Web Configuration Manual IoTBuddy

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Rev.	Release Date	Ву	Description of Change	ECR
0A			Initial Release	

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Wi-Fi Connection

Follow installation instructions to wire IoTBuddy to desired Modbus or analog device.

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

QR Code Connection

- 1. Scan the QR code on the label of the IoTBuddy 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.

10:09	Access Po	≈ == }
	IP Network	Status:
IoTBuddy		=
Home		
Login Credentia	ls	
Login Username:	admin	
Login Password:	•••••	۲
	Save Login In	fo
AA	4.3.2.1	2
		G

Manual Connection

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



- 3. Go to <u>https://4.3.2.1</u>
- 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.

Your connection is not private
Attackers might be trying to steal your information from 10.73.8.142 (for example, passwords, messages, or credit cards). <u>Learn more</u>
NET::ERR_CERT_AUTHORITY_INVALID
Q To get Chrome's highest level of security, <u>turn on enhanced protection</u>
Hide advanced Back to safety
This server could not prove that it is 10.73.8.142 ; its security certificate is not trusted by your computer's operating system. This may be caused by a misconfiguration or an attacker intercepting your connection.
Proceed to 10.73.8.142 (unsafe)

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

Sign in				
https://10.73.10.151				
Username	admin	admin		
Password	•••••	admin		
		Sign in	Cancel	

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 IoTBuddy.
- 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.

IoTBuddy Home			Network
Home			
Network	Wi-Fi Station		
Cloud Service	Network Status: 🔴	Disconnected	
Analog Settings	Wifi Station SSID:	SENVA	
Analog Datapoints	Wifi Station		
Advanced	Password:		. 4
System Info	Access Point		
Error Log			
	Access Point SSID:	IOTB-DEV-960A24	
	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.

IoTBuddy Home	Network		
Network	Wi-Fi Station		
Remote Output Connection	Network Status: 🔵	Connected: Available at https://10.73.9.143 on the SENVA network. Copy IP	
Locally- Connected Device	Wifi Station SSID:	SENVA	
loT Message Configuration	Wifi Station Password:	••••••	

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

Ethernet or Power over Ethernet Connection

Follow installation instructions to wire IoTBuddy to desired Modbus or analog device.

 For static IP addressing, connect RJ45 Ethernet plug to the IoTBuddy and directly to your computer. Press the button on the IoTBuddy 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 <u>Senva Sync app</u>.

For DHCP, connect RJ45 Ethernet plug to IoTBuddy 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 <u>Senva Sync app</u>.

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)."

Your connection is not private
Attackers might be trying to steal your information from 10.73.8.142 (for example, passwords, messages, or credit cards). <u>Learn more</u>
NET::ERR_CERT_AUTHORITY_INVALID
Q To get Chrome's highest level of security, <u>turn on enhanced protection</u>
Hide advanced Back to safety
This server could not prove that it is 10.73.8.142 ; its security certificate is not trusted by your computer's operating system. This may be caused by a misconfiguration or an attacker intercepting your connection.
Proceed to 10.73.8.142 (unsafe)

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

Sign in				
https://10.73.10.151				
Username	admin	admin		
Password	•••••	admin		
		Sign in	Cancel	

- 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.

IoTBuddy Home	Network	
Network	Security & A	ddressina
Remote Output Connection	Address	
Locally- Connected	Assignment:	Static 🗸
Device	Address:	10.73.8.142
Message Configuration	DNS Preferred:	10.73.8.2
Advanced	Ctatia	
System Info	Gateway:	10.73.8.1
Error Log	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: O

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: 🔴
I õTBuddy Home	Remote Output Connection		
Network	Connection I	nfo	
Remote Output Connection	Protocol/Service Selection:	AWS IoT Core (MQ' V	
Locally- Connected Device	Broker URI:	Enter the broker URI here	
loT Message Configuration	Port:	8883	
Advanced	Client ID:	Enter Client ID here	
System Info	Security		
Error Log			
	TLS:	Enabled V	

3. 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)

- 1. Navigate to the "Locally-Connected Device" tab and enter Modbus settings to match the settings on the device you wish to monitor.
- 2. 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 Humid TVOC ug/m3 TVOC PPB PM 1.0 ug/m3 PM 2.5 ug/m3 PM 4.0 ug/m3 PM 4.0 ug/m3	emperature.
	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	
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.

IoTBuddy Home		IoT Message	Configu	ration	
Network	1 AQ2 Temperat	ture (DUT-ABCD/Tempera	ture)		×
Remote Output	Register *	1	Register Count *	1	
Connection	Topic *	senvaDUT/senvaDUT-A	Rate of Publish *	60	(seconds)
Locally- Connected Device	Register Type *	0x03 (Holding) 🗸	Data Scale:	x10	~
loT	Precision	1	Data Type *	Int16	~
Message Configuration	QoS*	0 🗸	Retain *	No	~
Advanced	OVERRIDE:	0			
System Info	2 AQ2 Relative I	Humidity (nvaDUT-ABCD)	'Humidity)		×
Error Log	3 AQ2 CO2 (UT/senvaDUT-ABCD/CO2)			×
	4 AQ2 TVOC ug	/m3 (nvaDUT-ABCD/TVO	Cugm3)		×
	AQ2 V Defa	ault ~	Add		Save

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 IoTBuddy'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.

IoTBuddy Home		loT Me	ssage (Configurat	ion	
Network	Custom (Dl	JT/senvaDUT-A	BCD/CO)			×
Remote Output Connection	Channel *	A	~	Reading Min *	0	
Locally-	Reading Max *	200		Topic *	senvaDU	T/senvaDUT-A
Connected Device	Precision	0		Rate of Publish *	3600	(seconds)
loT Message Configuration	QoS*	0	~	Retain *	No	~
Advanced	2 Custom (U1	r/senvaDUT-AB	CD/NO2)			×
System Info	Channel *	В	~	Reading Min *	0	
Error Log	Reading Max*	10		Topic *	senvaDU	T/senvaDUT-A
	Precision	0		Rate of Publish *	3600	(seconds)
	QoS*	0	~	Retain *	No	~
	Basic ~ Defa	ult	~	Add		Save

App Provisioning

Setup

- 1. Open the Senva Sync app available on the <u>Google Play Store</u> for Android or the <u>Apple App Store</u> 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

10:23	.11	5G 🔲	10:23		al S	5G 🔲
〈 Back	Edit Settings		🗸 Back	Edit Se	ettings	
	IOT Model: IOT-AW			IC Model: I	DT-AW	
	System Info			Net	work	
IPv4 Address	10 . 73 . 11 . 13		Network SSID		27 characters	available.
IPv6 Link Local	FE80::E8B:95FF:FE95:DA0C		SENVA			5
IPv6 Global	0::0		(and the			1
	Login		Network Password		63 characters	available.
Login Username	58 characters	s available.	(The password wor	n't be change	ed)	5
admin		C	Change Pa	ssword		
Login Password	63 characters	s available.	Security Protocol		Open	5
(The password won'	't be changed)	5		Addre	essing	
Change Pas	sword		Address Assignmen	nt	Dynamic	5
	Access Point		Static IPv4			5
Access Point Passwe	ord 63 characters	s available.	State in V4	0.	0.0.0	J
			Static DNS	ο.	0.0.0	5
Change Pas	t be changed)		Static Gateway	0.	0.0.0	5
Undrige Pas						10
	Network		Static Netmask	1	0.0.0	5
in Paul	art All Save		0	ort All	Den	

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'.

10:23		📲 5G 🥅
🗸 Back	Edit Setting	S
	ΙΟΤ	
	Model: IOT-A	W
	System Inf	0
IPv4 Address	10 . 73 .	11 . 13
IPv6 Link Local	FE80::E8B:95FF:	FE95:DAOC
IPv6 Global	0::0	
	Login	
Login Username		58 characters available.
admin		5
Login Password		63 characters available.
(The password won	't be changed)	5
Change Pas	ssword	
	Access Poir	nt
Access Point Passw	vord	63 characters available.
(The password won	't be changed)	5
Change Pas	ssword	
	Network	k.
S Rev	ert All	Save
		- 18