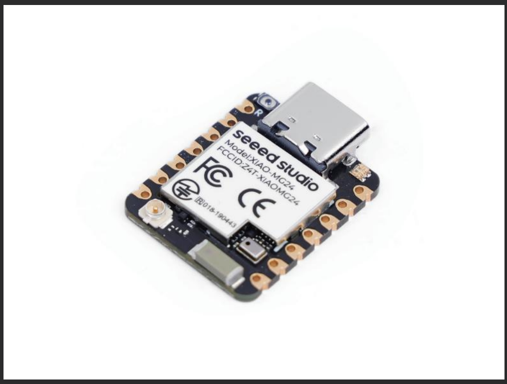
Getting Started with Seeed Studio XIAO MG24

Getting Started with Seeed Studio XIAO MG24(Sense)

Seeed Studio XIAO MG24	Seeed Studio XIAO MG24 Sense

	
Get One Now 🖱️	Get One Now 🖱️

Introduction

Seeed Studio XIAO MG24 is a mini development board based on Silicon Labs' MG24. XIAO MG24 is based on **ARM Cortex-M33 core**, **32-bit RISC** architecture with a maximum clock speed of 78MHz, supporting DSP instructions and FPU floating-point operations, possessing powerful computing power, and built-in **AL/ML hardware accelerator MVP**, which can efficiently process AI/machine learning algorithms. Secondly, it has excellent RF performance, It suppor ts multiple IoT and wireless transmission protocols such as **Matter, Thread, Zigbee, Bluetooth LE 5.3,Bluetooth mesh** etc.

Specification

Item	Seeed Studio XIAO MG24	Seeed Studio XIAO MG24 Sense
Processor	Silicon Labs EFR32MG24 ARM Cortex-M33 @ 78MHz	
Wireless	Complete 2.4GHz Wi-Fi subsystem BLE: Bluetooth 5.3, Bluetooth mesh	
Built-in Sensors	-	6-Axis IMU(LSM6DS3TR-C) Analog Microphone(MSM381ACT001)

Memory	256kB RAM & 1538KB + 4MB Flash	256kB RAM & 1538KB + 4MB Flash
Interface	2x UART, 1x IIC, 2x SPI, 18x Analog, 18x Digital, ALL PWM, 1x User LED, 1x Charge LED 1x Reset button,	2x UART, 1x IIC, 2x SPI, 18x Analog, 18x Digital, ALL PWM, 1x User LED, 1x Charge LED 1x Reset button,
Dimensions	21 x 17.8mm	21 x 17.8mm
Power	Input voltage (Type-C): 5V@14mA Input voltage (BAT): 3.7V@7mA	
	Charging battery current: **200mA**	Charging battery current: **200mA**
Low Power Consumption Model	Normal: **3.7V/6.71 mA** Sleep Model: **3.7V/1.91mA** Deep Sleep Model: **3.7V/1.95μA**	Normal: **3.7V/6.71 mA** Sleep Model: **3.7V/1.91mA** Deep Sleep Model: **3.7V/1.95μA**
Working Temperature	-20°C ~ 70°C	

Features

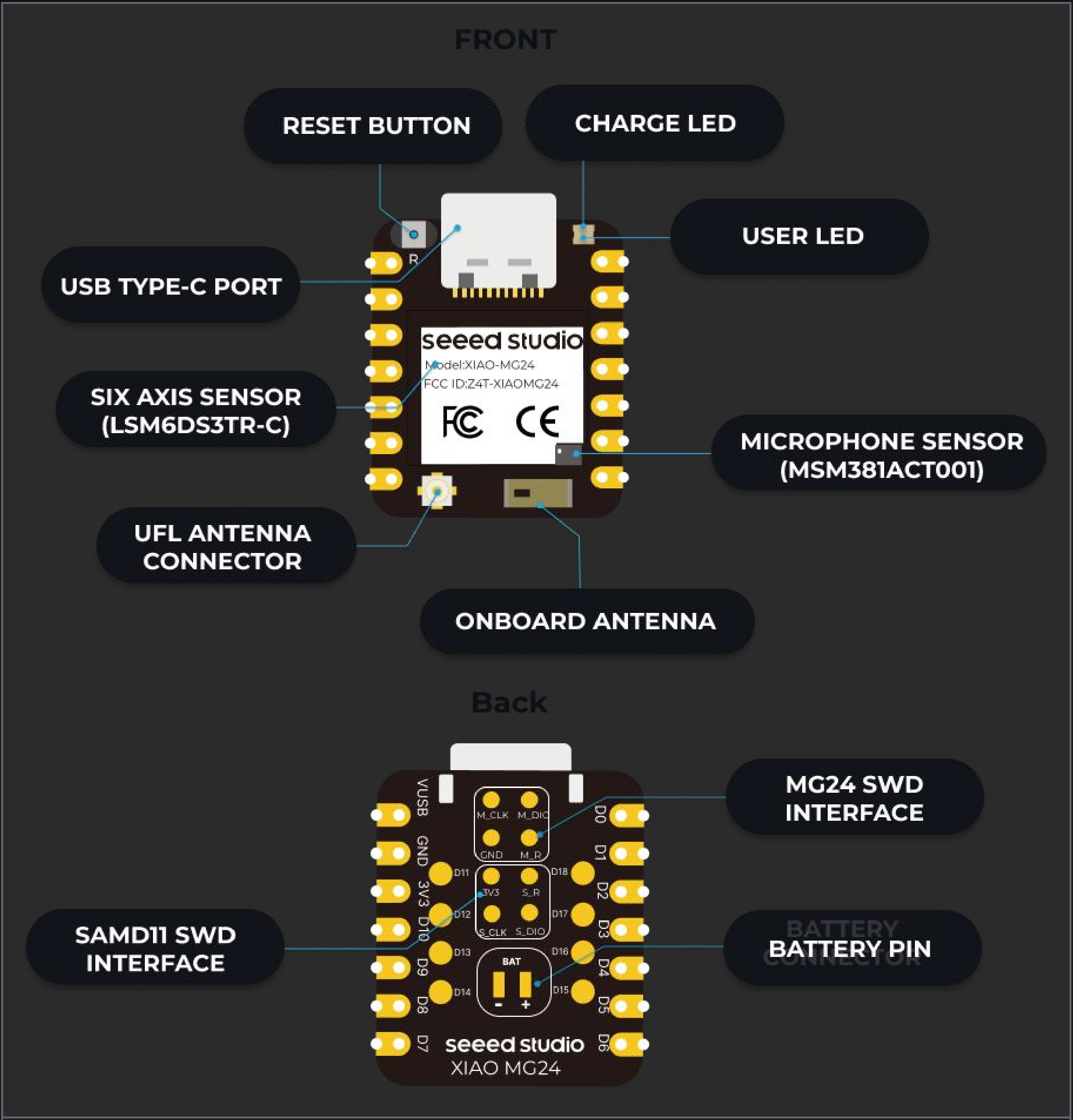
- **Powerful CPU**:ARM Cortex-M33 core, with a maximum clock speed of 78MHz, supporting DSP instructions and FPU floating-point operations, 32-bit RISC architecture.
- **Ultra-Low Power**:RX current 4.6mA/TX current 5mA (0dBm), multiple low-power sleep modes
- **Powerful AI**:Built in AI/ML hardware accelerator MVP, capable of efficiently processing AI/machine learning algorithms.
- **Multi style wireless transmission**:Integrated 2.4GHz multi protocol wireless transceiver, supporting multiple IoT protocols such as Matter, OpenThread, Zigbee,

Bluetooth LE 5.3, Bluetooth mesh, etc.

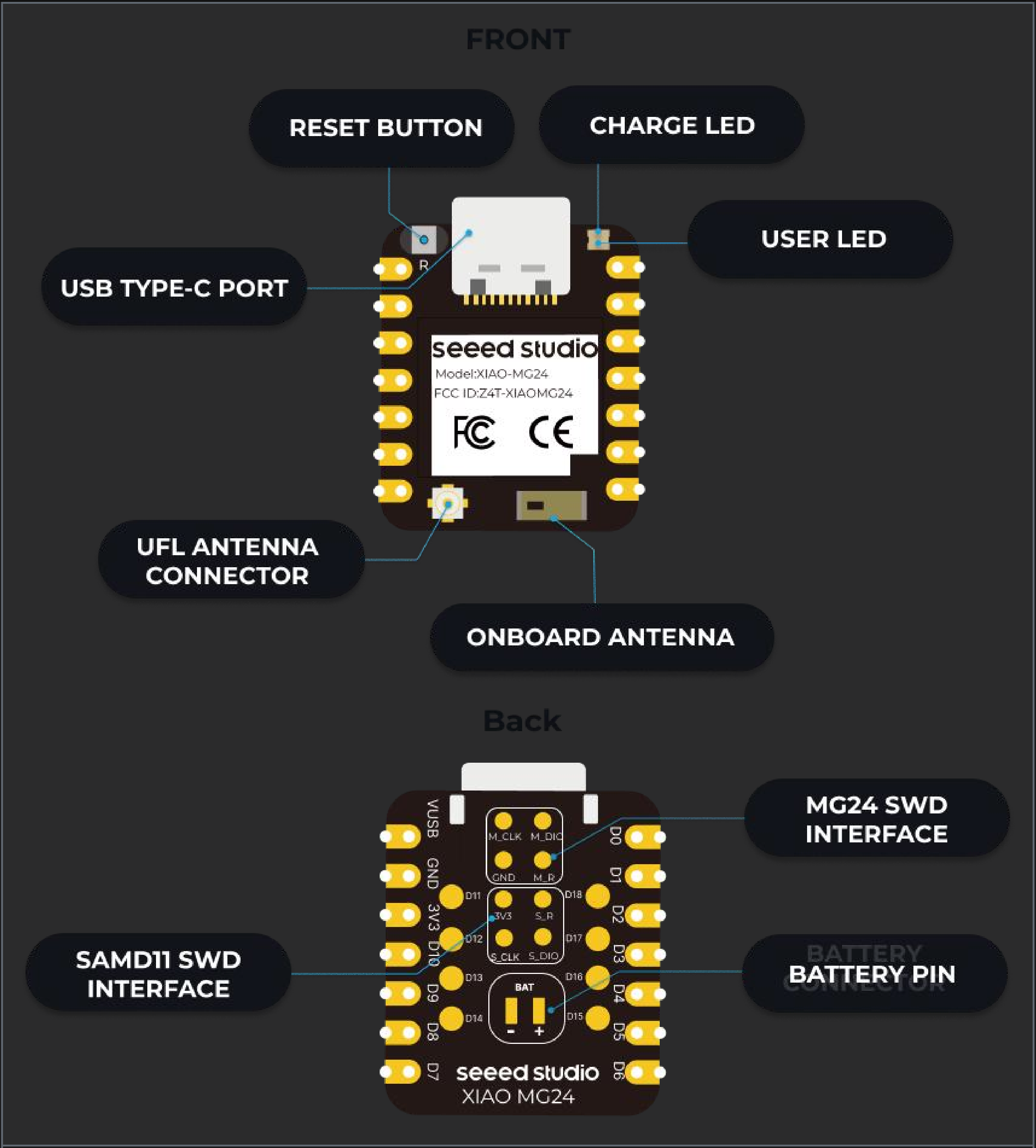
- **Powerful security**:Powerful security features of Secure Vault, including secure boot, encryption, random number generation, tamper proof, secure debugging, etc.
- **Ultra-small size**:
- **Rich on-chip resources**:Maximum 1536KB Flash and 256KB RAM, with ample storage space.
- **Rich interfaces**:Integrated with 12 bit 1Msps ADC, temperature sensor, analog comparator, DCDC and other rich peripherals, and up to 22 Pin, 2 USART, 2 low-power UART, 1 IIC and other interfaces.

Hardware overview

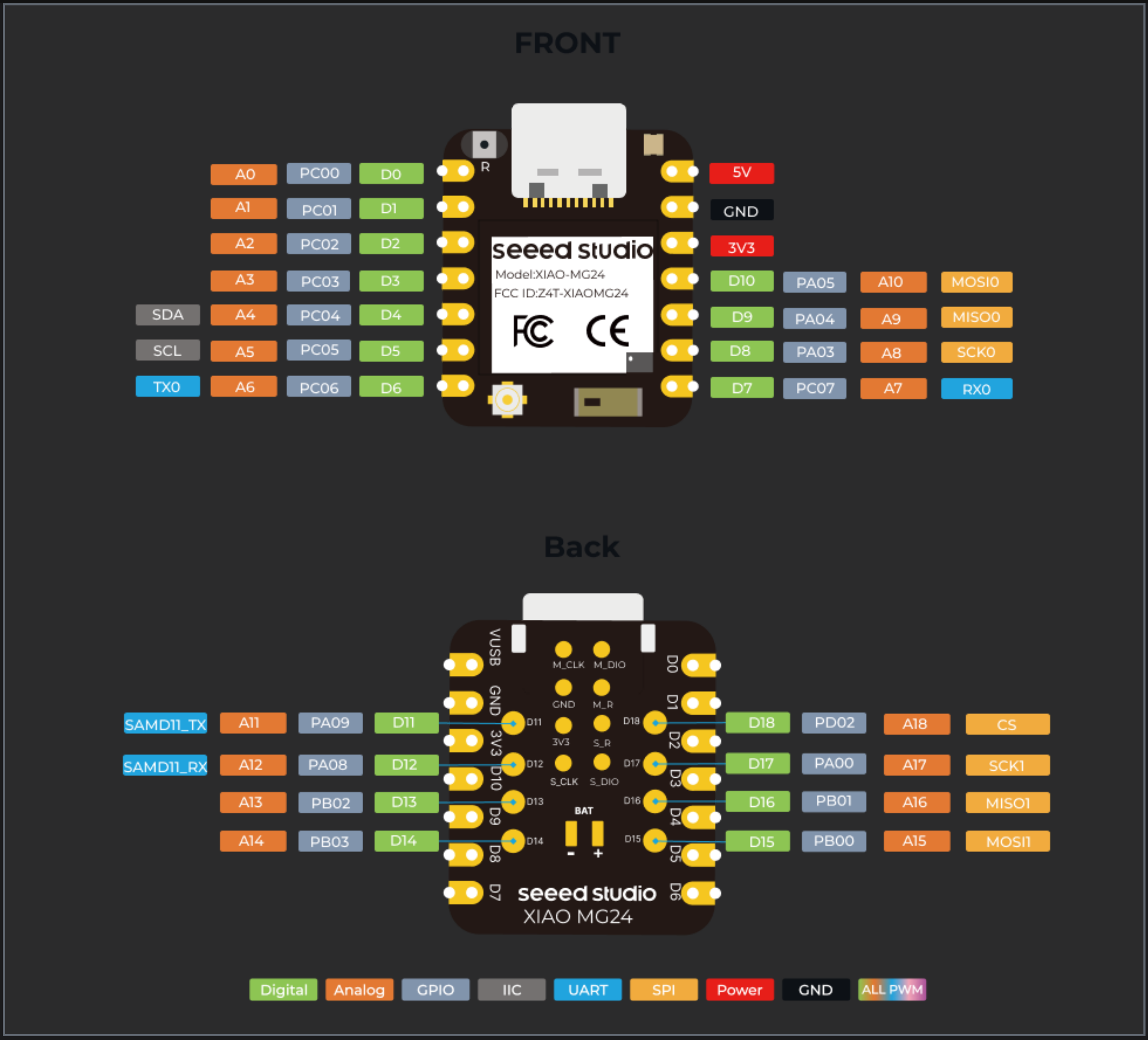
XIAO MG24 Sense indication diagram



XIAO MG24 indication diagram



XIAO MG24/ XIAO MG24(Sense) Pin List



TIP

The difference between the two development boards is that MG24 Sense has a microphone sensor and a six axis acceleration sensor, while MG24 does not have one.

- 5V - This is 5v out from the USB port. You can also use this as a voltage input but you must have some sort of diode (schottky, signal, power) between your external power source and this pin with anode to battery, cathode to 5V pin.
- 3V3 - This is the regulated output from the onboard regulator.
- GND - Power/data/signal ground

Getting started

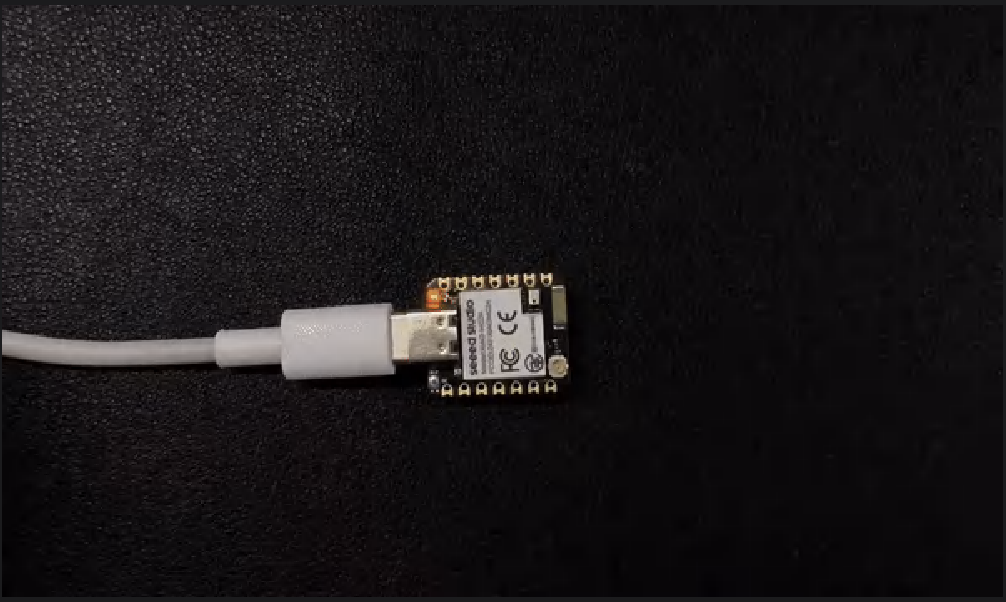
To enable you to get started with the XIAO MG24 faster, please read the hardware and software preparation below to prepare the XIAO.

Factory procedure

We pre-program each new XIAO MG24 and XIAO MG24 Sense with a simple factory program.

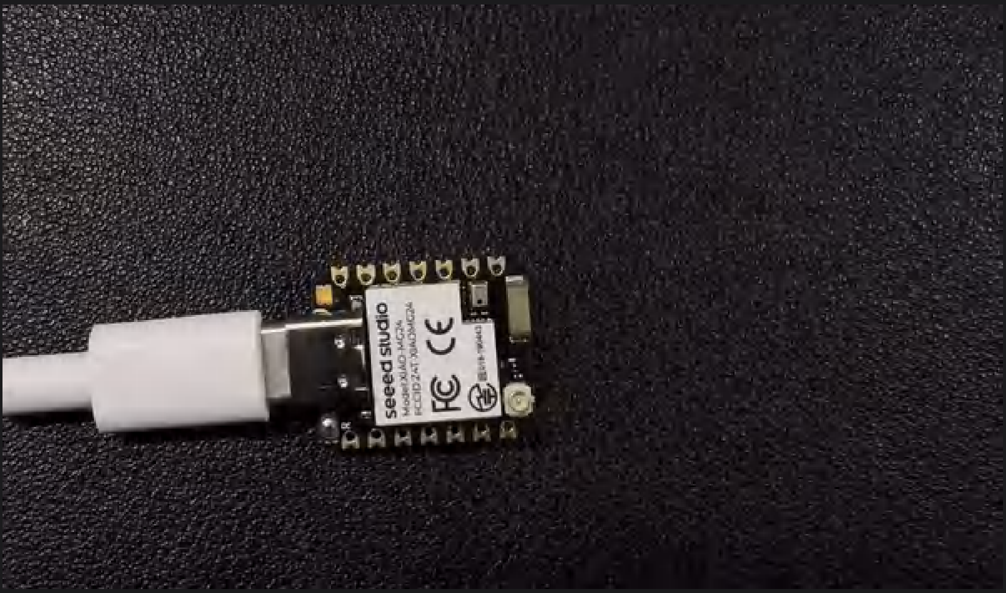
1. **XIAO MG24**

The factory program preset in the regular version is Blink Light. When you power up the XIAO,the orange user indicator will light up.



2. **XIAO MG24 Sense**

The factory program preset in the regular version is The louder you shout, the brighter the light will be.



Hardware Preparation

You need to prepare the following:

- 1 x Seeed Studio XIAO MG24
- 1 x Computer
- 1 x USB Type-C cable

> **TIP**
>
> Some USB cables can only supply power and cannot transfer data. If you don't have a USB cable or don't know if your USB cable can transmit data, you can check Seeed USB Type-C support USB 3.1.

Software Preparation

The recommended programming tool for the XIAO MG24 is the Arduino IDE, so you need to complete the Arduino installation as part of the software preparation.

> **TIP**
>
> If this is your first time using Arduino, we highly recommend you to refer to Getting Started with Arduino.

- **Step 1.** Download and Install the stable version of Arduino IDE according to your operating system.

Download Arduino IDE

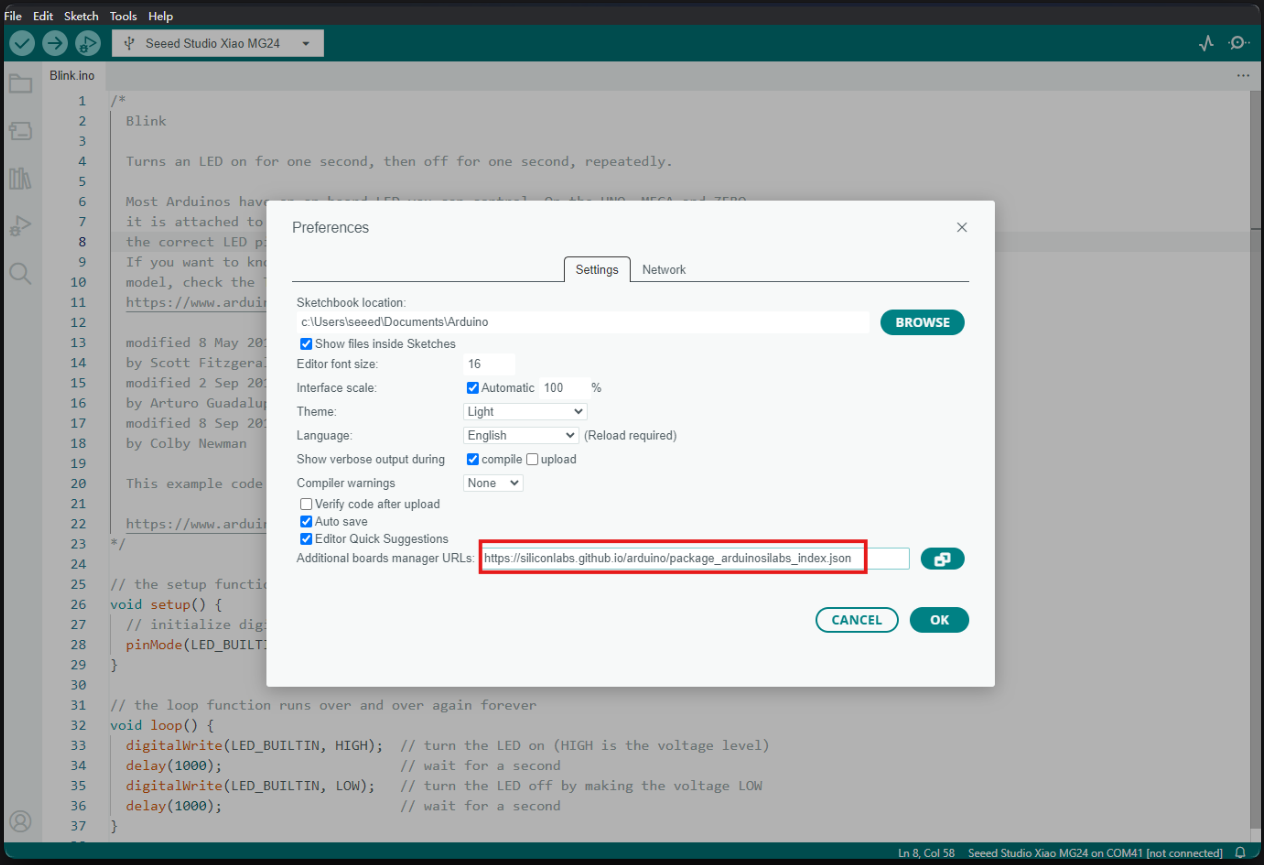
- **Step 2.** Launch the Arduino application.
- **Step 3.** Add the XIAO MG24 on-board package to the Arduino IDE and click `OK`.
- **Step 4.** Close the Arduino IDE and reopen it.

Add the XIAO MG24 Board

To install the XIAO MG24 board, follow these steps:

```
https://siliconlabs.github.io/arduino/package_arduinosilabs_index.json
```

1. Add the above board manager URL to the preferences of your Arduino IDE.



```
/*
  Blink

  Turns an LED on for one second, then off for one second, repeatedly.

  Most Arduinos have
  it is attached to
  the correct LED p
  If you want to kno
  model, check the
  https://www.ardui

  modified 8 May 20
  by Scott Fitzgera
  modified 2 Sep 20
  by Arturo Guadalu
  modified 8 Sep 20
  by Colby Newman

  This example code

  https://www.ardui
*/

// the setup functi
void setup() {
  // initialize dig
  pinMode(LED_BUILT
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH);  // turn the LED on (HIGH is the voltage level)
  delay(1000);                      // wait for a second
  digitalWrite(LED_BUILTIN, LOW);   // turn the LED off by making the voltage LOW
  delay(1000);                      // wait for a second
}
```

Preferences

Settings | Network

Sketchbook location: c:\Users\seeed\Documents\Arduino BROWSE

☑ Show files inside Sketches

Editor font size: 16

Interface scale: ☑ Automatic 100 %

Theme: Light

Language: English (Reload required)

Show verbose output during ☑ compile □ upload

Compiler warnings None

□ Verify code after upload

☑ Auto save

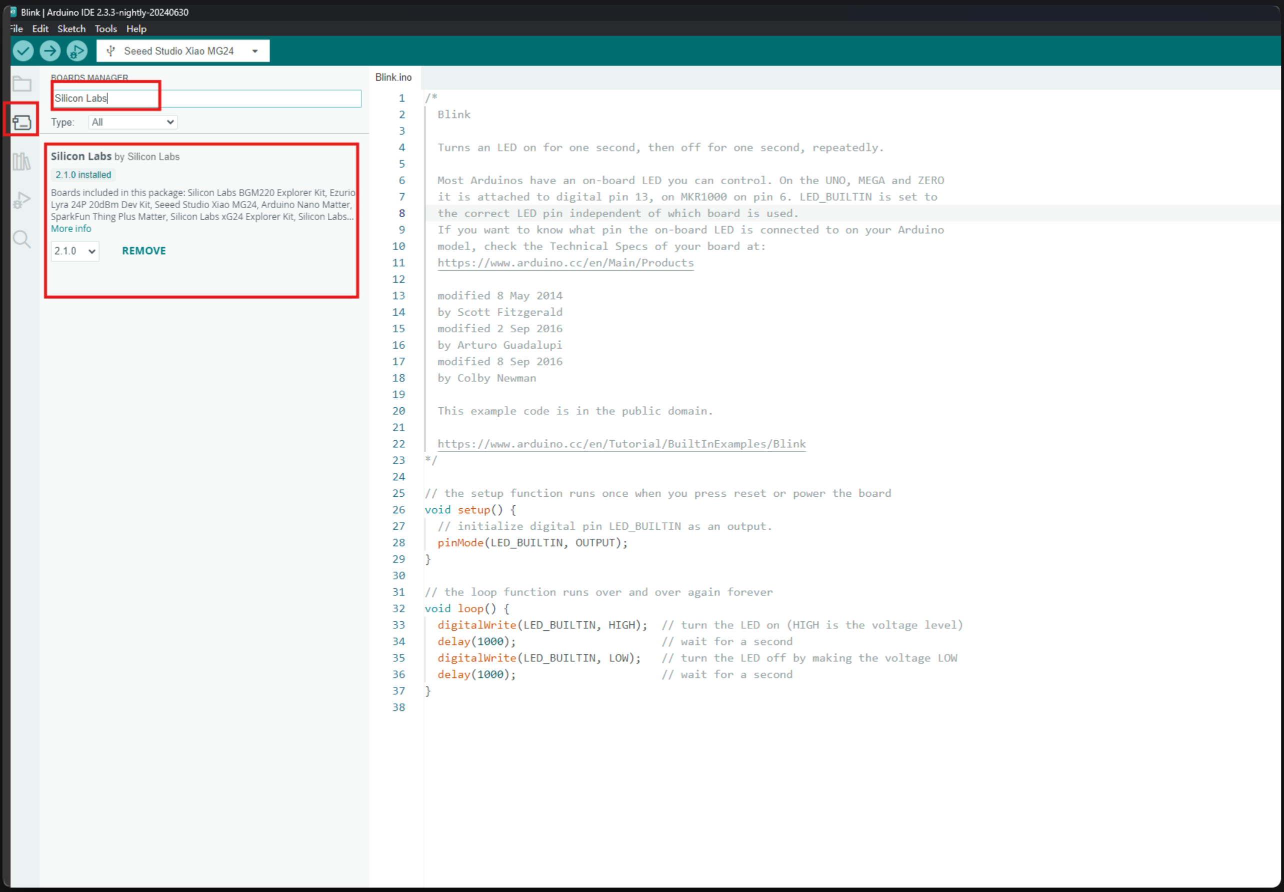
☑ Editor Quick Suggestions

Additional boards manager URLs: https://siliconlabs.github.io/arduino/package_arduinosilabs_index.json

CANCEL OK

Ln 8, Col 58 Seeed Studio Xiao MG24 on COM41 [not connected]

2. Download the XIAO MG24 board package.



Blink | Arduino IDE 2.3.3-nightly-20240630
File Edit Sketch Tools Help
Seeed Studio Xiao MG24
BOARDS MANAGER
Blink.ino

Silicon Labs

Type: All

Silicon Labs by Silicon Labs

2.1.0 installed

Boards included in this package: Silicon Labs BGM220 Explorer Kit, Ezurio Lyra 24P 20dBm Dev Kit, Seeed Studio Xiao MG24, Arduino Nano Matter, SparkFun Thing Plus Matter, Silicon Labs xG24 Explorer Kit, Silicon Labs...

More info

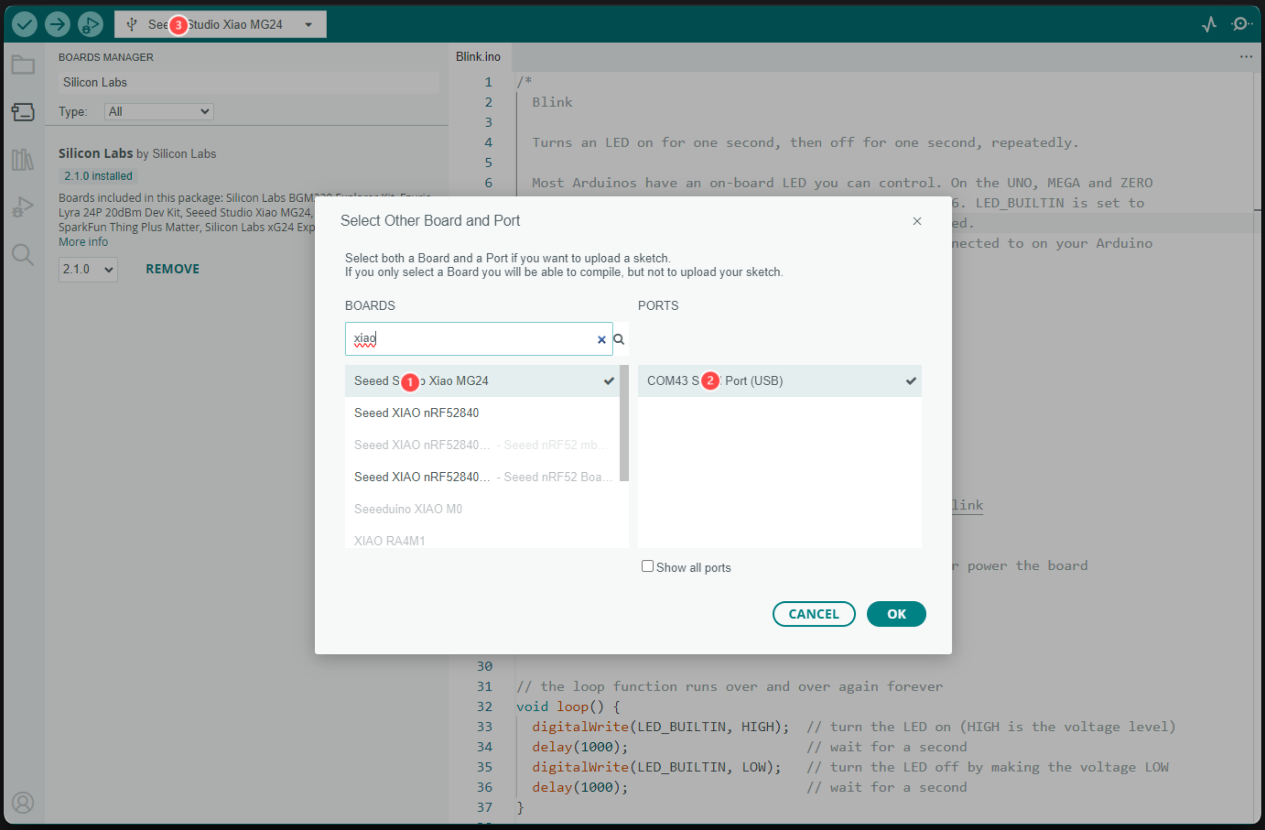
2.1.0 REMOVE

```
/*
  Blink

  Turns an LED on for one second, then off for one second, repeatedly.

  Most Arduinos have an on-board LED you can control. On the UNO, MEGA and ZERO
  it is attached to digital pin 13, on MKR1000 on pin 6. LED_BUILTIN is set to
  the correct LED pin independent of which board is used.
  If you want to know what pin the on-board LED is connected to on your Arduino
  model, check the Technical Specs of your board at:
  https://www.arduino.cc/en/Main/Products

  modified 8 May 2014
  by Scott Fitzgerald
  modified 2 Sep 2016
  by Arturo Guadalupi
  modified 8 Sep 2016
  by Colby Newman

  This example code is in the public domain.

  https://www.arduino.cc/en/Tutorial/BuiltInExamples/Blink
*/

// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH);  // turn the LED on (HIGH is the voltage level)
  delay(1000);                      // wait for a second
  digitalWrite(LED_BUILTIN, LOW);   // turn the LED off by making the voltage LOW
  delay(1000);                      // wait for a second
}
```

TIP

If you cannot find it after entering, please reopen the Arduino IDE.

3. Opt for `XIAO_MG24` variant.



Silicon Labs by Silicon Labs

2.1.0 installed

Boards included in this package: Silicon Labs BGM220 Explorer Kit, Ezurio Lyra 24P 20dBm Dev Kit, Seeed Studio Xiao MG24, SparkFun Thing Plus Matter, Silicon Labs xG24 Exp
More info

2.1.0

Select Other Board and Port

Select both a Board and a Port if you want to upload a sketch.
If you only select a Board you will be able to compile, but not to upload your sketch.

BOARDS: xiao

- Seeed Studio Xiao MG24 ✓
- Seeed XIAO nRF52840
- Seeed XIAO nRF52840... - Seeed nRF52 mb...
- Seeed XIAO nRF52840... - Seeed nRF52 Boa...
- Seeeduino XIAO M0
- XIAO RA4M1

PORTS

- COM43 Serial Port (USB) ✓

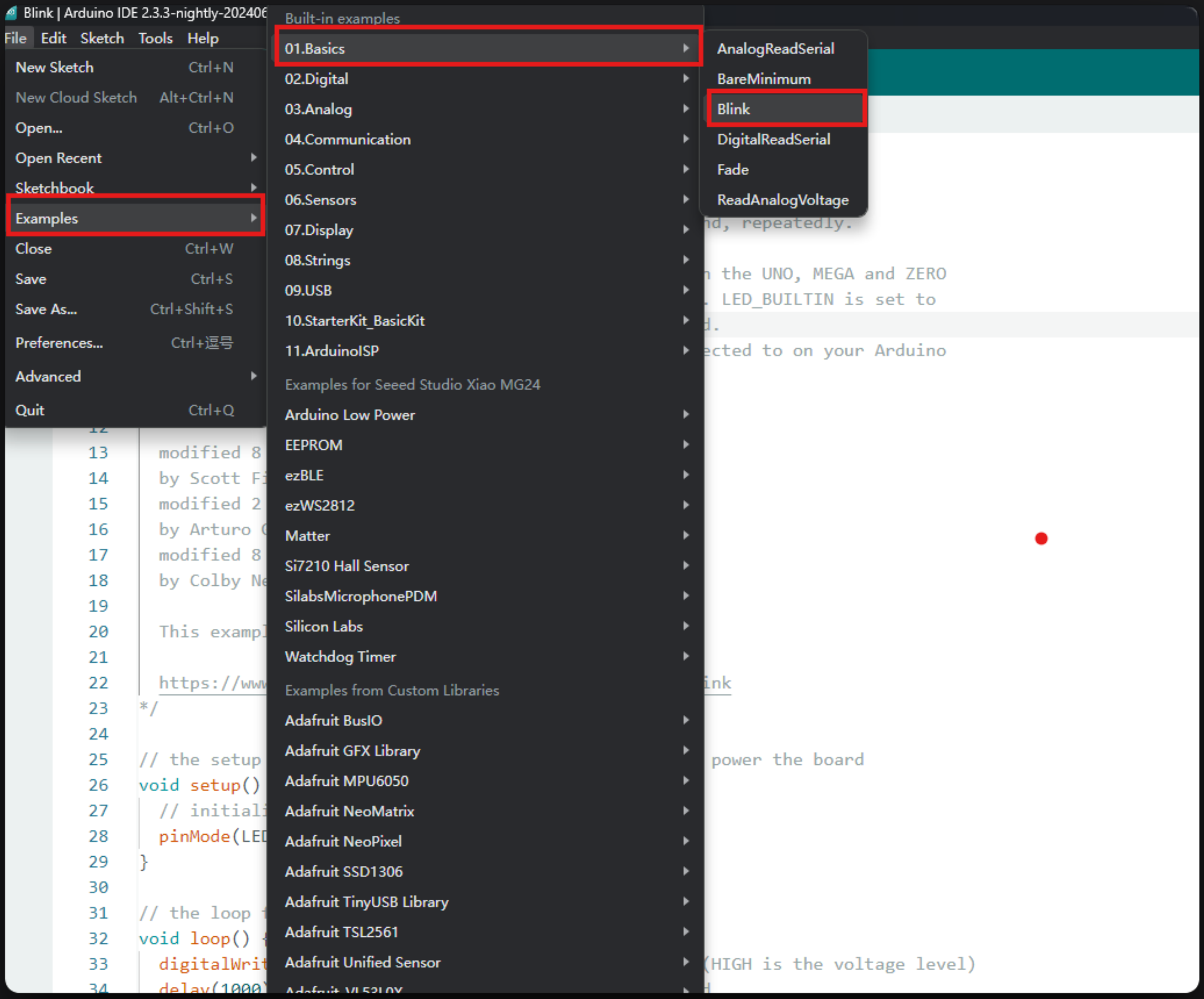
□ Show all ports

```
/*
  Blink

  Turns an LED on for one second, then off for one second, repeatedly.

  Most Arduinos have an on-board LED you can control. On the UNO, MEGA and ZERO
                                              6. LED_BUILTIN is set to
                                              ed.
                                              nected to on your Arduino

                                              link

                                              r power the board


// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH);  // turn the LED on (HIGH is the voltage level)
  delay(1000);                      // wait for a second
  digitalWrite(LED_BUILTIN, LOW);   // turn the LED off by making the voltage LOW
  delay(1000);                      // wait for a second
}
```

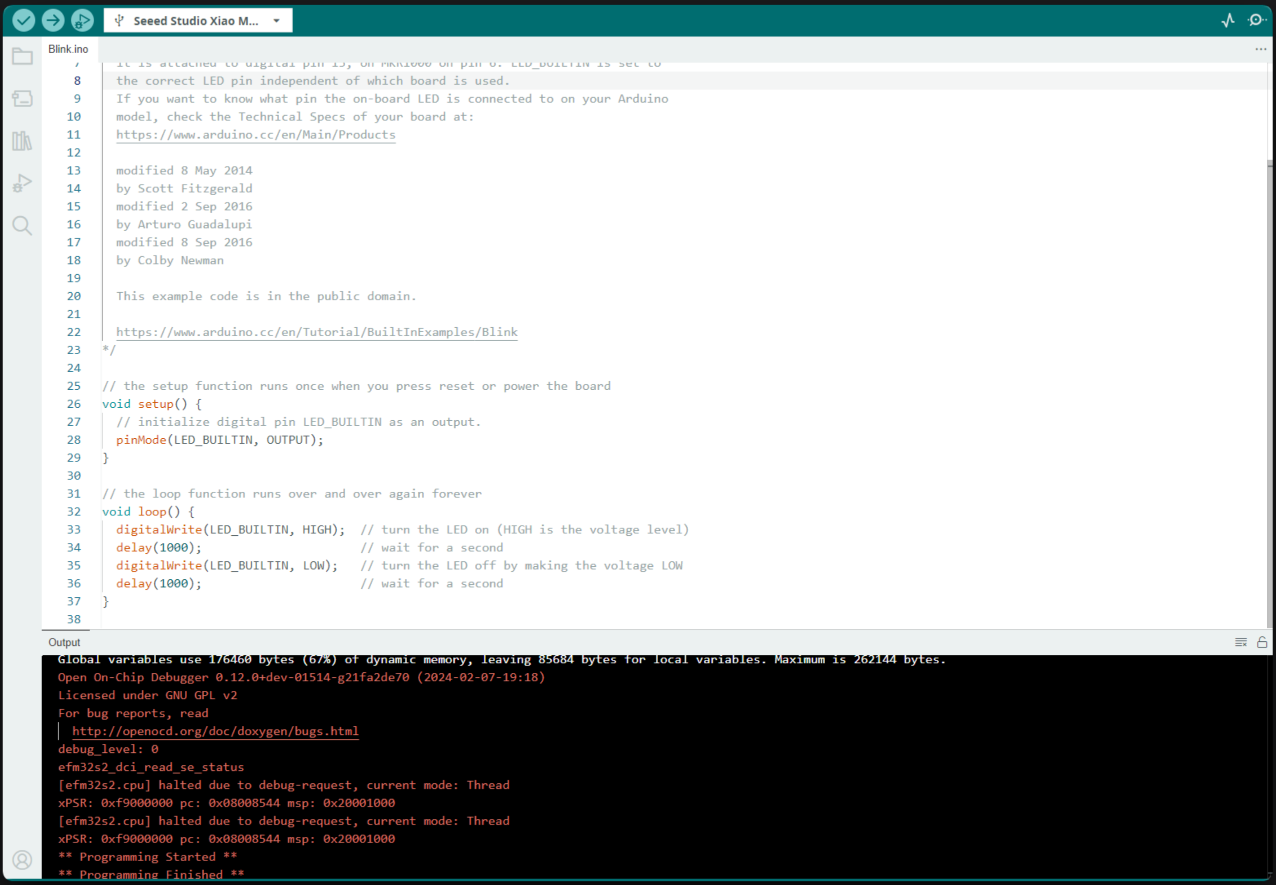
Now enjoy coding ✨.

Run your first Blink program

- **Step 1.** Launch the Arduino application.
- **Step 2.** Navigate to **File** > **Examples** > **01.Basics** > **Blink**, open the program.



- **Step 3.** Select the board model to **XIAO MG24**, and select the correct port number to upload the program.

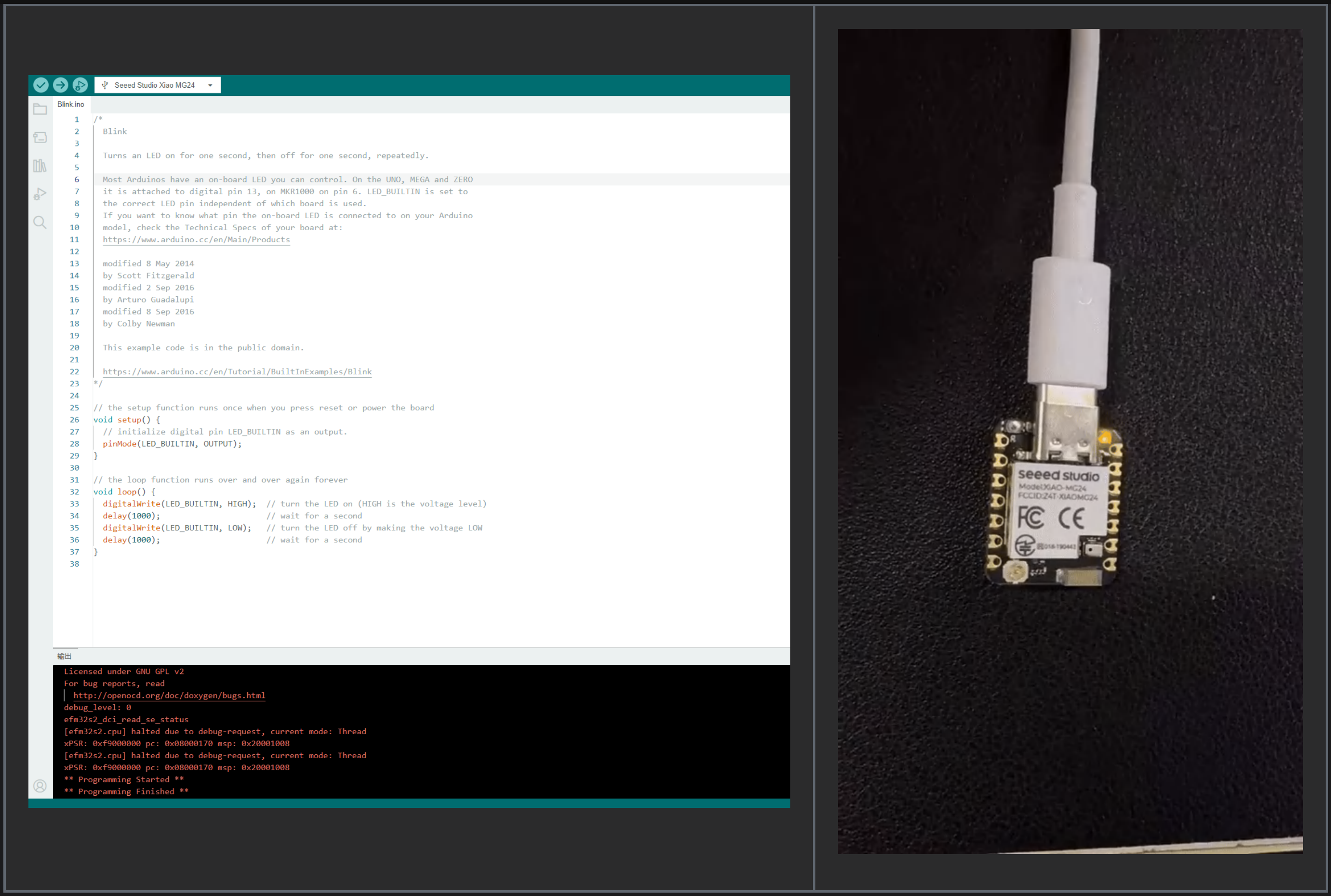


```
  It is attached to digital pin 13, on MKR1000 on pin 6. LED_BUILTIN is set to
  the correct LED pin independent of which board is used.
  If you want to know what pin the on-board LED is connected to on your Arduino
  model, check the Technical Specs of your board at:
  https://www.arduino.cc/en/Main/Products

  modified 8 May 2014
  by Scott Fitzgerald
  modified 2 Sep 2016
  by Arturo Guadalupi
  modified 8 Sep 2016
  by Colby Newman

  This example code is in the public domain.

  https://www.arduino.cc/en/Tutorial/BuiltInExamples/Blink
*/

// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH);  // turn the LED on (HIGH is the voltage level)
  delay(1000);                      // wait for a second
  digitalWrite(LED_BUILTIN, LOW);   // turn the LED off by making the voltage LOW
  delay(1000);                      // wait for a second
}
```

```
Global variables use 176460 bytes (67%) of dynamic memory, leaving 85684 bytes for local variables. Maximum is 262144 bytes.
Open On-Chip Debugger 0.12.0+dev-01514-g21fa2de70 (2024-02-07-19:18)
Licensed under GNU GPL v2
For bug reports, read
  http://openocd.org/doc/doxygen/bugs.html
debug_level: 0
efm32s2_dci_read_se_status
[efm32s2.cpu] halted due to debug-request, current mode: Thread
xPSR: 0xf9000000 pc: 0x08008544 msp: 0x20001000
[efm32s2.cpu] halted due to debug-request, current mode: Thread
xPSR: 0xf9000000 pc: 0x08008544 msp: 0x20001000
** Programming Started **
** Programming Finished **
```

Once the program is successfully uploaded, you will see the following output message and you can observe that the orange LED on the right side of the XIAO MG24 is blinking.

MG24 BLink Code	LED BLink DisPlay

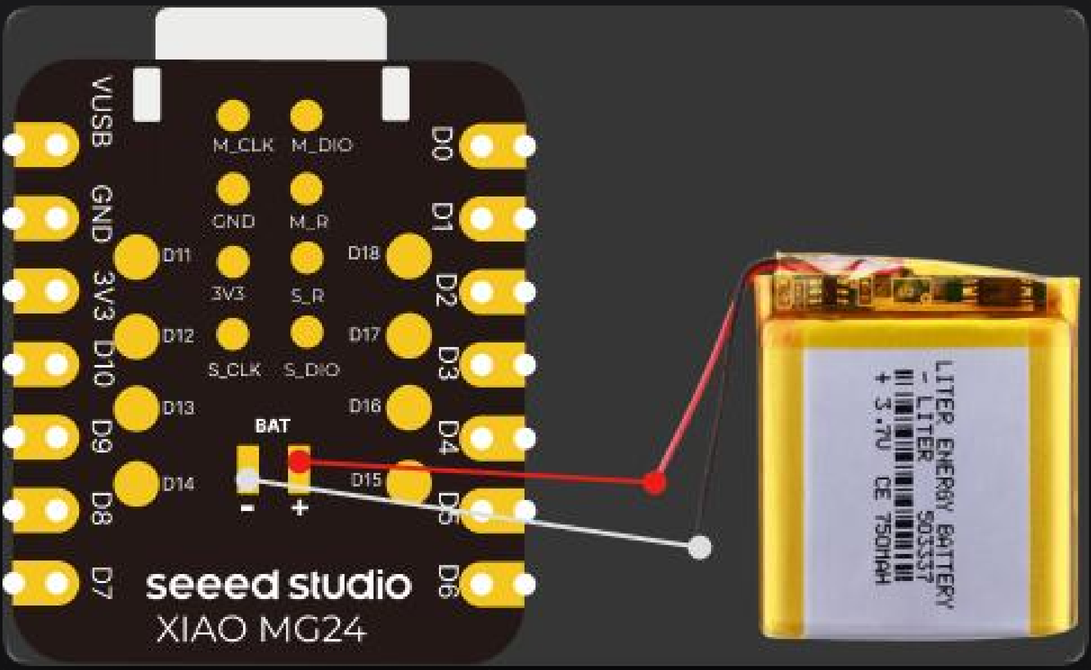


```
/*
  Blink

  Turns an LED on for one second, then off for one second, repeatedly.

  Most Arduinos have an on-board LED you can control. On the UNO, MEGA and ZERO
  it is attached to digital pin 13, on MKR1000 on pin 6. LED_BUILTIN is set to
  the correct LED pin independent of which board is used.
  If you want to know what pin the on-board LED is connected to on your Arduino
  model, check the Technical Specs of your board at:
  https://www.arduino.cc/en/Main/Products

  modified 8 May 2014
  by Scott Fitzgerald
  modified 2 Sep 2016
  by Arturo Guadalupi
  modified 8 Sep 2016
  by Colby Newman

  This example code is in the public domain.

  https://www.arduino.cc/en/Tutorial/BuiltInExamples/Blink
*/

// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH);  // turn the LED on (HIGH is the voltage level)
  delay(1000);                      // wait for a second
  digitalWrite(LED_BUILTIN, LOW);   // turn the LED off by making the voltage LOW
  delay(1000);                      // wait for a second
}

```

```
Licensed under GNU GPL v2
For bug reports, read
  http://openocd.org/doc/doxygen/bugs.html
debug_level: 0
efm32s2_dci_read_se_status
[efm32s2.cpu] halted due to debug-request, current mode: Thread
xPSR: 0xf9000000 pc: 0x08000170 msp: 0x20001008
[efm32s2.cpu] halted due to debug-request, current mode: Thread
xPSR: 0xf9000000 pc: 0x08000170 msp: 0x20001008
** Programming Started **
** Programming Finished **
```

Battery Usage

The XIAO MG24 is capable of using a 3.7V lithium battery as the power supply input. You can refer to the following diagram for the wiring method.



⚠ CAUTION

Please be careful not to short-circuit the positive and negative terminals and burn the battery and equipment when soldering.

Instructions on the use of batteries:

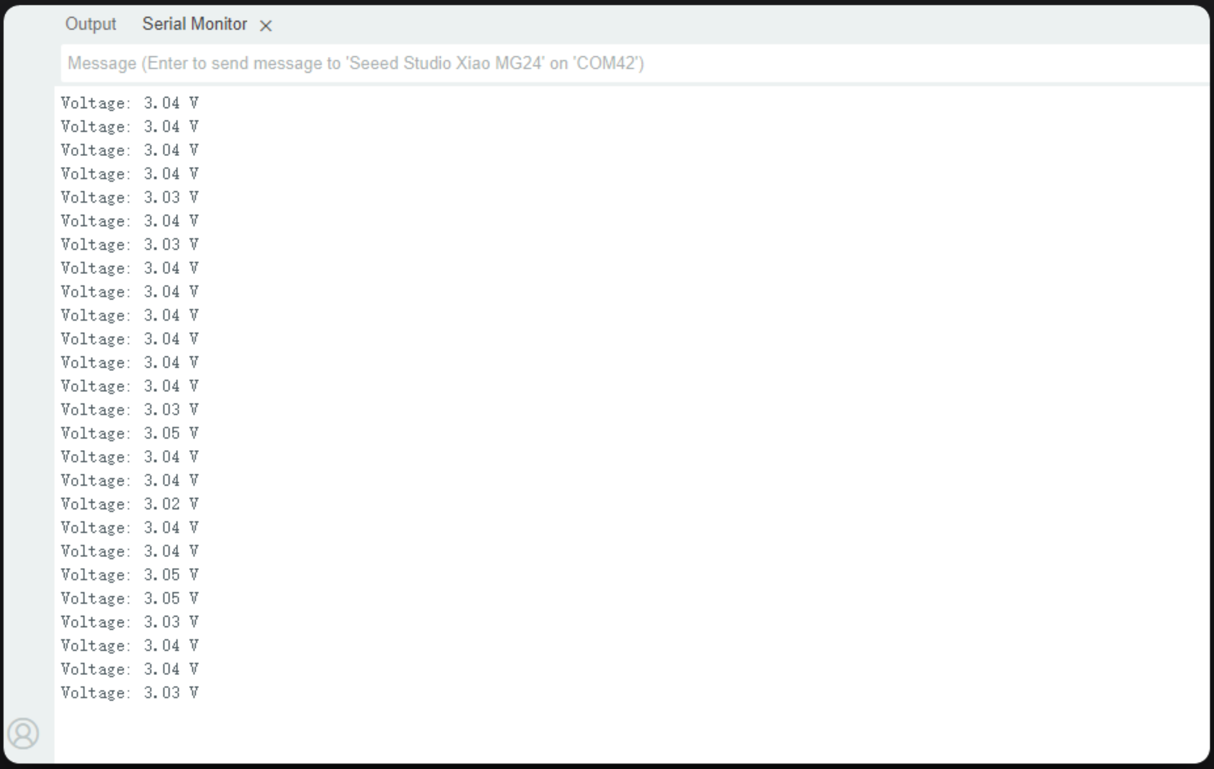
1. Please use qualified batteries that meet the specifications.
2. XIAO can be connected to your computer device via data cable while using the battery, rest assured that XIAO has a built-in circuit protection chip, which is safe.
3. The XIAO MG24 will not have any LED on when it is battery powered (unless you have written a specific program), please do not judge whether the XIAO MG24 is working or not by the condition of the LED, please judge it reasonably by your program.
4. Sorry, we currently have no way to help you check the remaining battery level through software (because there are no more chip pins available), you need to charge the battery regularly or use a multimeter to check the battery level.

Test voltage

Software code

```
/*
  AnalogReadSerial

  Reads an analog input on pin 0, prints the result to the Serial Monitor.
  Graphical representation is available using Serial Plotter (Tools > Serial
Plotter menu).
  Attach the center pin of a potentiometer to pin A0, and the outside pins to
+5V and ground.

  This example code is in the public domain.

  https://www.arduino.cc/en/Tutorial/BuiltInExamples/AnalogReadSerial
*/

// the setup routine runs once when you press reset:
void setup() {
  Serial.begin(115200);
  pinMode(PD3, OUTPUT);
  digitalWrite(PD3, HIGH);
}

void loop() {
  int voltageValue = analogRead(PD4);
  float voltage = voltageValue * (5.0 / 4095.0);

  Serial.print("Voltage: ");
  Serial.print(voltage, 2);
  Serial.println(" V");
  delay(1000);  // delay in between reads for stability
}
```

Display Result



Message (Enter to send message to 'Seeed Studio Xiao MG24' on 'COM42')

```
Voltage: 3.04 V
Voltage: 3.04 V
Voltage: 3.04 V
Voltage: 3.04 V
Voltage: 3.03 V
Voltage: 3.04 V
Voltage: 3.03 V
Voltage: 3.04 V
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Voltage: 3.04 V
Voltage: 3.03 V
Voltage: 3.05 V
Voltage: 3.04 V
Voltage: 3.04 V
Voltage: 3.02 V
Voltage: 3.04 V
Voltage: 3.04 V
Voltage: 3.05 V
Voltage: 3.05 V
Voltage: 3.03 V
Voltage: 3.04 V
Voltage: 3.04 V
Voltage: 3.03 V
```
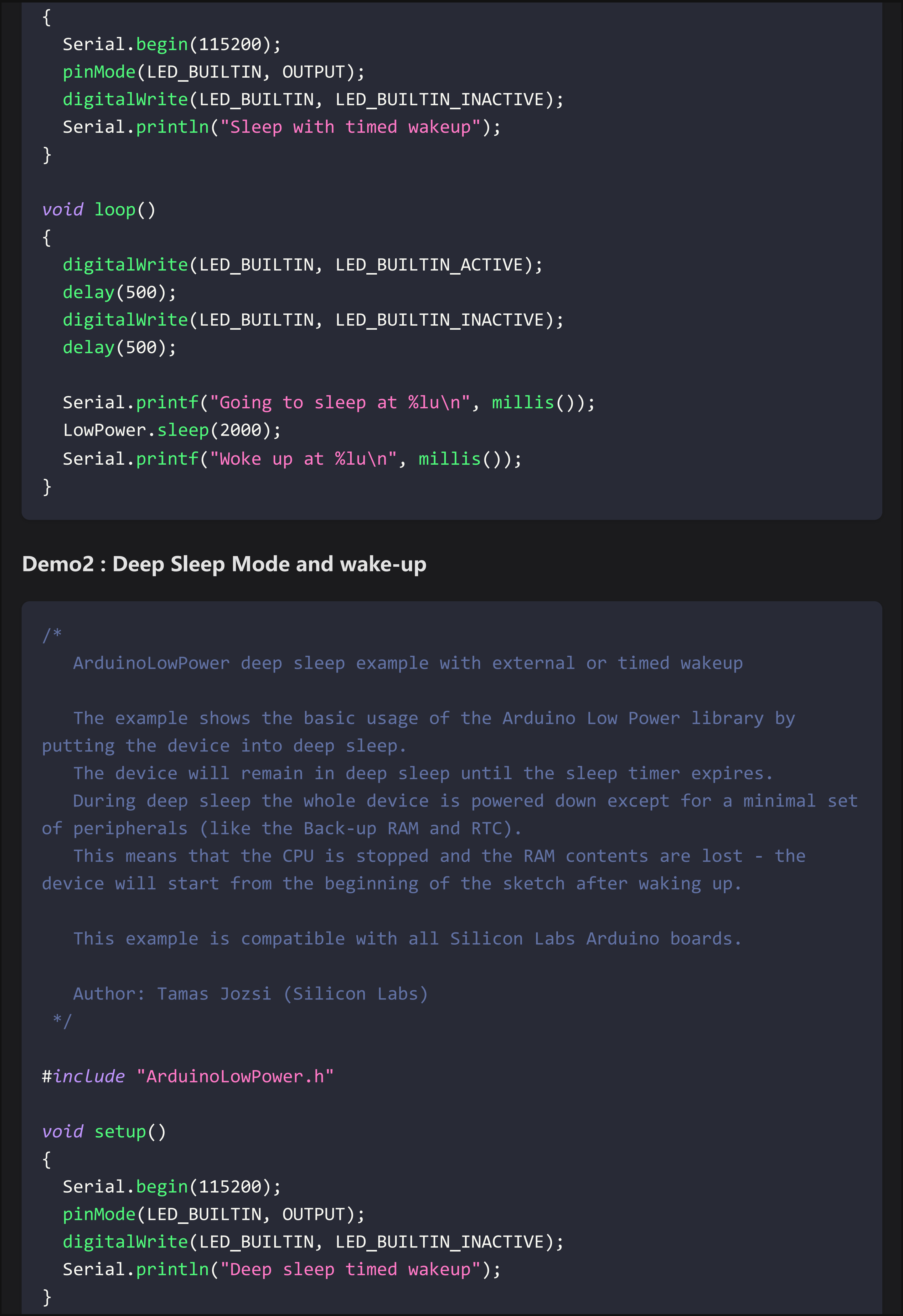

Deep Sleep and Sleep Example

Demo1 : Sleep Mode and wake-up

```
/*
   ArduinoLowPower timed sleep example

   The example shows the basic usage of the Arduino Low Power library by putting the device to sleep for a period of time.
   The device will enter sleep mode for 2000ms. During sleep the CPU is stopped but the RAM retains its contents.

   This example is compatible with all Silicon Labs Arduino boards.

   Author: Tamas Jozsi (Silicon Labs)
 */

#include "ArduinoLowPower.h"

void setup()
```



```
{
  Serial.begin(115200);
  pinMode(LED_BUILTIN, OUTPUT);
  digitalWrite(LED_BUILTIN, LED_BUILTIN_INACTIVE);
  Serial.println("Sleep with timed wakeup");
}

void loop()
{
  digitalWrite(LED_BUILTIN, LED_BUILTIN_ACTIVE);
  delay(500);
  digitalWrite(LED_BUILTIN, LED_BUILTIN_INACTIVE);
  delay(500);

  Serial.printf("Going to sleep at %lu\n", millis());
  LowPower.sleep(2000);
  Serial.printf("Woke up at %lu\n", millis());
}
```

Demo2 : Deep Sleep Mode and wake-up

```
/*
   ArduinoLowPower deep sleep example with external or timed wakeup

   The example shows the basic usage of the Arduino Low Power library by
putting the device into deep sleep.
   The device will remain in deep sleep until the sleep timer expires.
   During deep sleep the whole device is powered down except for a minimal set
of peripherals (like the Back-up RAM and RTC).
   This means that the CPU is stopped and the RAM contents are lost - the
device will start from the beginning of the sketch after waking up.

   This example is compatible with all Silicon Labs Arduino boards.

   Author: Tamas Jozsi (Silicon Labs)
 */

#include "ArduinoLowPower.h"

void setup()
{
  Serial.begin(115200);
  pinMode(LED_BUILTIN, OUTPUT);
  digitalWrite(LED_BUILTIN, LED_BUILTIN_INACTIVE);
  Serial.println("Deep sleep timed wakeup");
}
```

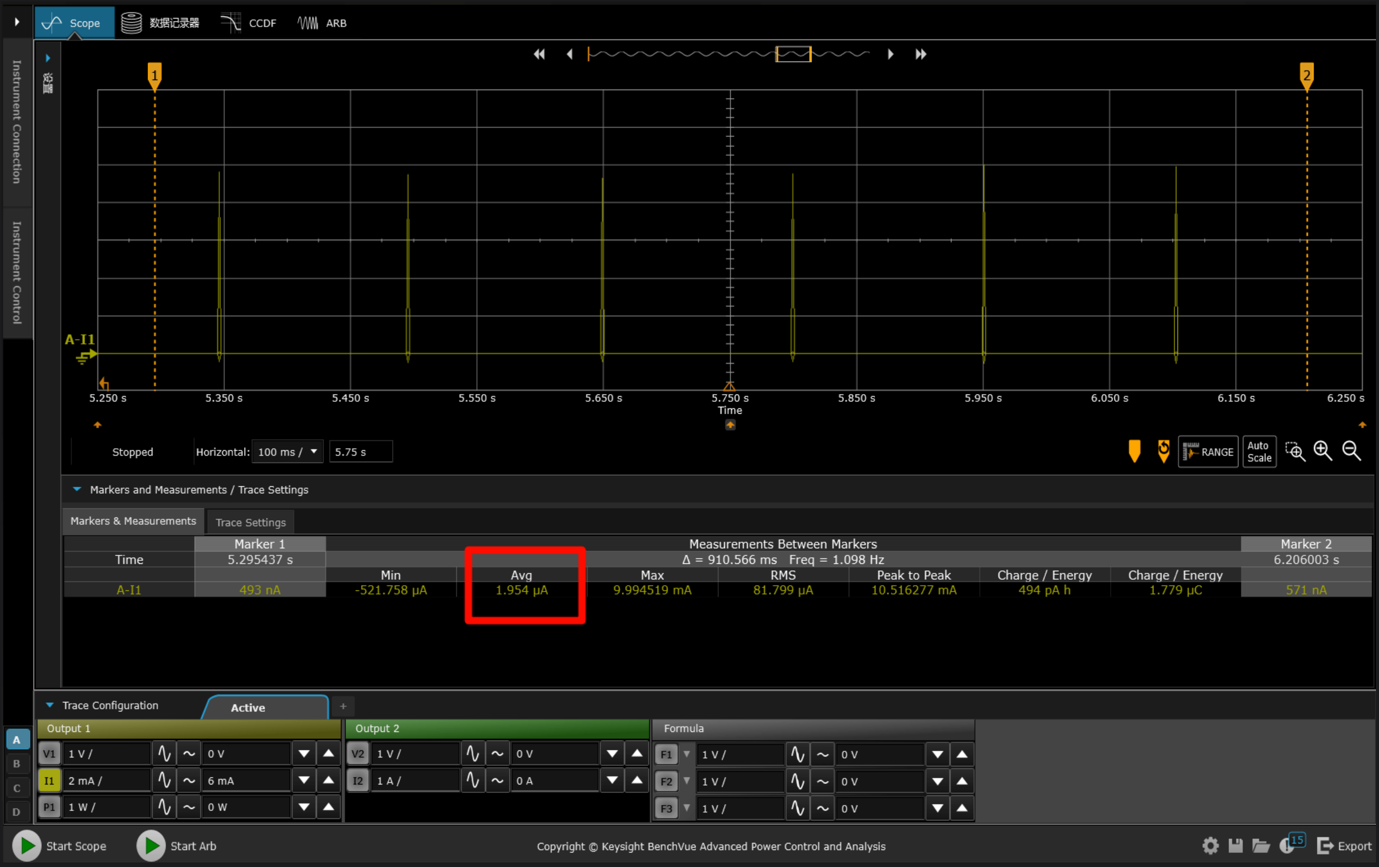
```
void loop()
{
  digitalWrite(LED_BUILTIN, LED_BUILTIN_ACTIVE);
  delay(500);
  digitalWrite(LED_BUILTIN, LED_BUILTIN_INACTIVE);
  delay(500);

  Serial.printf("Going to deep sleep for 10s at %lu\n", millis());
  LowPower.deepSleep(10000);
}
```

Demo3 : Deep Sleep Mode with flash and wake-up

> **TIP**
>
> If you want to set flash to deep sleep, you need to enable the 0xb9 register

```
/*
   ArduinoLowPower deep sleep example with external or timed wakeup

   The example shows the basic usage of the Arduino Low Power library by
putting the device into deep sleep.
   The device will remain in deep sleep until the sleep timer expires.
   During deep sleep the whole device is powered down except for a minimal set
of peripherals (like the Back-up RAM and RTC).
   This means that the CPU is stopped and the RAM contents are lost - the
device will start from the beginning of the sketch after waking up.

   This example is compatible with all Silicon Labs Arduino boards.

   Author: Tamas Jozsi (Silicon Labs)
 */
#include <Arduino.h>
#include "ArduinoLowPower.h"

#define CS_PIN PA6
#define CLK_PIN PA3
#define MOSI_PIN PA5
#define MISO_PIN PA4

#define READ_DATA 0x03
```

```
#define WRITE_ENABLE 0x06
#define PAGE_PROGRAM 0x02
#define SECTOR_ERASE 0x20

void sendSPI(byte data) {
  for (int i = 0; i < 8; i++) {
    digitalWrite(MOSI_PIN, data & 0x80);
    data <<= 1;
    digitalWrite(CLK_PIN, HIGH);
    delayMicroseconds(1);
    digitalWrite(CLK_PIN, LOW);
    delayMicroseconds(1);
  }
}

void writeEnable() {
  digitalWrite(CS_PIN, LOW);
  sendSPI(WRITE_ENABLE);
  digitalWrite(CS_PIN, HIGH);
}

void setup()
{
  //Serial.begin(115200);
  pinMode(PA7, OUTPUT);
  digitalWrite(PA7, LOW);

  pinMode(CS_PIN, OUTPUT);
  pinMode(CLK_PIN, OUTPUT);
  pinMode(MOSI_PIN, OUTPUT);
  pinMode(MISO_PIN, INPUT);


  //SW
  pinMode(PD3, OUTPUT);
  pinMode(PB5, OUTPUT);
  pinMode(PB1, OUTPUT);
  pinMode(PB0, OUTPUT);
  pinMode(PA6, OUTPUT);
  digitalWrite(PD3, LOW); //VBAT
  digitalWrite(PB5, LOW); //RF_SW
  digitalWrite(PB1, LOW); //IMU
  digitalWrite(PB0, LOW); //MIC
  digitalWrite(PA6, HIGH);  //FLASH

  //Serial.println("Deep sleep timed wakeup");
  writeEnable();
  digitalWrite(CS_PIN, LOW);
  sendSPI(0xB9);
  digitalWrite(CS_PIN, HIGH);
}

void loop()
{
  delay(12000);
  digitalWrite(PA7, HIGH);
  delay(500);

  //Serial.printf("Going to deep sleep for 10s at %lu\n", millis());
  LowPower.deepSleep(600000);
}
```



Stopped

Horizontal: 100 ms / 5.75 s

Markers and Measurements / Trace Settings

Markers & Measurements | Trace Settings

	Marker 1	Measurements Between Markers							Marker 2
Time	5.295437 s	Δ = 910.566 ms Freq = 1.098 Hz							6.206003 s
		Min	Avg	Max	RMS	Peak to Peak	Charge / Energy	Charge / Energy	
A-I1	493 nA	-521.758 µA	1.954 µA	9.994519 mA	81.799 µA	10.516277 mA	494 pA h	1.779 µC	571 nA

Trace Configuration | Active

Output 1
V1 1 V / 0 V
I1 2 mA / 6 mA
P1 1 W / 0 W

Output 2
V2 1 V / 0 V
I2 1 A / 0 A

Formula
F1 1 V / 0 V
F2 1 V / 0 V
F3 1 V / 0 V

Resources

For Seeed Studio XIAO MG24 Sense

- 📄 **[PDF]** Seeed Studio XIAO MG24 Sense datasheet
- 📄 **[PDF]** Seeed Studio XIAO MG24 Sense Schematic

- 📄 **[PDF]** Seeed Studio XIAO MG24 Sense Wireless SoC
- 🔗 **[Kicad]** Seeed Studio XIAO MG24 Sense FootPrint

For Seeed Studio XIAO MG24

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Tech Support & Product Discussion

Thank you for choosing our products! We are here to provide you with different support to ensure that your experience with our products is as smooth as possible. We offer several communication channels to cater to different preferences and needs.

Edit this page

*Last updated on **Oct 17, 2024** by **Jason***

FCC Requirement

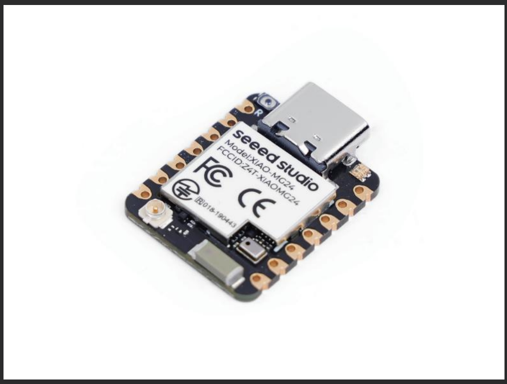
Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

	
Get One Now 🖱️	Get One Now 🖱️

Introduction

Seeed Studio XIAO MG24 is a mini development board based on Silicon Labs' MG24. XIAO MG24 is based on **ARM Cortex-M33 core**, **32-bit RISC** architecture with a maximum clock speed of 78MHz, supporting DSP instructions and FPU floating-point operations, possessing powerful computing power, and built-in **AL/ML hardware accelerator MVP**, which can efficiently process AI/machine learning algorithms. Secondly, it has excellent RF performance, It suppor ts multiple IoT and wireless transmission protocols such as **Matter, Thread, Zigbee, Bluetooth LE 5.3,Bluetooth mesh** etc.

Specification

Item	Seeed Studio XIAO MG24	Seeed Studio XIAO MG24 Sense
Processor	Silicon Labs EFR32MG24 ARM Cortex-M33 @ 78MHz	
Wireless	Complete 2.4GHz Wi-Fi subsystem BLE: Bluetooth 5.3, Bluetooth mesh	
Built-in Sensors	-	6-Axis IMU(LSM6DS3TR-C) Analog Microphone(MSM381ACT001)