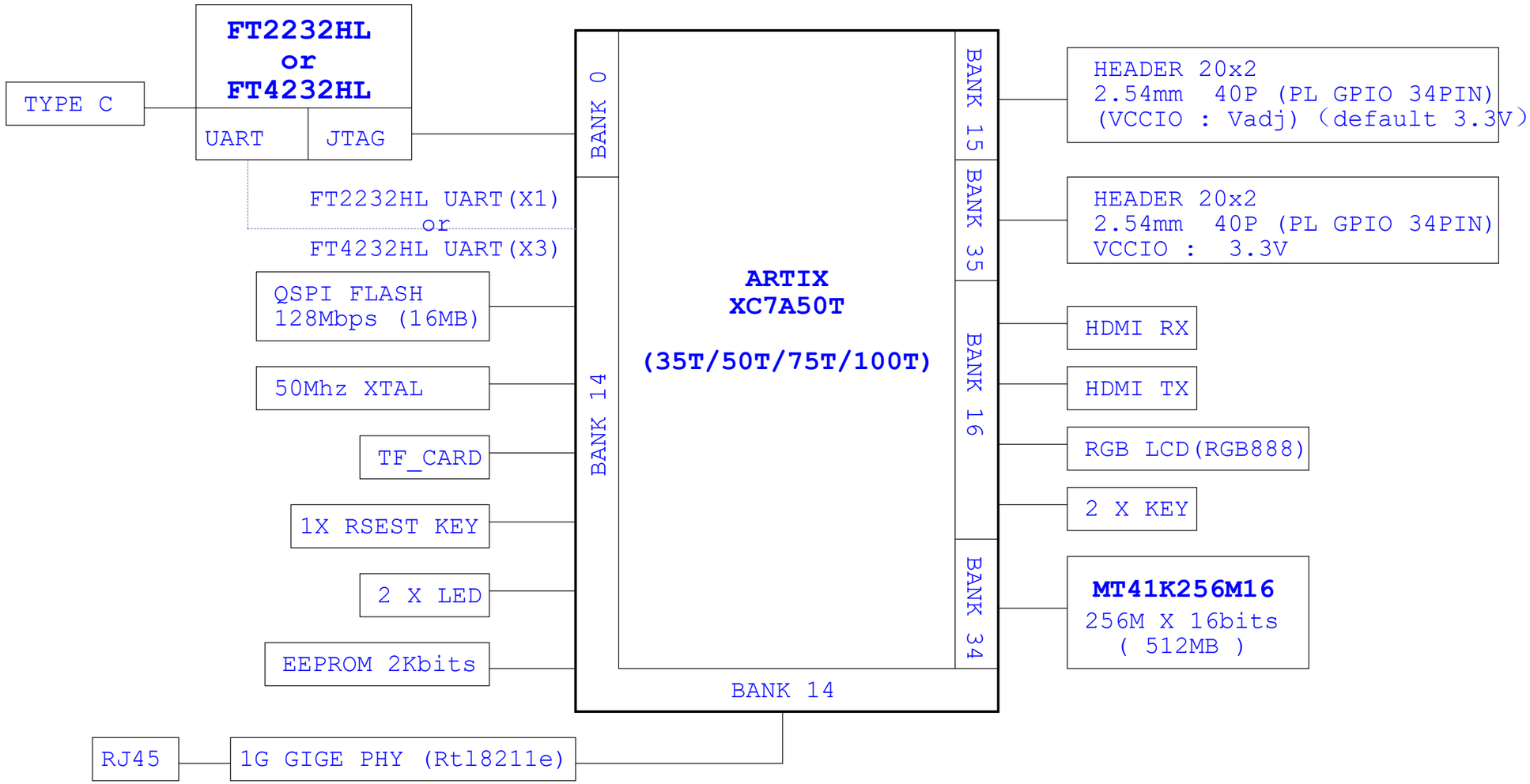
# Smart Artix
# Block Diagram VER : 1.3

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VCCIO : BANK 15 Vadj (default 3.3V)
BANK 35 3.3V

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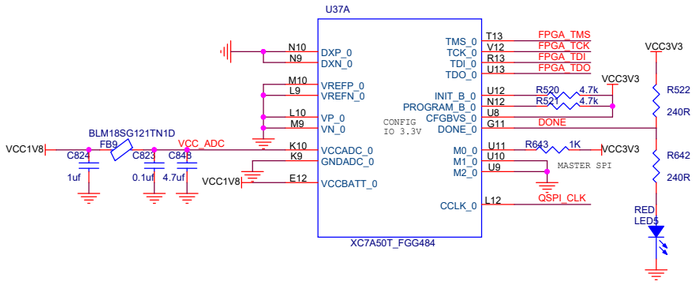


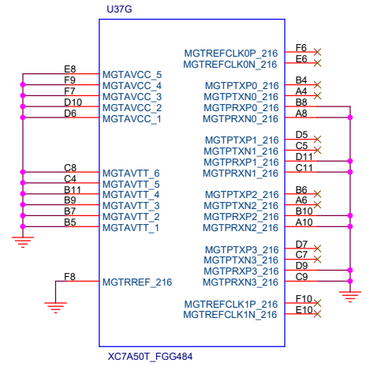


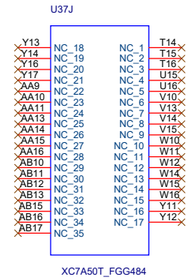


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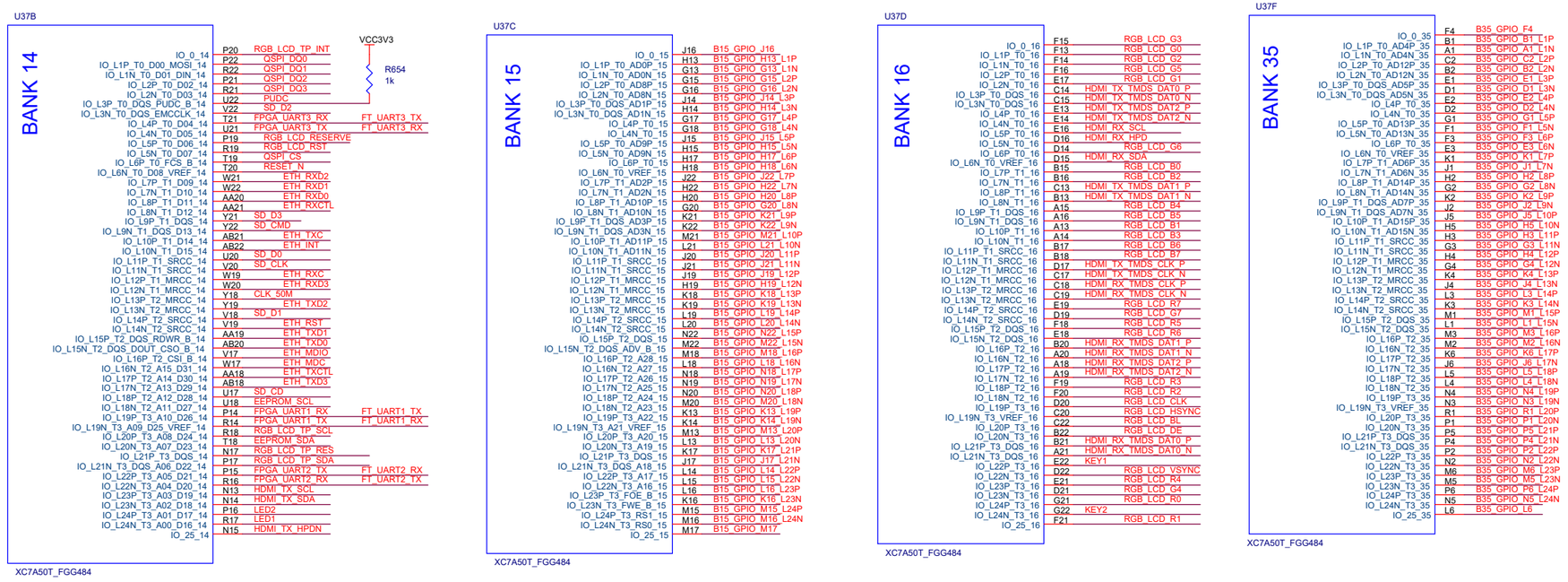


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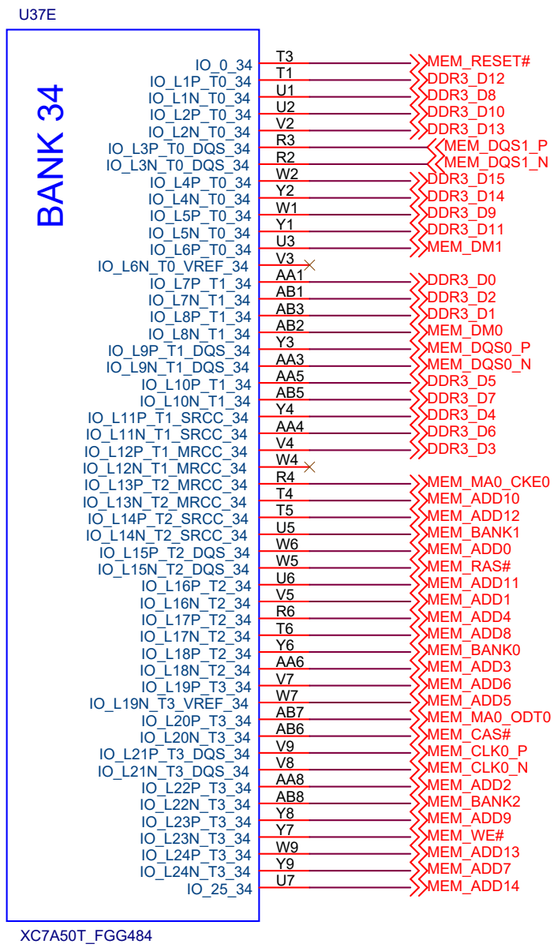


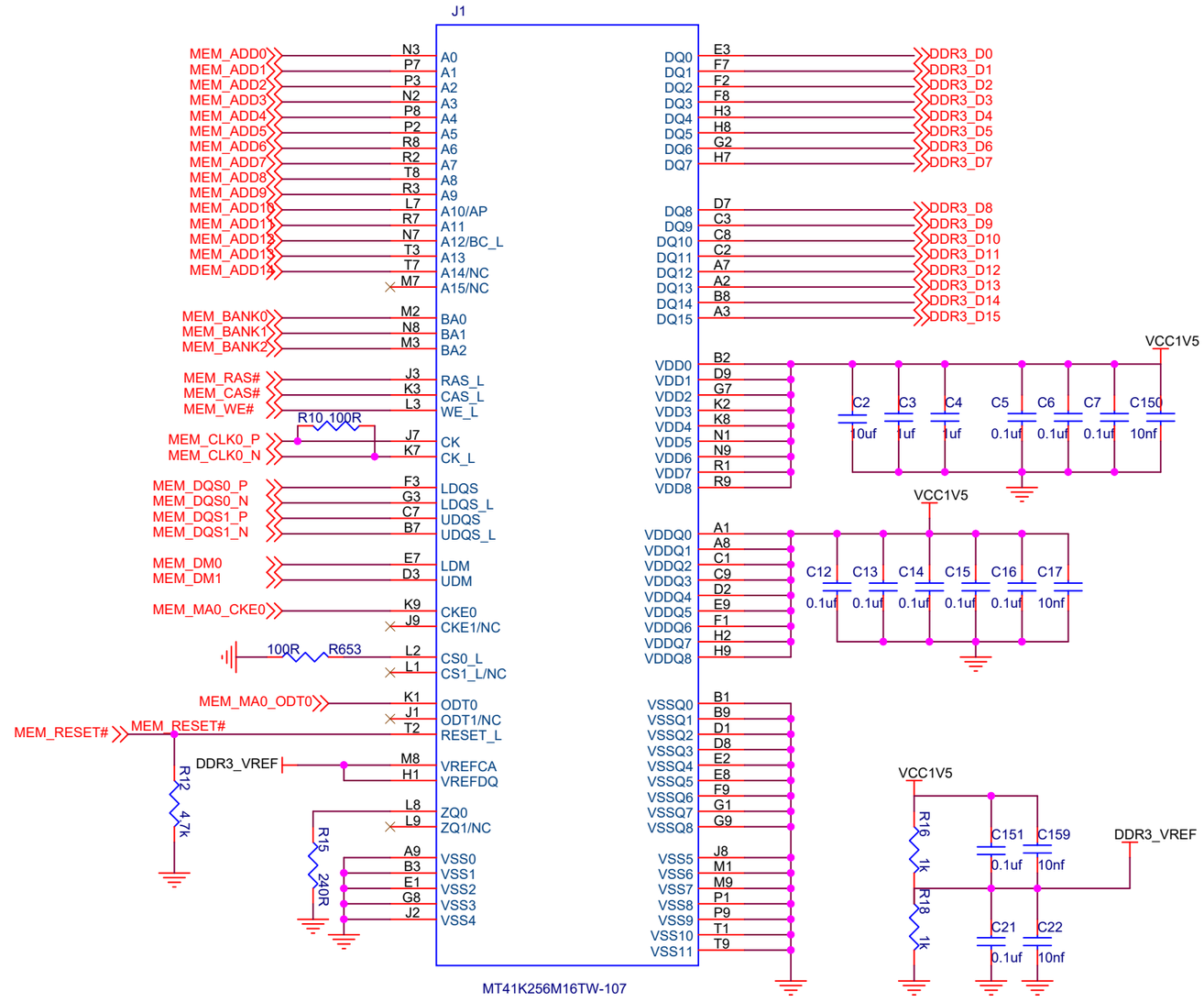


# DDR PART

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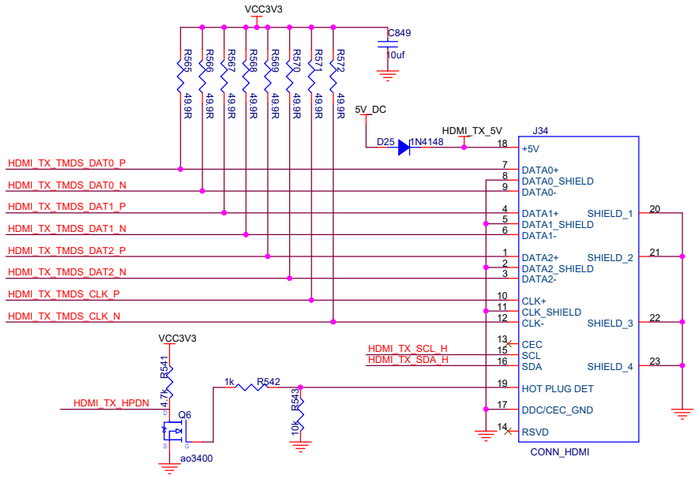


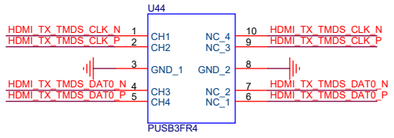


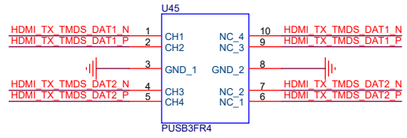


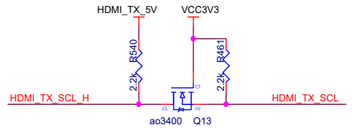


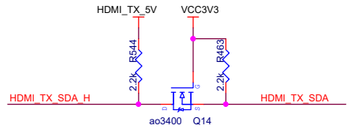


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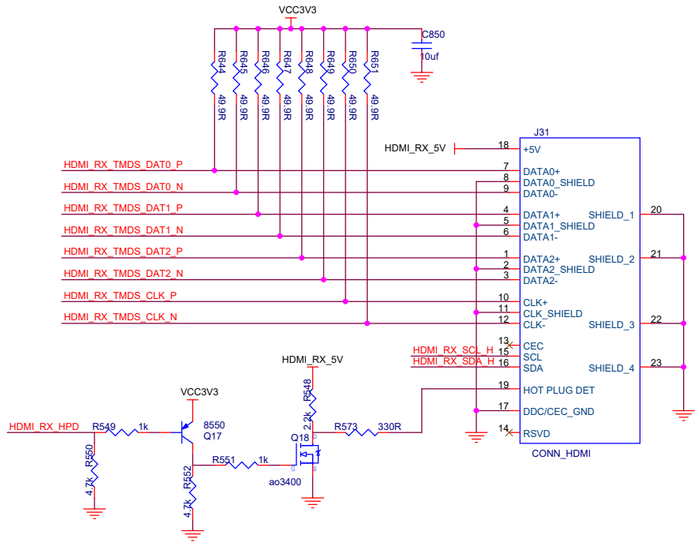


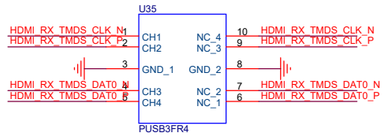


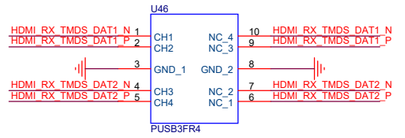


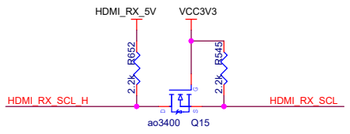


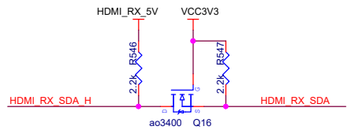


# HDMI_RX

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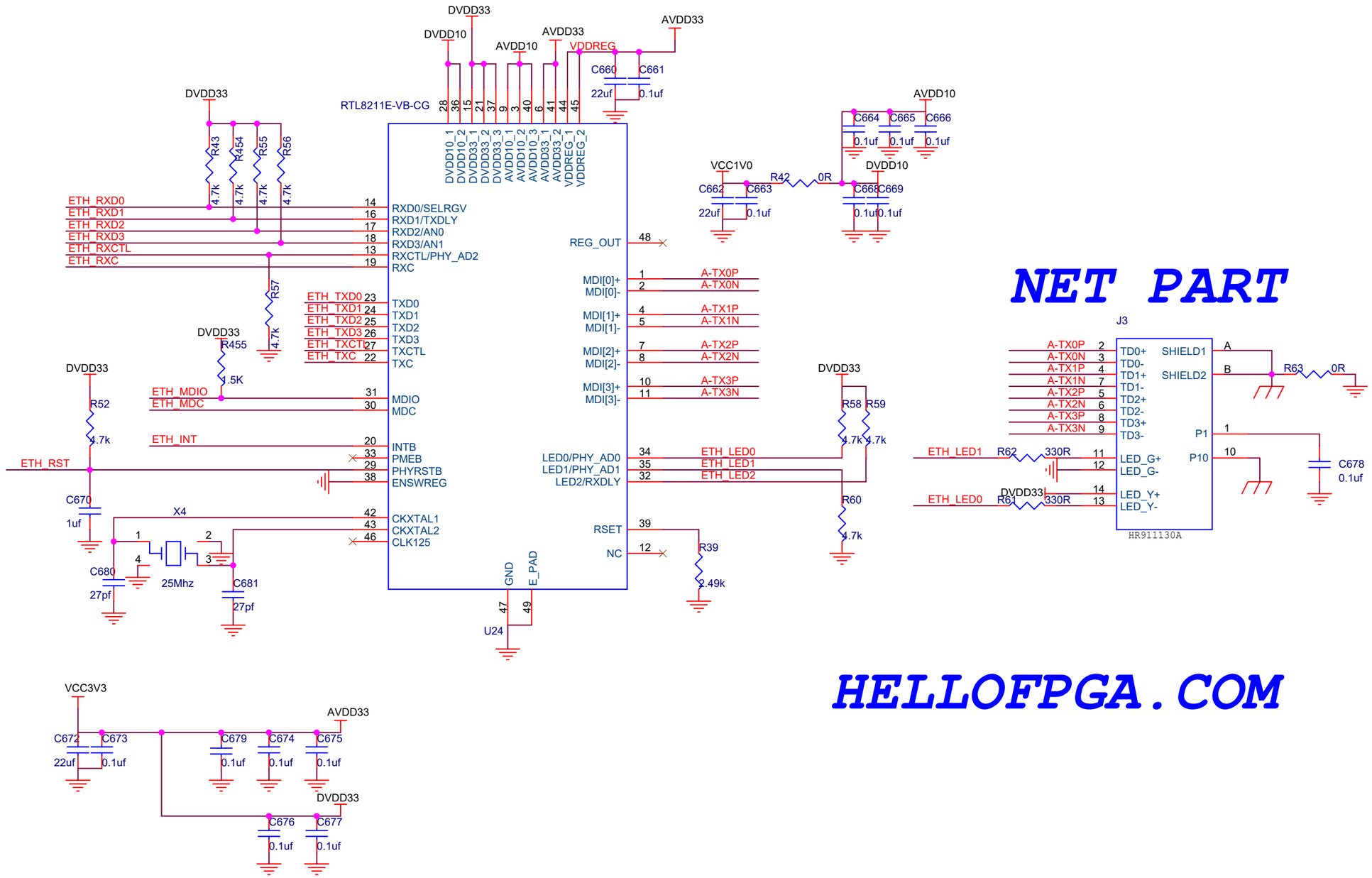


# NET PART

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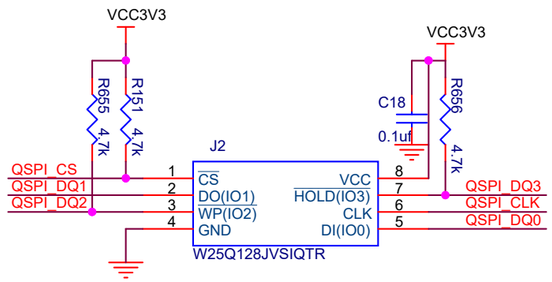
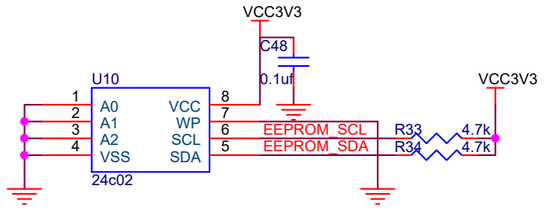
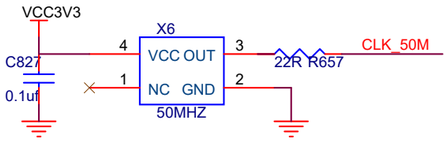
# QSPI FLASH



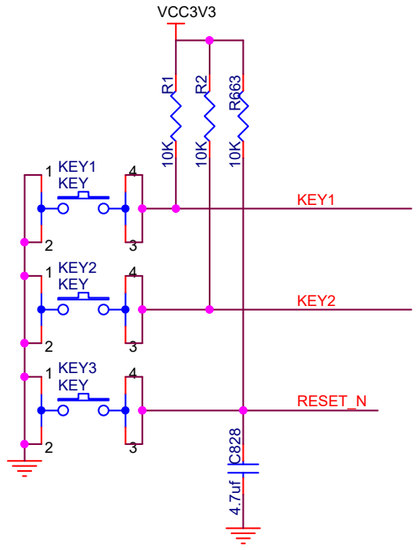

# EEPROM



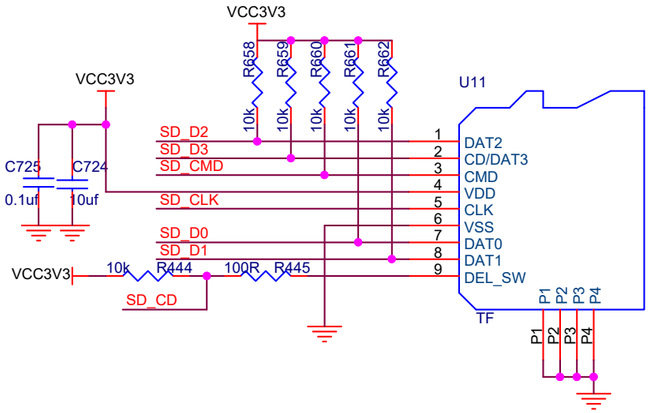

# FPGA CLK



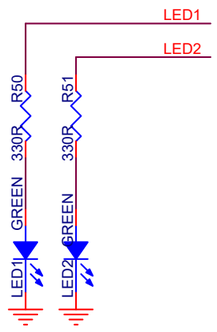

# KEY



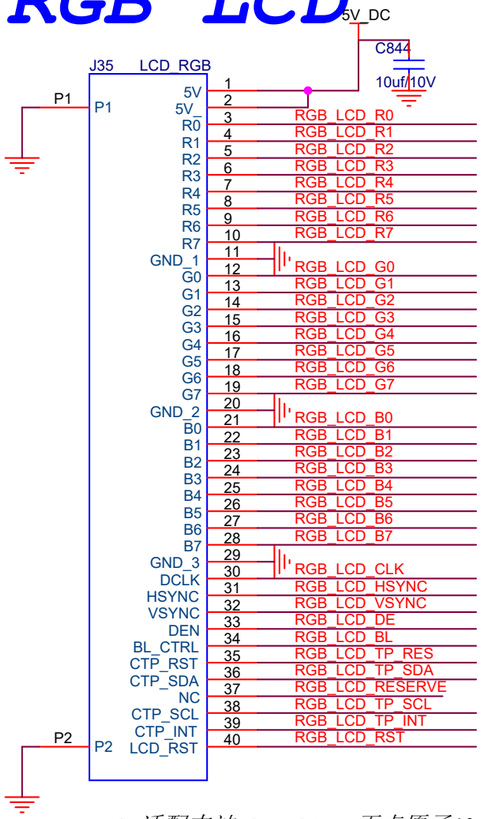

# TF CARD




# LED




# RGB LCD




*FPC 适配本站RGB LCD & 正点原子40P LCD*
*RGB LCD Interface*
*RGB888*

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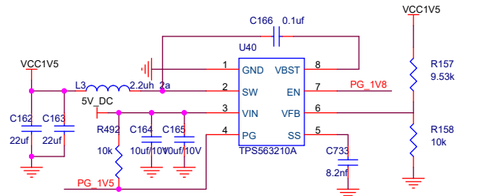
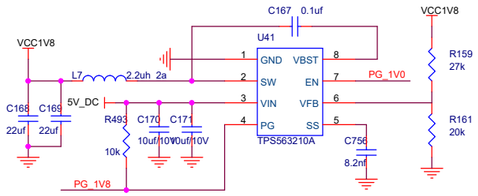
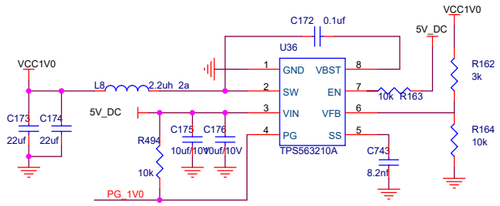
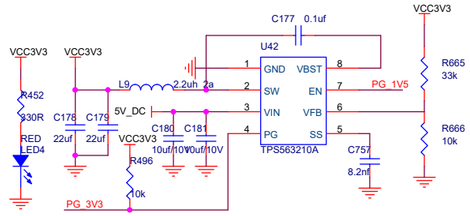


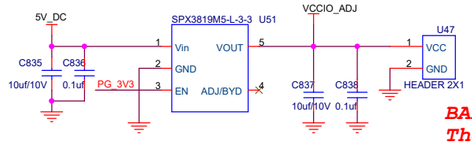




**POWER**

*通过更换LDO芯片（SPX3819M5），*
*可以实现对BANK15电压的调节*

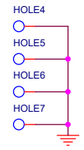
*By replacing the LDO chip (SPX3819M5),*
*the voltage of BANK15 can be adjusted.*

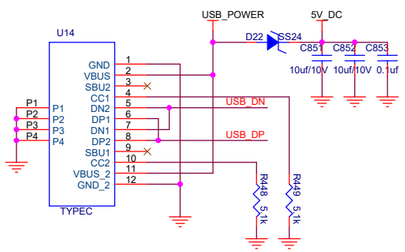


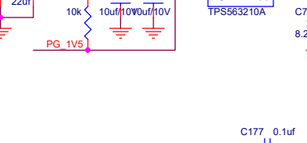

*SPX3819M5-L-3-3 : 3.3V*
*SPX3819M5-L-2-5 : 2.5V*
*SPX3819M5-L-1-8 : 1.8V*
*SPX3819M5-L-1-2 : 1.2V*

**Default Vadj = 3.3V**

***BANK 电压不要超过3.3V***
***The BANK voltage should not exceed 3.3V.***



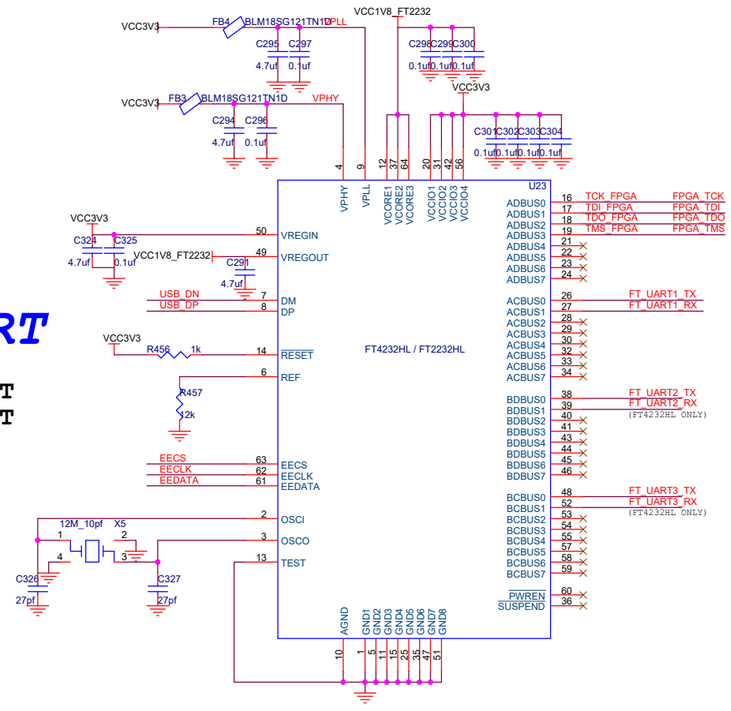







**JTAG & UART**

**FT4232HL 3X UART**
**FT2232HL 1X UART**



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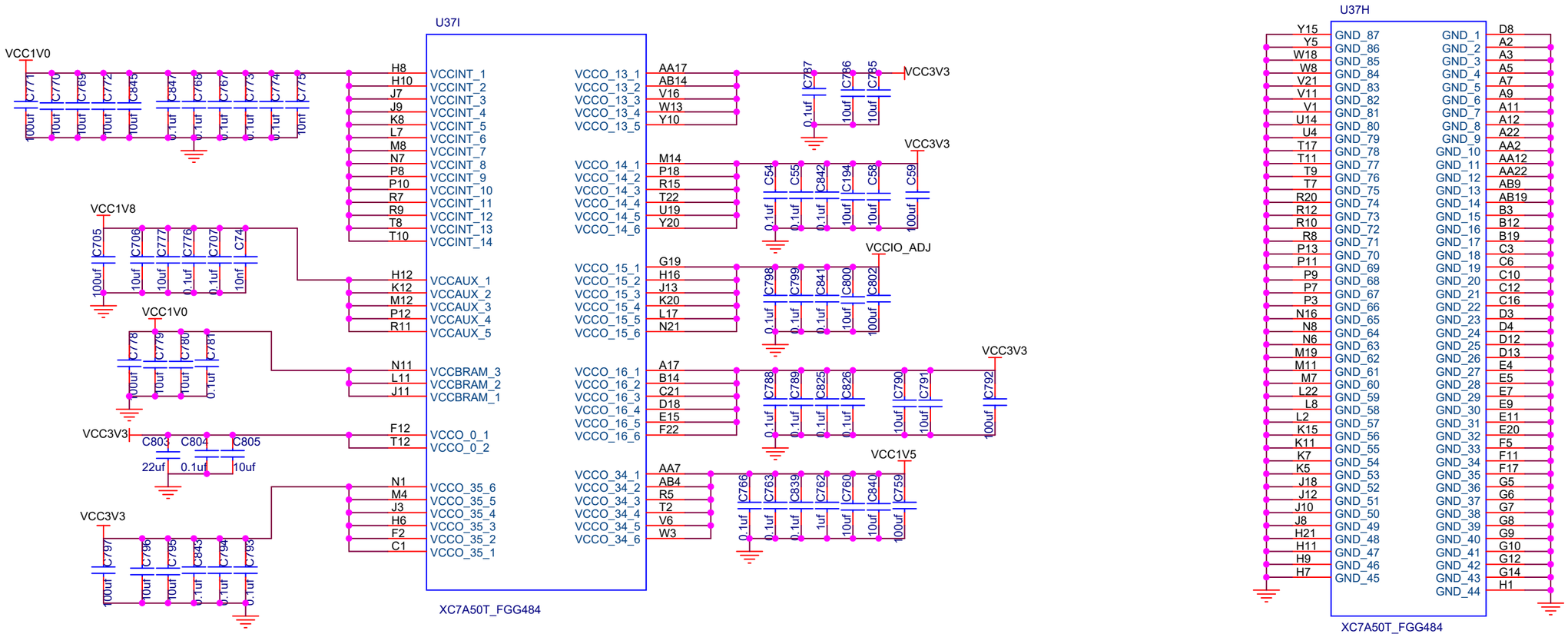


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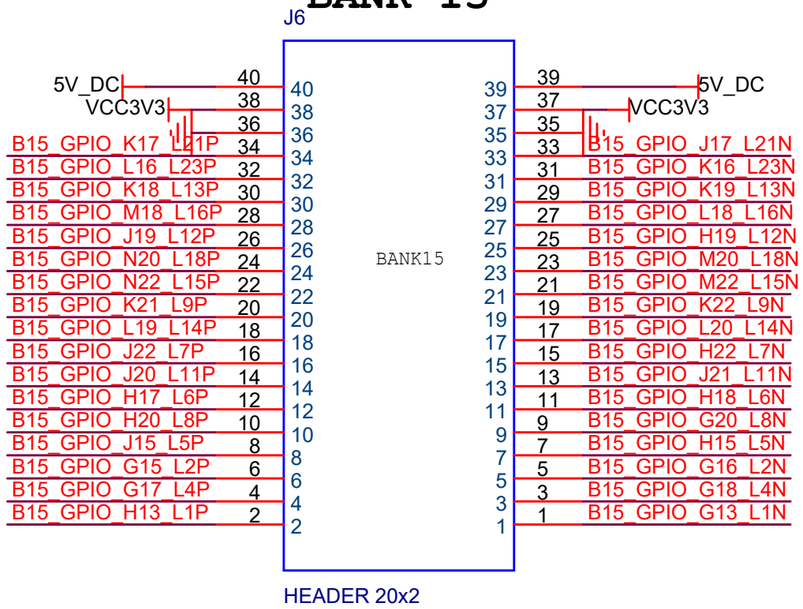
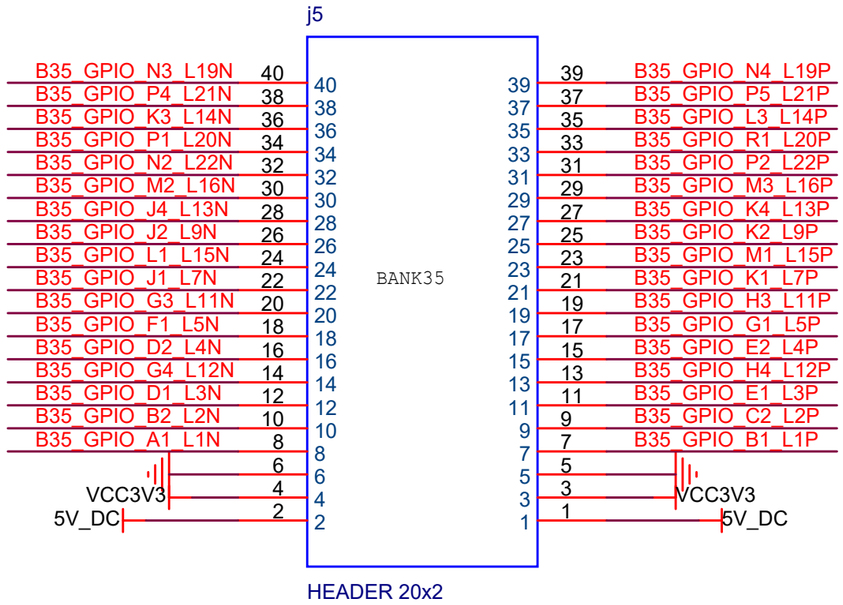
# BANK 15




**VCCIO :VADJ**
**Default Vadj = 3.3V**

# BANK 35




**VCCIO :3.3V**

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## KEY & LED

| | |
|---|---|
| KEY1 | E22 |
| KEY2 | G22 |
| LED1 | R17 |
| LED2 | P16 |

## RESET(KEY)

| | |
|---|---|
| RESET_n (KEY3) | T20 |

## 50M CLOCK

| | |
|---|---|
| CLK | Y18 |

## HDMI

| | RX | TX |
|---|---|---|
| CLK | C18 | D17 |
| D0 | B21 | C14 |
| D1 | B20 | C13 |
| D2 | A18 | E13 |
| SDA | D15 | N14 |
| SCL | E16 | N13 |
| HPD | D16 | N15 |

## UART

| | |
|---|---|
| TX1 | R14 |
| RX1 | P14 |
| TX2 | P15 |
| RX2 | R16 |
| TX3 | U21 |
| RX3 | T21 |

(FT4232HL ONLY)

## EEPROM

| | |
|---|---|
| SCL | U18 |
| SDA | T18 |

## TF CARD

| | |
|---|---|
| SD_D0 | U20 |
| SD_D1 | V18 |
| SD_D2 | V22 |
| SD_D3 | Y21 |
| SD_CMD | Y22 |
| SD_CLK | V20 |
| SD_CD | U17 |

## GigE phy

| | |
|---|---|
| ETH TD0 | AB20 |
| ETH TD1 | AA19 |
| ETH TD2 | Y19 |
| ETH TD3 | AB18 |
| ETH TX_CTL | AA18 |
| ETH TXC | AB21 |
| ETH RD0 | AA20 |
| ETH RD1 | W22 |
| ETH RD2 | W21 |
| ETH RD3 | W20 |
| ETH RX_CTL | AA21 |
| ETH RXC | W19 |
| ETH MDIO | V17 |
| ETH MDC | W17 |
| ETH INT | AB22 |
| ETH RST | V19 |

## RGB_LCD

| | |
|---|---|
| R7 | E19 |
| R6 | E18 |
| R5 | F18 |
| R4 | E21 |
| R3 | F19 |
| R2 | F20 |
| R1 | F21 |
| R0 | G21 |
| G7 | D19 |
| G6 | D14 |
| G5 | F16 |
| G4 | D21 |
| G3 | F15 |
| G2 | F14 |
| G1 | E17 |
| G0 | F13 |
| B7 | B18 |
| B6 | B17 |
| B5 | A16 |
| B4 | A15 |
| B3 | A14 |
| B2 | B16 |
| B1 | A13 |
| B0 | B15 |
| HSYNC | C20 |
| VSYNC | D22 |
| CLK | D20 |
| DE | B22 |
| BL | C22 |
| RST(RESERVE) | R19 |
| TP_RES | N17 |
| TP_INT | P20 |
| TP_SCL | R18 |
| TP_SDA | P17 |

TOUCH

| | |
|---|---|
| (RESERVE) | P19 |

## DDR

| | |
|---|---|
| D0 | AA1 |
| D1 | AB3 |
| D2 | AB1 |
| D3 | V4 |
| D4 | Y4 |
| D5 | AA5 |
| D6 | AA4 |
| D7 | AB5 |
| D8 | U1 |
| D9 | W1 |
| D10 | U2 |
| D11 | Y1 |
| D12 | T1 |
| D13 | V2 |
| D14 | Y2 |
| D15 | W2 |
| AD0 | W6 |
| AD1 | V5 |
| AD2 | AA8 |
| AD3 | AA6 |
| AD4 | R6 |
| AD5 | W7 |
| AD6 | V7 |
| AD7 | Y9 |
| AD8 | T6 |
| AD9 | Y8 |
| AD10 | T4 |
| AD11 | U6 |
| AD12 | T5 |
| AD13 | W9 |
| AD14 | U7 |
| DQS0_P | Y3 |
| DQS0_N | AA3 |
| DQS1_P | R3 |
| DQS1_N | R2 |
| MEM_DM0 | AB2 |
| MEM_DM1 | U3 |
| MA0_CKE0 | R4 |
| DQS1_N | R3 |

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