# QSG163: EFM32GG12-SLTB009A Quick-Start Guide

The EFM32GG12-SLTB009A is an excellent starting point to get familiar with the EFM32 Giant Gecko 12 microcontrollers.

The kit contains sensors and peripherals demonstrating some of the MCU's many capabilities. The kit can also serve as a starting point for application development.

KIT CONTENTS

- EFM32GG12 Thunderboard
- 1 x micro USB cable
- Getting Started card

EFM32 USB Port

Dual PDM Microphones

Power Selection Switch
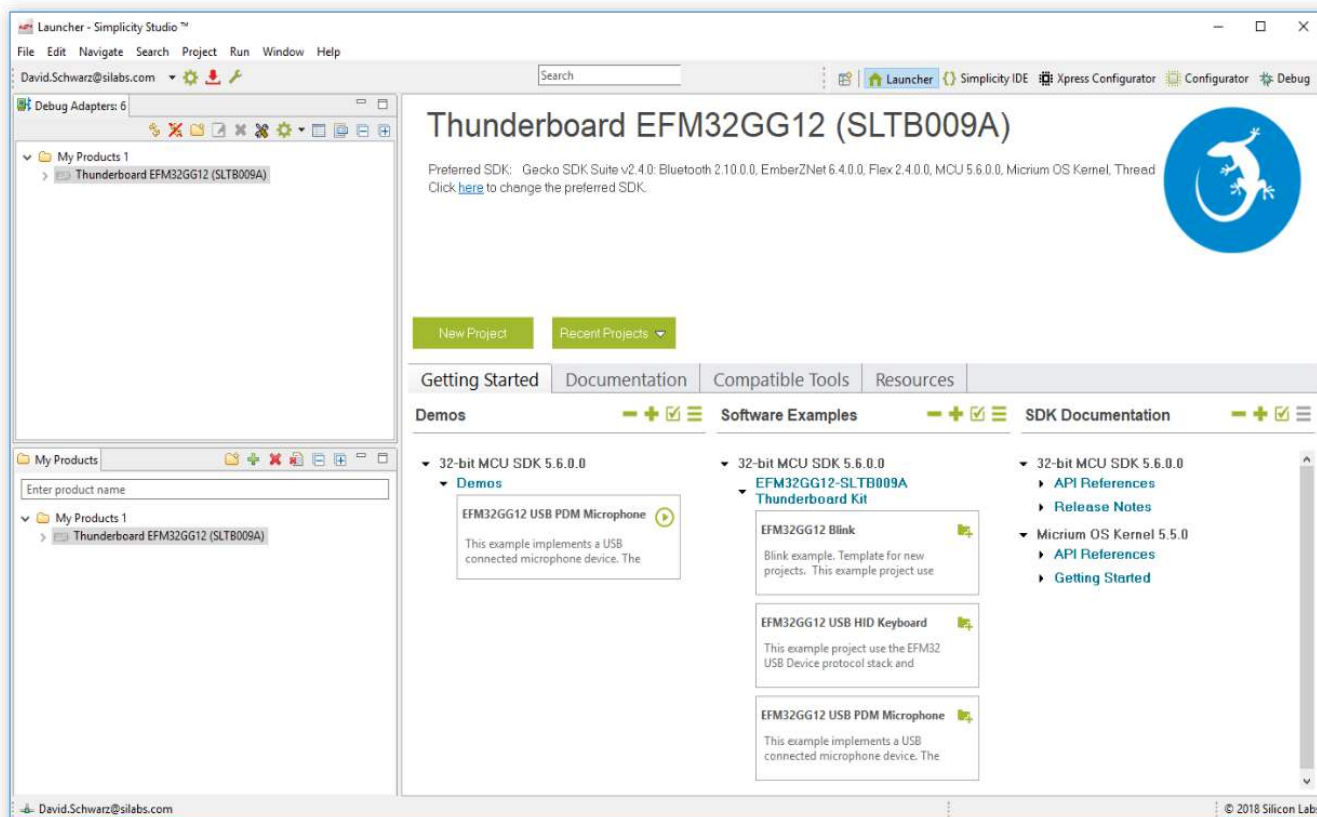
EFM32 Debug and Detection Port
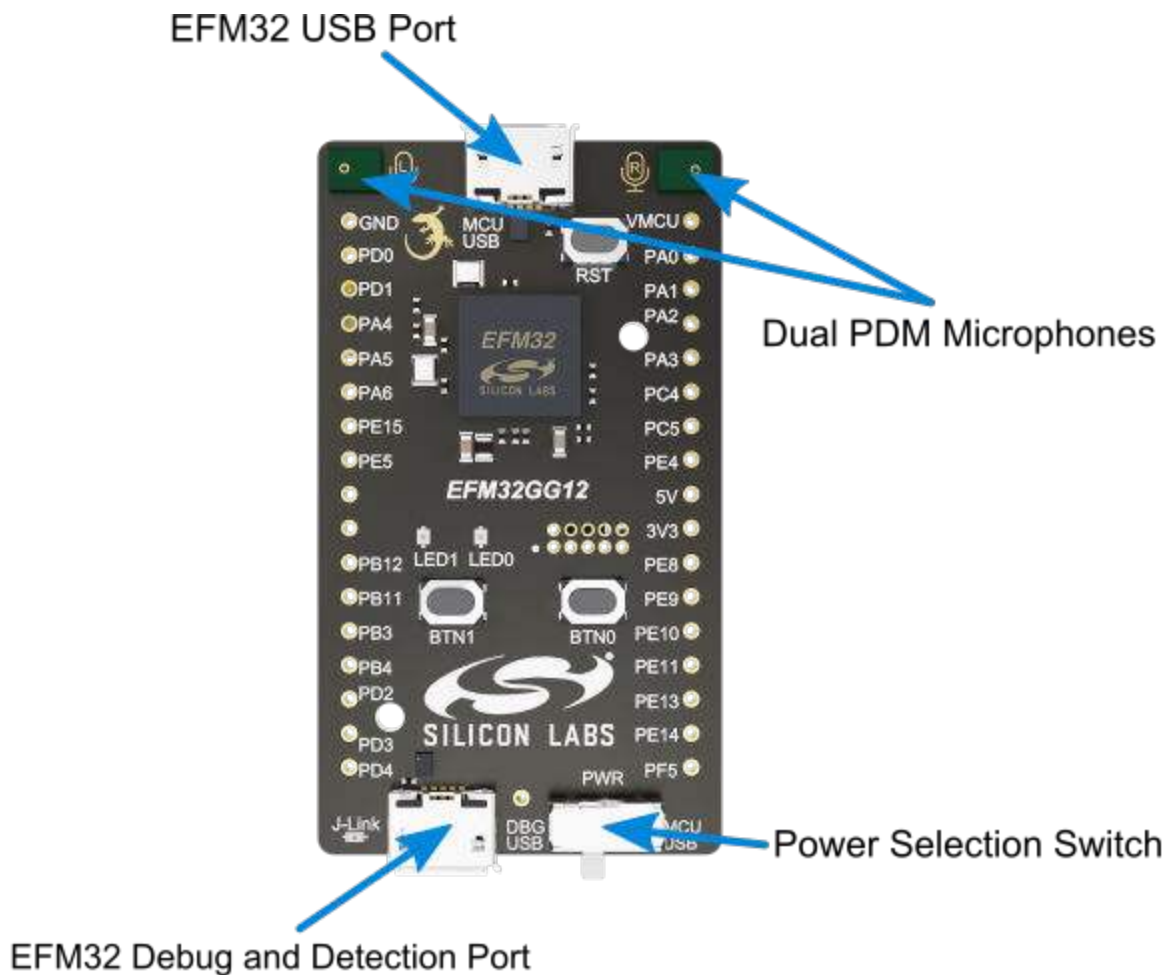
1. Getting Started

Install Simplicity Studio

Simplicity Studio is a free software suite needed to start developing your application. Download the latest version of Simplicity Studio from the Silicon Labs website:

http://www.silabs.com/simplicity-studio

1. Download the software and follow the installation instructions.
2. The installation wizard automatically selects the recommended software for the connected device or selected product line. To adjust the installed software, click the [**Update Software**] button in the [**Launcher**] area. In the dialog that opens, select the desired software under the [**SDKs**] tab and tools under the [**Tools**] tab.
3. Finalize the installation.

Preprogrammed demo

1. The Thunderboard GG12 has a pre-programmed demo that you can explore while Simplicity Studio is installing. This demo is the USB PDM microphone program.
2. To run the demo, connect the micro USB cable between the kit and computer. Use the usb connector labeled [**MCU USB**], and set the Power Selection Switch to the [**MCU**] position.
3. The USB PDM microphone example implements a USB connected microphone device. The device enumerates as a device supporting stereo 16 bit PCM encoded audio at a samplerate of 44.1 kHz (the standard audio CD samplerate). The PCM samples are aquired using the Pulse Density Modulation (PDM) peripheral of the microcontroller.

Detect Your Device

1. Provide power and a debug connection to the kit by connecting the provided USB cable between the kit and a computer. Use the USB connector labeled [**DBG USB**].

2. Ensure the power selector switch on the STK is in the [**DBG**] position.

3. Click the [**Refresh**] button in the [**Device**] area. The board may take some time to appear due to driver installations for the debug adapter.

4. Once an item with the name [**J-Link Silicon Labs**] appears, expand by clicking the arrow, and verify that the detected devices matches the kit. Click the EFM32GG12-SLTB009A.

5. The [**Launcher**] view will now display a number of available resources, including pre-compiled demos, examples, documentation, tools, and other resources.
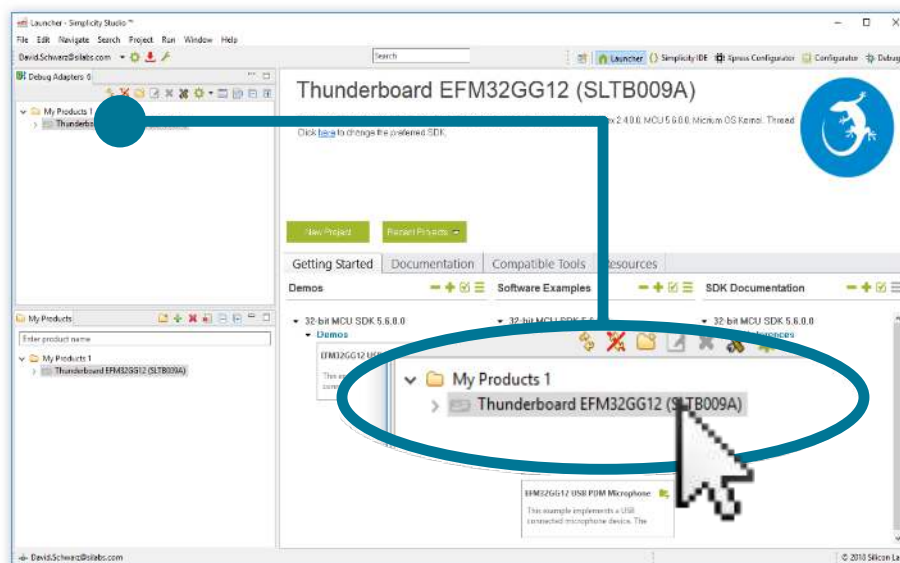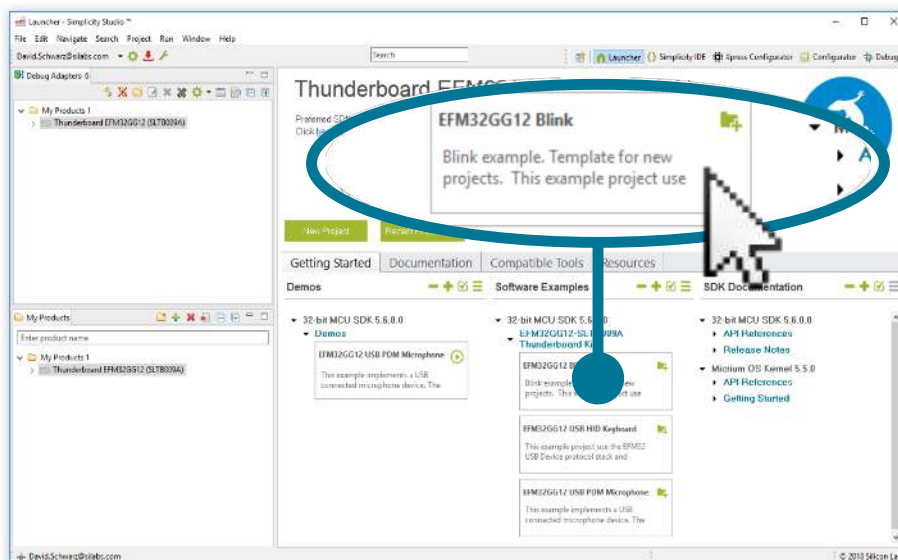
2. Resources

Demos

Demos are a quick and easy way to evaluate a device without compiling or debugging code. Demos can be accessed using the [**Getting Started**]>[**Demos**] area in the launcher.
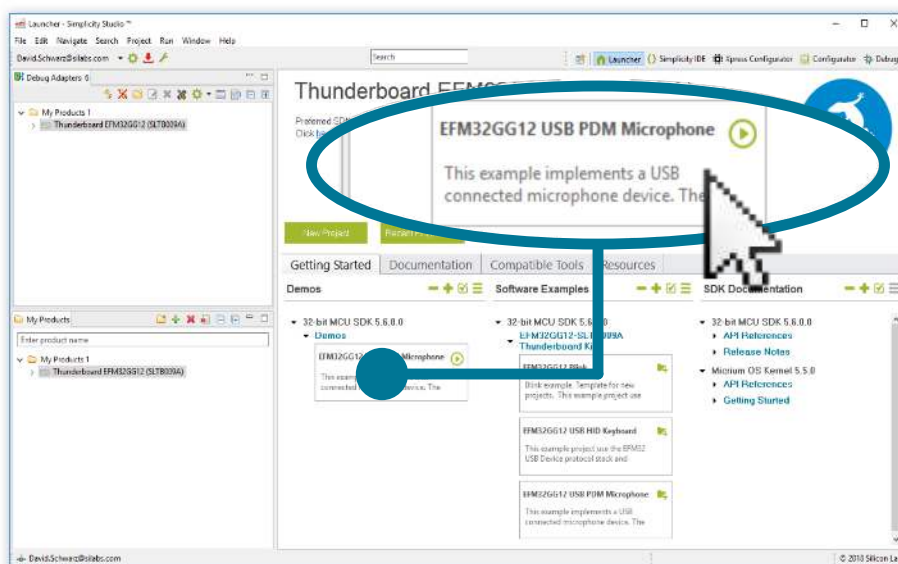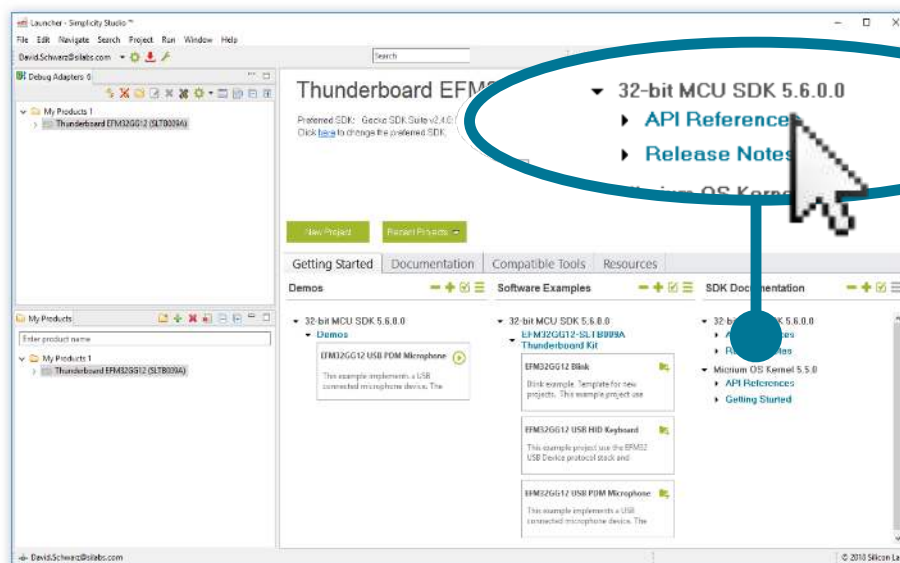

Software Examples

Software examples can be imported, compiled, and downloaded using the [**Getting Started**]>[**Software Examples**] area in the launcher.
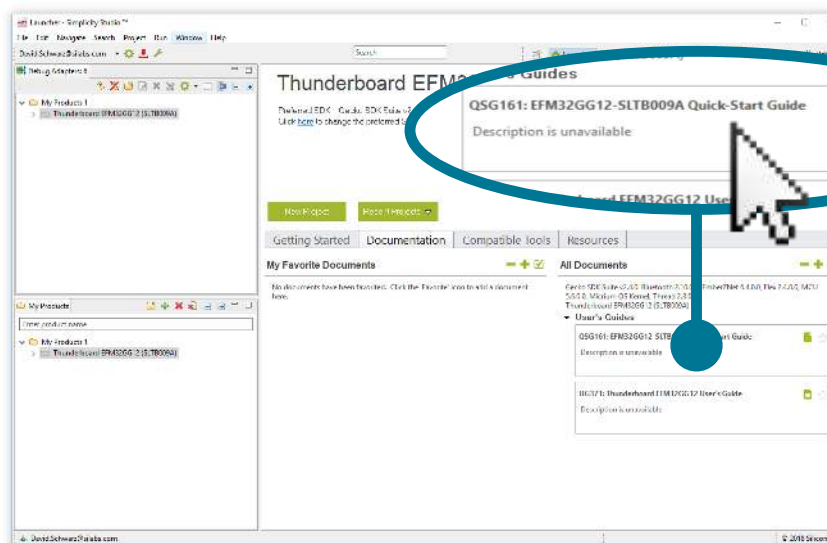
Software Documentation

Software documentation provides more information on the firmware libraries available for the selected device. Access these documents using the [**Documentation**] area in the launcher.
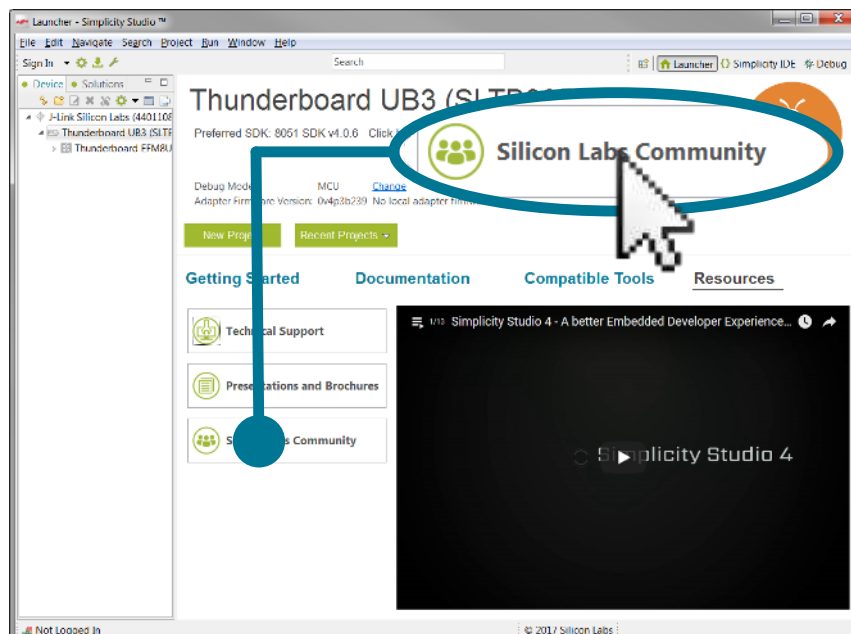

Other Documentation

Kit documentation, application notes, and device documentation can be found using the [**Documentation**] area of the launcher.

Community and Support

Have a question? Visit the community by clicking the [**Resources**]>[**Silicon Labs Community**] area of the launcher.

Simplicity Studio

One-click access to MCU and wireless tools, documentation, software, source code libraries & more. Available for Windows, Mac and Linux!

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Silicon Laboratories Inc.
400 West Cesar Chavez
Austin, TX 78701
USA

http://www.silabs.com