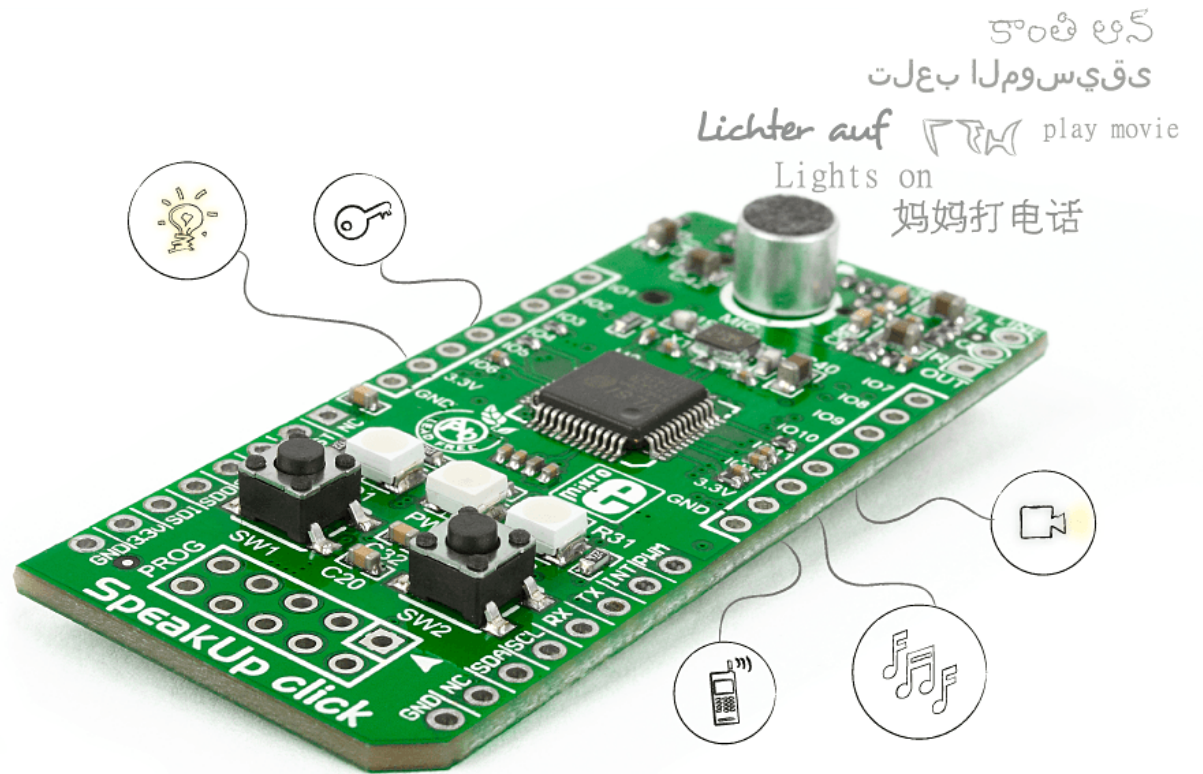



# SpeakUp<sup>1</sup> I'm listening.


The SpeakUp is a speech recognition click™ board. You can set it up to recognize over 200 different voice commands and have the on-board MCU carry them out instantly.

**PREORDER NOW**


shipping starts April 28th



 Easy to configure

 Over 200 commands

 Ultra fast operation

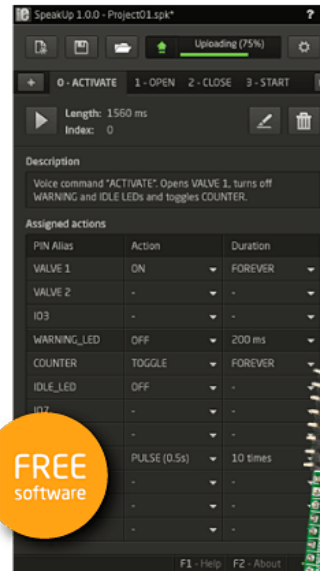
 Standalone mode

## Simple & Straightforward

SpeakUp learns from scratch, so you can make it understand your commands spoken in any language, dialect or slang.

## It listens and learns...

Using a simple interface on your computer, you record a word or phrase (up to 5 seconds) and assign it an instruction. Repeat for as many commands as you need.



## ...understands and obeys

When you put it to work, it listens to what you're saying, matches the sound to one of the pre-recorded commands, and triggers the specified action which the on-board MCU executes.

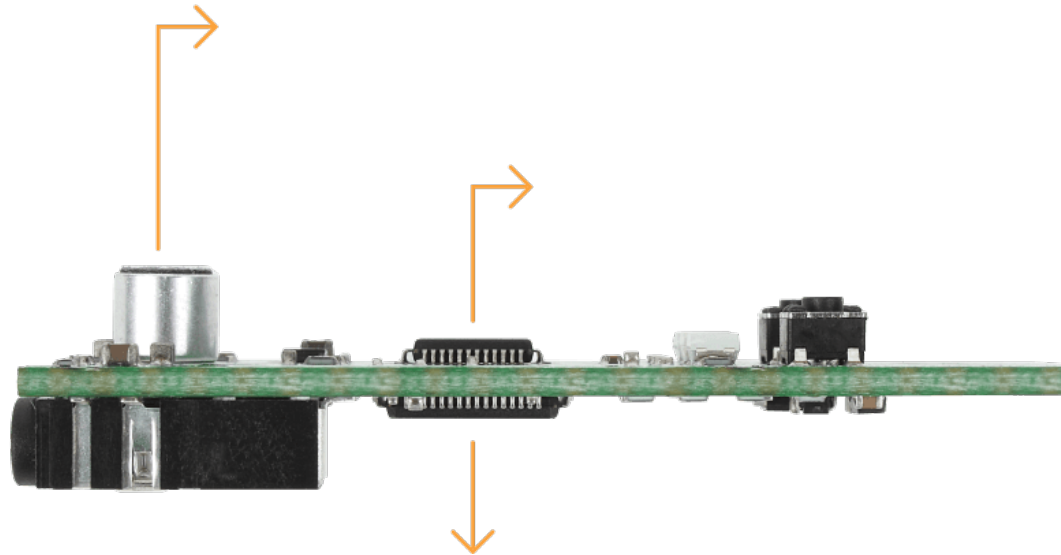
## Ins & Outs

What gives the SpeakUp its speech recognition capabilities is the firmware we developed for the on-board MCU. It's based on the DTW algorithm, which makes it decisive, it turns your talk into action almost instantly.

### Input:

Sound is received through an **on-board microphone**. There's also a **3.5mm jack** for connecting an external microphone.

Between the mic and the MCU sits a **VS1053** IC with a built in stereo-audio codec to process the raw signal.

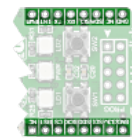
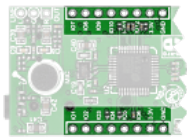


## Output:

After the processed sound has been forwarded to the **STM32F415RG** MCU that interprets the voice command, there are two output options which can be utilized at the same time or separately:

### STANDALONE

**MODE:** On-board MCU directly controls external devices using 12 user programmable GPIOs.

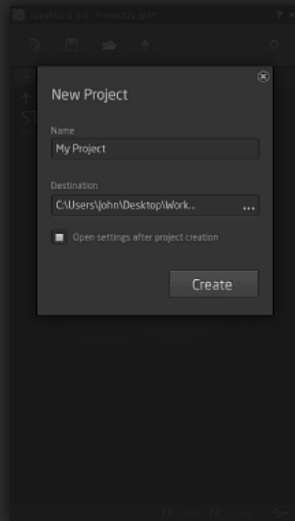


### CLICK™ MODE:

Sends index of the matched voice command to a selectable interface: USB or UART.

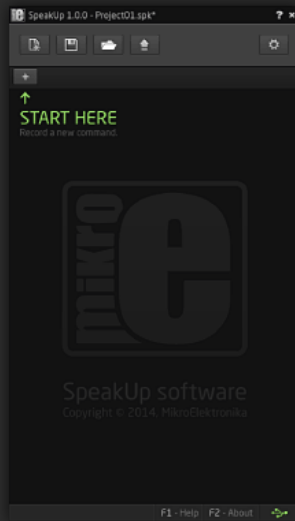
# Software Makes It Easy

Recording commands and assigning actions is dead simple thanks to the free software tool for programming the SpeakUp. First, connect the SpeakUp to your computer using a USB cable. It will show up as a HID device, so no special drivers are required. Just launch the app and start tinkering.



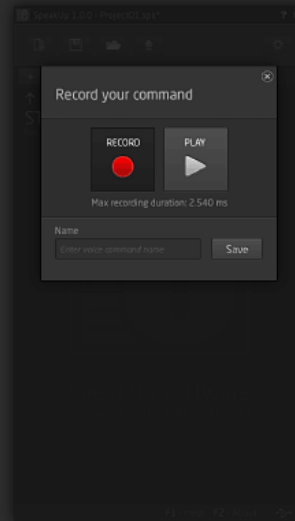
### 1. Create a project

Start by creating a new project. It will hold all of your settings and configuration.



### 2. Add a command

Commands are listed as tabs. Add a new one using the plus button in the upper left corner.



### 3. Record it

Record your voice command and give it a name. You can play it back to make sure it's OK.



## Turn Talk To Action

Wouldn't you rather issue verbal commands and have your machines comply, instead of pressing keys, pushing buttons and flipping switches all the time? There's a wide range of applications for the SpeakUp.



Command your lights, doors and home appliances.



Create voice commanded remotes for TVs or media centers.



Reduce complexity and cost of control interfaces.



When you do something with both hands and voice command is the only option.

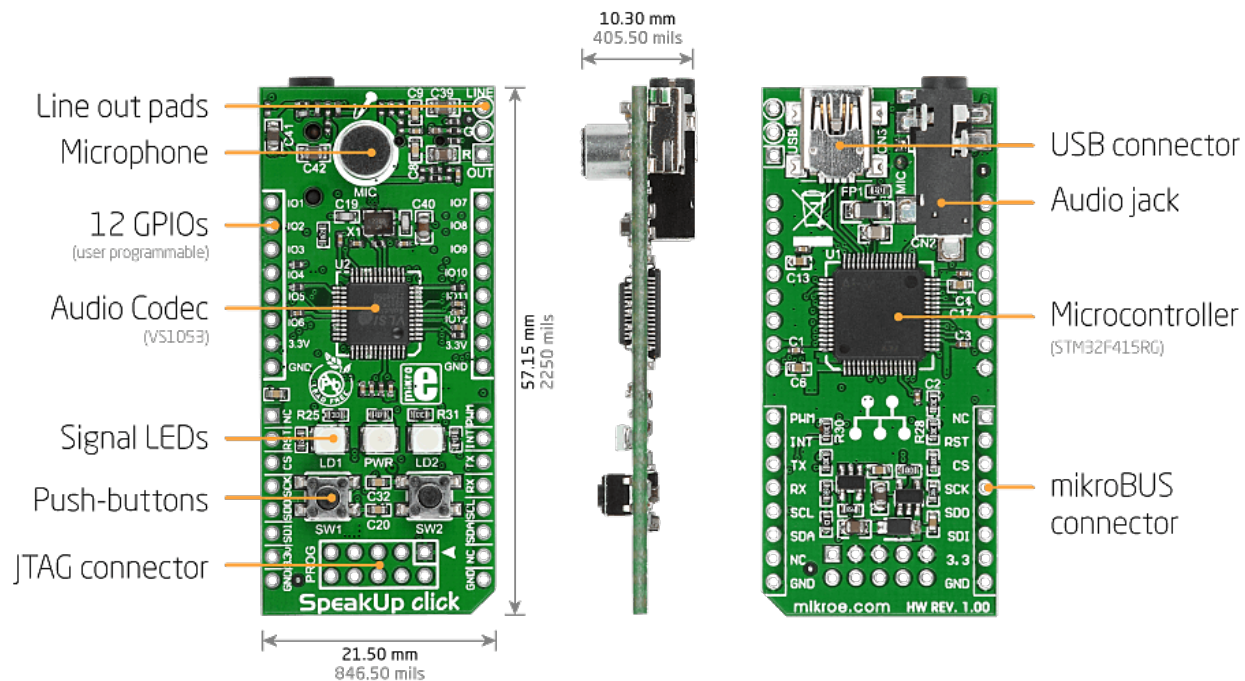


Examples coming soon!

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## Tech Specs

Along with its key components, the tiny click board packs other useful bits like two buttons for recording or deleting voice commands manually, three signal LEDs give recognition feedback and indicate power.



### Microphone

- Sensitivity:  $-44 \pm 3$ dB
- Frequency range: 100Hz to 20.000Hz
- Signal to noise ratio: 56dBA



### Microcontroller

- STM32F415RG (ARM Cortex-M4)
- 1024kB Flash, 192kB RAM
- 168MHz operation



### Audio codec


- VS1053 stereo audio codec
- Streaming support
- Line out pads




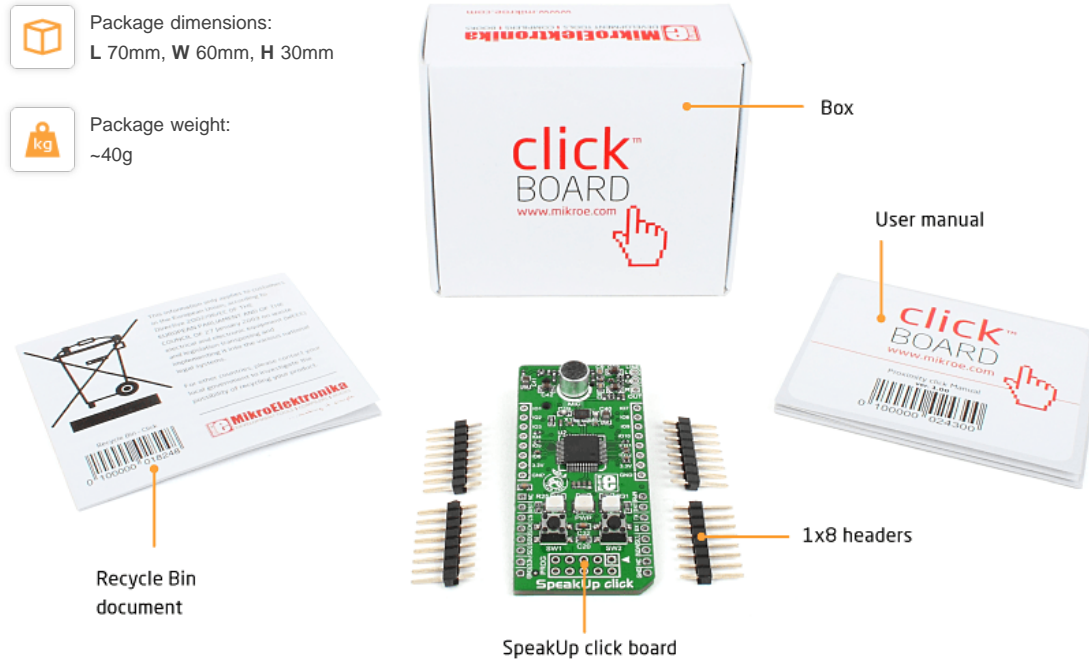
### Connectivity

- 12 programmable GPIOs
- mikroBUS connector
- USB MINI-B connector

## What You Get

 Package dimensions:  
L 70mm, W 60mm, H 30mm

 Package weight:  
~40g



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# Preorder Now For Shipping On April 28th

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MIKROE-  
1534

SpeakUp click

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