



# **SPAN**

## Owner's Manual

## Product Specifications

This manual applies to the following products:

- Span Panel, 1<sup>st</sup> Generation (1-00200-xx)
- Span Panel, 2<sup>nd</sup> Generation (1-00800-xx)

## Audience

This manual is intended for use by owners of Span products.

## Warranty

To ensure optimal performance and reliability and to meet warranty requirements, Span products must be installed according to the instructions in the installation manuals and guides. To secure the full product warranty, the Span Panel must be registered by completing the commissioning process via a Span Certified Installer, which sends system information to Span.

Your Span Panel is intended to operate with an internet connection. Maintaining an internet connection is important, not only for updating software and firmware but also for measuring the health of the system. Failure to maintain an internet connection may have an impact on the warranty.

Span assumes no liability for injury or property damage due to installation or service attempted by unqualified individuals, or due to a failure of installers or service technicians to properly follow safety, installation and service instructions.

For complete warranty information, refer to the Product Warranty at [www.span.io/warranty](http://www.span.io/warranty).

## Other Information

All specifications and descriptions contained in this document are accurate at the time of publication. In the interest of product improvement, Span reserves the right to make product modifications at any time without advance notice.

User documentation is updated frequently. Check the Span website ([www.span.io](http://www.span.io)) for the latest information and complete product specifications.

The images provided in this document are for demonstration purposes only. Depending on product version and market region, details may appear slightly different.

## Electronic Device Waste Disposal

Proper disposal of electronic equipment is required. Electronic devices should not be disposed of with household waste. Refer to local codes for disposal requirements. To arrange for proper disposal of this product, contact your local authorities or dealer for proper disposal requirements.

## Span Contact Information

[support.span.io](mailto:support.span.io)

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# IMPORTANT SAFETY INFORMATION

## Read This First

This manual describes the safe use of the Span Panel. Follow these instructions during maintenance and operation of the equipment. This section contains safety information that must be observed at all times when working on or using the equipment. Do not remove product deadfront covers (the metal or plastic guards inside the enclosure intended to protect access to live parts).

## In Case of Fire or other emergency:

- If safe to do so, switch off the main or upstream breaker for the panel.
- Contact the fire department or other required emergency response team.
- Evacuate the area and alert others in the area.

## In case of unusual noise, smell or smoke:

- Ensure nothing is in contact with the Span Panel or other equipment.
- Ventilate the space.
- Contact your installer or Span Customer Support.

## Symbols Used

These symbols indicate important safety information in the documentation or on the equipment:

-  **WARNING:** Indicates a situation where failure to follow instructions or use proper materials may be a safety hazard that may result in serious injury, loss of life, or destruction of equipment. Use caution and do not proceed until the indicated conditions or required procedures are fully understood and met.
-  **CAUTION:** Indicates a situation where failure to follow instructions or use proper materials may be a safety hazard that may result in minor injury or damage to equipment. Do not proceed until the indicated conditions or required procedures are fully understood and met.
-  **NOTE:** Indicates an important step or additional information that highlights best practices or procedures. Follow instructions carefully.

All installations must conform to the laws, regulations, codes and standards applicable in the jurisdiction of installation. Before starting an installation, consult a local building or electrical inspector for current requirements. Local codes may vary but are adopted and enforced to promote safe electrical installations. A permit may be needed to do electrical work, and some codes may require an inspection of the electrical work.

## GENERAL

 **WARNING:** Risk of electric shock. Risk of fire. Only qualified electrical personnel should install, troubleshoot, service, or replace the equipment.

**WARNING:** To perform routine service or maintenance on circuits connected to your Span Panel, confirm that the corresponding circuit breaker is switched to "OFF". Powering down circuits using Span's software control should not be considered a suitable off position. Contact a trained electrician for procedure to identify correct circuit breaker.

**WARNING:** Risk of electric shock. Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices during installation and service. Turn off all power supplying this equipment before working on or inside equipment. Always use a properly rated voltage sensing device to confirm power is off. Replace all devices, covers, and doors before turning on power to the equipment.

**WARNING:** To protect the equipment and its components from damage when transporting, handle with care. To help prevent damage, leave all equipment in its shipping packaging until it is ready to be installed.

**WARNING:** Inspect the equipment for damage before installing. Do not install the equipment if it has been damaged in any way.

**WARNING:** Do not insert foreign objects into any part of the equipment.

**WARNING:** Do not expose the equipment or any of its components to direct flame.

**WARNING:** Do not attempt to open, disassemble, repair, tamper with, or modify the equipment other than what is permitted in this manual. The equipment contains no user-serviceable parts other than field-installed circuit breakers. Contact the installer who installed the equipment for any repairs.

**WARNING:** Do not connect life-support systems, other medical equipment, or any other use where product failure could lead to injury to persons or loss of life to circuits which can be remotely switched.

 **CAUTION:** Do not use solvents to clean the equipment or expose the equipment to flammable or harsh chemicals or vapors. Do not allow petroleum-based paints, solvents, or sprays to contact nonmetallic parts of the equipment.

**CAUTION:** Do not use parts or accessories other than those specified for use with the equipment.

## INSTALLATION AND USE

 **WARNING:** Risk of electric shock. Risk of fire. Only use electrical system components approved for wet locations.

**WARNING:** Risk of electric shock. Risk of fire. Ensure that all wiring is correct and that none of the wires are pinched or damaged.

**WARNING:** Risk of electric shock. Risk of fire. Before making any connections verify that the circuit breaker(s) are in the off position. Double check all wiring before applying power.

**WARNING:** Risk of electric shock. Improper servicing of the equipment or its components may result in a risk of shock or fire. To reduce these risks, disconnect all wiring before attempting any maintenance or cleaning.

**WARNING:** Risk of electric shock. Always de-energize the equipment before servicing. While connectors are rated for disconnect under load, it is best practice to de-energize before disconnecting.

**WARNING:** Risk of electric shock. Do not use equipment in a manner not specified by the manufacturer. Doing so may cause injury or loss of life, or damage to equipment.

**WARNING:** Risk of electric shock. To maintain the warranty, do not modify the deadfront other than to remove filler plates as needed.

 **NOTE:** The equipment is intended to operate with a connection to the internet. Failure to maintain an internet connection may impact performance.

**NOTE:** This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

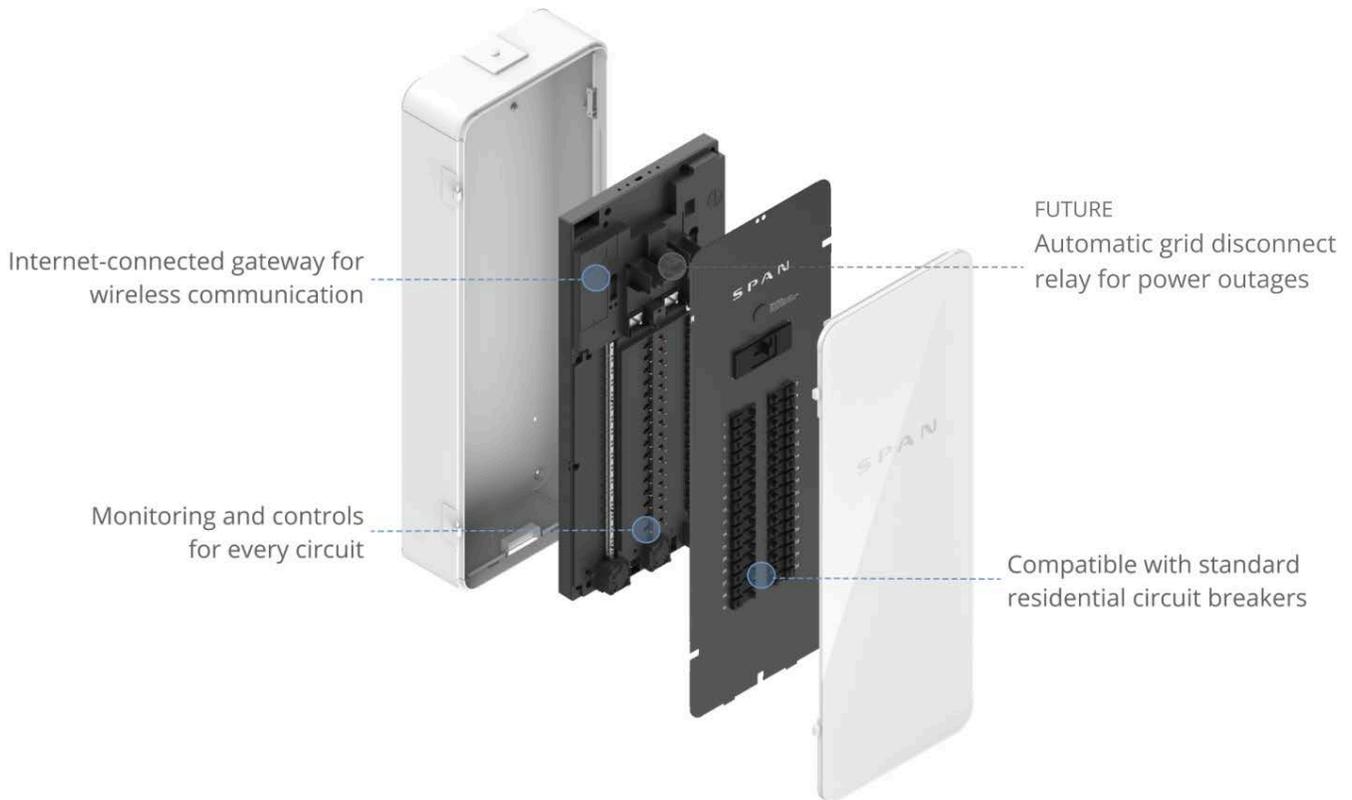
## ENVIRONMENTAL CONDITIONS

 **WARNING:** This equipment is intended for operation in an environment having a minimum temperature of  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ ) and a maximum temperature of  $50^{\circ}\text{C}$  ( $122^{\circ}\text{F}$ ).

**WARNING:** Install the equipment in a location that prevents damage from flooding. Ensure that no water sources are above or near the equipment, including downspouts, sprinklers, or faucets.

# PRODUCT OVERVIEW

The Span Panel is an intelligent breaker panel with integrated connectivity, monitoring, and control for home loads, solar generation, battery-based energy storage, electric vehicle charging equipment, and the utility grid. Span is wall-mounted and similar in size, weight, and configuration to traditional electrical panels, so it can be installed in place of a typical breaker panel.



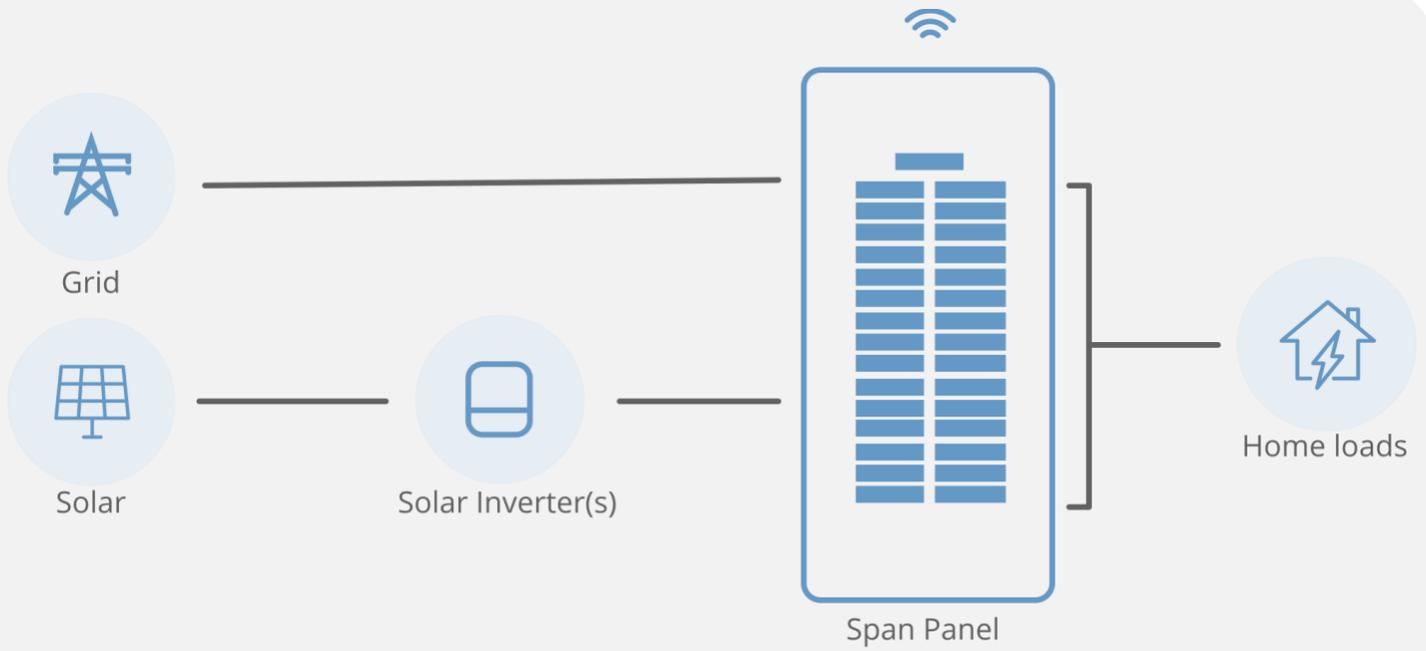
Span enables real-time monitoring and control for every circuit in your home. Span's onboard intelligence uses your energy data to give you interesting, actionable and previously unknown insight into your home.



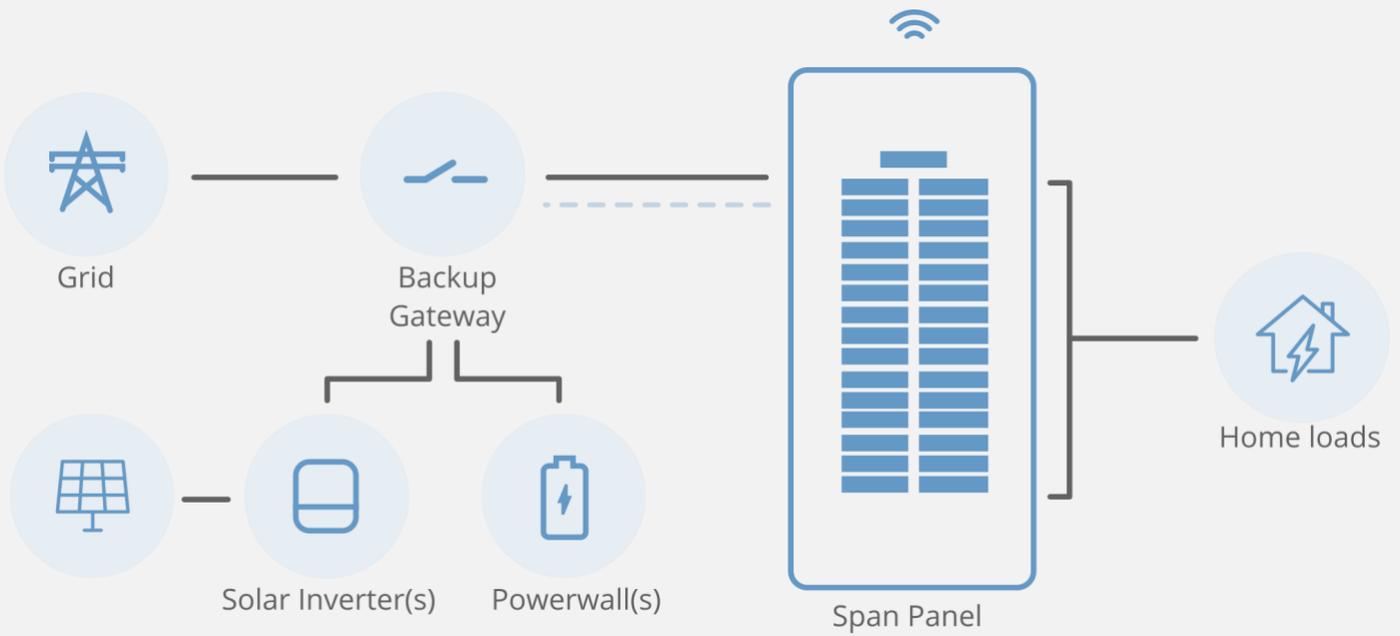
When paired with battery backup systems, Span enables configurable whole-home backup based on your preferences. During an outage, Span allows for real-time prioritization of energy usage to extend your battery's capacity, helping you last through any outage.



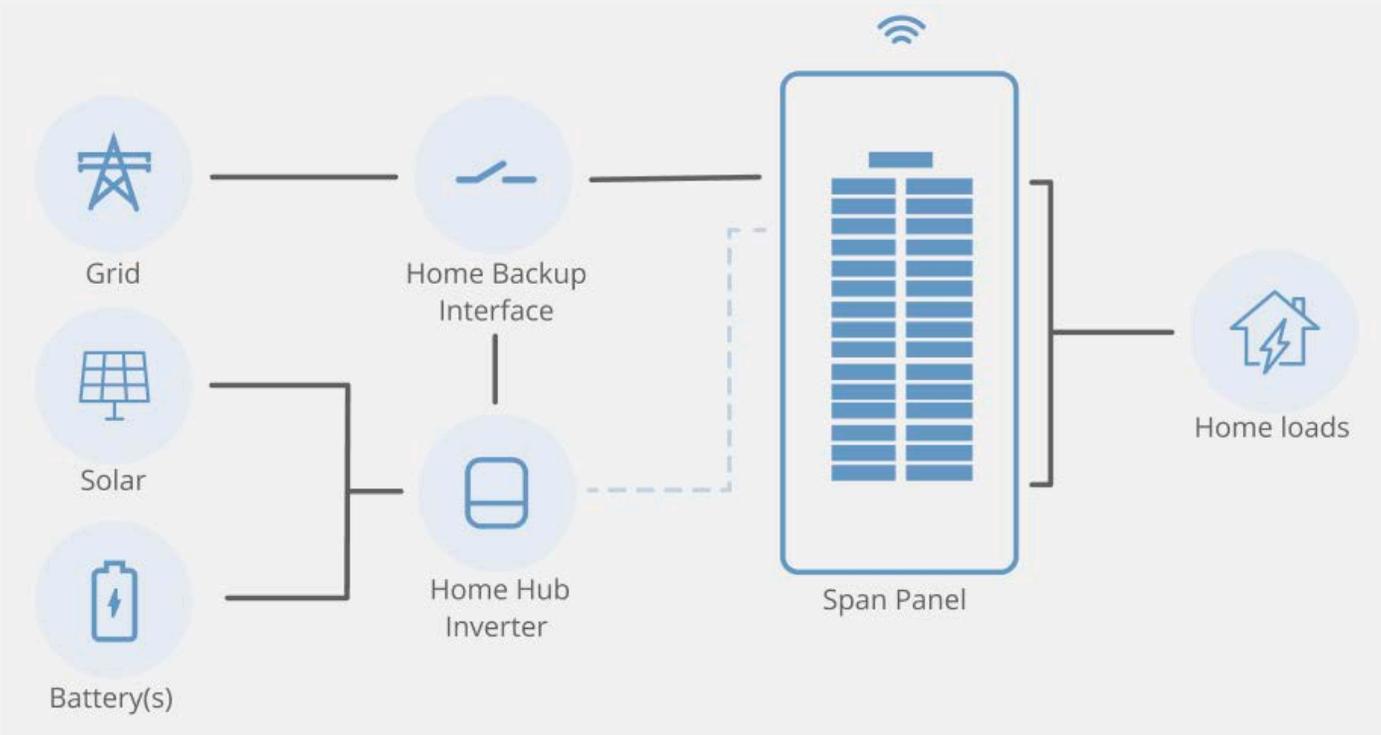
Grid disconnect functionality may be managed by Span or by the paired battery backup system, depending on which battery backup system is installed. The next page shows system diagrams for common configurations.



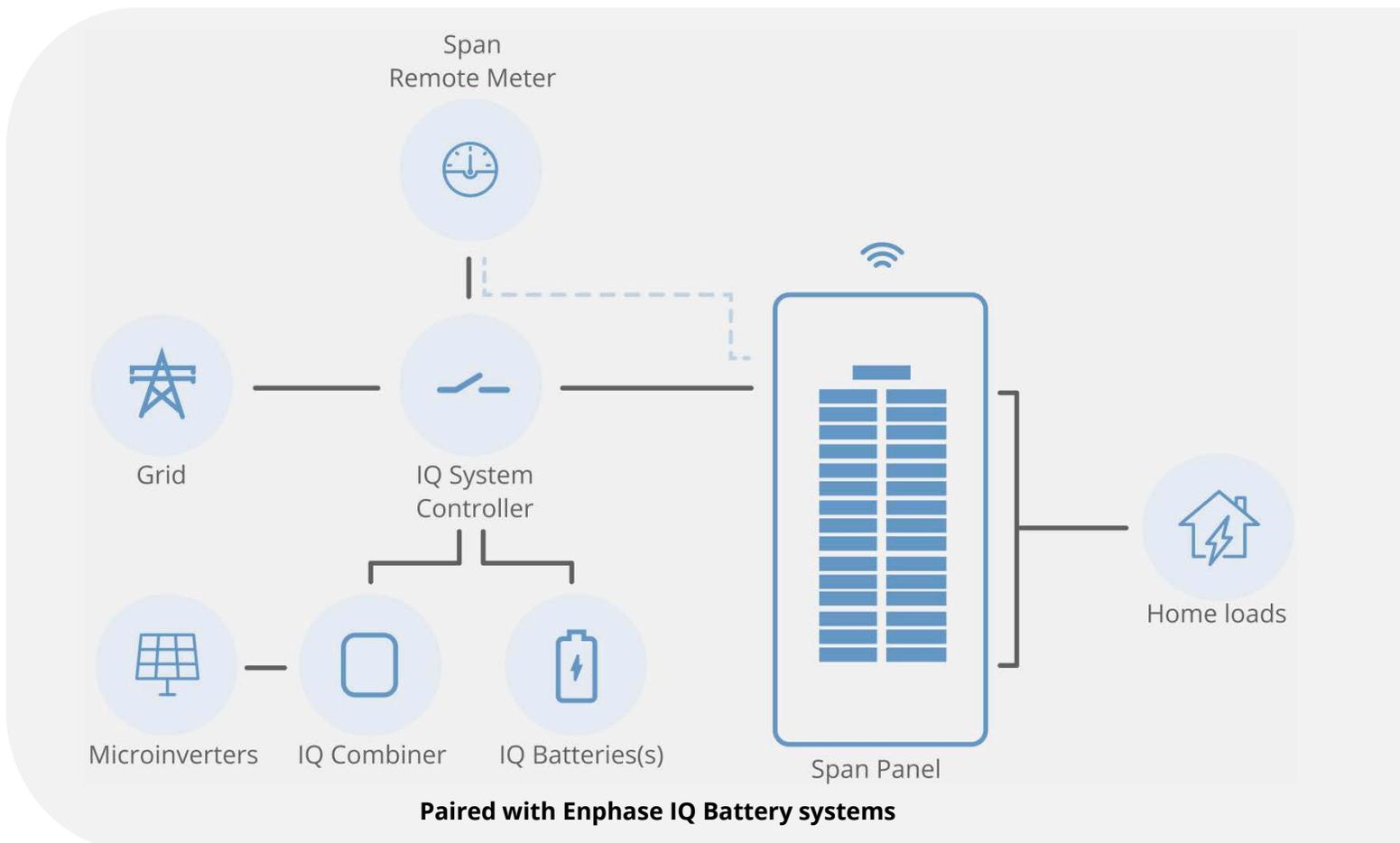
**Paired with grid-tied solar systems (no battery backup)**



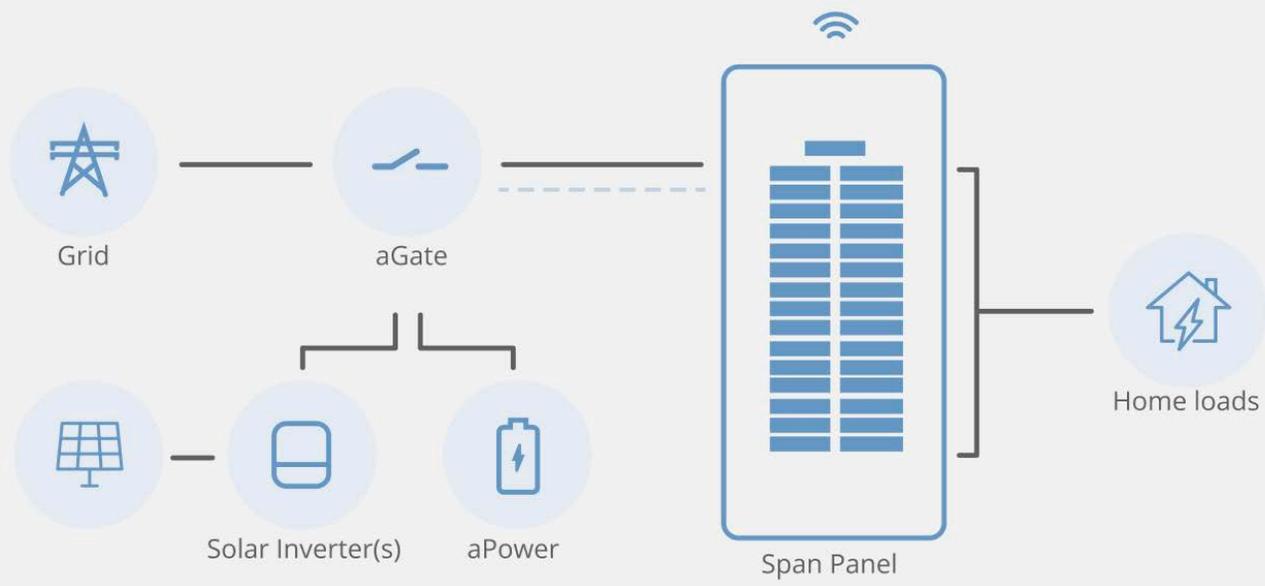
**Paired with Tesla Powerwall systems**



**Paired with SolarEdge Home Hub systems**



**Paired with Enphase IQ Battery systems**



**Paired with FranklinWH aPower systems**

# UNDERSTANDING SYSTEM OPERATION

## Monitoring and Control

The **Span Home** app is your platform for monitoring and controlling your Span system.

Instructions to activate your account will be sent to the email provided to your installer. Look for an email with the subject line **"Welcome to Span!"** from **hello@span.io**. Be sure to unblock this address from your junk mail filters for future messages.

Find complete terms of service at [span.io/terms-of-service](https://span.io/terms-of-service)



Span Home is available for iOS and Android. Scan the QR code above to download from the Apple App Store or Google Play Store.

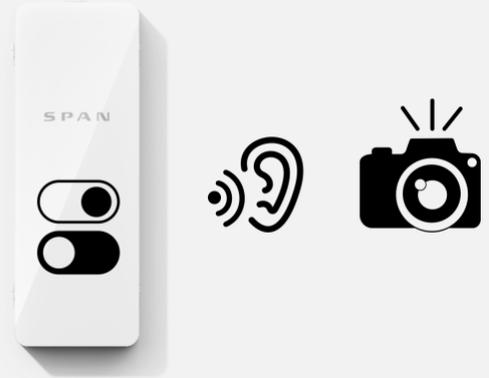
To learn more about the Span Home app, visit [support.span.io](https://support.span.io)

## Normal Operating Sounds

During normal operation your Span panel may make audible sounds. Don't worry, this is completely normal!

### Circuit ON / OFF control

The Span Panel uses internal switches to control power to your branch circuits. When a circuit is turned ON or OFF you may hear a small *click* similar to camera's shutter sound. During a grid outage, you may hear a series of *clicks* in rapid succession as several switches are activated.



### Cooling Fans

Your Span Panel includes intelligently-controlled cooling fans. These fans may turn on if certain circuits are consuming at a high power, or during a weekly fan self-test procedure. When the fans are operating you will hear a soft whirring sound similar to a refrigerator.



## Off-Grid Functionality

When paired with a battery backup system, Span allows you to set a backup priority level for each circuit in your home to extend your battery capacity. Priorities are automatically applied when Span detects the utility grid is down. Priorities can be updated at any time via the Span Home app, including during the outage!

See the *Getting Started* content on [support.span.io](https://support.span.io) for a detailed description of Span's backup priority settings.

# TROUBLESHOOTING AND MAINTENANCE

 **WARNING:** To perform routine service or maintenance on circuits connected to your Span Panel, confirm that the corresponding circuit breaker is switched to “OFF”. Powering down circuits using Span’s software control should not be considered a suitable off position. Contact a trained electrician for procedure to identify correct circuit breaker.

## General Care

- Do not install the Span Panel near an emergency exit or other building evacuation route.
- Do not install the Span Panel in a location or place any objects near it that would prevent its door from opening to 90°, or that would restrict access to the unit. Ensure access to the panel is clear from clutter.
- Do not mount objects on the wall within the minimum required clearances indicated below, with the exception of items required by the installation, such as electrical conduit or junction boxes.
- To clean your Span Panel use a soft, lint-free cloth. If needed, the cloth can be dampened with mild soap and water only.
- Do not use cleaning solvents to clean Span or expose Span to flammable or harsh chemicals or vapors.

## Adding or Modifying Breakers, Solar, or Batteries

Planning to make changes to your Span Panel after installation? Visit [span.io/additions](https://span.io/additions) for

- Installation instructions for your solar and storage installer
- Steps required to have wiring changes reflected in your Span Home app

## Locating your Serial Number

For troubleshooting, you may be asked for your panel serial number. Your Span Panel’s serial number can be found:

- in your Span Home App under the *Settings* screen
- printed on the inside of your Span Panel glass door

Your serial number will be in the format “SN: XX-XXXX-XXXX”

## Circuit Breakers

Span uses standard circuit breakers to protect the wiring in your home. If you have lost power to an appliance or circuit, first check whether the circuit breaker in your Span Panel has tripped. To reset a circuit breaker, move the breaker handle to the OFF position, then to the ON position. If tripping persists, leave the circuit off and contact an electrician.

## Updating Wi-Fi Settings

To update the home Wi-Fi network connected to your Span Panel:

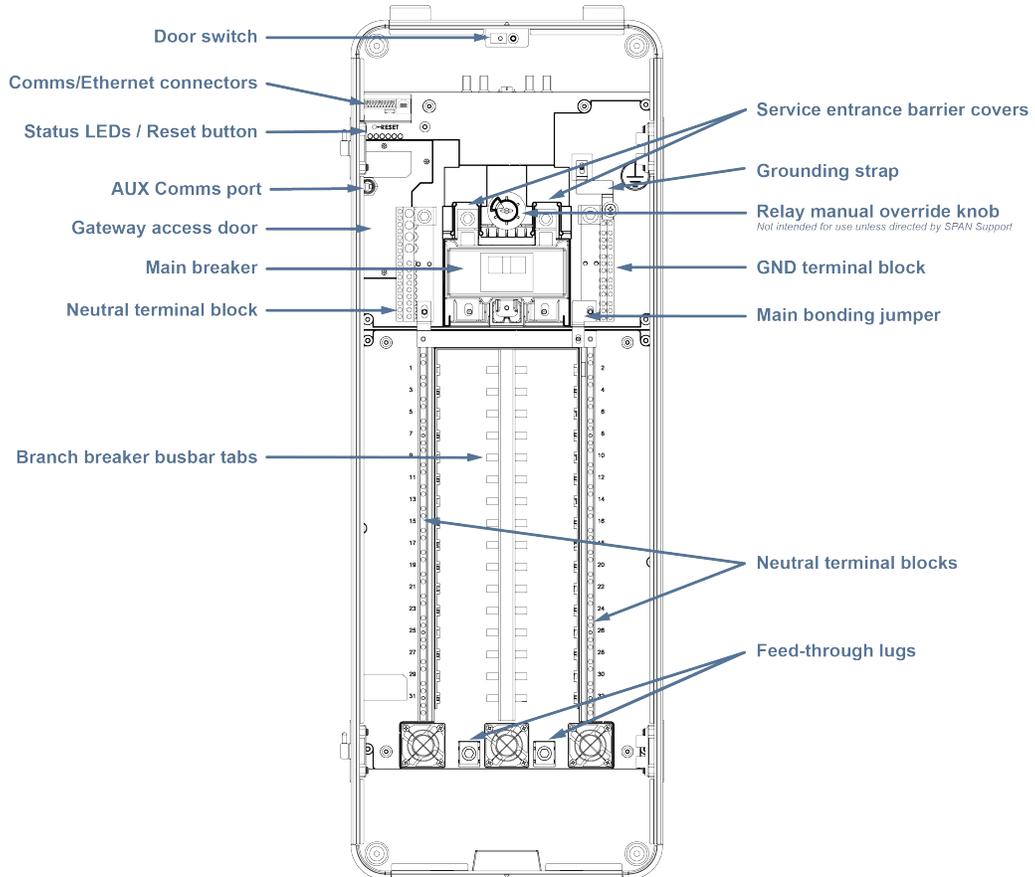
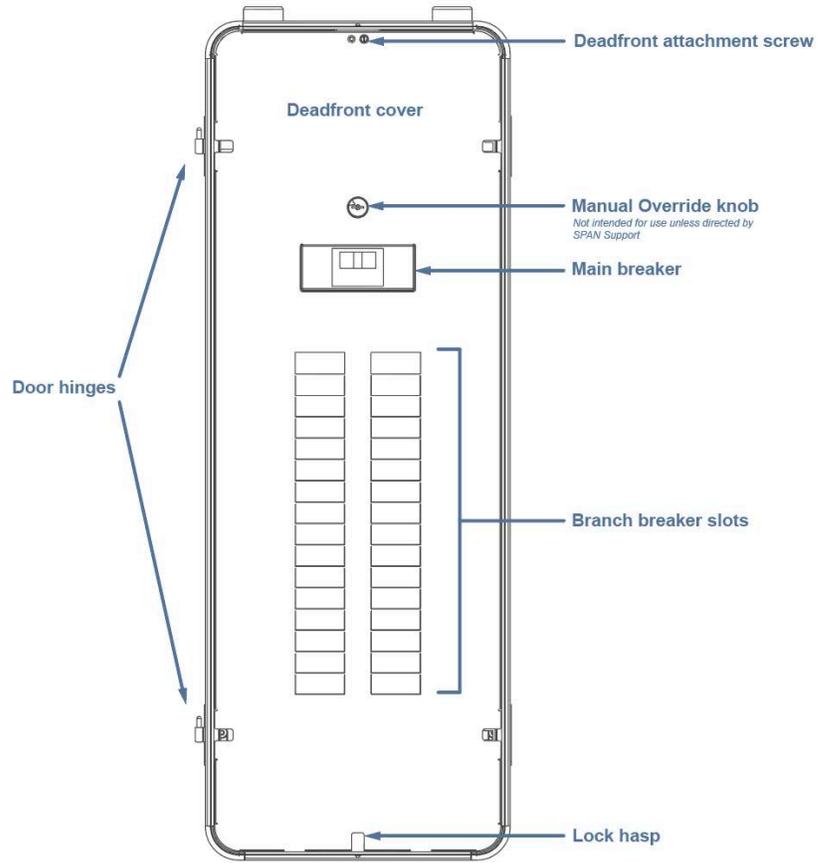
1. Locate the *Settings* menu in the Span Home App
2. Select *Internet Connection* page
3. Select *WiFi Network* page
4. Select the Wi-Fi network you would like Span to connect to
5. Enter your network password if you are prompted to do so
6. Once you see a confirmation message on the screen, your panel is connected to the internet

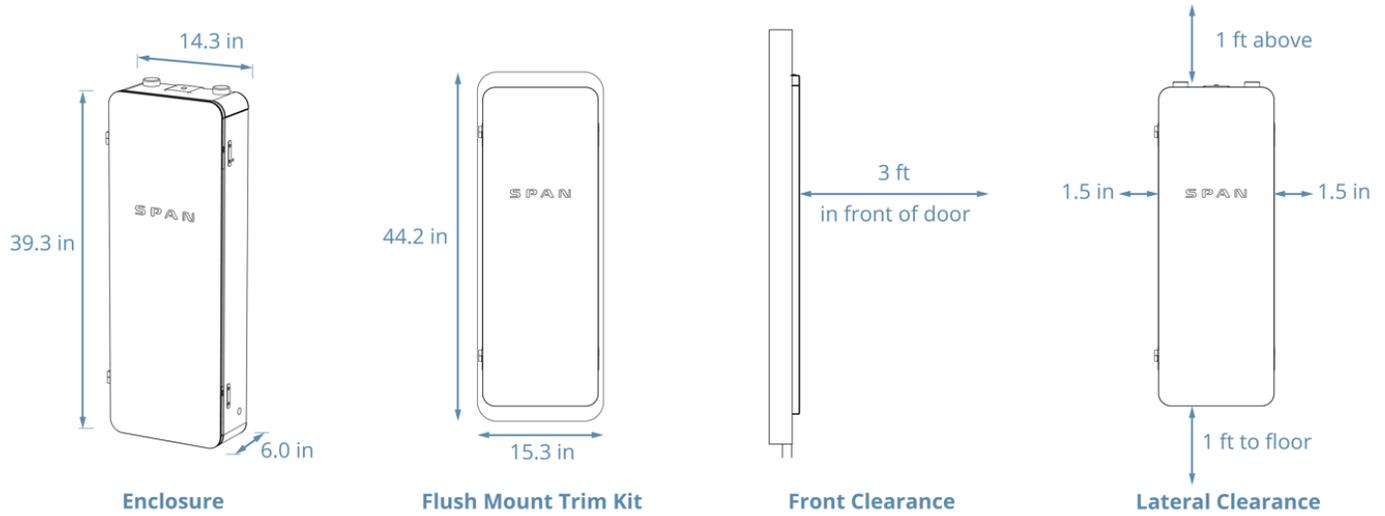
## Technical Support

If you need further assistance, contact the Span Support team via the [support.span.io](https://support.span.io) website or by emailing [support@span.io](mailto:support@span.io)

Please have the following information available when contacting Span:

- Owner name
- Best way for Span to contact you (name, phone number, email)
- Span Panel serial numbers
- Brief description of the issue





| Element                               | Rating   |
|---------------------------------------|--|
| Site Electrical Service               | 240/120 V, 60 Hz split-phase   |
| Service Feed                          | 225 A maximum  |
| Internal Bussing                      | 225 A maximum  |
| Overcurrent Protection (Main Breaker) | 100 - 200 A  |
| Location                              | Indoor or Outdoor (NEMA 3R)  |
| Ambient Temperature                   | -22°F to 122°F (-30°C to 50°C)<br><i>recommend out of direct sun if high ambient temperatures expected</i> |
| Enclosure Dimensions                  | GEN2: 998 x 362 x 153 mm (39.3 x 14.3 x 6.0 in)<br>GEN1: 1270 x 438 x 125 mm (50 x 17.25 x 4.9 in)         |
| Flush Trim Kit Dimensions (on wall)   | GEN2: 1123 x 405 mm (44.2 x 15.9 in)   |
| Weight (without circuit breakers)     | GEN2: 34 kg / 75 lbs<br>GEN1: 50 kg / 109 lbs  |



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Data subject to change.

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