MSP432P401R DEVELOPMENT BOARD FEATHER BOARD COMPLIANT

DATA SHEET & TECHNICAL USE DOCUMENTATION

PINOUT DIAGRAM

Left (msp432 pin # listed last)

Reset Pin

3.3V Output

Voltage Reference Pin (analog)

Ground

Analog Input 1 (A0 | P5.5 | 44)

Analog I/O 2 (A1 | P5.4 | 43)

Analog I/O 3 (A2 | P5.3 | 42)

Analog I/O 4 (A3 | P5.2 | 41)

Analog I/O 5 (A4 | P5.1 | 40)

Analog I/O 6 (A5 | P5.0 | 39)

SCL Serial Clock (P6.7 | 50)

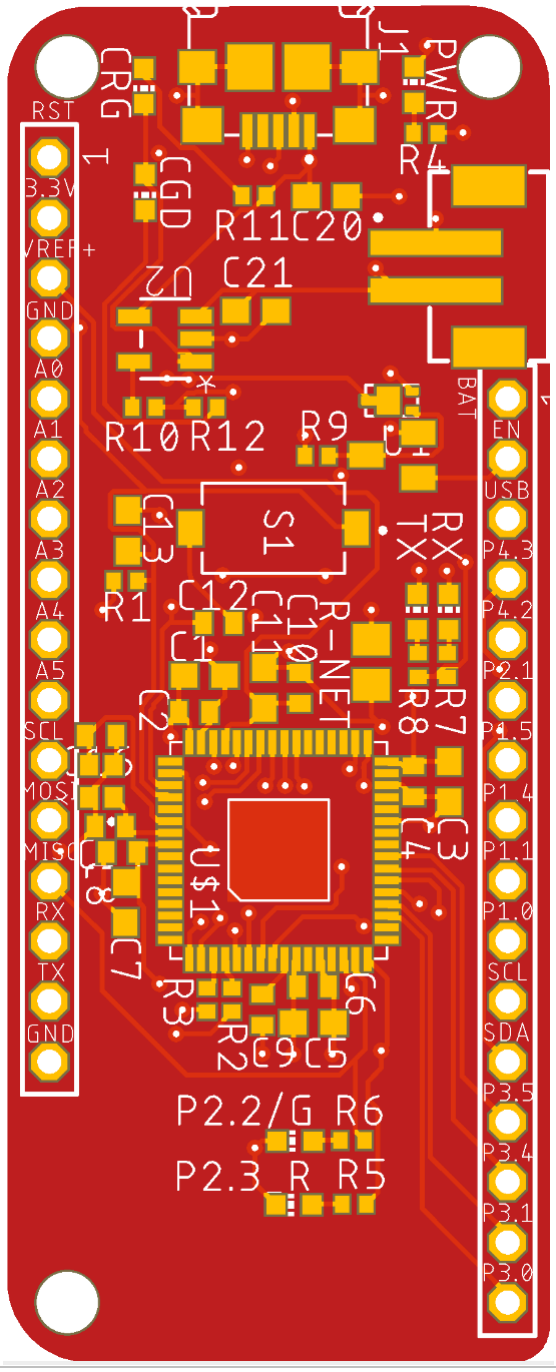
MOSI (P2.3 | 16)

MISO (P2.2 | 15)

RX (P3.2 | 21)

TX (P3.3 | 22)

Ground



Right

Battery Pin (4.2V MAX)

Power Passthrough Enable

USB Voltage Pin (4.5-5V)

P4.3 (A10 | 34)

P4.2 (A11 | 33)

P2.1 (14)

P1.5 (6)

P1.4 (5)

P1.1 (2)

P1.0 (1)

SCL Serial Clock (P1.7 | 8)

SDA (P1.6 | 7)

P3.5 (24)

P3.4 (23)

P3.1 (20)

P3.0 (19)

PIN REFERENCES:

analogRead() Pins: A0, A1, A2, A3, A4, A5, A10, A11
digitalRead(), digitalWrite() & analogWrite() Pins: P3.2 (21), P3.3 (22)
digitalRead() & digitalWrite() Pins: P4.3 (34), P4.2(33), P2.1(14), P1.5(6), P1.4(5), P1.1(2), P1.0(1), P3.5 (24), P3.4 (23), P3.1(20), P3.0 (19), A0 – A5, A10 & A11.
SPI: P6.7(50), P2.3(16), P2.2(15), P3.4 (23, Slave transmit enable)
I2C: P1.6(7), P1.7(8)

FUNCTIONALITY

The MSP432P401R Feather Board is a highly capable microcontroller and development board with 8 bits of total analog input (utilizing half of the available analog inputs) to provide a powerful 8-bit ADC functionality for your projects. In addition, the board offers 24 digital, interruptible GPIO pins. Output pins are also configured for SPI and I2C connectivity.

This feather board is designed to be fully compatible with the Adafruit feather wing breakout boards as well as other Adafruit feather interface boards.

Included is a 3.7-4.2V Lithium Polymer charger and battery connectivity for additional mobility and power needs through a 2 pin JST battery connector.

PROGRAMMING

Programming can be done using the integrated Serial to UART FTDI chip in conjunction with either Energia or Code Composer Studio.

ADDITIONAL RESOURCES

Please reference the MSP432P401R microcontroller datasheet, as well as the Texas Instruments website for help with the MSP432P401R.

MSP432P401R Datasheet (reference 64-VQFN package):
https://www.ti.com/lit/ds/symlink/msp432p401r.pdf?HQS=TI-null-null-digikeymode-df-pf-null-wwe&ts=1592429423731

Texas Instruments MSP432 getting started guide:
https://www.ti.com/lit/ug/slau597f/slau597f.pdf?ts=1592431970375&ref_url=https%253A%252F%252Fwww.ti.com%252Ftool%252FMSP-EXP432P401R%253FDCMP%253Dep-mcu-msp-432-en%2526HQS%253Dbeginmsp432launchpad

For compatible feather wings, please visit Adafruit's website:
https://www.adafruit.com/category/943