SparkFun Experiential Robotics Platform (XRP) Controller - Beta
SKU: ROB-22727

Product Overview

The Experiential Robotics Platform (XRP) is a hands-on, comprehensive robotics platform and includes everything needed to build and program a robot to perform beginning through advanced tasks - building the foundation for innovative thinking, science, engineering, and problem solving. The platform provides:

- Progression from fundamental robotics to driving, line following, using sensors, using a robotic arm, and culminates in building an autonomous delivery robot

- Coding environment includes Blockly tools/libraries, Python, and the FIRST ® Robotics coding development tool, WPILib

- Easy-to-assemble hardware kit that can be assembled completely tool free (no soldering, no screws)

- Online activities and modules that build on one another

- Content designed for middle and high-school students and beginners

- Jumping off point for customizing the robot in countless ways

Features & Specs

Raspberry Pi Pico W:

- RP2040 microcontroller chip designed by Raspberry Pi in the United Kingdom

- Dual-core ARM Cortex M0+ processor, flexible clock running up to 133 MHz

- 264kB of SRAM, and 2MB of on-board Flash memory

- Infineon CYW43439 Based Wireless Module

- USB 1.1 Host and Device support

- Low-power sleep and dormant modes

- Accurate clock and timer on-chip

- Temperature sensor

- Accelerated floating point libraries on-chip

XRP Controller:

- LSM6DSO 6DoF IMU
- DRV8835 H-Bridge Motor Driver
- 4x DC Motor Connectors
- 2x Servo Motor Connectors
- 1x Vertical Qwiic Connector
- 1x Line Follower Connector
- 1x Range Sensor Connector
- 1x Extra Connector
- PWR & GND Pins
- GPIO28 & GPIO22 Pins for Pico W
- Power
- Barrel Jack
- microB USB (On Pico W)
- Power Switch