

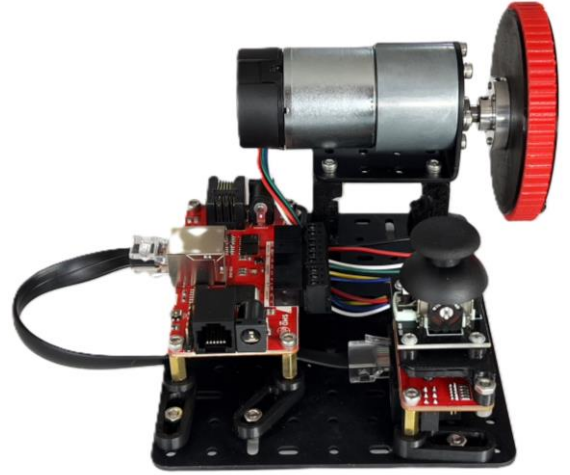
# SMD Starter Kit

## Technical Specifications

**Revision Date: 08/2024**

### Introduction:

ACROME SMD Starter Kit is based on ACROME Smart Motion Devices RED Brushed DC Motor Control Unit, a brushed DC Motor, and a joystick module. It comes with a USB Gateway to communicate with the PC. Software and other controller options are available.



### Purchase Options:

FEATURE MODEL	SOFTWARE & COURSEWARE OPTIONS				
	Arduino® C (requires Arduino controller)	Matlab / Simulink® (requires RasPi controller)	LabVIEW® [PC]	Python [PC]	(GUI) [PC]
SMD Starter Kit	+	+	+	✓	✓

✓ : Available as default

⊕ : Optional hardware/software to purchase

### General Information:

- SMD Starter Kit includes the mechanical plate, DC motor, flexible wheel, ACROME SMD modules for motor control, joystick input and USB gateway, connection cables, a 12Vdc power adapter and the software.
- System needs an external computer to operate. Unless requested explicitly from the customer, the external computer is not provided with the System.
- Multiple motors and different SMD Add-on sensors can be connected using the daisy-chain protocol of the SMD product line.

### Software Specifications:

- The System comes with an Application Programming Interface (API) for Python to control all the modules.

- System provides feedback to the software for its current position, velocity and torque (with current measurement).
- System uses USB as the default computer interface.
- API can be used with any OS through the USB interface.
- An optional GUI application is available. GUI runs on Windows 10/11 or Linux (Ubuntu distro is tested).

### Hardware Specifications:

- Motor specifications:
  - Type: Brushed DC Motor
  - Max speed: 100 RPM
  - Max. Holding Torque: 0.2 Nm
  - Nominal supply voltage: 12V dc.
  - Max. current: 2.5A dc.
- Encoder specifications:
  - Type: Incremental encoder with direction
  - Resolution: 64 Pulse per Revolution
  - Signal Type: TTL
- The motor is driven by ACROME SMD RED module, with built-in H-bridge circuitry.

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