

# FULLY COMPATIBLE WITH ALL EV3 MOTORS & SENSORS



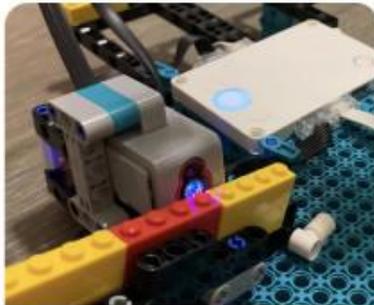
**More Motors  
& Sensors = More Fun!**



## QIKEASY ADAPTER

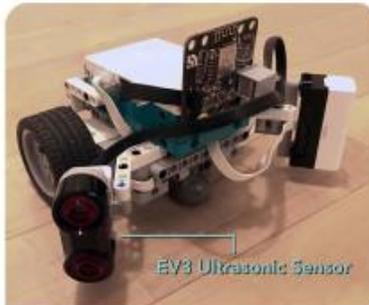
FOR LEGO SPIKE PRIME & MINDSTORMS ROBOT INVENTOR HUB

POWER BOOST YOUR ROBOT WITH AN EXTRA EV3 DEVICE



### **Color Sensor**

Use more than one color sensor to create a robot that detects color off the wall while follows a line on the floor.



### **Ultrasonic Sensor**

An extra ultrasonic sensors can give your robot more coverage surface in obstacle avoidance.



### **Touch Sensor**

It's always handy to have another push button.

## EV3 Gives You Capabilities that Don't Exist in the new LEGO Robotic sets



**COMPACT GYRO**  
Convenient & Flexible.  
Real time gyroscopic data  
without the constraint of  
mobilizing the bulky Lego  
hub.



**HIGH TORQUE MOTOR**  
EV3 Large Motor provides  
**significantly more torque** than  
the default Spike Prime motors  
for your demanding applications.



**HANDY REMOTE & DIRECTION BEACON**  
Control your robot with a handy  
physical remote control. Or, use it  
to detect **relative direction and  
distance** from the active IR Beacon.

## **Bonus Feature: WIRELESS Virtual Sensor capability**

PLUS Amazon Alexa integration

QikEasy Adapter now provides unique Wireless "Virtual Sensor" capability to Spike Prime and Robot Inventor. The Adapter emulates a Spike Prime Color Sensor, Force Sensor or Distance Sensor. Any HTTP capable device can remotely set measurements for the virtual device. For ease of use, the feature is fully compatible with both WORD BLOCK and Python.



The following demo illustrates the power of adding wireless capability to your Spike Prime or Robot Inventor system. As a bonus, we also show you how you can use Amazon ALEXA voice commands to activate actions on your LEGO robot. Using IFTTT, one will be able to enable Google Assistant and other triggers in the same way.

The "Virtual Sensor" feature opens a world of opportunities for enabling new functionality to your robotic projects: from wireless sensors, to remote control applications, to voice command activations. The possibilities are only limited by your imagination.

We will continue adding new capabilities to this product. Adding such new features is possible even after the product is released, as we can update the adapter board's firmware through its Over-the-Air Update functionality.

For Behind the Scene Videos:

For those interested who are interested in knowing more about how we build the demos, you may watch these videos to learn the details:

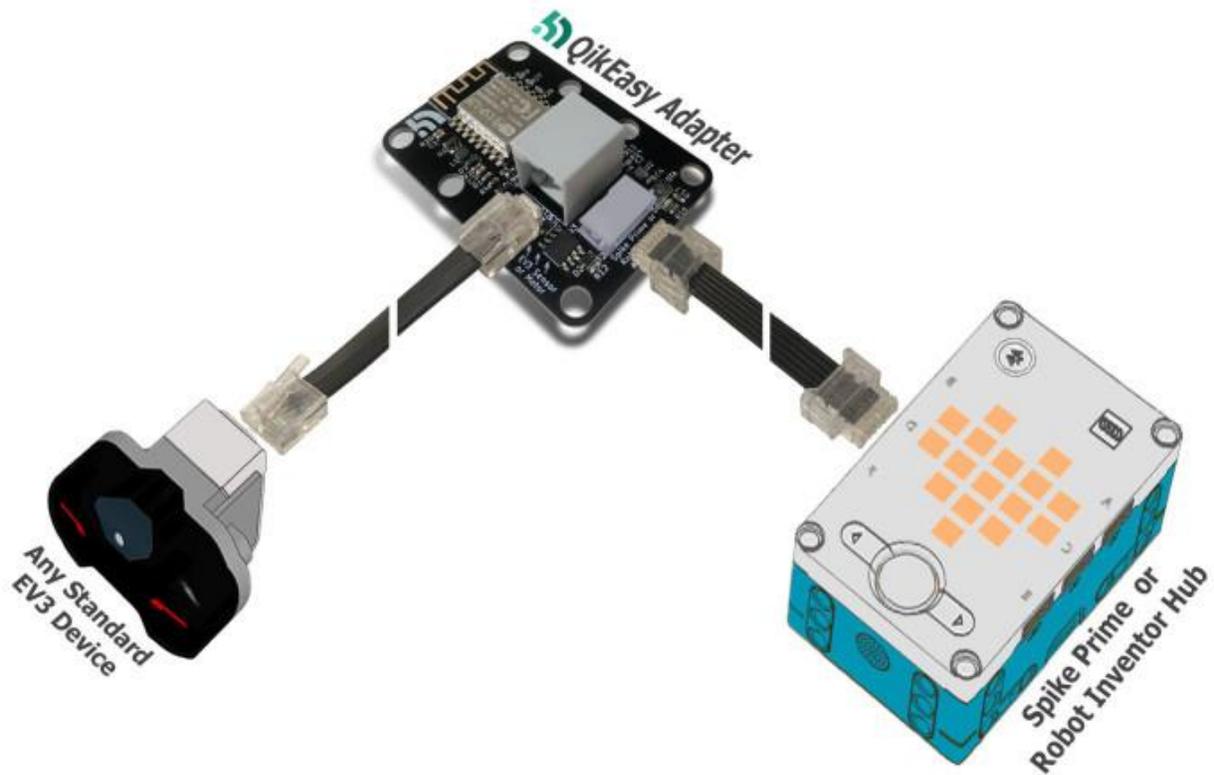
Setting up the Amazon ALEXA integration:

<https://youtu.be/fyhpGJvJtY0>

Making of Wifi Remote LEGO RaceCar:

<https://youtu.be/k6d4IVWuiZU>

## 100% Hassle-Free Plug-n-Play



“Size Compatible” with LEGO bricks

Build your protective cage 5×7 frames, and attach QikEasy Adapter to your LEGO robot.

# Save Money and Save the Environment

Instead of dumping your EV3 sensors and motors and harm the environment, we give these useful components A SECOND LIVE. QikEasy Adapter not only saves you money, it provides you functionalities that you don't get with your new LEGO robotic kit.



## We help Transition your Classes to the new Spike Prime system

The Challenge: Over the years of using EV3, many educators had customized their curriculum with their own custom construction plans. Moving to the new Spike Prime platform means that they will lose all their work, and they will have to completely redesign their curriculum.

Our Solution:

Enter QikEasy Adapter, you can now reuse your custom made EV3 based construction plans with your new hub.

*Upgrade Construction Plans Gradually.* With QikEasy Adapter, you may gradually transition from EV3 to Spike Prime. Without changing your hardware build plans, your students may use old EV3 devices with the new hubs.

*Ease Budget Constraint.* With QikEasy Adapter, since you will use the same construction plans for both the old and the new hub, you can have part of your class use the old hub and the rest use the new hub. So with limited budget, you may slowly update your class by only upgrading a subset of all the kits.



## State of The Art Technology

**100% Plug-n-Play** No External Power source Needed  
**Over-The-Air Firmware Update**  
**No External Power source Needed**

**Dedicated Processor for Protocol Emulation** **Word Block Support**

**Over-The-Air Firmware Update**  
**Compatible with ALL EV3 Devices**

100% Plug-n-Play  
No External Power source Needed **Word Block Support**

**Python Support**

# Supported Devices

EV3 Device	Feature Mode	WORD BLOCK Support	PYTHON Support
<b>Color Sensor</b>	Simple Color Mode	✓	✓
	RGB Raw	✓	✓
	Reflective Light	✓	✓
	Ambient Light	☆ <sup>1</sup>	✓
<b>Infrared Sensor</b>	IR Remote	✓	✓
	Proximity Sensing	✓	✓
	Heading & Distance from Beacon	☆ <sup>2</sup>	✓
<b>Ultrasonic Sensor</b>	Distance L (Up To 200cm)	✓	✓
	Distance S (Up To 32cm)	☆ <sup>1</sup>	✓
	Single Measurement	☆ <sup>1</sup>	✓
	Listen For Ultrasonic Signal	☆ <sup>1</sup>	✓
<b>Touch Sensor</b>	On or Off	✓	✓
<b>Large Motor</b>	Speed	✓	✓
	Relative Angular Position	✓	✓
<b>Medium Motor</b>	Speed	✓	✓
	Relative Angular Position	✓	✓
<b>NXT Motor</b>	Speed	✓	✓
	Relative Angular Position	✓	✓

☆<sup>1</sup> Not supported. Same behavior as Spike Prime sensor.

☆<sup>2</sup> Not supported due to technical limitation of the EV3 Infrared Sensor.

## What Others are Saying about QikEasy

*"If you have a bunch of old NXT motors or EV3 motors or sensors just lying around, then I strongly recommend you buy multiple copies of this awesome adapter. It's a game changer and it will make upgrading to the new system so much easier. I also greatly appreciate how their website has very good documentation and instructions how to use all the sensor and motors. They made it very easy to understand and I'm a big fan of this product."*

Ivan Filippov @ Unbreakme

Unbreakme is a Youtube channel on LEGO robotics with 28,000 subscribers.

*"The QikEasy EV3 Spike Prime Adapter lets you use old EV3 sensors with your Powered Up hubs. My favorite was the IR sensor!"*

Danny's LAB

Danny's LAB is a Youtube channel on LEGO robotics with 12,600 subscribers.



*"The QikEasy Adapter links the past to the present and let schools reuse and recycle LEGO robotic parts - this is a smart, eco-friendly decision! "*

Joey Tanaka,  
Award winning digital learning and robotics educator,  
Bertschi School, Seattle



*"The Qikeasy adapter solves a big problem for schools by giving old EV3 devices more longevity. I look forward to further development of this project. "*

Garry Law,  
Director of Creator Academy, Australia  
TEAM Educator, YouTuber



"如果你需要充分利用現有的EV3各種電子零件，這是一個不錯的連接方式，讓SPIKE有更多感應器或馬達可以使用，特別是31313的紅外線遙控，還有具備超強扭力的EV3、NXT馬達。"

邱信仁先生

機器人教育講師 @ 探奇自然科學工作室，台灣  
著名作家和博主

(Translation) "*QikEasy Adapter is a good way to allow you to fully utilize your existing EV3 devices, giving your Spike Prime system more motors and sensors, particularly the 31313 IR sensor and the high torque EV3 and NXT motors.*"

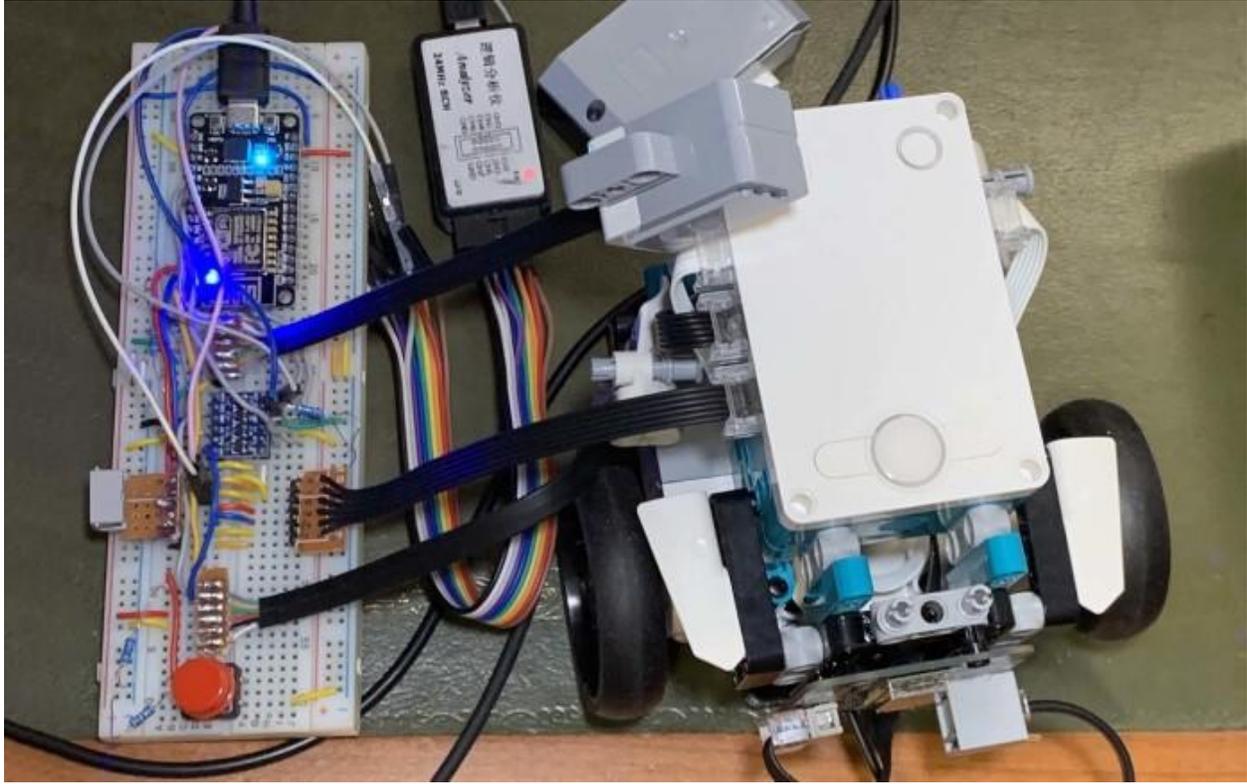
Mr Hunter Chiou

Robotics Educator in Taiwan

Renowned Robotics Authors and Blogger in Taiwan

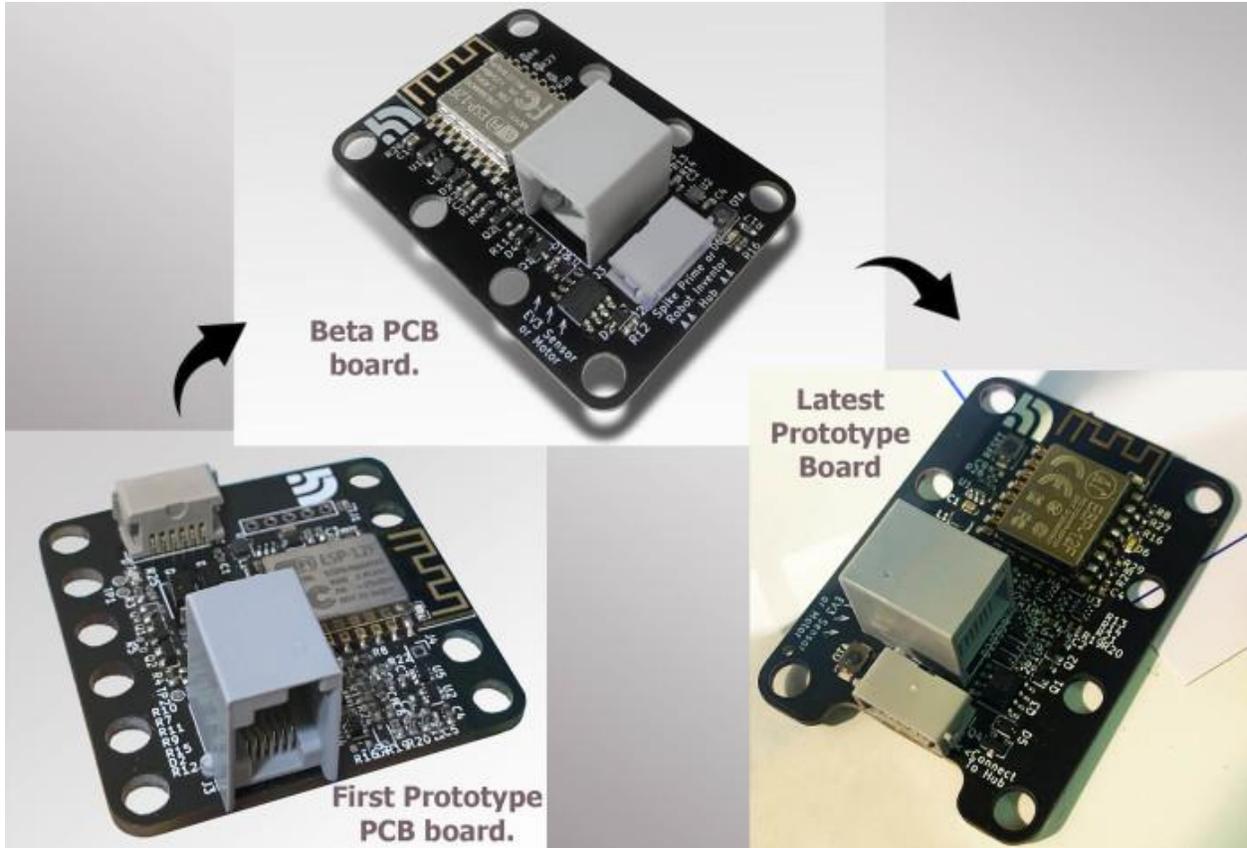
# Evolution of our Adapter Board

Our adapter board went through multiple iterations of design, testing and improvement.



Our initial proof of concept was built on a breadboard.

You can see the progression we made with every iteration of our PCB board.



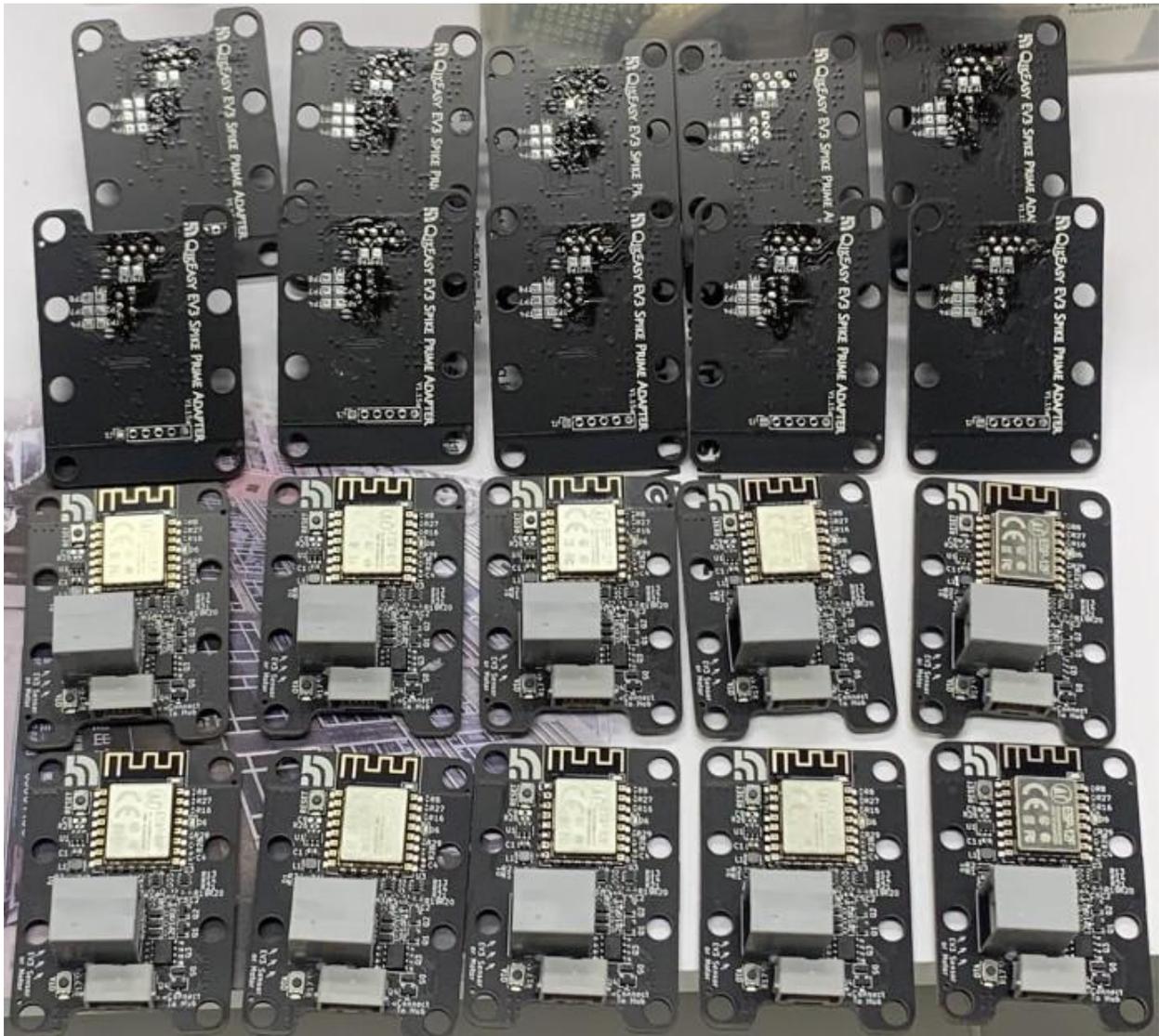
Aiming for perfection, we will be testing at least one more iteration of design update before releasing the board to the general public.

Here's our current status:

- ✓ Our prototype is fully functional as seen in the review videos.
- ✓ All circuit design and PCB layout of the final product are finished.
- ✓ Firmware programming is done.
- ✓ Beta program was successfully completed.
- ✓ Narrowing down qualified factories to help us build the final products.

Risks: LOW

- ✓ Our product being a PCB board is straightforward to manufacture.
- ✓ The circuit design and the MCU firmware are already done and field tested.
- ✓ Production samples were produced and are being intensively tested.



- ✓ Over-The-Air update capability provides reassured long term reliability.

Partner



An online educational supply store that deals in homeschool and teaching supplies in  
Canada.