Processor

File: Processor.kicad_sch

Logic, IDE

File: Logic.kicad_sch

Expansion Memory

File: ExpansionMemory.kicad_sch

Base Memory, Spares, Power

File: BaseMemory.kicad_sch

Card Edge

File: Card Edge.kicad_sch

CPLD 1

File: CPLD1.kicad_sch

Jumpers

File: jumpers.kicad_sch

MOTOROLA 68030

IDE PORT

IDE ADDRESS BUS

68030 DATA BUS

IDE AND ZORRO 3 MEMORY CONTROLLER

ZORRO 3 SDRAM ADDRESS BUS

ZORRO 3 RAM

68030 ADDRESS BUS

ZORRO 2 MEMORY CONTROLLER

ZORRO 2 SDRAM ADDRESS BUS

ZORRO 2 RAM

68000 COMPATABLE DATA BUS

68000 COMPATABLE ADDRESS BUS

AMIGA 2000

68000 AND DMA ADDRESS BUS

68000 AND DMA DATA BUS

AMIGA N2630

Jumper	Description	Shorted	Open
J302	Amiga Version	A2000	B2000
J304	OS Mode	Unix	Amiga OS
J403	Zorro 2 RAM	Disable	Enable
J404	Z2 4/8MB	4MB	8MB
J405	Zorro 3 RAM	Disable	Enable

Zorro 3 RAM Banks Populated	J400
Low Bank Only	Open
Both Banks	Shorted

Desired Zorro 3 RAM (MB)	SDRAM Capacity	J401	J402
32	4MX16	Open	Shorted
64	8MX16	Shorted	Open
128	16Mx16	Shorted	Shorted
256	32MX16	Open	Open

NOTE: J401 and J402 have no effect if J400 is open.

Jumper	Description	1-2	2-3
J202	FPU Clock	X1	X2

JUMPER SETTINGS

PGA MC68882
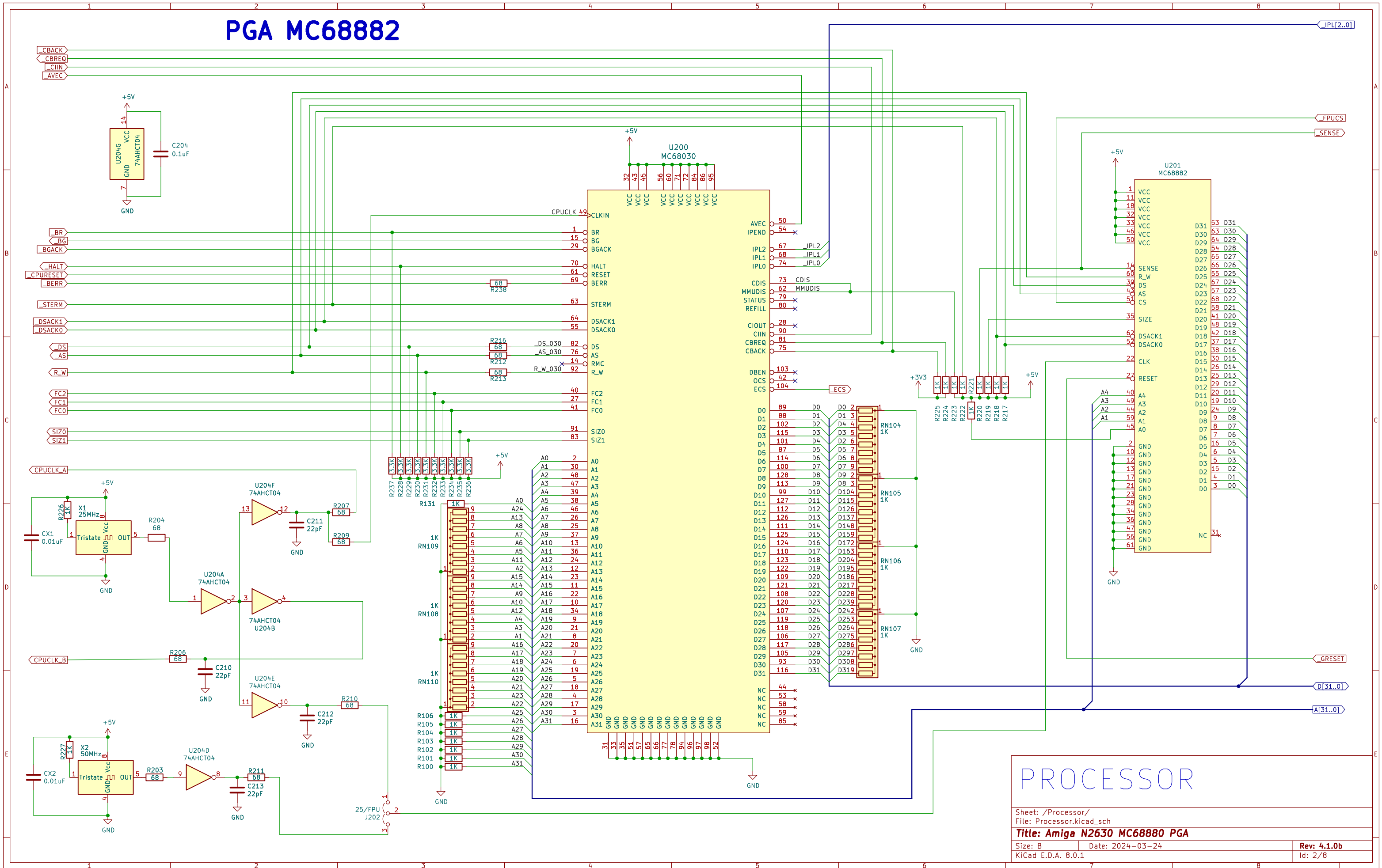
Title: Amiga N2630 MC68880 PGA

Sheet: /Processor/
File: Processor.kicad_sch

Size: B | Date: 2024-03-24 | Rev: 4.1.0b
KiCad E.D.A. 8.0.1 | Id: 2/8
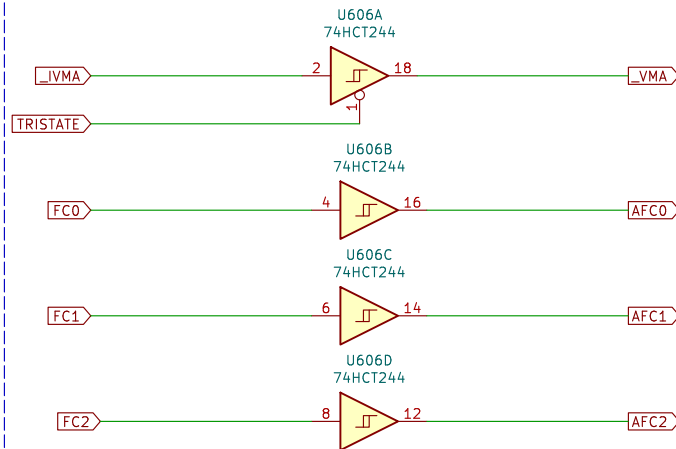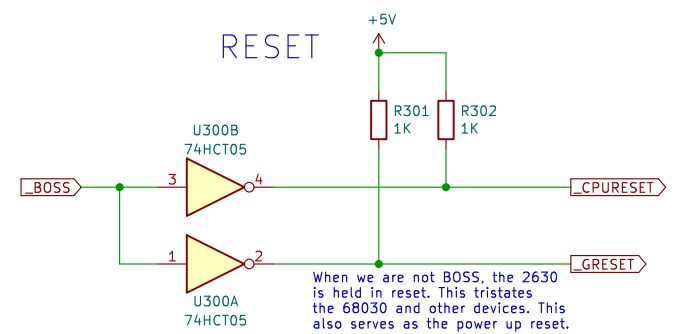
LOGIC, IDE
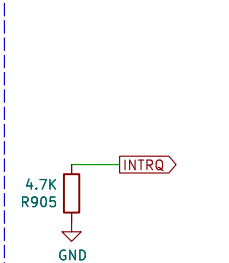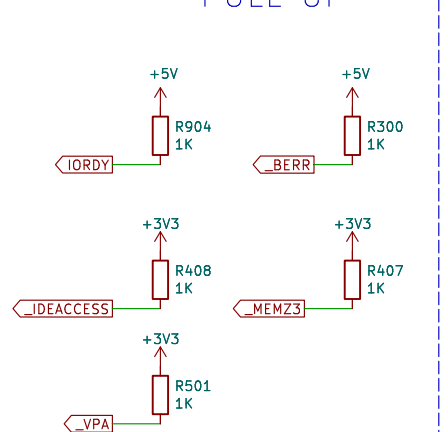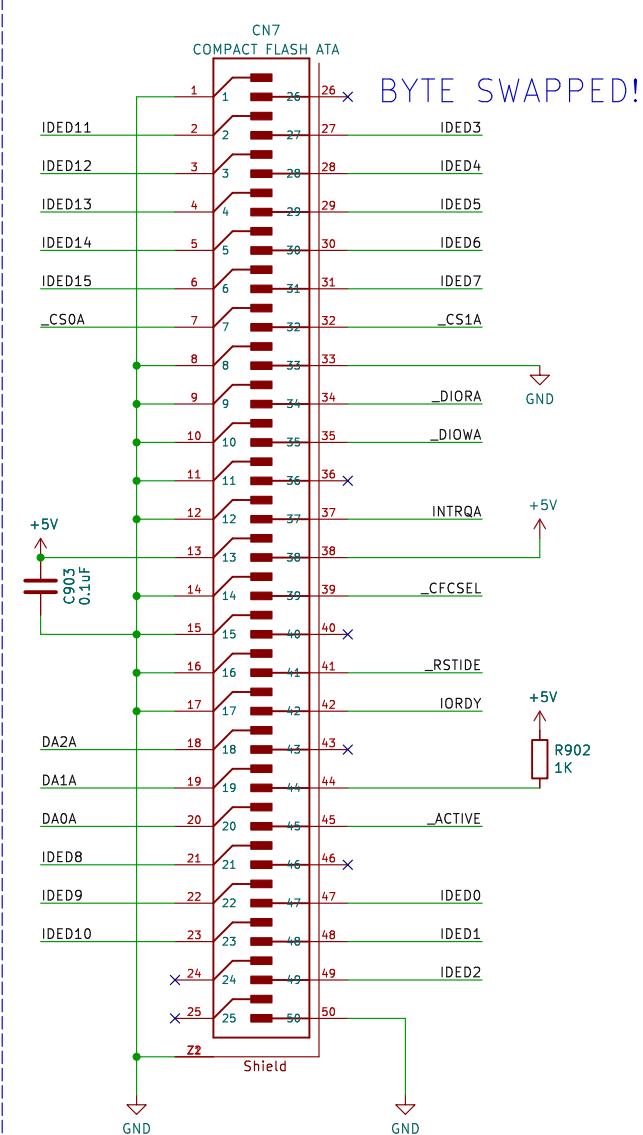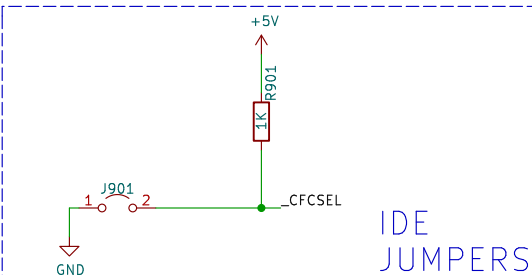
Sections shown: OUTPUT TO AMIGA BUFFER, COMPACT FLASH, IDE INTERFACE, SDRAM BUFFERS, RESET, PULL DOWN, PULL UP, IDE JUMPERS.

EMD[31..0]
EMA[12..0]

D[31..0]

BANK0

BANK1

ROMs

+3V3

+3V3

+5V

+5V

HIGH_WORD

U406
SDRAM(16Mx16)

U408
SDRAM(16Mx16)

U102
27C256

U103
27C256

BANK0
BANK1
CPUCLK_B
EMCLKE
_EMRAS
_EMCAS
_EMWE

GND

GND

GND

GND

_CSROM

A[31..0]

_EM1CS

SDRAM CONFIG JUMPERS

+3V3

LOW_WORD

U407
SDRAM(16Mx16)

U409
SDRAM(16Mx16)

R934 R933 R932 R900 R402 R401 R400

CJ2
CONFIG

J402
J401
J400
_IDEDIS
IDE0
IDE1
IDE2

GND

IDE0-2 RESERVED
FOR FUTURE

GND

GND

+5V

+3V3

C102
0.1uF

C103
0.1uF

C406 C407 C408 C409 C410 C411 C412 C413 C422 C423 C424 C425 C426

0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF

GND

GND

_EMOCS
_EMLLBE
_EMLMBE
_EMUUBE
_EMUMBE

CONFIG JUMPERS

J302 – A2000 Shorted/B2000 Open
J403 – Do not configure Z2 RAM Shorted/Autoconfigure Z2 RAM Open
J304 – AMIX Shorted/AmigaOS Open
J405 – Do not configure Z3 RAM Shorted/Autoconfigure Z3 RAM Open
J404 – 4 Megabytes Z2 RAM Shorted/8 Megabytes Open

There is no A0 on the 68000 (Amiga 2000)
Thus, it is not connected here.

CARD EDGE AND
INTERFACE LOGIC

Sheet: /Card Edge/
File: Card Edge.kicad_sch

Title: Amiga N2630 MC68880 PGA

Size: B   Date: 2024-03-24   Rev: 4.1.0b
KiCad E.D.A. 8.0.1   Id: 5/8

ZMA[12..0]

EMD[31..0]

+3V3

SPARES

U300D
74HCT05
9 → 8

U606E
74HCT244
11 → 9

U300E
74HCT05
11 → 10

U606F
74HCT244
13 → 7

U606G
74HCT244
15 → 5

U606H
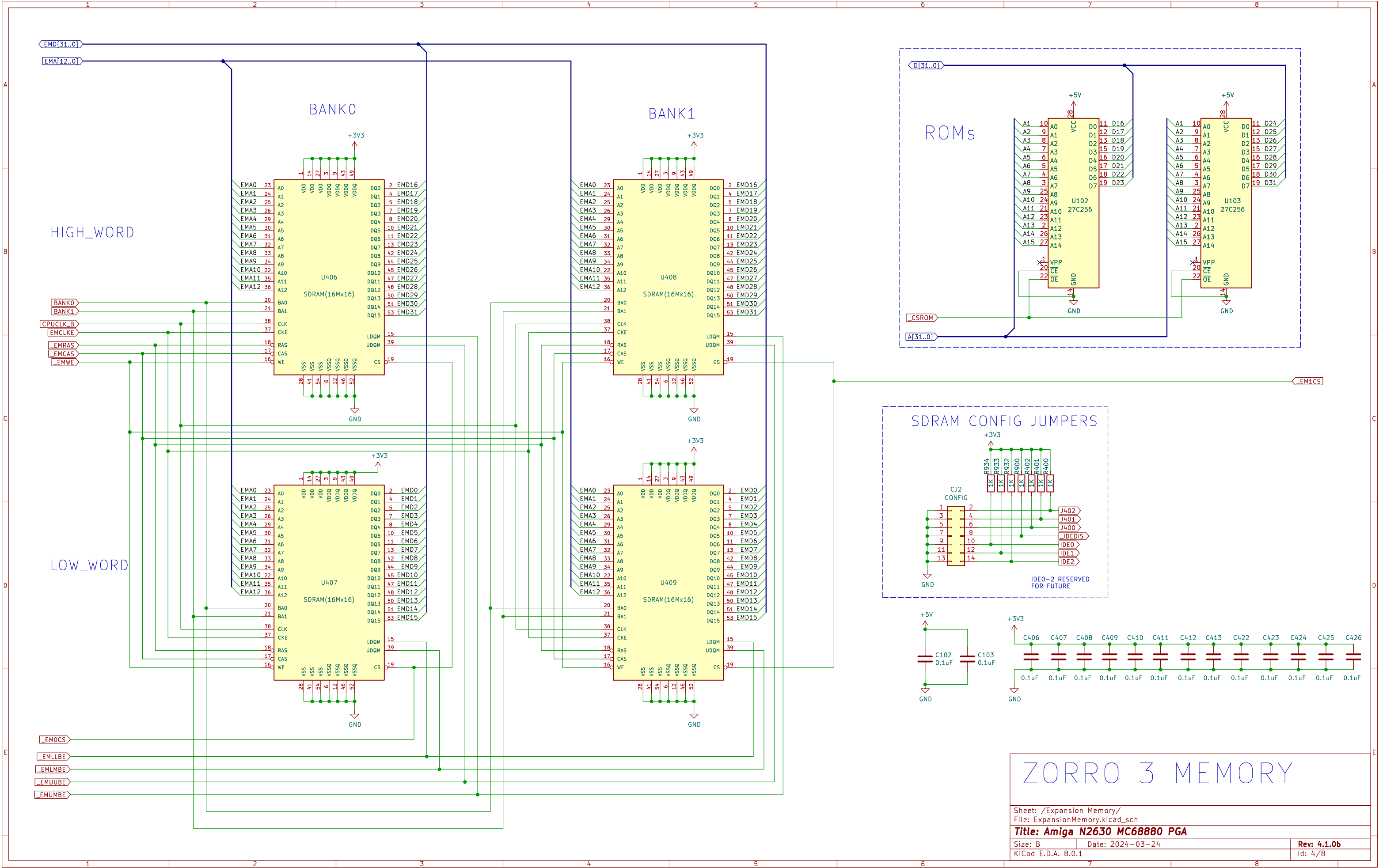74HCT244
17 → 3

GND

RN400 3.3K
RN401 3.3K
RN402 3.3K
RN403 3.3K

+3V3

U400
SDRAM(4Mx16)

A0 23 ZMA0
A1 24 ZMA1
A2 25 ZMA2
A3 26 ZMA3
A4 29 ZMA4
A5 30 ZMA5
A6 31 ZMA6
A7 32 ZMA7
A8 33 ZMA8
A9 34 ZMA9
A10 22 ZMA10
A11 35 ZMA11
A12 36 ZMA12

BA0 20 ZBANK0
BA1 21 ZBANK1

CLK 38
CKE 37
RAS 18 _ZRAS
CAS 17 _ZCAS
WE 16 _ZWE

DQ0 2 EMD16
DQ1 4 EMD17
DQ2 5 EMD19
DQ3 7 EMD18
DQ4 8 EMD20
DQ5 10 EMD21
DQ6 11 EMD22
DQ7 13 EMD23
DQ8 42 EMD24
DQ9 44 EMD25
DQ10 45 EMD26
DQ11 47 EMD27
DQ12 48 EMD28
DQ13 50 EMD29
DQ14 51 EMD30
DQ15 53 EMD31

LDQM 15 ZUMBE
UDQM 39 ZUUBE
CS 19 _ZCS

VDD VDD VDD VDDQ VDDQ VDDQ
VSS VSS VSS VSSQ VSSQ VSSQ VSSQ

GND

CPU/FPU DECOUPLING

+5V

C209 C201 C205 C206 C208 C200 C202 C214 C215 C216 C218 C219 C220
0.22uF 0.1uF 330pF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF

GND

+3.3V

+5V
U800
AP7361C-33ER
VI VO
GND

C801 4.7uF
C800 4.7uF
C802 10uF
C803 47uF
C804 10uF
C805 10uF

+3V3

GND

MOUNTING HOLES

H1 MountingHole
H2 MountingHole

GND

+3V3

U401
SDRAM(4Mx16)

A0 23 ZMA0
A1 24 ZMA1
A2 25 ZMA2
A3 26 ZMA3
A4 29 ZMA4
A5 30 ZMA5
A6 31 ZMA6
A7 32 ZMA7
A8 33 ZMA8
A9 34 ZMA9
A10 22 ZMA10
A11 35 ZMA11
A12 36 ZMA12

BA0 20 ZBANK0
BA1 21 ZBANK1

CLK 38
CKE 37
RAS 18
CAS 17
WE 16

DQ0 2 EMD0
DQ1 4 EMD1
DQ2 5 EMD2
DQ3 7 EMD3
DQ4 8 EMD4
DQ5 10 EMD5
DQ6 11 EMD6
DQ7 13 EMD7
DQ8 42 EMD8
DQ9 44 EMD9
DQ10 45 EMD10
DQ11 47 EMD11
DQ12 48 EMD12
DQ13 50 EMD13
DQ14 51 EMD14
DQ15 53 EMD15

LDQM 15 ZLLBE
UDQM 39 ZLMBE
CS 19 ZCS

VDD VDD VDD VDDQ VDDQ VDDQ
VSS VSS VSS VSSQ VSSQ VSSQ VSSQ

GND

_ZWE
_ZCAS
_ZRAS

JT1 MODE68K
MODE68K 1

JT2 SMDIS
SMDIS 1

JT4 _IDEACCESS
_IDEACCESS 1

JT5 _MEMZ3
_MEMZ3 1

JT6 _MEMZ2
_MEMZ2 1

RESERVED FOR FUTURE

+3V3
R600 1K
R601 1K

SW1 MODE
1
2
3

_MODE0
_MODE1

GND

CPUCLK_A
ZCLKE

+3V3

C427 C428 C429 C430 C431 C432
0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF

GND

ZORRO 2 MEMORY, SPARES, POWER