

## EVB PCB Schematics and Pinouts

The SPU-001 EVB PCB can be used with any host with an SPI interface and 1.8-3.3V logic.

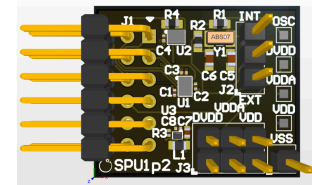
There are two variations available:

- EVB2: SPU-001-CSP (TC2) package
- EVB3: SPU-001-QFN (TC2) package
- EVB4: SPU-001-CSP (Mass Production) package

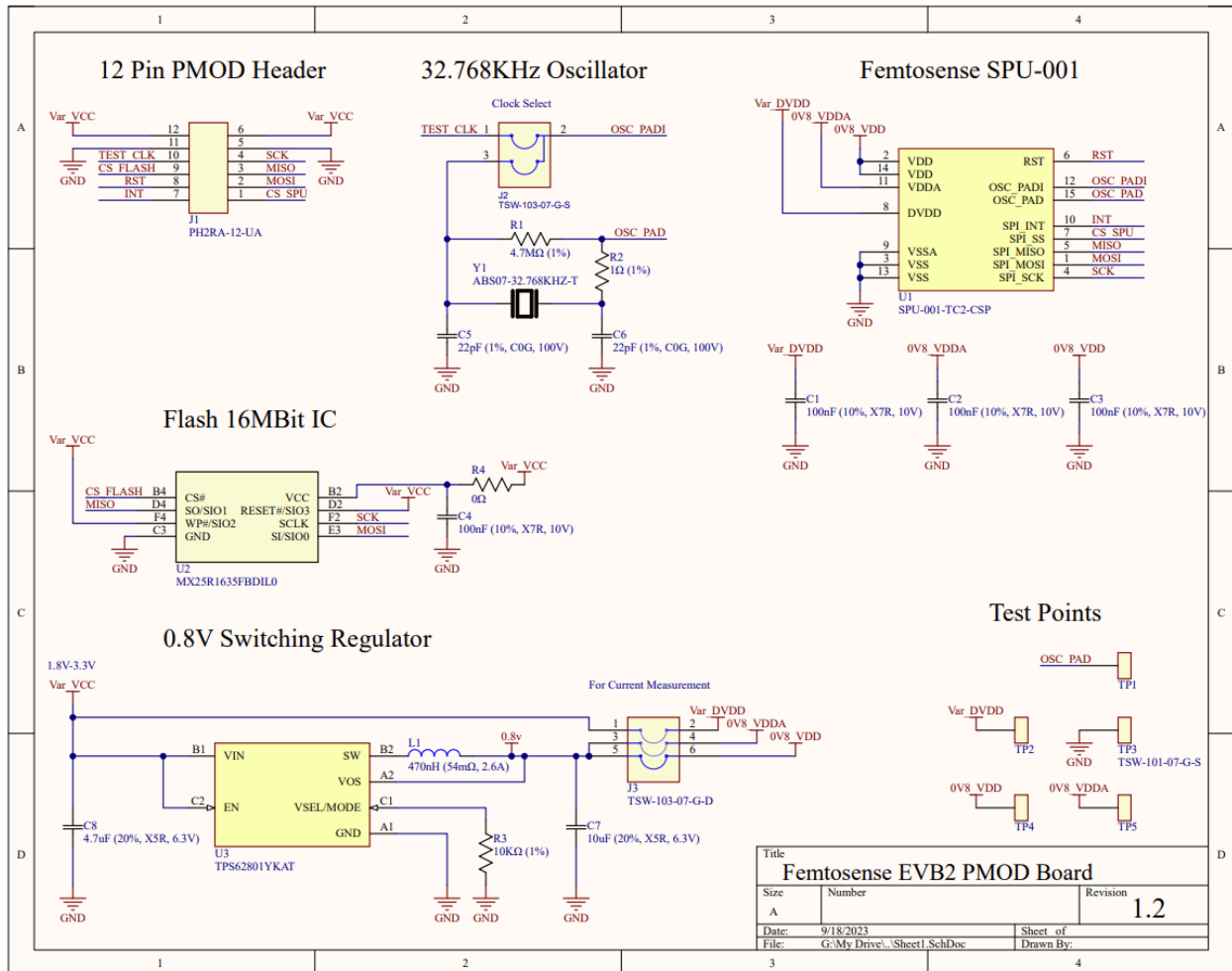
These boards are mostly backwards compatible, however EVB4 replaces one VCC pin with the 0.8V regulator enable pin. The schematics are given below:

# SPU-001 Evaluation Kit

## Application Note 002

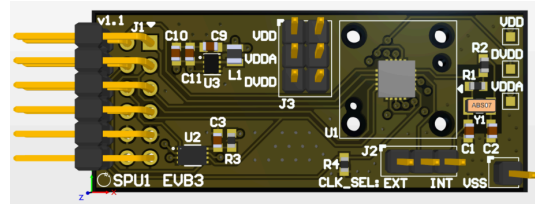


### EVB2

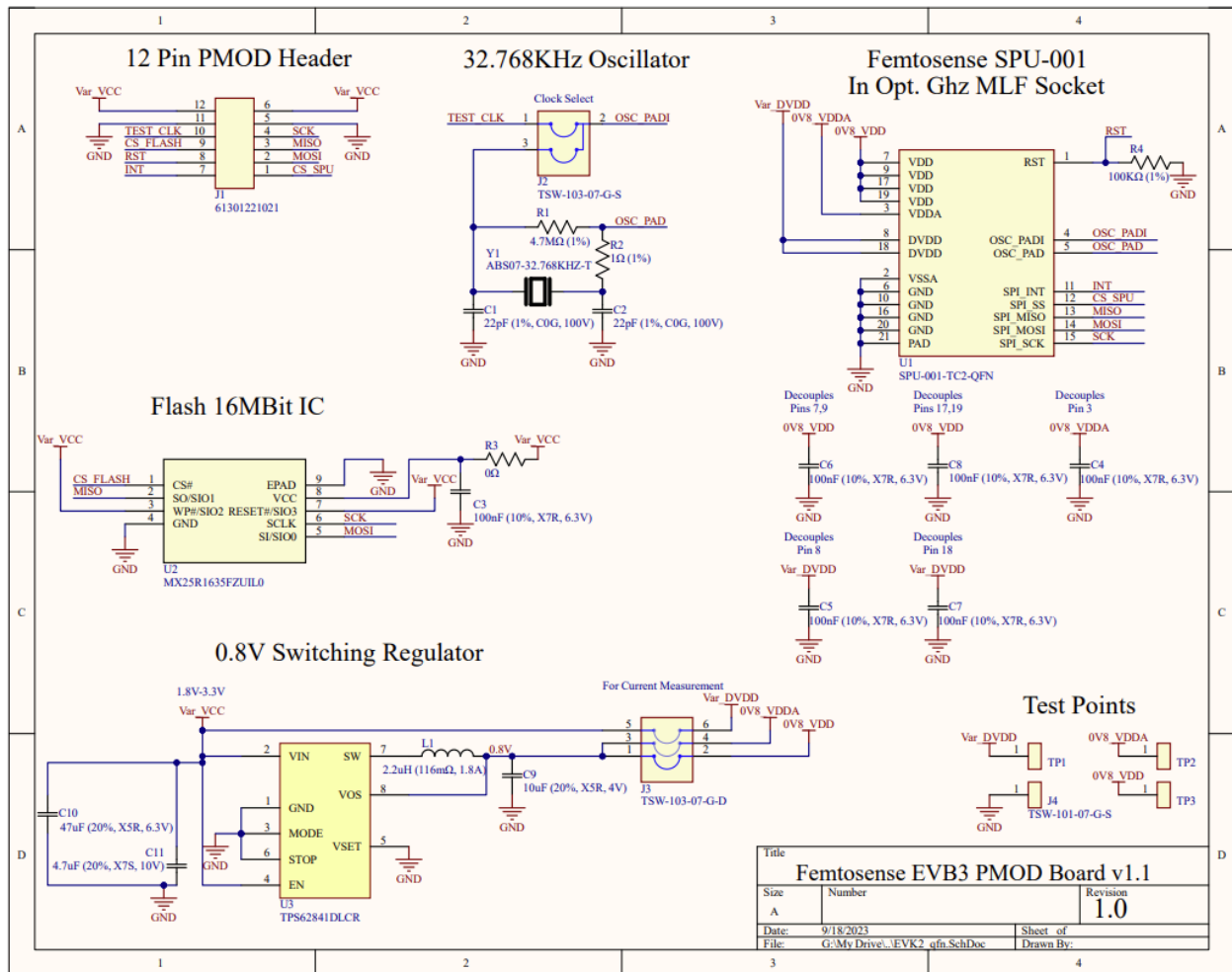


# SPU-001 Evaluation Kit

## Application Note 002

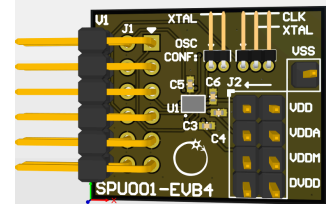


### EVB3

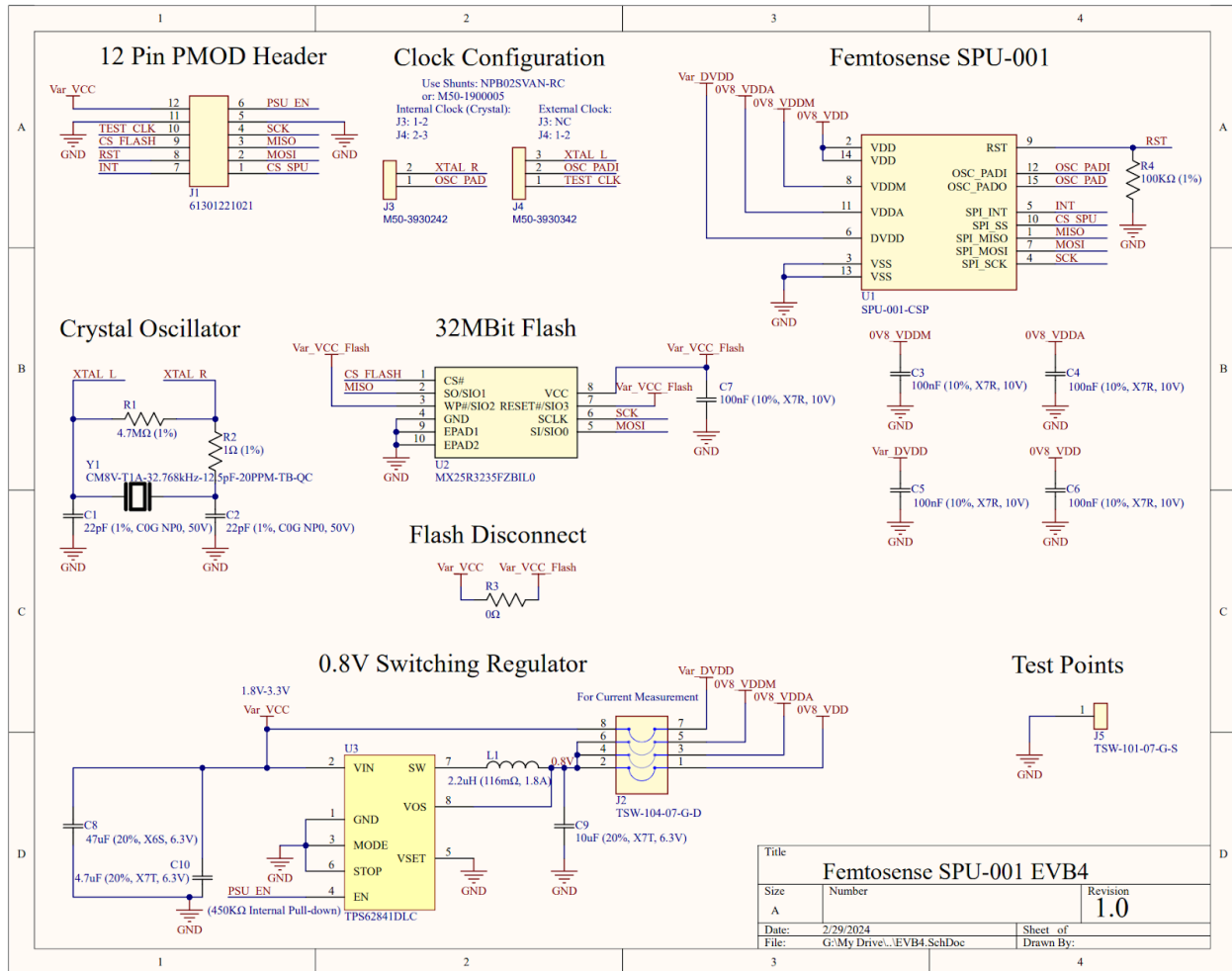


# SPU-001 Evaluation Kit

## Application Note 002

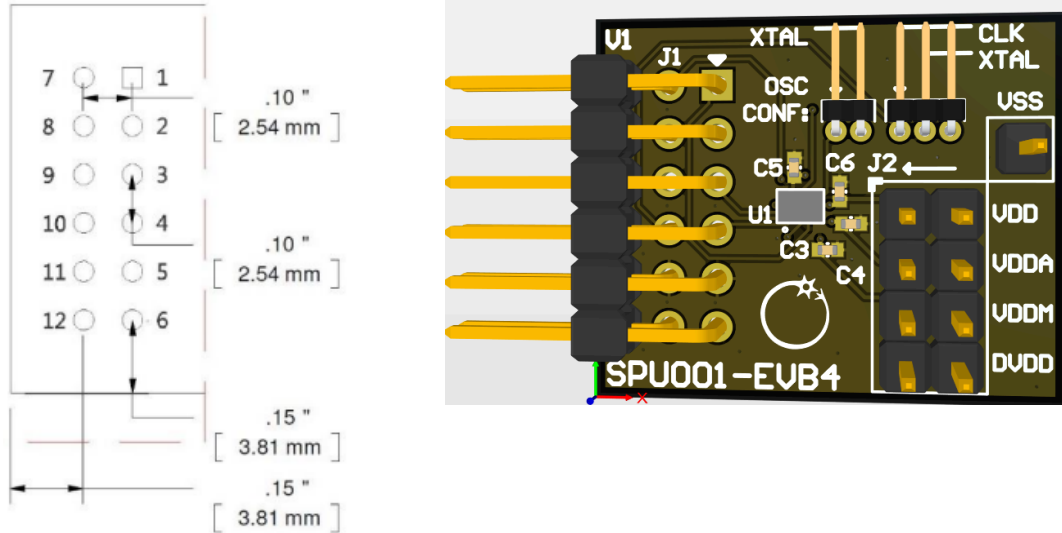


### EVBA



Application Note 002

The pinout of the main header J1 is pin-compatible with the Digilent PMOD interface type 2A specification. Optionally, on EVB4, the 0.8v regulator output can be controlled.



Pin	Description	Note
1	SPI Chip Select for SPU-001	active low
2	SPI MOSI signal	mode 0
3	SPI MISO signal	mode 0
4	SPI SCK clock signal	mode 0
5	Ground	
6	PSU Enable (EVB4) or VCC (EVB2, EVB3)	active high
7	SPU Interrupt signal	logic high when data frame is ready
8	SPU Reset signal	active high
9	SPI Chip Select for onboard flash chip	active low
10	Reference Clock for SPU	VCC level
11	Ground	
12	VCC	1.8V-3.3V

**Application Note 002**

Note: All IO, including PSU enable and the reference clock, should be referenced to VCC logic level.

## Jumpers

The jumpers should be configured as follows:

Pin	Description	Configuration
DVDD	IO power rail, VCC	connect jumper vertically (EVB2) or horizontally (EVB3,EVB4)
VDDA	PLL power rail, 0.8v	connect jumper vertically (EVB2) or horizontally (EVB3,EVB4)
VDDM	Memory power rail, 0.8v	connect jumper horizontally (EVB4)
VDD	Main power rail, 0.8v	connect jumper vertically (EVB2) or horizontally (EVB3,EVB4)
CLK_SEL (EVB2,EVB3)	Reference clock selector	INT position: onboard oscillator EXT position: reference clock from J1 pin 10
OSC CONF (EVB4, 2 jumpers)	Reference clock selectors	For onboard oscillator: place 2 jumpers across XTAL markers For reference clock from J1 pin 10: place 1 jumper across CLK marker

## Change Log

Version	Release Date	Description
1.0	2023-05-04	Initial release
1.1	2023-07-23	Updated schematic with typo
1.2	2023-09-18	Added EVB3
1.3	2024-02-29	Added EVB4