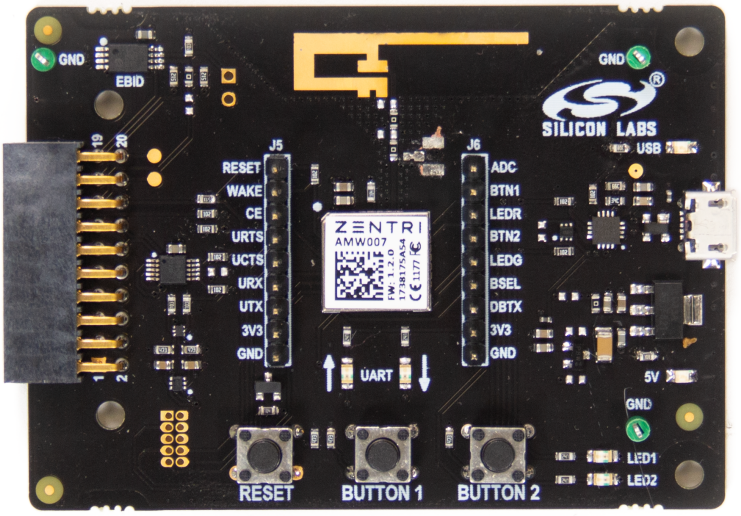
QSG162: Wireless Xpress AMW007 Kit Quick-Start Guide

The Wireless Xpress AMW007 Kit is an excellent way to get started with Wi-Fi connectivity. This document explains how to quickly connect to the AMW007 module as an access point.

KIT CONTENTS

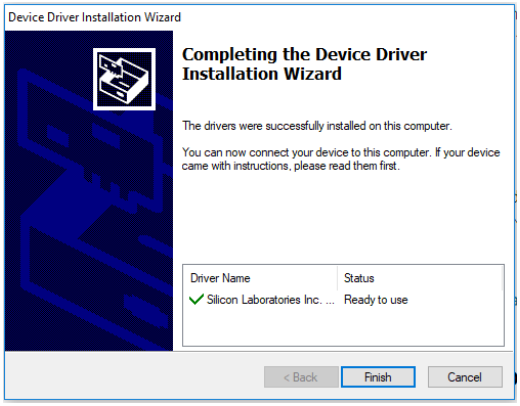
- Wireless Xpress AMW007 Expansion Board
- Micro USB Cable
- Getting Started card



1. Getting Started

Software Requirements

1. The CP210x VCP driver allows a terminal program to communicate with the kit over a serial COM port. AMW007 evaluation boards labeled AMW007-E04.2 or higher that are connected to Windows and Linux machines should be configured to this driver automatically. However, if the board is not automatically recognized by the operating system, please download and install the latest version of the CP210x VCP driver: https://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers.



2. A terminal program (Tera Term, RealTerm, Coolterm, Terminal, etc.) to communicate to the kit over a serial COM port.

Hardware Setup

1. Connect the AMW007 board to your PC using the provided micro USB cable.

Software Setup

- For Windows, use a terminal program set to 115200, 8N1.
- For a Mac, the terminal can be accessed using [**tty.usbserial**]. There may be a modifier at the end of this for your computer. Type [**tty.usbserial_modifier 115200,8n1**] to set the connection to the right settings. If using a utility like CoolTerm, make sure the settings are configured to 115200, 8N1.

Checking the Version

After connecting the board to the PC and opening the terminal program, press the [**RESET**] button on the board. You should see a header with the version information for the device. Ensure this version is 2.1.5 or newer. If you find you are using an older version of firmware, perform an over the air update on the board as described on docs.silabs.com.

help

The [**help**] command provides information both for commands and variables on the device.

Variables are system-level variables that determine the configuration of the AMW007 module.

Commands are actions that can be taken.

1. Type [**help**] to see the options for the help command.
2. Type [**help commands**] to see a list of commands supported by this module.

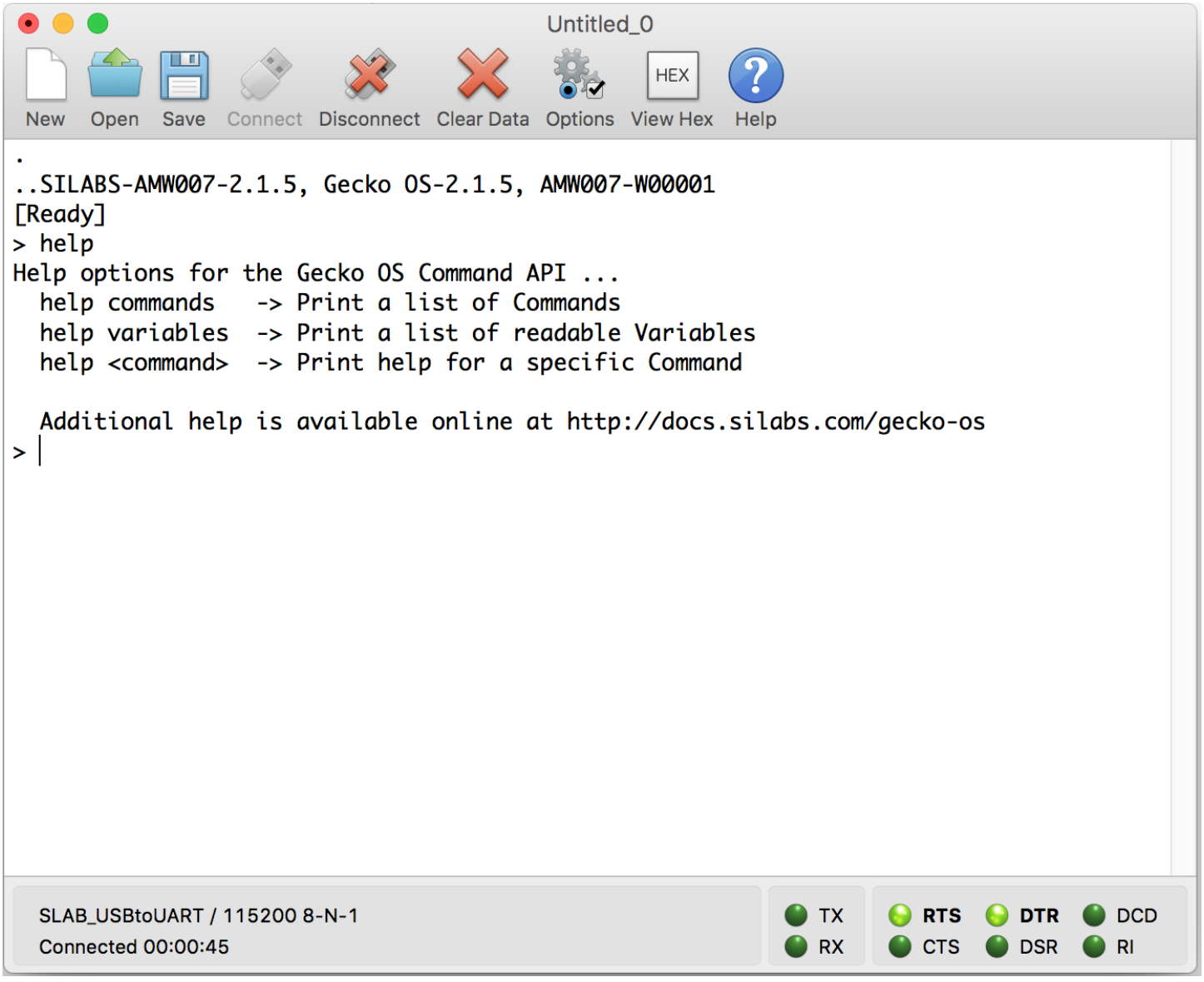


Figure 1.1. help

Commands used:

- https://docs.silabs.com/gecko-os/latest/cmd/commands#help

Configuring the AMW007 as a Soft Access Point

To set up the AMW007 as an access point:

1. Set/Get commands access variables that configure operation and features in the device. Type [**set setup.web.ssid**] to [**"GeckoOS #"**], where [**#**] is a unique SSID that will be easy to see on a list of other SSIDs as shown in Figure 1.3. Ensure this SSID does not match any nearby SSIDs. Note that you will need quotes around the network name if it contains spaces.
2. To read the password on the network, type [**get setup.web.passkey**]. The default password is "password". Set the password for the network by typing [**set setup.web.passkey**].
3. Type [**save**] to save the new SSID and password values.
4. Type [**setup web**] to enable the module as a Wi-Fi access point and web server. A computer or phone can then be used configure the module.

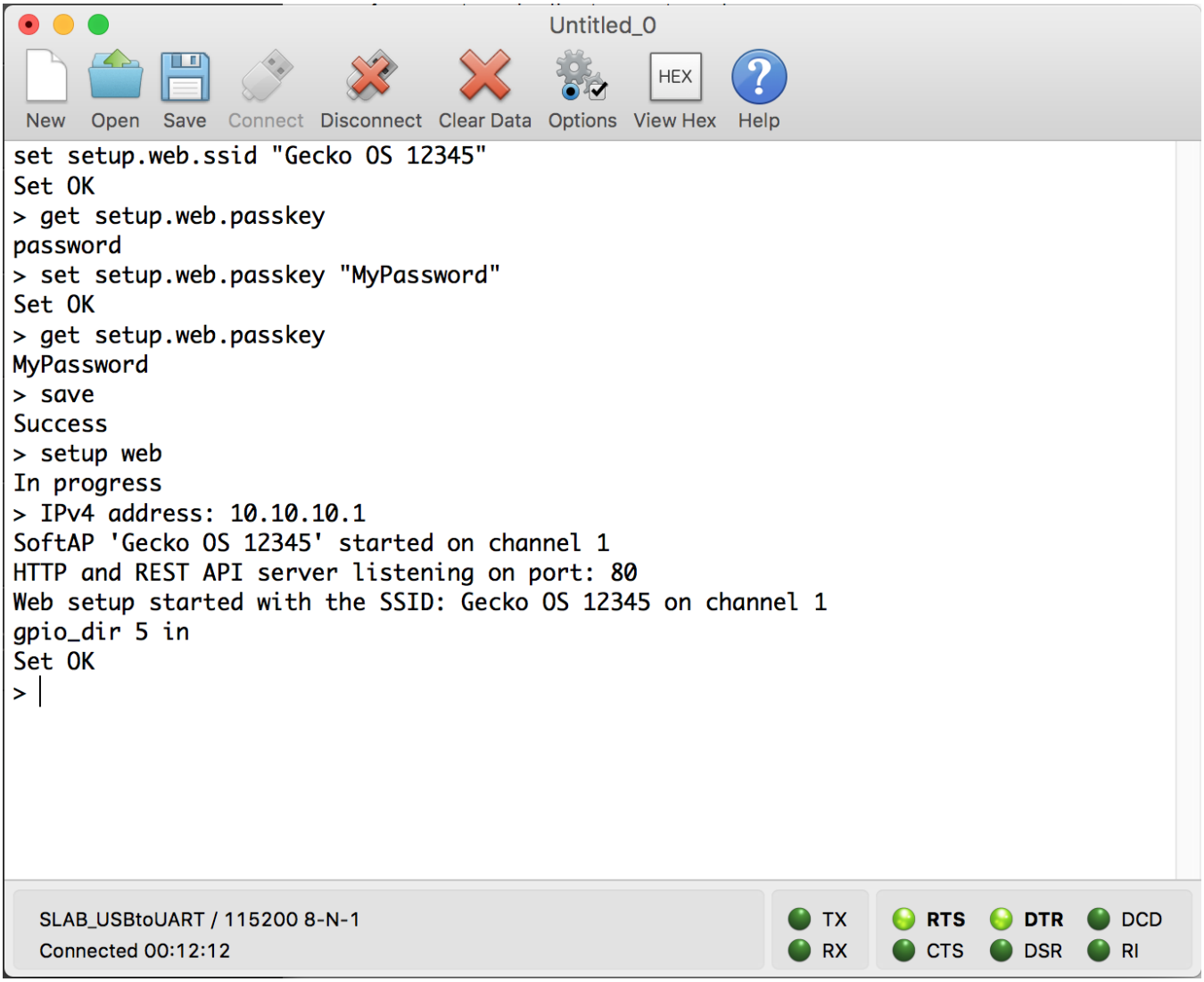


Figure 1.2. setup web / set setup.web.ssid / save / get setup.web.passkey

5. Configure GPIO 5 to be an input by executing the command 'gpio_dir 5 in'. Note that this is done to illustrate additional capability in step 9 of this QSG. This command is not typically required to configure your device.

6. Using your computer or phone, connect to the Gecko OS access point [**GeckoOS #**] using the password.

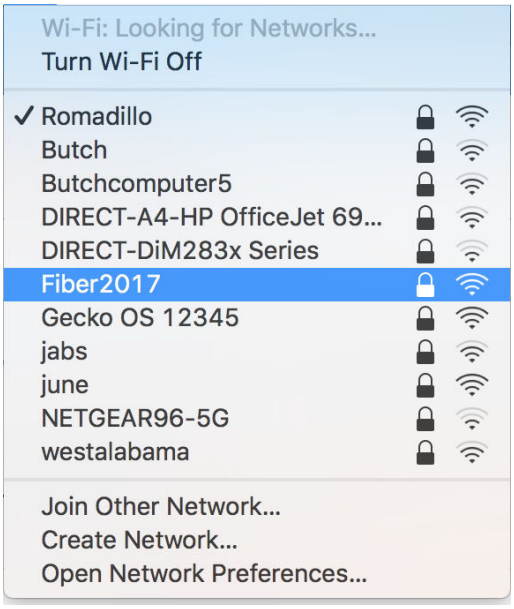


Figure 1.3. Connecting to the Gecko OS Access Point

7. Using a web browser, navigate to setup.com. You are now connected to a website that is being served by the AMW007 web server. The source code for this website is fully customizable and available for download from docs.silabs.com.
8. Click the [**GPIOs**] area on the left side of the browser.

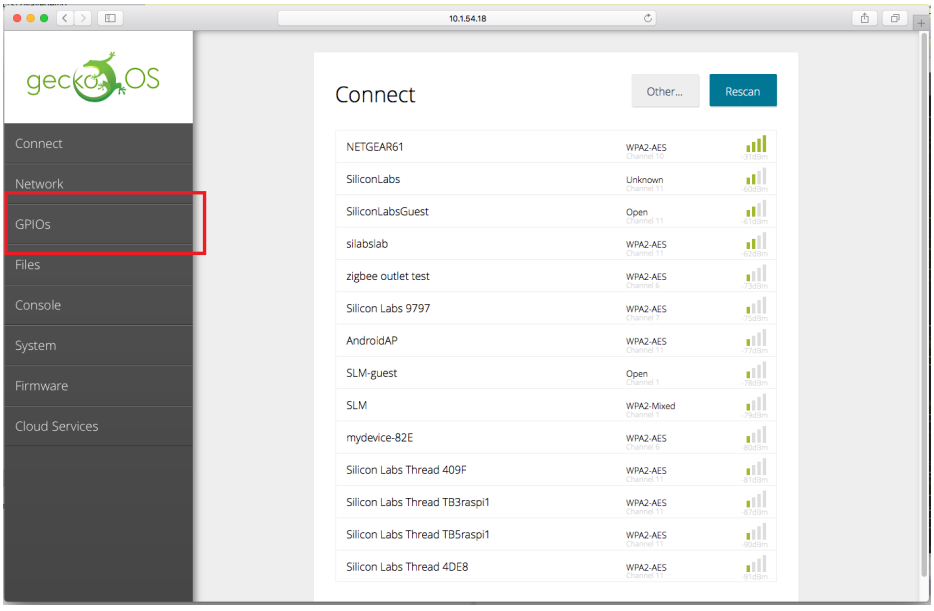


Figure 1.4. Navigating to the Gecko OS webserver homepage

9. Press and hold the [**BUTTON 2**] switch on the AMW007 board to change the GPIO toggle on the webpage. Note that this functionality is enabled through the GPIO configuration in step #5 above.

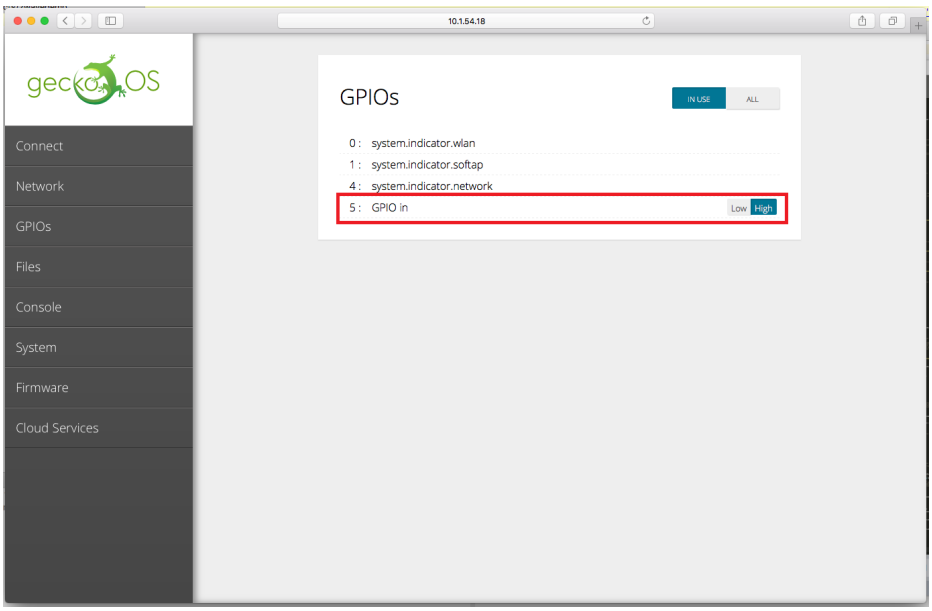


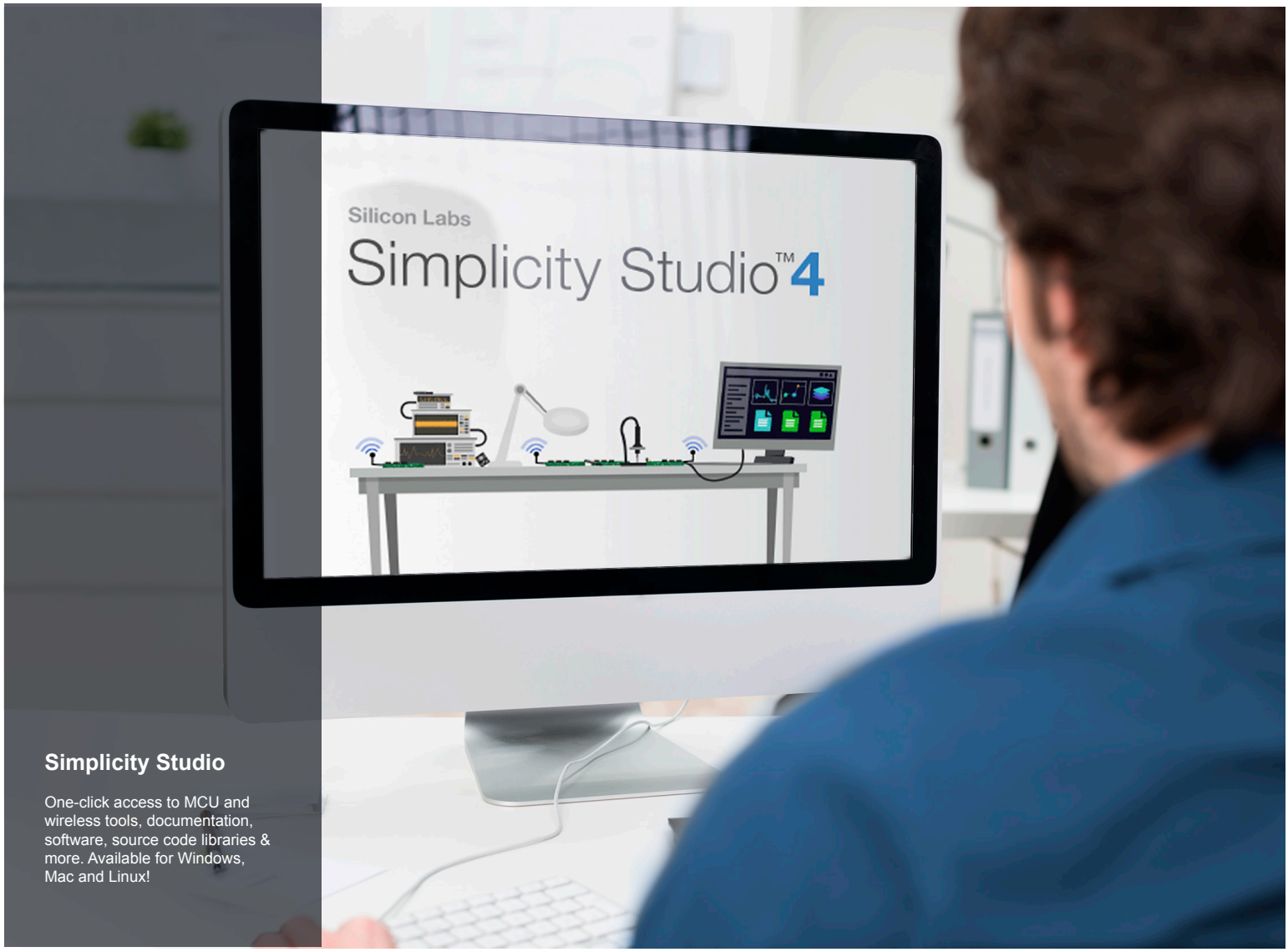
Figure 1.5. Toggling the GPIO Using the Buttons

For a detailed description of each command and variable used in this tutorial, please see https://docs.silabs.com/

2. Additional Resources

For more information, see the following resources:

- GeckoOS API and other documentation are available at https://docs.silabs.com/
  - All commands can be found at https://docs.silabs.com/gecko-os/latest/cmd/commands
- Wireless Xpress AMW007 Kit User's Guide at https://www.silabs.com/documents/public/user-guides/ug370-amw007-user-guide.pdf



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Silicon Laboratories Inc.
400 West Cesar Chavez
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