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1. About This Guide

1.1 Purpose and Scope

This guide introduces **three E10-based backup systems**. It covers system functions, hardware components, power-on and power-off procedures, and the app setup process. A separate section explains how to use smart control features in the Anker app.

1.2 Related Guide

This guide assumes all individual components have been installed, wired, and configured in accordance with their respective guides. Review the following documents before using this guide.

Component	User Guide
Anker SOLIX E10	Anker SOLIX E10 (A17E1) User Guide
Anker SOLIX Power Dock	Anker SOLIX Power Dock (AX170) Installer Guide
Anker SOLIX Smart Inlet Box	Anker SOLIX Smart Inlet Box (AS211) User Guide
Anker SOLIX Smart Generator 5500 (Tri-Fuel)	Anker SOLIX Smart Generator 5500 (Tri-Fuel) (A7320J40) User Guide

1.3 Model Reference

Model	Product Name	Shortened Form
A17E1	Anker SOLIX E10 Power Module	Power Module
A17E1141-85	Anker SOLIX B6000 Battery Module	Battery Module
A17E1, A17E1141-85	Anker SOLIX E10	E10
AX170	Anker SOLIX Power Dock	Power Dock
AS211	Anker SOLIX Smart Inlet Box	Inlet Box
A7320	Anker SOLIX Smart Generator 5500 (Tri-Fuel)	Smart Generator

2. Automatic Backup System (A17E1, AX170)

2.1 System Overview

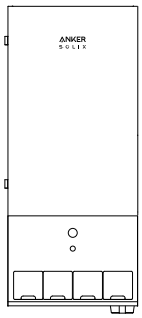
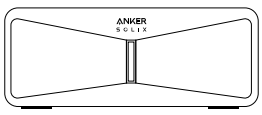
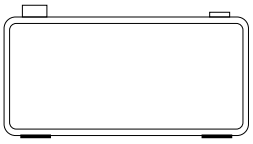
The automatic backup system combines the power dock and up to three E10 units into one integrated solution. This configuration manages solar, battery, generator, and grid sources to provide continuous power during outages.

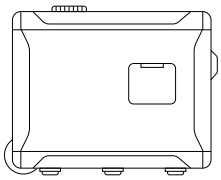
Main Features:

· Provides uninterrupted power to critical home loads during grid outages.
· Combines energy from solar, generator, battery, and grid.
· Operates 12 smart circuits to prioritize and balance household loads efficiently.
· Monitors power status and optimizes usage through the Anker app.

2.2 Main Components

The automatic backup system includes the following Anker SOLIX devices.

Component	Description
	**Anker SOLIX Power Dock** **Model: AX170** **Role: Automatic Energy Gateway** · Connects up to three E10 units. · Supports connection to solar, generator, and grid sources. · Controls 12 smart circuits for intelligent power distribution. · Switches automatically between grid and backup power during outages.
	**Anker SOLIX E10 Power Module** **Model: A17E1** **Role: Power Control Device** · Supports both AC and DC charging inputs. · Utilizes dual MPPTs to deliver up to 9 kW solar input. · Connects up to five battery modules to expand capacity. · Provides up to 37.2 kW (155 LRA) surge power for high-demand loads.
	**Anker SOLIX B6000 Battery Module** **Model: A17E1141-85** **Role: Modular Energy Storage** · Stackable modular design. · Expands system capacity up to 90 kWh. · Connects to the power module for capacity scaling.



Anker SOLIX Smart Generator 5500 (Tri-Fuel)

Model: A7320J40

Role: Optional Backup Source

· Charges E10 for extended backup power during outages.

· Supports three fuel types for versatile use.

· Starts and stops automatically based on battery charge level.

2.3 System Layout

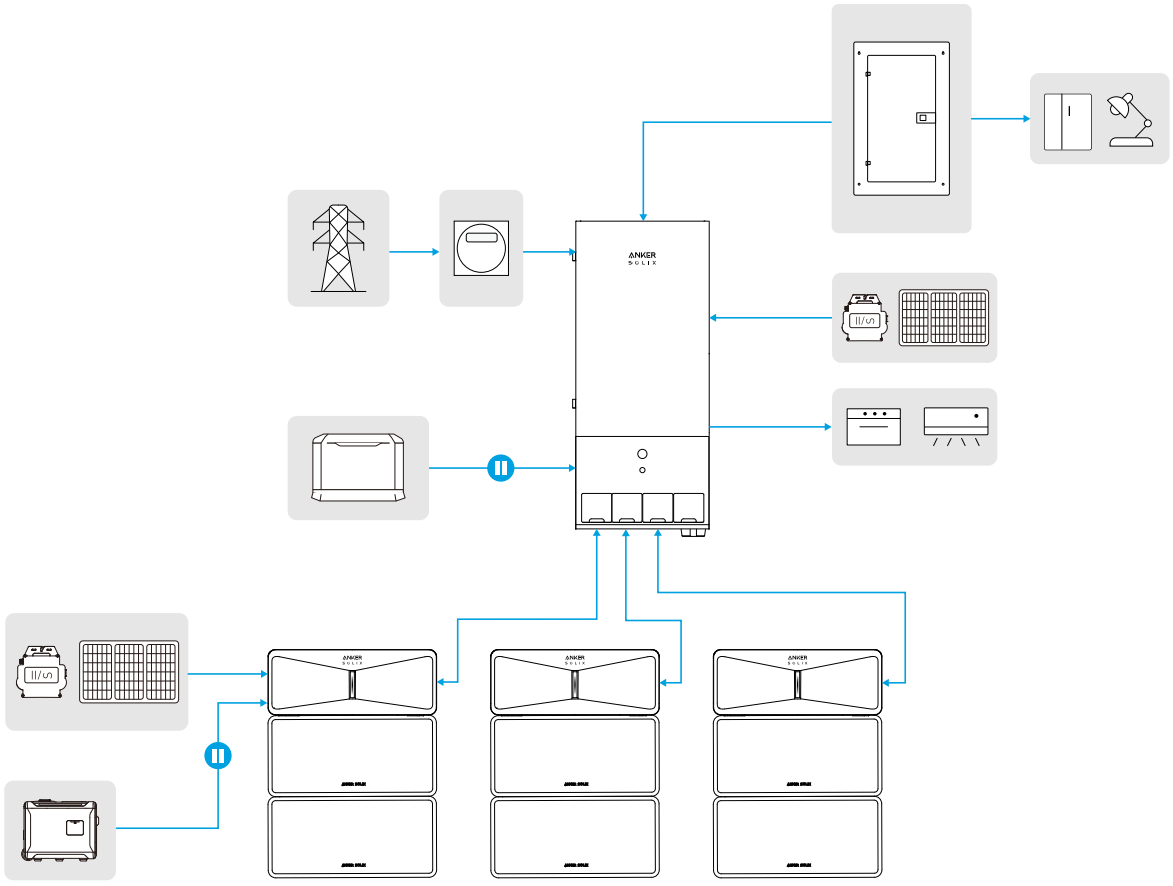
The following diagrams show how energy flows in four typical scenarios.

***Notes**

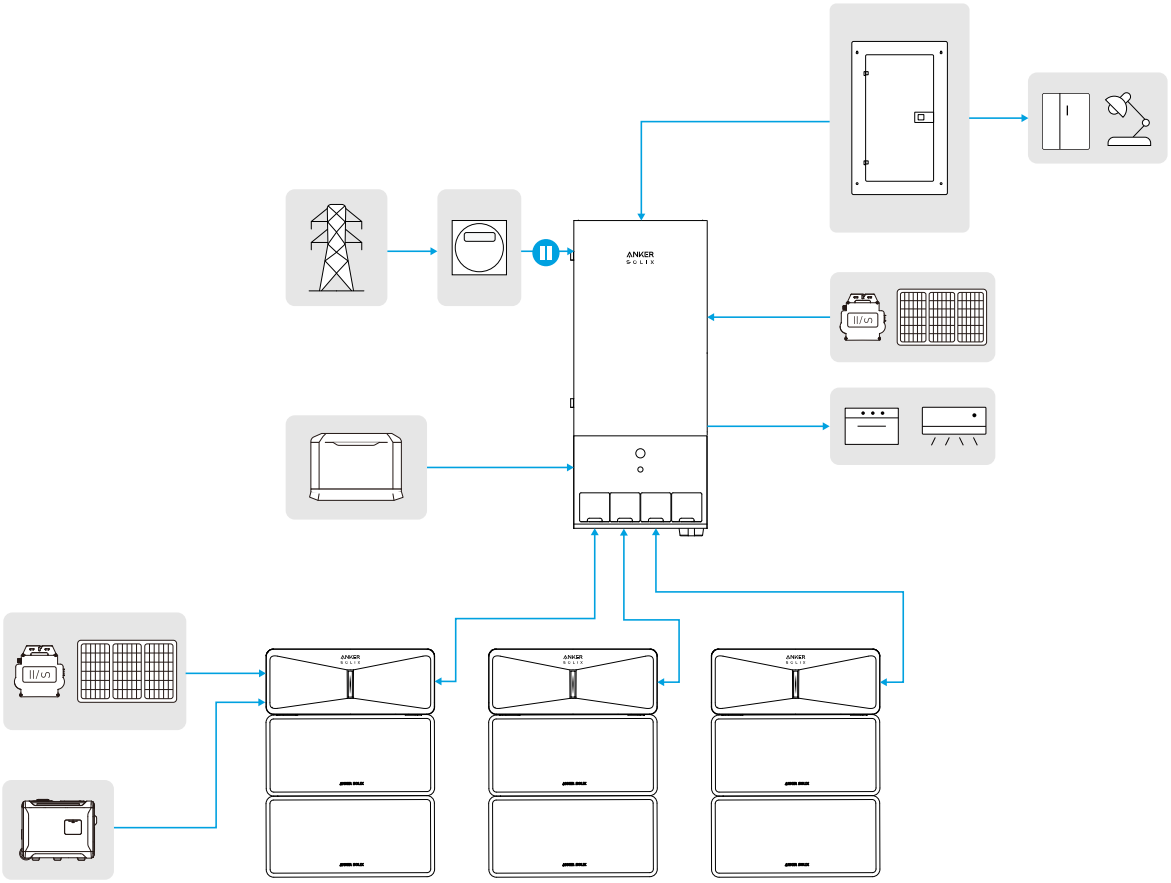
· When the power dock is used with E10, only one AC generator can be connected. Do not connect different AC generators to the power dock and E10 simultaneously.

· The power dock automatically disconnects the solar system when the third-party generator operates in off-grid mode.

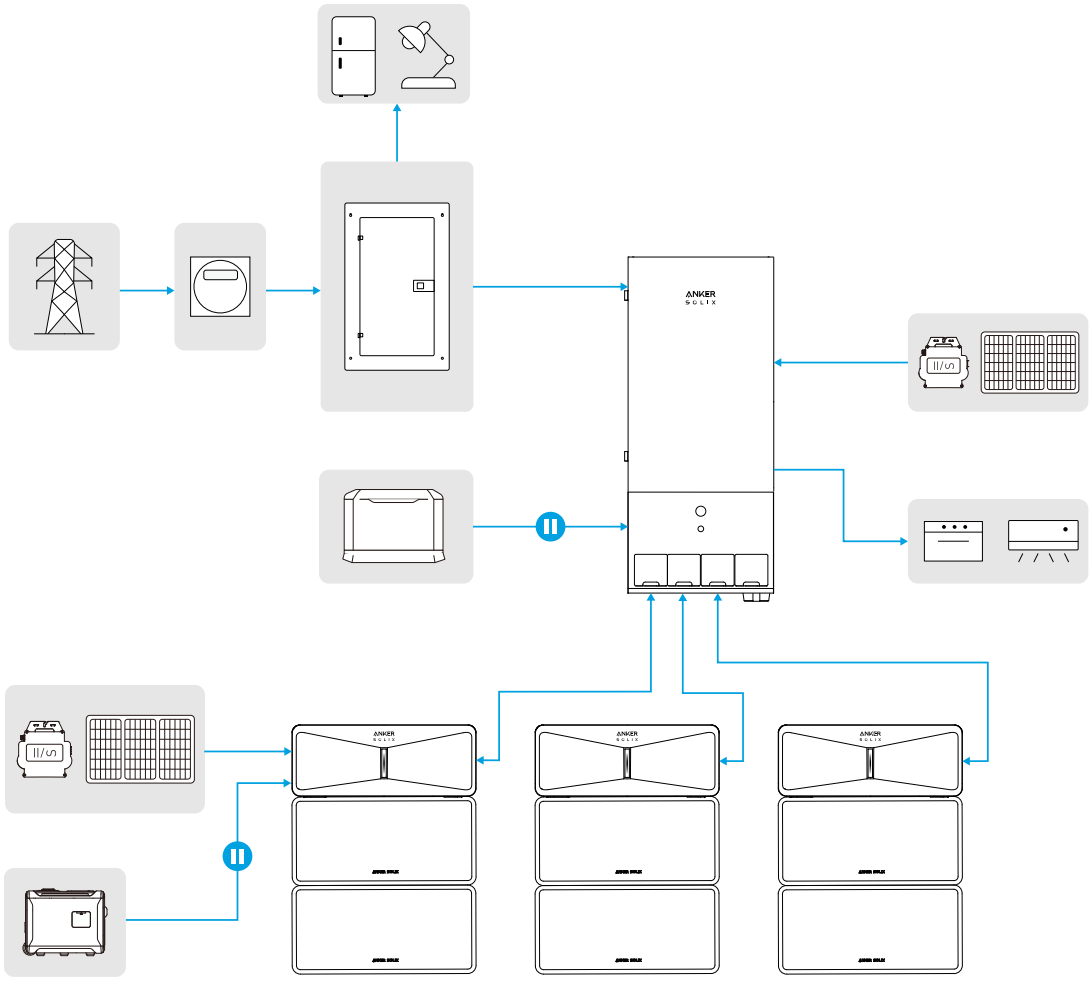
Scenario 1: Whole Home Backup (On-Grid)



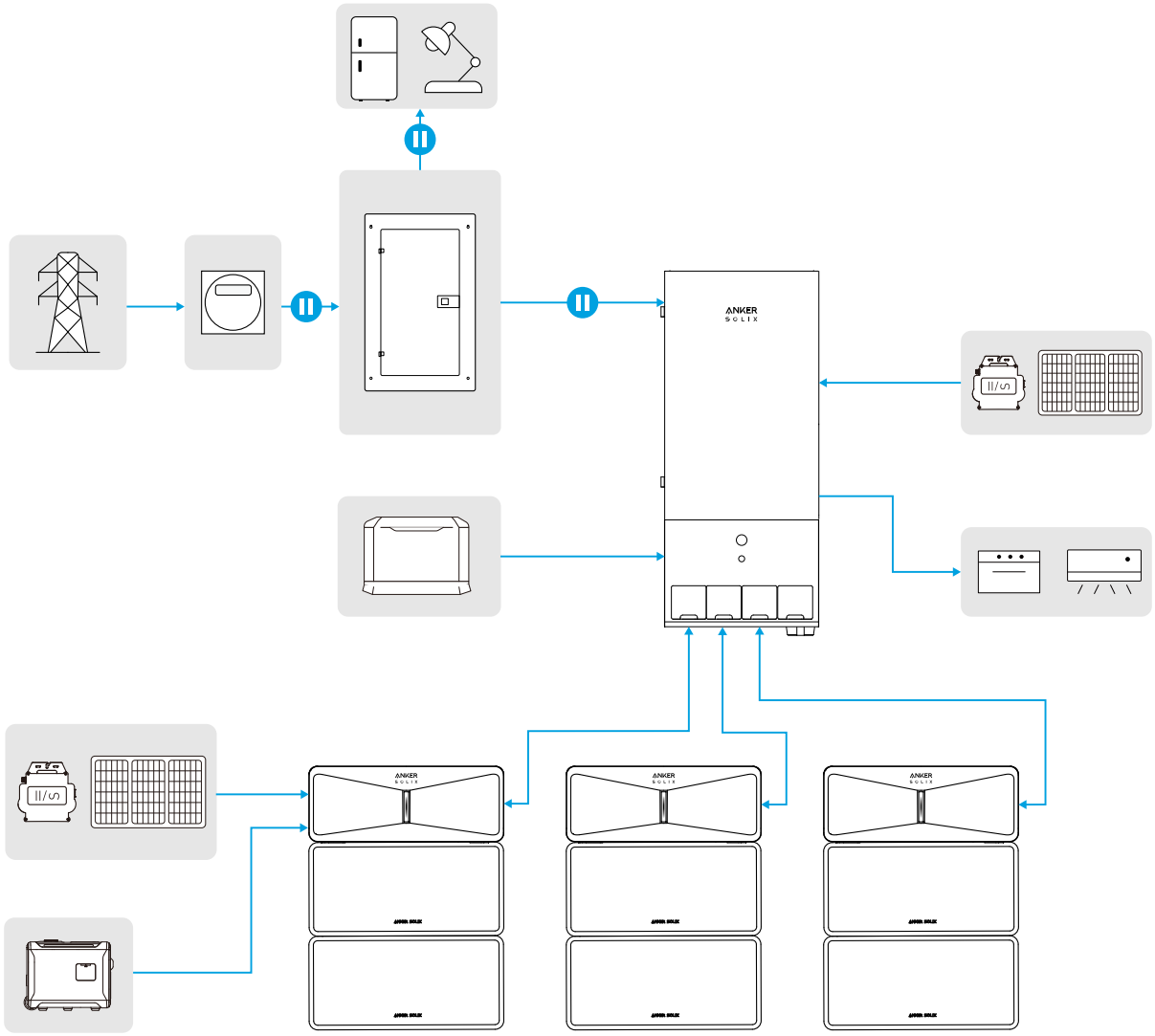
Scenario 2: Whole Home Backup (Off-Grid)



Scenario 3: Partial Home Backup (On-Grid)

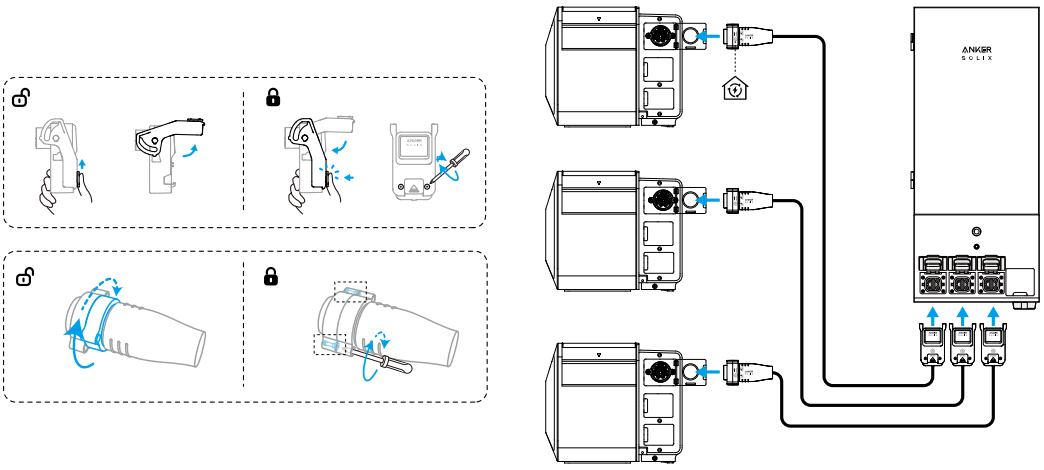


Scenario 4: Partial Home Backup (Off-Grid)



2.4 Electrical Connections

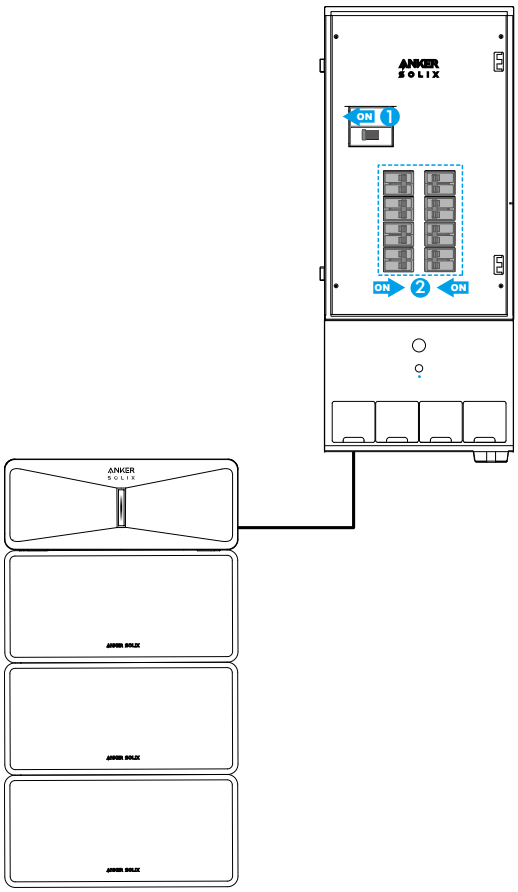
Connect the power dock to up to three power modules using the on-grid cables.



2.5 Power On / Off

To Power On the System

1. Turn on the main breaker (if available) on the power dock.
2. Turn on each branch breaker on the power dock. The power module will automatically turn on.

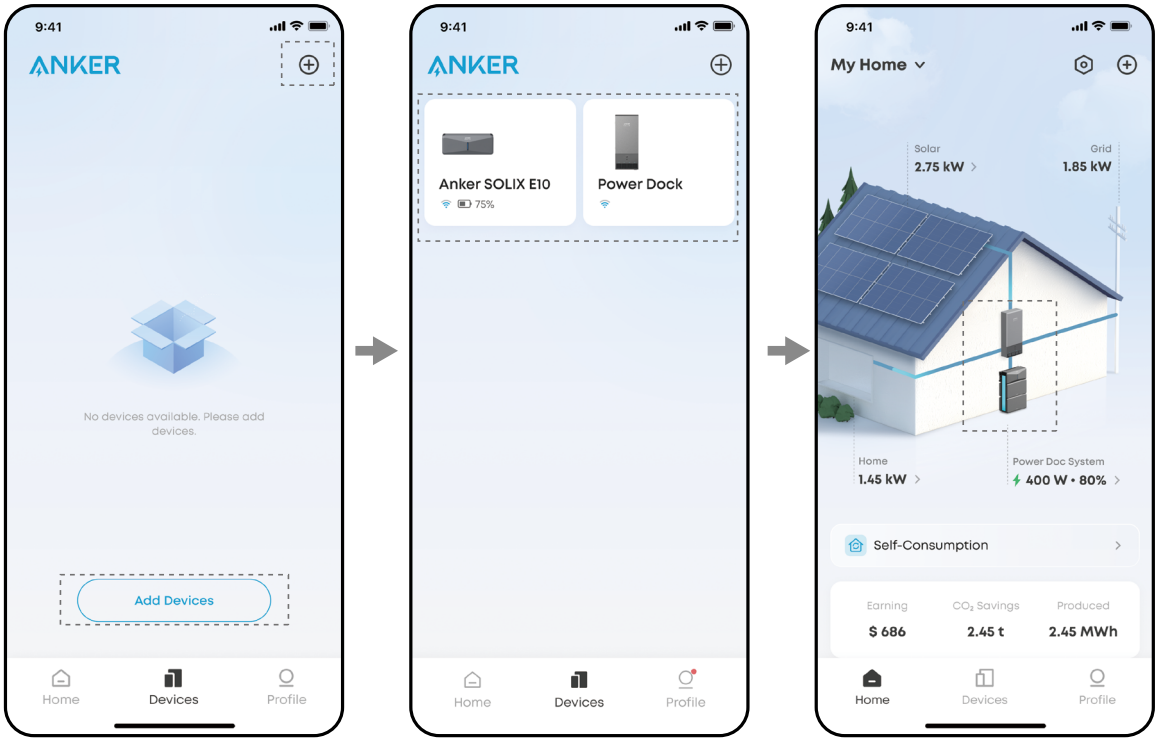


To Power Off the System

1. Turn off each branch breaker.
2. Turn off the main breaker (if available).
3. Press the power button on the power module for 3 seconds to turn it off.
4. Disconnect the on-grid cable between the power module and the power dock.

2.6 App Setup

1. Tap **Add Device** in the Anker app.
2. Add Anker SOLIX E10 and your power dock respectively.
3. Follow the on-screen instructions to complete setup for each device.
4. After both devices are added to the same account, the app automatically creates a backup system.



3. Manual Backup System (A17E1, AS211)

3.1 System Overview

The manual backup system combines the inlet box and E10 into one integrated solution.

When grid power is available, E10 powers home loads and charges from solar or grid. During an outage, you can manually switch the interlock and activate backup power using the E10 button.

Main Features:

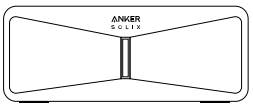
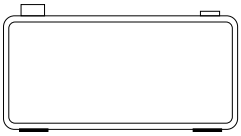
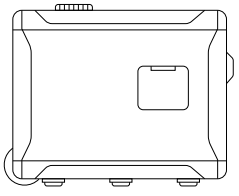
· Integrates solar, generator, battery, and grid for manual whole-home backup.

· Supports self-consumption and time-of-use modes to reduce energy costs.

· Monitors power status and optimizes usage through the Anker app.

3.2 Main Components

The manual backup system includes the following Anker SOLIX devices.

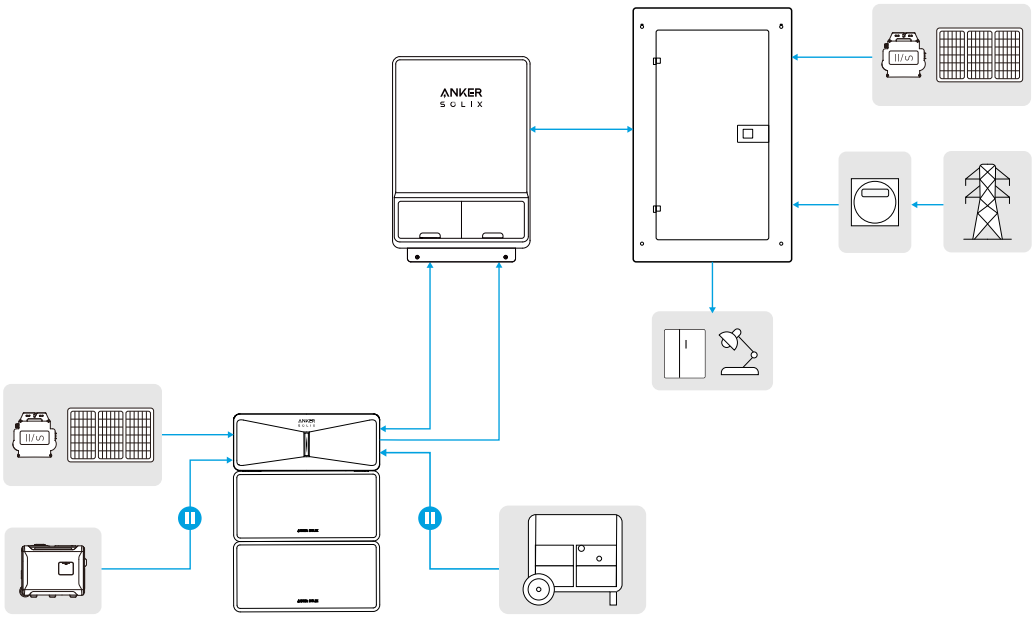
Component	Description
	**Anker SOLIX Smart Inlet Box** **Model: AS211** **Role: Grid Connection Interface** · Connects one E10 unit to the grid. · Supports multiple power modes. · Allows manual switching between grid and backup power during outages.
	**Anker SOLIX E10 Power Module** **Model: A17E1** **Role: Power Control Device** · Supports both AC and DC charging inputs. · Utilizes dual MPPTs to deliver up to 9 kW solar input. · Connects up to five battery modules to expand capacity. · Provides up to 37.2 kW (155 LRA) surge power for high-demand loads.
	**Product Name: Anker SOLIX B6000 Battery Module** **Model: A17E1141-85** **Role: Modular Energy Storage** · Stackable modular design. · Expands system capacity up to 90 kWh. · Connects to the power module for capacity scaling.
	**Product Name: Anker SOLIX Smart Generator 5500 (Tri-Fuel)** **Model: A7320J40** **Role: Optional Backup Source** · Charges E10 for extended backup power during outages. · Supports three fuel types for versatile use. · Starts and stops automatically based on battery charge level.

3.3 System Layout

The following diagrams show how energy flows in two typical scenarios.

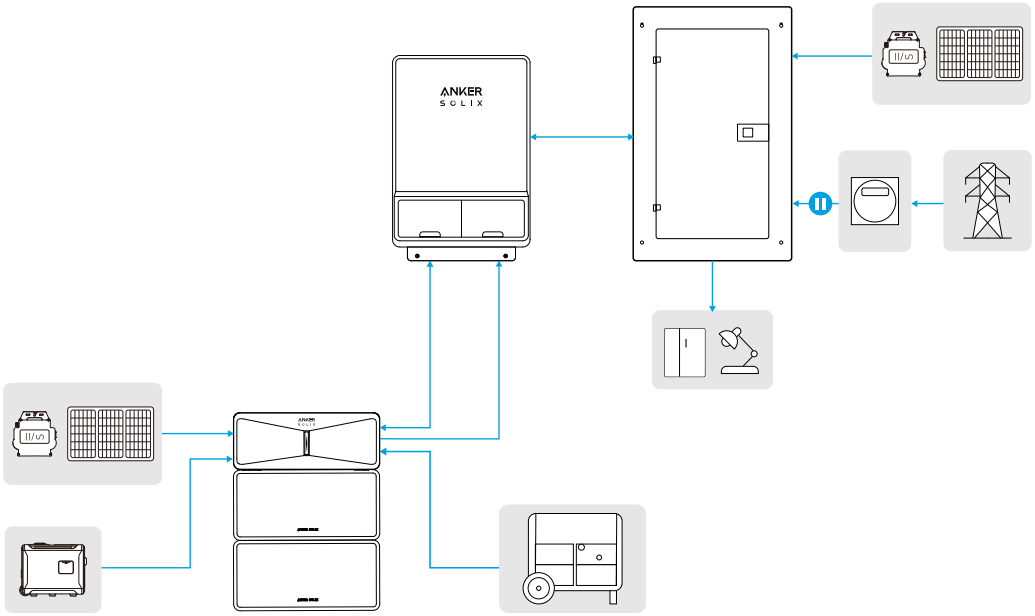
Scenario 1: On-Grid Operation

When grid power is available, the inlet box integrates energy from the grid, solar system, and E10 to supply home loads based on the selected mode. E10 charges from solar or grid while generators remain inactive.



Scenario 2: Off-Grid Operation

During a grid outage, E10 powers home loads through the inlet box. E10 can connect to the smart generator or third-party AC generator to extend backup duration.

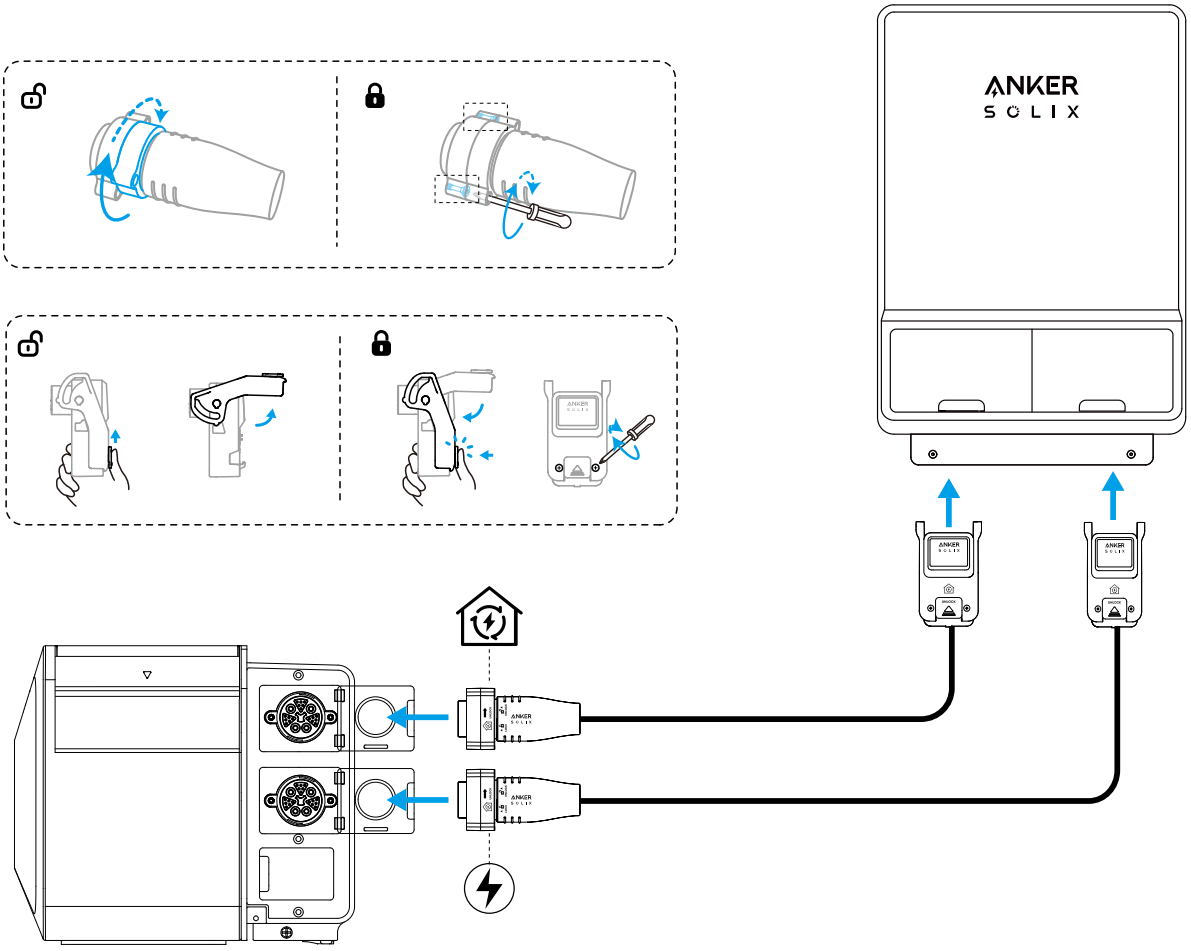


Notes for Off-Grid Operation:

- A third-party solar system can operate only if it supports frequency deviation compliance (CA21, IEEE 1547-2018+).
- To maintain system stability, use third-party AC generators with Total Harmonic Distortion (THD) less than 10%.
- Do not run a third-party solar system and a third-party generator at the same time. Before starting the generator, turn off the solar breaker on the main panel and set "Third-Party Solar System" to "Not Installed" in the app. Otherwise, the generator output will be automatically disconnected.
- E10 cannot start a central air conditioner when charged by a third-party generator. This type of generator lacks the peak power required for startup and may become overloaded. Turn off the central air conditioner to ensure stable operation.

3.4 Electrical Connections

Connect the inlet box to the power module using the on-grid cable and backup power cable. Ensure all plugs are locked in place.

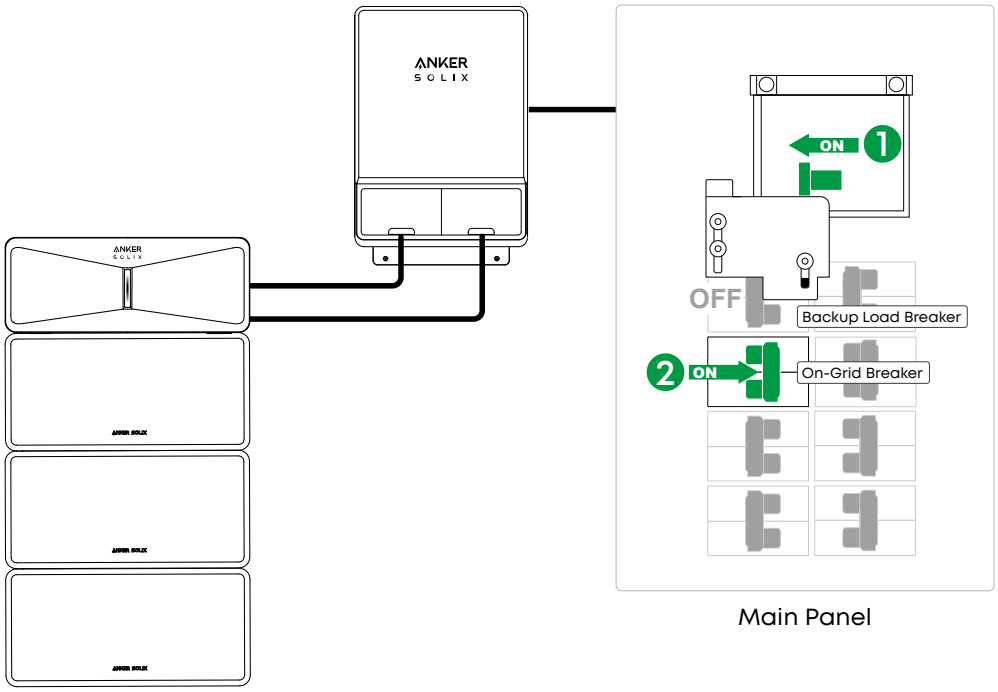


3.5 Power On / Off

To reduce the risk of electric shock, never turn on the main circuit breaker and backup load breaker simultaneously.

To Power On the System

1. Turn on the main circuit breaker.
2. Turn on the on-grid breaker. The power module will automatically turn on.



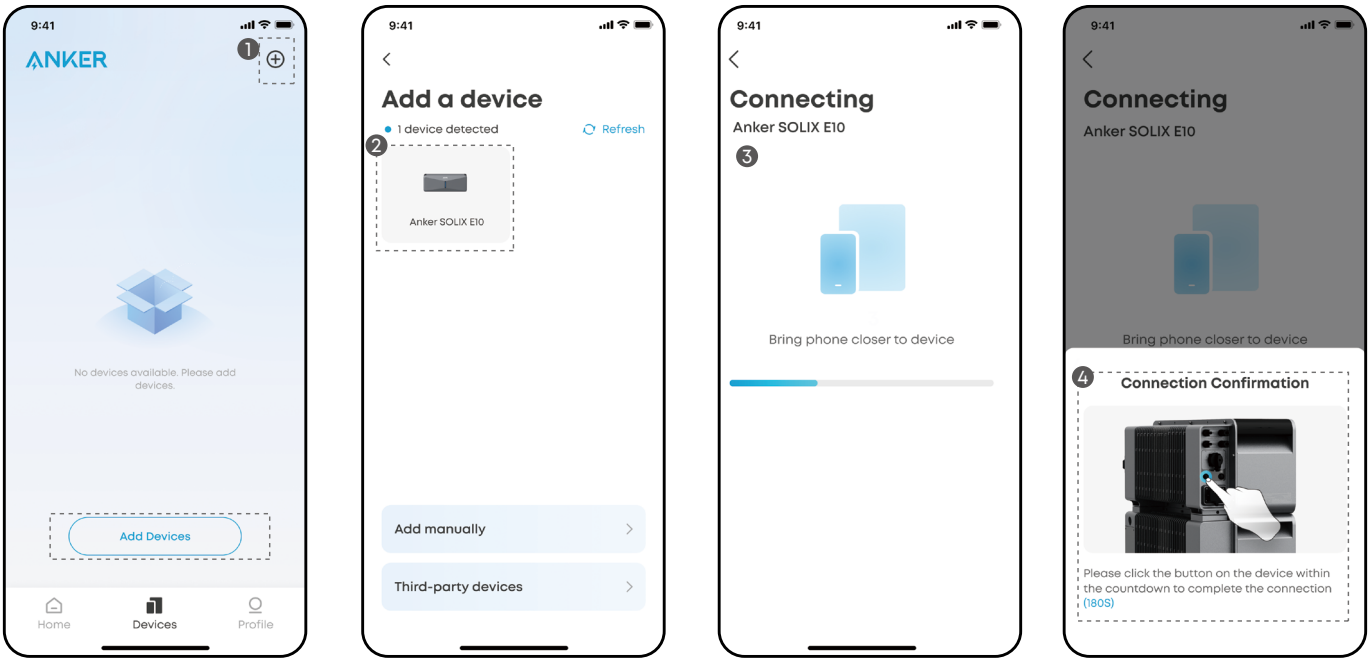
Main Panel

To Power Off the System

1. Turn off the on-grid breaker.
2. Turn off the backup load breaker.
3. Press the power button on the power module for 3 seconds to turn it off.
4. Disconnect the cables from the inlet box and the power module.

3.6 App Setup

Add Anker SOLIX E10 to the app, and follow the in-app instructions to complete setup.



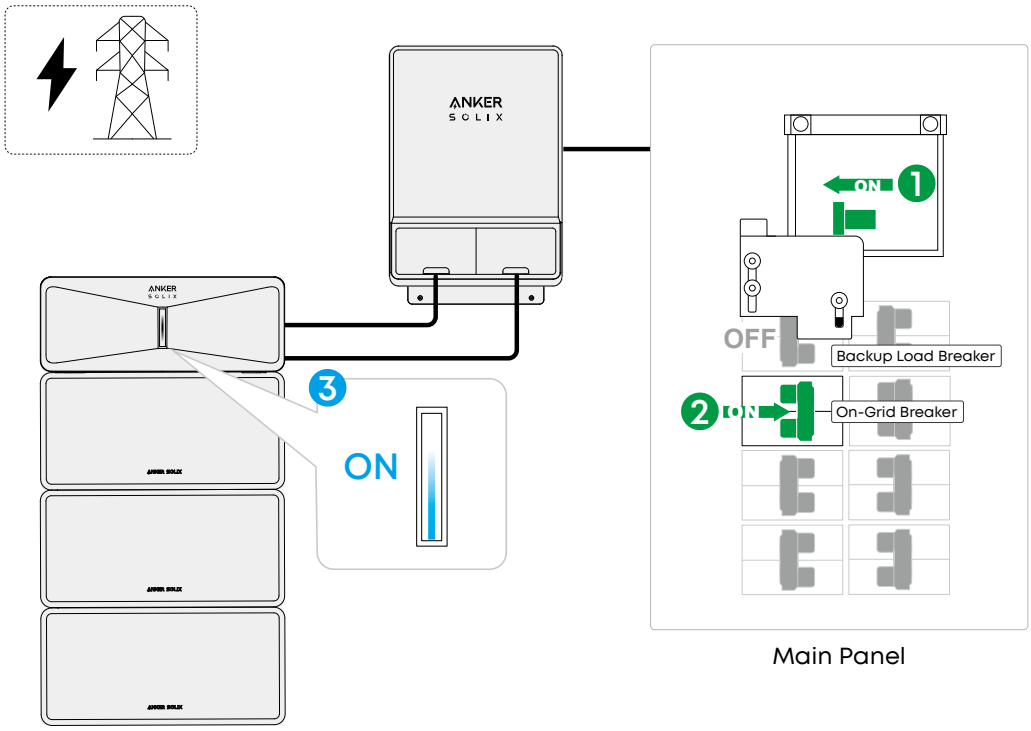
3.7 Power Your Devices

During a grid outage, the solar system connected to the main panel does not charge E10 via the inlet box, in compliance with anti-islanding requirements to stop power feed to the grid.

When Grid Power Is Available

To reduce the risk of electric shock, never turn on the main circuit breaker and backup load breaker simultaneously.

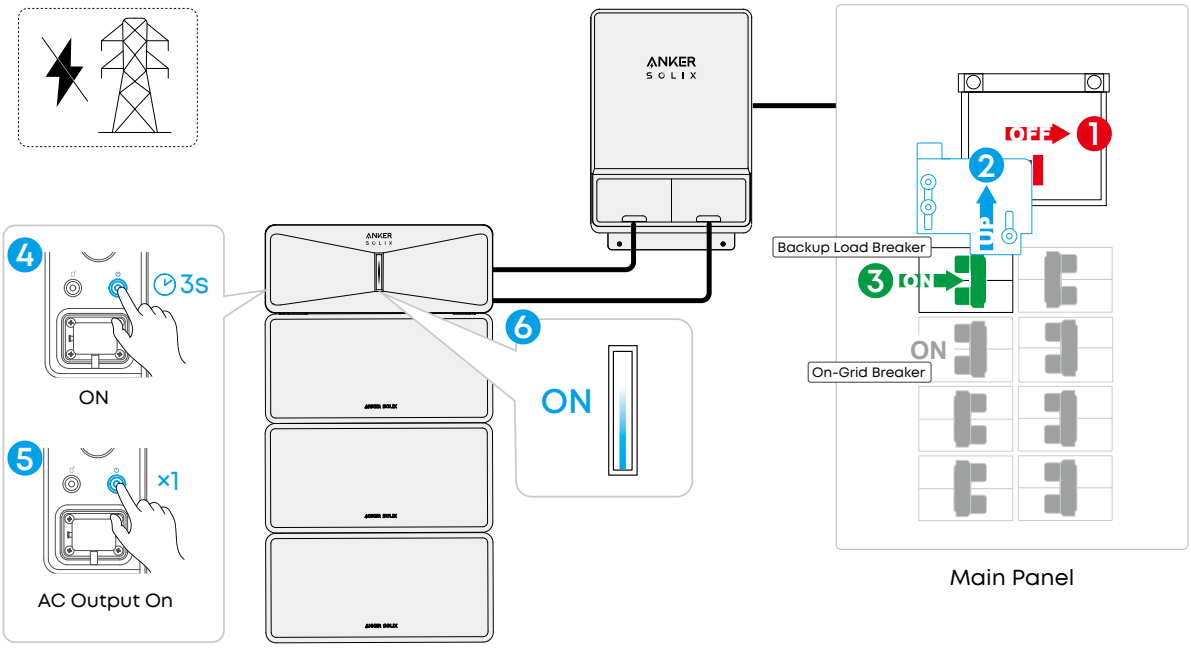
1. Turn on the main circuit breaker.
2. Turn on the on-grid breaker.
3. The power module will automatically turn on and power your home loads. This also allows grid power to charge the battery modules.



Main Panel

During a Power Outage

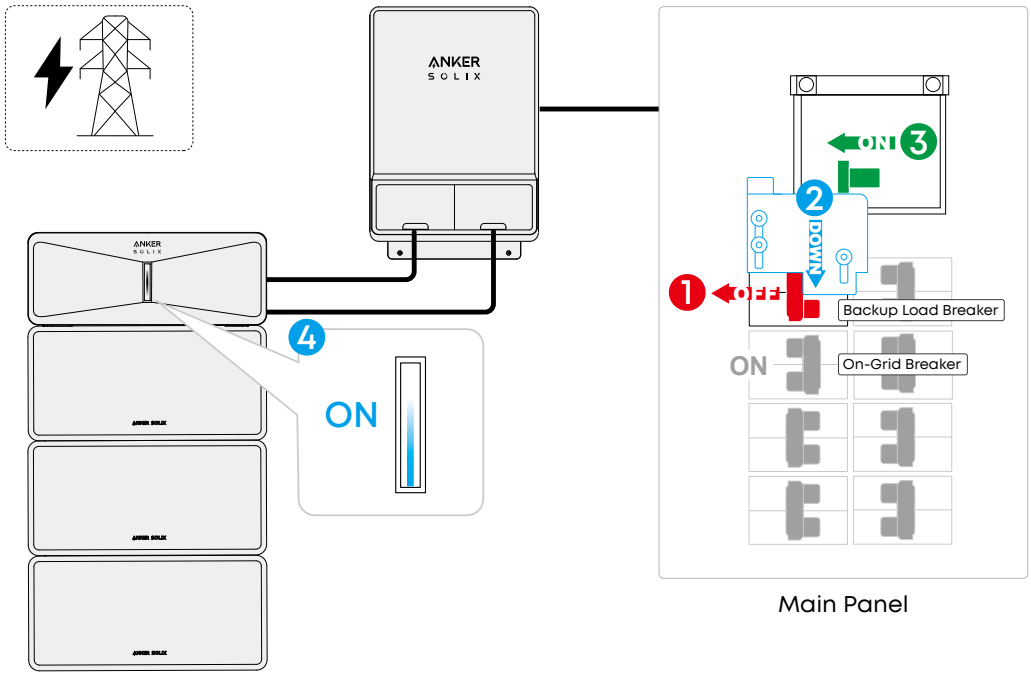
1. Turn off the main circuit breaker.
2. Switch the interlock to lock the main circuit breaker.
3. Turn on the backup load breaker.
4. Press the power button for 3 seconds to turn on the power module.
5. Press again to enable AC output.
6. The light bar will turn blue and the power module will start powering the backup loads.



When Grid Power Is Restored

Ensure the on-grid breaker is turned on.

1. Turn off the backup load breaker.
2. Switch the interlock to lock the backup load breaker.
3. Turn on the main circuit breaker.
4. The grid and the power module will continue to power your home loads.



Main Panel

4. Range-Extended Backup System (A17E1, A7320)

4.1 System Overview

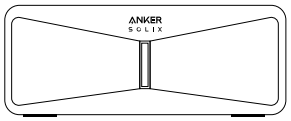
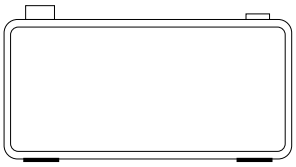
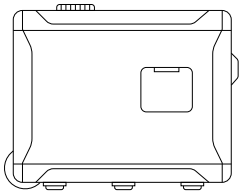
The range-extended backup system combines the smart generator and E10 into one integrated solution. This configuration provides extended backup power and automatic charging control.

Main Features:

· Supplies home loads during grid failures while simultaneously charging E10.
· Automatically starts and stops based on the battery charge level.
· Monitors power status and optimizes usage through the Anker app.

4.2 Main Components

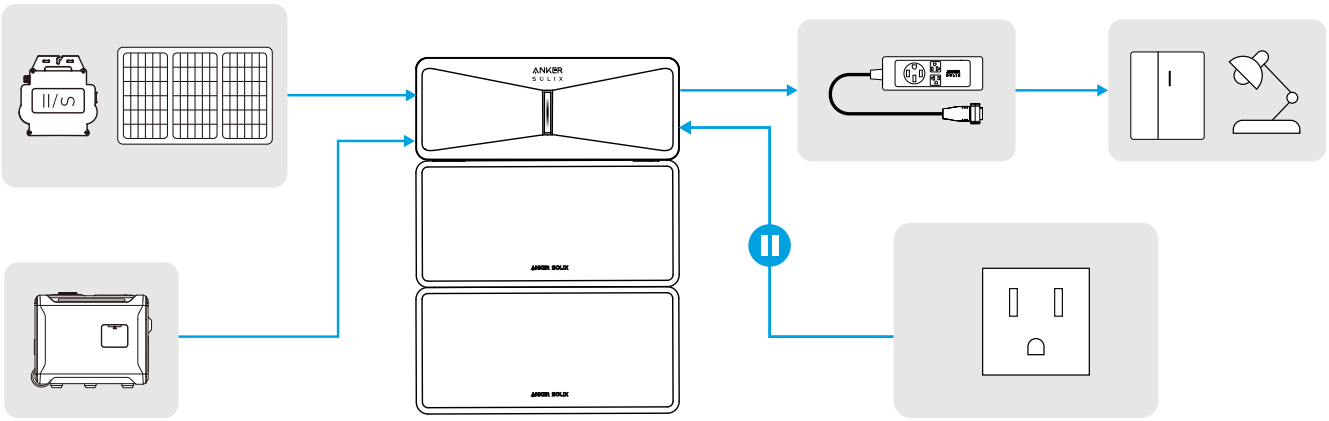
The range-extended backup system includes the following Anker SOLIX devices.

Component	Description
	**Product Name: Anker SOLIX E10 Power Module** **Model: A17E1** **Role: Power Control Device** · Supports both AC and DC charging inputs. · Utilizes dual MPPTs to deliver up to 9 kW solar input. · Connects up to five battery modules to expand capacity. · Provides up to 37.2 kW (155 LRA) surge power for high-demand loads.
	**Product Name: Anker SOLIX B6000 Battery Module** **Model: A17E1141-85** **Role: Modular Energy Storage** · Stackable modular design. · Expands system capacity up to 90 kWh. · Connects to the power module for capacity scaling.
	**Product Name: Anker SOLIX Smart Generator 5500 (Tri-Fuel)** **Model: A7320J40** **Role: Optional Backup Source** · Charges E10 for extended backup power during outages. · Supports three fuel types for versatile use. · Starts and stops automatically based on battery charge level.

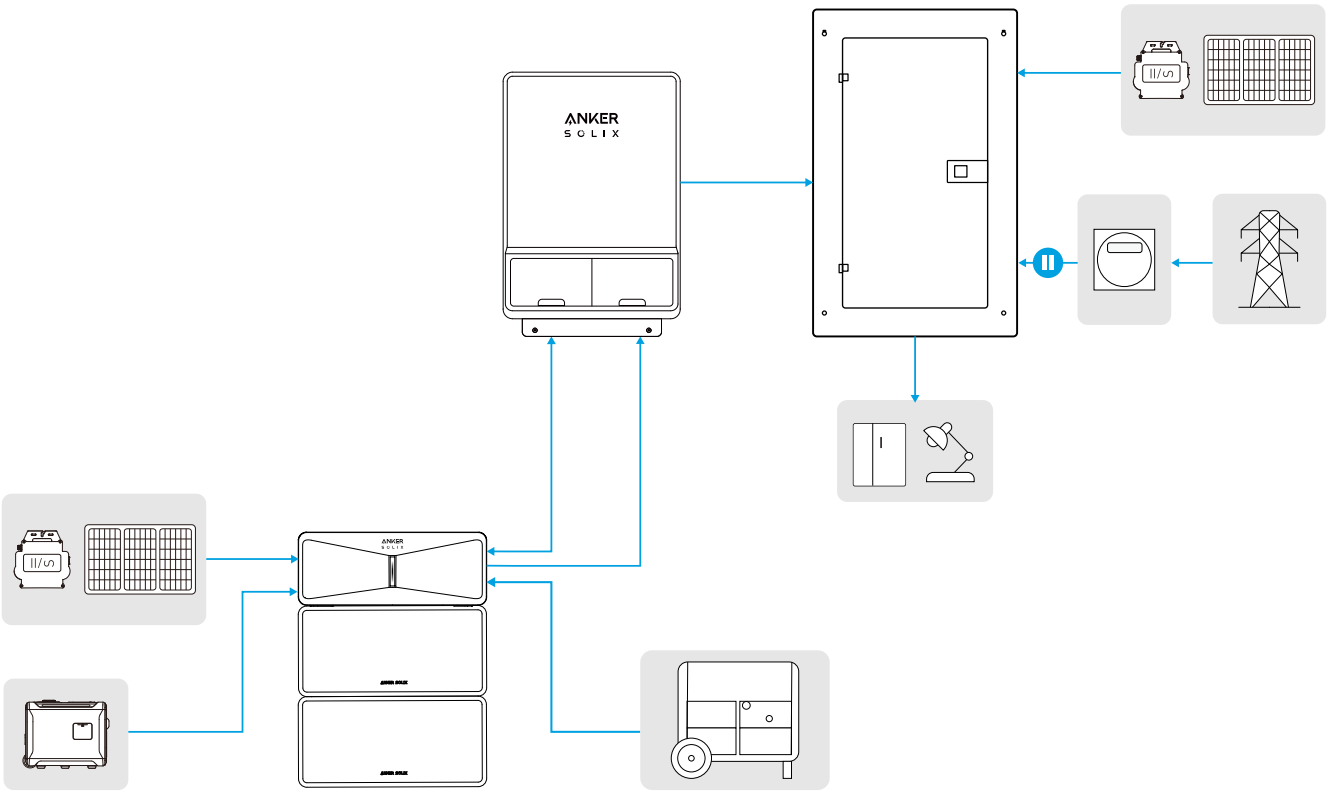
4.3 System Layout

The following diagrams show how energy flows in three typical scenarios.

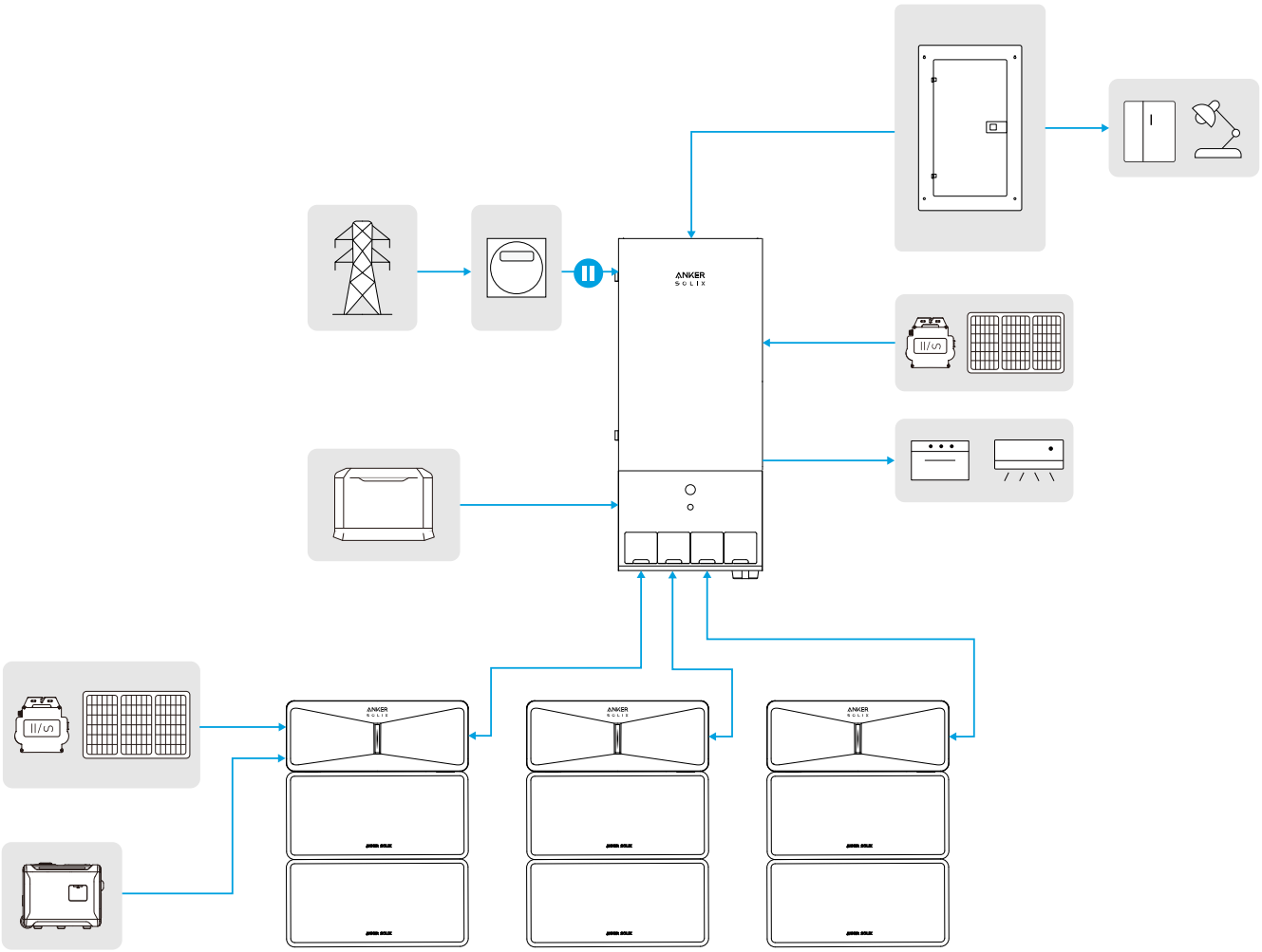
Scenario 1: E10 + Smart Generator (Off-Grid)



Scenario 2: E10 + Smart Generator + Inlet Box (Off-Grid)



Scenario 3: E10 + Smart Generator + Power Dock (Whole Home Backup, Off-Grid)

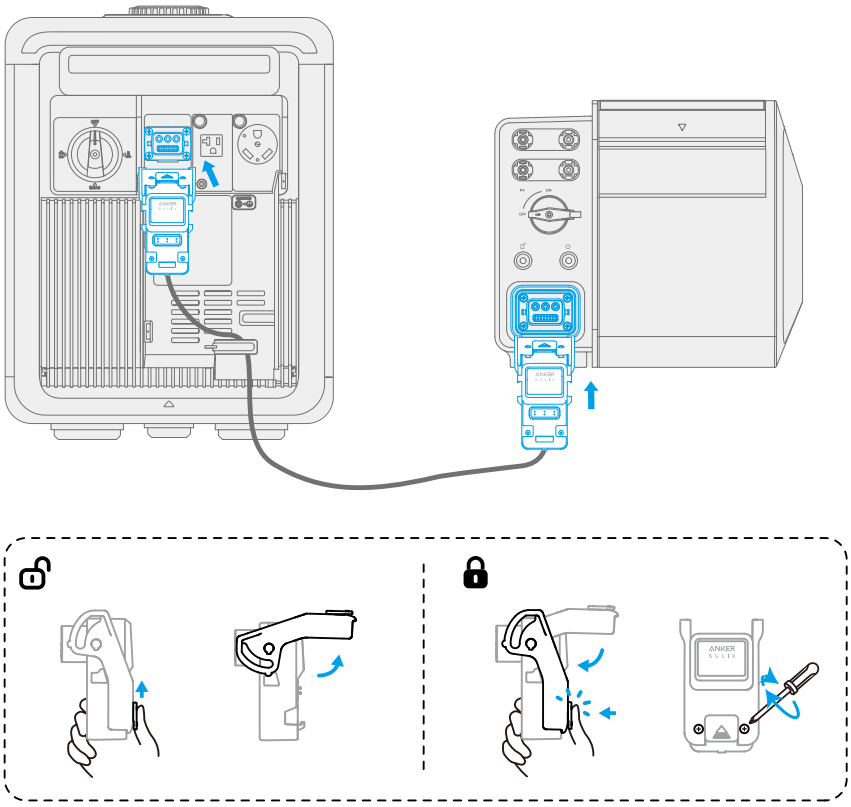


4.4 Charge E10 (DC Mode)

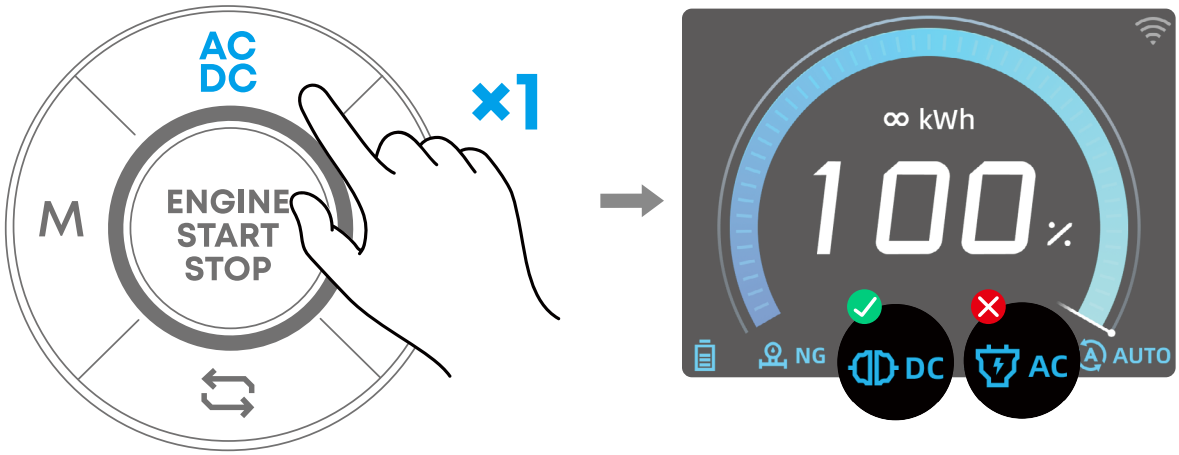
The smart generator charges E10 through the DC output port. In DC mode, E10 can also charge the generator's starter battery.

To Start Charging

1. Turn the engine switch to the desired fuel type.
2. Start the engine.
3. Connect E10 to the smart generator using the DC charging cable.



4. Press the power button on the power module for 3 seconds to turn it on.
5. Set the smart generator to DC mode.



To Stop Charging

1. Disconnect E10 from the smart generator.
2. Stop the engine.
3. Turn the engine switch to OFF.

4.5 App Setup

1. Ensure E10 is connected to the smart generator using the DC charging cable.
2. Tap **Add Device** in the Anker app.
3. Add Anker SOLIX E10 and your smart generator respectively.
4. Follow the on-screen instructions to complete setup for each device.
   After both devices are added to the same account, the app automatically creates a backup system.
5. Tap the smart generator on the home screen.
6. Set the smart generator to DC mode.



5. Anker App for Smart Control

The Anker app allows you to monitor and manage your system easily. Please note that the user interface images displayed are for illustration purposes and may differ from your actual view based on the software version.

5.1 Power Usage Scenario

Choose how the system manages energy through the following modes to meet your power needs.

Self Consumption

Self-consumption mode maximizes your use of solar power and minimizes reliance on the grid. In this mode, the system will dynamically adjust the power output or storage based on the power demand.

Required component: E10

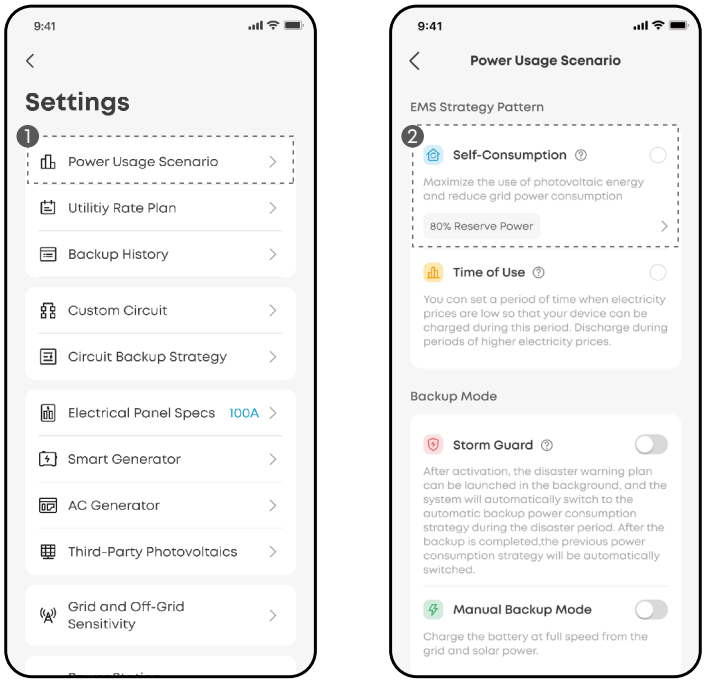
How It Works

Battery power must be allocated within the system charging and discharging limits.

Power Type	Description
Reserve Power	Battery capacity reserved for emergency use during power outages. The system automatically discharges until it reaches the lower limit.
Power for Home	Battery capacity used daily to supply home loads.

How to Set Up

1. Go to **Settings** > **Power Usage Scenario**.
2. Enable **Self-Consumption**.



3. Adjust the backup reserve by dragging the slider.
4. Tap **Save** to apply the settings.

Time of Use (TOU)

TOU mode saves your electricity costs by automatically scheduling charging and discharging based on power rates. The battery charges when electricity prices are low and discharges when they are high.

Required component: E10

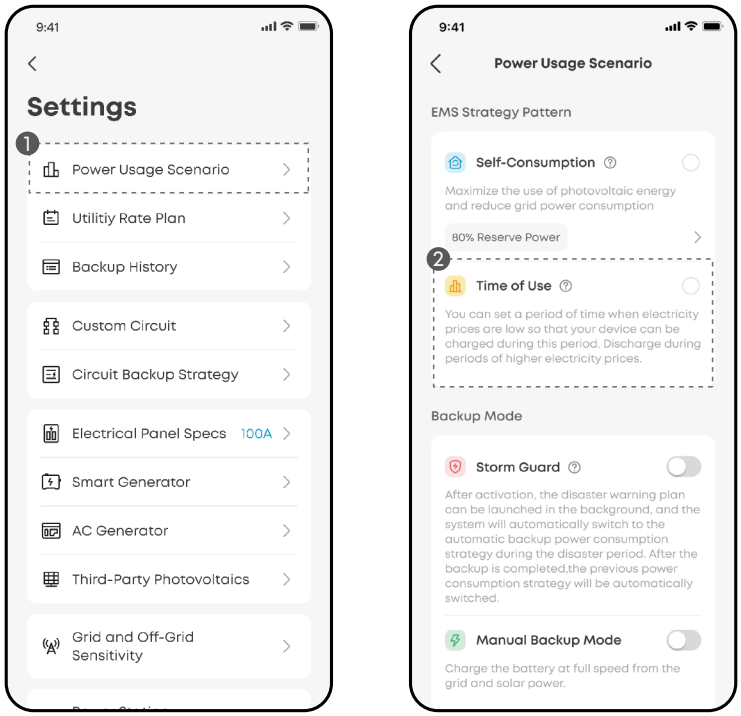
How It Works

The system automatically adjusts power flow between solar, battery, and grid to optimize energy usage.

Period	Strategy
Peak	· Highest rates; usually daytime. · Solar powers home loads; extra solar charges the battery. · If solar is insufficient, the battery discharges to supply home loads.
Mid-Peak	· Moderate rates; usually early evening or midday. · Solar powers home loads; extra solar charges the battery. · If solar is insufficient, the battery discharges to supply home loads.
Off-Peak	· Low rates; usually night or early morning. · If battery SOC is below 80%, solar charges the battery first and grid assists. · If battery SOC is over 80%, solar powers home loads and battery supports extra demand.
Super Off-Peak	· Lowest rates; usually late night or early morning. · Solar charges the battery and grid assists. · The battery does not discharge during this period.

How to Set Up

1. Go to **Settings** > **Power Usage Scenario**.
2. Enable **Time-of-Use**.



3. Adjust the backup reserve by dragging the slider.
4. Choose a time structure.
   - **Year-Long**: Apply the same rates throughout the year.
   - **Season**: Use different rate plans for different seasons. Add or remove seasons as needed.
5. Edit time periods by dragging the slider.
6. Enter the price for each time period.
7. Repeat steps 5 and 6 for all time periods and seasons.
8. Review and save your settings.

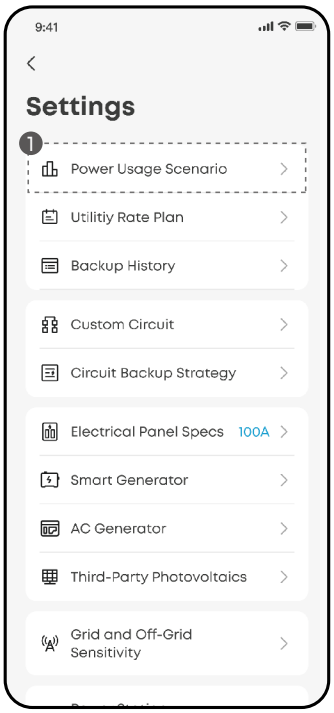
Storm Guard

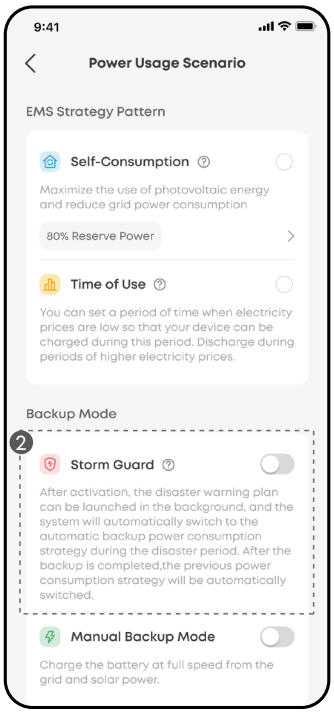
When a severe weather alert is issued for your area, the system automatically charges the battery at full speed using solar and grid power. Set your system location in the app to receive alerts.

Required component: E10

How to Set Up

Go to **Settings** > **Power Usage Scenario**, and enable **Storm Guard**.





Manual Backup Mode

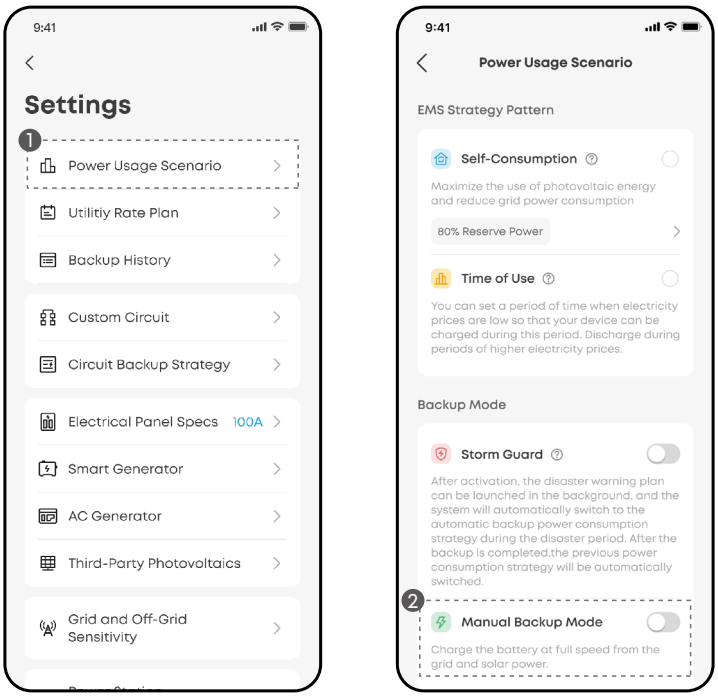
When manual backup mode is enabled, the system charges the battery at full speed from solar and grid power.

Required component: E10

How to Set Up

Go to **Settings** > **Power Usage Scenario**, and enable **Manual Backup Mode**.

Set the specific start and end times for manual charging.



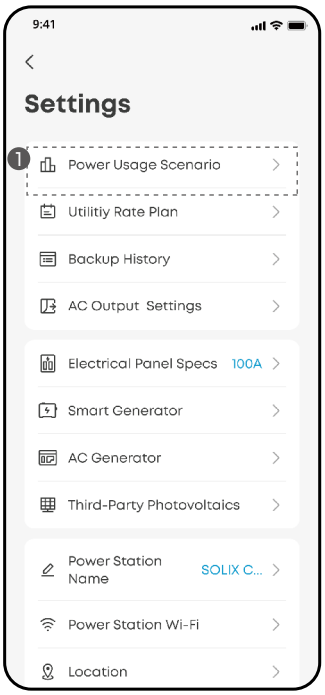
Only Backup

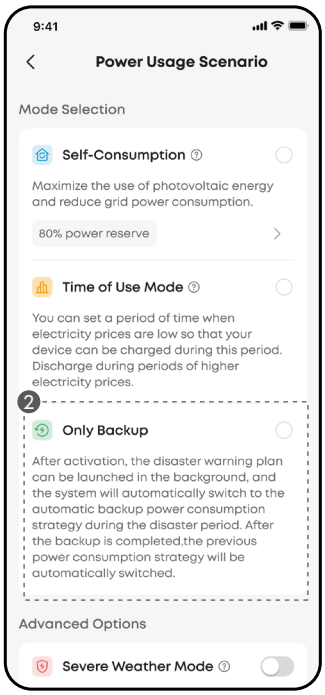
Keep E10 fully charged to ensure reliable backup power during grid outages.

Required component: E10

How to Set Up

Go to **Settings** > **Power Usage Scenario**, and enable **Only Backup**.





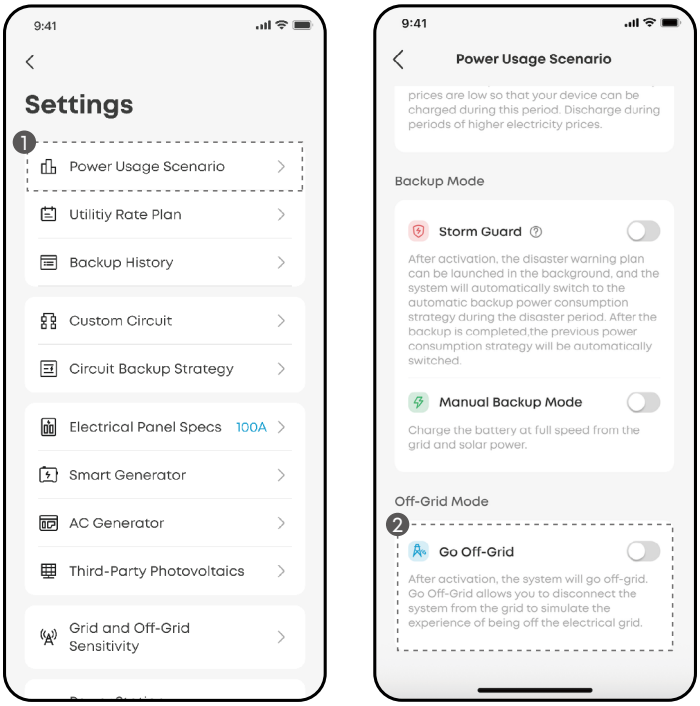
Go Off-Grid

Disconnect your system from the grid and power your home entirely with solar and battery energy. This mode is ideal for temporary off-grid operation or planned grid maintenance.

Required component: E10 + power dock

How to Set Up

Go to **Settings** > **Power Usage Scenario**, and enable **Manual Off-Grid**.



5.2 Utility Rate Plan

To view electricity costs, make sure your system is connected to the Internet and a rate plan has been set up.

Required component: E10

How to Set Up

Go to **Settings** > **Utility Rate Plan**. Choose the tariff structure that matches your household electricity contract.

Utility Rate Plan	Description
Fixed Rate	A fixed rate tariff means you pay the same price for electricity at all times. This is common for households where prices do not change throughout the day or year.

Time of Use	A time-of-use (TOU) tariff reflects changing electricity prices throughout the day and year. Electricity prices are higher during high-demand periods and lower during low-demand times. Some utilities also divide rates by season.

5.3 Smart Generator

Auto Start-Stop

When this feature is enabled, the smart generator automatically starts or stops charging E10 at preset thresholds.

- Generator exhaust contains carbon monoxide, a colorless, odorless, poisonous gas. Breathing carbon monoxide will cause nausea, dizziness, fainting or death.
- Only use the smart generator outdoors and far away from windows, doors, and vents.
- Never use the generator in the home or in partly enclosed areas such as garages.

- Required components: E10 + smart generator (connected via the DC charging cable).
- Add both devices to the Anker app via Bluetooth or Wi-Fi.
- Set the smart generator to DC mode and ensure the system is off-grid.
- Check that fuel and engine oil are sufficient for operation.
- Verify that the starter battery shows at least three bars of charge.

How It Works

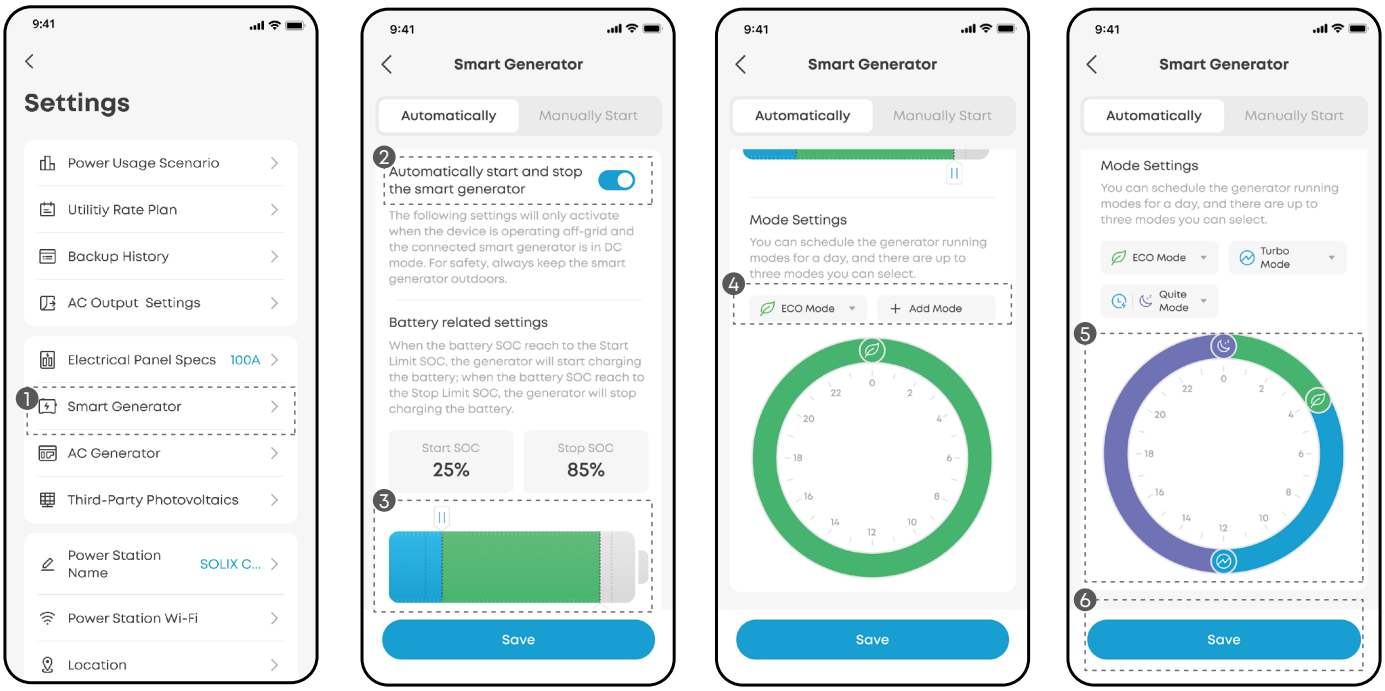
The system automatically adjusts power flow between solar, battery, and grid to optimize energy usage.

Automatically start and stop the smart generator	· Enable the auto start-stop feature of the smart generator. · If you manually start or stop the smart generator using the app or the generator button, auto start-stop mode is deactivated. Enable the feature again in the app to reactivate automatic control.
Start Limit SOC	When the battery SOC drops below the start limit SOC, the smart generator starts charging the battery.
Stop Limit SOC	When the battery SOC rises above the stop limit SOC, the smart generator stops charging the battery.

Mode Settings	Define how the smart generator operates after startup by selecting an operation mode and active time. · Turbo Mode: Provides maximum power for high-demand loads. · ECO Mode: Reduces fuel consumption and noise during operation. · Quiet Mode: Runs with minimal noise and reduced power output.

How to Set Up

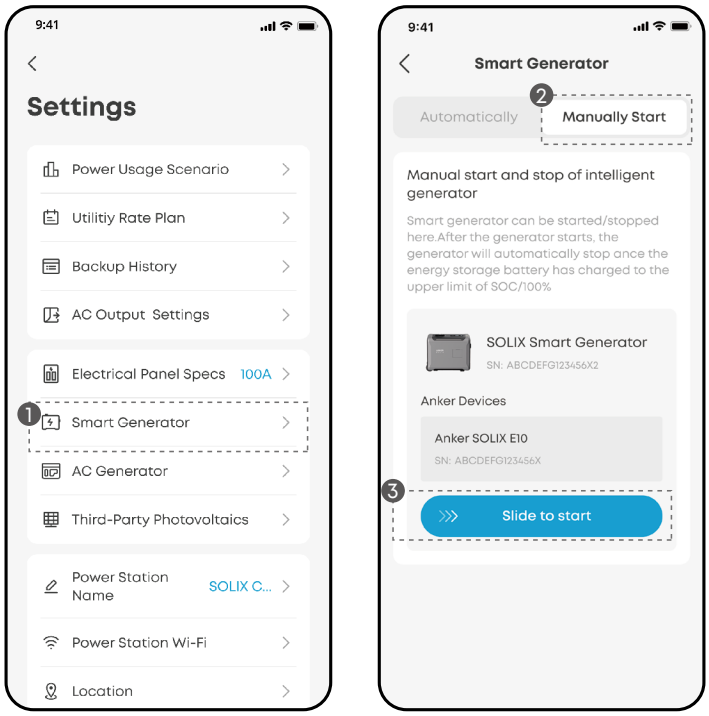
1. Go to **Settings** > **Smart Generator**.
2. Enable the auto start-stop feature.
3. Set the start limit SOC and stop limit SOC values.
4. Add or modify operation mode.
5. Drag the time bar to adjust the active period.
6. Tap **Save** to apply the settings.



Manual Start-Stop

Manually start and stop the smart generator in the app.

Required component: E10 + smart generator



5.4 Custom Circuit

This feature allows you to name, edit, and assign icons to each home circuit for easy management.

Required components: E10 + power dock

Default Settings

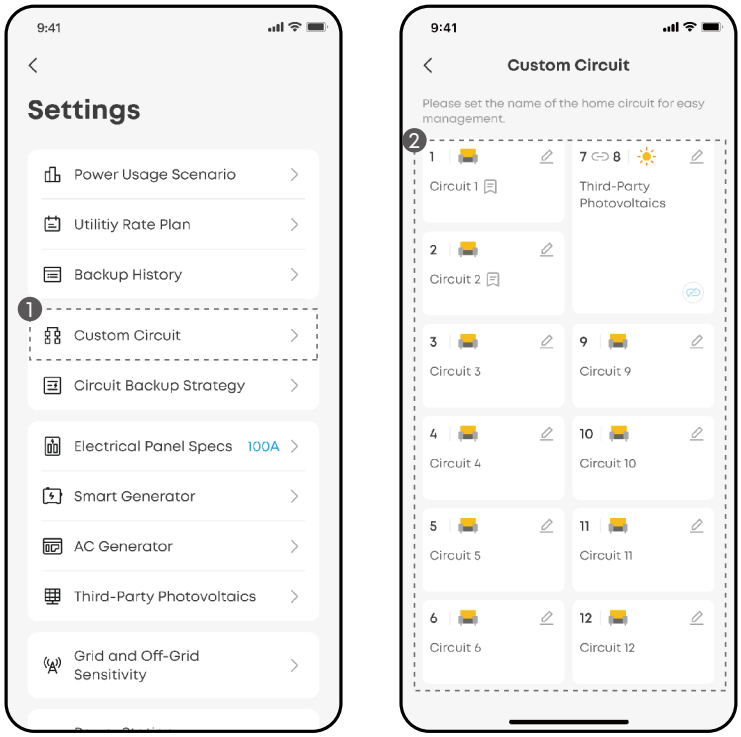
- Circuits 1 and 2 are combined for generator input. If no generator is configured, they can be split.
- Circuits 7 and 8 are combined for solar input. If no solar system is configured, they can be split.

How to Set Up

Go to **Settings** > **Circuit Settings** to view and customize your circuits.

App Icon	Function
	Separate a combined branch into individual circuits.

	Combine two circuits into a shared branch.
	Rename circuits, change icons, or add notes for easy identification.



5.5 Circuit Backup Strategy

This feature lets you prioritize which circuits receive power during an outage. Each circuit can be classified as Must-Have, Nice-to-Have, or Non-Priority to extend backup duration as battery SOC drops over time.

Required components: E10 + power dock

How It Works

· **Must-Have Circuits**: Always powered during an outage.

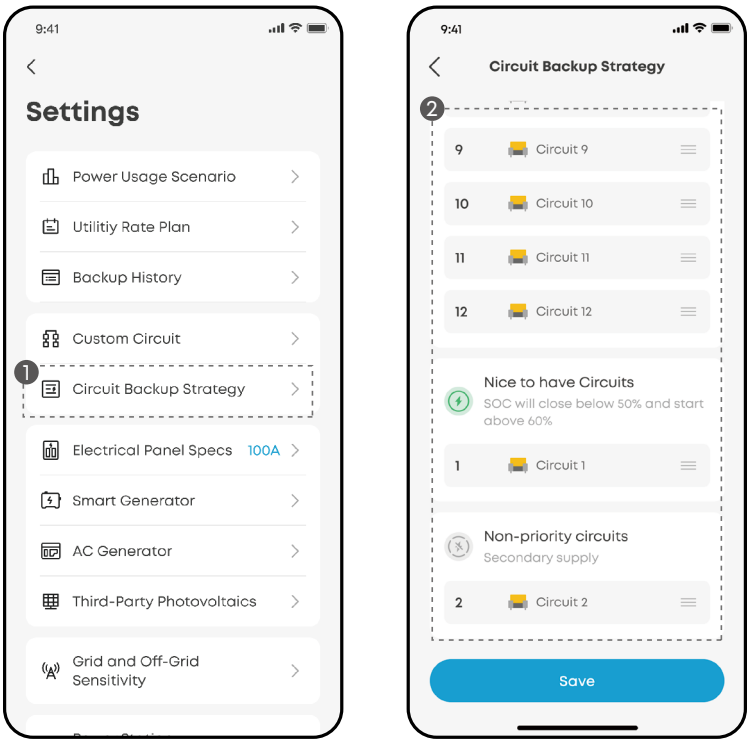
· **Nice-to-Have Circuits**: Powered only when battery SOC meets specific conditions.

Condition	Nice-to-Have Circuits
Battery SOC ≥ Start Limit	The battery starts supplying power to the circuits.
Stop Limit < Battery SOC < Start Limit	If the battery is supplying power, the circuits stay on. If the battery is not supplying power, the circuits stay off.
Battery SOC ≤ Stop Limit	The battery stops supplying power to the circuits.

· **Non-Priority Circuits:** Excluded from backup power.
· **Remaining Time**: Estimated backup duration for the must-have and nice-to-have circuits.

How to Set Up

Go to **Settings** > **Circuit Backup Strategy**, and drag each circuit into its priority group.



5.6 Other Settings

On-Grid and Off-Grid Sensitivity	Set how quickly the system switches between on-grid and off-grid modes. · **Required components**: E10 + power dock · **High sensitivity**: Use high sensitivity for fast switching response, but be aware that it may cause frequent mode changes when the grid voltage fluctuates. · **Low sensitivity**: Use in areas with unstable grid power to reduce unnecessary switching and prevent damage to electrical appliances.
Third-Party Solar System	· **Required components**: E10 + third-party solar system · Enter your third-party solar system information in the app. This setup ensures the system can execute charging and discharging strategies correctly.