QSG136: CP2102N Mini Evaluation Kit Quick-Start Guide

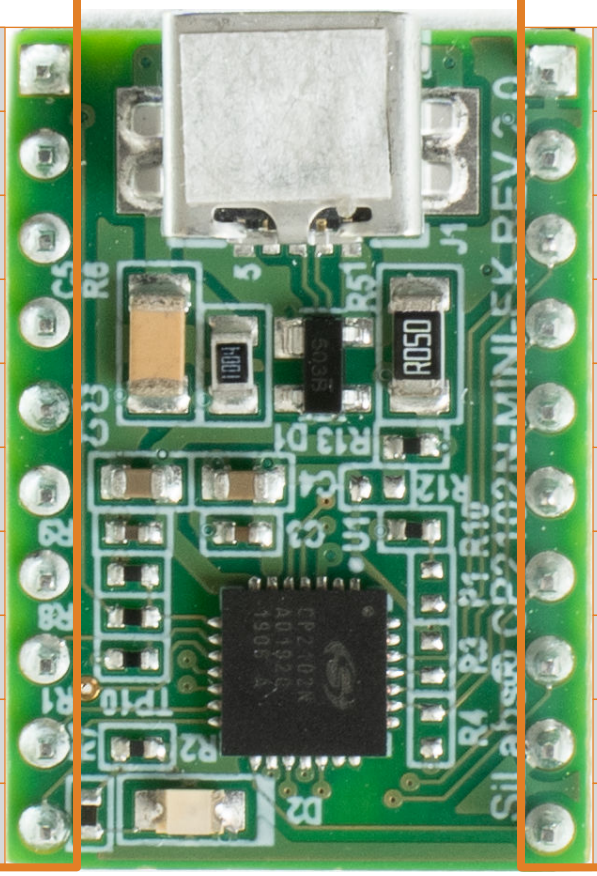
The CP2102N-MINIEK kit is designed to showcase the various features of the CP2102N USBXpress® devices.

These highly-integrated USB-to-UART bridge controllers provide a simple solution for updating RS-232 designs to USB using a minimum of components and PCB space. By eliminating the need for complex firmware and driver development, the CP2102N devices enable quick USB connectivity with minimal development effort.

KIT CONTENTS

- CP2102N USB-to-UART Bridge Mini Evaluation Board
- Getting Started card

J5		J2
VDD		GND
VDD		TXD
VREGIN		RXD
GPIO.0		RTS
GPIO.1		CTS
GPIO.2		VBUS
GPIO.3		SUSPENDb
RSTb		SUSPEND
CHREN		GND
CHR1		CHR0



1. Getting Started

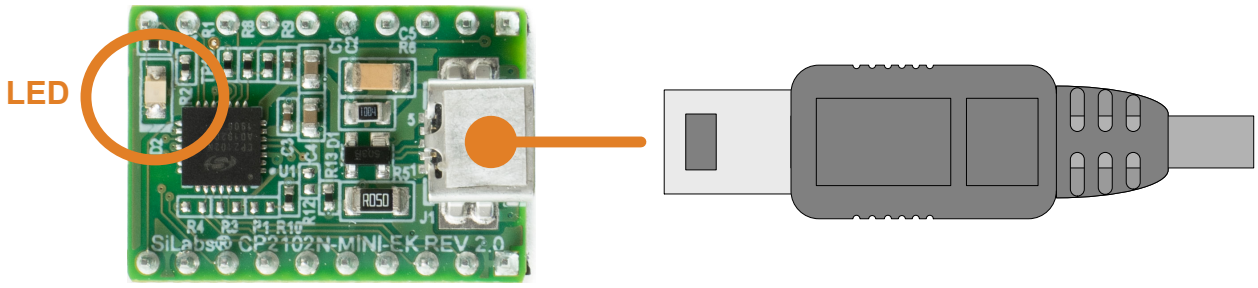
1. Download and Install the Latest Virtual COM Port (VCP) Drivers.

   The Virtual COM Port (VCP) drivers enable the CP2102N to appear as a standard COM port. Download the latest version of drivers from the Silicon Labs website:

   http://www.silabs.com/vcpdrivers

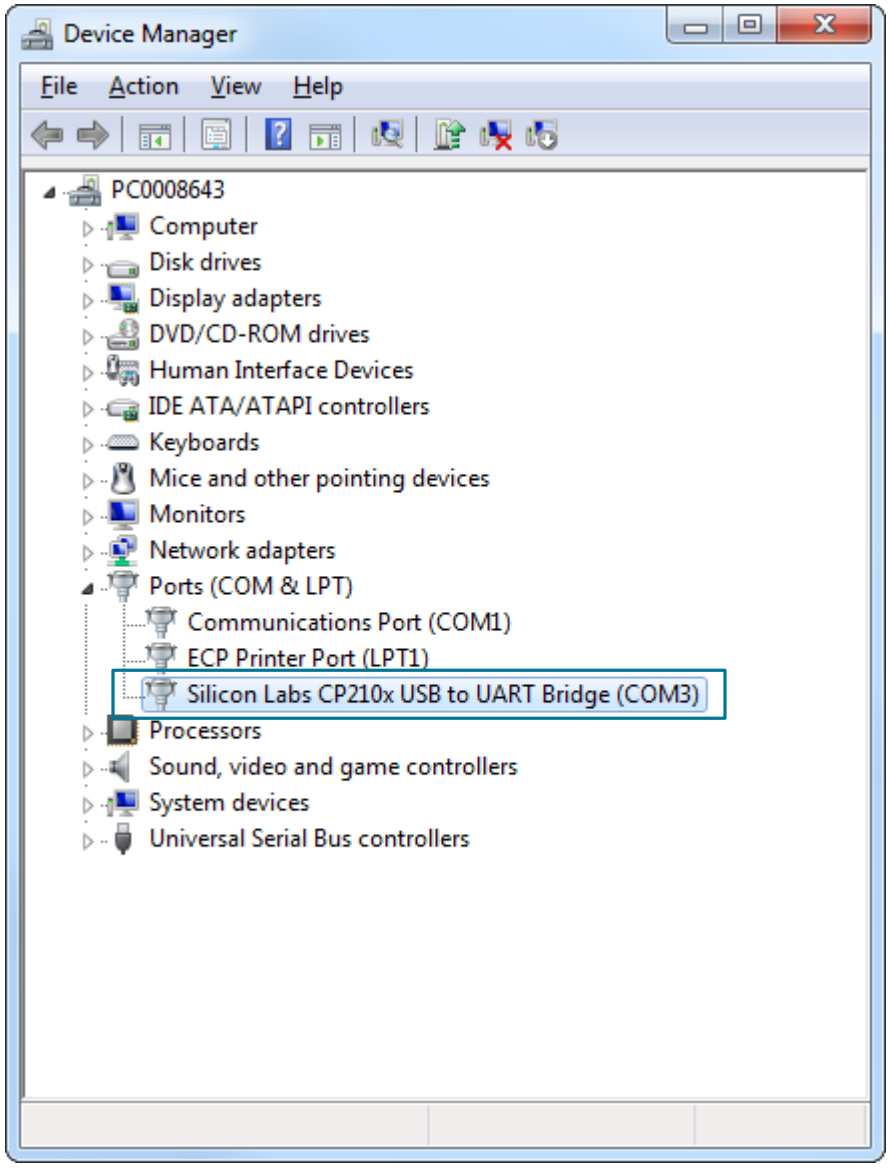
   In most cases, select the default option without serial enumeration.
2. Set Up Your Kit.

   a. Provide power to the board by connecting the mini USB connector to the PC using a mini USB cable (not provided). When a connection has been established successfully, the LED (marked in the picture) lights up.



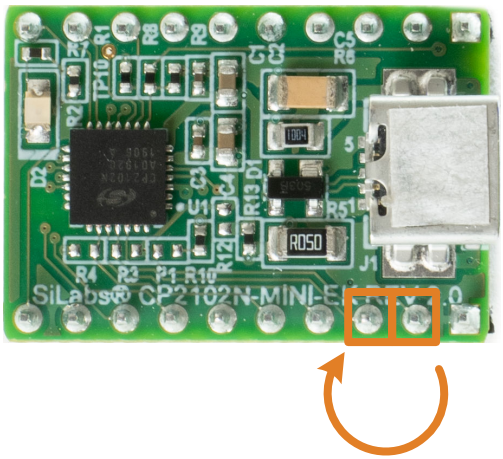
3. Detect Your Device.

The CP2102N device will appear as a COM port in Device Manager in Windows. As a virtual COM port, the CP210x functions identically to a real COM port from the reference point of both the host application and the serial device, and it can support serial device control requests defined in the Microsoft Win32® Communications API.



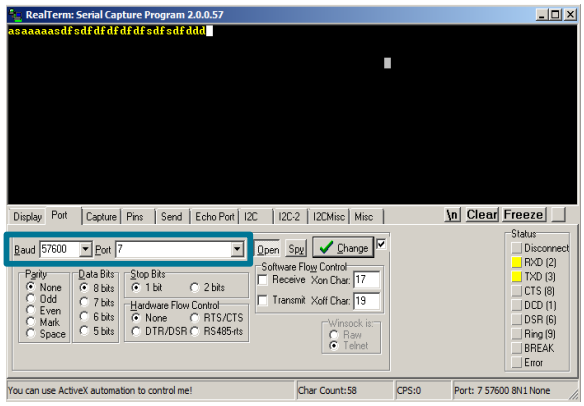
4. Set up a Loop-Back Test.

   Short the CP210x RXD and TXD pins on header J2.



5. Send and Receive Some Data

   a. In Windows, open a serial terminal program (downloaded separately, RealTerm pictured) to verify the CP2102N UART functionality.
   b. Set the baud rate and select the COM port from Device Manager.
   c. Type in the transmit area. The characters should echo back after looping through the CP2102N TXD and RXD pins.



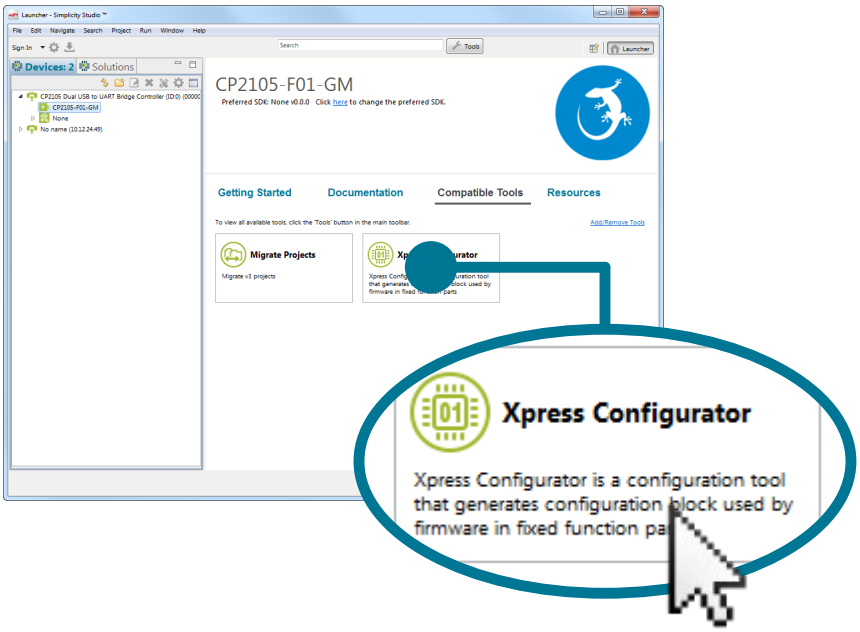
6. Utilize the Available Resources

   The next section includes additional resources available for the device, including documentation and application notes.

2. Resources

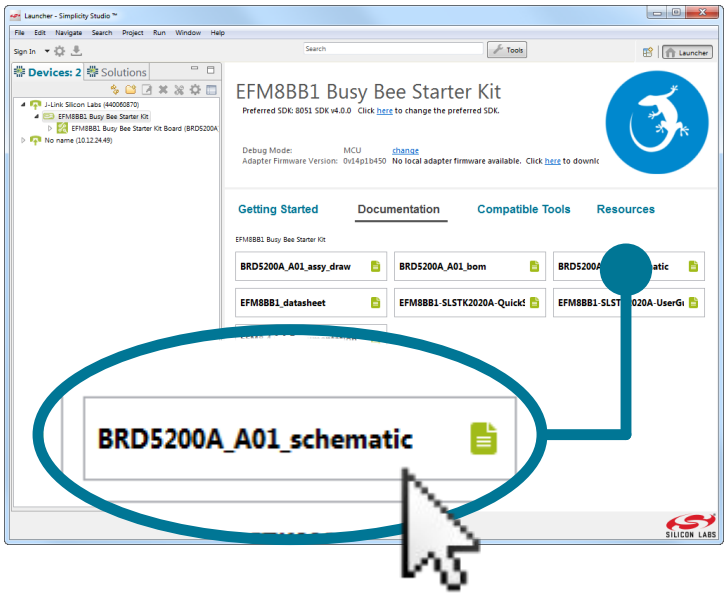
Xpress Configurator

The various GPIO and other features of the CP2102N can be configured using the [**Xpress Configurator**] tool within Simplicity Studio (http://www.silabs.com/simplicity-studio). Documentation for Xpress Configurator can be found in *AN721: CP210x Device Customization Guide*, which can be found on the Silicon Labs website (www.silabs.com/interface-appnotes) or within Simplicity Studio using the [**Getting Started**]>[**Application Notes**] area of the launcher.



Kit Documentation and User's Guide

Kit documentation like the schematic and detailed board description can be found using the [**Documentation**] area of the launcher. The User's Guide will be a valuable document to reference while using the device.



CP2102 to CP2102N Migration Guide

Migrating a product from the CP2102 to the CP2102N? View *AN976: Migrating from a CP2102 to a CP2102N* for more information on differences and similarities between these products. This document can be found on the Silicon Labs website (www.silabs.com/interface-appnotes) or within Simplicity Studio using the [**Getting Started**]>[**Application Notes**] area of the launcher.

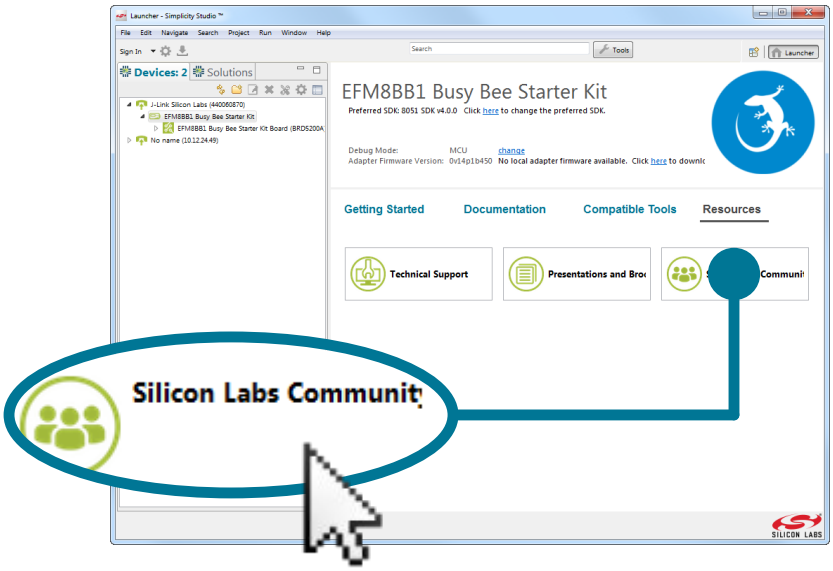
Other Application Notes

Application Notes can be accessed on the Silicon Labs website (www.silabs.com/interface-appnotes) or within Simplicity Studio using the [**Getting Started**]>[**Application Notes**] area of the launcher. Some application notes that are available are as follows:

- *AN721: CP210x Device Customization Guide*—This application note guides developers through the configuration process of USBXpress devices using Simplicity Studio [**Xpress Configurator**].
- *AN220: USB Driver Customization*—This document and accompanying software enable the customization of the CP210x Virtual COM Port (VCP) and USBXpress drivers.
- *AN197: Serial Communications Guide for CP210x*—This document describes recommendations for communicating with USBXpress CP210x devices using the Virtual COM Port (VCP) driver.

Community and Support

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



3. Revision History

Revision 0.1

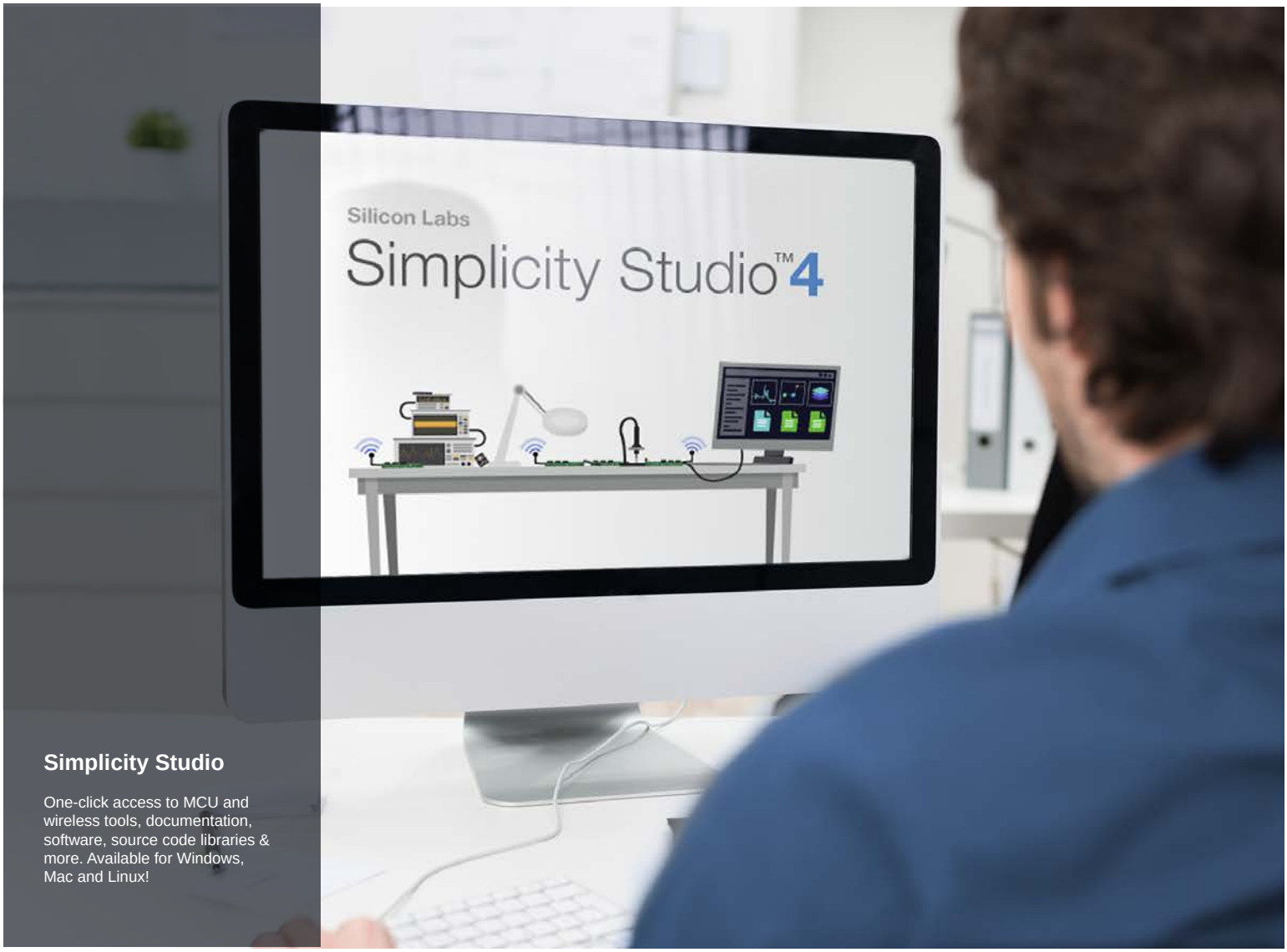
October, 2016

- Initial revision.

Revision 0.2

December, 2019

- Updated Revision History format.
- Updated images throughout to reflect hardware revision 2.0.
- Corrected error in pinout diagram on front page kit diagram.



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