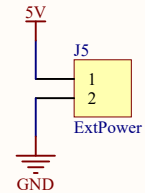
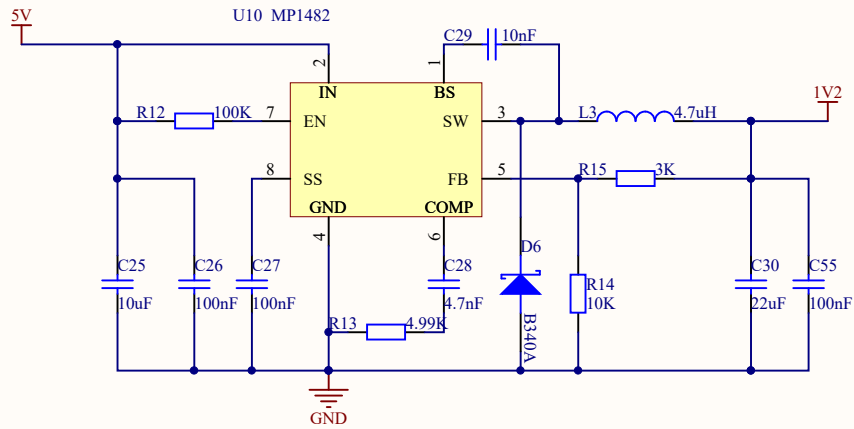
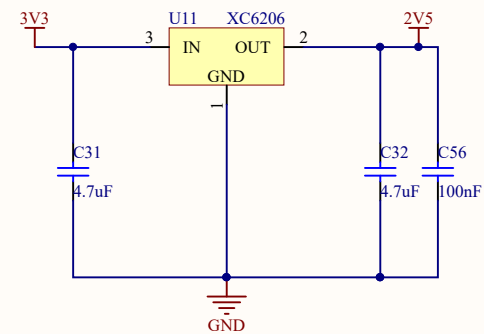
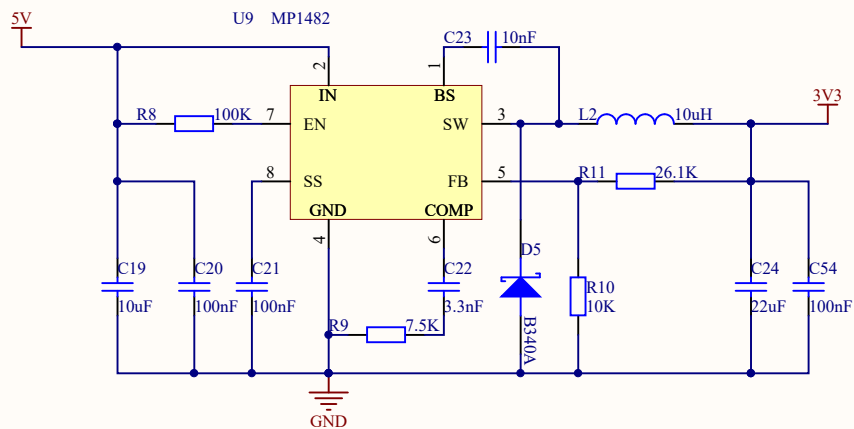


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| Size | Number | Revision |
| A4 | | |
| Date: | 2023/6/6 | Sheet of |
| File: | D:\project\...FPGA_parts.SchDoc | Drawn By: |



| Title | | |
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| Size | Number | Revision |
| A4 | | |
| Date: | 2023/6/6 | Sheet of |
| File: | D:\project\..\Power.SchDoc | Drawn By: |

A

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C

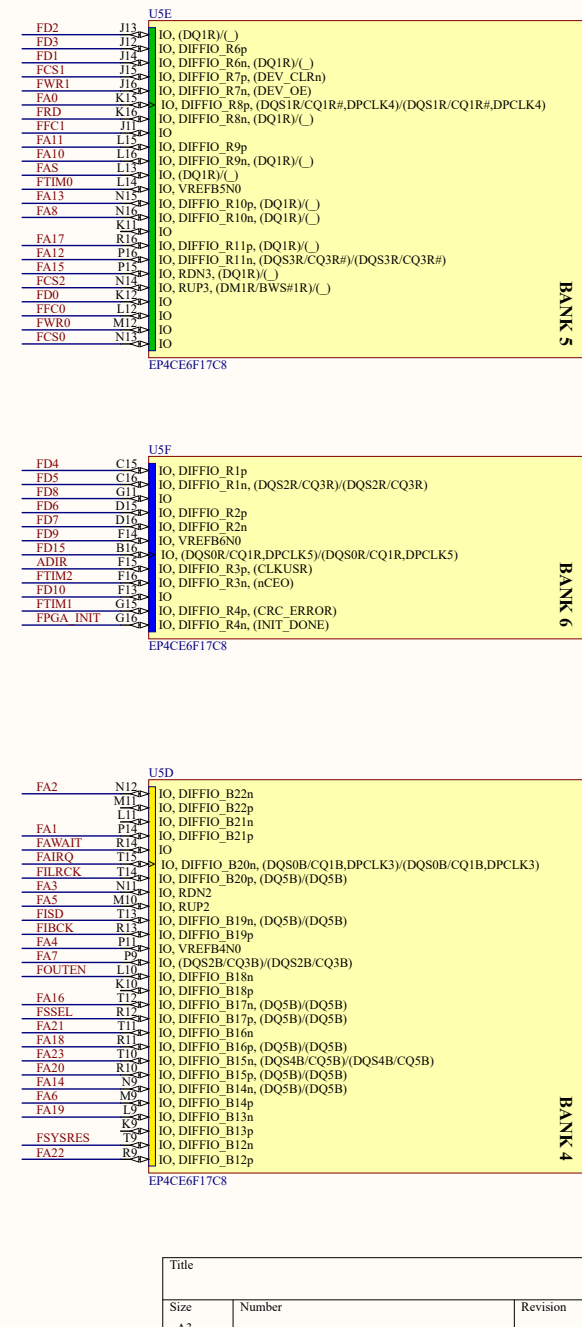
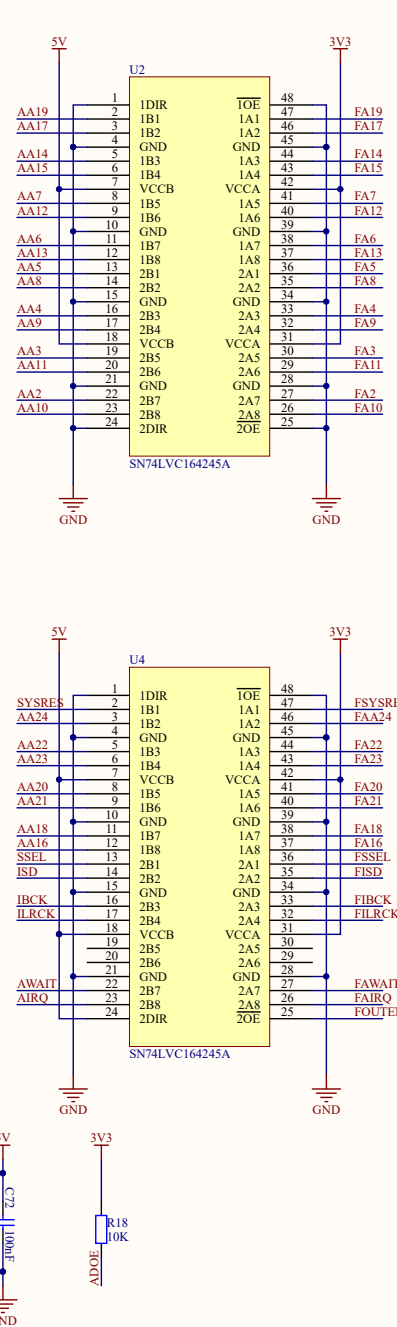
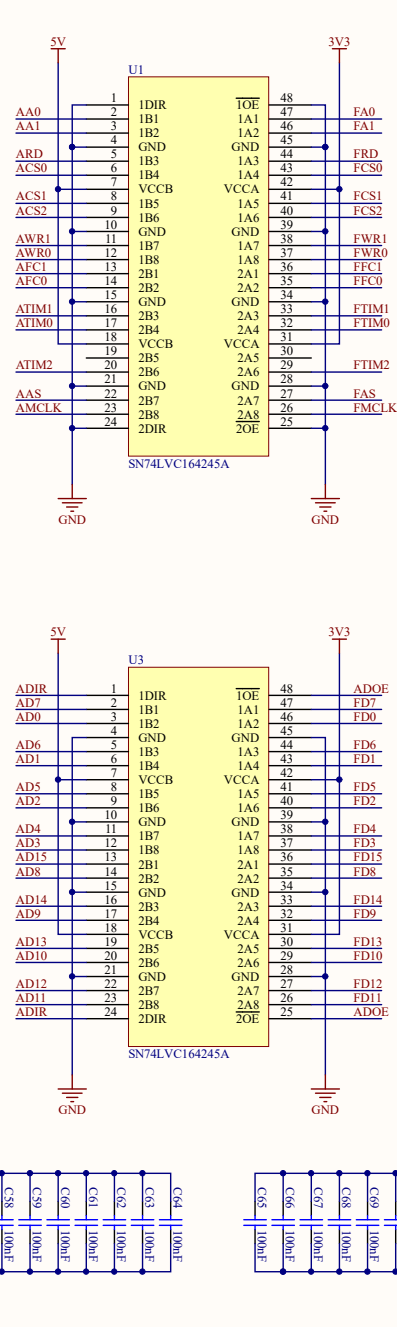
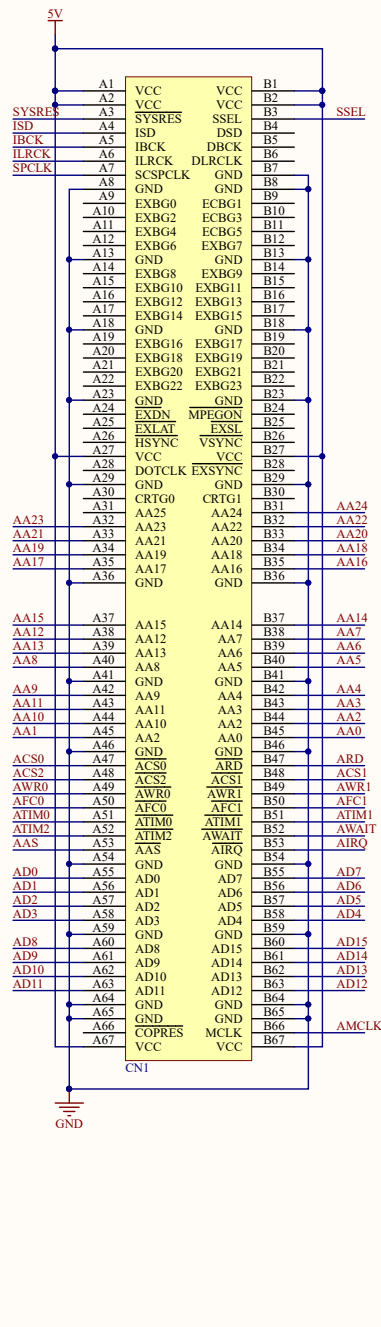
D

A

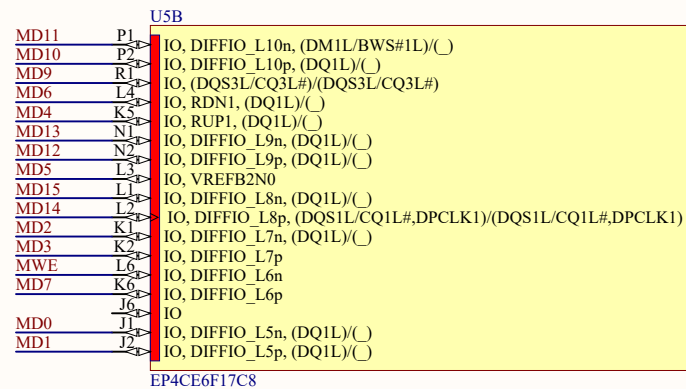
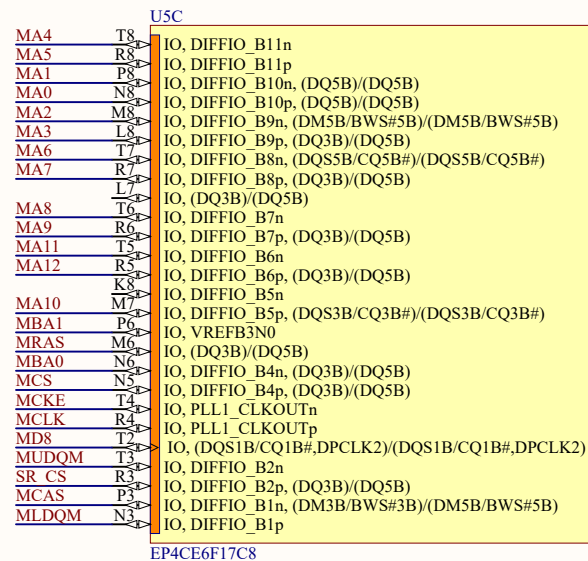
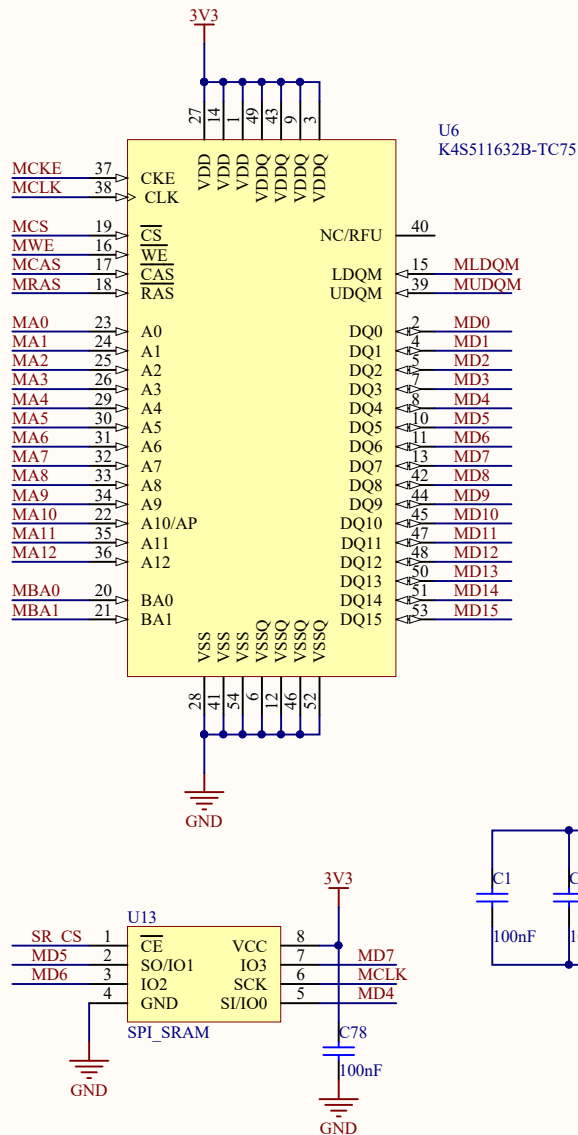
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C

D



| Title | | |
|-------|--------------------------------------|-----------|
| Size | Number | Revision |
| A3 | | |
| Date: | 2023/6/6 | Sheet of |
| File: | D:\project\...\Saturn Cartage.SchDoc | Drawn By: |



| Title | | |
|-------|-------------------------|-----------|
| Size | Number | Revision |
| A4 | | |
| Date: | 2023/6/6 | Sheet of |
| File: | D:\project\SDRAM.SchDoc | Drawn By: |

| Comment | Description | Footprint | Quantity | Designator |
|-----------------|--|------------------|----------|---|
| 100nF | Capacitor | C0603 | 53 | C1, C2, C3, C4, C8, C9, C10, C11, C12, C16, C18, C20, C21, C26, C27, C33, C34, C35, C36, C40, C41, C42, C43, C44, C45, C46, C47, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C74, C77, C78 |
| 10uF | Capacitor | C1206 | 3 | C5, C19, C25 |
| 22pF | Capacitor | C0603 | 2 | C6, C7 |
| 4.7uF | Capacitor | C0603 | 8 | C13, C31, C32, C38, C39, C48, C49, C73 |
| 10nF | Capacitor | C0603 | 4 | C14, C23, C29, C37 |
| 1uF | Capacitor | C0603 | 1 | C15 |
| 100pF | Capacitor | C0603 | 1 | C17 |
| 3.3nF | Capacitor | C0603 | 1 | C22 |
| 22uF | Capacitor | C1206 | 2 | C24, C30 |
| 4.7nF | Capacitor | C0603 | 1 | C28 |
| 2.2uF | Capacitor | C0603 | 2 | C75, C76 |
| SaturnCartage | | Saturn_cart | 1 | CN1 |
| LED | Typical RED GaAs LED | D0603 | 3 | D1, D2, D3 |
| B340A | Schottky Diode | SMA | 3 | D5, D6, D7 |
| MicroUSB | USB micro female SMT with 4 fixed foot | USB_MICRO_5S_B | 1 | J1 |
| SIP5 | | SIP5 | 1 | J2 |
| JTAG | Header, 5-Pin, Dual row | HDR2X5 | 1 | J3 |
| MicroSD | MicroSD | MicroSD-1 | 1 | J4 |
| ExtPower | Header, 2-Pin | HDR1X2 | 1 | J5 |
| BLM21PG300SN1 | Inductor | R0805 | 2 | L1, L4 |
| 10uH | Inductor | CDRH5D28 | 1 | L2 |
| 4.7uH | Inductor | CDRH5D28 | 1 | L3 |
| 16M | XTAL SMD 2016, 32MHz, Cl=8pF, Total Tol: 40ppm | SMD3225 | 1 | Q1 |
| 10K | Resistor | R0603 | 15 | R1, R3, R4, R10, R14, R18, R19, R24, R25, R26, R27, R28, R29, R30, R31 |
| 1K | Resistor | R0603 | 3 | R2, R16, R17 |
| 22 | Resistor | R0603 | 3 | R5, R22, R23 |
| 0 | Resistor | R0603 | 2 | R6, R20 |
| 0(NC) | Resistor | R0603 | 2 | R7, R21 |
| 100K | Resistor | R0603 | 2 | R8, R12 |
| 7.5K | Resistor | R0603 | 1 | R9 |
| 26.1K | Resistor | R0603 | 1 | R11 |
| 4.99K | Resistor | R0603 | 1 | R13 |
| 3K | Resistor | R0603 | 1 | R15 |
| SW-PB | Switch | SW4_5X5 | 1 | S1 |
| SN74LVC164245A | | DGG048 | 4 | U1, U2, U3, U4 |
| EP4CE6F17C8 | Cyclone IV Family FPGA, 2V Core, 179 I/O Pins, 2 PLLs, 256-Pin FBGA, Speed Grade 8, Commercial Grade | FBGA256 | 1 | U5 |
| K4S511632B-TC75 | 512Mb Synchronous High Data Rate DRAM, 8Mb x 16Bit x 4 Banks, 54-Pin TSOP | 54_TSOP2_400AF_N | 1 | U6 |
| STM32H750VBT6 | | TQFP-100 | 1 | U7 |
| SST25FV080B | | SOIC-8 | 1 | U8 |
| MP1482 | | SOIC-8 | 2 | U9, U10 |
| XC6206 | LDO | sot-23-xc6206 | 1 | U11 |
| SPI_FLASH | | SOIC-8 | 1 | U12 |
| SPI_SRAM | | sop-8_n | 1 | U13 |
| 50Mhz | | OSC_5032 | 1 | Y1 |