



IOTBuddy 154-xxxx-xx Web Configuration Senva Sensors Instruction Manual

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Web Configuration Manual
IoT Buddy
Senva Sensors
1825 NW 167Th Place Beaverton, OR 97006
154-xxxx-xx

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154-xxxx-xx Web Configuration Senva Sensors

Rev.	Release Date	By	Description of Change	ECR
0A			Initial Release	—

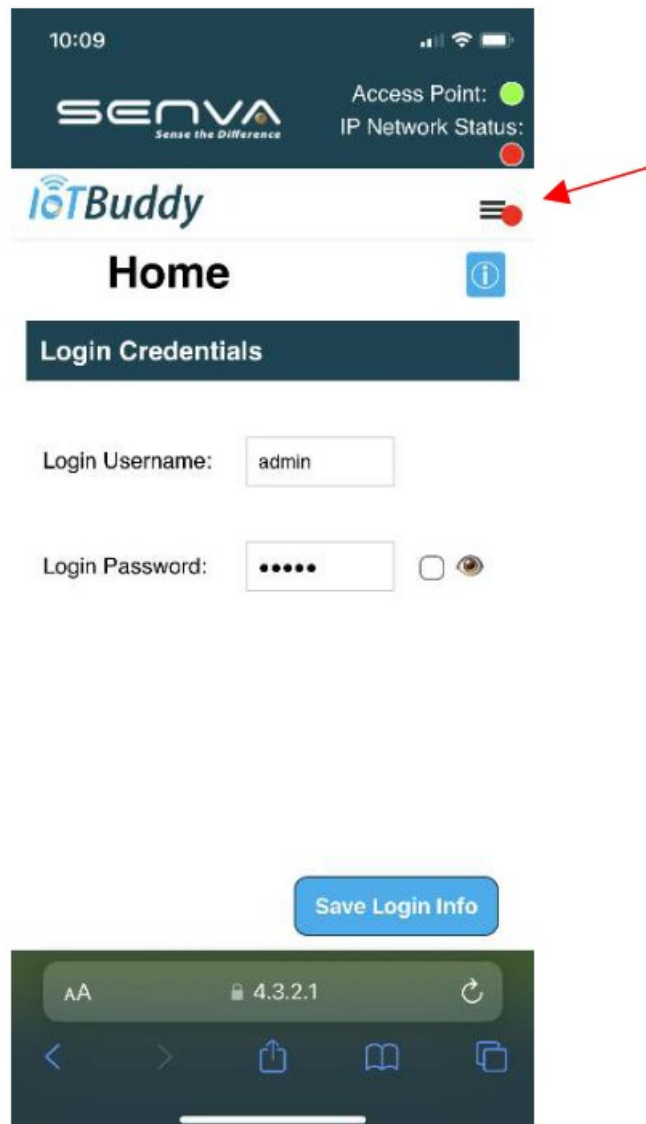
Wi-Fi Connection

Follow installation instructions to wire IoT Buddy to desired Modbus or analog device.

Once powered, IoT Buddy will host an access point for 5 minutes. To re-enable the access point, press the button on the IoT Buddy.

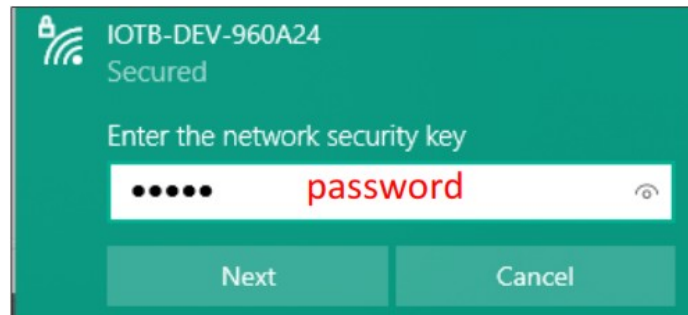
QR Code Connection

1. Scan the QR code on the label of the IoT Buddy device. Join the network.
2. Open a browser; go to <https://4.3.2.1>
3. A non-private connection status may appear, please approve and “visit website”
 - a. You may need to hit “refresh” after clicking the “visit website” link.
4. Log in using the default credentials:
 - username: admin
 - password: admin
5. Navigate using the 3-line “hamburger” menu on the top right. See following sections for explanation of each setup screen.

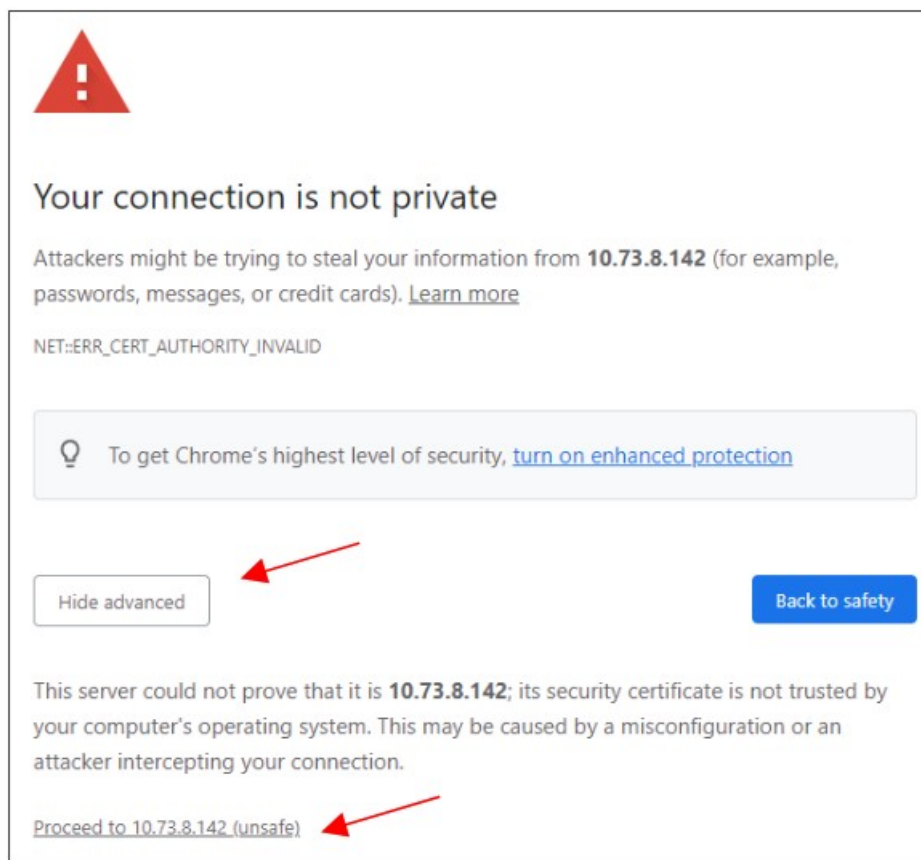


Manual Connection

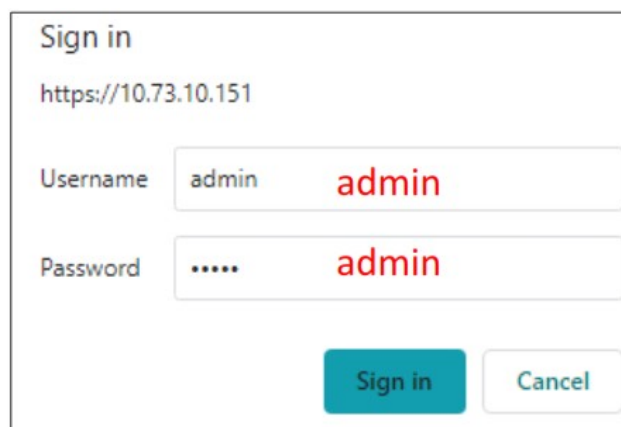
1. Open your Wi-Fi network page and find the IOTB that matches the serial number printed on your IoT Buddy label.
2. Enter the network security key: password



3. Go to <https://4.3.2.1>
4. Your browser may indicate a non-private connection. Find the “proceed” button near the bottom of the warnings; you may need to click the subtle link labeled “advanced” or “show more” first.



5. Log in using the default credentials:
 - username: admin
 - password: admin



6. You may change your username and password on the first screen. Once you click “save,” you will be logged

out and prompted to log in again with the new credentials.

Network Configuration

1. Enter the credentials for the existing Wi-Fi network you wish to connect to the IoT Buddy.
2. You may change your access point password on this page, if desired. If you chose a static IP assignment, please enter it in the “security and addressing” section.

IoT Buddy

Home

Network

Cloud Service

Analog Settings

Analog Datapoints

Advanced

System Info

Error Log

Network

Wi-Fi Station

Network Status: ● Disconnected

Wifi Station SSID:

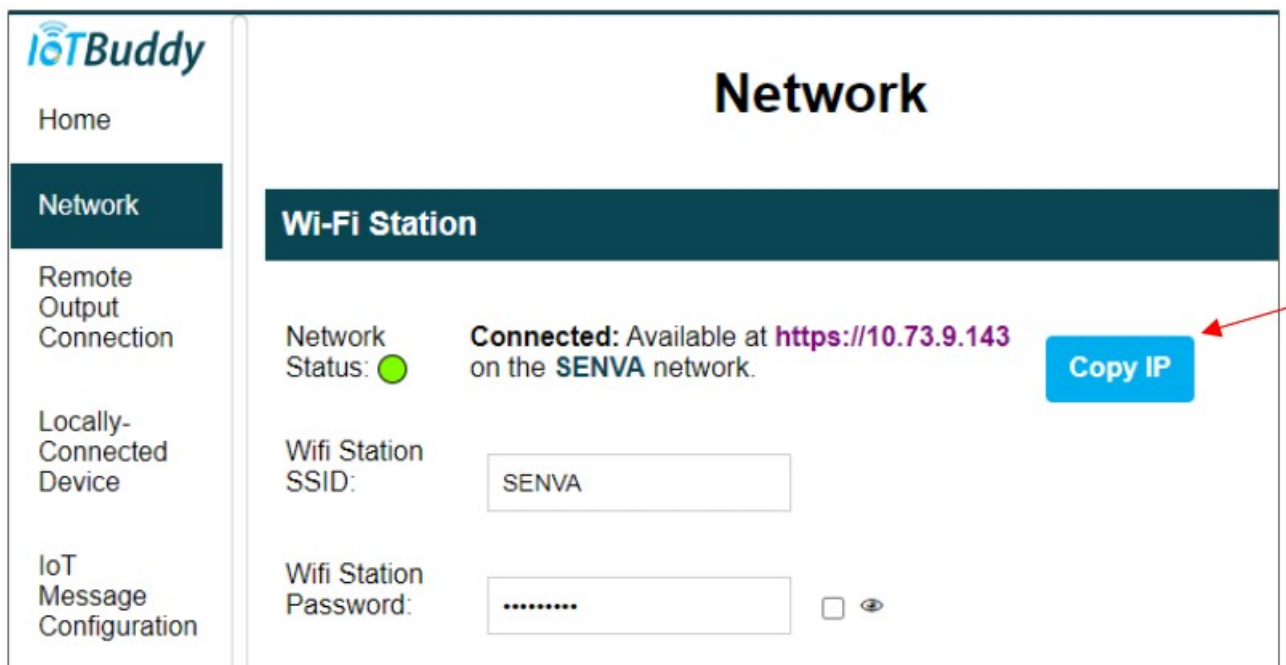
Wifi Station Password: ☐

Access Point

Access Point SSID:

Access Point Password: ☐

3. When you hit “save changes & connect” button, you will need to disconnect and reconnect to the access point IOTB-xxxxxx. Click the “reload” button on your web browser.
4. For Static, enter your assigned IP address into your browser. You will be prompted with another non-private connection, please proceed. Log in again using your new login credentials.
For DHCP, navigate to the network tab and copy your new IP address. Paste the new IP address into your browser. You will be prompted with another non-private connection; please proceed.
Log in again using your new login credentials.



5. You may now connect to your designated Wi-Fi network.

Ethernet or Power over Ethernet Connection

Follow installation instructions to wire IoT Buddy to desired Modbus or analog device.

1. For static IP addressing, connect RJ45 Ethernet plug to the IoT Buddy and directly to your computer. Press the button on the IoT Buddy once. Using a web browser, go to <https://3.2.1.1>; it may take a few seconds before this address is accessible. You may then set up your desired static IP address using the web interface (see step 5).

Note: If a static IP address has already been assigned, the above process will not work.

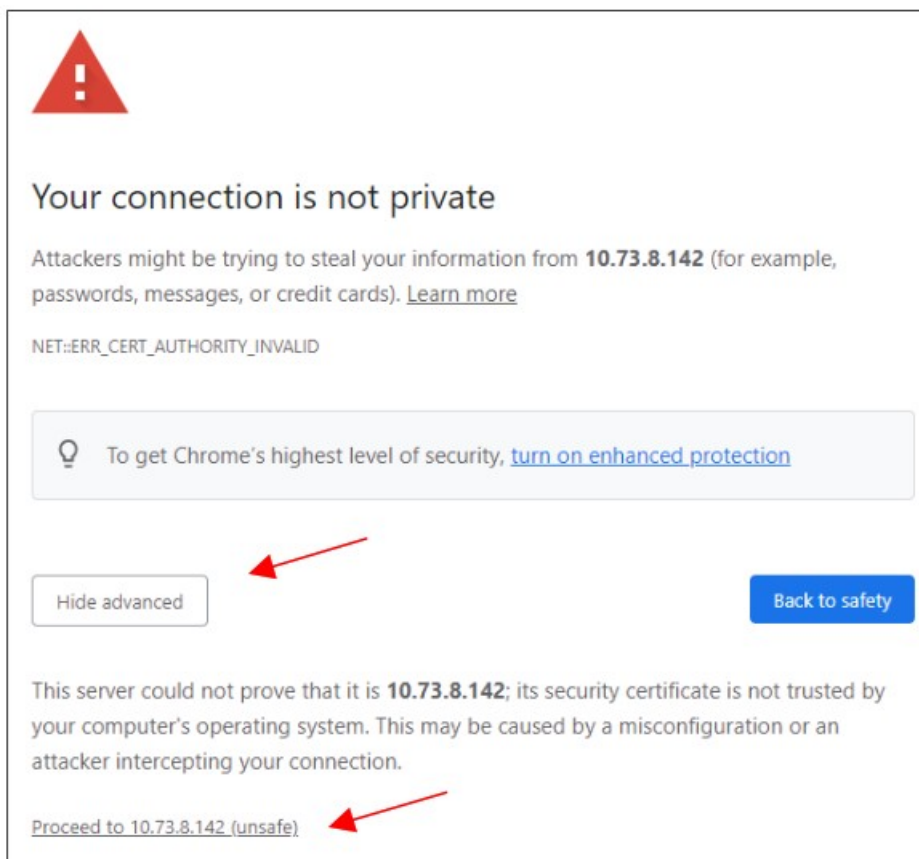
The designated IP address can be easily retrieved Senva Sync app.

For DHCP, connect RJ45 Ethernet plug to IoT Buddy and to your network. Determine your automatically assigned IP address and enter it into your web browser using "https://".

Note: The assigned IP address can be easily retrieved Senva Sync app.

Your browser may indicate a non-private connection. Click "Advanced" and then "Proceed to xx.xx.x.xxx (unsafe)." Once signed in, you will be able to update security settings to enhance privacy.

2. Your browser may indicate a non-private connection. Click "Advanced" and then "Proceed to xx.xx.x.xxx (unsafe)."



3. Log in using the default credentials:

- username: admin
- password: admin

4. You may change your username and password on the first screen. Once you click "save" you will be logged out and prompted to log in again with the new credentials.
5. For static IP addressing, navigate to the "network" tab. Select "static" address assignment and enter the rest of your credentials in the associated boxes. Once you click "Save Changes and Connect" you will be logged out and prompted to log in again, with the new IP address and credentials.

Note: The ethernet connection or the power to the IOTBuddy will need to be disconnected then reconnected for the new address to take effect.

IoT Buddy

Home

Network

Remote Output Connection

Locally-Connected Device

IoT Message Configuration

Advanced

System Info

Error Log

Network

Security & Addressing

Address Assignment:

Static

IPv4 Address:

10.73.8.142

DNS Preferred:

10.73.8.2

Static Gateway:

10.73.8.1

Static Netmask:

255.255.252.0

Save Changes & Connect

6. Once connected, you will see the “network status” icon at the top of the page turn green.

IP Network Status: 

Cloud Service Setup (Remote Output Connection)

1. Choose your MQTT protocol from AWS IoT Core over MQTT, Azure IoT Hub over MQTT, or plain MQTT. Enter your cloud service or broker information.
2. Enter client certificates in the Security section if applicable.

IP Network Status: ●

IoT Connection Status: ●

IoT Buddy

Home

Network

Remote Output Connection

Locally-Connected Device

IoT Message Configuration

Advanced

System Info

Error Log

Remote Output Connection

Connection Info

Protocol/Service Selection: AWS IoT Core (MQTT)

Broker URI:

Port:

Client ID:

Security

TLS: Enabled

- When you hit “save changes and connect,” you should see the IOT Connection Status icon at the top turn green.

Datapoint Settings

Modbus Settings (Locally-Connected Device)

- Navigate to the “Locally-Connected Device” tab and enter Modbus settings to match the settings on the device you wish to monitor.
- Navigate to “IoT Message Configuration” tab. You may choose one of the pre-configured Senva devices from the dropdown or choose “basic” to manually enter the points you wish to monitor.
Select the pre-configured points you wish to monitor or add basic points manually.

Default

Temperature

Relative Humidity

CO2

TVOC ug/m3

TVOC PPB

PM 1.0 ug/m3

PM 2.5 ug/m3

PM 4.0 ug/m3

PM 10.0 ug/m3

Air Quality

Slider Display

Occupancy

Ambient Light

Relay Contacts State

Dewpoint

Pressure

PM 0.5 Particle Count

PM 1.0 Particle Count

PM 2.5 Particle Count

Read current temperature.

AQ2

Default

Add

Save

3. Adjust the settings for each point you wish to monitor. The right sidebar provides a detailed description of each field as it is selected.

The screenshot displays the 'IoT Message Configuration' interface. On the left is a sidebar with navigation links: Home, Network, Remote Output Connection, Locally-Connected Device (highlighted), IoT Message Configuration (active), Advanced, System Info, and Error Log. The main panel is titled 'IoT Message Configuration' and shows a list of configured points. The first point, 'AQ2 Temperature (...DUT-ABCD/Temperature)', is expanded to show its settings: Register (1), Register Count (1), Topic (senvaDUT/senvaDUT-#), Register Type (0x03 (Holding)), Rate of Publish (60 seconds), Precision (1), Data Scale (x10), Data Type (Int16), QoS (0), and Retain (No). An 'OVERRIDE' field is set to 0. Below this are three other points: 'AQ2 Relative Humidity (...nvaDUT-ABCD/Humidity)', 'AQ2 CO2 (...UT/senvaDUT-ABCD/CO2)', and 'AQ2 TVOC ug/m3 (...nvaDUT-ABCD/TVOCugm3)'. At the bottom, there is a form to add a new point with a dropdown for 'AQ2', a 'Default' dropdown, an 'Add' button, and a 'Save' button.

Point ID	Point Name	Register	Register Count	Topic	Register Type	Rate of Publish	Precision	Data Scale	Data Type	QoS	Retain	Override
1	AQ2 Temperature (...DUT-ABCD/Temperature)	1	1	senvaDUT/senvaDUT-#	0x03 (Holding)	60 (seconds)	1	x10	Int16	0	No	0
2	AQ2 Relative Humidity (...nvaDUT-ABCD/Humidity)											
3	AQ2 CO2 (...UT/senvaDUT-ABCD/CO2)											
4	AQ2 TVOC ug/m3 (...nvaDUT-ABCD/TVOCugm3)											

Analog Settings

1. Navigate to the "Locally-Connected Device" tab and enter the voltage or current range of the analog signal to be monitored on the two channels. Channel A should correspond to your IoT Buddy's blue wire and Channel B should be grey.
2. Navigate to the "IOT Message Configuration" tab. You may choose one of the pre-configured Senva devices from the dropdown or choose "basic" to manually enter the points you wish to monitor. Make sure to assign readings to either Channel A or Channel B.

- Home
- Network
- Remote Output Connection
- Locally-Connected Device
- IoT Message Configuration**
- Advanced
- System Info
- Error Log

IoT Message Configuration

1 Custom (...DUT/senvaDUT-ABCD/CO)

Channel *
A

Reading Min *
0

Reading Max *
200

Topic *
senvaDUT/senvaDUT-#

Precision
0

Rate of Publish *
3600 (seconds)

QoS *
0

Retain *
No

2 Custom (...UT/senvaDUT-ABCD/NO2)

Channel *
B

Reading Min *
0

Reading Max *
10

Topic *
senvaDUT/senvaDUT-#

Precision
0

Rate of Publish *
3600 (seconds)

QoS *
0

Retain *
No

Basic ▾

Default ▾

Add

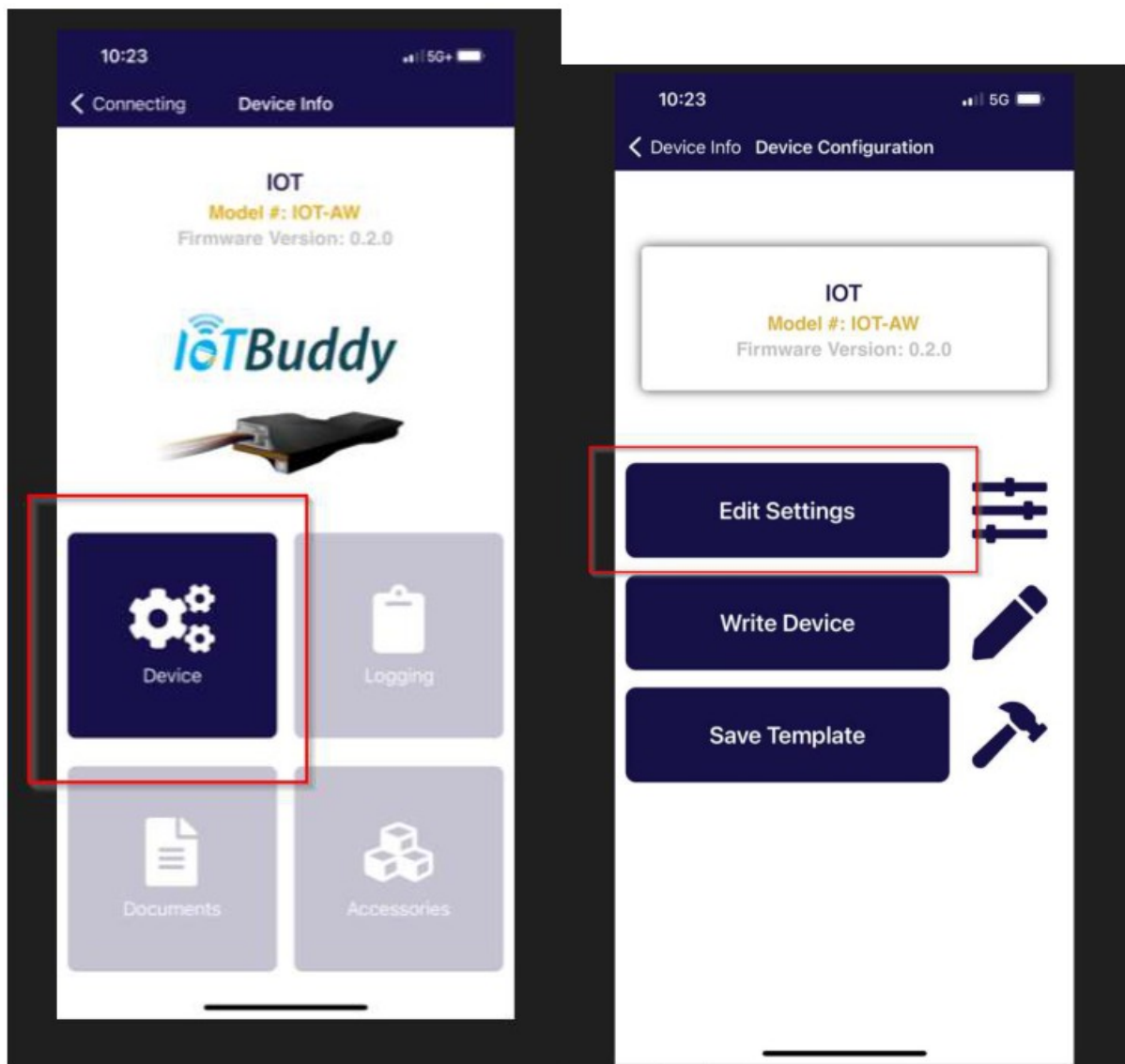
Save

App Provisioning Setup

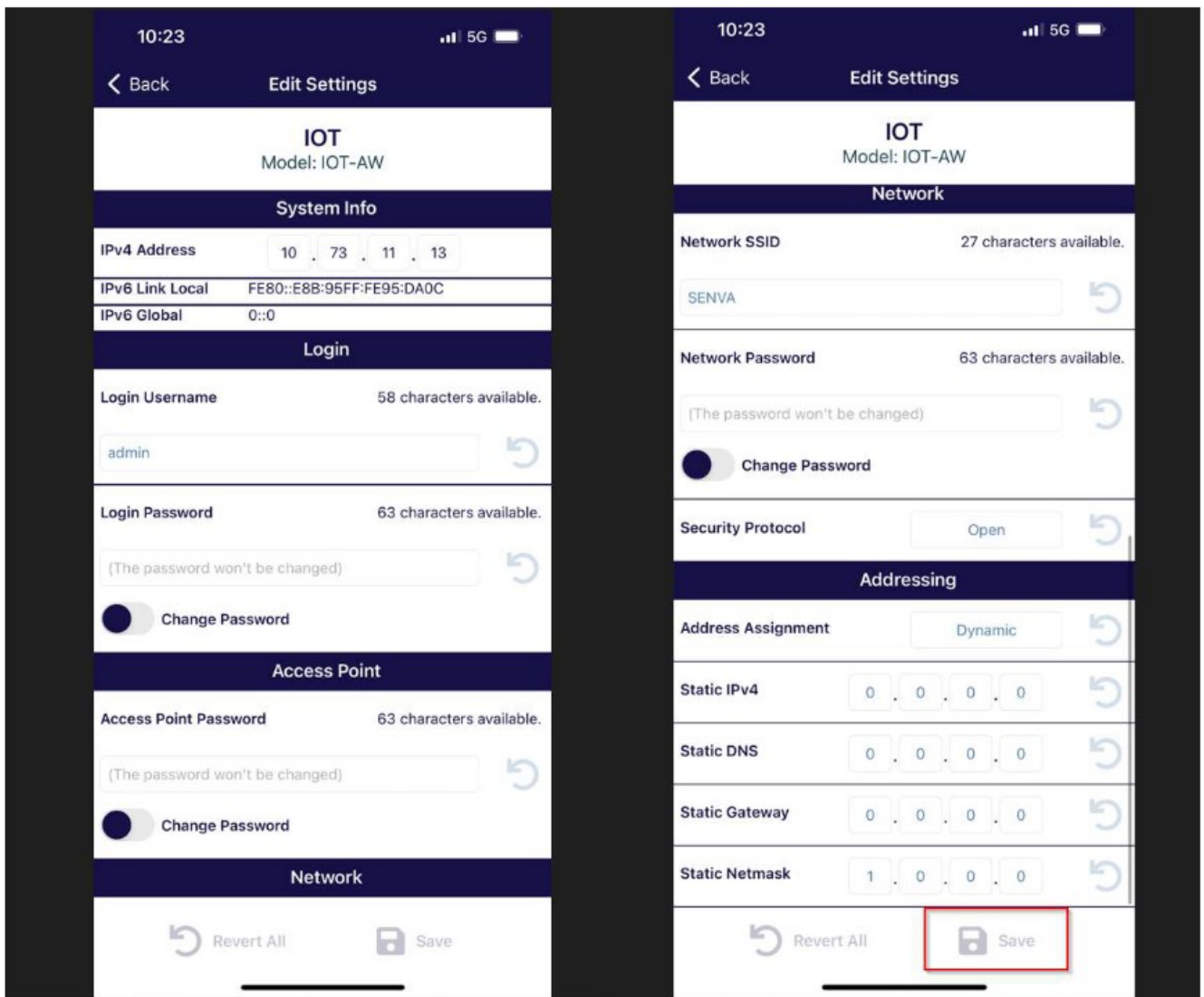
1. Open the Senva Sync app available on the Google Play Store for Android or the Apple App Store for iOS.
2. Tap 'Scan Device' and place your phone's NFC adapter over IoT Buddy until a successful connection occurs and a green checkmark is displayed.



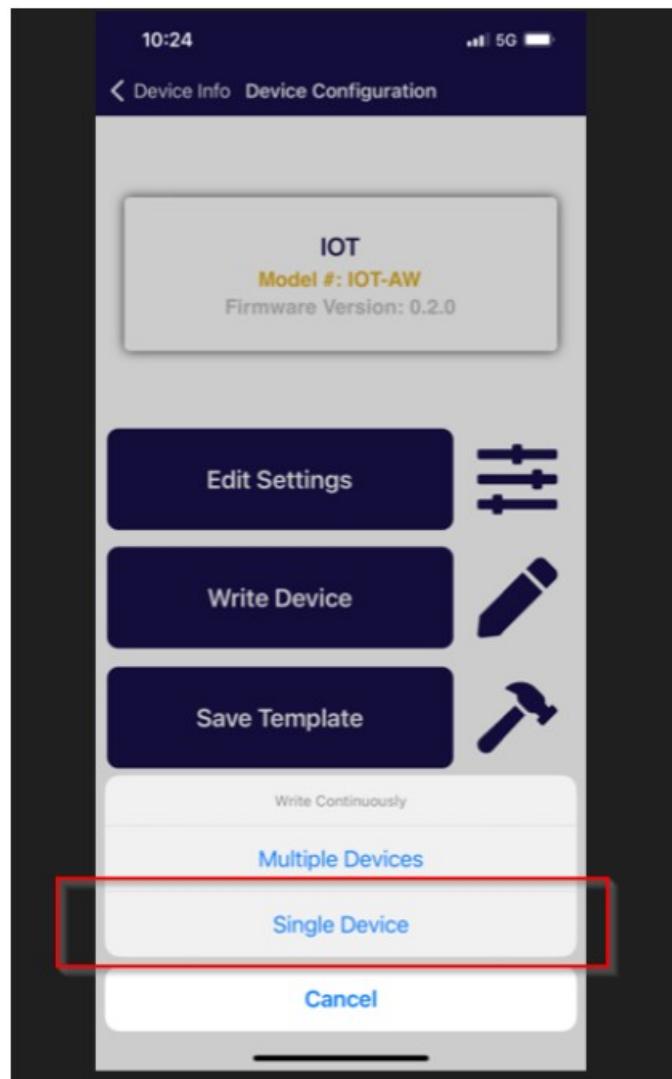
3. Tap 'Device', then tap 'Edit Settings'.



4. Update available settings as needed.
 - a. For WIFI devices, available settings are:
 - i. Currently assigned IP addresses
 - ii. Login credentials for the web interface
 - iii. The Access Point password
 - iv. WIFI Network settings
 - v. Addressing method and static IP assignment
 - b. For ethernet and POE devices, available settings are:
 - i. Currently assigned IP addresses
 - ii. Login credentials for the web interface
 - iii. Addressing method and static IP assignment



5. After changing the settings as needed, tap 'Save'. When prompted to write a device, tap 'yes', then tap 'single device'.



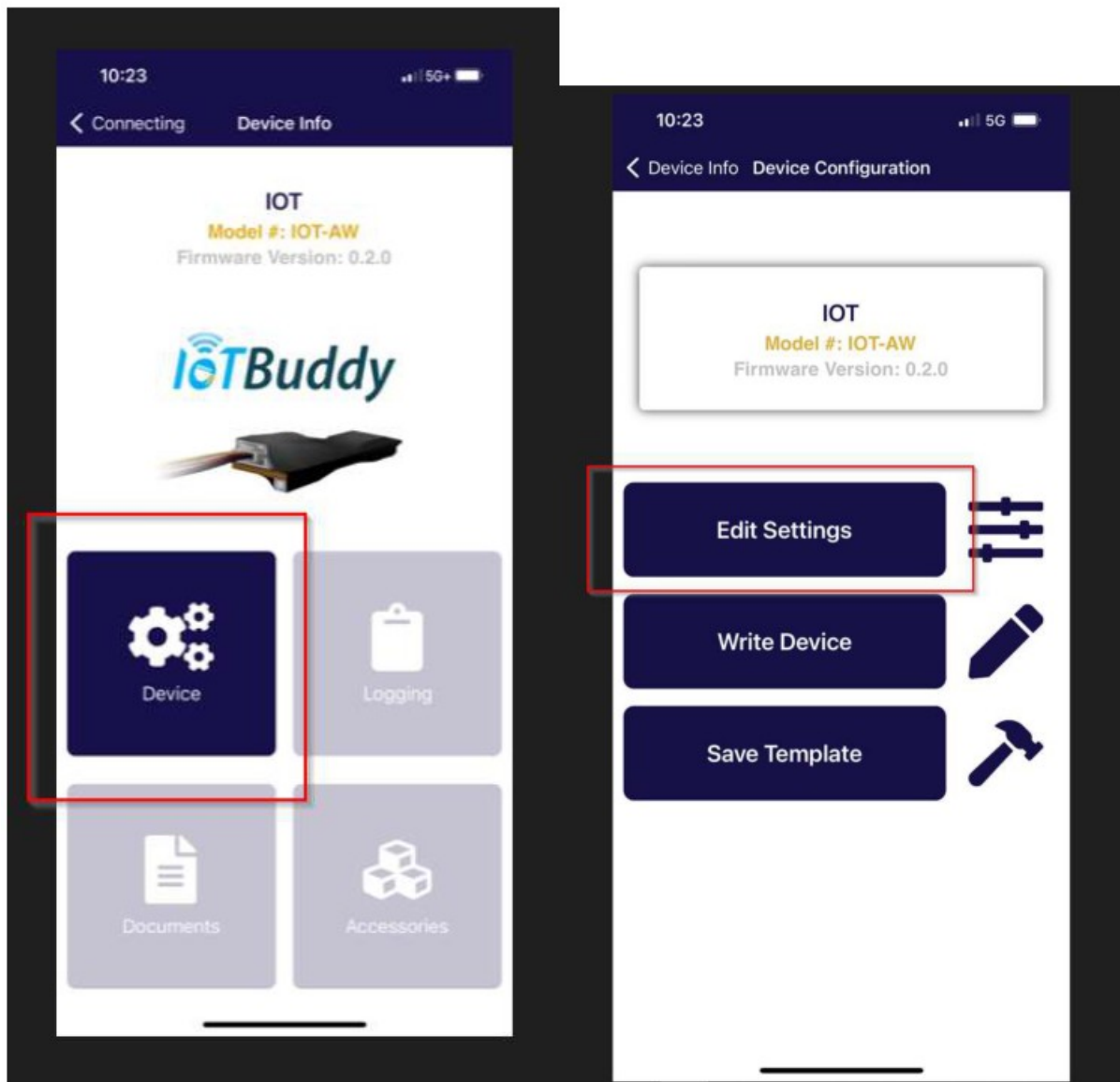
6. Place your phone's NFC adapter over IoT Buddy to write out the new settings until a successful connection occurs and a green checkmark is displayed.

IP Address Retrieval

7. Wait at least 5 seconds for IoT Buddy to reboot after a write, then from the app's home page, tap 'Scan device'. Place your phone's NFC adapter over IoT Buddy until a successful connection occurs and a green checkmark is displayed.



8. Tap 'Device', then tap 'Edit Settings'.



9. The currently assigned IP addresses will be displayed at the top under 'System Info'.

