WiFi Box Quick Start

The WiFi Box enables the Colorimetry Research instruments to be controlled over a wireless network connection. This can be done using the CRIApp or using Remote Communication commands.

Figure 1 CR-300 mounted with the WiFi Box

Hardware Setup:

The WiFi Box consists of the following

- Internal Battery
- Power switch (battery operation)
- SD Card (used for firmware updates)
- Micro USB and Micro USB Host OTG cable with Micro USB Power

Figure 2 Micro USB Cable

1. The male micro-USB connector of the micro-USB OTG (On-The-Go) is connected to the WiFi Box.
2. The female USB-A (host) connector with the blue (Female to Male mini-USB) adapter is used to connect to the Colorimetry Research meters.

3. The other USB connector is used to supply external power to the device.

Note:

The external power is used to power the WiFi box and the meter and is also used to recharge the internal battery.

Once the WiFi box is powered the status LED will indicate the state of the connection.

LED	Status
Green	Initial power up
Blue	Connected to WiFi Network
Yellow	In Access Point mode. CRIWiFi SSID available
Red	Disconnected, connection lost or a failed connection
White	Other intermediate statuses
Blinking	Meter detected

Table 1 LED status colors

Configuration

Connection to a wireless network

When the WiFi Box is powered on (LED **Green**) it will attempt to connect to a wireless network. If no SSID is configured (which will be the first time) the WiFi box is configured in an AP (Access Point) Mode which enables your browser to connect to and configure. The SSID of the AP is **CRIWiFi**. The LED status will be **YELLOW** and the default IP address in AP mode is **192.168.4.1**

Connect your computer WiFi network to CRIWiFi and then type in 192.168.4.1 in your browser. You will now see the following screen to interact with your WiFi box.
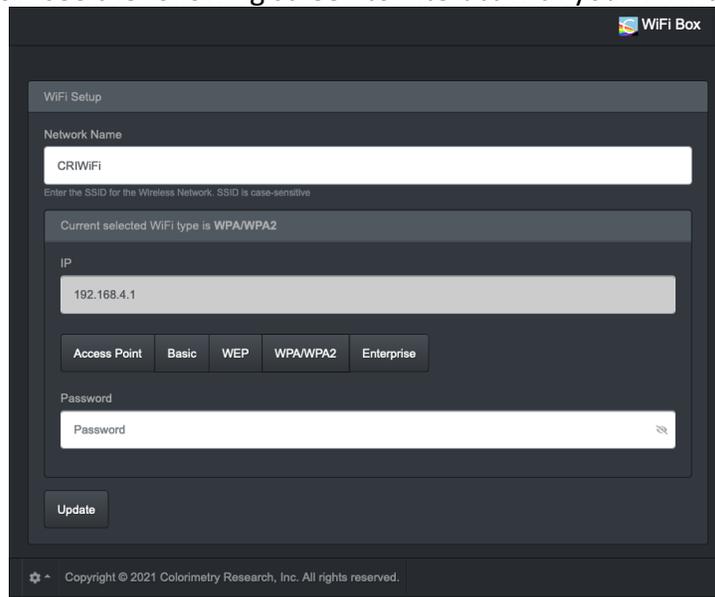
Figure 3 Colorimeter Utility Network Configuration

Enter the SSID (case sensitive), select the WiFi connection type and enter the password. Once all the data is confirmed to be accurate, click on **Update**.

The WiFi box will disconnect the Access Point and will attempt to connect to the configured SSID. If connection is successful, the LED will turn **BLUE**.

Proceed to connect using the CRIApp to use the meter.

> **Note:**
>
> Once the firmware is updated, the browser will lose connection with the WiFi box as the IP address will most likely change.

General Information

To "About" page displays the version of firmware and copyright information. This can be launched by selecting the settings menu ⚙ on the bottom left of the web page. The following information is displayed

- Firmware version
- Build date and time
- WiFi version
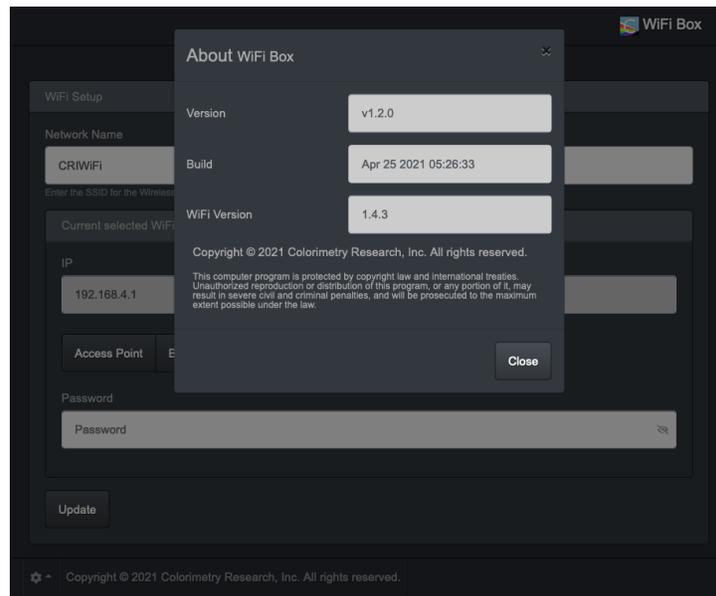
Figure 4 Colorimeter Utility Network Configuration

Updating Firmware

The "Firmware Update" can be launched by selecting the settings menu ⚙ on the bottom left of the web page.
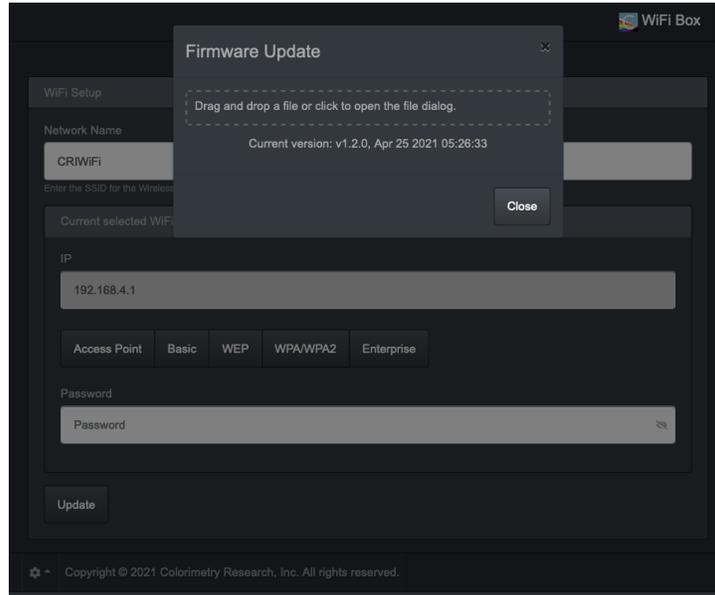
Figure 5 Firmware Update

Drag the firmware image file from your computer to the dotted area. A progress bar indicating the file upload will be displayed in place. Once the file upload is at a 100% completed, the device will reset, and the firmware will be updated.

Note:
After the firmware update the SSID and password of WiFi box needs to be reconfigured.

Connecting with CRIApp
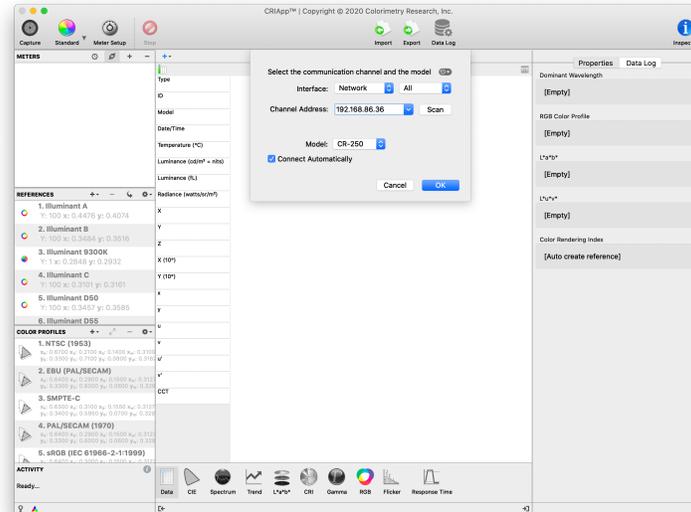
Figure 6 CRIApp add new meter

Note:

As of the current release, the CRIApp does not auto connect to networked meters.

Launch CRIApp. Click the + icon in the METERS pane. This will launch the Add Meter setup. Select the **Network** interface. Scanning the network will detect the IP address of the meter/WiFI box and will display it in the Channel Address field. Select the correct model and press OK.

Connecting using Remote Communication

Communication with the instrument is implemented by means of an ASCII protocol defined in the Remote Communications Manual.

TCP Port: 51200