

Description

Attention

Since this product is still in the DVT(Design Validation Test) stage, the final shipped

About "IoT into the Wild" (<https://www.seeedstudio.com/iitw.html>).

The theme of Seeed's new product launch in 2022 is "[IoT into the Wild](https://www.seeedstudio.com/iitw.html)". Check [. \(https://www.seeedstudio.com/iitw.html\)](https://www.seeedstudio.com/iitw.html), low-power sensors to ultra-long-range gateways fully featuring Edge AI and LoRaWAN.

【About SenseCAP】 Among the first launch of Seeed industrial IoT (IIoT) product series, **SenseCAP** (<https://solution.seeedstudio.com>) is focusing on wireless environmental sensing applications: smart agriculture, precision farming, and smart city, to name a few. It consists of hardware products (sensors, data-loggers & gateways, etc.), software services (SenseCAP portal, mobile App, open dashboard), an API for device & data management.

Feature

- Embedded Machine Learning Sound AI supports Google TensorFlow Lite
- Low-power, low-noise, high SNR MEMS microphone
- Ultra-low-power Lora module: support EU868/US915/AU915/AS923/KR920/IN865
- Ultra-long-distance transmission: 10km in line of sight scene, 2 km in urban scenes
- Long battery life over 2 years
- Build-in Bluetooth 5.0, easy to deploy & configure
- IP66 enclosure, suitable for outdoor applications

Description

Need help?
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Imaging such a smart LoRaWAN device that can truly understand the sound like a human:

Not just hear the sound, but listen to what you say.

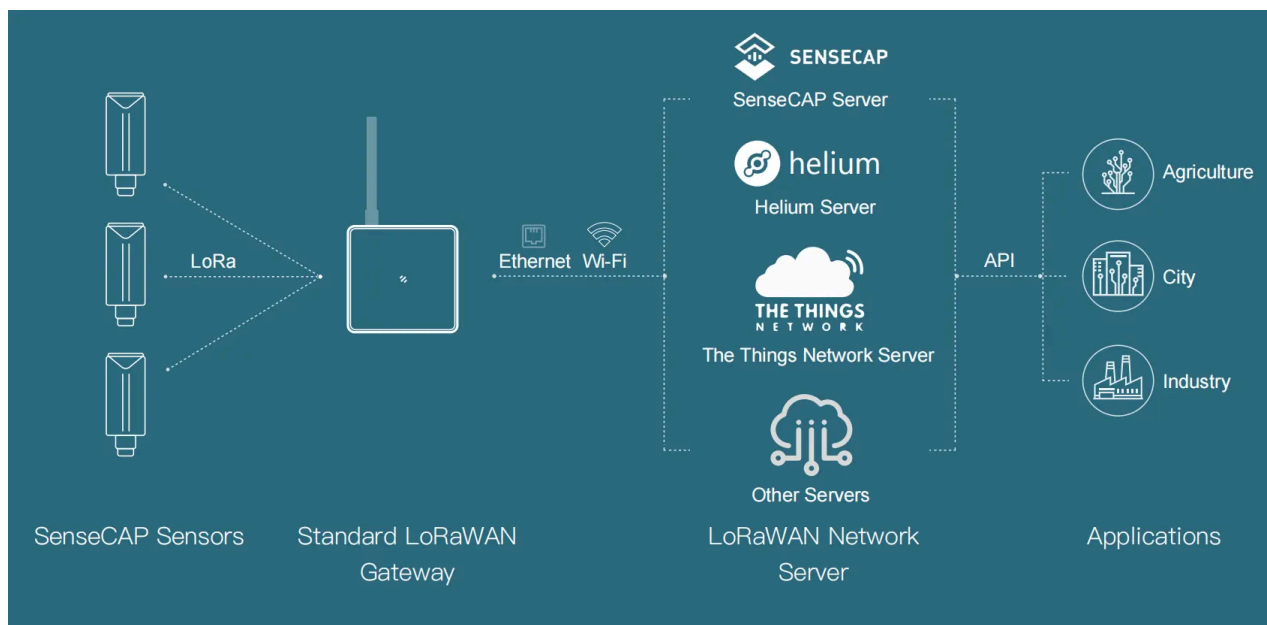
Not just human voice, but the sound of machines and animals.

Not a fixed algorithm, but a flexible AI.

Now we present you the SenseCAP A1102 - LoRaWAN Sound/Vibration AI Sensor -- A LoRa-based machine learning edge Sound/Vibration AI Sensor. It supports the Tensor Flow Lite machine learning framework, which allows users to train and deploy practical algorithmic models using various TinyML platforms. It can be applied in baby care to detect baby cries or deployed in offices to detect the sound of breaking glass or placed outdoors to detect bird calls, frog calls... Meanwhile, Seeed works with professional AI algorithm companies to provide industry users with a total solution with built-in mature models that can be deployed quickly - including algorithm models, gateways, and cloud services.

On the hardware side, the sound/vibration AI sensor uses an MCU with AI acceleration, which can greatly improve machine learning efficiency and significantly reduce power consumption. With the built-in high sensitivity, high SNR MEMS microphone, it can accurately capture the original sound signal. Thanks to Seeed LoRa-E5 module, this sensor support worldwide LoRa band, including EU868 / US915 AU915 / AS923 / KR920 / IN865. We also add a built-in Bluetooth module, which makes it easy to deploy & configure the LoRaWAN net.

System Architecture



Typical Applications

- Emergency Detection
-

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Glass break recognition

-

Smoke alarm recognition

-

Voice Recognition

-

Recognize specific sounds of humans, e.g., laughter, coughing, Crying

-

Identify the sounds of different animals

-

Smart Buildings

-

Aids in detecting human presence

- Health Care

-

Baby crying detection

-

Patient cough detection

-

Audio-based sentiment analysis

3 Steps to Get the Data based on SenseCAP Portal



Part List

Sensor*1

Bracket*1

Waterproof gasket*1

Need help?

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ECCN/HTS



HSCODE	9031809090
UPC	
COO	CHINA

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