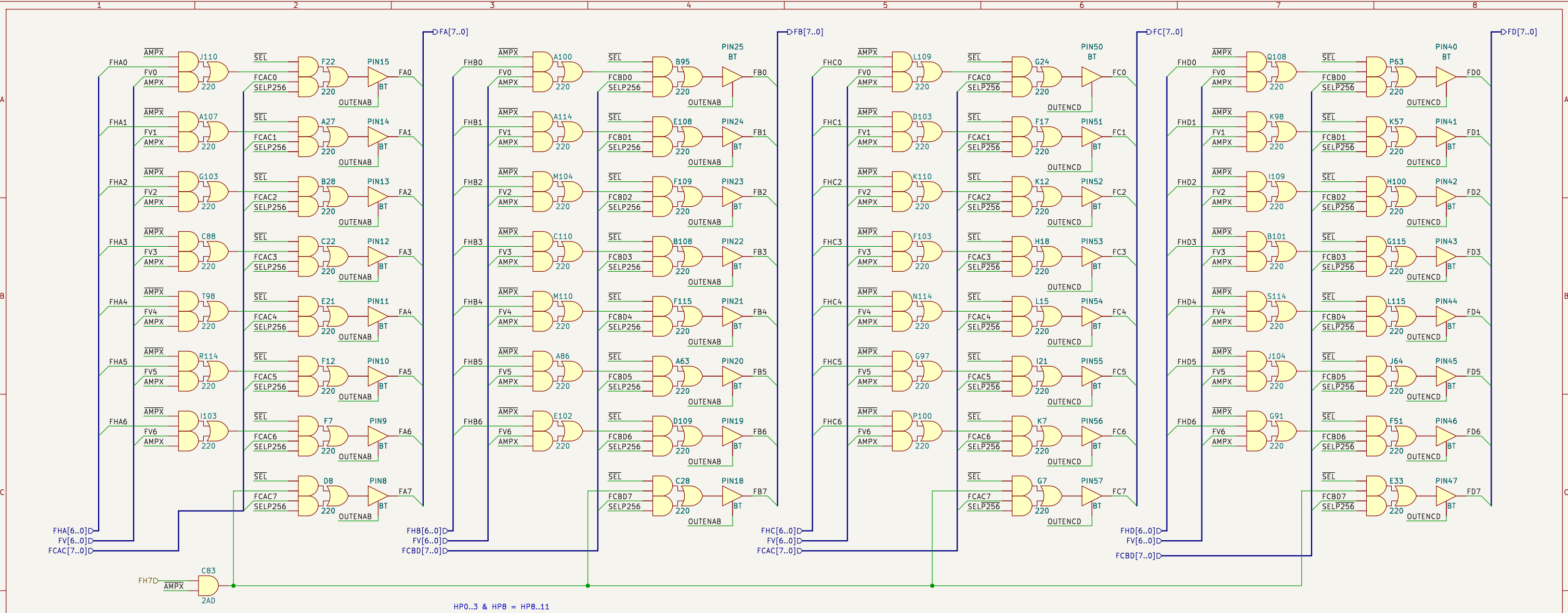


The 007786 is a sprite frame buffer controller.  
It works in two modes:  
– When SEL = 0, it generates addresses for the frame buffer.  
– When SEL = 1, it parses sprite character data  
It also handles refreshing of data in the DRAM memory.

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



HP0..3 & HP8 = HP8..11

Output buffer enable

Addressing mode, SEL = 0

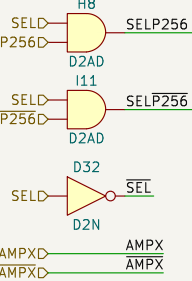
Outputs are enabled all the time when the 007786 is used for addressing sprite characters in the frame buffer, SEL = 0.

Sprite character mode, SEL = 1

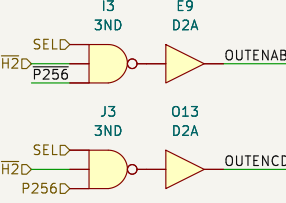
When used for writing sprite characters to the frame buffer it is enabled when H2 = 1 or for FA and FB outputs when P256 = 1. The corresponding for C and D outputs is when P256 = 0.

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

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



AMPX and AMPX selects between Row and Columns in the frame buffer DRAM.



SCM, P256 = 1, AB out enabled.

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Sheet: /Outputs/  
File: outputs.kicad\_sch

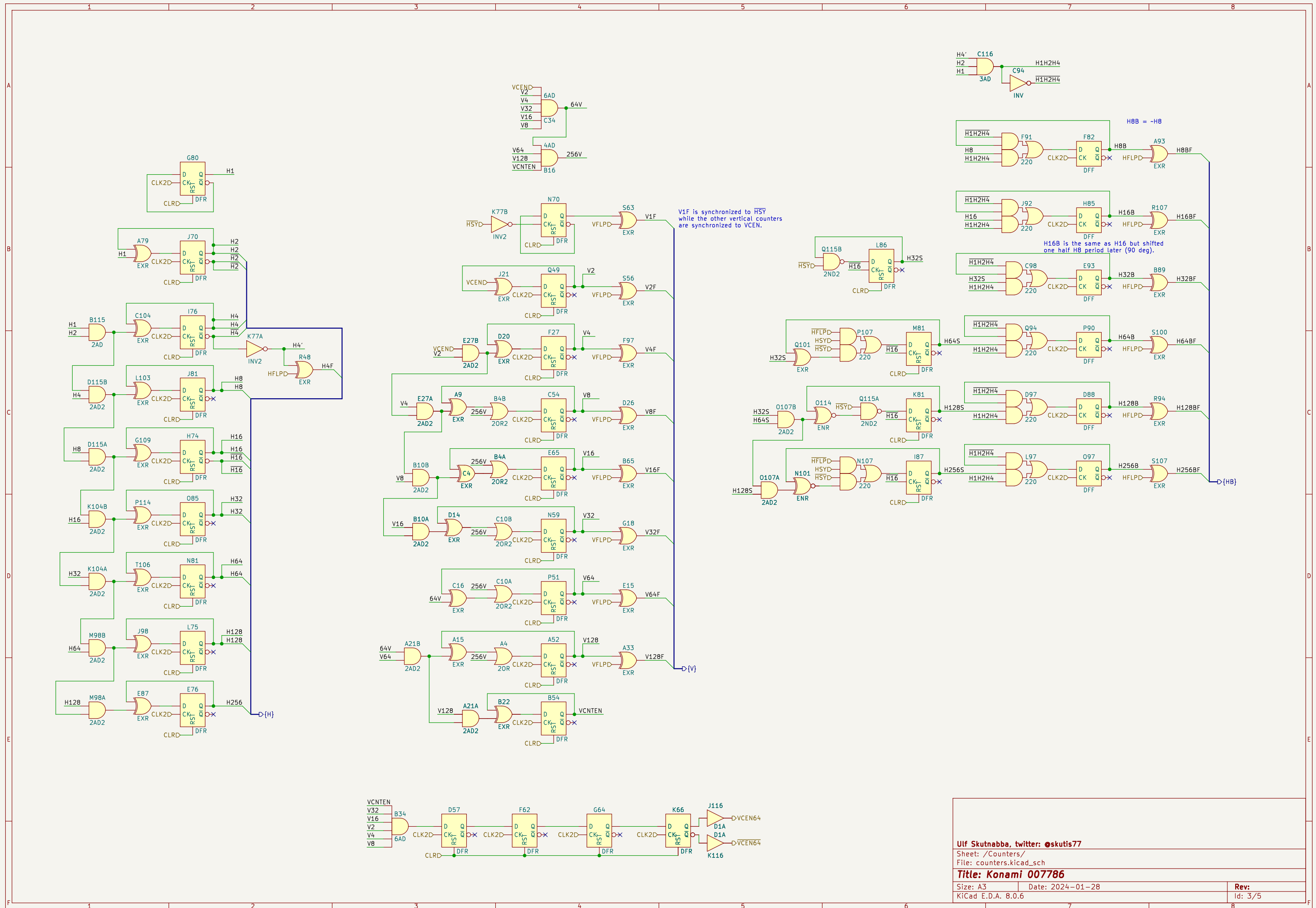
Title: Konami 007786

Size: A3 Date: 2024-01-28

KiCad E.D.A. 8.0.6

Rev:

Id: 2/5



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Sheet: /Counters/  
File: counters.kicad\_sch

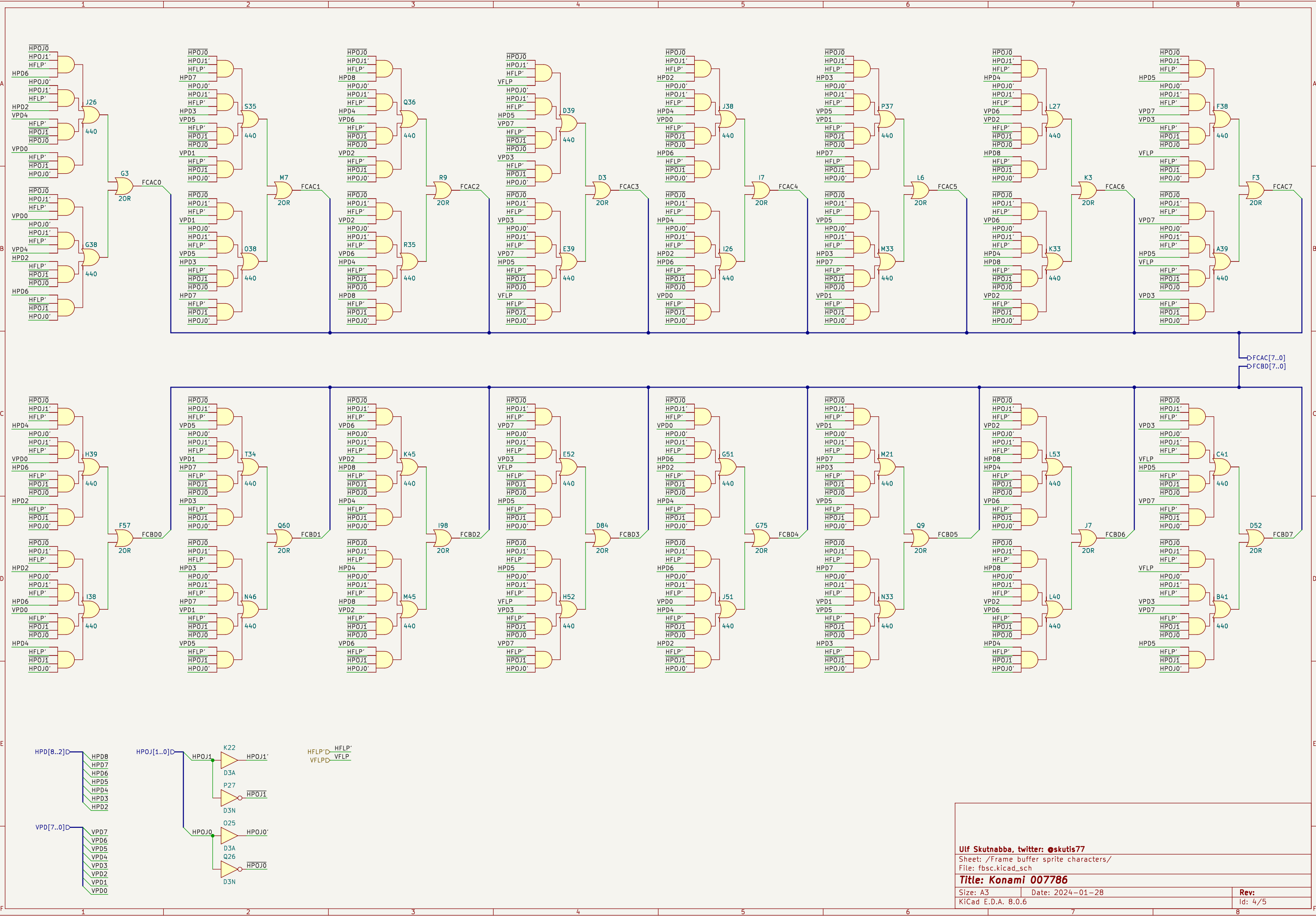
Title: Konami 007786

Size: A3 Date: 2024-01-28

KiCad E.D.A. 8.0.6

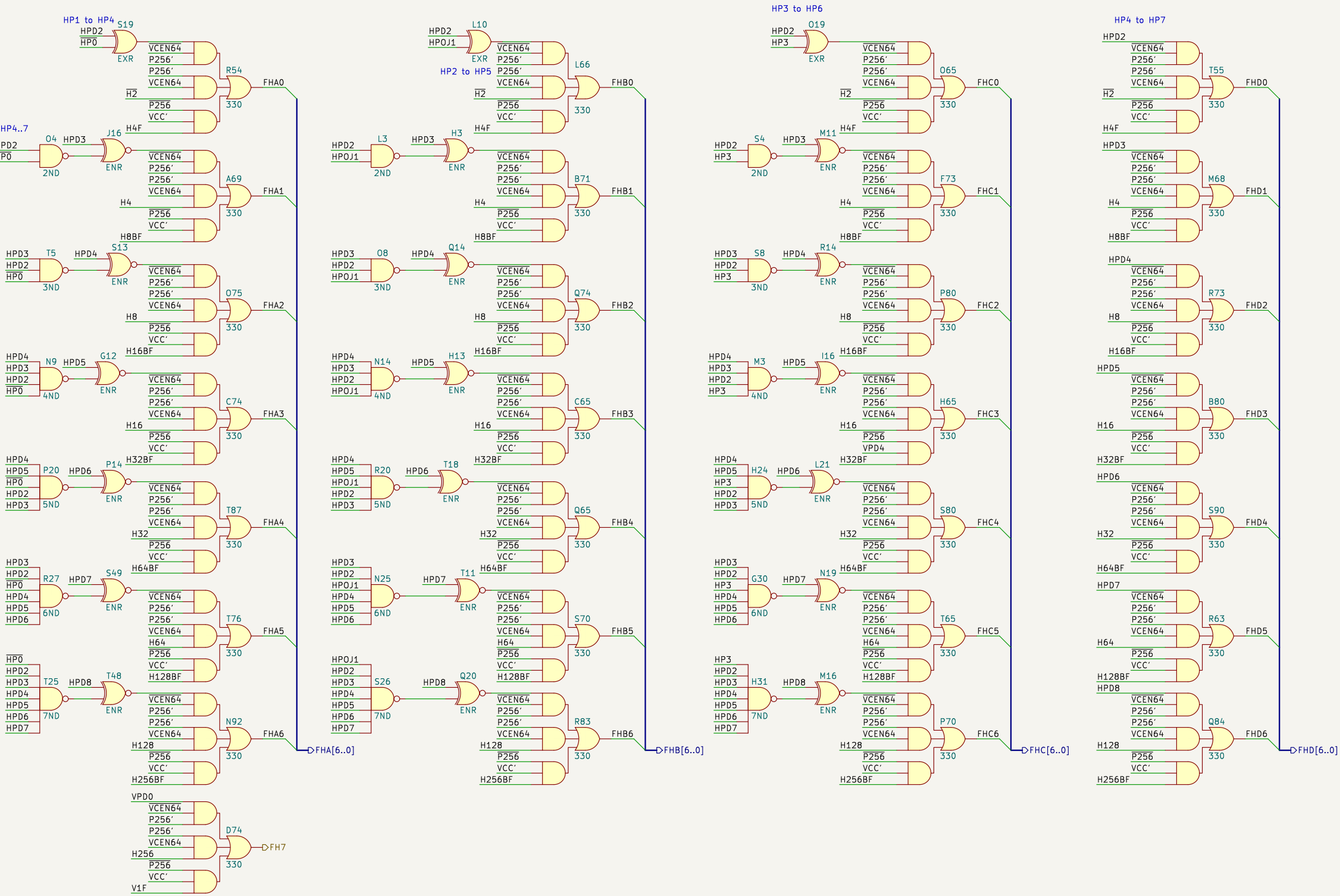
Rev:

Id: 3/5

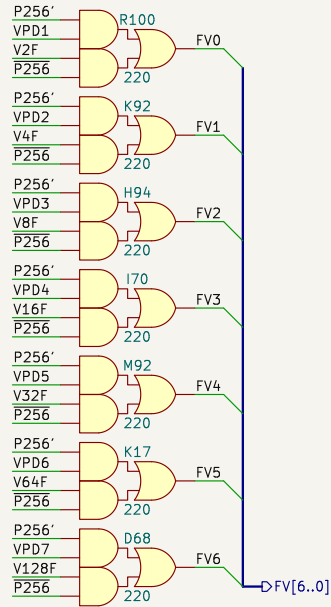


# Horizontal Position

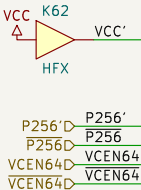
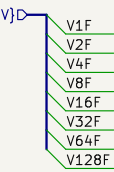
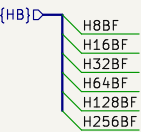
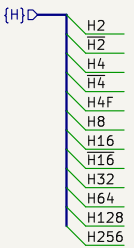
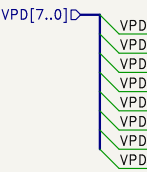
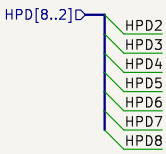
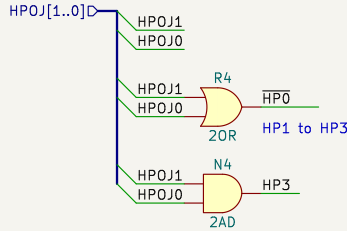
VCEN64 active: Data is written to the frame buffer  
VCEN64 active, four times pre frame: Data is refreshed in DRAM, every 4ms.



# Vertical Position



P256' active: Write addressing  
P256 active: Read addressing



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Sheet: /Sprite Character Frame Buffer Position/  
File: scfbp.kicad\_sch

Title: Konami 007786

Size: A3 Date: 2024-01-28  
KiCad E.D.A. 8.0.6

Rev:  
Id: 5/5