15 PB11
	PB12/DMIC-CLK/PWM0/SPDIF-IN/SPI1-CS/DBI-CSX/CLK-FANOUT2/IR-RX/PB-EINT12	F16 PB12

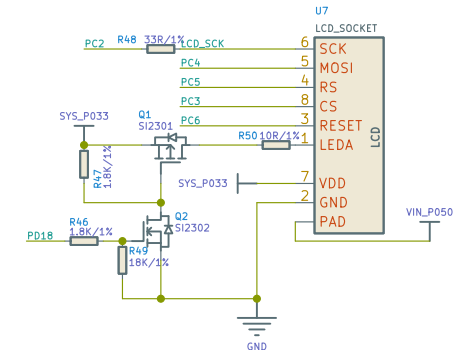
D1_CPU

U4E

ALLWINNER_D1

PortC	VCC-PC	G4	VCC_PC
	PC0/UART2-TX/TWI2-SCK/LEDC-DO/PC-EINT0	F2 PC0	
	PC1/UART2-RX/TWI2-SDA/PC-EINT1	F1 PC1	
	PC2/SPI0-CLK/SDC2-CLK/PC-EINT2	G3 PC2	
	PC3/SPI0-CS0/SDC2-CMD/PC-EINT3	G2 PC3	
	PC4/SPI0-MOSI/SDC2-D2/BOOT-SEL0/PC-EINT4	H3 PC4	
	PC5/SPI0-MISO/SDC2-D1/BOOT-SEL1/PC-EINT5	F5 PC5	
	PC6/SPI0-WP/SDC2-D0/UART3-TX/TWI3-SCK/DBG-CLK/PC-EINT6	G6 PC6	
PC7/SPI0-HOLD/SDC2-D3/UART3-RX/TWI3-SDA/TCON-TRIG/PC-EINT7	G5 PC7		

D1_CPU



NOTE: LCD backlight on while PD18 is high-level.

SPLLCD

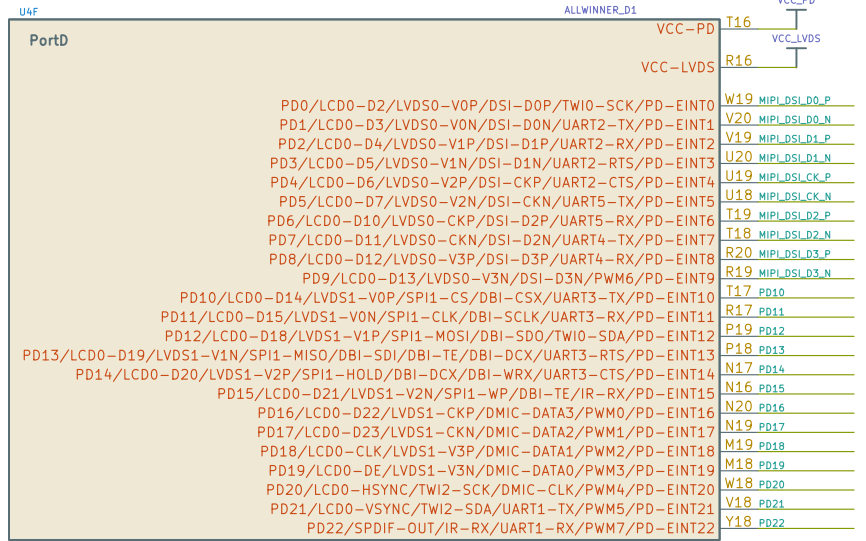


Sheet: /P07_D1_Core_GPIO_LCD/
 File: P07_D1_Core_GPIO_LCD.kicad_sch

Title: Page07_GPIO_LCD

Size: A4 Date: 2021-11-02
 KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

Rev: 1.0
 Id: 8/13



D1_CPU



CLOSE TO CPU



Sheet: /P08_D1_Core_PORTD_MIPI_DSI/
 File: P08_D1_Core_PORTD_MIPI_DSI.kicad_sch

Title: Page8_PORTD_MIPI

Size: A4	Date: 2021-11-02	Rev: 1.0
KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)		Id: 9/13

U4G

ALLWINNER_D1

VCC_PE

PortE

VCC-PE

M4

PE0/NCSIO-HSYNC/UART2-RTS/TWI1-SCK/LCD0-HSYNC/RGMII-RXCTRL/RMII-CRS-DV/PE-EINT0
 PE1/NCSIO-VSYNC/UART2-CTS/TWI1-SDA/LCD0-VSYNC/RGMII-RXD0/RMII-RXD0/PE-EINT1
 PE2/NCSIO-PCLK/UART2-TX/TWI0-SCK/CLK-FANOUT0/UART0-TX/RGMII-RXD1/RMII-RXD1/PE-EINT2
 PE3/NCSIO-MCLK/UART2-RX/TWI0-SDA/CLK-FANOUT1/UART0-RX/RGMII-TXCK/RMII-TXCK/PE-EINT3
 PE4/NCSIO-D0/UART4-TX/TWI2-SCK/CLK-FANOUT2/D-JTAG-MS/R-JTAG-MS/RGMII-TXD0/RMII-TXD0/PE-EINT4
 PE5/NCSIO-D1/UART4-RX/TWI2-SDA/LEDC-DO/D-JTAG-DI/R-JTAG-DI/RGMII-TXD1/RMII-TXD1/PE-EINT5
 PE6/NCSIO-D2/UART5-TX/TWI3-SCK/SPDIF-IN/D-JTAG-DO/R-JTAG-DO/RGMII-TXCTRL/RMII-TXEN/PE-EINT6
 PE7/NCSIO-D3/UART5-RX/TWI3-SDA/SPDIF-OUT/D-JTAG-CK/R-JTAG-CK/RGMII-CLKIN/RMII-RXER/PE-EINT7
 PE8/NCSIO-D4/UART1-RTS/PWM2/UART3-TX/JTAG-MS/MDC/PE-EINT8
 PE9/NCSIO-D5/UART1-CTS/PWM3/UART3-RX/JTAG-DI/MDIO/PE-EINT9
 PE10/NCSIO-D6/UART1-TX/PWM4/IR-RX/JTAG-DO/EPHY-25M/PE-EINT10
 PE11/NCSIO-D7/UART1-RX/I2S0-DOUT3/I2S0-DIN3/JTAG-CK/RGMII-TXD2/PE-EINT11
 PE12/TWI2-SCK/NCSIO-FIELD/I2S0-DOUT2/I2S0-DIN2/RGMII-TXD3/PE-EINT12
 PE13/TWI2-SDA/PWM5/I2S0-DOUT0/I2S0-DIN1/DMIC-DATA3/RGMII-RXD2/PE-EINT13
 PE14/TWI1-SCK/D-JTAG-MS/I2S0-DOUT1/I2S0-DIN0/DMIC-DATA2/RGMII-RXD3/PE-EINT14
 PE15/TWI1-SDA/D-JTAG-DI/PWM6/I2S0-LRCK/DMIC-DATA1/RGMII-RXCK/PE-EINT15
 PE16/TWI3-SCK/D-JTAG-DO/PWM7/I2S0-BCLK/DMIC-DATA0/PE-EINT16
 PE17/TWI3-SDA/D-JTAG-CK/IR-TX/I2S0-MCLK/DMIC-CLK/PE-EINT17

V1 PE0 RGMII_RXCTL
 U1 PE1 RGMII_RXD0
 U2 PE2 RGMII_RXD1
 U3 PE3 RGMII_TXCK
 T2 PE4 RGMII_TXD0
 T3 PE5 RGMII_TXD1
 R1 PE6 RGMII_TXCTL
 R2 PE7 RGMII_CLKIN
 R3 PE8 RGMII_MDC
 P2 PE9 RGMII_MDIO
 P3 PE10 EPHY_CLK_25M
 N1 PE11 RGMII_TXD2
 R5 PE12 RGMII_TXD3
 R4 PE13 RGMII_RXD2
 N4 PE14 RGMII_RXD3
 N5 PE15 RGMII_RXCK
 N6 PE16 RGMII_RESET
 M6 PE17

D1_CPU



CLOSE TO CPU



Sheet: /P09_D1_Core_PORTE_RGMII/
 File: P09_D1_Core_PORTE_RGMII.kicad_sch

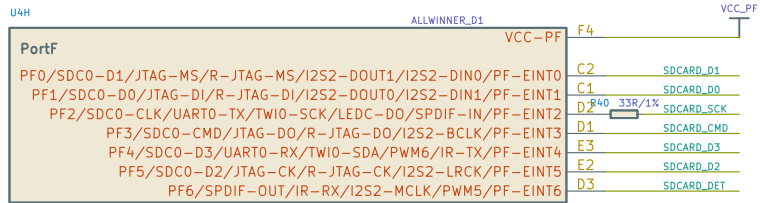
Title: Page09_PORTE_RGMII

Size: A4 Date: 2021-11-02

KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

Rev: 1.0

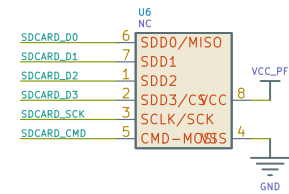
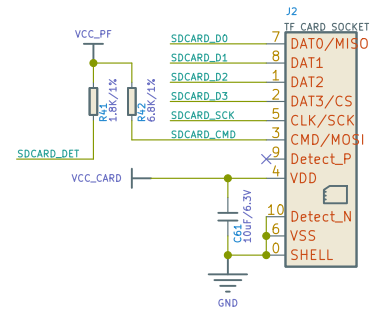
Id: 10/13



D1_CPU



CLOSE TO CPU



TF-CARD/SD-NAND



Sheet: /P10_D1_Core_PORTF_SDCARD/
File: P10_D1_Core_PORTF_SDCARD.kicad_sch

Title: Page10_PORTF_SDMMC

Size: A4 Date: 2021-11-02

KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

Rev: 1.0

Id: 11/13

U41

ALLWINNER_D1

VCC_PG



D1_CPU



CLOSE TO CPU

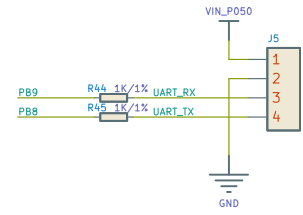
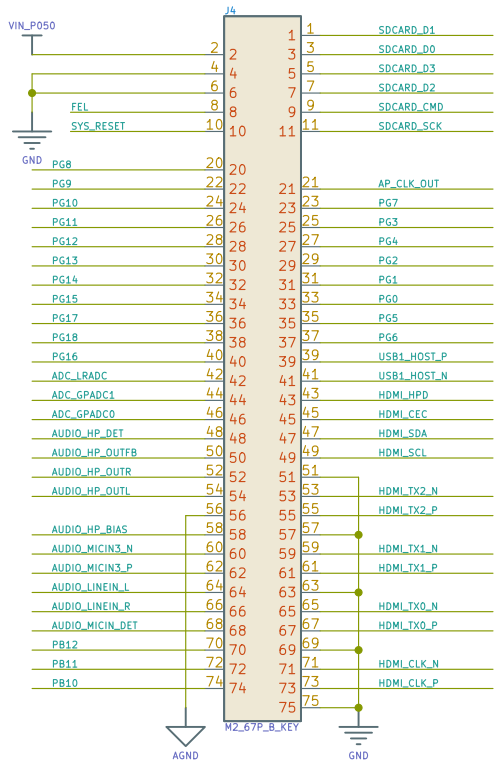
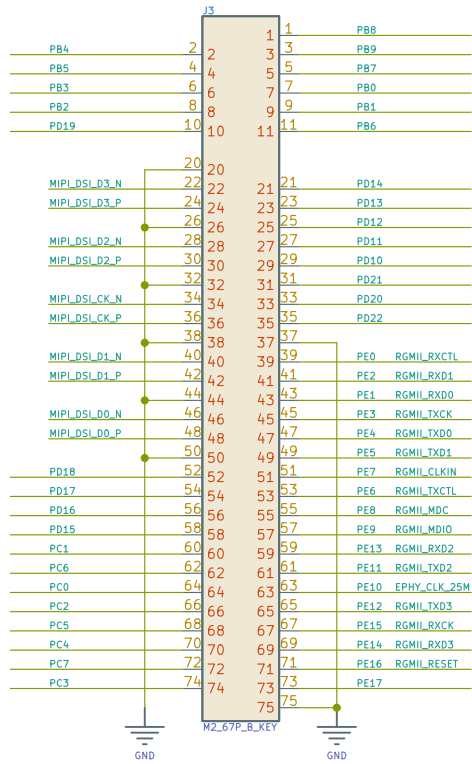


Sheet: /P11_D1_Core_PORTG_WIFI_BT/
 File: P11_D1_Core_PORTG_WIFI_BT.kicad_sch

Title: Page11_PORTG

Size: A4 Date: 2021-11-02
 KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)

Rev: 1.0
 Id: 12/13



Sheet: /P12_D1_Core_CONNECTOR/
 File: P12_D1_Core_CONNECTOR.kicad_sch

Title: Page12_Connector

Size: A4	Date: 2021-11-02	Rev: 1.0
KiCad E.D.A. kicad (5.99.0-13035-g22ba640c2b)		Id: 13/13