This document lists the connections for the STM32F446ZE implementation.

The SPI pins are critical; the NCS pins may be swapped to any GPIO pin for convenience.

LCD Pins:

LCD VCC is +5V. Keep note of this. SPI reference is +3V3 however.

This device uses SPI3. The accompanying pins for this peripheral are

* PB2 (SPI3\_MOSI)
* PC10 (SPI3\_SCK)
* PC11 (SPI3\_MISO)
* PG9 (LCD\_NCS)
* PG14 (LCD\_RST)
* PF15 (LCD\_DC)
* PC9 (LCD\_LED) [ I don’t know what this does and I don’t think it was used. Keep it connected anyways]

AD9833 and MCP3202

These two devices share SPI Bus 1.

* PA5 (SPI1\_SCK)
* PA6 (SPI1\_MISO)
* PA7 (SPI1\_MOSI)
* PD14 (AD9833\_NCS)
* PD15 (MCP3202\_NCS)

Other pins:

* PC13 (User input button) [Can be anything. Probably have two buttons for up/down shifting frequency
* PA0 (ADC1\_IN0) [Direct STM32 Analog input]
* PA1 (ADC2\_IN1) [Direct STM32 Analog input]