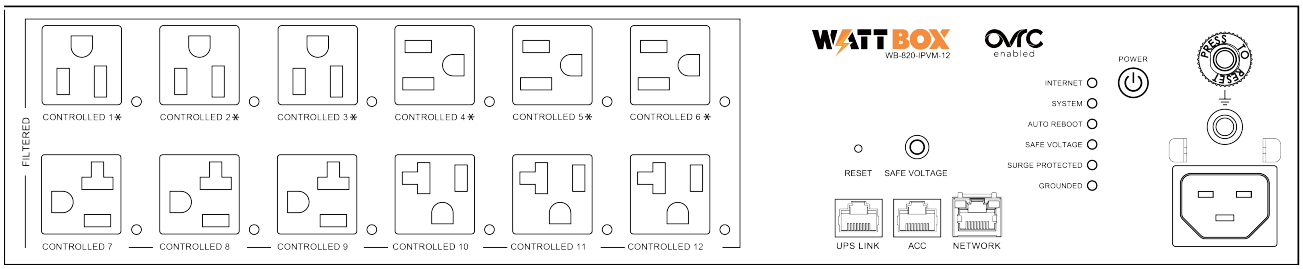
WB-820-IPVM-12

Installation Guide



Package contents

- (1) WB-820-IPVM-12
- (4) Rubber feet
- (1) Removable 2m (6') IEC 21 power cord
- (2) Small rack mounting brackets
- (2) Large rack mounting brackets
- (1) Wall-mount template
- (8) Mounting bracket screws
- (6) Hook & loop tie-down straps
- (1) Locking clip for IEC cord
- (4 ea.) Screws, washers, and wall anchors
- (1) Documentation QR insert card

Important Safety Instructions

Read and observe the following safety points at all times.

Notice

For indoor use only. Internal components are not sealed from the environment. The device can only be used in a fixed location such as a telecommunication centre, or a dedicated computer room. When you install the device, ensure that the protective earthing connection of the socket-outlet is verified by a skilled person. Suitable for installation in Information Technology Rooms in accordance with Article 645 of the National Electrical Code and NFPA 75.

Only use brackets/attachments/accessories specified by the manufacturer.

Do not place the device in an unstable position where it might fall and cause injuries. This equipment is not suitable for use in locations where children are likely to be present.

Do not cover this device with a cloth. Do not install it on a carpet or rug.

Caution — Potential injury

Do not use this product with extension cords, multioutlet power strips, multioutlet extenders, or UPS devices (other than a WattBox UPS). The power capacity of these accessories can be overloaded by this product and may result in a risk of fire, or property damage.

Warning — Lithium battery

A lithium battery is molded into this device's real-time clock. The lithium battery is not intended to be replaced; a lithium battery can explode if it is incorrectly replaced. Do not recharge, disassemble, or incinerate a lithium battery. Discard used lithium batteries according to local regulations.

Warning — Power sources, grounding, polarization

This plug is designed to be inserted into a NEMA 5-15 (three-prong grounded) outlet only. Do not force the plug into an outlet that is not designed to accept it. Never dismantle the plug or to alter the power cord, and do not attempt to defeat the grounding feature by using a three-to-two prong adapter. If you have questions about grounding, consult your local power company or a qualified electrician.

This WattBox requires a properly grounded outlet for safety. If you're not sure if your home's electrical wiring is properly grounded, have it checked by a qualified electrician.

If a rooftop devices such as a satellite dish connects to the WattBox, ensure that the device's wires are also properly grounded.

The Bonding Point can be used to provide a common ground to other equipment. This bonding point can accommodate minimum 12 AWG wire and should be connected using the required hardware specified by the other bonding point. Please use termination for your equipment in accordance with applicable local agency requirements.

Warning — Liquid: Avoiding electrical shocks

Do not operate the WattBox if liquid of any kind is spilled onto or inside the unit. Do not operate it near rain or water, even water that is contained (e.g., bathtub or sink).

Warning — Power cord safety

Do not place the power cord near areas with heavy foot traffic (e.g., hallways). Do not create a trip hazard with the power cord.

If the power cord's protective jacket rips or frays, exposing the internal wiring or shielding, disconnect it from the power source and replace the power cord immediately. See the warranty section of the owner's manual for details.

Warning — No user-serviceable parts inside

If the WattBox is not operating properly, do not remove any part of the unit (cover, etc.) for repair. Unplug the unit and consult the warranty section of **snapone.com/legal**.

Caution — Exposure to heat

Do not expose the WattBox to direct sunlight or place it near wall heaters, space heaters, or in an enclosed space prone to temperature increase.

Do not use the device in a confined, poorly-ventilated location; this can overheat the unit, possibly even causing a fire. If used in a small space other than an EIA-standard rack, ensure that there is adequate space around the device.

Caution — Proper cleaning

In general, the only cleaning necessary for is a light dusting. Unplug the WattBox from the wall outlet before cleaning it. Do not use liquid or aerosol cleaners.

FCC Warning

WARNING!! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice: (1) An unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord by used. (2) Use only shielded cables to connect I/O devices to this equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

The Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

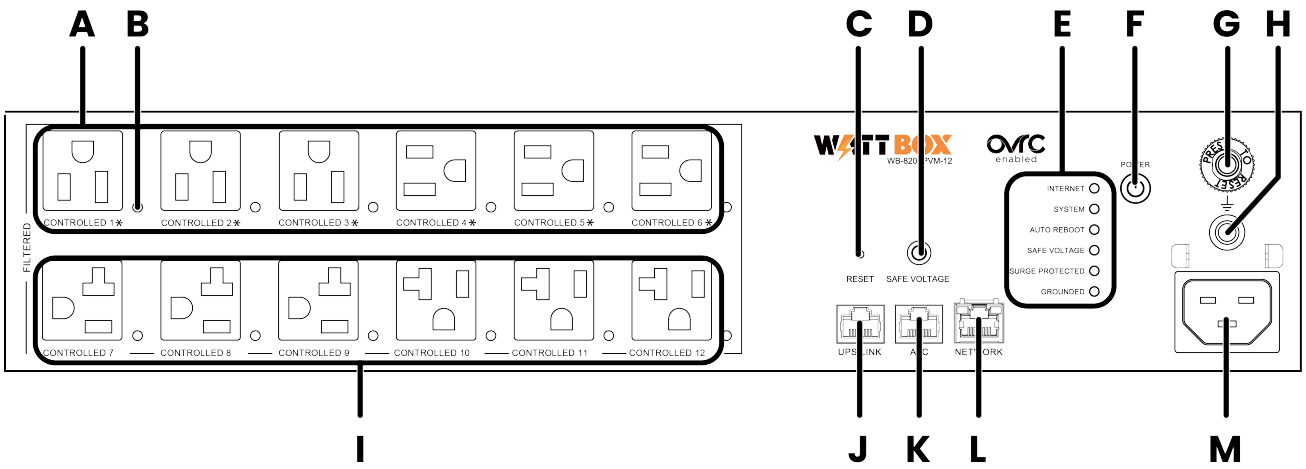
Cet appareil numerique de la class B respecte toutes les exigencies du Reglement sur le materiel brouilleur du Canada.

Warning

This product can expose you to chemicals including carbon black, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

To reduce the risk of electric shock, use only indoors and in dry locations.

Front panel



A. **Controllable outlets 1-6** — 5-15R outlets that are independently switchable (IP controlled).

B. **Power indicators 1-12** — Illuminate when power is on (one for each outlet).

C. **Reset button** — Press and release to restart the network card, press and hold five seconds to reset network settings, and press and hold 10 seconds to restore to factory defaults.

D. **Safe Voltage button** — Toggles Safe Voltage on and off. When enabled, Safe Voltage turns off outlets to protect connected equipment from out-of-range input voltage.

E. **Indicator LEDS** — See the status of the internet, Safe Voltage, surge protection, and whether the unit is properly grounded. Refer to "LED indicators" on page 10.

F. **Power button** — Press to manually toggle the unit's power outlets on or off. Outlets set for Reset Only are not affected.

G. **Circuit breaker** — 20A resettable breaker that trips when overamperage conditions occur.

H. **Bonding point** — Ground post for bonding equipment.

I. **Controllable outlets 7-12** — 5-20R outlets that are independently switchable (IP controlled).

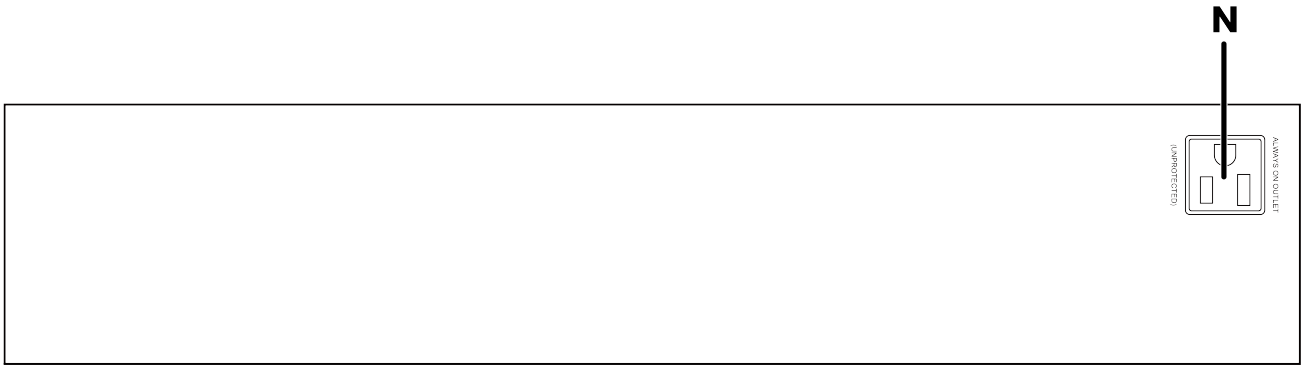
J. **UPS Link** — For connection to a WB-OVRC-UPS-2000-1.

K. **ACC port** — For use with the WattBox 800 Series Accessories (WB-ACC-TRIGGER-800 & WB-800-FP).

L. **Network connection** — Connect to the Local Area Nertwork (LAN) for IP control and monitoring.

M. **Power input** — Input for 3-prong IEC power cord, with detachable locking clip.

Rear panel



N. **Accessory outlet** — AC outlet for powering accessories. This outlet is not surge protected or metered.

LED indicators

The below chart describes each LED status.

Internet	Green (Solid)	All hosts are communicating with the WattBox.
	Green (Flashing)	At least one (not all) sites / IP addresses are communicating with the WattBox.
	Red	None of the hosts are communicating with the WattBox.
System Status	Green (Solid)	WattBox is operating normally.
	Red (Flashing)	Firmware is being updated. The WattBox interface is inaccessible during the update.
Auto Reboot	Green	Auto reboot is enabled. WattBox will power cycle outlets that are ON when communication with the assigned hosts is lost. Note: outlets that are OFF will not power cycle.
	Off	Auto Reboot is Disabled, no power cycle will occur when communication with the assigned host is lost.
Safe Voltage	Green	Safe voltage is enabled. The current incoming AC voltage is safe for operation.
	Red	Incoming AC voltage is not safe. Outlets have been turned off to protect the equipment.
	Off	Safe voltage is disabled.
Surge Protected	Green	WattBox is powered on and outlets are protected.
	Off	The WattBox is not powered on, or the MOVs have opened removing power from the outlets.
Grounded	Green	Incoming AC outlet is grounded.
	Off	Incoming AC outlet is not grounded and requires inspection by an electrician.

Mounting

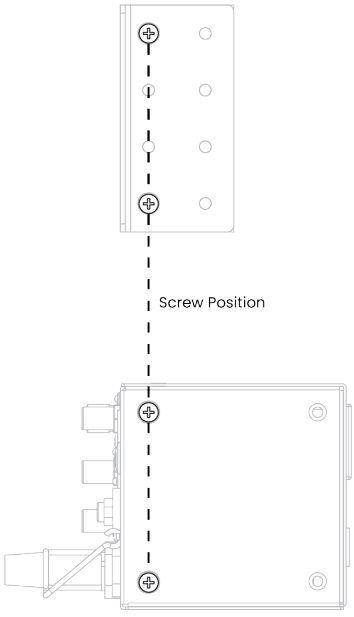
The vertical PDU can be mounted using the provided rack ears or clips.

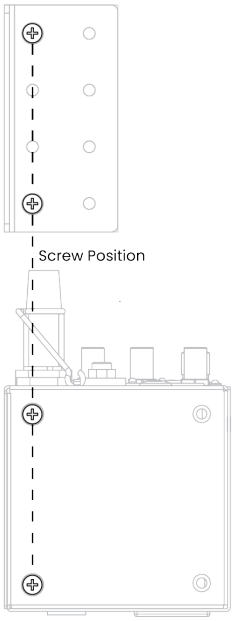
Rack-mounting options

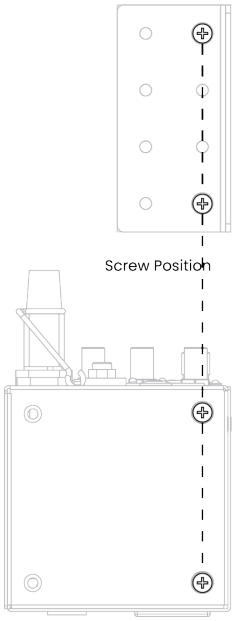
This WattBox is designed for standard 19" equipment racks and features versatile mounting options. The large multi-position bracket allows horizontal or angled mounting. The unit can also be mounted flush with the rack or set back to the most convenient position for a particular installation.

Attach the brackets to the WattBox in the desired position using the supplied hardware, then install the WattBox into the rack using standard rack screws.

Small bracket mounting

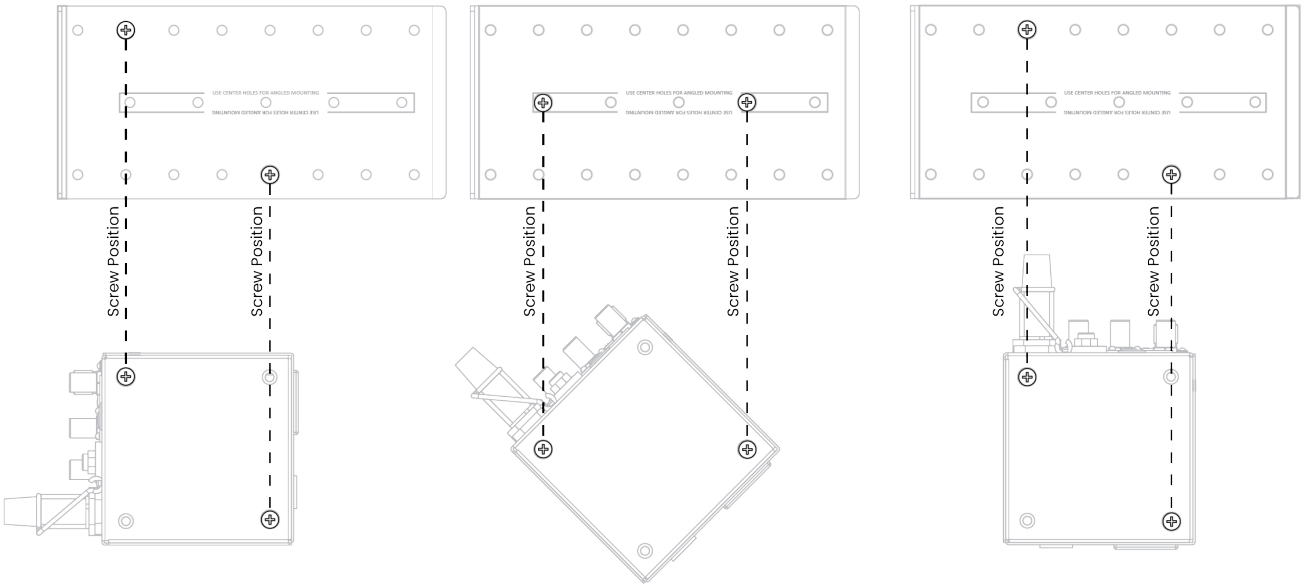






Wall mounting

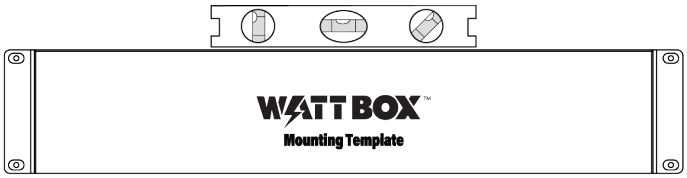
Large bracket mounting



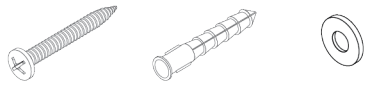
Wall-mounting options

The WattBox 820 Series can be mounted to a wall or cabinet by using the small bracket. Mount the small bracket to the WB-820 with the flat part of the bracket facing away from the outlets.

1. Locate wall studs using a stud finder (not included).
2. Position and level the wall-mount template in the desired location, then mark the wall with the screw locations.

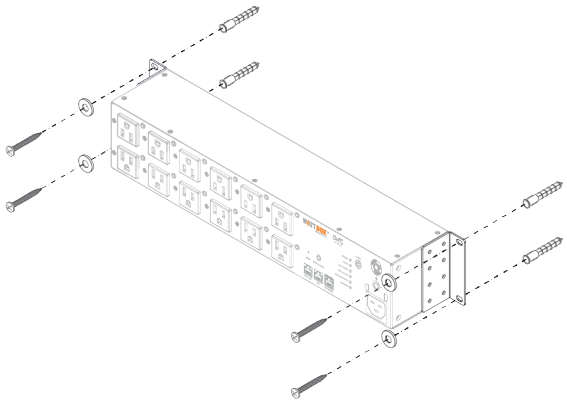


3. If the location does not allow for stud mounting, use an anchor (included) or toggle bolt (not included) with the appropriate weight rating for the WattBox

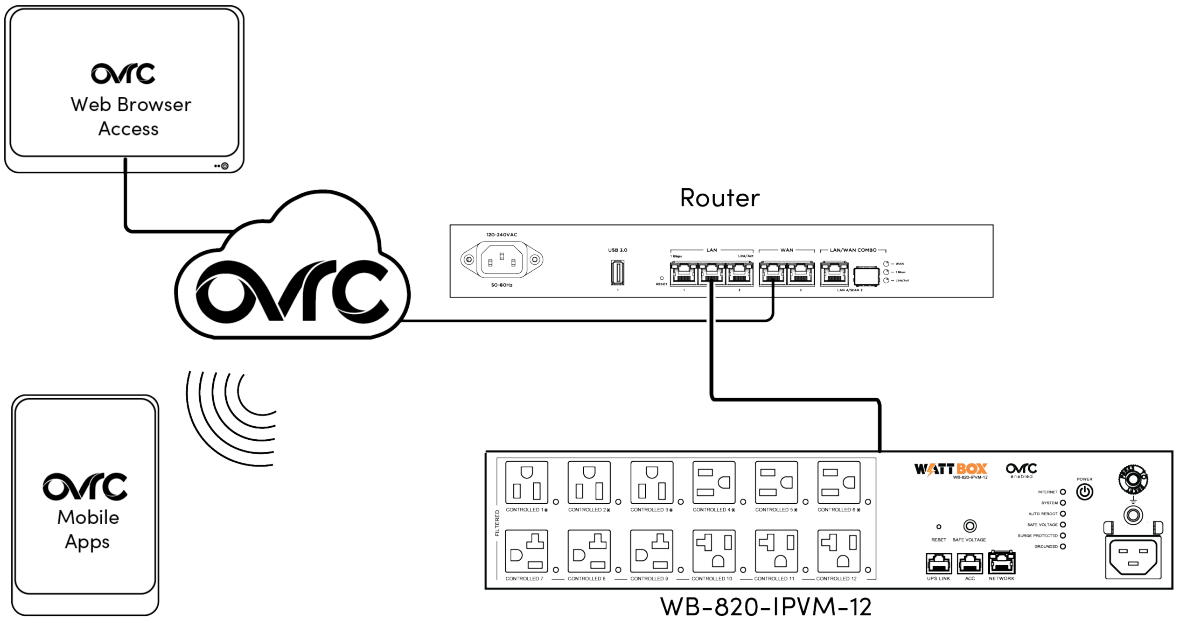


Screw Anchor Washer

4. Secure the WattBox to the wall.



Connections



1. If attaching a WattBox UPS battery pack to the power conditioner, connect an Ethernet cable between the UPS Link ports on the power conditioner and the UPS.

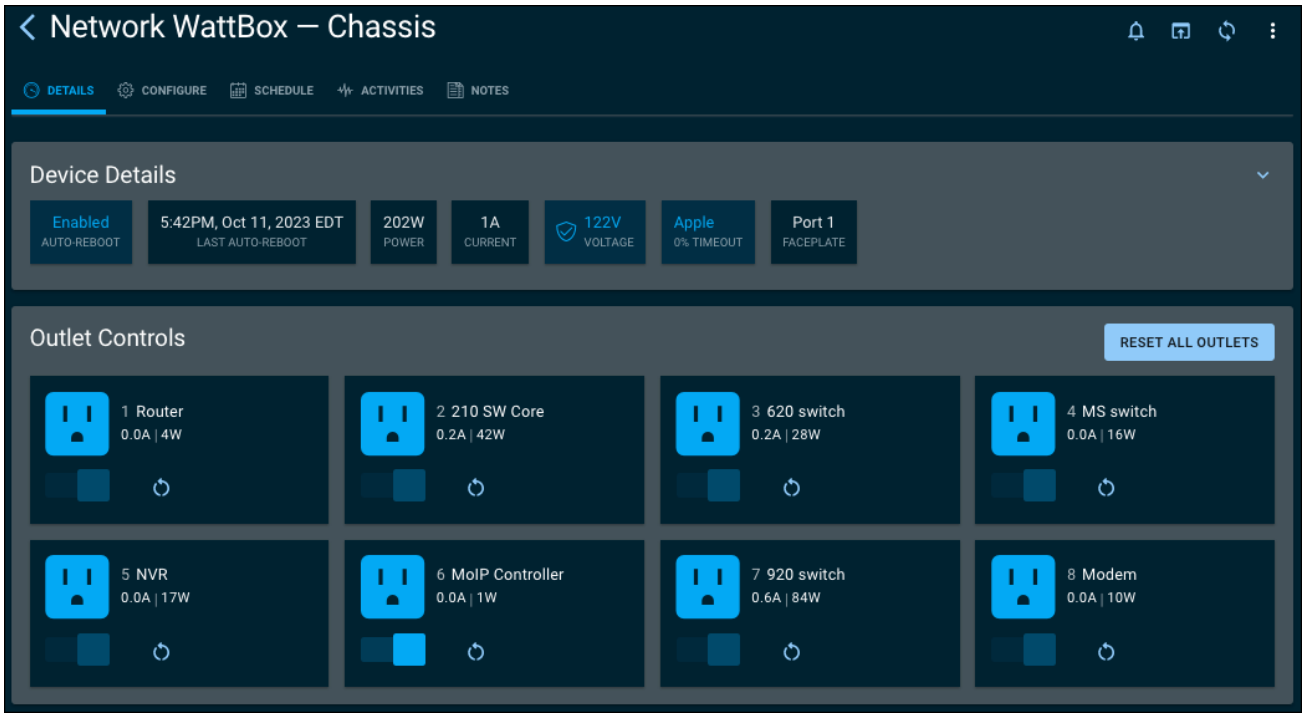
   Caution: The UPS link must be connected before applying power to the PDU. For OvrC connectivity, plug a network cable from your router or switch into the network port.

2. For IP control and OvrC connectivity, connect a network cable from your router or switch into the WB-820 Network port. To learn more about OvrC, visit the **Tech Community** and read the **OvrC User Guide**.

3. Connect the IEC power cord to the power conditioner and to the WattBox UPS (if applicable) or a grounded outlet.

OvrC setup

The **Details** page shows the outlet name, power draw, and provides outlet control to power an outlet on/off or reset it, as well as the Device Details window preset on all OvrC-enabled devices.

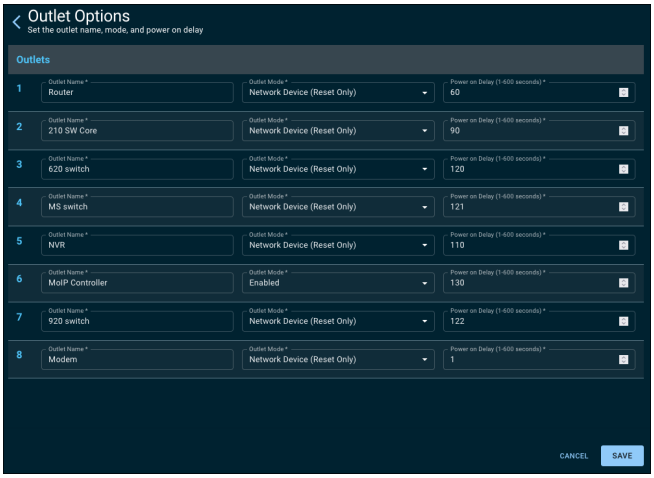


Note: If an outlet is set to **Disabled** you cannot control it. If an outlet is set to **Reset Only** it can only be reset.

General Settings

Use the below settings to take advantage of the WattBox's basic functions and notifications.

Outlet Options



Enter the Outlet Name, Mode, and Power on Delay.

When configuring **Power on Delay**, make sure the first device in the network topology powers on first. Make sure the first device has enough time to power on before the next device in the topology powers on.

For example, the Modem's Power on Delay is 1 second, the router's Power On Delay is 60 seconds, and the Core switch's Power on Delay is 90 seconds.

Pro Tip: Configure the **Outlet Mode** to **Network Device (Reset Only)** for all network devices to avoid outages caused by devices accidentally being powered off.

IP Settings

Select DHCP (default) or Static. Static allows you to designate an IP address, Subnet Mask, Device Gateway, and DNS Server for the WattBox.

Pro Tip: Use DHCP and give the WattBox a MAC (DHCP) Reservation to avoid IP conflicts or connection loss in case the IP scheme changes.

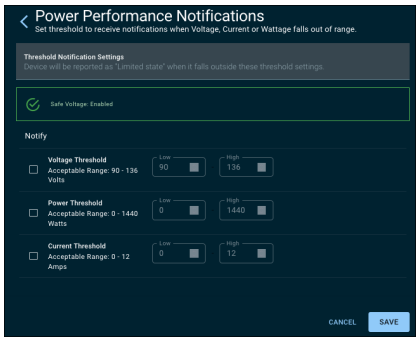
Time Settings

Use the dropdown to select the Time Zone the WattBox is installed in.

Power Performance Notification

Enable or disable notifications when the Safe Voltage, Current, or Wattage falls out of the specified range.

Each notification type allows you to set a specified range. When a threshold falls out of range the WattBox reports that it is in a Limited state.



Note: These settings affect each user on the OvrC account. Manage which notifications you receive in the User settings.

UPS Settings

These settings appear if you have an OvrC-enabled UPS connected to the UPS Link of an IP-enabled Wattbox.

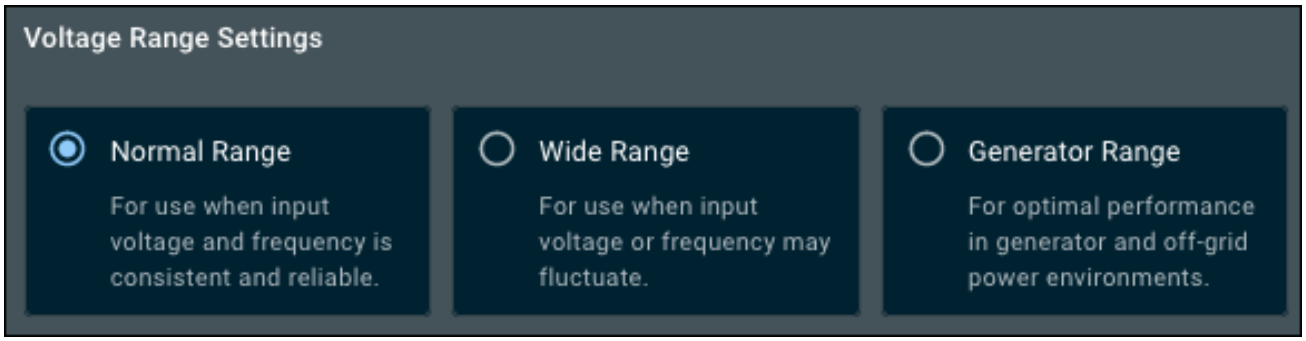
UPS Alarm on Power Loss

Toggle on for the UPS to emit an alarm when you lose power.

Voltage Range Settings (800 and 820 series with an OvrC-enabled UPS only)

Select the type of Voltage Range you expect at the installed location. Options include:

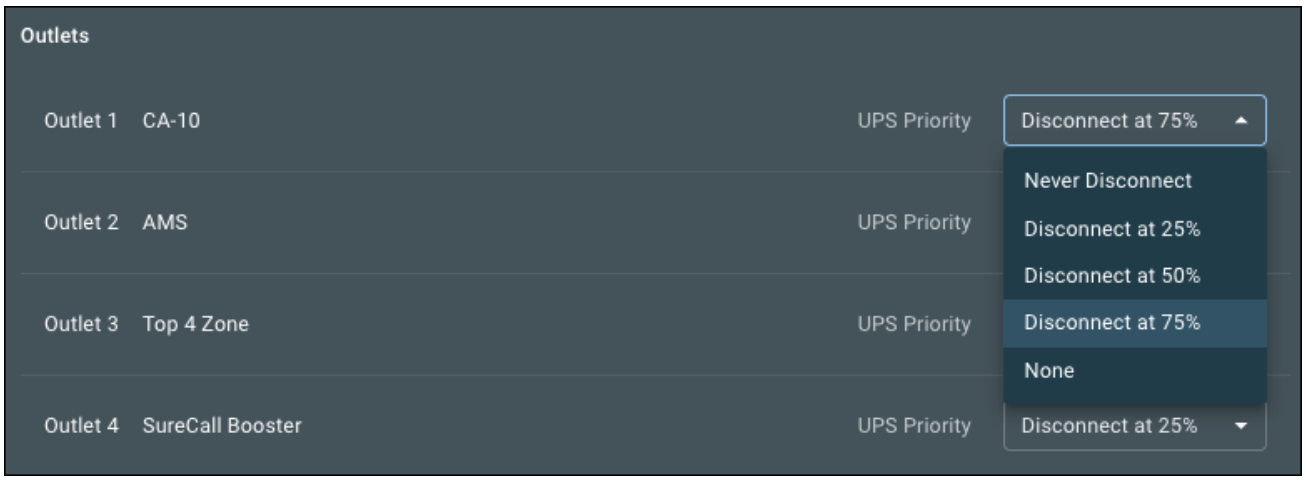
- **Normal Range** — For locations with consistent and reliable input voltage and frequency.
- **Wide Range** — For locations where the input voltage or frequency may fluctuate.
- **Generator Range** — For optimal performance in generator and off-grid power environments.



Note: This feature is not available for International WattBox PDUs. 820 series PDUs are only compatible with the WB-OVRC-UPS-2000-1.

Load shedding configuration

Use the dropdown next to each outlet to determine at what battery percentage the UPS turns the outlet off.



Note: Load shedding does not work for outlets configured to **Reset Only**.

Safe Voltage

Safe Voltage disables all the outlets when the input voltage falls outside of a safe range. Toggle this feature on or off.

Note: This feature is only compatible with the WB-800CH1U-IPVM-8 and 820 series WattBoxes in North America. All 800I devices are compatible.

LED Brightness (chassis and faceplate devices only)

If the WattBox is a chassis model or has a connected faceplate Use the slider to set the brightness of the faceplate's LEDs

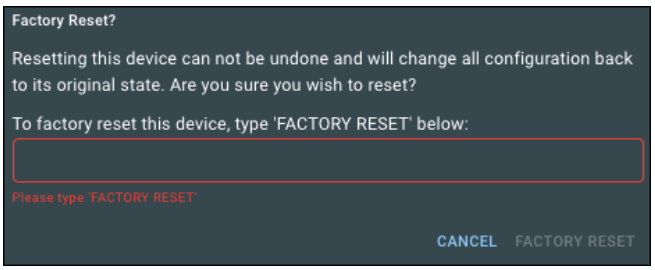
Telnet Control (150/250/800/820 series only)

Toggle to enable/disable control API communication.

Note: Changes require the WattBox to restart. Outlets are not affected.

Reset to Factory Default Settings (150/250/800/820 series only)

Click the **Reset** button to return the WattBox to factory default settings. Read the warning statement, then click **Yes, Continue**. Type "FACTORY RESET" in to the new text field, then click **Factory Reset** to complete the process.



Auto-Reboot Settings

Use these settings to take advantage of the WattBox's self-healing features.

Auto-Reboot

Enable to reset specific outlets when the WattBox fails to connect to the hosts configured in Host Settings.

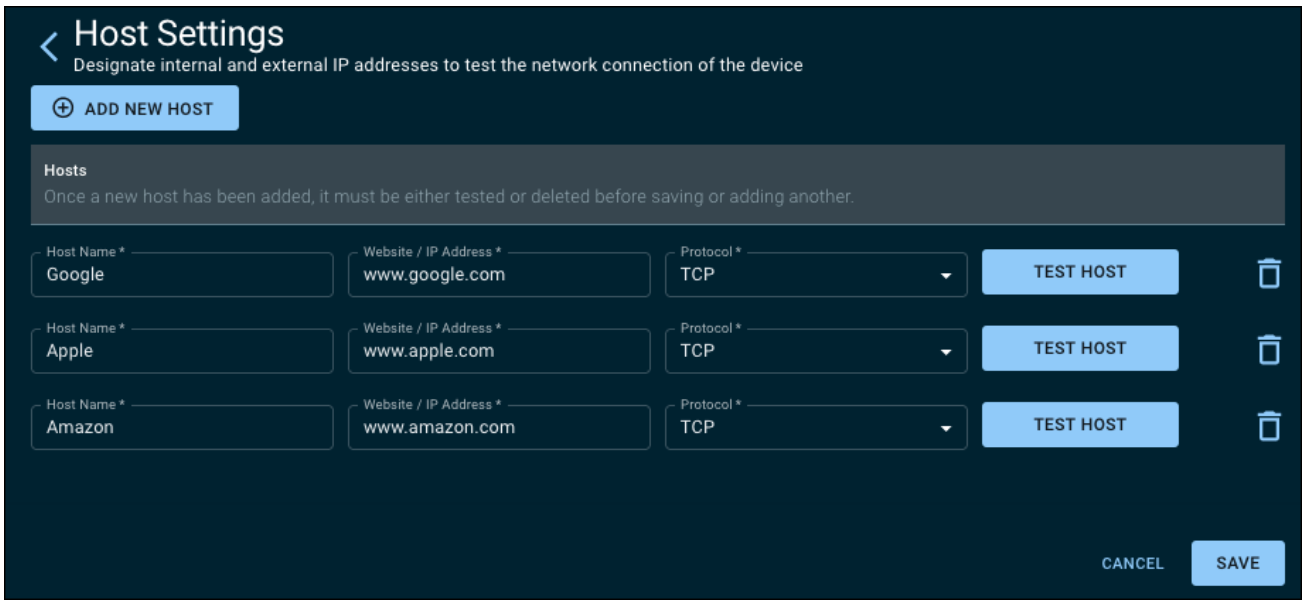
Note: Auto-Reboot does not need to be enabled to configure the rest of the Auto-Reboot Settings.

Host Settings

Add, delete or test hosts for the WattBox to ping. The default hosts are Google, Apple, and Amazon.

Click **ADD NEW HOST** at the top of the page to add an internal or external IP address to the list. Enter a **Host Name**, **Website or IP Address**, and the **Protocol** to use, then click **TEST HOST**.

Note: You must click the **TEST HOST** button before you can add another Host or save your changes.



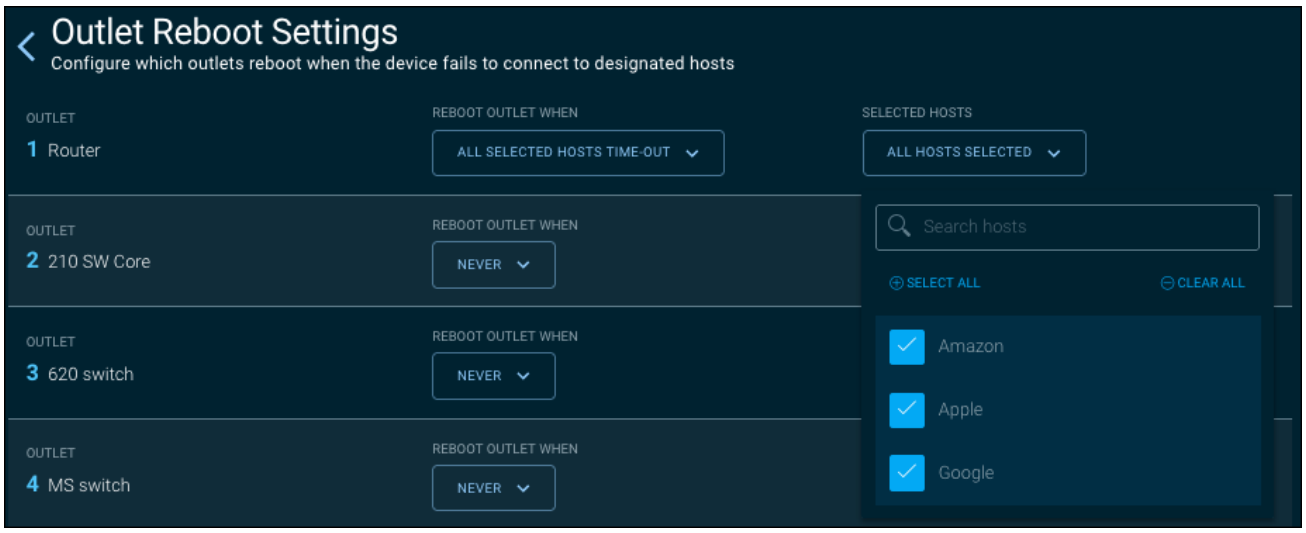
Outlet Reboot Settings

Configure which outlets restart when they cannot connect to the selected hosts.

Use the **Reboot Outlet When** dropdown to specify whether the outlet restarts when All selected hosts time-out, Any selected host time-out, or Never.

Use the **Selected Hosts** dropdown to select all the Hosts configured in the Host Settings or specific hosts.

Pro Tip: Only use Hosts with external IP addresses for outlets with routers or modems connected. If you use internal IP addresses the device will most likely not restart when you'd like it to.



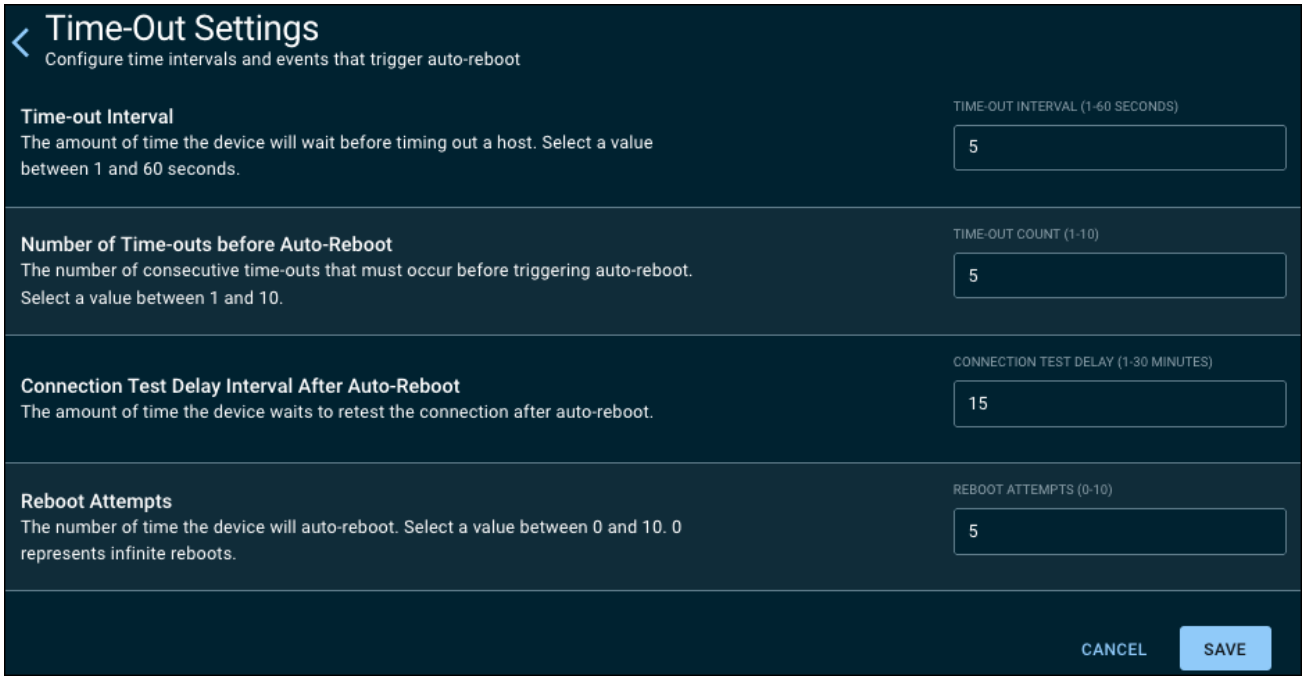
Time-Out Settings

Configure the amount of time and the events that trigger an auto-reboot. Options include:

- **Time-out Interval** is the amount of time (between 1 and 60 seconds) the device waits before it considers a host to time out. For example, if the Time-out Interval is set to 30 seconds the host(s) must be unreachable for 30 seconds before it is considered a time-out.
- **Number of Time-outs before Auto-Reboot** is the number of consecutive time-outs (between 1 and 10) that must occur before an outlet reboots.
- **Connection Test Delay Interval After Auto-Reboot** is the amount of time the WattBox waits between time-out tests.

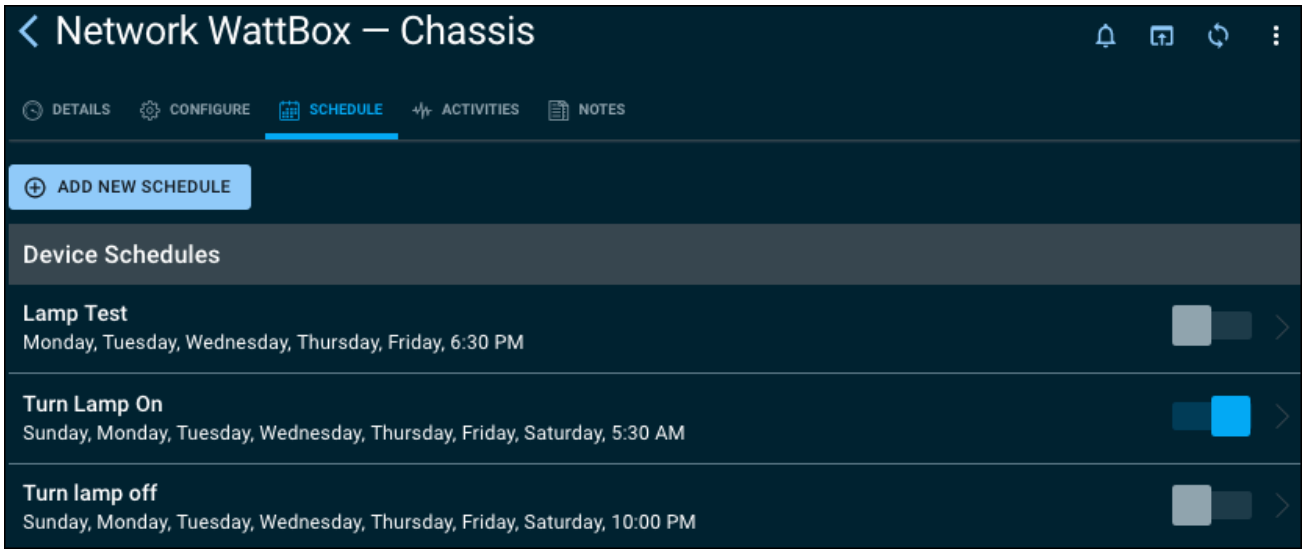
> **Pro Tip:** Make sure there is enough time for the networking equipment to power on and start their services before the WattBox tries to connect to the configured Hosts.

- **Reboot Attempts** is the number of times the WattBox will auto-reboot the outlets. Zero means the WattBox will continue restarting outlets until the hosts stop timing out.



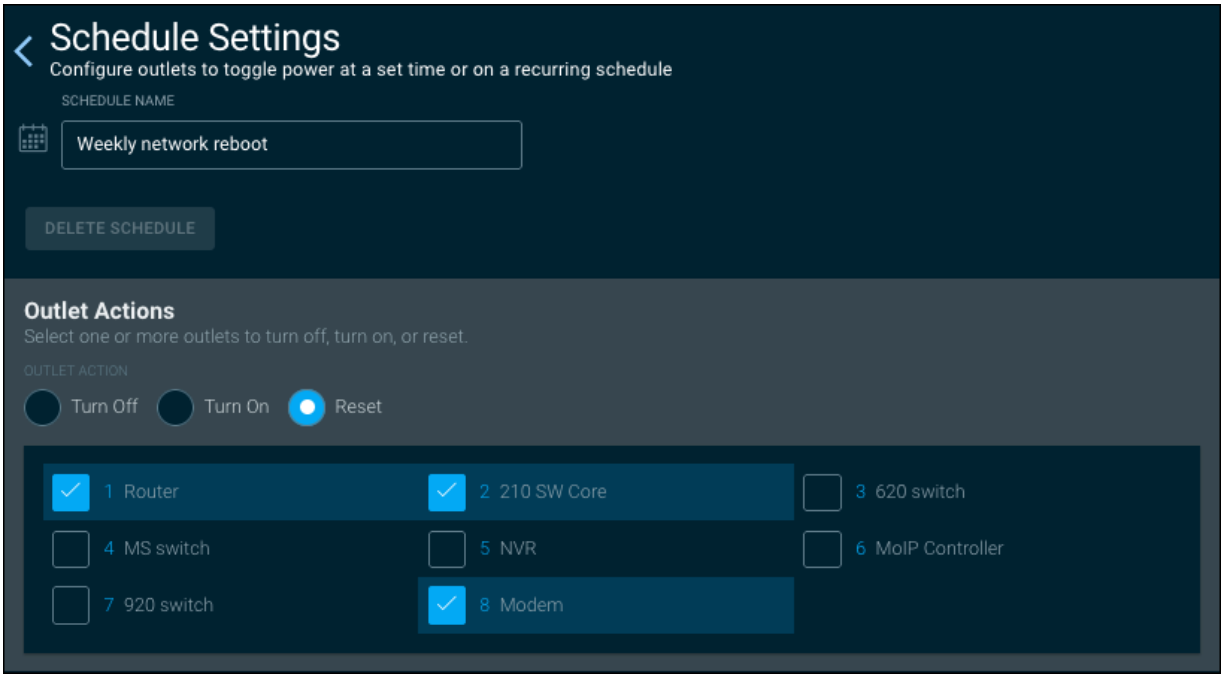
Outlet Schedules

The **Schedule** tab allows you to create schedules to turn off, turn on, or reset outlets at specific times. Device Schedules can be toggled on or off. Click a schedule to delete or edit it.

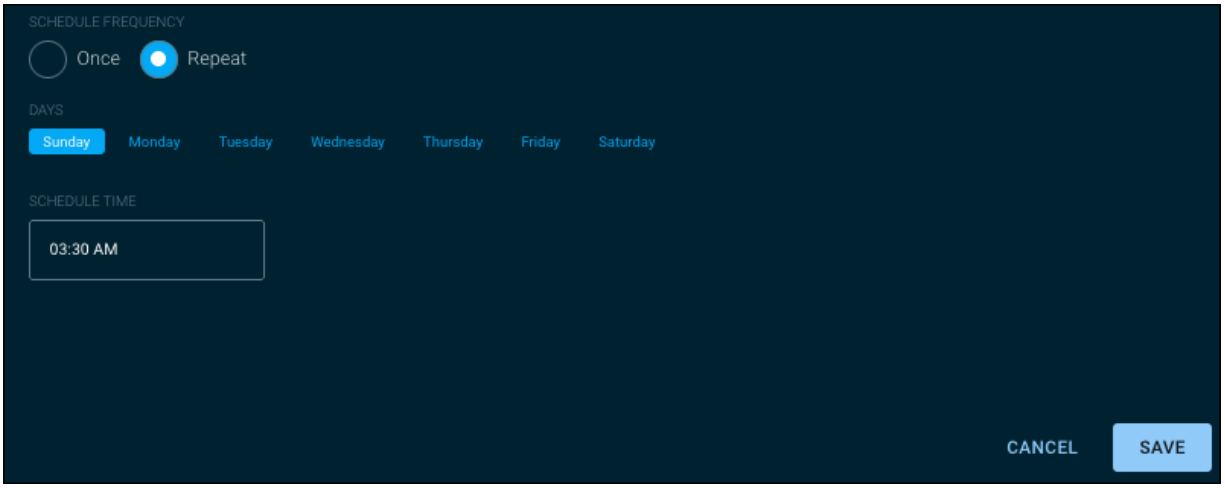


How to create a Device Schedule

1. Click **Add New Schedule** to open the Schedule Settings page.
2. Enter a meaningful **Schedule Name**. Something with the device or device type, the outlet action, and how often the action happens. Like "Weekly network reboot."
3. Select an **Outlet Action**. Turn Off, Turn On, or Reset. You can only select one type of action per Device Schedule. Then select the outlets to take the action.



4. Set a **Schedule Frequency**. **Once** allows you to set a Schedule Date and Time. **Repeat** allows you to select which days and at what time the Outlet Action is taken. Click **Save** when finished.



Local web interface

You can access the interface by typing the IP address into a web browser or by using OvrC's WebConnect feature.

Username and password

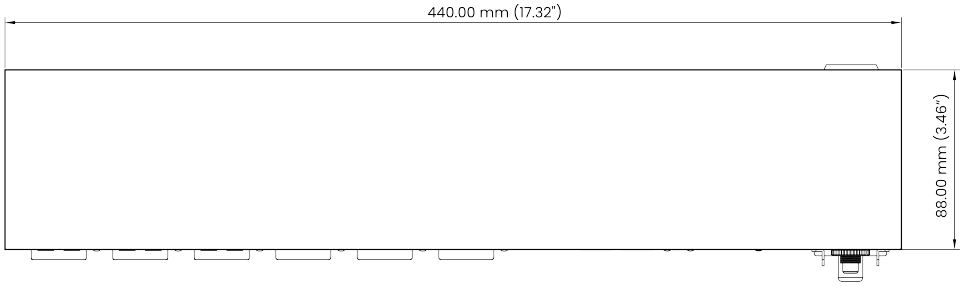
The default username and password are both wattbox. You must change them after the initial login.

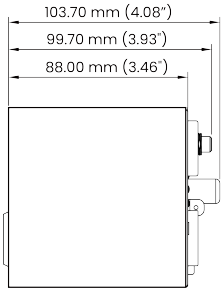
Troubleshooting

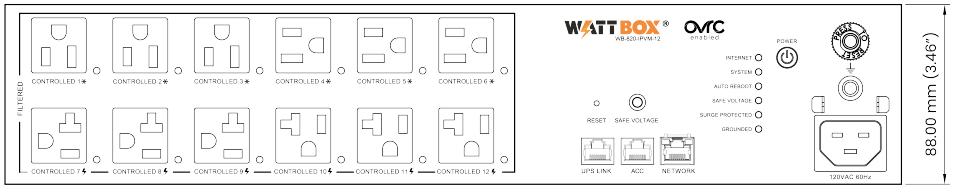
Symptom	Possible cause	Remedy
WattBox is not receiving power (the System Status LED is not illuminated).	No power is being supplied.	Make sure the AC power plug is plugged into a properly grounded 120V (nominal) wall outlet. Some wall outlets are controlled by a wall switch. Try flipping the switches in the room, especially those near the wall outlet. Also check the location's circuit breakers.
	Too many devices are connected, causing an overload, tripping the WattBox's internal circuit breaker.	Press the circuit breaker's reset button. Allow 10 minutes before attempting to reset; otherwise, the reset will fail. If the circuit breaker continues to trip, move one or more components to another WattBox.
The attached component is not receiving power from the WattBox.	Component is plugged into a controlled outlet and the outlet is off.	To turn the outlet on, log in to the WattBox interface or press the power button.
	In some instances, a component plugged into a switched outlet won't automatically power itself up when the WattBox is turned on.	Turn the component power on.
Speakers emit	WattBox is sharing AC power	Connect WattBox to a dedicated

Symptom	Possible cause	Remedy
a humming or buzzing noise.	with equipment that is not properly grounded.	outlet. Unplug different components from WattBox one at a time to see if the noise stops.

Dimensions


440.00 mm (17.32")
88.00 mm (3.46")


103.70 mm (4.08")
99.70 mm (3.93")
88.00 mm (3.46")


88.00 mm (3.46")

Specifications

EMI/RFI Filtration	# of Filters = 1 for 12 outlets
Outlets	(6) NEMA 5-20 Outlets, Bottom Bank (6) NEMA 5-15 Outlets, Top Bank
Peak Impluse Current	135,000A
Safe Voltage	Yes, (90V ~ 136V)
Certifications	UL 62368-1, UL 1449, UL 1283, FCC 47 CFR Part 15 Sub-part B-Class B
Dimensions	440.00 mm (17.32") x 88.00 mm (3.46") x 88.00 mm (3.46")
Features	Protection Modes: L-N, L-G, N-G Locking and Detach-able Power Cord
Inputs	AC Input Connection: IEC C-22
Operating Temperature	14 °F - 104 °F
Power Cord Length	6 ft. with IEC C-21 Connection
Line Voltage	120V, 50/60 Hz
Circuit Breaker Rating	20A
UL Current Rating	16A
UL Power Rating	1920W
Voltage Protection Rating	L-N-500V, L-G-600V, N-G-700V
Joule Rating	3240J
Rack Spacing	2U
Fuse Type	Thermal Fuse
IP Controllable Outlets	12
API	Yes
Power Metering	Individual Outlets: Yes Whole Device: Yes
Surge Protection	Yes, MOV Type with AC Disconnect Thermal Fuse

Technical Support

For chat and telephone, visit **snp1.co/techsupport** • Email: **TechSupport@SnapOne.com**. Visit **snp1.co/tc** for discussions, instructional videos, news, and more.

Warranty and Legal Notices

Find details of the product's Limited Warranty and other resources such as regulatory notices and patent and safety information, at **snapone.com/legal** or request a paper copy from Customer Service at **866.424.4489**.

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