

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 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 ad-

just 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.
- 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.

File Edf: Naviget: Search Project Run Window Help DavidSchwar@biblaccom < 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Searce Thunderbe Click <u>here</u> to change the p	oard EFM	32GG12 (S	tauncher () Simplicity II LTB009A)	DE 👼 Xpress Configurator 🌐 Conf	igurator 🐡	Debug
Devid Schwarz@bilac.com • ¢ 2 / B) Debug Adapters 6 • My Products 1 • Thundeebo	Searce Thunderbo Click <u>here</u> to change the p	oard EFM	82GG12 (S	Launcher () Simplicity II	DE 🔹 Xpress Configurator 🔅 Conf	igurator 🎋	Debug
B) Debug Adapters 6	Thunderbe Click <u>here</u> to change the p	oard EFM	32GG12 (S	LTB009A)			
	Click here to change the p			ex 2.4.0.0, MCU 5.6.0.0, Mi	icrium OS Kernel, Thread		
	New Project P	preferred SDK.					
	Getting Started	Documentation	Compatible Tools	esources			
De	lemos	-+⊠≡	Software Examples	-+⊠≡	SDK Documentation	-+	⊠≡
My Products My Products My Products 1 > My Products 1 > Thunderbeard EFM326612 (SLT8009A)	 32-bit MCU SDK 5.6. Demos EFM32GG12 USP This exception 	0.0	• 32-bit MCH SDK E 6	% 🗳 1	32-bit MCU SDK 5.6.0.0		^
			EFM32GG12 USB PD This example implem connected microphor	M32GG12 (SITB MMicrophone ents a USB e device. The	(A2009A)	ノ	
- David.Schwarz@silabs.com						: © 2018 Sil	icon Lab

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 [Get-ting Started]>[Demos] area in the launcher.

🚰 Launcher - Simplicity Studio File Edit Navigate Search Project Run Window Help	
David.Schwarz@silabs.com 👻 🏠 🤌	Search 😰 🔓 Launcher 🚷 Simplicity IDE 🏨 Xpress Configurator 🌐 Configurator 🎄 Debug
🖹 Debug Adapters: 6 🔅 🖓 💥 🍪 🖛 🗔 😥 🕞 🕀	Thunderboard EEMos
V D My Products 1) Thunderbard EPA22GG12 (\$178094)	EFM32GG12 USB PDM Microphone
	Demos $- + \mathcal{V} =$ Software Examples $- + \mathcal{V} =$ SDK Documentation $- + \mathcal{V} =$
My Products My Andrews My Product 1 Thunderboard DFM226012 (01100064)	32-bit MCU SDK 5.6.0 32-bit MCU SDK 5.6.0 32-bit MCU SDK 5.6.0 Second State Sta
	EFM32GG12 USB HDD Kryboard This sample project use the EFM32 USB Device protocol stack use the FM32 EFM22GG12 USB PDM Microphone FFM32GG12 USB PDM Microphone Connected microphone device. The

Software Examples

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

🗠 Launcher - Simplicity Studio M			- 🗆 ×
File Edit Navigate Search Project Run Window Help			
David.Schwarz@silabs.com 🔻 🔅 🛃 🥕	Search	😰 🚹 Launcher 🚯 Simplicity	IDE 🛱 Xpress Configurator 🛄 Configurator 🎄 Debug
Bebug Adapters: 6 □ % X ≅	Thunderboard EF	Mos	
V C My Poducts 1	Prefered STORE Cick to The Preference STORE New Piged Resame And Getting Started Documentation Demos - + 6	A32GG12 Blink nk example. Template for new ojects. This example project use on Compatible Tools Resources X ≡ Software Examples - + ⊠ ≡	SDK Documentation
M My Products Inter product same w My Products 1 m My Products 1 Thundeeboerd EFM226012 (SLT800A)	2-2-2-bit MCU SDX 5.6.0.0 Demos International State of the state of th	S2-bit MCU SIOK 5.6 Formation of the sample projects. This county of the SIMU SIGNAL	22-bit MCU SOK 5.6.0. APT References Helease Notes Micrium OS Karnel 5.0 APT References Getting Started
👍 David.Schwarz@silabs.com		1	© 2018 Silicon Labs

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.

w Launcher - Simplicity Studio ™ File Edit Navinate Search Project Run Window Heln		- • ×
David.Schwarz@silabs.com 👻 🏠 🤌	Search	
Bebug Adapters 6 V My Products 1 Thunderboard EM0206012 (SLT8009A)	Thunderboard EFM Preferred SDK: Geska SDK Sute v2.4.8 Cick here to change the preferred SDK	 32-bit MCU SDK 5.6.0.0 API Reference Release Notes Thinm OS Keres
	New Project Recent Projects Getting Started Documentation C Demos -+ 🗹 Ξ	Compatible Tools Resources Software Examples -+ 10 Ξ SDK Doc pentation -+ 10 Ξ
My Product My Product My Product I My Product I Thundeebard EFMI226012 (SLTB009A)	32-bit MCU SDK 5.8.0 Demos IfM326G12US9 PDM Microphone Ton cample implements US connected microphone device. The	32-bit MCU SDK 5.6.0 EFAU2GG12 SR TBB09A Thunderboard Ki FM2ZGG12 SR TBB09A Micrison SS Kennel 5.5.0 All References Micrison SS Kennel 5.5.0 All References Getting Storted Micrison S Kennel 5.5.0 All References Getting Storted
1. Duid Schumfteibhe ean		EFM326G12 USB PDM Microphone Pg. This example implements a USB connected microphone device. The

Other Documentation

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

✓ Launcher - Simplicity Studio ™				- 🗆 X
ile Edit Navigate Search Project Run Window Help				
David.Schwarz@silabs.com 👻 🌣 🛃 🥕	Search	<u>e</u> 1	A Lower Law Contract of the	iii Dukug
🖁 Debug Adapters: 6 🔤 🔤 🔤 👘 🖬	Thunderboard EF	lo suit	es	
v 🗋 My Producti 1 > 🔚 Thunderbanel (FMI20012 (\$ET8094))	Preferred SDK: Geolo SDK Safe vo Click <u>hear</u> to change the preferred S	QSG161: EFN Description is	I32GG12-SLTB009A Qui unavailable	ick-Start Guide
	Getting Started Documentation	Compatible Tools	Resources	· · ·
	My Favorite Documents	-+ 🗹	All Documents	-+ 🗹
My Products There product name (My Products 1) Thunderboard EFM226012 (SLT8009A)	No documents have been favorited. Click the 'Favorite here.	icon to add a document	Gecko SDK Suite v2-4:0: Bluetooth 2:10.0 Er S.A.O., Micrium OS Kernel, Thread 2:8.0 Thunderboard KMS2G012 (SLT8009A) • User's Guides QSG161: EFM32GG12-SLTBF Description is unavailable	nberZNet 6.4.0.0, Flex 2.4.0.0, MCU
			UG371: Thunderboard EFM326G12 Us Description is unavailable	er's Guide 🕒 🏠
David.Schwarz®silabs.com				© 2018 Silicon Labs

Community and Support

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

