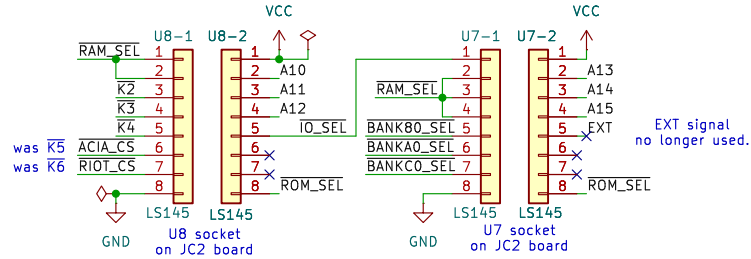
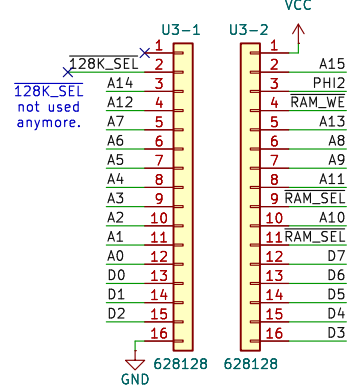


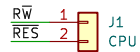
U7 & U8 are no longer needed.
Function is taken over by U1 (MMU).



Remove existing 74LS145 ICs (U7 and U8) and SRAM (U3) from their sockets and insert add-on board in these 3 sockets.

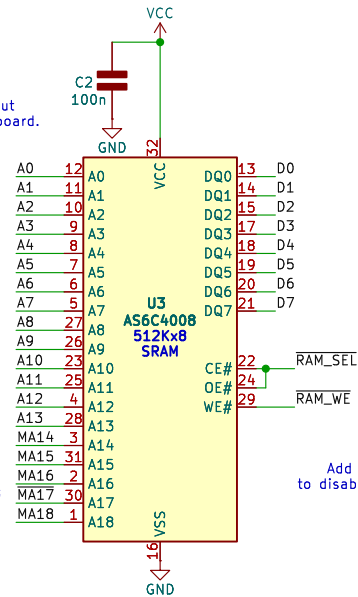


RAM_WE also goes to J1 connector, so bent U6B pin 4 (74LS01) out of its socket on JC2 board.



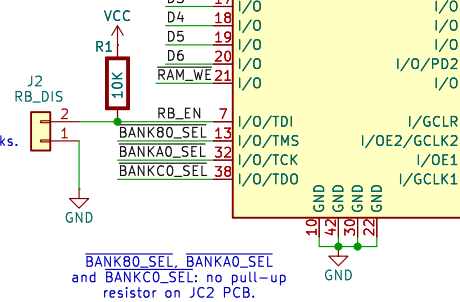
Additional signals from CPU not present on U7, U8 or U3.

pin 30: CS2 on 628128



The existing 628128 SRAM can also be used.

Add Jumper J2 to disable RAM-banks.



NOTE: Please bent two pins (pin 4 and pin 10) of U6 (74LS01) out of its socket on the JC2-board and make sure they do not contact the IC-socket anymore!

U1 MMU register (\$1700-\$17FF):

Bit 7: not used
Bit 6: RAMB4
Bit 5: RAMB3
Bit 4: RAMB2
Bit 3: RAMB1
Bit 2: RAMB0
Bit 1: MON_EN: 1=Enable Monitor-ROM, 0=Enable RAM
Bit 0: BIOS_EN: 1=Enable BIOS-ROM, 0=Enable RAM

K2, K3, K4:
no pull-up R on JC2 PCB.

RIOT: \$1A00-\$1AFF (JC2 v3.1b: \$1800-\$1BFF)
ACIA: \$1600-\$16FF (JC2 v3.1b: \$1600-\$17FF)

RAM_SEL:
4K7 pull-up R15 on JC2 PCB.

RAM_SEL signal is also made by U6C pin 10 (74LS01), so bent pin 10 out of its socket on JC2 board.

U1 (MMU) now controls the following RAM areas:
\$E000-\$FFFF 8K BIOS-ROM <-> RAM area
\$4000-\$7FFF 16K RAM-bank area
\$2000-\$3FFF 8K RAM area (JC2 v3.1b U7)
\$1C00-\$1FFF 1K Monitor-ROM <-> RAM area
\$1800-\$1BFF 256B RAM (JC2 v3.1b RIOT shadow area)
\$1800-\$19FF 512B RAM (JC2 v3.1b not in use)
\$1400-\$15FF 512B RAM (JC2 v3.1b from U5D, U5E & U6C)
\$0000-\$07FF 2K RAM (JC2 v3.1b from U8)

ATF1504 Current Firmware is V0.31

Sheet: /
File: jc2_mmu_addon_atf1504.kicad_sch

Title: JC2 512K MMU Add-on board

Size: A4 Date: 2025-03-05

KiCad E.D.A. 8.0.5

Rev: 0.3

Id: 1/1