SILICON LABS
CONNECTED INTELLIGENCE

2026 tech talks
WEBINAR SERIES

Extending Bluetooth LE Tracking with Satellites, Featuring Hubble Network

September 1, 2026

BLUETOOTH®

Today's Presenters

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SR. PRODUCT MANAGER
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HEAD OF PRODUCT
hubble NETWORK

Agenda

01 The Core Challenge

02 A New Approach to Global IoT Visibility

03 Applications

04 What is Hubble Network?

05 How does it work?

06 See it in Action

07 Getting Started & Resources

08 Q&A

The Core Challenge

Coverage Gaps

Assets can be static or mobile, indoors and outdoors, and in crowded or remote environments. Coverage is unpredictable.

Infrastructure & Cost

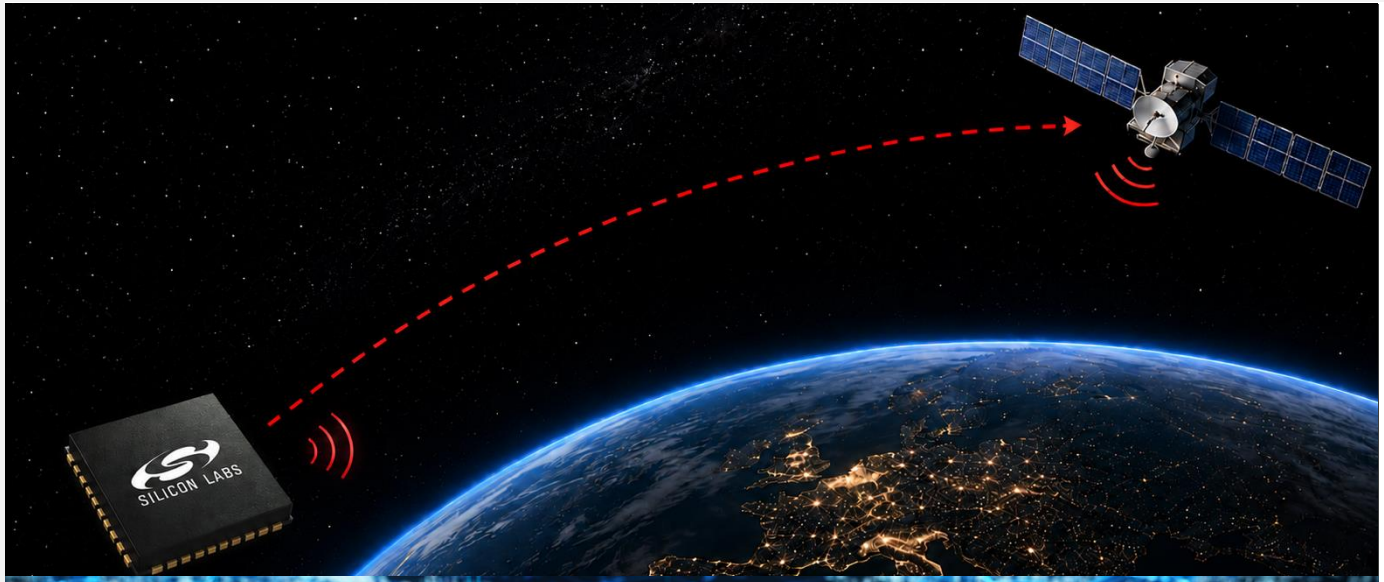
Extending visibility everywhere can be impractical or expensive.

Power & Hardware

Long-range visibility can increase power consumption and add radio hardware.

In order to scale, Asset Tracking needs a viable hybrid solution for both short and long range tracking.

A New Approach to Global IoT Visibility



No additional hardware

- No satellite modem
- No additional radio hardware

Low cost & complexity

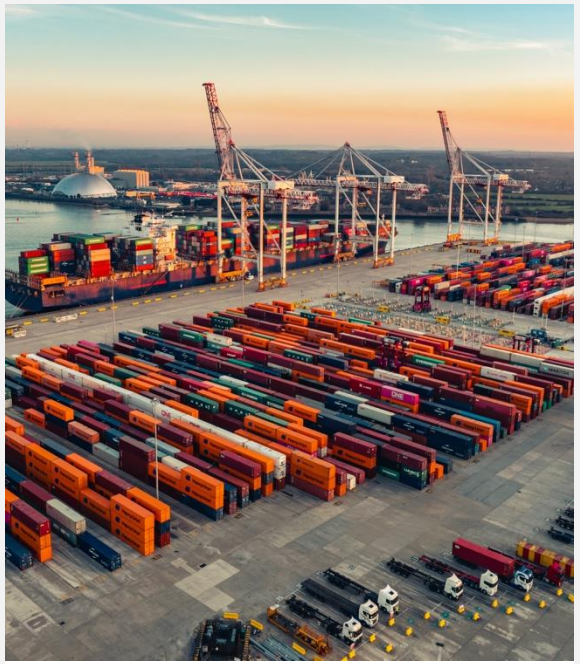
- Closes the gap between Bluetooth and long-range protocols
- Enables next generation experiences that extend real-time tracking capabilities

Low Power

- Built for long battery life in remote deployments
- Leverages a much more energy efficient hardware platform

Extend Bluetooth visibility from meters to hundreds of kilometers with existing hardware

Extending Visibility Across IoT Applications



GLOBAL LOGISTICS

- Shipping containers
- Fleet vehicles
- Train cargo

ASSET TRACKING

- Pallets and bins
- Construction equipment
- Tools and machinery

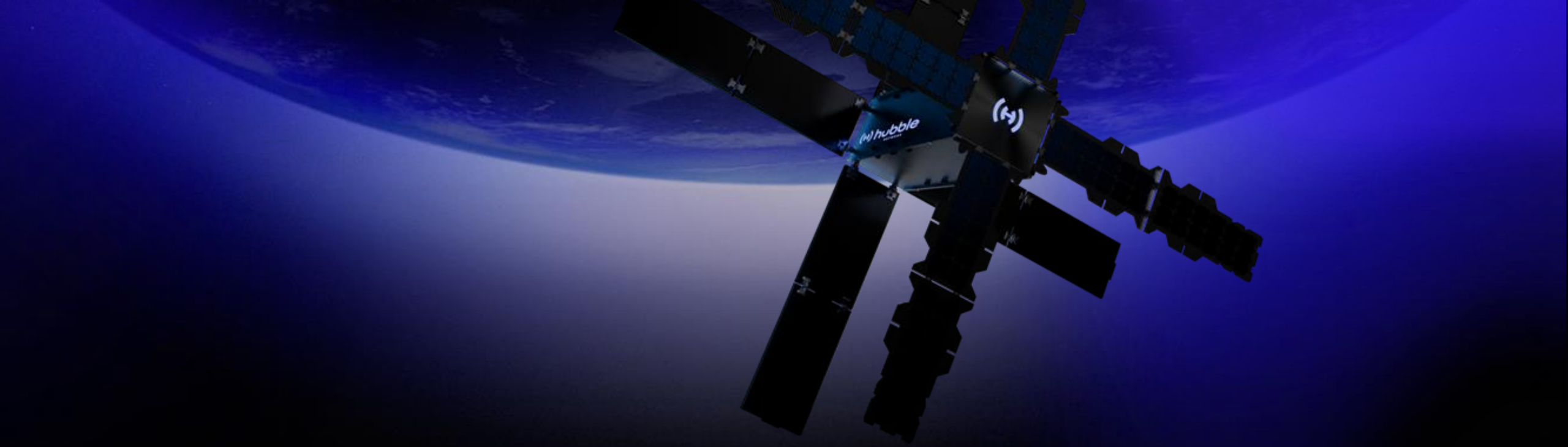
INDUSTRIAL INFRASTRUCTURE

- Oil and gas tanks
- Pipeline monitoring
- Solar panel fields
- HVAC

AGRICULTURE & ENVIRONMENT

- Agriculture sensors
- Forestry sensors
- Remote environmental sensors

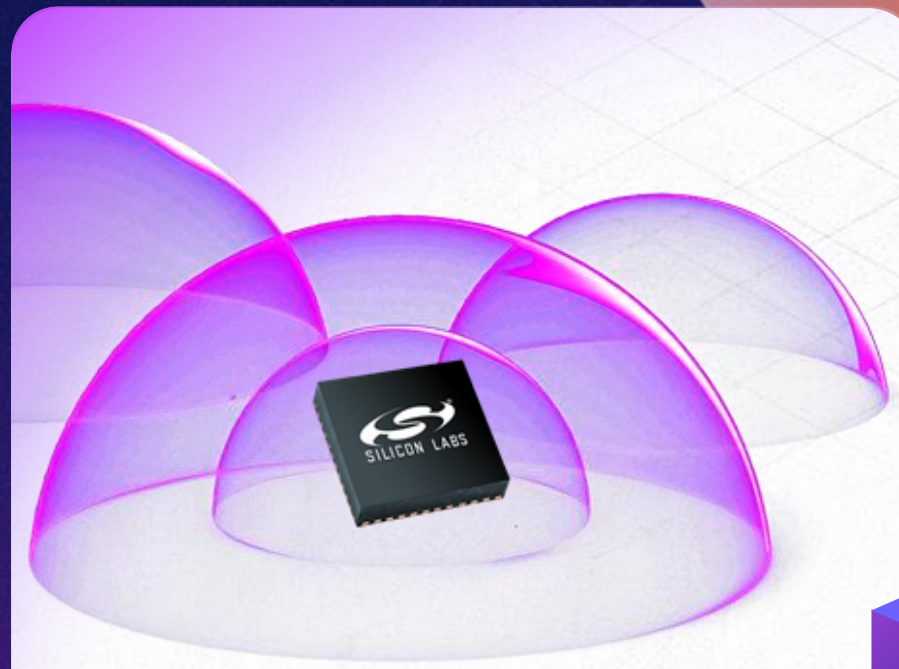
Frequently monitor high-value mission-critical assets through their lifecycle



“Bluetooth® to space should not be possible.”

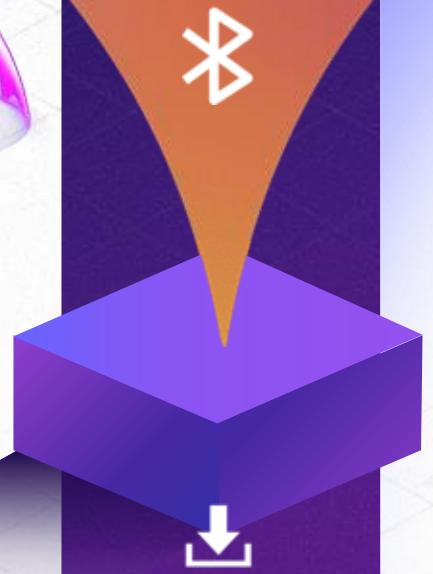
The world's first global BLE Network.

Hubble connects standard Bluetooth devices to the internet—anywhere.



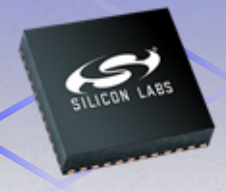
Terrestrial Network

100M+ gateways live today, forming a global BLE Network



ONE SDK

FOR BOTH NETWORKS



Satellite Network

BLE devices can also talk to **Hubble's LEO satellites**

Simple integration with **no hardware changes required.**

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Hubble unlocks Bluetooth's full potential

hubble NETWORK | SILICON LABS

Hubble unlocks Bluetooth's full potential

- ✓ **Ubiquitous IoT radio –** *Connect anything.*
- ✓ **Ultra low power –** *Long device life.*
- ✓ **Low BOM** (Bill of Material) **–** *Design for scale.*

We're creating the first network with billions of connected IoT devices.

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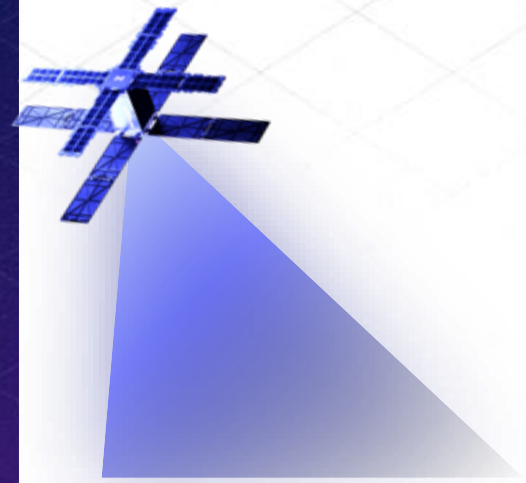
Bluetooth vs. the field

	Cellular IoT LTE-M / NB-IoT	**Legacy satellite IoT**	**LoRaWAN**	**RFID**	**Consumer finding networks** FindMy
Constraints	- BOM (modem + SIM) - Per-country certification - Larger power draw (larger battery)	- BOM (10-100x BLE) - Custom radio and hardware lock-in - Larger power draw	- Not global: custom gateway infrastructure required	- Not global: lose visibility beyond your reader zone	- Not enterprise friendly: no API - Certification gated
Bluetooth advantage	✓More competitive BOM ✓Coverage across borders ✓Least power draw	✓More competitive BOM ✓Ubiquitous radio ✓Least power draw	✓With Hubble: global connectivity	✓With Hubble: global connectivity	✓With Hubble: enterprise-grade platform ✓Alternative to GPS

Introducing the “Dual Stack” Network

Terrestrial Network

Satellite Network



Terrestrial Network

Via Firmware Update

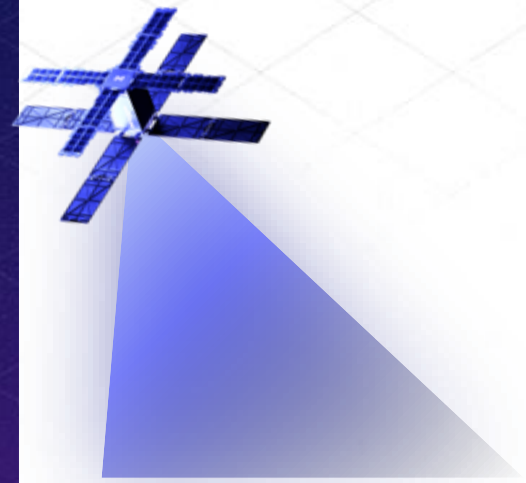
[BLE ADVERTISEMENT PACKET]

Packet Size

13 Bytes

[CUSTOM PAYLOAD]

Satellite Network



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Terrestrial Network

Via Firmware Update

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Indoor & Outdoor Coverage

10+ detections / 24 hr in populated areas

[SEE NETWORK EXPLORER]

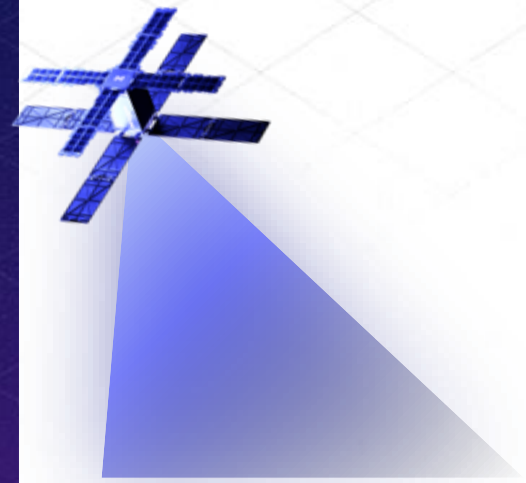
Packet Size

13 Bytes

[CUSTOM PAYLOAD]

Versatile for Static & Mobile Endpoints

Satellite Network



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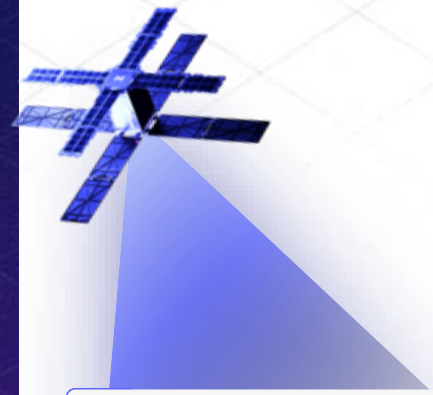

Via Firmware Update

[HUBBLE MODULATION]

Global Outdoor & Remote Coverage

1+ Transmissions Per Day

[AND GROWING]

Packet Size

13 Bytes

[CUSTOM PAYLOAD]

Ideal for Static Endpoints

Major Enhancements coming in 2027+

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Recap

- ✓ Hubble unlocks Bluetooth's full potential with global connectivity: two networks, same radio, 13 bytes – just a firmware update.
- ✓ We provisioned an EFR32MG24 Pro Kit to talk to Satellite (Hubble-native flow in Dash).

What you should do next

1. **Sign up for free**
   Time-limited free access to the Dual Stack Network (Terrestrial + Satellite). dash.hubble.com

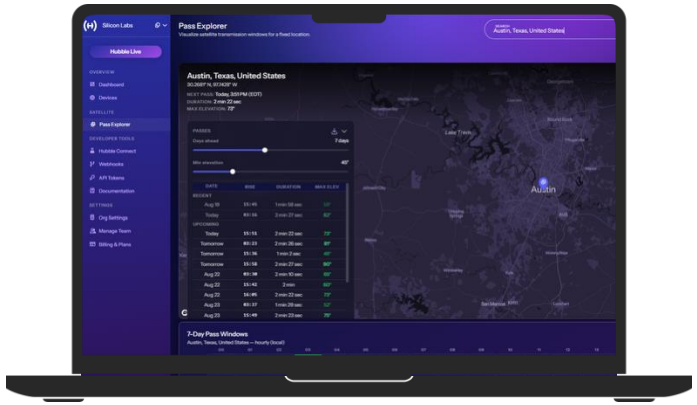
2. **Check Terrestrial coverage heat map**
   Look up detection rates anywhere globally for your bespoke device configuration. network.hubble.com

1. **Build a custom app with the SDK**
   Clone a reference app or customize a dual-stack sample with custom payload for your first bespoke device. docs.hubble.com

Getting started with Silicon Labs & Hubble

EVALUATE

- Start with Silicon Labs BG24 hardware
- Zephyr-based development environment
- Check Terrestrial coverage heat map on network.hubble.com



BUILD

- Sign up and register your device on dash.hubble.com
- Provision the device key, flash and validate.
- Build a custom app with the SDK docs.hubble.com
- Extend application in Silicon Labs Simplicity Studio IDE

DEPLOY

- Move from evaluation to Hubble-enabled product and track in real-time
- Silicon Labs CPMS device manufacturing service for key injection

xG24 – Optimized for Battery Powered IoT Devices

Bluetooth® Proprietary

- **5x5 QFN40 (26 GPIO)**
- **6x6 QFN48 (28/32 GPIO)**
- **WLCSP**

DIFFERENTIATED FEATURES

- **Up to +19.5 dBm output power**
  - Eliminates the need for an external power amplify
- **AI/ML accelerator**
  - Accelerates inferencing and reduces power consumption
- **Secure Vault High**
  - Designed for PSA Level 3
  - Protects data, IP and device
- **20-bit ADC**
  - 16-bit ENOB for advance sensing
- **PLFRCO**
  - Eliminates need for 32 KHz crystal
- **Feature Rich peripherals**
  - 20-bit ADC, ACMP, VDAC, EUSART,USART, I2C

DEVICE SPECFICATIONS

- **High Performance Radio**
  - -97.6 dBm RX @ BLE 1 Mbps
  - -105.4 dBm RX @ 802.15.4
- **Multi-core**
  - Efficient ARM® Cortex®-M33
  - 78 MHz (FPU and DSP)
  - Dedicated radio and security cores
- **Memory**
  - Up to 1536kB Flash
  - Up to 256kB RAM
- **Low Power**
  - 5.0 mA TX @ 0 dBm
  - 19.1 mA TX @ +10 dBm
  - 4.4 mA RX (BLE 1 Mbps)
  - 5.1 mA RX (802.15.4)
  - 33.4 µA/MHz
  - 1.3 µA EM2 with 16 kB RAM
- **Wide Operating Range**
  - 1.71 to 3.8 volts
  - +125ºC operating temperature

Silicon Labs xG24 Development Kits

XG24-PK6010A

EFR32xG24 +20dBm Pro Kit
supports 2.4GHz protocols with
J-Link debugger, Packet Trace Interface
and Virtual COM port.

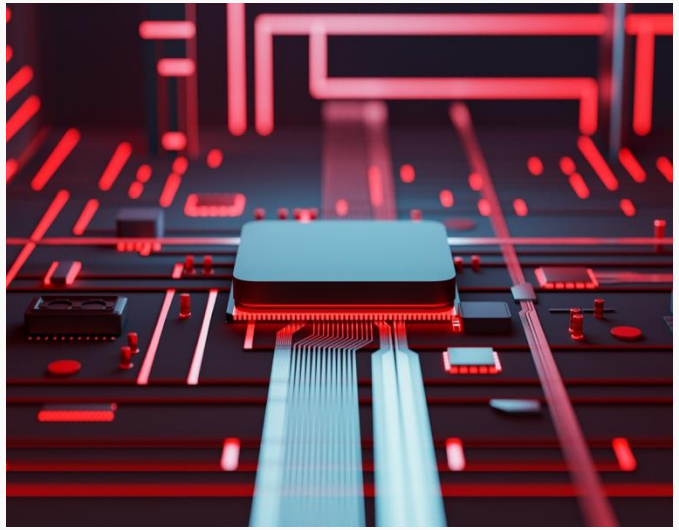
Design files available.

SEEED STUDIO XIAO MG24

Partner dev kit by Seeed Studio

Based on MG24 architecture
and +20dBm radio

Learn More About Silicon Labs & Hubble



GETTING STARTED

MG24 Available at:

Visit site

Hubble SDK:

Visit site

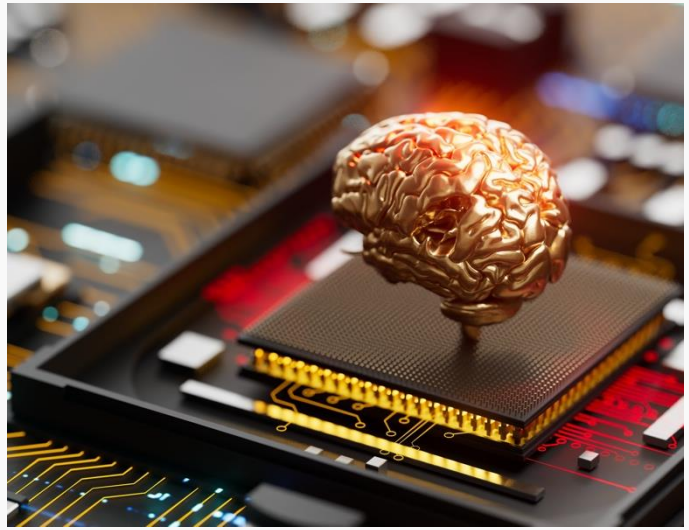
FOR MORE INFORMATION

Learn About Silicon Labs & Hubble:

View Case Study

Sign up for Hubble's Dual Stack Network:

Visit site



CALL TO ACTION

For any questions about SiLabs offerings, please contact our Sales team, or reach out to our developer community.

Developer Community