

# Growatt Smart EV Charger

SHENZHEN GROWATT NEW ENERGY CO.,LTD

**GROWATT**



**Dedicated to Becoming**

The World's Largest Supplier of Smart Energy Solutions

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# CONTENTS

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- 01 Product Overview and Application Scenarios
- 02 Leading Features
- 03 Working Modes
- 04 Smart Home

## Product Overview



### GROWATT Smart EV Charger

#### **THOR 03/07AS-S, THOR 03/07AS-P**

230VAC 3/7kW Home Charger  
Charging time 7-15 hours

#### **THOR 11/22AS-S, THOR 11/22AS-P**

400VAC 11/22kW Public/Home Charger  
Charging time 1-4 hours

# Application Scenarios

*THOR EV Charger covers the full residential and commercial scenarios*

**Residential**



**Commercial**





## Leading Features – Driven by Solar

### *Driven by Solar*

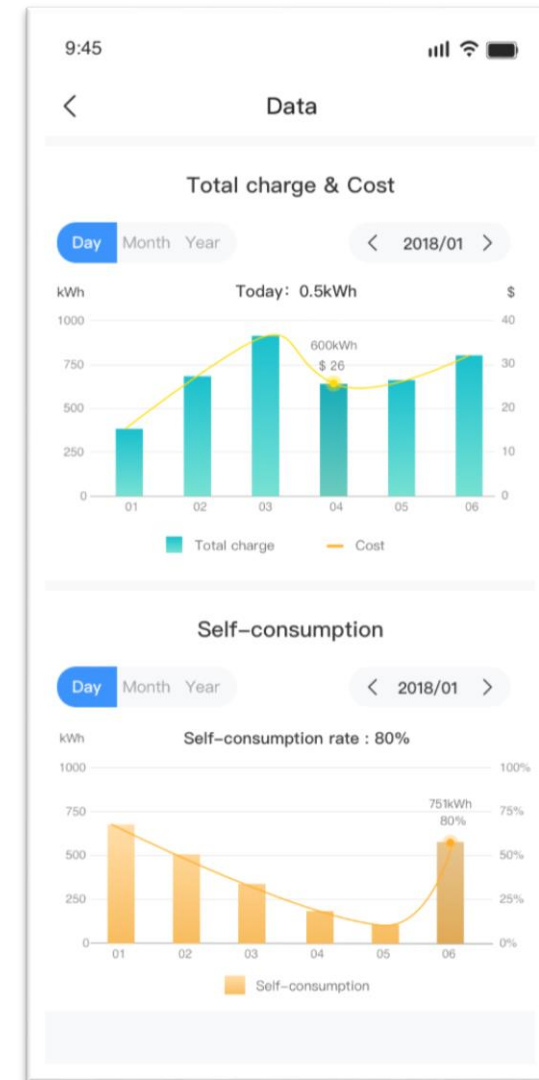
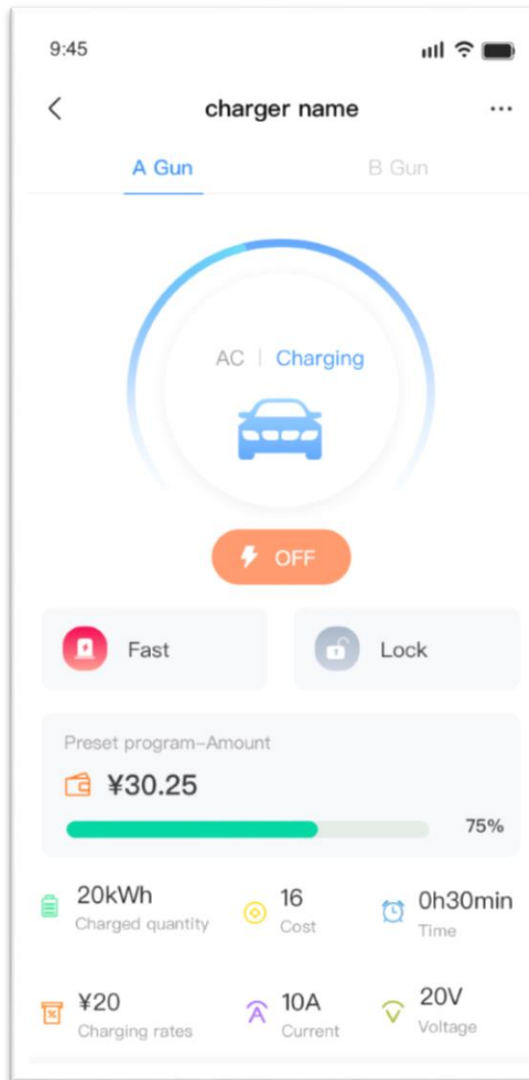
Charge EV with 100% renewable energy by surplus solar power, maximize the benefits of your solar system



# Leading Features – Smart Management

## Remote Control and Smart Scheduling

- ◆ Remote control and monitor the real-time status of charging
- ◆ Smart scheduling by multiple working modes
- ◆ Remote firmware upgrade by OTA technology



## Leading Features – Extreme Safety

### Overall Protection

The overall protection of the THOR EV charger guarantees the operation safety and reliability





## Leading Features – Full Flexibility

### Compatible with ALL Branded EV

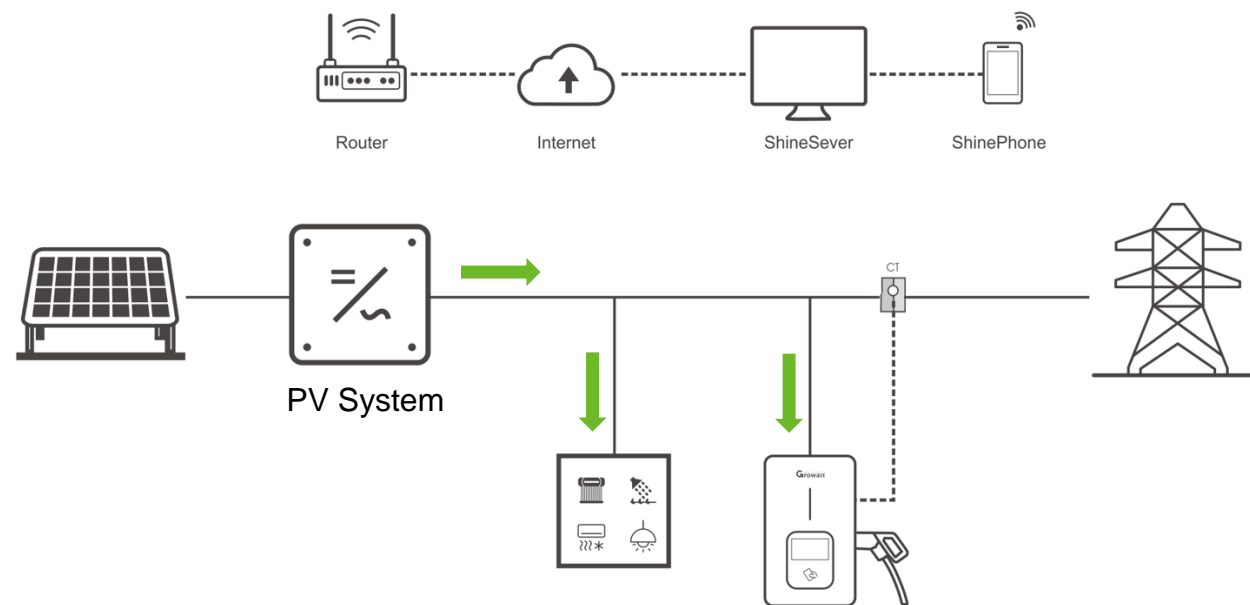
THOR EV Charger is highly flexible and compatible with all branded EV thanks to its attached type 2 charging gun/interface



## Leading Features – Full Flexibility

### Compatible with Different Branded PV

THOR EV Charger is highly flexible and compatible with different brand of PV systems to charge your car with surplus solar power



## Leading Features – Full Flexibility

Supports three different ways of charging activation, users can define freely for different scenarios

Plug and Play



Mobile APP



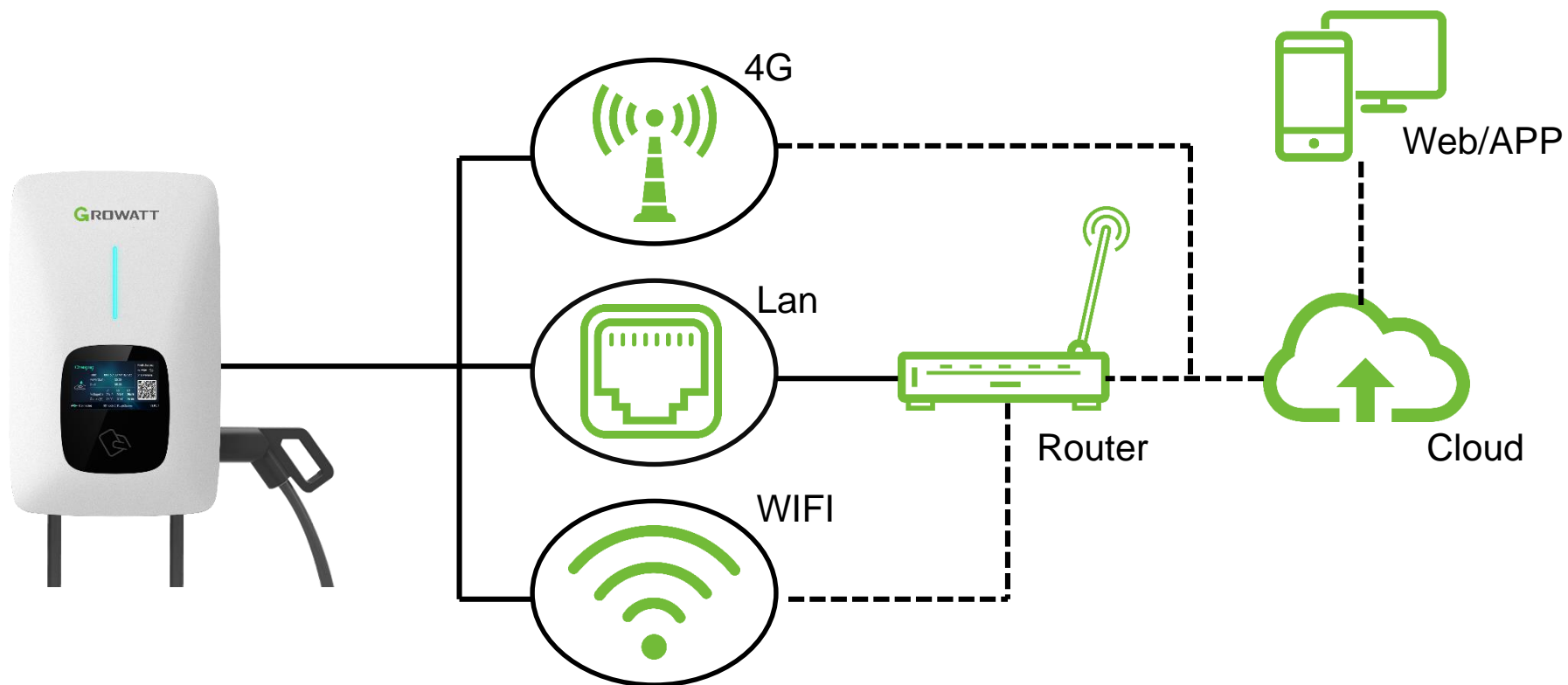
RFID Card



\* Three ways of charging activation will be available in Fast mode, and only mobile APP for Off-peak and PV Linkage modes

## Leading Features – Full Flexibility

THOR EV charger provides flexible communication by Lan, WIFI or 4G\*

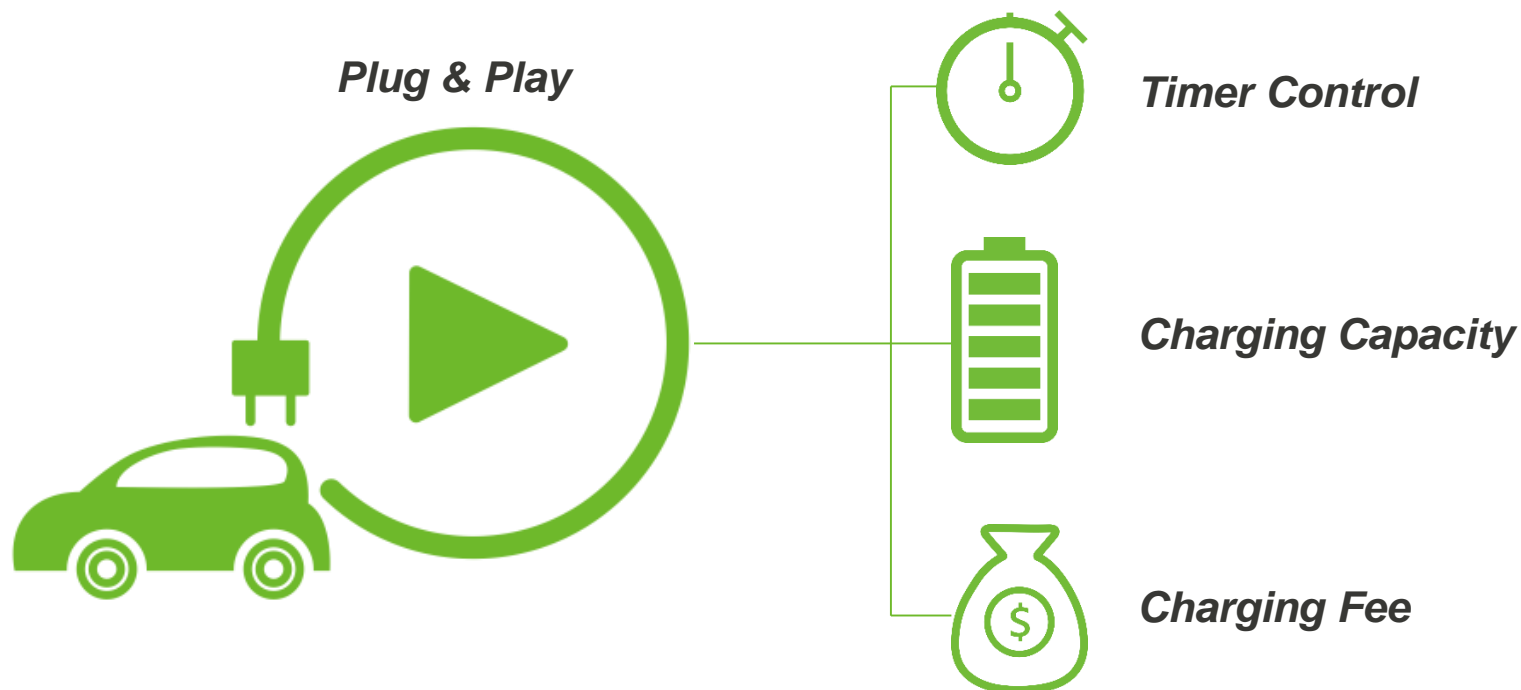


\* Default model is WiFi version also with LAN port, consult with regional sales if need 4G version.

## Working Modes

### Fast Mode

The EV will be charged at maximum power coming from a renewable energy source or simply from the grid, especially quickly if you're in a hurry, and support multiple control strategies of timer, charging capacity, charging fee.



The screenshot shows the 'Preset' charging control interface. At the top, there is a back arrow and the title 'Preset'. Below the title, there are three tabs: 'Cost', 'Energy', and 'Time', with 'Time' selected. The interface displays the following settings:

- Preset charge**: Cost, Energy, Time (selected)
- Preset Time**: 0h30min >
- Start time**: 11:20 >
- Everyday**:

**Appointment notice:**

- 1.For the same account, only one charging pile can be reserved at the same time at the same time;
- 2.Only a single appointment can be made with the same account;
- 3.When the appointment time is up, the platform will not interrupt the charging process;
- 4.After the appointment is submitted, the appointment can be cancelled;

At the bottom, there is a blue 'Confirm' button.

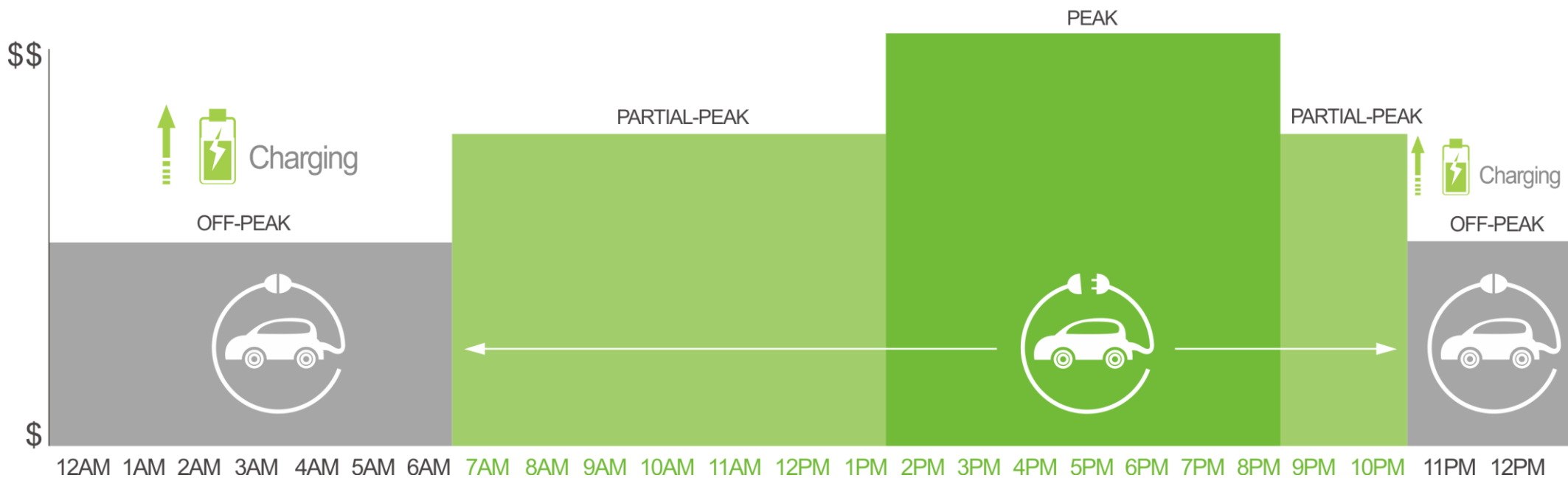
# Working Modes

## Off-Peak Mode

Once enable the Off-Peak mode, the EV charger will automatically charge the EV when it's at off-peak time to reduce the electricity bills.

LOWEST COST  
 IDEAL CHARGING TIMES: 11PM-7AM

HIGHER COST  
 AVOLD CHARGING : 7AM-11PM

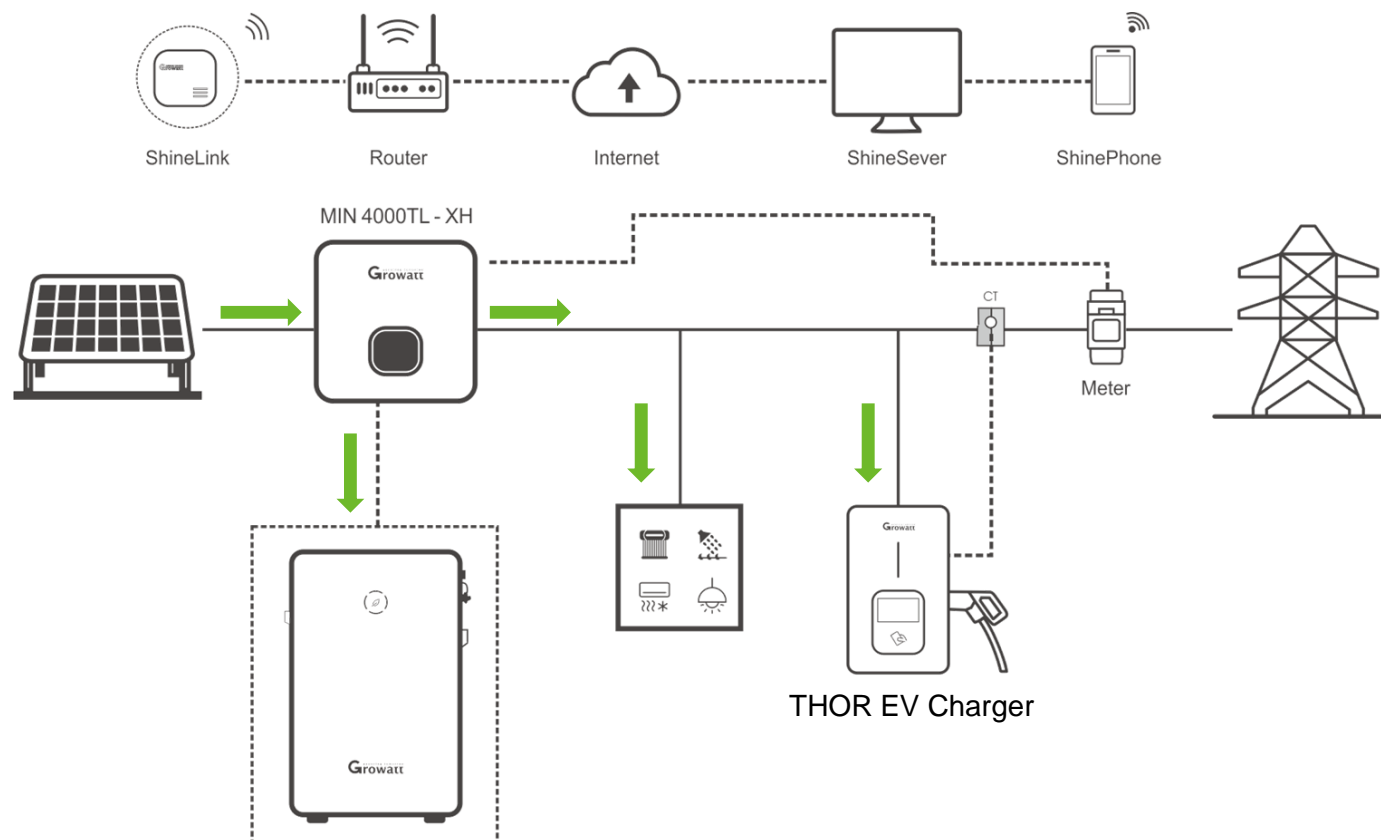




# Working Modes

## PV Linkage Mode

Driven by solar, charge your car with 100% renewable energy, the EV will be charged by the surplus solar power dynamically, combining PV and EV charger together to maximize the solar self-consumption rate and cut your bill.



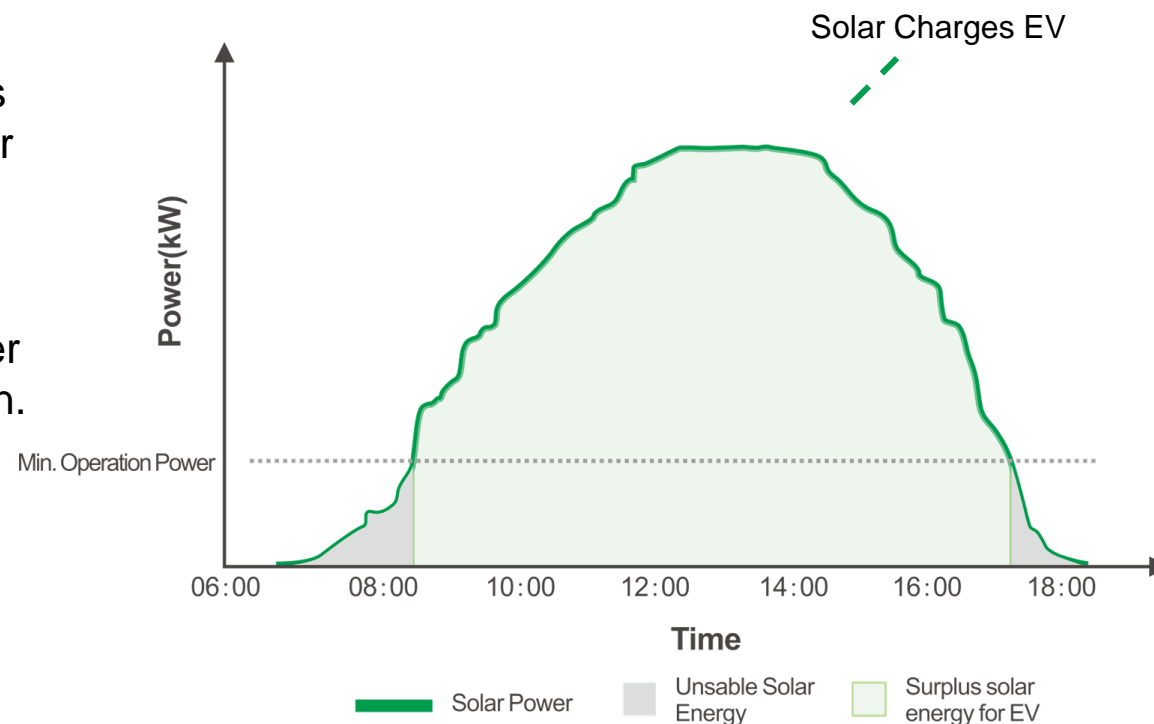
\*The solar system cannot enable the zero export limitation function if enabling the PV linkage mode of EV charger

# Working Modes

## PV Linkage Mode

### How it works?

- (1) The EV will be charged dynamically only by surplus solar power when the surplus solar power is greater than Min. operation power\*
- (2) When surplus solar power is lower than Min. operation power, the EV Charger will use grid power to offset the shortage part and keep charging at Min. operation power.
- (3) If disabling that importing power from the grid, then the EV charger will stop charging when the surplus solar power is lower than the Min. operation power.



\*Min. operation power: 1.4kW for single phase EV charger, and 4.1kW for three-phase EV Charger

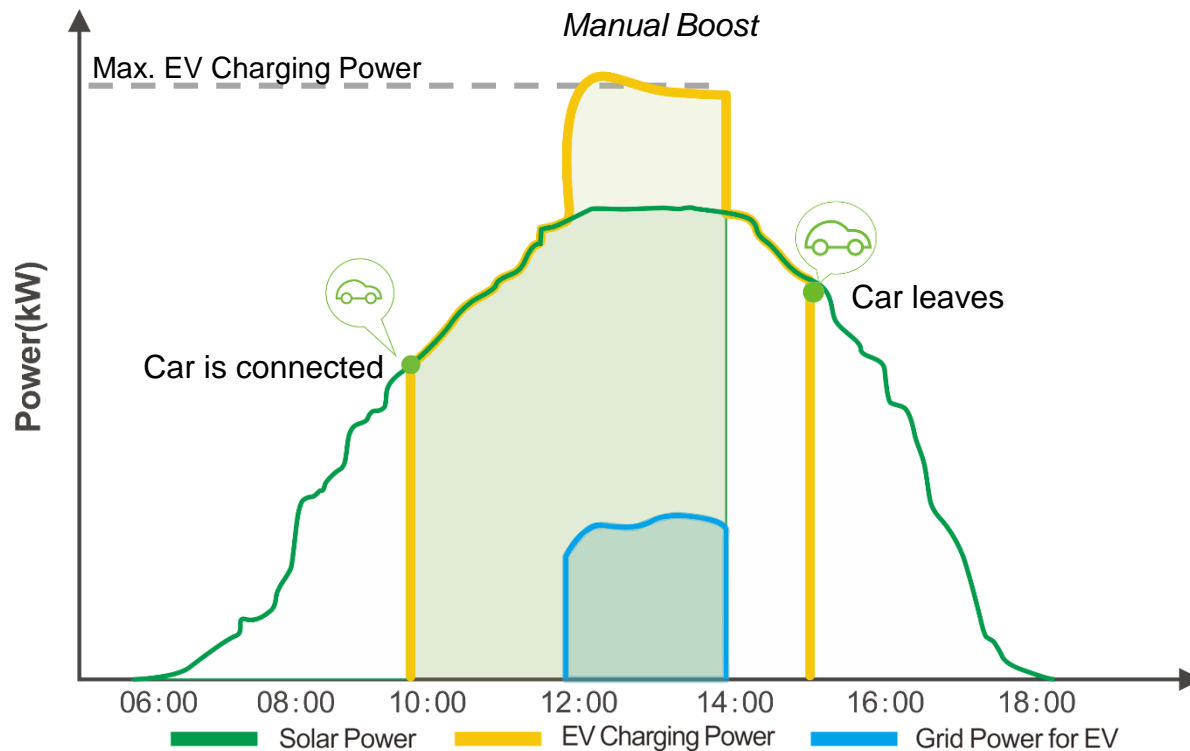
## Working Modes

### Manual Boost

It's only available in PV Linkage mode, and be useful if you arrive home with an almost empty battery and want to charge the EV immediately to ensure the enough energy for a short trip if needed

### How it works?

While in Manual Boost mode, EV will be charged at Max. power (Fast Mode) for a set period even drawing the power from the grid. After that, will recover back to the normal PV linkage mode.



Manual Boost Time: 12:00-14:00

# Working Modes

## Smart Boost

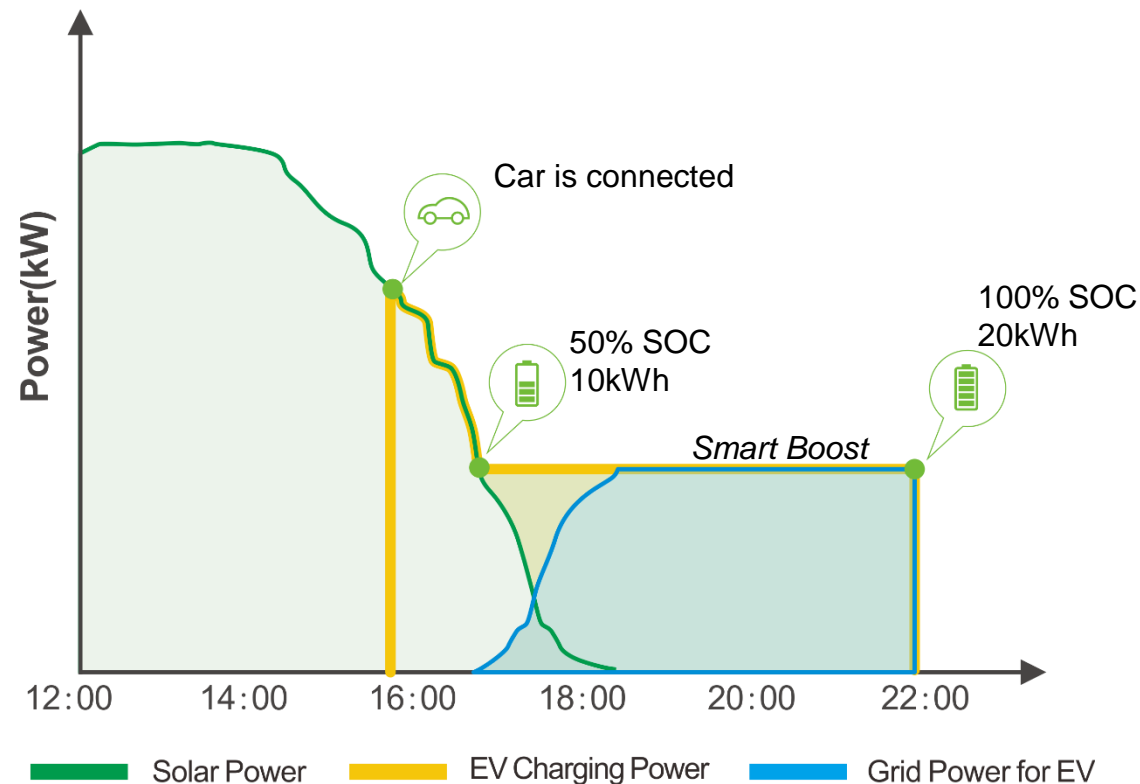
It's only available in PV Linkage mode and Off-peak mode, and it guarantees EV's battery capacity before a set time even the solar energy is insufficient or off-peak time is short

### How it works?

The Smart Boost will enable to charge the EV with a target kWh figured by a set time, it may draw the power from the grid to guarantee the EV's battery capacity when the solar energy is insufficient or the off-peak time not long enough.

### Example:

You wish to ensure there is enough charge (20kWh) in the EV to go out at 22:00, and The EV has been charged by surplus solar energy during PV Linkage mode with only 10kWh of charge accumulated. Because you activated the smart boost, then the THOR EV Charger will automatically boosted the charge to the required 20kWh by 22:00

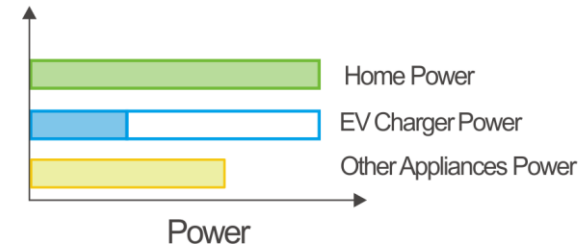
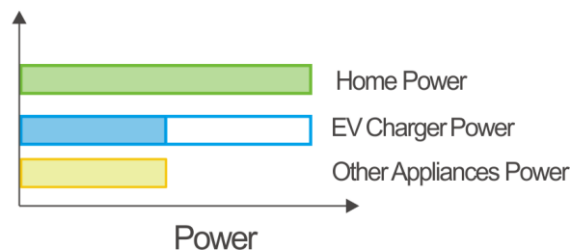
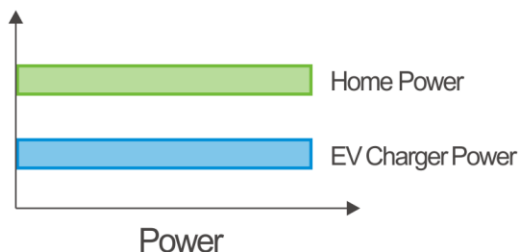


*Smart Boost : 20kWh of charge before 22:00*

# Working Modes

## Load Balancing

The EV Charger offers power balancing function at home, the EV charger can read the incoming power to the house with an additional CT. Then the EV charger will adjust its charging power dynamically according to the home power to avoid exceeding the limited point, always charge your car at the maximum charging speed without trigger the power limitation.

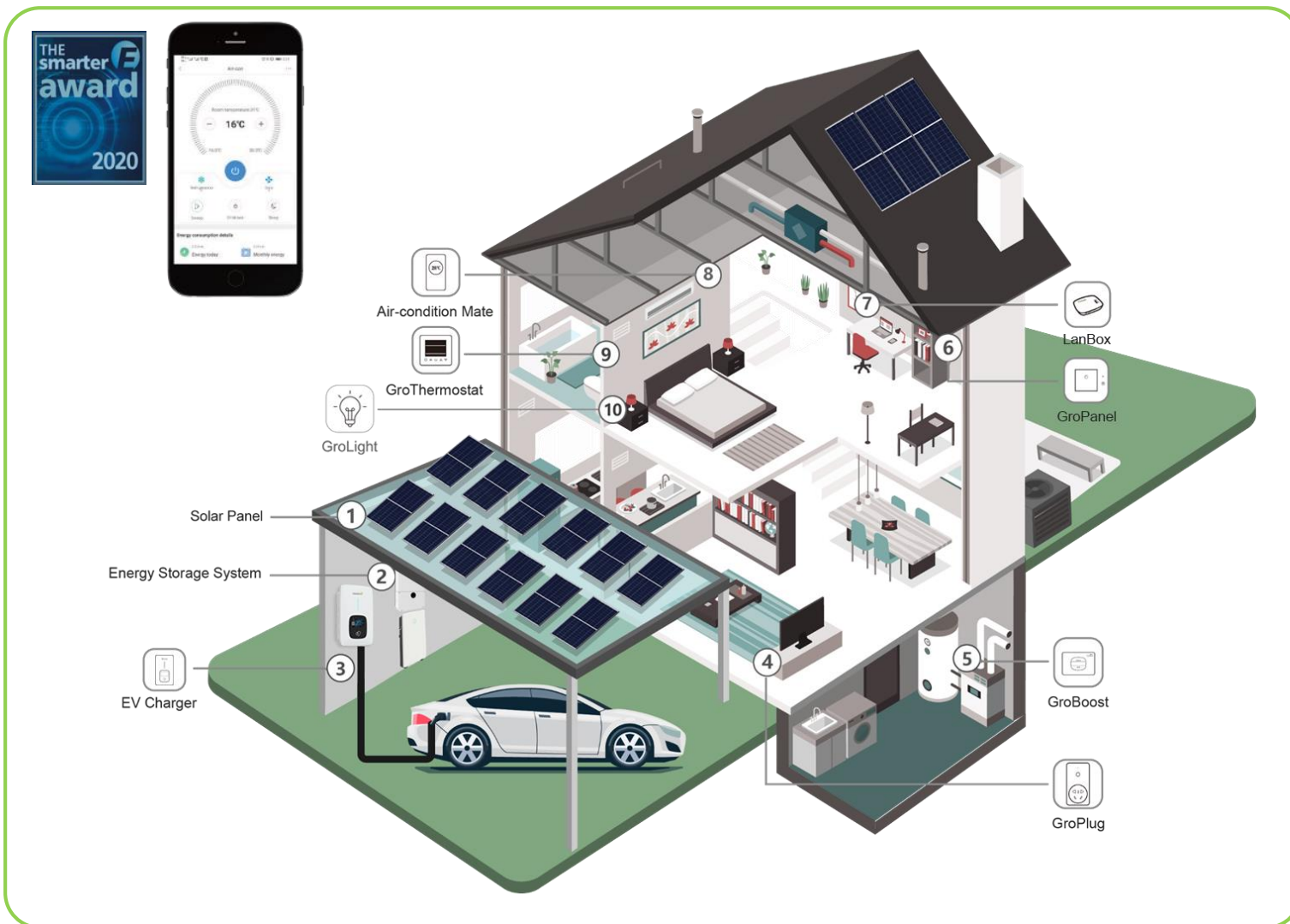


# Smart Home

## GroHome

is a smart home system that integrates solar, energy storage, smart EV charger, water heater, VPP interface and IoT devices to increase a household's rate of PV self-consumption, also help you to **enjoy the new lifestyle of 'Green + Smart'**.

*100% Green Energy for Your Home.*





# Thanks!



[www.ginverter.com](http://www.ginverter.com)



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