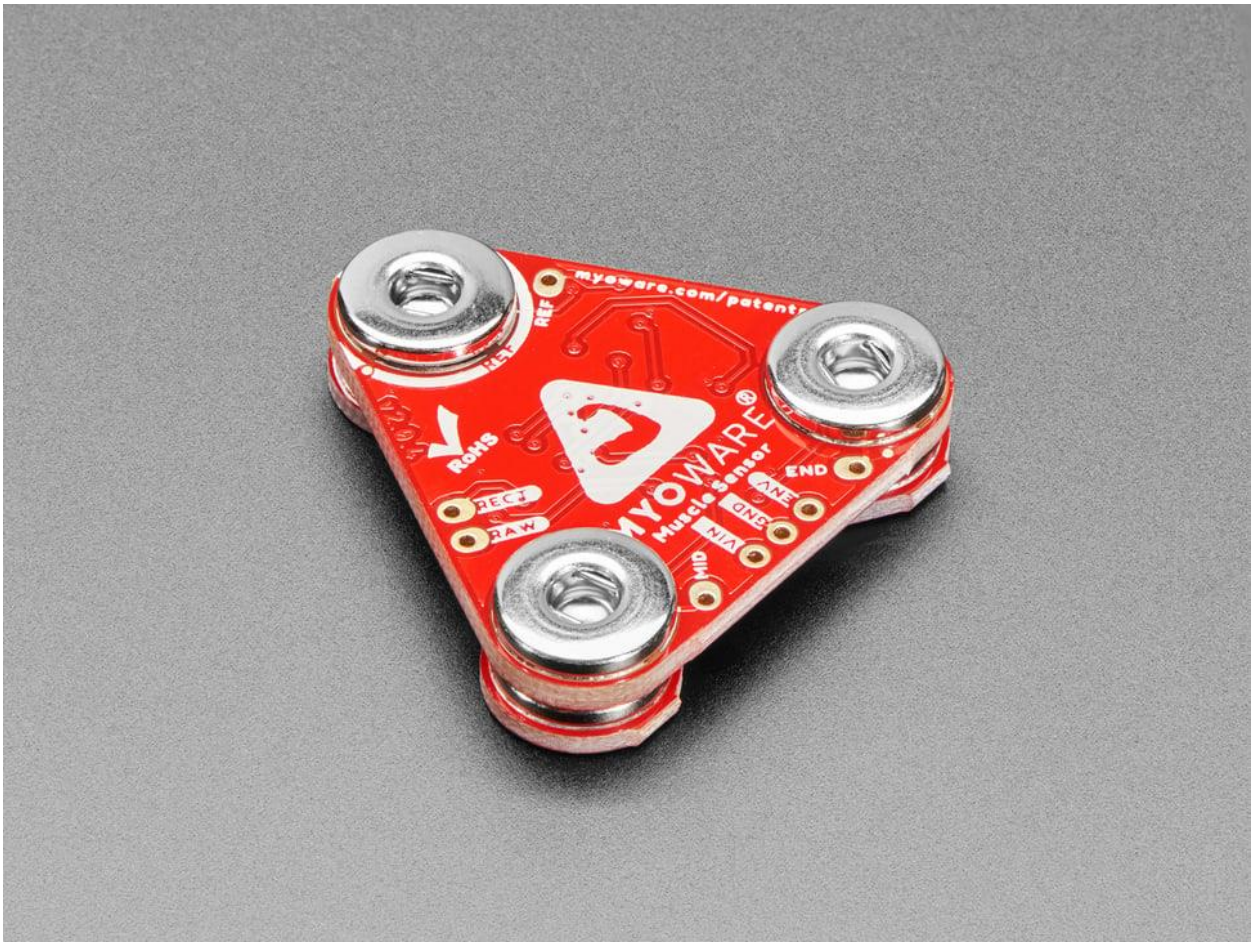
MyoWare 2.0 Muscle Sensor

Product ID: 2699



Description

Control your next project with your muscles with the MyoWare 2.0 Muscle Sensor! Pair the MyoWare with some Muscle Sensor Surface EMG Electrodes and a microcontroller (ie. Raspberry Pi, Arduino, or Beagle Bone Black) to create a DIY low-cost version of an EMG or an electromyograph!

Electromyography is an electrodiagnostic medicine technique for evaluating and recording the electrical activity produced by skeletal muscles. Use these sensors in prosthetics, robotics, and so much more! Once you attach the sensor to a large muscle (like your bicep) you can flex and measure the signal spike as an analog voltage.

These MyoWare Muscle Sensors are designed to be used by hobbyists, backyard tinkerers, and students alike.

Specifications:

- Wearable Design
- Supply Voltage
    - Minimum: +2.27V
    - Typically: +3.3V to +5V
    - Maximum: +5.47V
- Input Bias Current
    - 250pA, max 1nA
- Reverse Polarity Protection
- Three Output Modes
    - Raw EMG
    - Rectified
    - Envelope
- Expandable via Shields
- MyoWare® 2.0 Muscle Sensor Form Factor
    - 3x Female Snap Pins (Power and EMG Envelope Output)
    - 3x Male Snap Pins (Input Electrodes)
- LED Indicators
    - VIN
    - ENV
- Reference Electrode Jumper
- Specially Designed For Microcontrollers
- Adjustable Gain
- Board Dimensions
    - 37.57mm x 35.90mm (1.48” x 1.41”)

Technical Details

Revision History:

- As of March 28, 2023 – The following changes for V2.0.4 include:
  - PCB board thickness increased.
  - NPTH for snap connector buttons.
  - Updated footprint for snap connectors buttons with slots for improved cleaning.
  - Updated size of reference pin's jumper pad.

Getting Started Guide

MyoWare 2.0 Ecosystem Page

Github Example Repo

Schematic