

About us

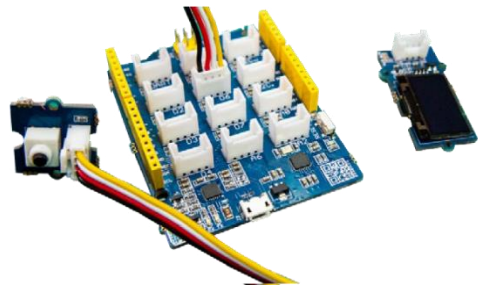
the AI hardware partner

Seed Studio has been a leading Open Hardware company since 2008, empowering half a million direct users to create real-world digital solutions. Through relentless efforts and earned trust, our ever-growing product lines now form around emerging AI scenarios:

- Sensor networks to fetch extensive real-time data
- Edge computing to push intelligence to new frontiers

We provide industrial-ready modules and devices, and open up the capability of prototype, produce, and promote as Fusion service. Innovators from different vertical domains co-create with us to make their creations widely available for diversified markets.

By embracing open source, community building and integrated software suites like SenseCraft, we are proactively lowering the tech barriers and including users with diverse expertise for globalized matters.



**From possibilities to
productivities**



From Technology to Industry

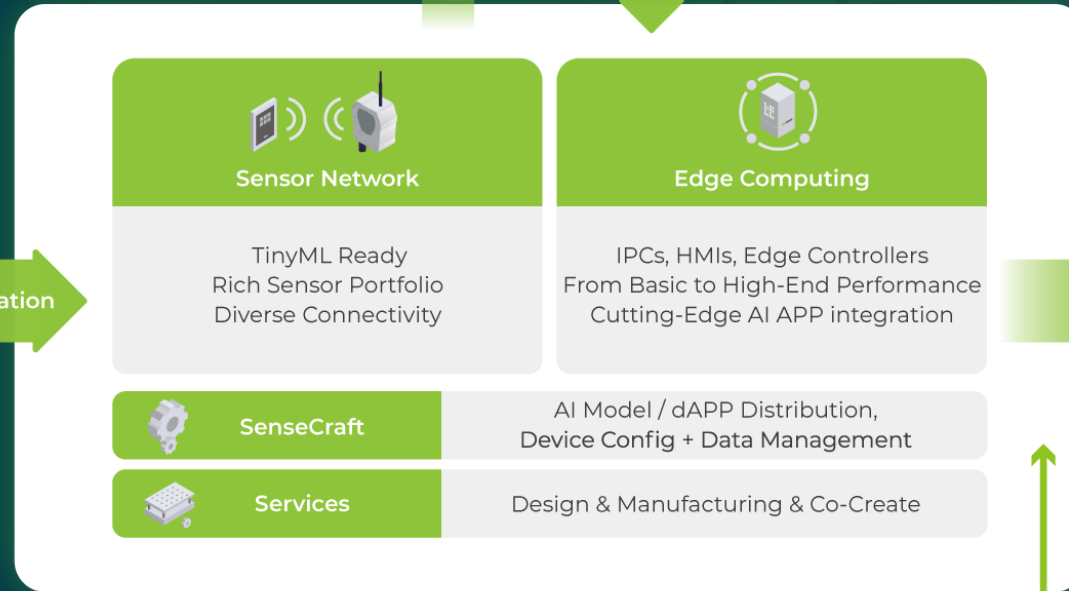
Technologies

- Open Source Hardware
- Machine Learning
- Advanced Sensors
- Home Assistant
- Wireless. DePIN
- LLM

Emerging Technologies



Collaborative Innovation



Applications

- Asset Tracking
- Smart Building
- Industrial space
- Smart City
- Smart Agriculture
- Smart Energy
- Tech for good
- Open Science

- Digital Infrastructure
- Smart Environment
- Smart Agriculture
- Smart Energy



Arduino



Beaglebone



Home Assistant



NVIDIA@ Jetson



Raspberry Pi



SenseCAP



TinyML

Adding AI to almost anything

multi-modal

vision
sound
speech
sensors

Faster
new architecture
(Cortex-M55)

low power

<1 w

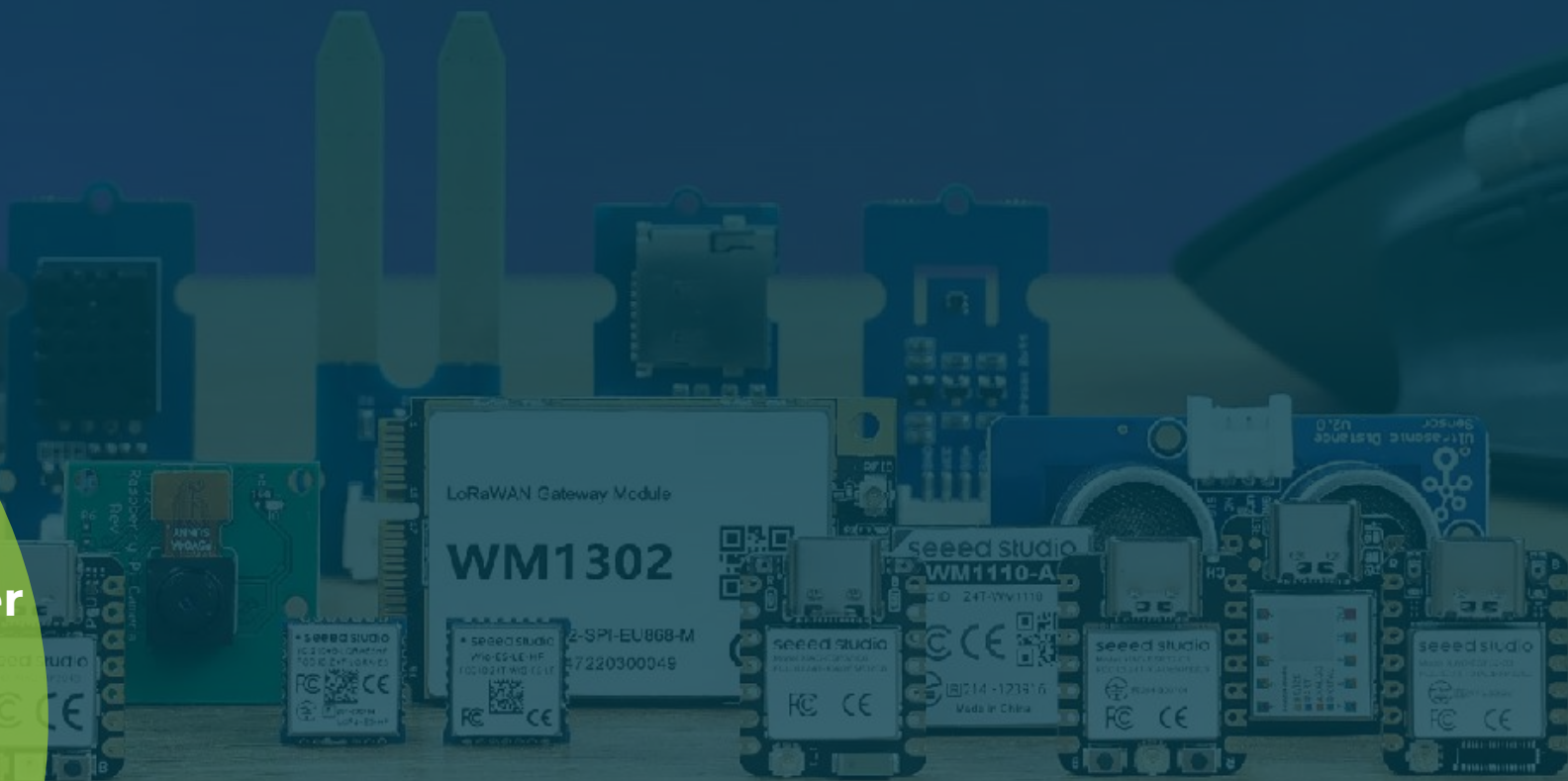
TinyML

Cheaper

<10 \$

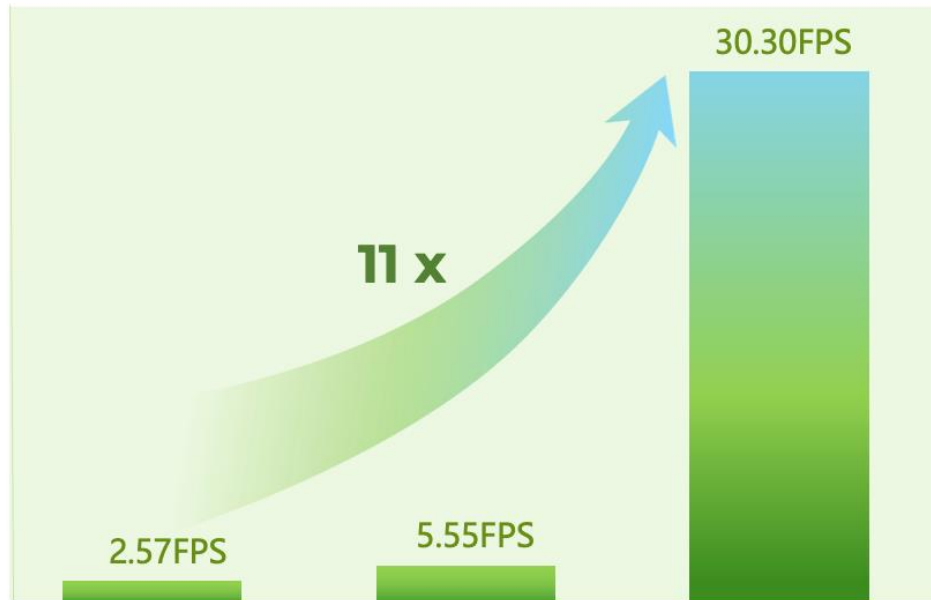
Easier

few shot
training
no-code
web server



Faster and Lower power

Refresh Rate



Grove Vision AI v1

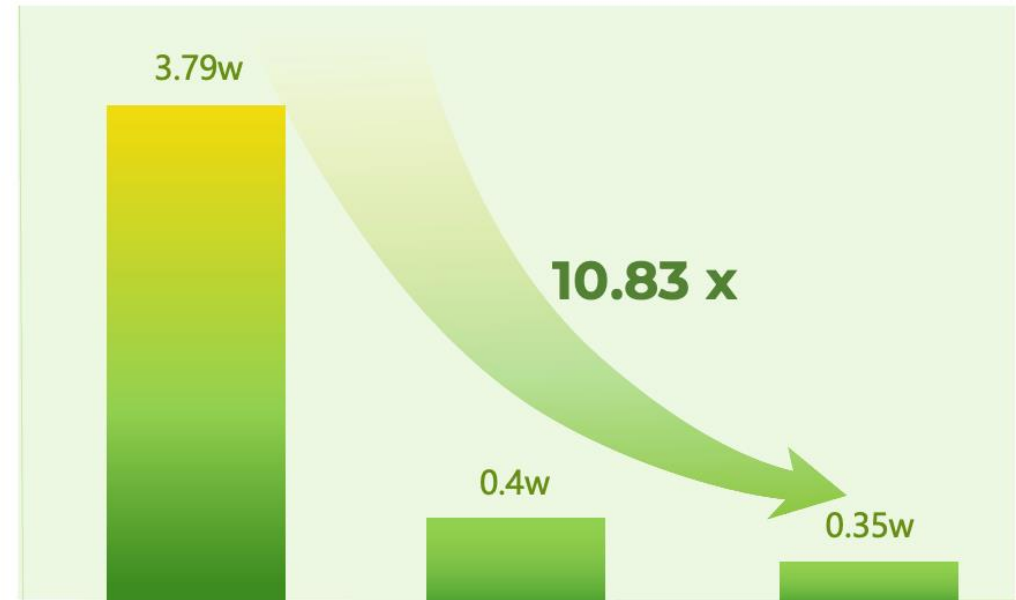


XIAO ESP32S3



Grove Vision AI v2
(M55 + U55 AI addon)

Energy Efficiency



Raspberry Pi 4B



Grove Vision AI v1



Grove Vision AI v2
(M55 + U55 AI addon)

Smaller and cheaper

XIAO - tinyML MCUs

Add AI to Almost Everything

The Seeed Studio XIAO Series is a collection of thumb-sized, powerful microcontroller units (MCUs) tailor-made for space-conscious projects requiring high performance and wireless connectivity. Embodying the essence of popular hardware platforms such as ESP32, RP2040, nRF52840, and SAMD21, the Arduino compatible XIAo series is the perfect toolset for you to embrace tiny machine learning (tinyML) on the Edge. Trusted by 500,000 developers globally!



- **Module and Development Board Hybrid**

Enabling Rapidly Prototype While Easily Integrate, Significantly Streamline Product Development Process



- **Invest for Your Future**

Unified Form Factor Enables You to Seamlessly Upgrade or Downgrade Your Product at the Lowest Cost



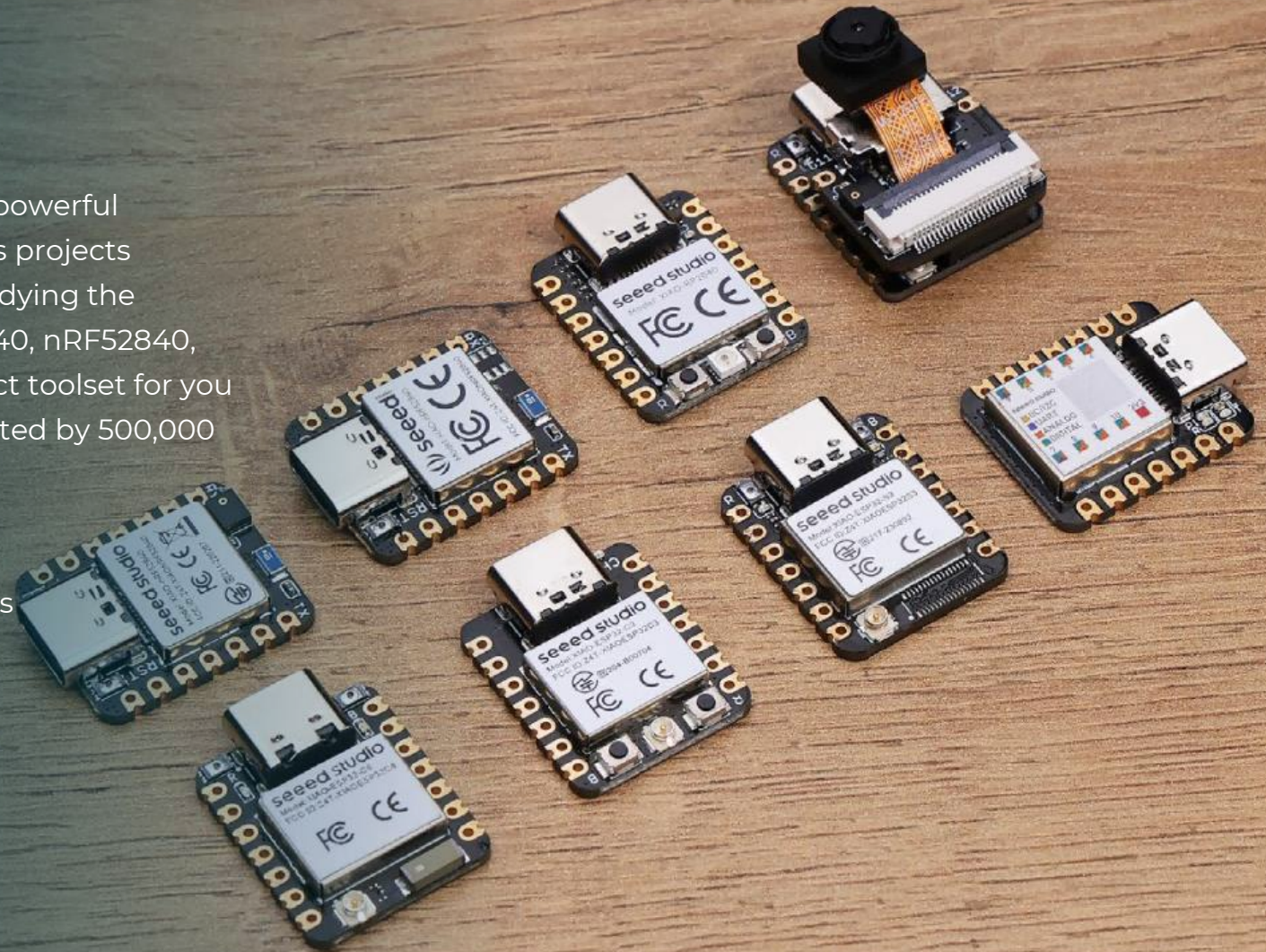
- **Single-Sided Surface Mount Design**

Effortlessly Incorporate XIAO into Other Boards for Large-Scale Manufacturing



- **Strong Ecosystem Support**

Extensive Software Compatibility, Abundant Community Resources, and Dedicated Technical Assistance



Easier – one click model deploy

<https://sensecraft.seed.cc/ai>

SenseCraft AI

Home AI Models Device Workspace

Sign In

2

Please input model name



13 Models

Clear

Task

Detection

Classification

segment

Pose

Supported Devices

Vision AI

reComputer Jetson

XIAO ESP32S3

Publisher

leo

测试环境

Public AI Models

Custom Models

1

4

+ Add Model



啊

啊

Detection

reComputer Jetson

YOLOV8



测试环境



cat detection

cat detection

Detection

reComputer Jetson

YOLOV8



测试环境



1

1

segment

XIAO ESP32S3

YOLOV8



测试环境



number of people

the number of people

Pose

reComputer Jetson

YOLOV8



测试环境



1

1

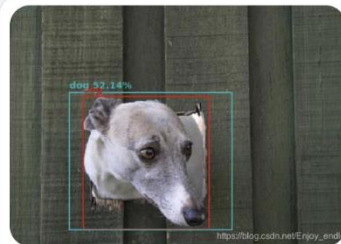
Detection

reComputer Jetson

YOLOV8



leo



dog detection

dog detection

Classification

reComputer Jetson

YOLOV8



测试环境



helmet detection

helmet detection

Detection

reComputer Jetson

YOLOV5



测试环境



Human Pose(small)

small but dangerous!

Pose

reComputer Jetson

YOLOV8



leo



General Objects Detection

Object detection is a task that involves identifying the location and class of object...

Detection

reComputer Jetson

YOLOV8



leo



People(small)

people detect

Detection

reComputer Jetson

YOLOV8



leo

3



Total 13

10/page



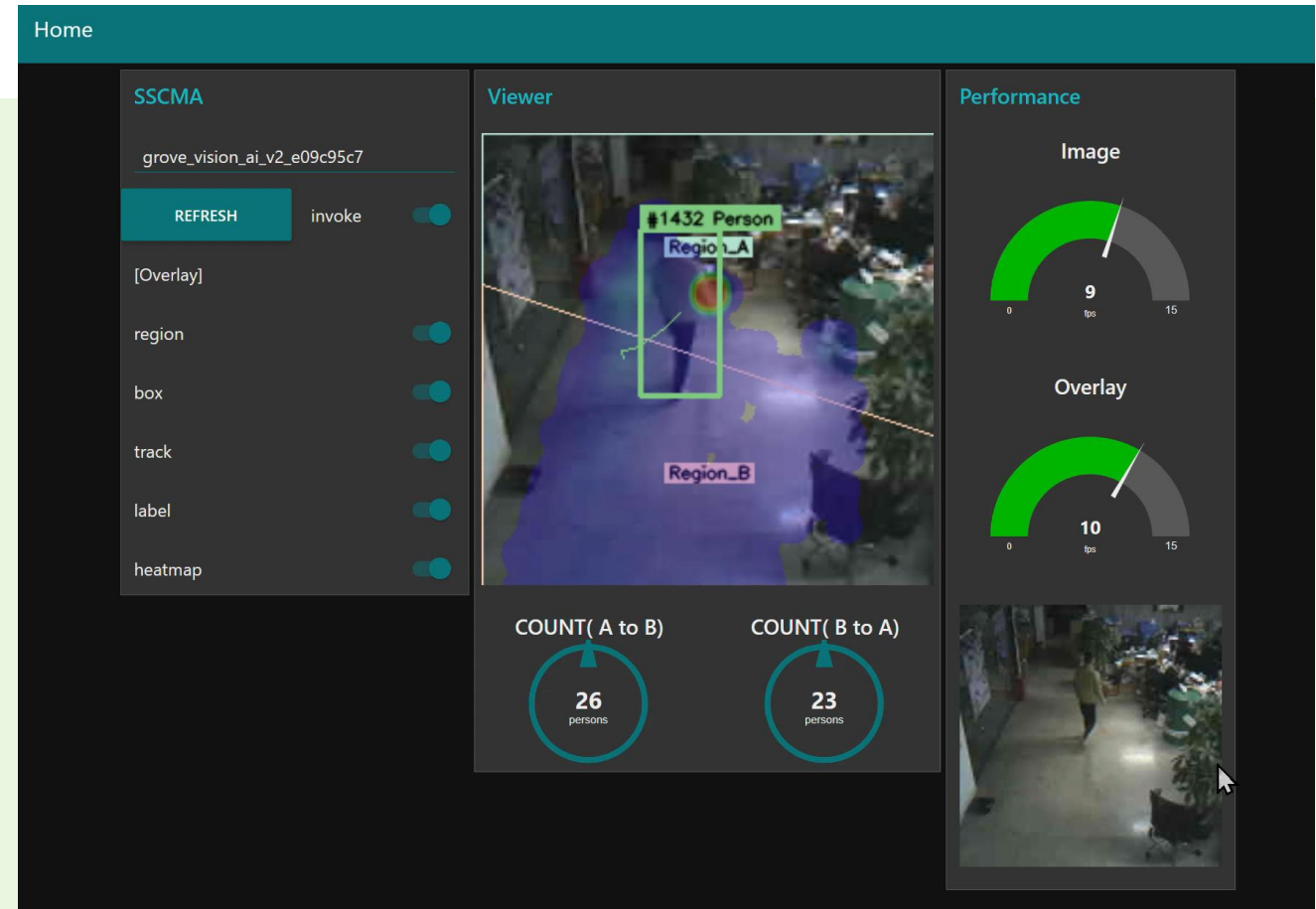
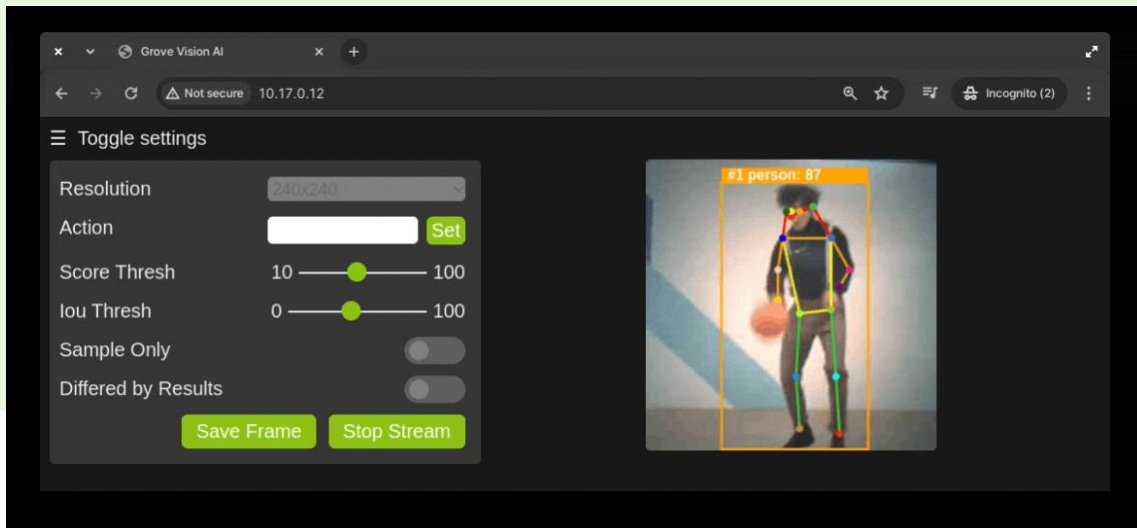
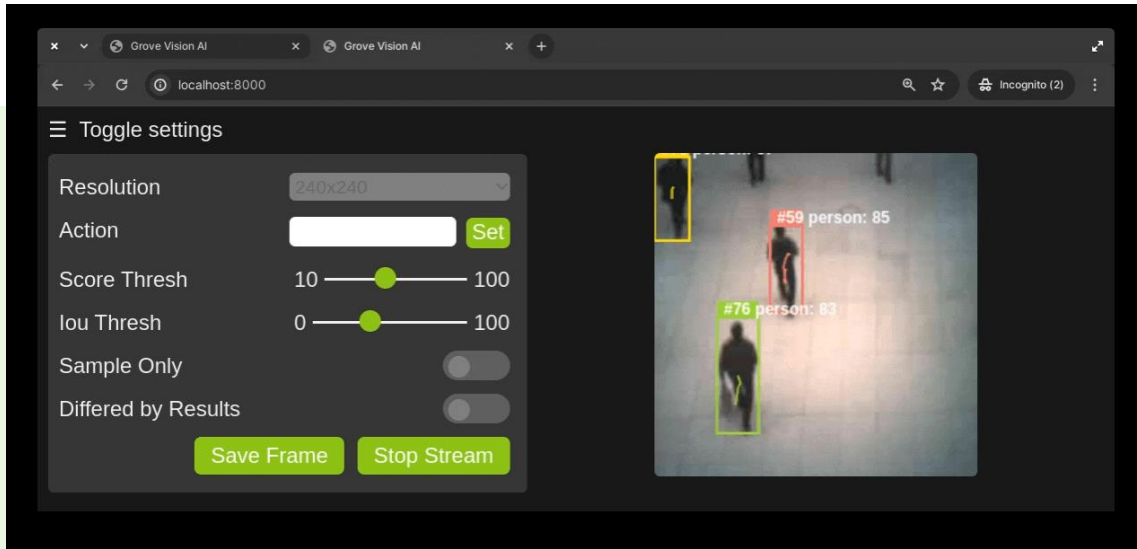
1

2



Go to 1

Easier - No code MLops



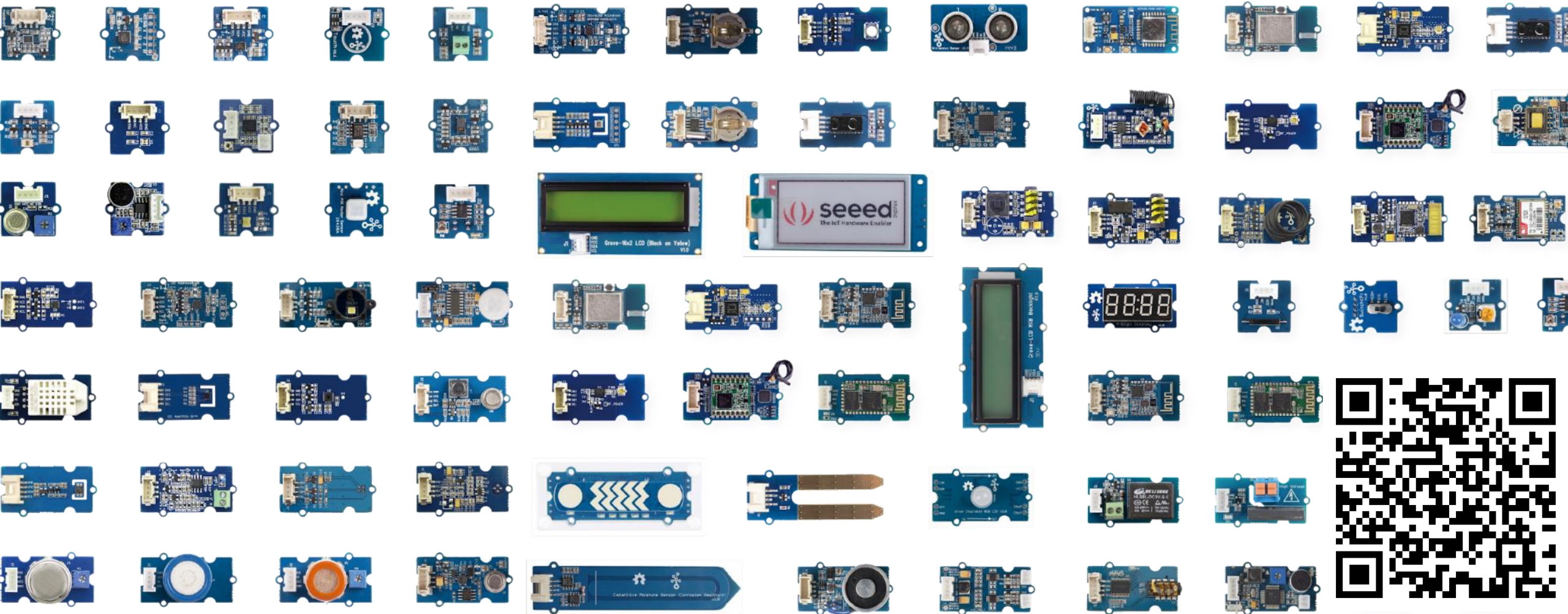
https://github.com/Seed-Studio/Seed_Arduino_SSCMA/tree/main/examples/camera_web_server

Atlas of Sensors

Nerve endings of the digital world

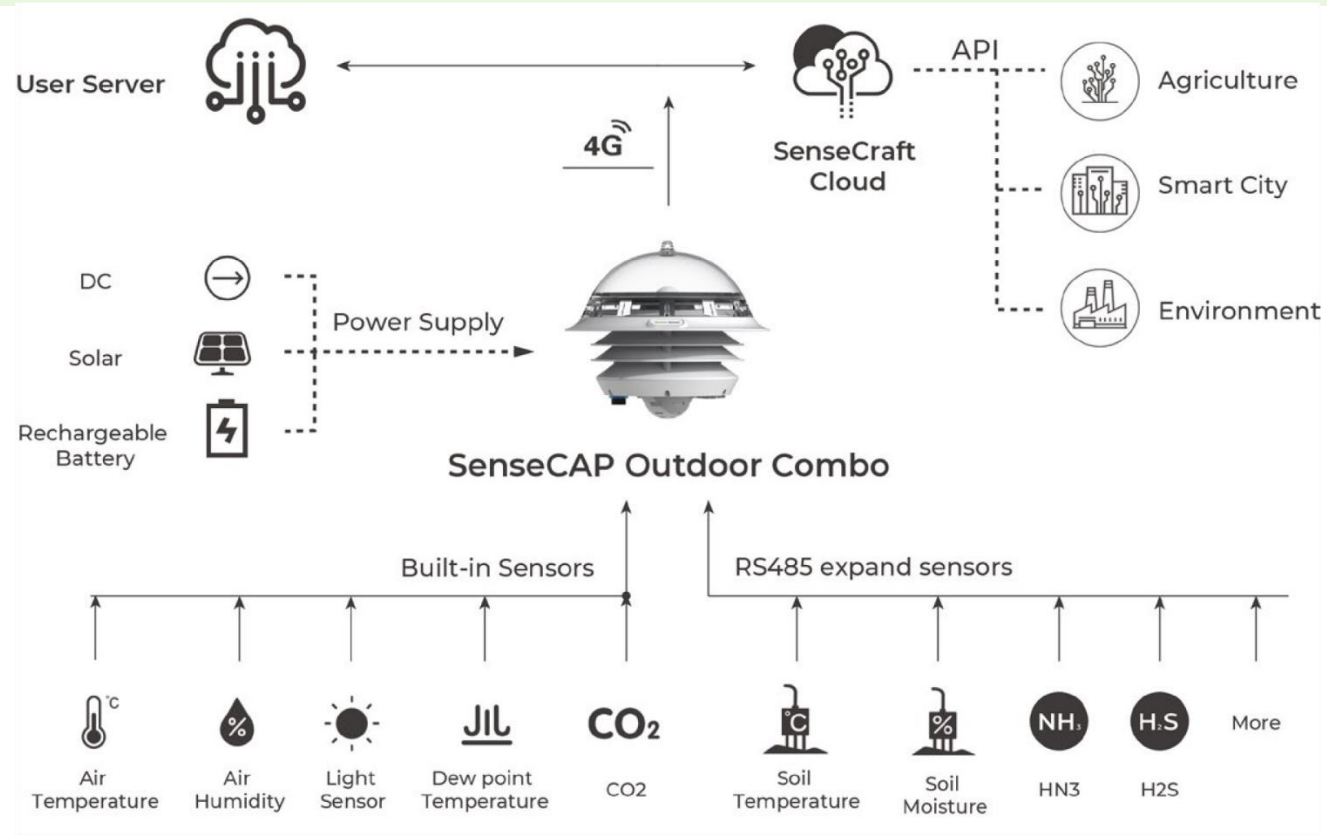
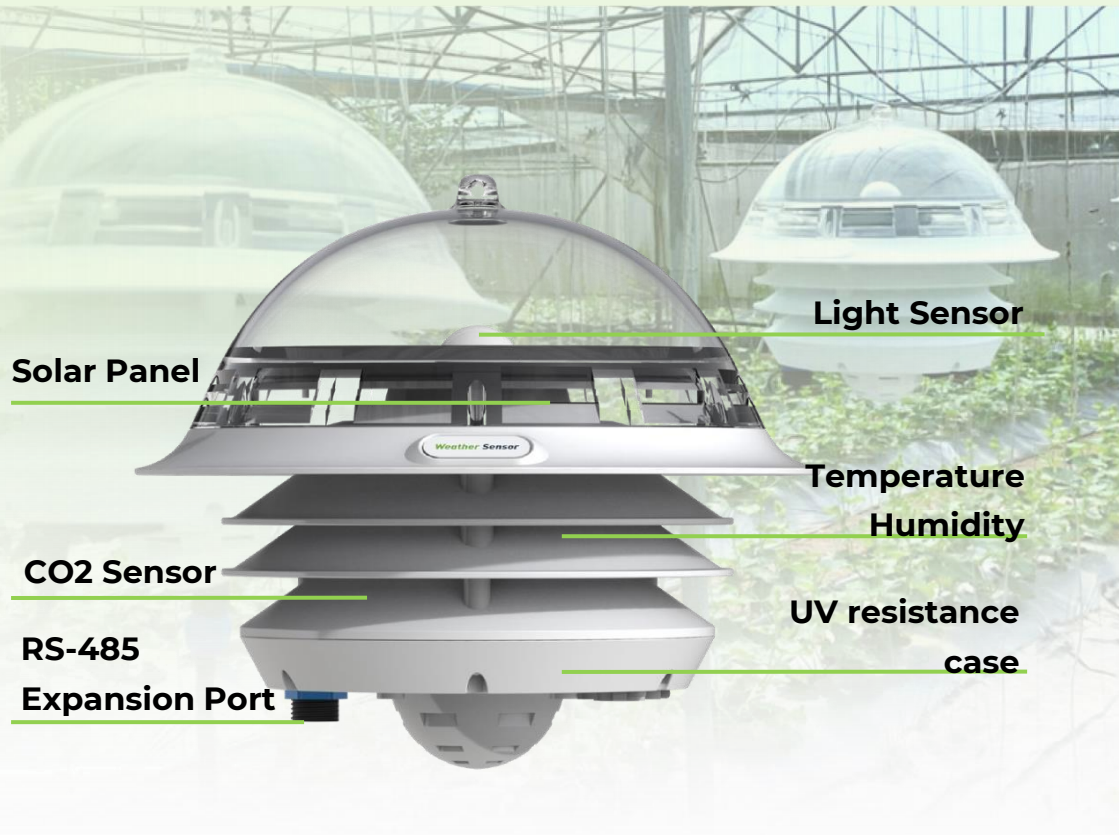


CO₂



Scan code to download

Multi-modal



Generative AI expand to real world

multi-modal

image
Speech
Sensors

Stronger

> 40T

Distributed

Locally deployed

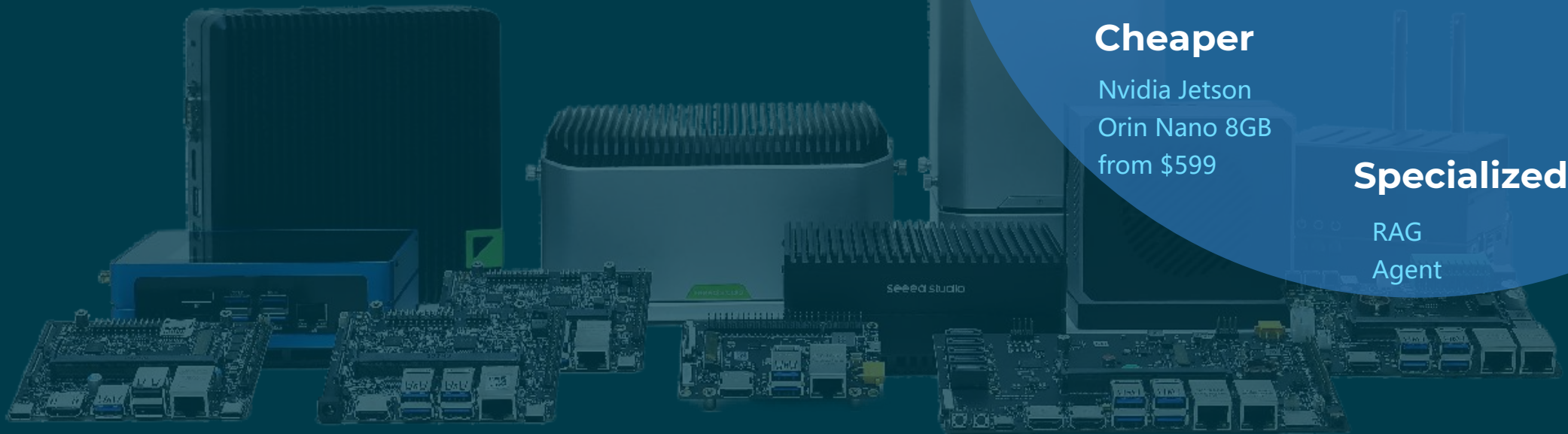
Generative AI

Cheaper

Nvidia Jetson
Orin Nano 8GB
from \$599

Specialized

RAG
Agent



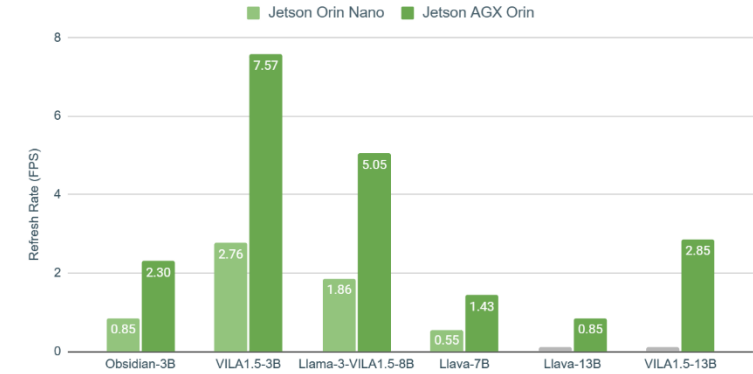
Generative AI at the Edge

Describe the image concisely.



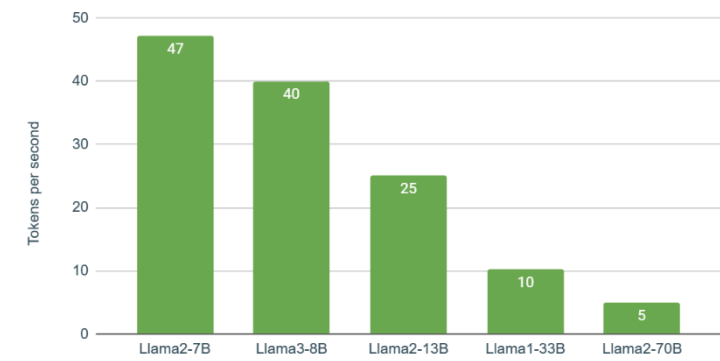
Multimodal Streaming Rate

Vision Encoder + Projector + VLM



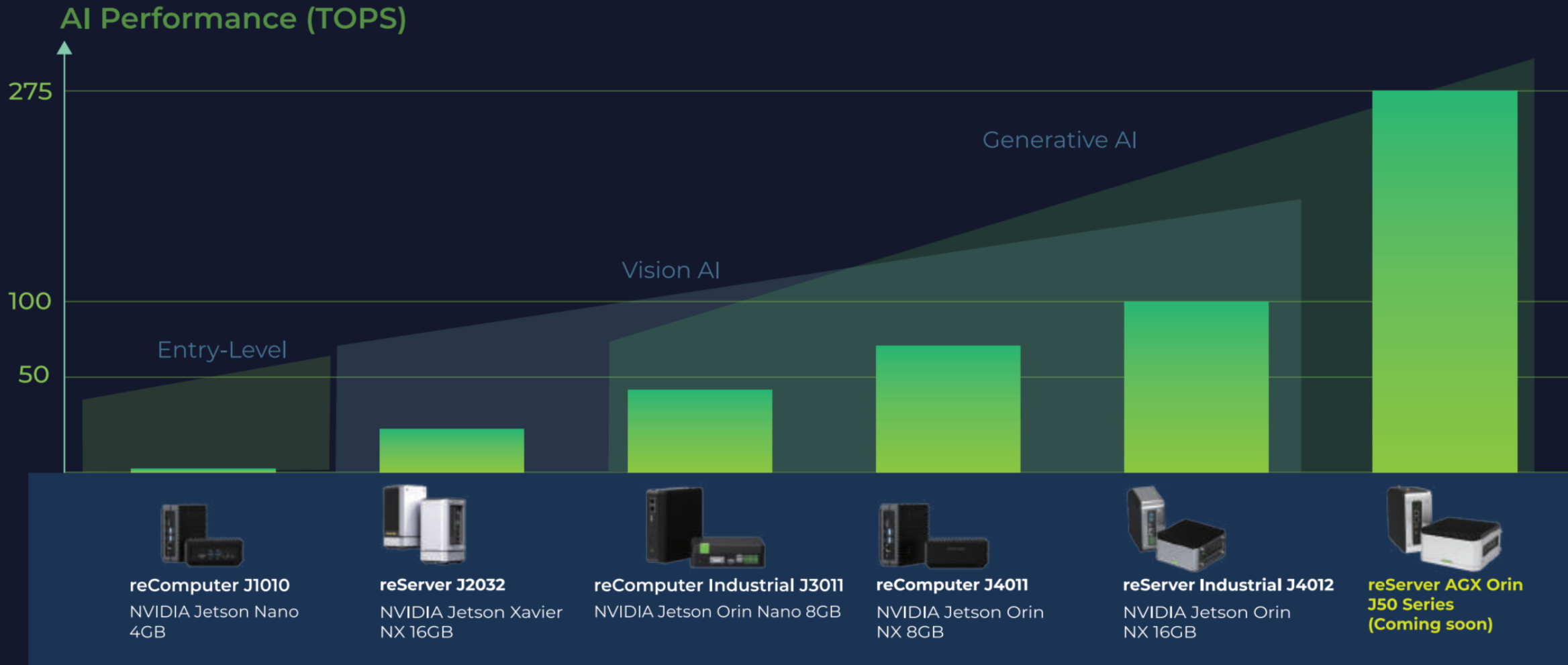
LLM Text Generation Rate

Jetson AGX Orin, 4-bit Quantization



<https://www.jetson-ai-lab.com/>

Edge AI Selection Guide



Convergence of TinyML and Generative AI

multi-modal

vision
sound
speech
sensors

Faster

new architecture
(Cortex-M55)

low power

<1 w

Easier

few shot
training
no-code
web server

TinyML

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Mixed Reality

next gen HMI

Embodied AI

Droids

Autonomus Machines

multi-modal

imagine
Speech
Sensors

Stronger

> 40T

Distributed

Locally
deployed

Generative AI

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Orin Nano 8GB
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Specialized

RAG
Agent

New 'Friend' ChatGPT Appliance Records, Transcribes And Summarizes Conversations

John Koetsier Senior Contributor ©
Journalist, analyst, author, and speaker.

Follow

🔖 0

Jun 24, 2024, 12:03pm EDT

Updated Jun 27, 2024, 02:06pm EDT



AI hardware now open source

Friend: Open Source AI Wearable Recording Device



Friend

Open-source AI wearable
Build using the power of
recall.



Wear It, Record Your Conversations, Get Helpful Summaries and Advice. Customize the AI wearable for any use case you want

Visit website

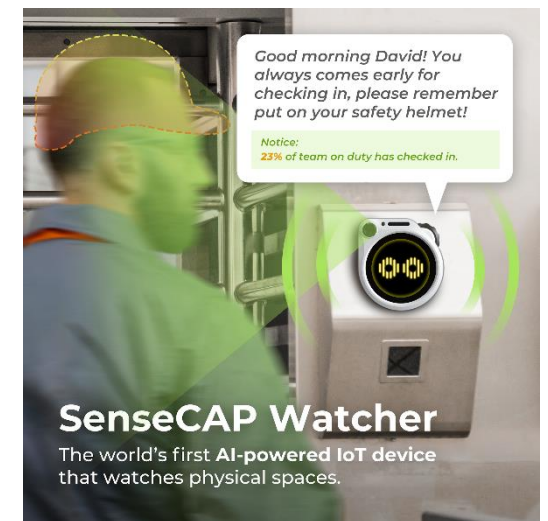
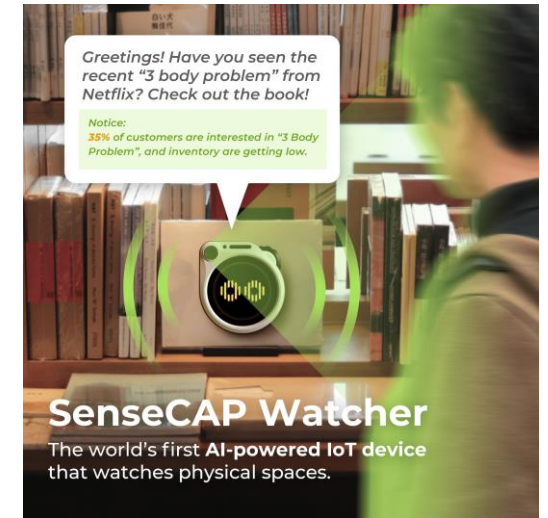
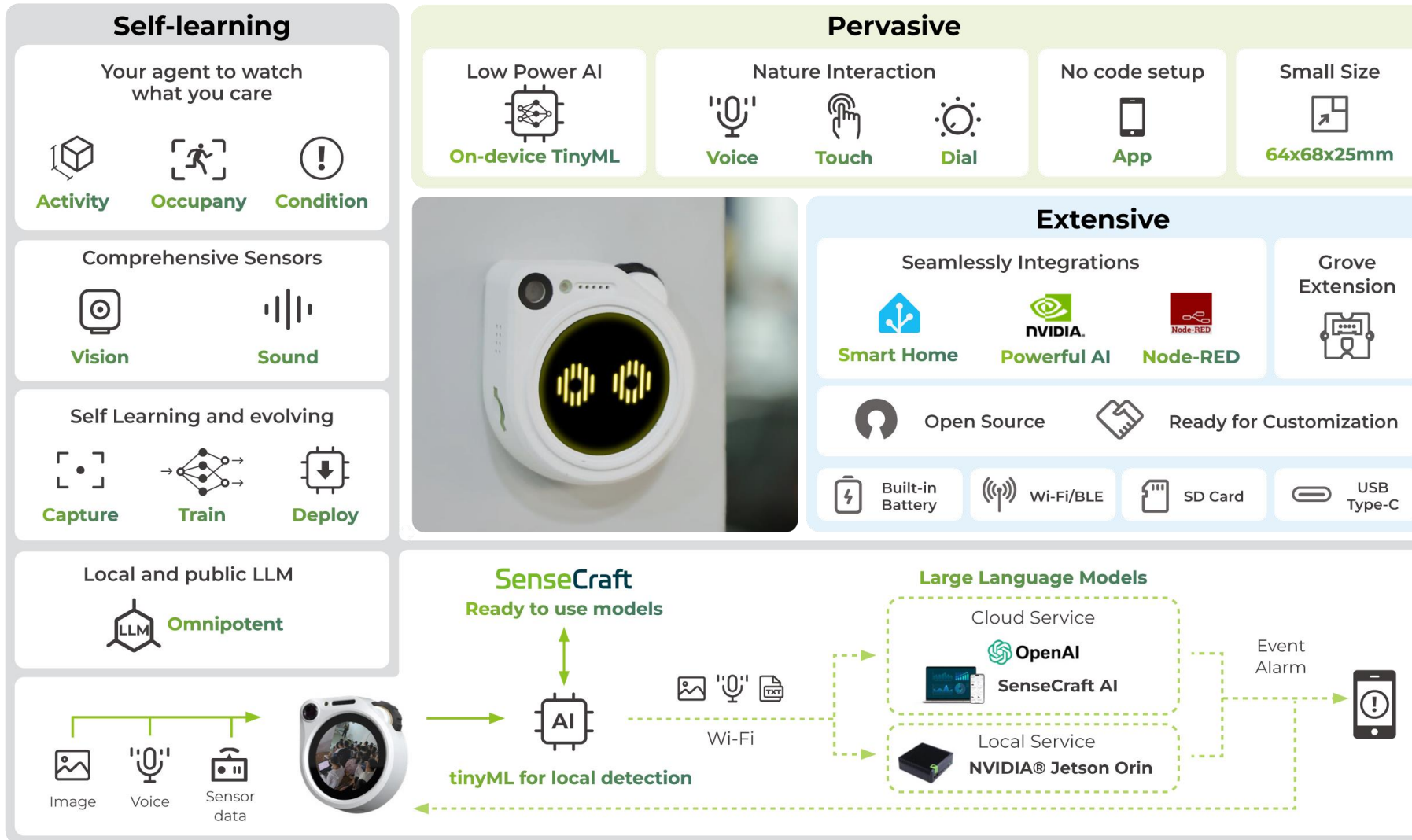
發起人:

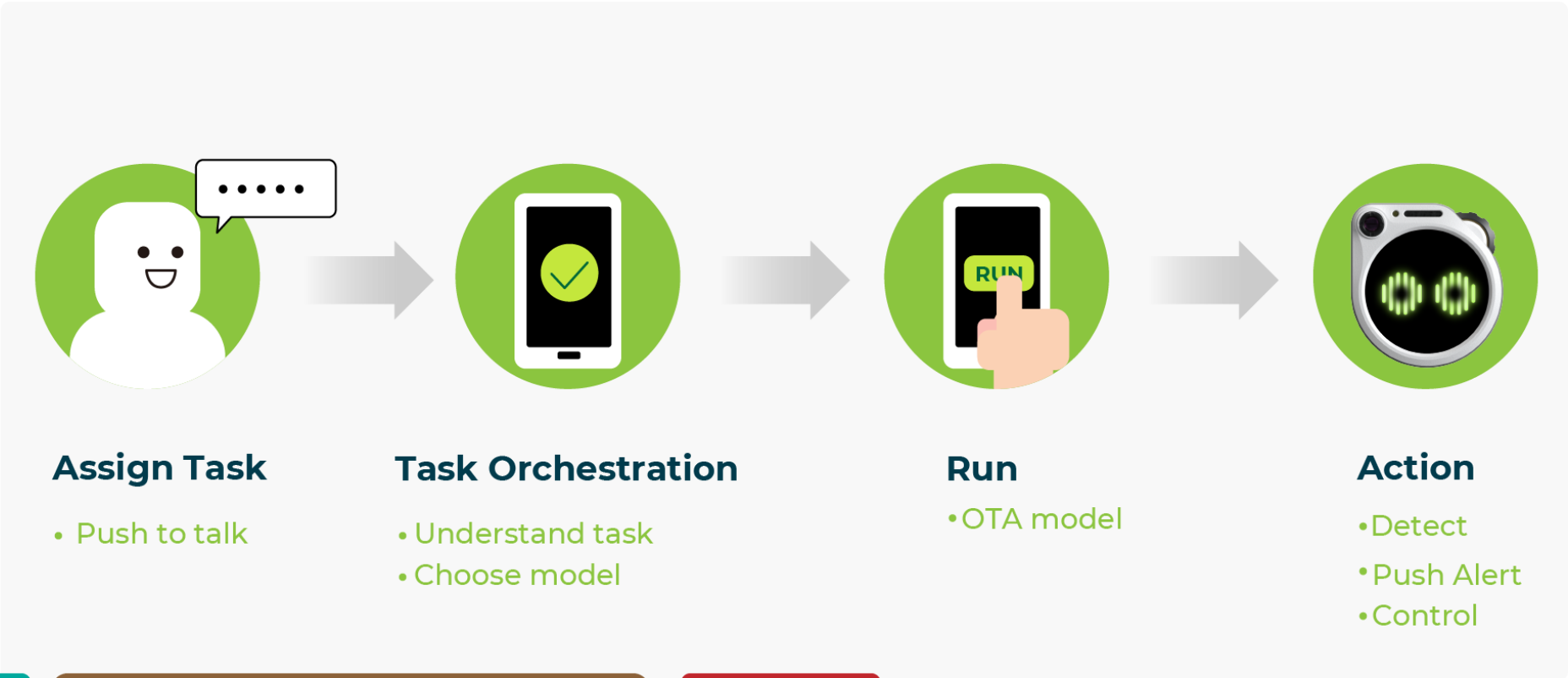
Nik Shevchenko

有712名支持者認繳了\$ 49,868，幫助此專案變為現實。

📅 上次更新 五月 27 2024

Physical AI agent for smarter facility and machines





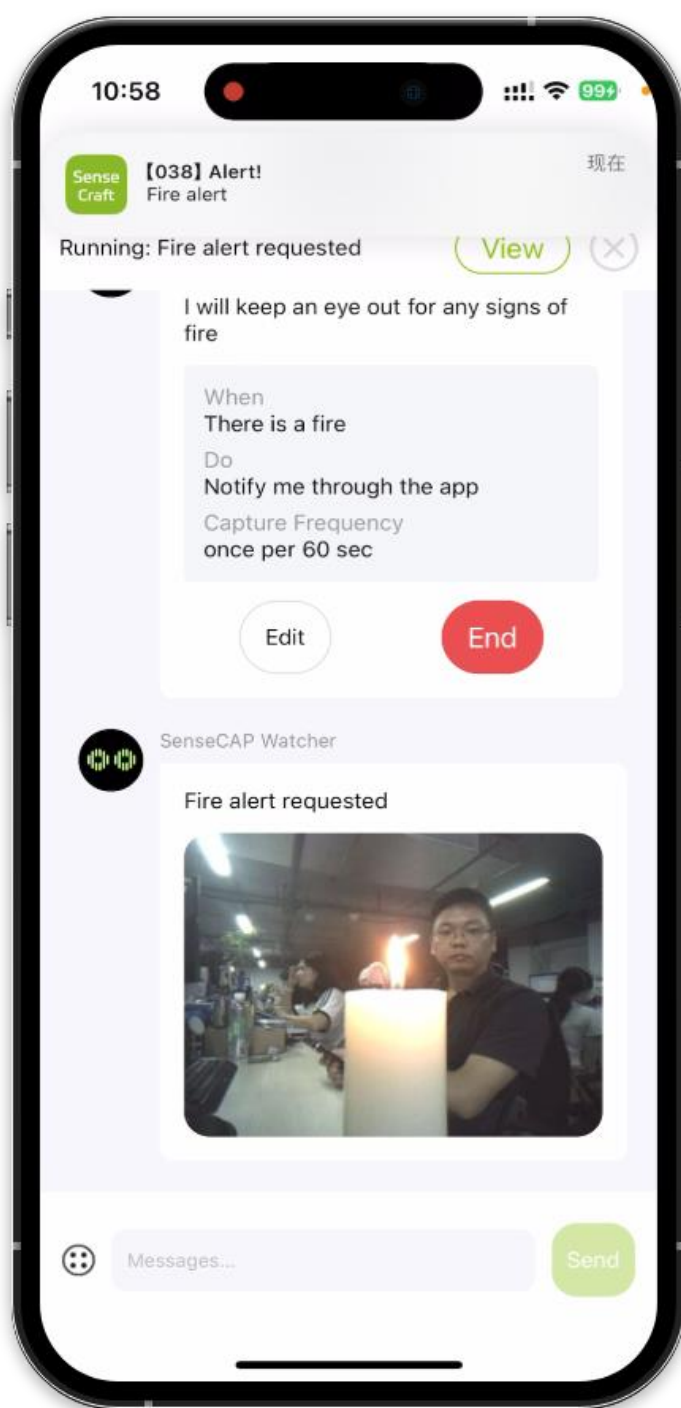
if there is a **Object** **Doing Something** (Optional), **Action**

Object directly affects the **model of the local recognition** task called by Watcher. If the selected model is not included in SenseCraft AI, then a large model engine in the cloud is called directly for recognition.

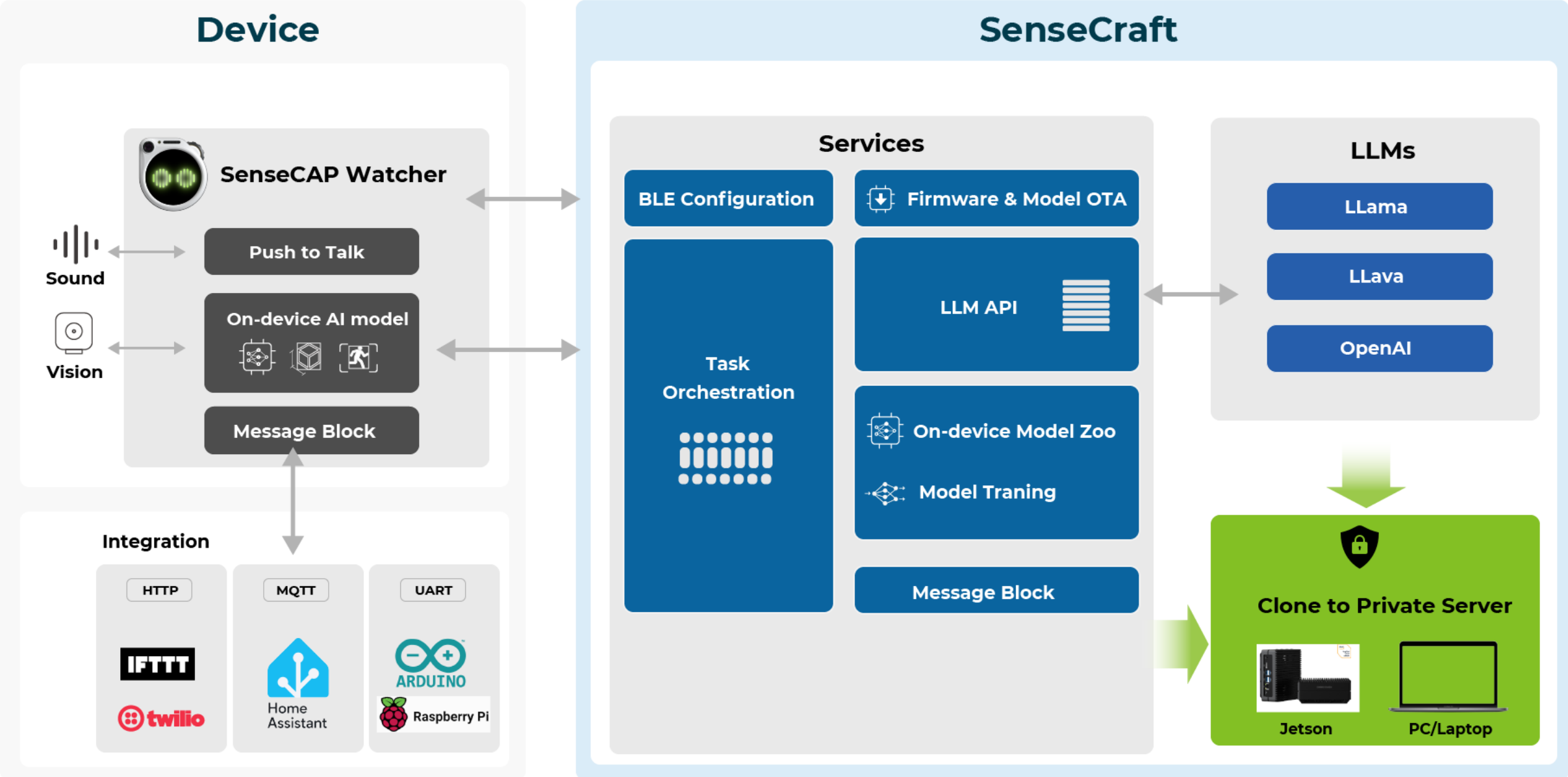
The presence or absence of an action description in the task instruction determines whether Watcher invokes the **cloud-based Large Language model engine**.

The **action** executed upon triggering the Watcher's task:

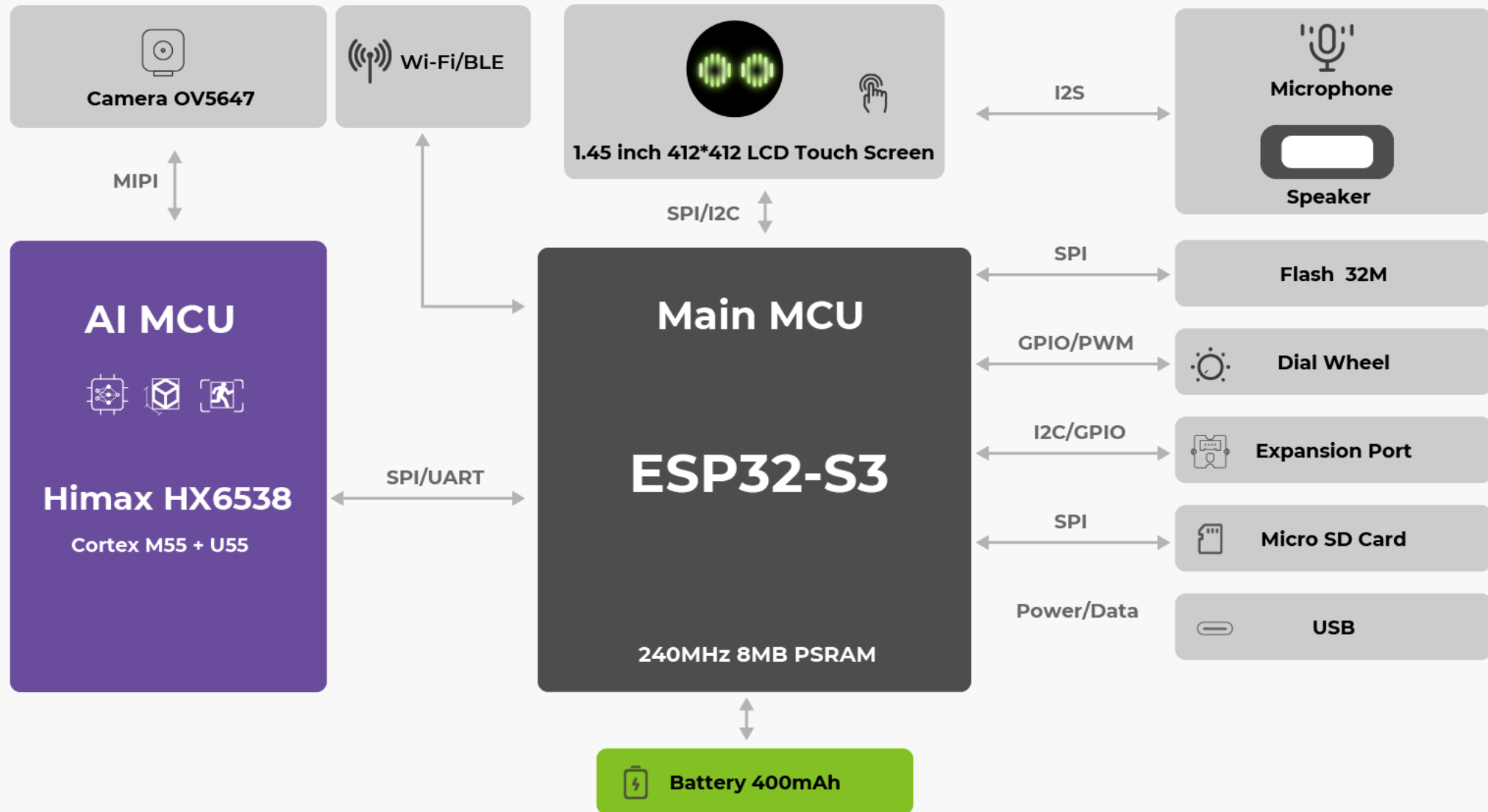
- RGB light flashing
- Push Notification
- Watcher Sound
- SNS
-



Infrastructure



Hardware Diagram





📅 Launching soon

SenseCAP Watcher - The Physical AI Agent for Smarter Spaces

See+Hear, Comprehend, and React | On-Device AI | ChatGPT / LLM | Voice Interaction | Animation | Private Deployment | MQTT | + Sensors

seed STUDIO
4 created • 1 backed

📍 Project We Love Santa Clara, CA Hardware

📌 Notify me on launch

245 followers

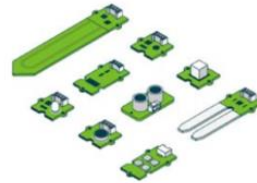
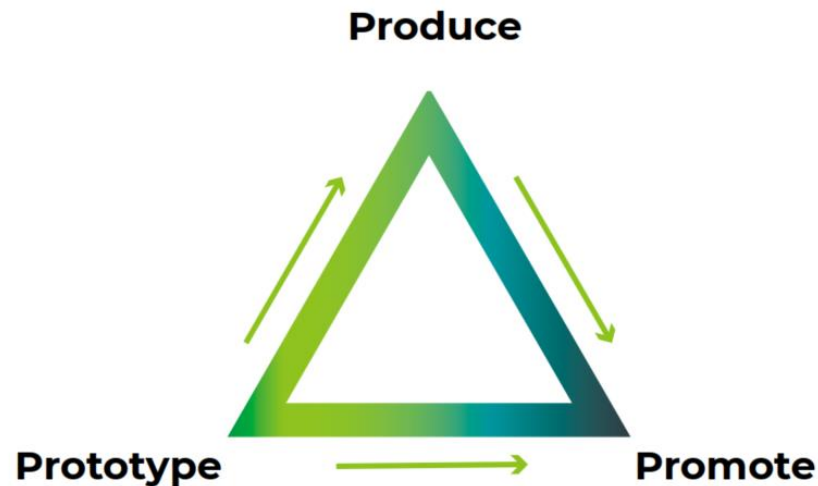
<https://www.kickstarter.com/projects/seed/sensecap-watcher-open-source-ai-assistant-for-smarter-spaces>

Co-Create with Seeed Fusion

Fast Track from Idea to Market

Seeed Fusion Service offers one-stop services catering to your needs, from **design & customization** to **production** and **promotion**. Focus on your strengths, co-create and co-grow with Seeed Fusion!

Open Source + AI + Hardware



Prototype - Design and Customization for Diverse Needs

- Full spectrum services - from light to deep customization.
- Open reference design - lower threshold for rapid prototyping.
- Professional expertise - proven product design experience.



Produce - From Small-batch to Mass Production

- Instant online quotation & lead time for PCB & PCBA.
- Professional experts - guaranteed services for scale-up.
- Designated engineers & professional project management.



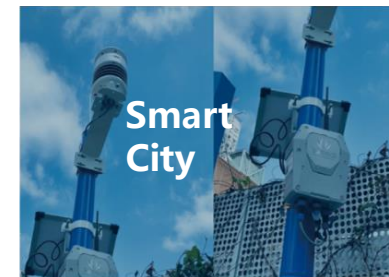
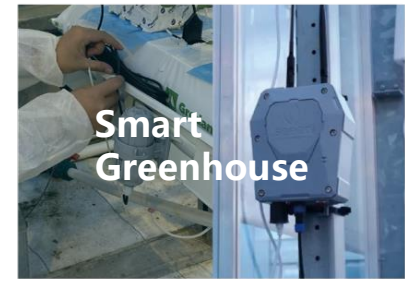
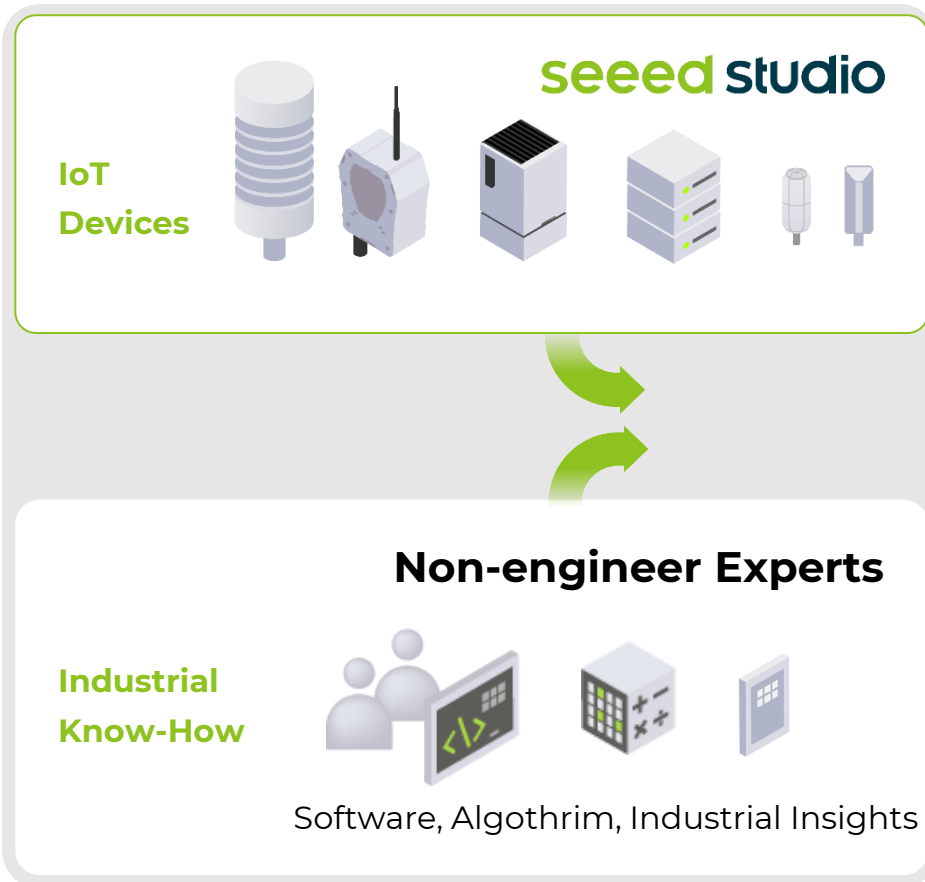
Promote - Rich Resources for Marketing and Promotion

- Online store serving half a million direct customers worldwide.
- 200+ global and local distributors via online/ offline channels.
- Dedicated resources to create contents with active communities.

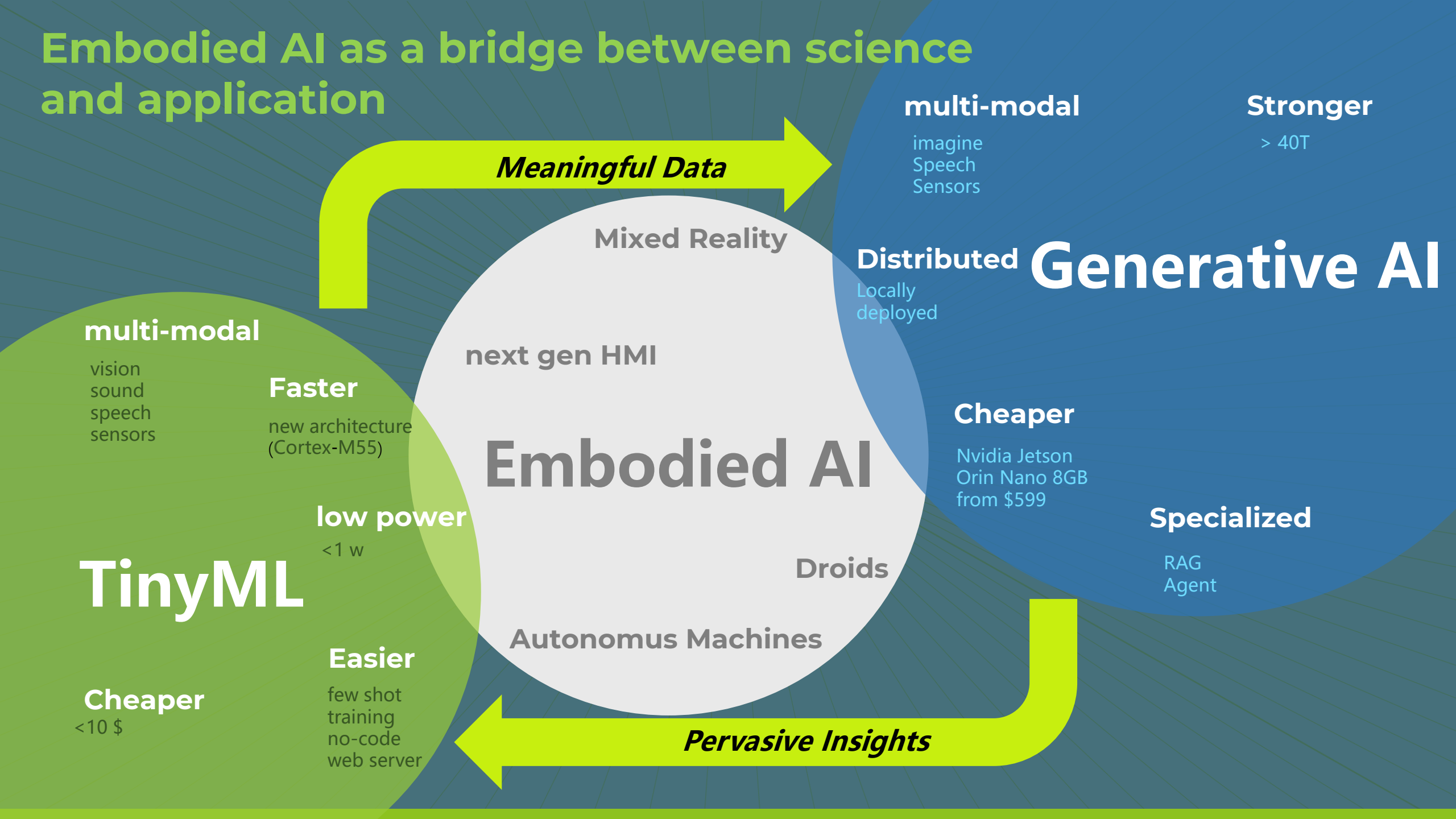
Embodied AI as a bridge between science and application

Co-Invent Solutions

Based on various digital transformation scenarios, we continue to develop smart devices that integrate the latest technologies, and work closely with developers and industry experts to provide software and hardware solutions for vertical industries at multiple levels.



Embodied AI as a bridge between science and application



multi-modal

vision
sound
speech
sensors

Faster

new architecture
(Cortex-M55)

low power

<1 w

TinyML

Easier

few shot
training
no-code
web server

Cheaper

<10 \$

Meaningful Data

Mixed Reality

next gen HMI

Embodied AI

Droids

Autonomous Machines

multi-modal

imagine
Speech
Sensors

Stronger

> 40T

Distributed Generative AI

Locally
deployed

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Nvidia Jetson
Orin Nano 8GB
from \$599

Specialized

RAG
Agent

Pervasive Insights

Academic Support

Welcome to Seeed Studio's Academic Support hub, where we empower educational institutions with high-quality learning resources, maker camps, innovative technologies, co-create services and career opportunities.

With the mission of "**Making Technology Accessible for All**", we are dedicated to fostering a learning environment that inspires creativity and innovation, ensuring that both educators and students have the tools they need to succeed in the ever-evolving tech landscape.



Learning
Resources



Teaching
Support



Research and
Competitions



Maker Camps



Career

ENCHANT EVERYTHING WITH AI

万物皆可AI

大湾区国际创客峰会

Maker Faire Shenzhen



Exhibition
创新应用展



Forums
高峰论坛



Workshops
创新工作坊



Highlights
亮点项目



Exhibition application



Maker Faire Shenzhen



2024 Nov. 16~17

Add: Vanke Design Commune, Nanshan District, Shenzhen

seeed studio

The AI Hardware Partner



Let's talk!

ep@seeed.cc



LinkedIn
@Seed Studio



Twitter
@seedstudio



Discord
discord.seeed.cc



YouTube
@Seed Studio



Project Hub
hackster.io/seed