

The 007786 is a sprite frame buffer controller.
It works in two modes:
– When SEL = 0, it generates addresses for the frame buffer.
– When SEL = 1, it parses sprite character data
It also handles refreshing of data in the DRAM memory.

The 007786 uses an OKI 74V000 CMOS gate array
with 2400 unit cells.

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Sheet: /

File: 007786.kicad_sch

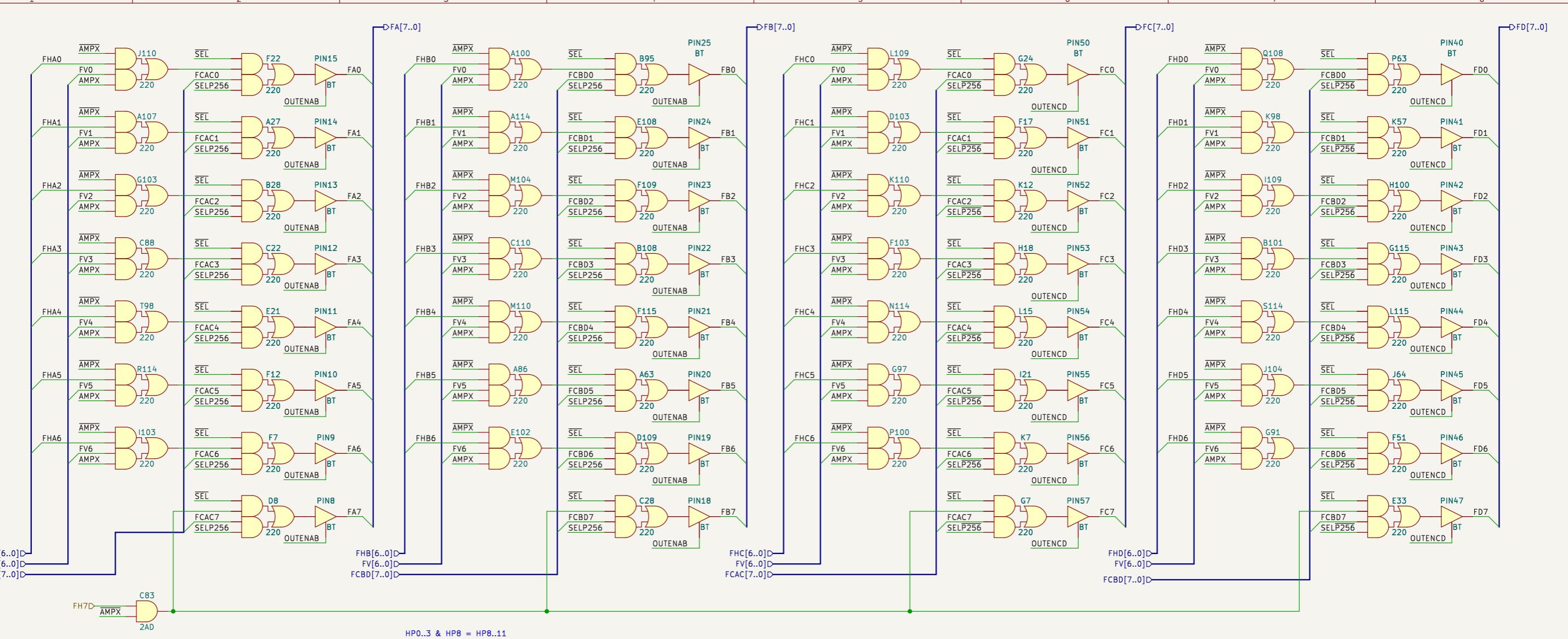
Title: Konami 007786

Size: A3 Date: 2024-01-28

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Rev:

Id: 1/5



Output buffer enable

Addressing mode, SEL = 0

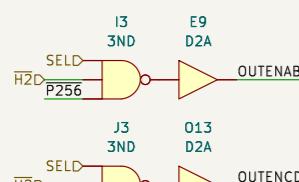
Outputs are enabled all the time when the 007786 is used for addressing sprite characters in the frame buffer.
SEL = 0.

Sprite character mode, SEL = 1

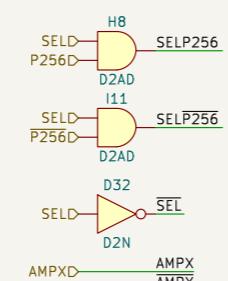
When used for writing sprite characters to the frame buffer it is enabled when H2 = 1 or for FA and FB outputs when P256 = 1. The corresponding for C and D outputs is when P256 = 0.

A and B output
OUTENAB =
-SEL | -H2 | -P256 =
-SEL | H2 | P256

OUTENCD =
-SEL | -H2 | -P256 =
-SEL | H2 | P256



SCM, P256 = 1, AB out enabled.



AMPX and $\bar{\text{AMPX}}$ selects between Row and Columns in the frame buffer DRAM.

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Sheet: /Outputs/

File: outputs.kicad_sch

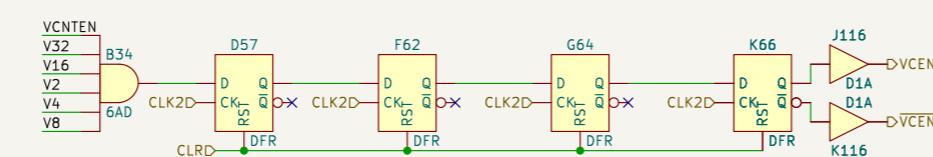
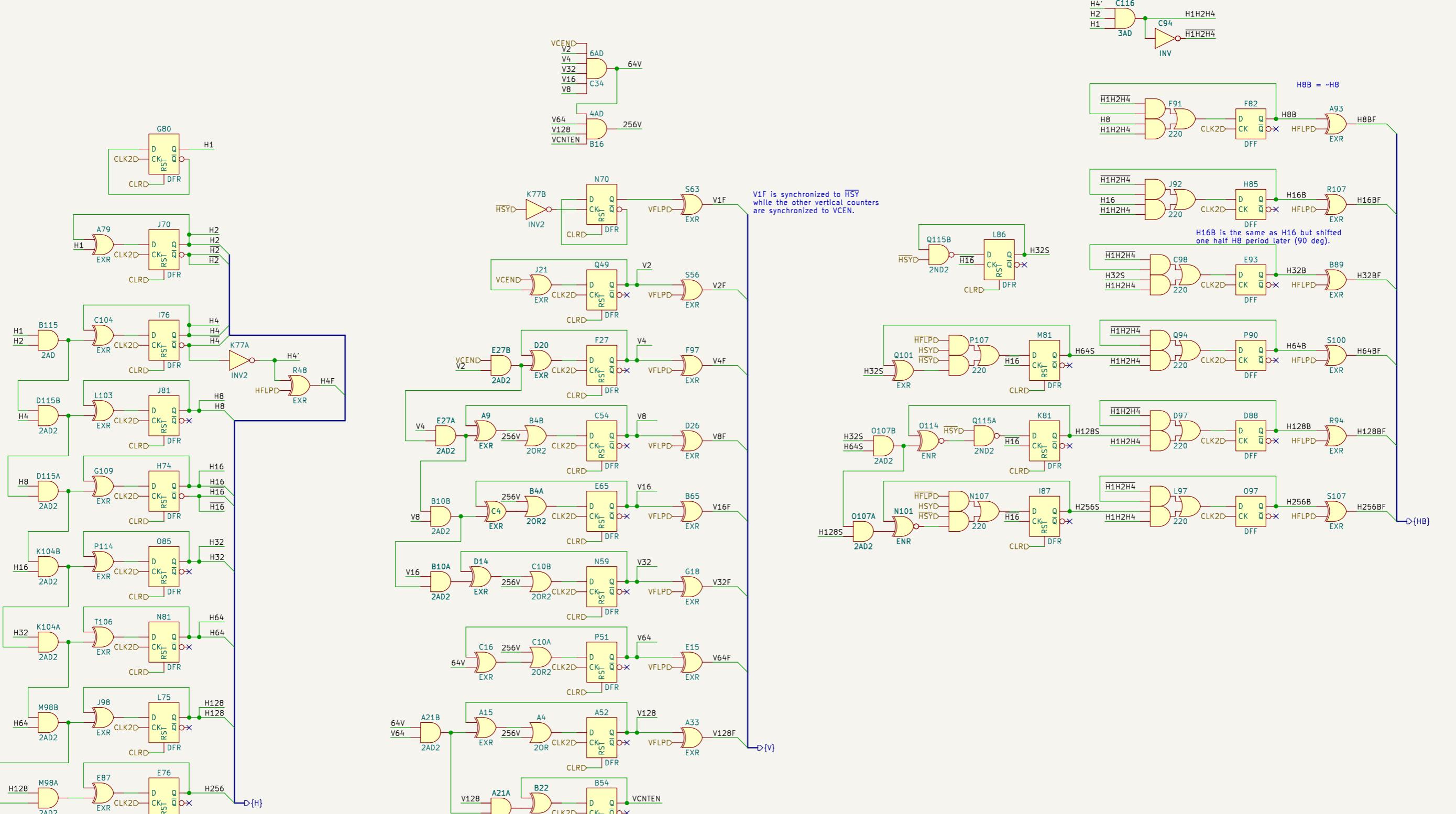
Title: Konami 007786

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Rev:

Id: 2/5



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Sheet: /Counters/

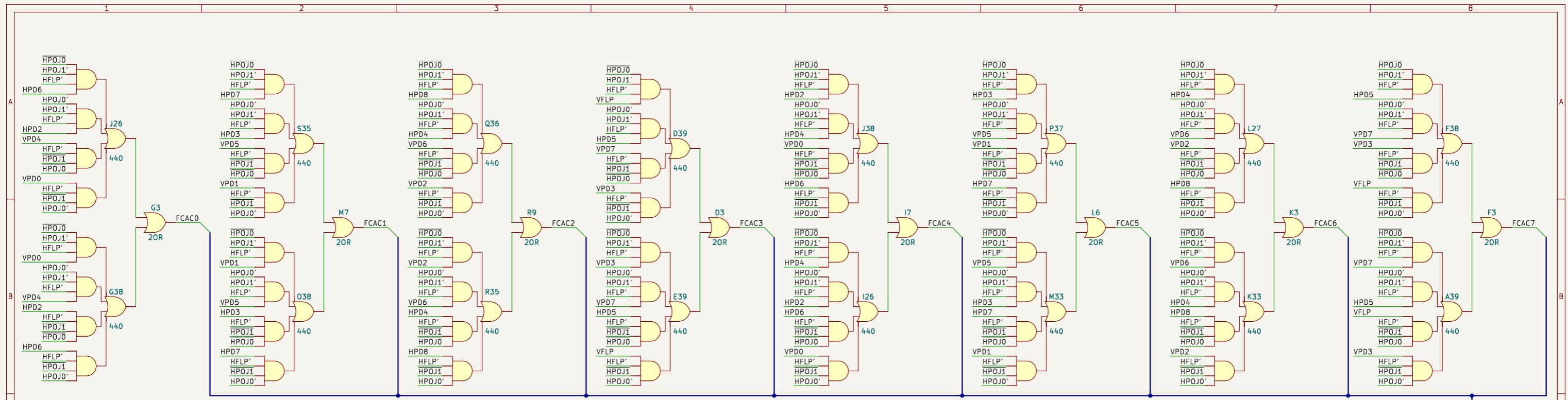
File: counters.kicad_sch

Title: Konami 007786

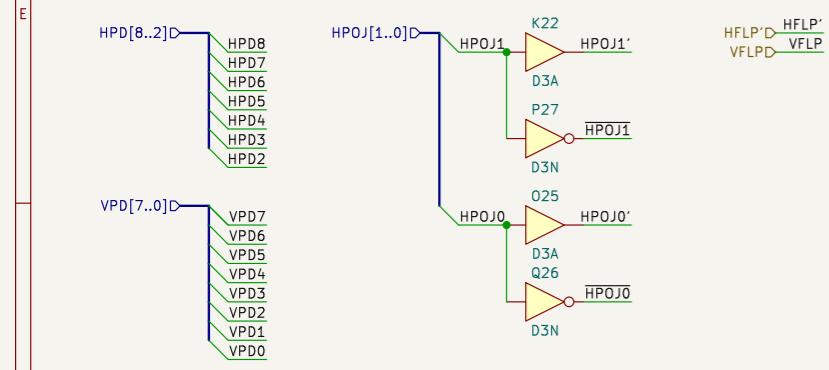
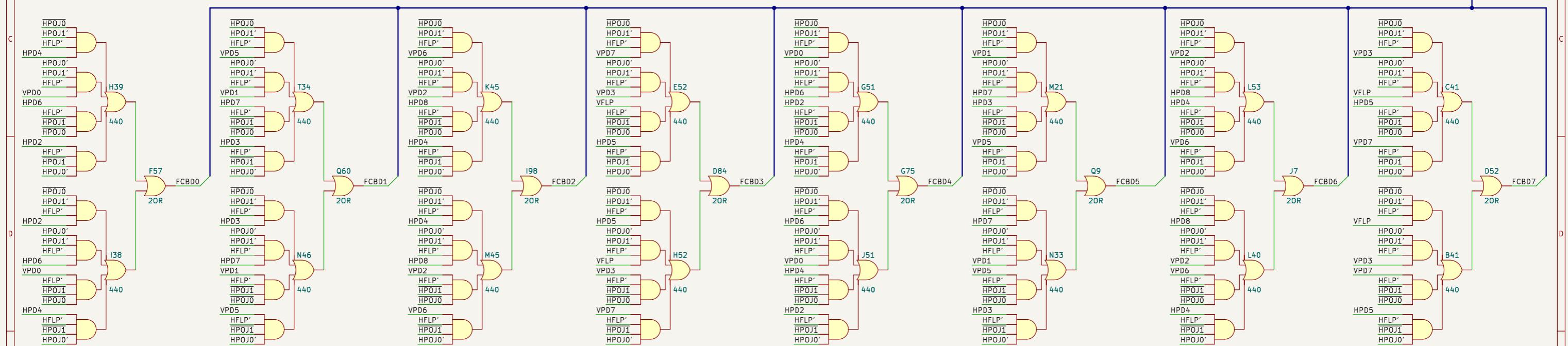
Size: A3 Date: 2024-01-28

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7



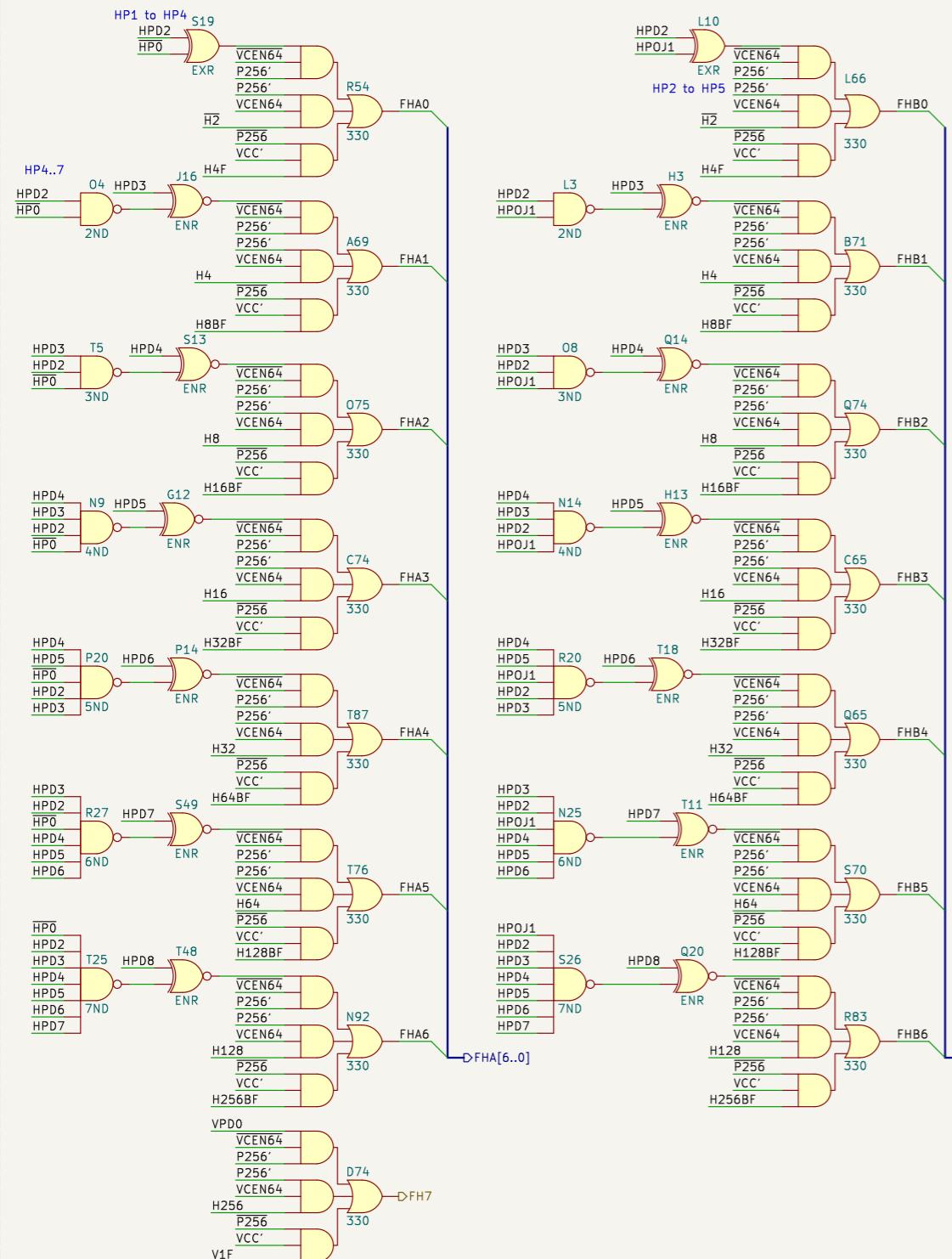
FCAC[7..0]
FCBD[7..0]



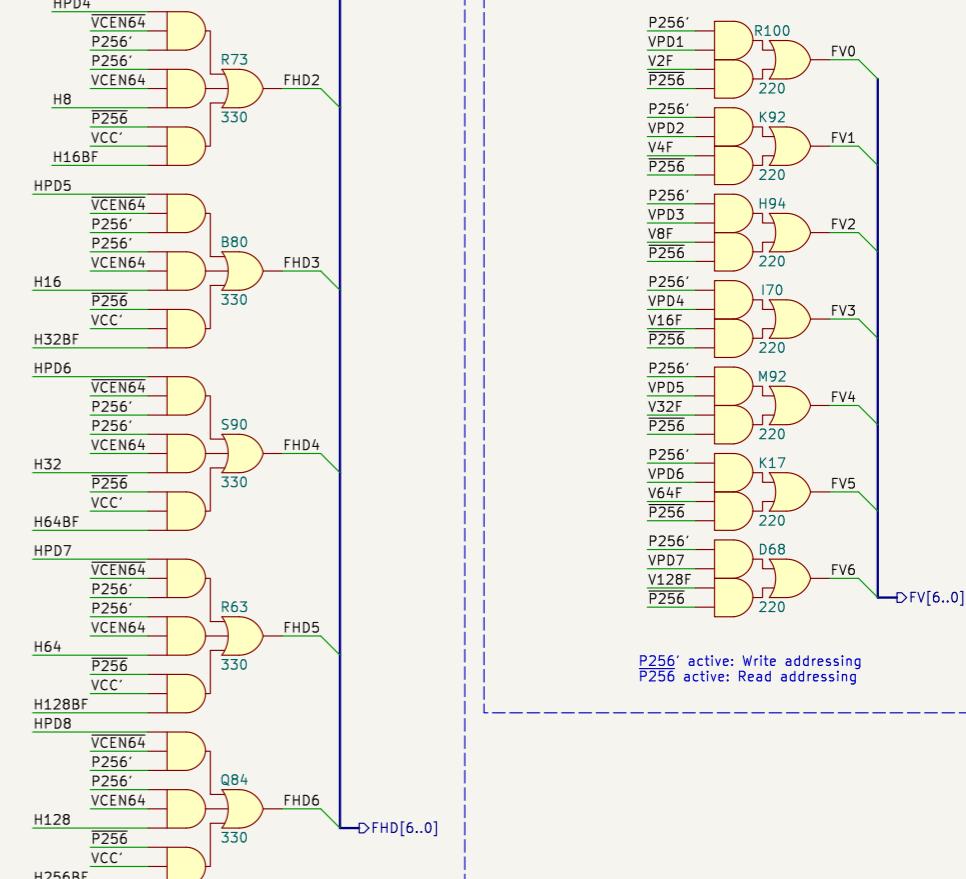
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Sheet: /Frame buffer sprite characters/
File: fbsc.kicad_sch
Title: Konami 007786
Size: A3 Date: 2024-01-28
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Id: 4/5

Horizontal Position

VCEN64 active: Data is written to the frame buffer
VCEN64 active, four times pre frame: Data is refreshed in DRAM, every 4ms.



Vertical Position



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Sheet: /Sprite Character Frame Buffer Position/
File: scfbp.kicad_sch

Title: Konami 007786

Size: A3 Date: 2024-01-28
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