

# ATOM Echo Smart Speaker Dev Kit

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## Description

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For **Japanese users**, please order it from **Switch Science** @

For **US users**, please order it from **Digi-key** @

<https://www.digikey.com/product-detail/en/m5stack-technology-co-ltd/C008-C/2221-C008-C-ND/12174736>

**ATOM Echo** is a Programmable Smart Speaker based on the M5ATOM design. Its form factor is very small, its dimensions are only 24 \* 24 \* 17 mm. Music can be played using the bluetooth capabilities of the ESP32 from a mobile phone or tablet. The device could be programmed to access AWS, Baidu and other cloud platforms, using the built-

in microphone and speaker for voice interaction, so that M5AtomECHO has certain AI capabilities, realizing voice control, story telling, Internet of things and other functions. The speaker is embedded with an RGB LED (SK6812), which can visually display the connection status. In addition to being used as a Bluetooth speaker, it still has the control ability of Atom series. You can connect devices through the grove interface, G21 / G25 can only be used for general I/O, they do not support I2C and UART. Screw hole on the back is convenient for users to fix.

<https://www.cnx-software.com/2020/06/05/m5stack-atom-echo-coin-sized-bluetooth-speaker-is-powered-by-esp32-pico-d4-sip/>

<https://lemariva.com/blog/2020/06/m5stack-introducing-new-m5stack-atom-echo>

<https://www.youtube.com/watch?v=pfINimJDtio>

[https://www.youtube.com/watch?v=EFce9XoiUgE&feature=emb\\_logo](https://www.youtube.com/watch?v=EFce9XoiUgE&feature=emb_logo)

<https://www.hackster.io/PeterN/atom-echo-first-experiments-df6f12>

**Note: This product is not recommended to play low-frequency or heavy music for a long time.**

# ATTENTION

Please avoid such conditions with M5Stack Atom Echo:

- **DC output from I2S channel.**
- **Playing white noise for a long time.**
- **Playing full square-wave audio.**



## Product Features

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- Light and small
- Support STT services

- Based on ESP32, Support A2DP, BLE 4.0
- 2.4G WiFi IEEE 802.11b/g/n
- Built-in microphone and speaker
- RGB LED status display indication
- GROVE extension interface
- Record and playback
- Programmable key
- Programming platform:Arduino、ESP-IDF/ADF

## Include

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1x ATOM ECHO

## Applications

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- Bluetooth Speaker
- Voice control
- IoT

## Specification

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Resources	Parameter
SoC	ESP-PICO-D4,240MHz,Dual Core,BLE,Wi-Fi
Flash	4MB
Interface	1x IR-TX,1x Function Button,1x Reset Button
PinOut	G21/G25/5V/GND, 3V3/G22/G19/G23/G33
RGB LED	SK6812
Speaker	0.5W/NS4168 I2S
Micphone	SPM1423 PDM
net weight	5g
Gross weight	10g
Product Size	24*24*17mm
Package Size	63*63*12mm
Case Material	Plastic ( PC )

