

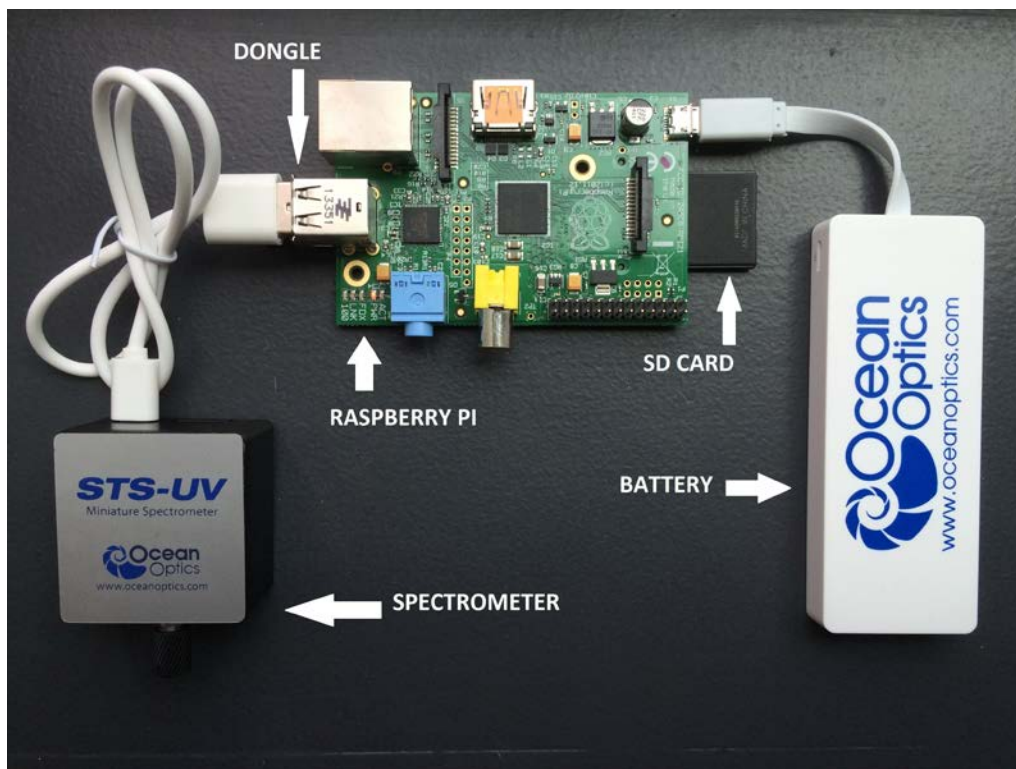
# STS Developer's Kit

## Quick Start Instructions

### Package Contents

The STS Developer's Kit contains the following components:

- STS Spectrometer
- Raspberry Pi microcomputer
- Wi-Fi™ dongle
- SD card with firmware
- Lithium-Ion battery
- USB cable



# Connecting the Components

Before beginning, ensure that the battery supplied with the kit is fully charged, or provide an alternative power supply for the kit that is capable of providing 5 Volts and at least 1000mA through a micro-USB connection.

## ► Procedure

1. Insert the dongle into one of the USB ports on the Raspberry Pi computer.
2. Plug the spectrometer into the remaining USB port on the Raspberry Pi computer.
3. Insert the SD card before plugging in the power supply.

# Power Up

When the battery (or alternative power supply) is plugged into the micro-USB port, the Raspberry Pi automatically boots and starts the software to control the spectrometer. Allow at least 30 seconds for operating system and services to start before attempting to use any of the software to control the device. See [Shut Down the System](#) for information on powering off.

# Connecting to the Device

When the Raspberry Pi has completed starting up it will appear as a secure wireless access point that you can connect to in order to control the spectrometer:

- The default name (SSID) of the access point is **ocean-spectrometer**.
- You can connect to this with the default password **oceanwifi**.

These settings can be changed.

## ► Procedure

1. Ensure that the Raspberry Pi has power and has booted up. This takes approximately 30 seconds. The Wi-Fi dongle flashes blue when it is transmitting.
2. From your wireless device, look for the network named **ocean-spectrometer**.
3. Enter the password **oceanwifi**.
4. Open your browser and load the interface at address <http://192.168.42.1>.

The Raspberry Pi can be reconfigured to connect as a DHCP client to another wireless network. These changes may be necessary for more complex networks or if you have more than one development kit operating within wireless range of each other. Setting up the device for more complex networks is described in the *Advanced User Guide* (see Product-Related Documentation).

The Raspberry Pi assigns your computer or smartphone an IP address on the network in the range 192.168.42.x where x is a number between 10 and 50. This address can also be reconfigured for more complex cases. The Raspberry Pi is configured to have a fixed IP address on the wireless network of 192.168.42.1.

## Shut Down the System

Shut down the Raspberry Pi with the **Shutdown** button on the **Spectrometer Settings** web page. Or, expert users can log in to the operating system and shut down the Raspberry Pi directly as described in the *Advanced User Guide* (see [Product-Related Documentation](#)).

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### Caution

**It is important to shut down the device correctly before removing the power supply. If you fail to do this you risk corrupting the SD card, potentially losing software and any measurements stored on the card.**

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#### ► Procedure

To shut down the system safely,

1. Enter the administrator password for the *ocean* account (the default is **ocean**).
2. Click **Shutdown**.
3. Allow sufficient time for the shutdown to complete (around 60 seconds) before removing the power supply.

## Setting the Default Passwords

There are two user accounts set up on the Raspberry Pi, the superuser “root” and an administrative account, “ocean.” The default password for both of these accounts is **ocean**. This is not secure so it is recommended that you change the password for these accounts at the earliest opportunity. This information is in the *STS Developer’s Kit Installation and Operation Manual* (see [Product-Related Documentation](#)).

## Product-Related Documentation

You can access documentation for Ocean Optics products by visiting our website at <http://www.oceanoptics.com>. Select *Technical* → *Operating Instructions*, then choose the appropriate document from the available drop-down lists. Or, use the **Search by Model Number** field at the bottom of the web page.

## Upgrades

Occasionally, you may find that you need Ocean Optics to make a change or an upgrade to your system. To facilitate these changes, you must first contact Customer Support at 1-727-733-2447 and obtain a Return Merchandise Authorization (RMA) number. Please contact Ocean Optics for specific instructions when returning a product.

