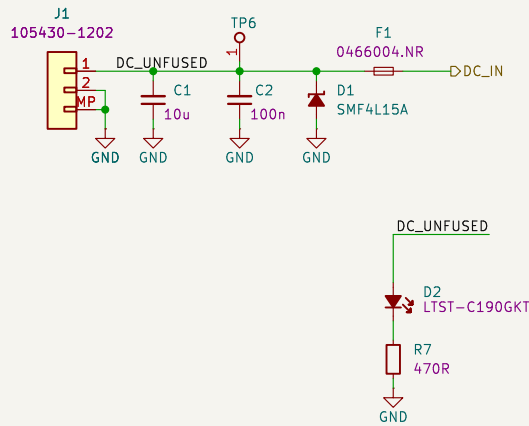
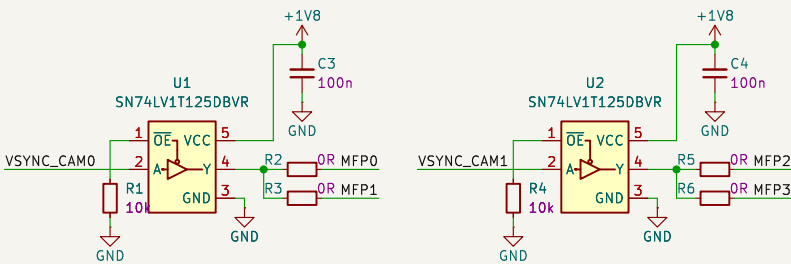


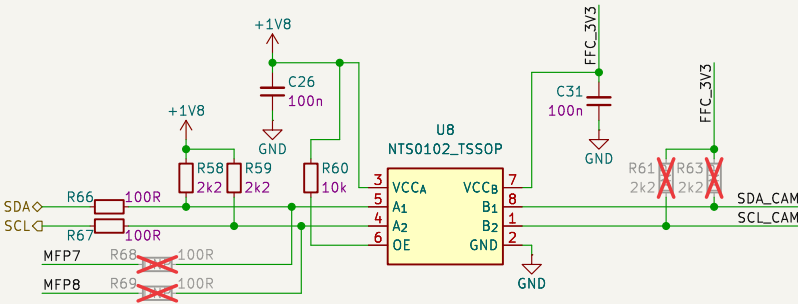
Power connector



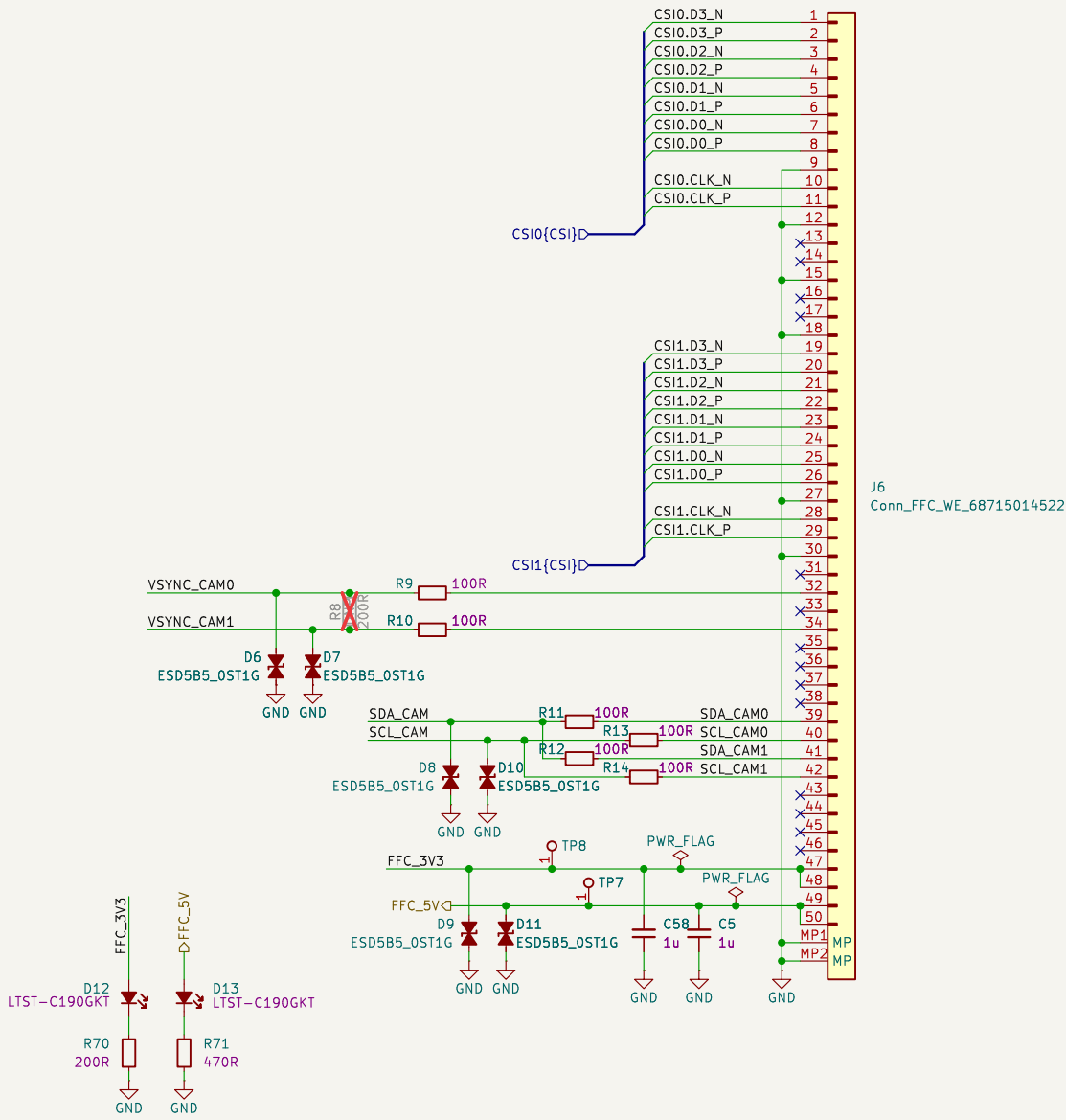
Buffer gates



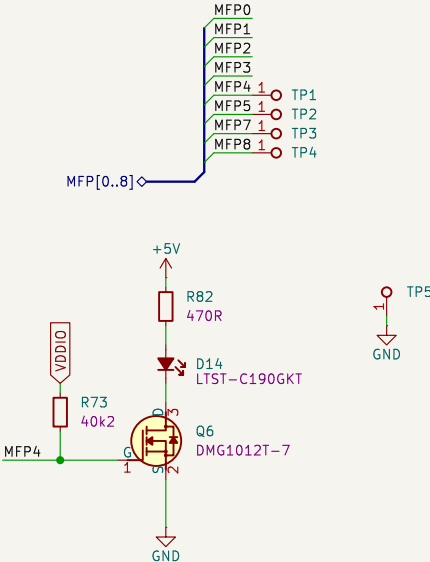
Level shifter



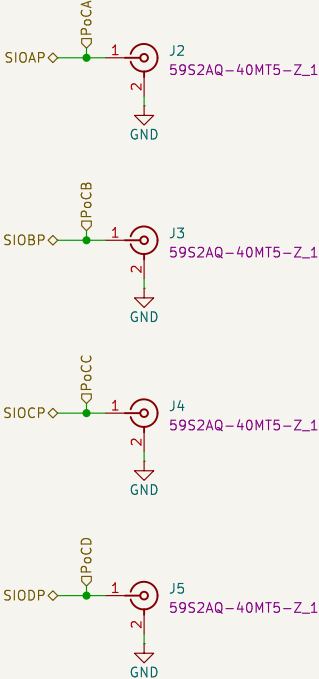
CSI connector



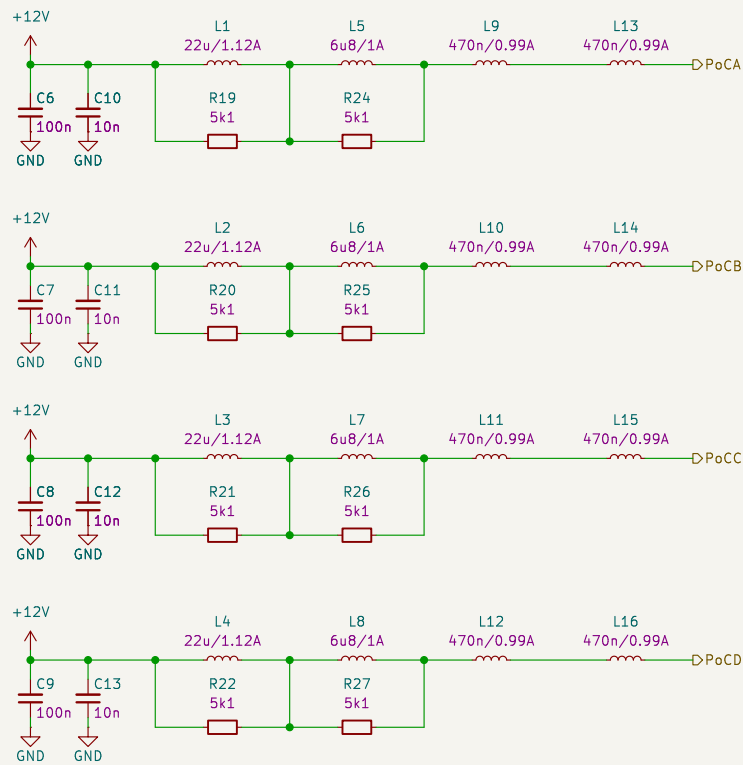
Multi-function pins



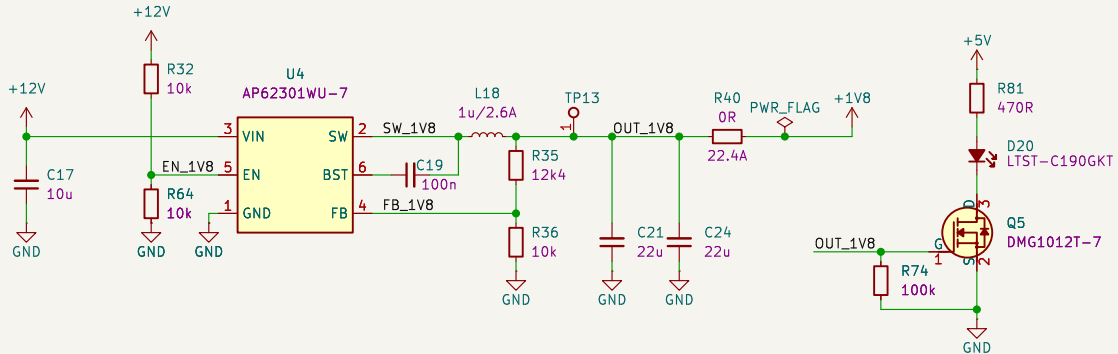
Fakra connectors



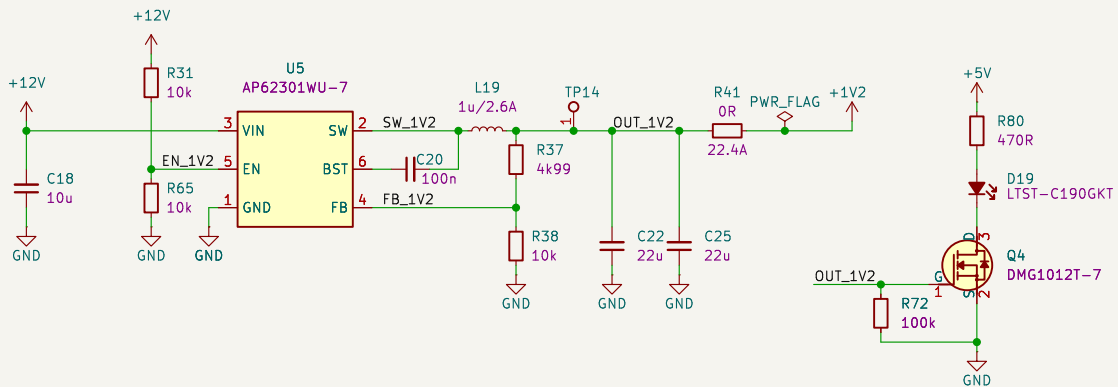
PoC circuit



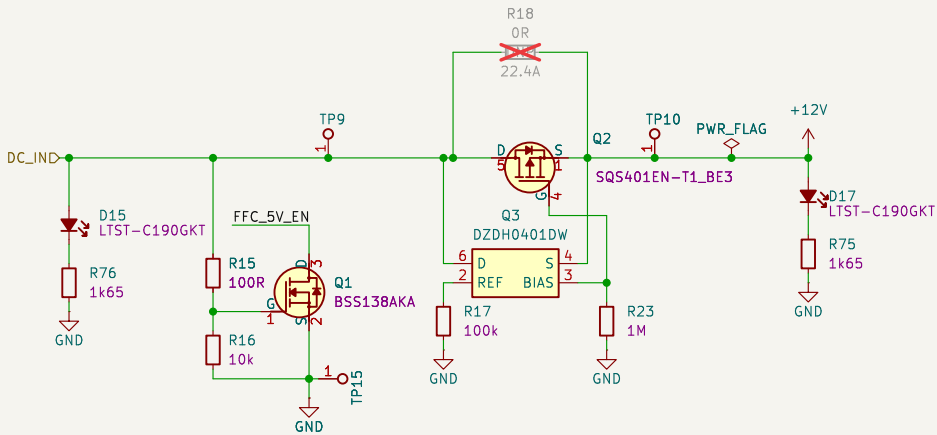
Buck converter
12V to 1.8V



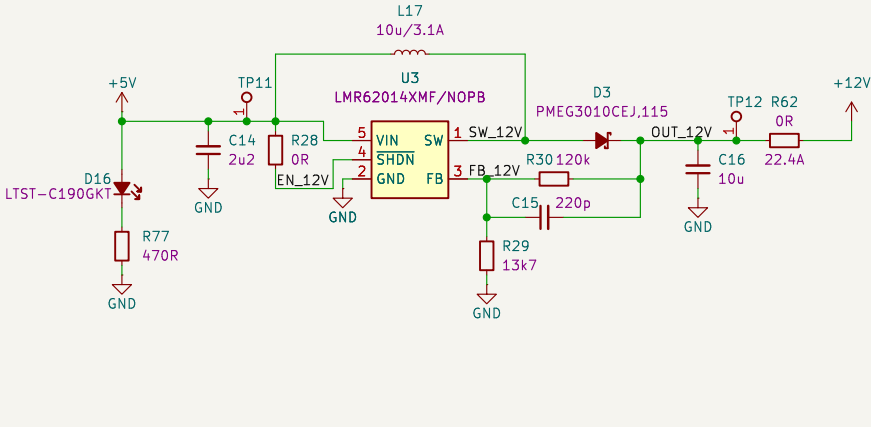
Buck converter
12V to 1.2V



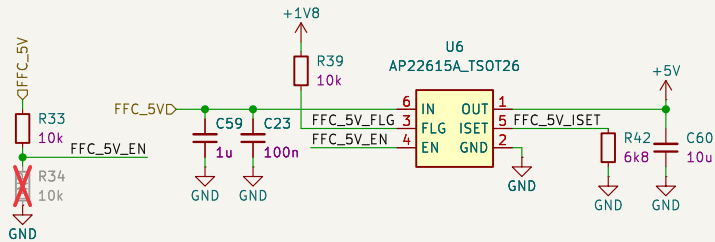
Power arbiter



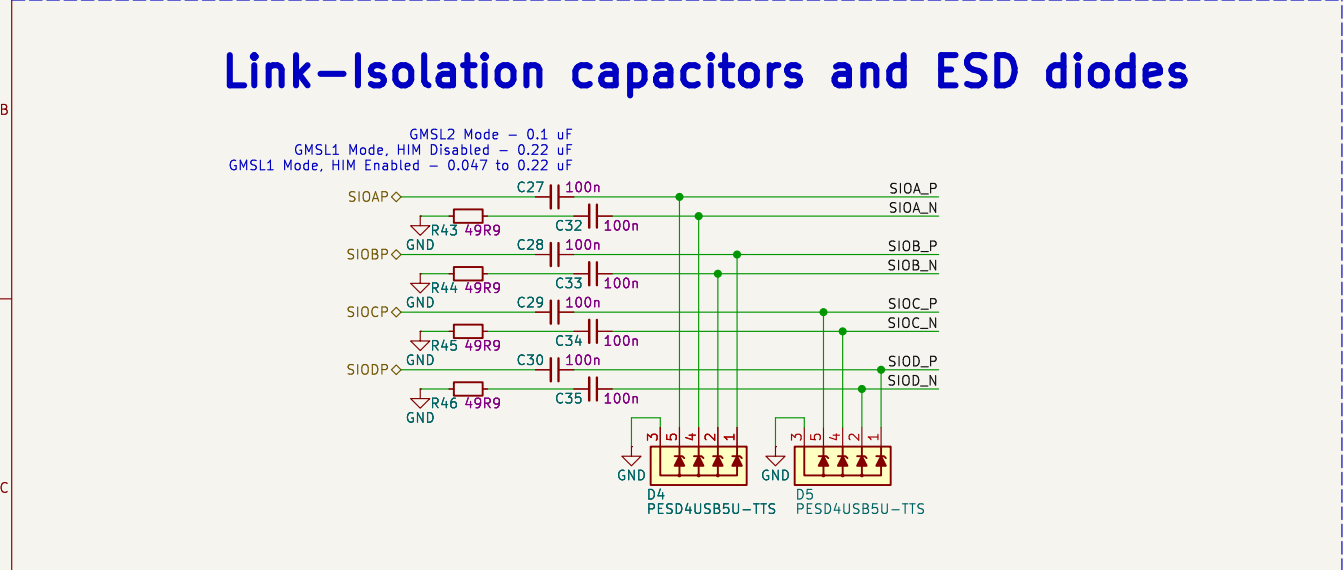
Boost converter
5V to 12V



FFC 5V current limit



Link-Isolation capacitors and ESD diodes

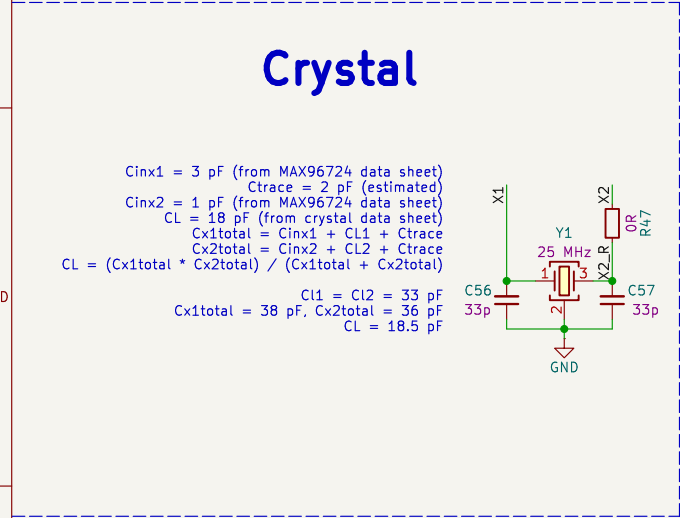


Crystal

$C_{inx1} = 3 \text{ pF}$ (from MAX96724 data sheet)
 $C_{trace} = 2 \text{ pF}$ (estimated)
 $C_{inx2} = 1 \text{ pF}$ (from MAX96724 data sheet)
 $CL = 18 \text{ pF}$ (from crystal data sheet)
 $C_{x1total} = C_{inx1} + CL_1 + C_{trace}$
 $C_{x2total} = C_{inx2} + CL_2 + C_{trace}$
 $CL = (C_{x1total} * C_{x2total}) / (C_{x1total} + C_{x2total})$

$CL_1 = CL_2 = 33 \text{ pF}$
 $C_{x1total} = 38 \text{ pF}$, $C_{x2total} = 36 \text{ pF}$
 $CL = 18.5 \text{ pF}$

The diagram shows a crystal oscillator circuit. A 25 MHz crystal (Y1) is connected between pins 1 and 2. Pin 1 is connected to X1 and C56 (33pF). Pin 2 is connected to X2, C57 (33pF), and GND. X1 is connected to a green line. X2 is connected to a green line and a 0R resistor (R47) to ground.

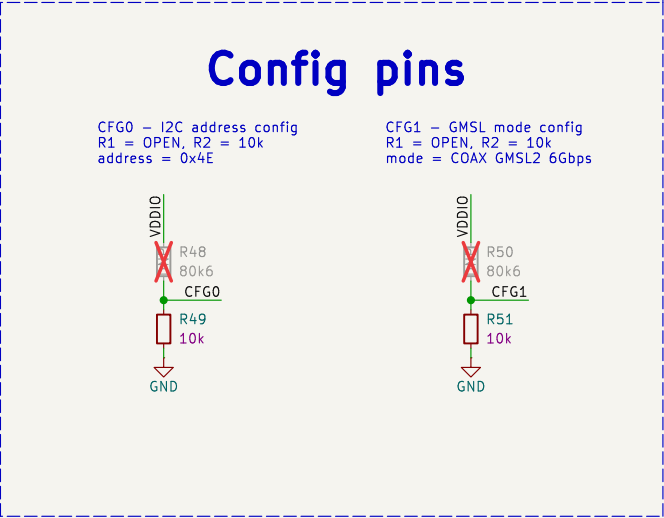


Config pins

CFG0 – I2C address config
R1 = OPEN, R2 = 10k
address = 0x4E

CFG1 – GMSL mode config
R1 = OPEN, R2 = 10k
mode = COAX GMSL2 6Gbps

The image shows two circuit diagrams for configuration pins. The left diagram for CFG0 shows a pull-up resistor R49 (10k) connected to VDDIO, with a green dot at the junction labeled CFG0. A red 'X' is placed over the VDDIO label. The right diagram for CFG1 shows a pull-up resistor R51 (10k) connected to VDDIO, with a green dot at the junction labeled CFG1. A red 'X' is placed over the VDDIO label. Both diagrams show the connection to GND.



Deserializer IC with passives

The schematic diagram illustrates the power and signal connections for a Deserializer IC (MAX9674GTN/VY+). The IC is shown in a yellow box. The connections are as follows:

- Power Connections:**
 - +1V8:** Connected to pins 21 (VDD_1.8V), 22 (VDD_1.2/1.0V), 24 (VDDIO), 25 (VDDIO), 26 (PWNB), 27 (VTERM), 28 (SCL), 29 (SDA), 30 (PWNB), 31 (VTERM), 32 (SCL), 33 (SDA), 34 (PWNB), 35 (VTERM), 36 (SCL), 37 (SDA), 38 (PWNB), 39 (VTERM), 40 (SCL), 41 (SDA), 42 (PWNB), 43 (VTERM), 44 (SCL), 45 (SDA), 46 (PWNB), 47 (VTERM), 48 (SCL), 49 (SDA), 50 (PWNB), 51 (VTERM), 52 (SCL), 53 (SDA), 54 (PWNB), 55 (VTERM), 56 (SCL), 57 (SDA).
 - +1V2:** Connected to pins 18 (SIOB_P), 19 (SIOB_N), 10 (SIOC_P), 9 (SIOC_N), 5 (SIOD_P), 6 (SIOD_N), 4 (CFG0), 1 (MFP0), 2 (MFP1), 3 (MFP2), 12 (MFP3), 13 (MFP4), 14 (MFP5), 25 (CFG1/MFP6), 26 (MFP7), 27 (MFP8).
 - +1V2:** Connected to pins 18 (SIOB_P), 19 (SIOB_N), 10 (SIOC_P), 9 (SIOC_N), 5 (SIOD_P), 6 (SIOD_N), 4 (CFG0), 1 (MFP0), 2 (MFP1), 3 (MFP2), 12 (MFP3), 13 (MFP4), 14 (MFP5), 25 (CFG1/MFP6), 26 (MFP7), 27 (MFP8).
 - +1V8:** Connected to pins 21 (VDD_1.8V), 22 (VDD_1.2/1.0V), 24 (VDDIO), 25 (VDDIO), 26 (PWNB), 27 (VTERM), 28 (SCL), 29 (SDA), 30 (PWNB), 31 (VTERM), 32 (SCL), 33 (SDA), 34 (PWNB), 35 (VTERM), 36 (SCL), 37 (SDA), 38 (PWNB), 39 (VTERM), 40 (SCL), 41 (SDA), 42 (PWNB), 43 (VTERM), 44 (SCL), 45 (SDA), 46 (PWNB), 47 (VTERM), 48 (SCL), 49 (SDA), 50 (PWNB), 51 (VTERM), 52 (SCL), 53 (SDA), 54 (PWNB), 55 (VTERM), 56 (SCL), 57 (SDA).
- Signal Connections:**
 - SCL:** Connected to pins 28, 32, 36, 40, 44, 48, 52, 56.
 - SDA:** Connected to pins 29, 33, 37, 41, 45, 49, 53, 57.
 - CSIO.D0_P, CSIO.D0_N, CSIO.D1_P, CSIO.D1_N, CSIO.D2_P, CSIO.D2_N, CSIO.D3_P, CSIO.D3_N, CSIO.CLK_P, CSIO.CLK_N:** Connected to pins 31, 32, 33, 34, 35, 36, 37, 38, 39, 40.
 - CSI1.D0_P, CSI1.D0_N, CSI1.D1_P, CSI1.D1_N, CSI1.D2_P, CSI1.D2_N, CSI1.D3_P, CSI1.D3_N, CSI1.CLK_P, CSI1.CLK_N:** Connected to pins 51, 52, 53, 54, 55, 56, 57.
- Other Connections:**
 - CFG0:** Connected to pin 4.
 - MFP0:** Connected to pin 1.
 - MFP1:** Connected to pin 2.
 - MFP2:** Connected to pin 3.
 - MFP3:** Connected to pin 12.
 - MFP4:** Connected to pin 13.
 - MFP5:** Connected to pin 14.
 - CFG1/MFP6:** Connected to pin 25.
 - MFP7:** Connected to pin 26.
 - MFP8:** Connected to pin 27.
 - X1/OSC:** Connected to pin 15.
 - X2:** Connected to pin 16.
 - CAP_VDD:** Connected to pin 20.
 - XRES:** Connected to pin 17.
 - GND:** Connected to pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57.

