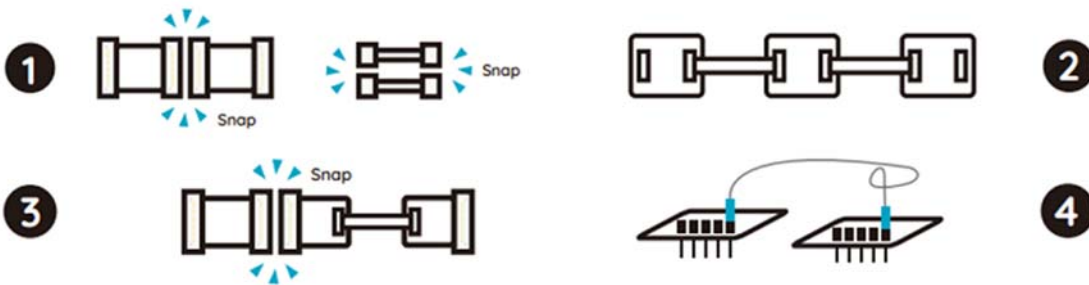# Grove Zero STEM Starter Kit
SKU 110060822

Description

Grove Zero is a series of color-coded and magnetic electronic modules that teaches students about programming, electronics, design thinking, and logics. The modules are plug-and-play and programmable with our computer-based app, or with the drag-and-drop blocks using the Microsoft MakeCode. Students can either just snap them together to make fun creative projects, or get into re-program the modules for advanced projects. With a curriculum that is written by very experienced educators, Grove Zero Kits allows teachers with no experience or lots of experience to bring the detailed lesson plans into their classroom and embed them in their learning system.

Plug-and-Play

Since the Grove Zero is specially designed for kids, the connection of modules is designed to be very simple. There are three connection ways.
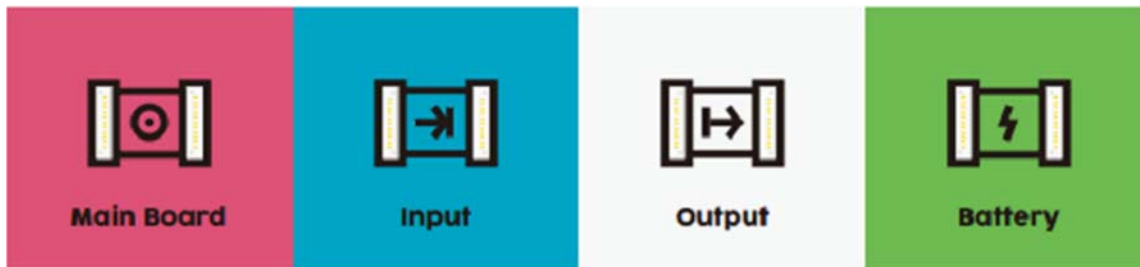
- Connect with Magnets
- Connect with Cables
- Connect with Breakout Holes

The easiest way is to use the magnetic connectors because kids can snap the modules together in any orders without concerning connecting to the wrong port.
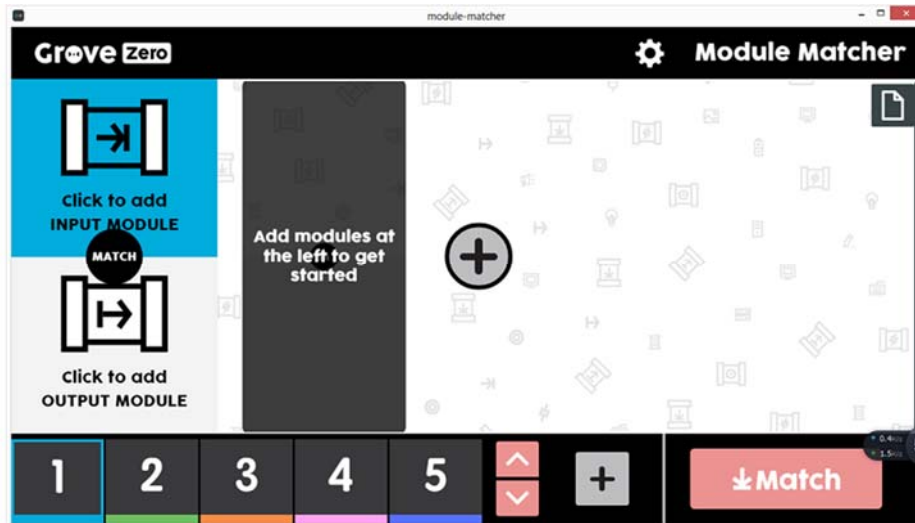

Color Coded

Grove Zero are all color-coded by functions. Currently there are four colors stands for different functionalities – Pink for the main board, blue for input module, white for output module, and green for battery module. The color coded feature is a good way for kids to distinguish modules types, and when kids open the package, they will find a colorful kit instead of single boring color.

Programmable Module

Grove Zero modules are all programmable, and programing with Grove Zero is very simple because it supports 2 graphical programming tools – Module Matcher for beginners and Microsoft MakeCode for advanced users. Just by some clicking and dragging, kids are able to build simple programming project and starts an invention journey.

As a product line specially designed for STEM, we hope Grove Zero not just have easy-to-use hardware, but also have rich and well designed documentation. As for the starter kit, we have already prepared well designed user guide that suitable for kids. In the near future, there will be organized courses and active communities based on Grove Zero, with which students will have a great inventor journey and go further in the electronic world.

Invention Journey with Grove Zero

Technical Details

Dimensions	273mm x 150mm x 33mm
Weight	G.W 489g
Battery	Exclude
Main Board MCU	Atmel SAMD21G18
Node MCU	STM32F030F4P6
Working Voltage	3.6V – 5V
Communication	I2C
9-Dof Chip	MPU9250

Light Sensor Chip	TSL2561
Temperature Sensor Chip	LM75A
Sound Sensor Chip	LM358

Module Size	
Basic	30mm x 25mm
Extended	50mm x 25 mm

Part List

Main Board	1
LED Matrix	1

Buzzer	1
Twin Button	1
Light Sensor	1
9-Dof	1
Temperature Sensor	1
Sound Sensor	1
Power	1