

GOODWE

# DRIVING THE WORLD'S SMART ENERGY FUTURE

GoodWe

GoodWe' ES G2 and ET 15 to 30k Series

# SMT Series

**Model Name:**  
GW50KS-MT,  
GW60KS-MT

**Weight:** 55kG





**Dimension:** 520 x 660 x 220 mm



GW50KS-MT  
5 MPPTs



GW60KS-MT  
6 MPPTs

		SDT G2 Series	SMT Series <b>NEW</b>	MT Series <b>Phase out</b>	HT Series
					
<b>Design</b>	Nominal AC output	17 – 25 kW	25 – 60 kW	80 kW	100 – 120 kW
	Grid Connection	3 phase	3 phase	3 phase	3 phase
	AC output Voltage	400 V	400 V	400 V – 540 V	400 V – 500 V
	MPPTs	2	3	4	10 - 12
	Input current	12.5 A	12.5 A	11 - 13.3 A	15 A
	Max efficiency*	98.4 %	98.8 %	99.0 %	99.0 %
	Max DC Voltage	1100 V	1100 V	1100 V	1100 V
<b>Com.</b>	Standard communication	RS485/ Wi-Fi	RS485/ Wi-Fi	RS485	RS485
	Optional communication	LAN	LAN / PLC	Wi-Fi / PLC	Wi-Fi / PLC
<b>Protection</b>	Protection degree	IP65	IP65	IP65	IP66
	SPD Types AC/DC	III/III (II opt. DC)	III/III (II opt. DC&AC)	II/II	II/II
	PID recovery function	-	Optional	Optional	Optional
	AFCI	Optional	Optional	Optional	Optional

\* Highest efficiency in the series



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**High Efficiency** – More power and less heat

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**Robust design** – Low weight/volume for easy installation

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**High yields** - Full power operation up to 45°C or 50°C

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Up to **10% extra AC** power

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**Reliable** – High temp. range and IP65 protection

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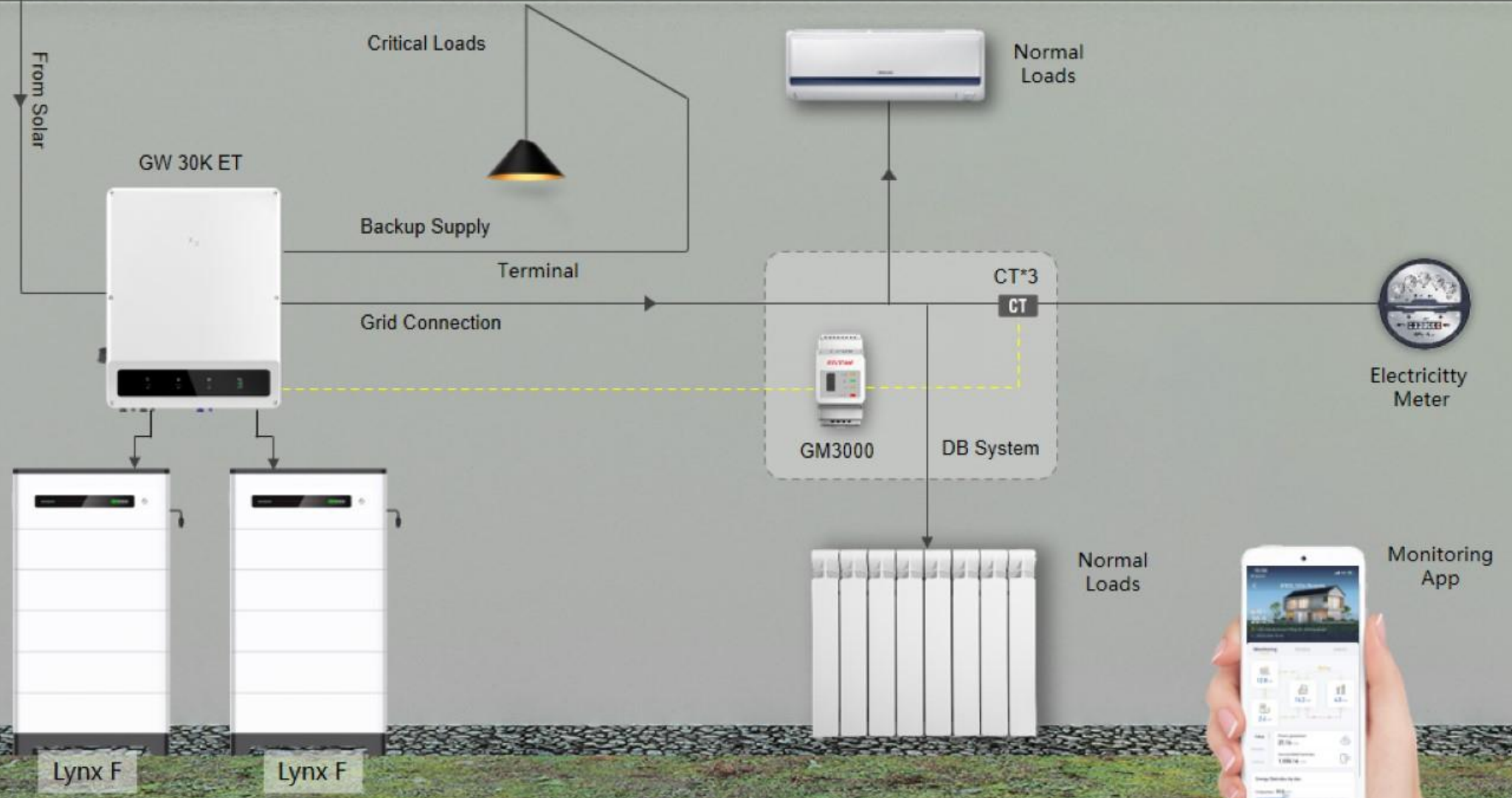
**Flexible communication** – Wi-Fi / RS485 / PLC / LAN / 4G

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**SEMS** - Free monitoring platform

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# System Diagram - One Stop Solution Center



- Easy Installation – Plug & Play Design
- Easy Commissioning - One APP for All
- PV overload( $1.5 \times P_n$ )
- Unbalanced output
- Smart load control
- 2 separate battery input for ET 25K and ET 30K
- New Lynx F Plus+ support parallel connection
- Higher efficiency
- Peak shaving



# Parameters

Model Name		GW15K-ET	GW20K-ET	GW25K-ET	GW29.9K-ET	GW30K-ET
DC Input	Max. Charge/Discharge Current (A)	50		50*2		
	Max. Charge/Discharge power (kW)	15	20	12.5*2	15*2	15*2
	Bat Voltage Range (V)	200-800				
	Max. Input Power (W)	1.5*Pn				
	Max. Input Current per MPPT (A)	30				
	Number of MPPT	2	2	3	3	3
	Number of Strings per MPPT	2/2		2/2/2		
Grid Output	Nominal Output Voltage (V)	380/400, 3L/N/PE				
	Max. Apparent Power Output to Utility (kVA)	16.5	22	27.5	29.9	33
	Max. Apparent Power from Utility Grid (kVA)	22.5	30	33	33	33
Backup Output	Max. Continuous Output Power (kVA)	Pn				
	Peak Output Apparent Power (kVA)	1.6*Pn @ 3s		30 @ 60s	36 @ 60s	36 @ 60s
Efficiency	Max. Efficiency	98.0%				
	European Efficiency	97.5%				
	Max. Battery to Load Efficiency	97.5%				
Protections	DC Surge Arrester	Type 2				
	AC Surge Arrester	Type 3				
	AFCI/RSD	Optional				
General	Communication with Portal	WiFi/4G/LAN/WIFI+LAN/Bluetooth				
	Weight (Kg)	48		54		
	Dimension (W×H×Dmm)	660×520×220				
	IP Rating	IP66				
	Noise(dB)	< 45			< 60	

# System Diagram





# Series Combination

GW5048D-ES

ES Series

GW5048-EM

EM Series

ES Series

GW5000-ES-20

GW5000M-ES-20

GW5000S-BP

SBP Series

SBP Series

GW5000-SBP-20



# Features

Easy Installation - Plug&Play Design

Easy Commissioning - One APP for All

House Fit-in - Mute and Soft Style

Integrated PV2 Isolator



**GOODWE**  
Smart Energy Innovator



# Comparison With G1

Model Name		Generation 1		Generation 2	
		GW***-EM	GW***D-ES	GW***M-ES-20	GW***-ES-20
Battery Input	Max. Charge/Discharge Current (A)	50	100	60	120
	Max charge power (W)	2300	Pn	3000	Pn
	Max discharge power (W)	2300	Pn	3000	Pn
	Max. Input Power (W)	1.3*Pn		1.5*Pn	
	Max. Input Current per MPPT (A)	11	14	16	
Grid Output	Nominal Apparent Power Output to Utility (VA) <sup>*3</sup>	Pn		Pn	
	Max. Apparent Power from Utility Grid (VA)	1.5*Pn @ 10s		Pn	2*Pn, max 10000W
Backup Output	Max. Continuous Output Power with Grid (VA)	2300	Pn	Pn	2* Pn
	Max. Continuous Output Power (Only Battery) (VA)	2300	Pn	3000	Pn
	Peak Output Apparent Power (Battery) (VA) <sup>*5</sup>	3500 @ 10s	1.5*Pn @ 10s		2*Pn @ 10S
Efficiency	Max. Efficiency	97.60%	97.60%	97.60%	97.60%
	European Efficiency	97%	97%	97%	97%
	Max. Battery to Load Efficiency	94%	94%	>95%	>95%
Protections	DC Surge Arrester	NA		Type 2	
	AC Surge Arrester	NA		Type 3	
	DC Arc Fault Circuit Interrupter	NA		Optional	
General	Communication with Portal	WiFi	WiFi/LAN	WiFi/Wifi+LAN/4G	
	Weight (Kg)	17	28	21.5	
	Dimension (W×H×Dmm)	347*432*175	516*440*184	505.9*434.9*154.8	

# Ezlink- for parallel systems



The image shows a black, vertical, rectangular device with a small screen and buttons, set against a background of a city at night with glowing lights and a network overlay. The word 'GOODWE' is written in red in the top right corner of the image area.

## Ezlink


Ezlink features compact size, lightweight design, and installation flexibility. With WiFi and LAN compatibility, Ezlink makes it possible for inverters to be connected to the GoodWe Smart Energy Management System (SEMS) for data monitoring. It is compliant with the IEEE 2030.5 communication protocol. Additionally, Ezlink can be used outdoors freely with its ability to accommodate harsh working conditions, thanks to a wide range of working environment temperatures and humidity.

-  Safe asymmetric encryption
-  One-to-many connection
-  Outstanding system stability
-  Recordable operation logs
-  Extensive communication methods: WiFi and LAN
-  Powerful protocol compatibility

**GOODWE**  
SOLAR ACADEMY

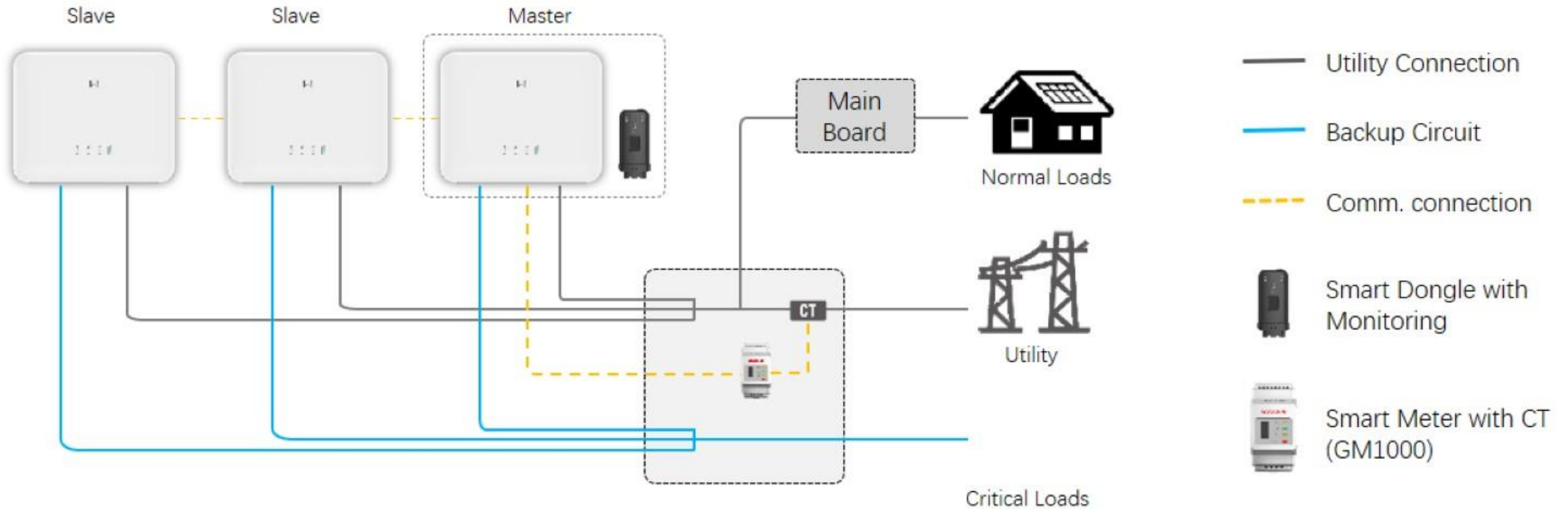
# GOODWE ES G2

GoodWe Solar Community  
[community.goodwe.com](https://community.goodwe.com)

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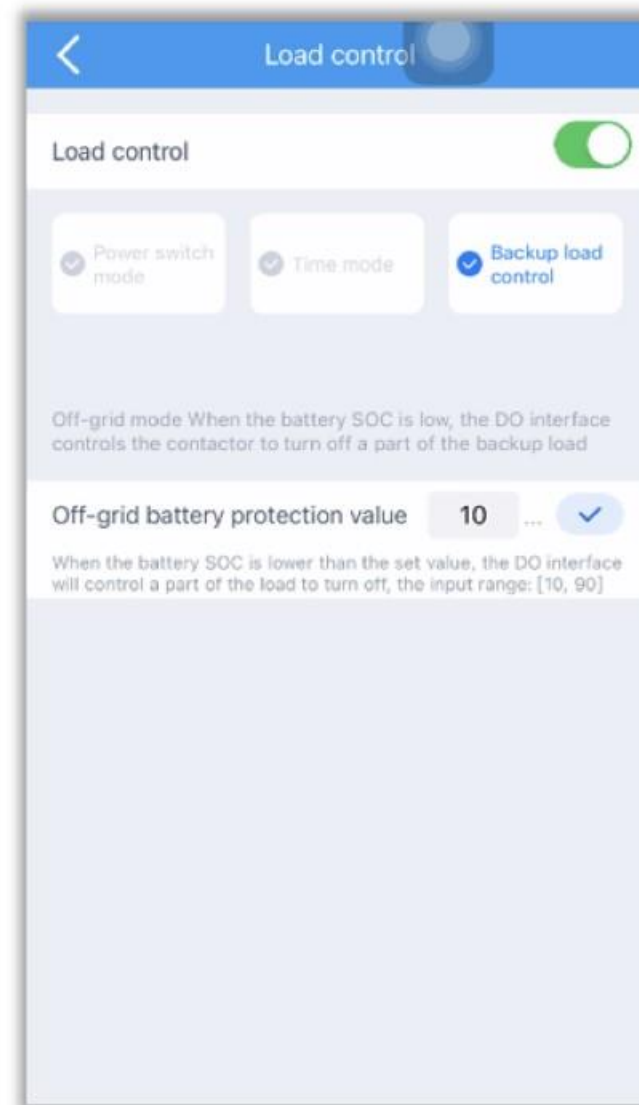
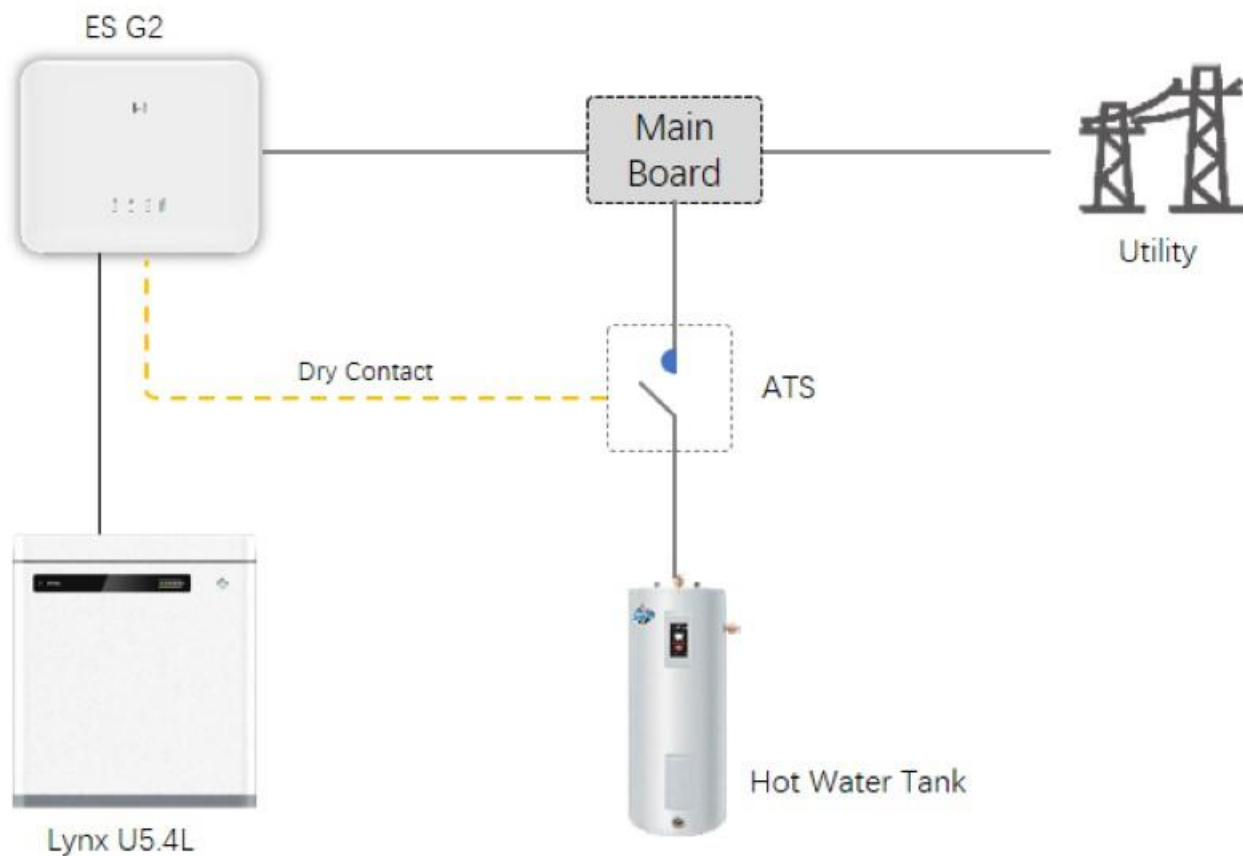
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# Paralleling System

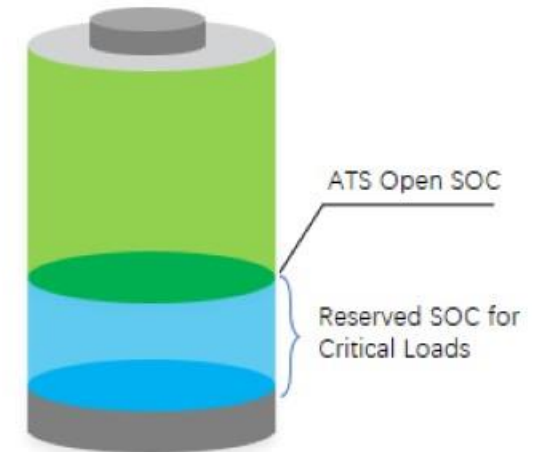
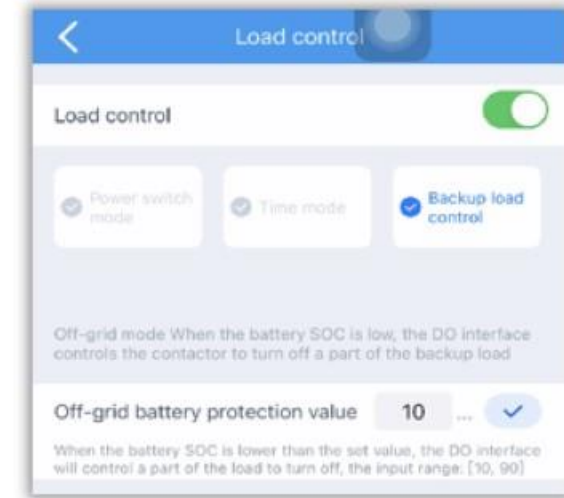
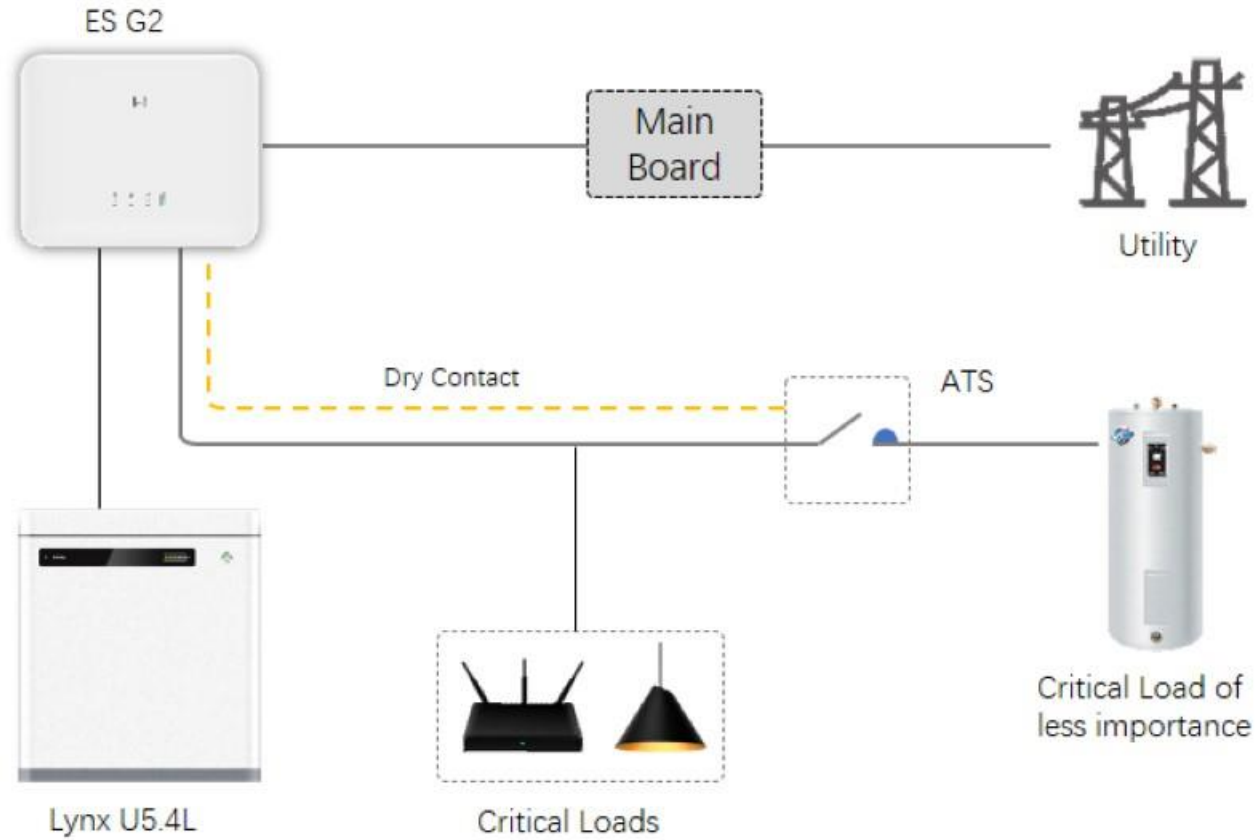


**3 pcs** could be paralleled, by Master & Slave relationship with smart communication dongle. Slave Inverter in fault mode will **automatically be bypassed**.

# Smart Load Control

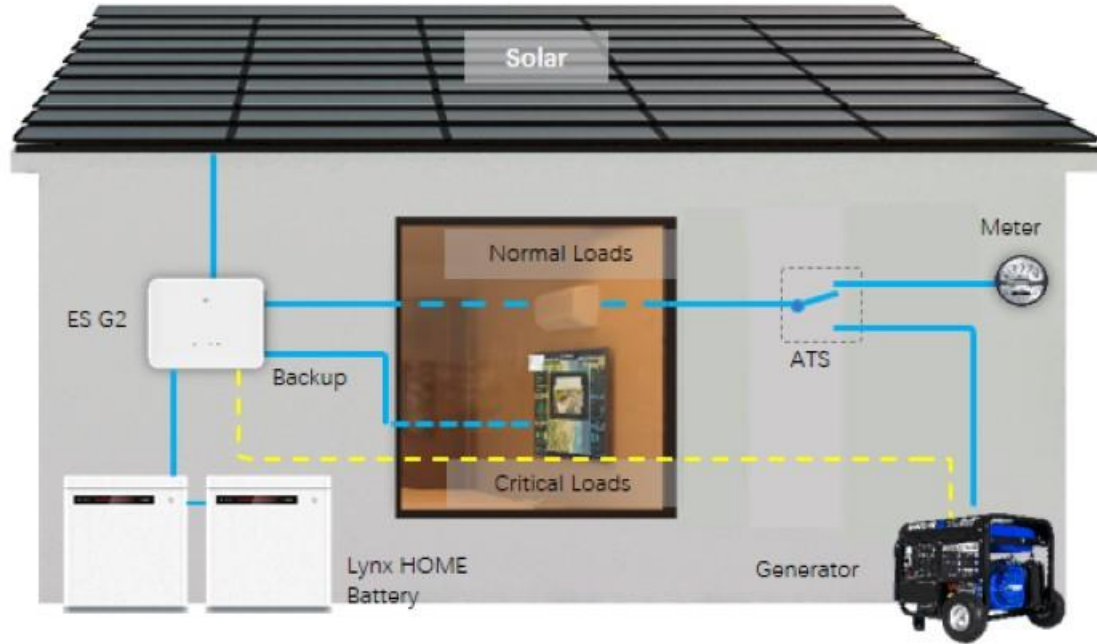


# Smart Load Control

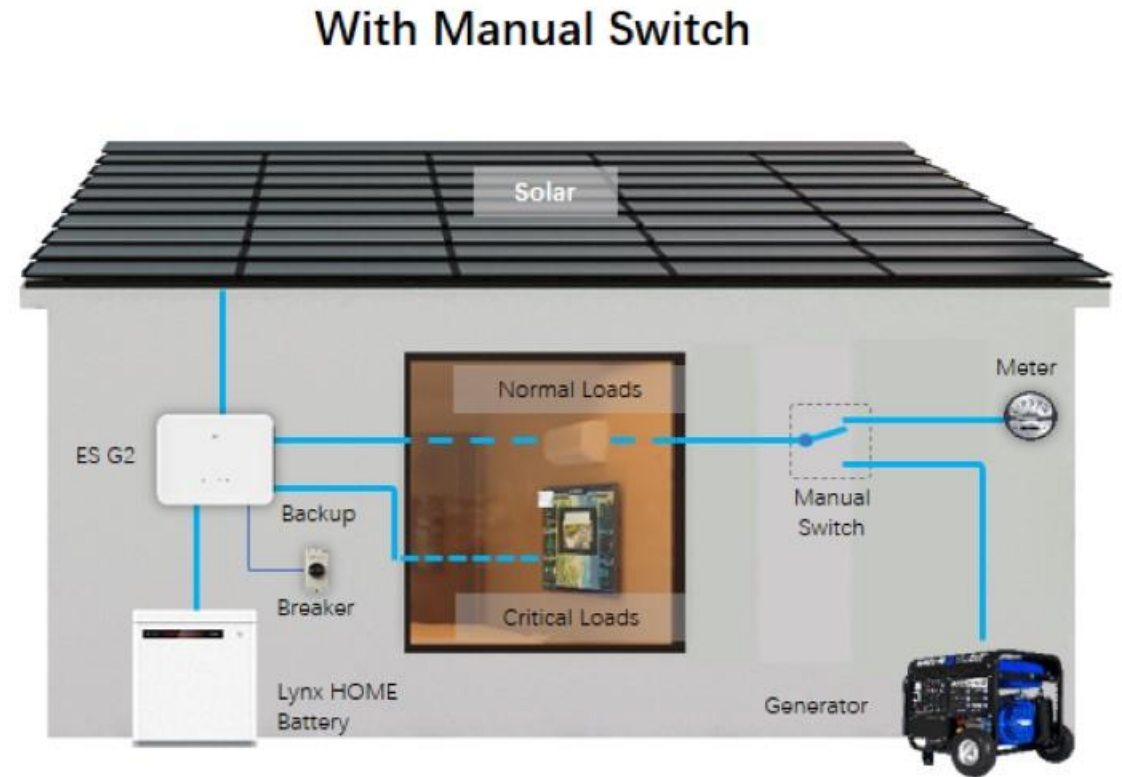




# Generator Integration

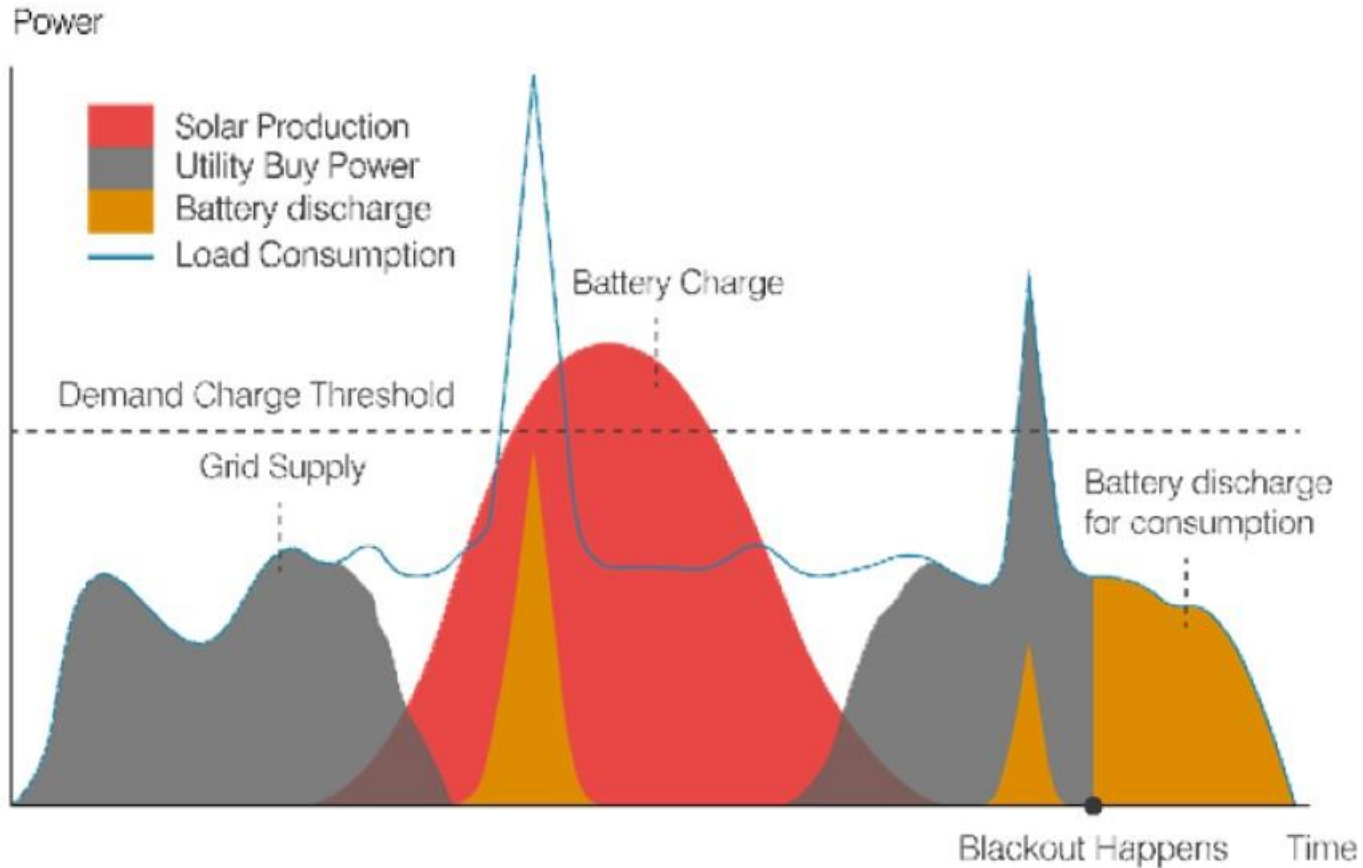


**With Auto-detection Switch**



ARM Firmware V05 required

# Operation Modes



## Self-Consumption

Maximize self-use of solar and save electricity bill

## Time of Use

Set charge/discharge time to maximize battery benefits according to FiTOU electricity prices

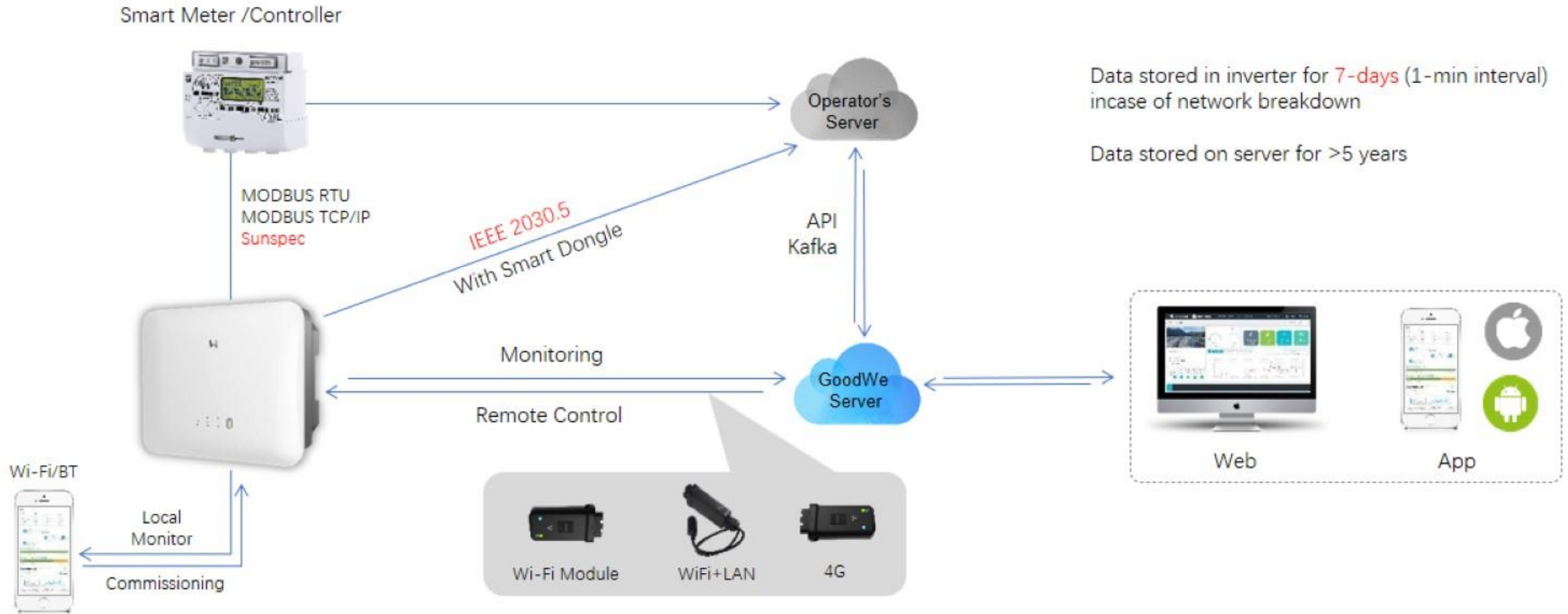
## Backup only

Battery power could be reserved usage during outage

## Peak-shaving (New)

To fit in demand charge strategy or to control the max line current at service point

# Communication System



# Safety Solution

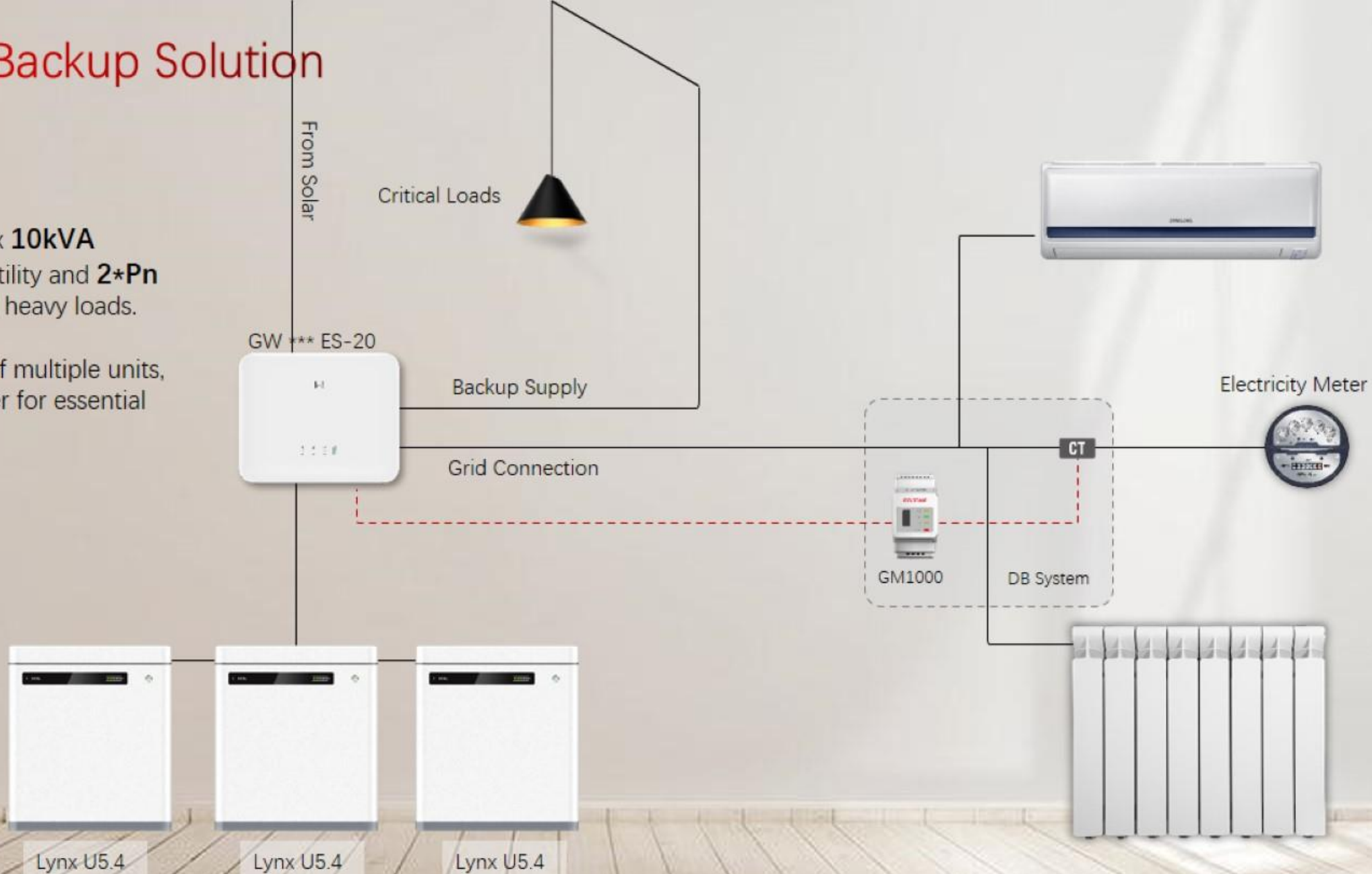


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# Essential Backup Solution

Backup support max **10kVA** consumption with utility and **2\*Pn** for 10s to withstand heavy loads.

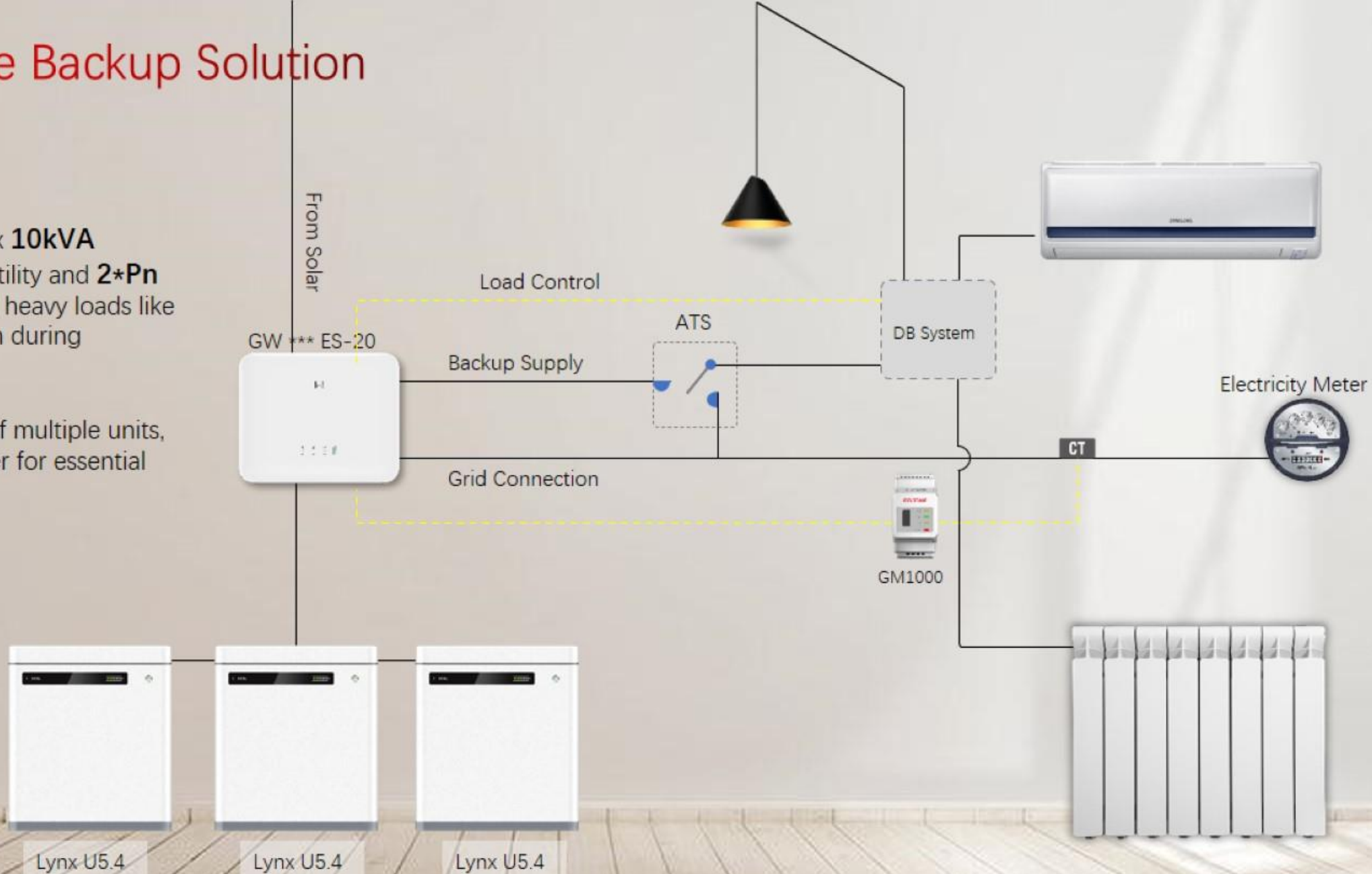
With **Paralleling** of multiple units, power supply is safer for essential loads.



# Full House Backup Solution

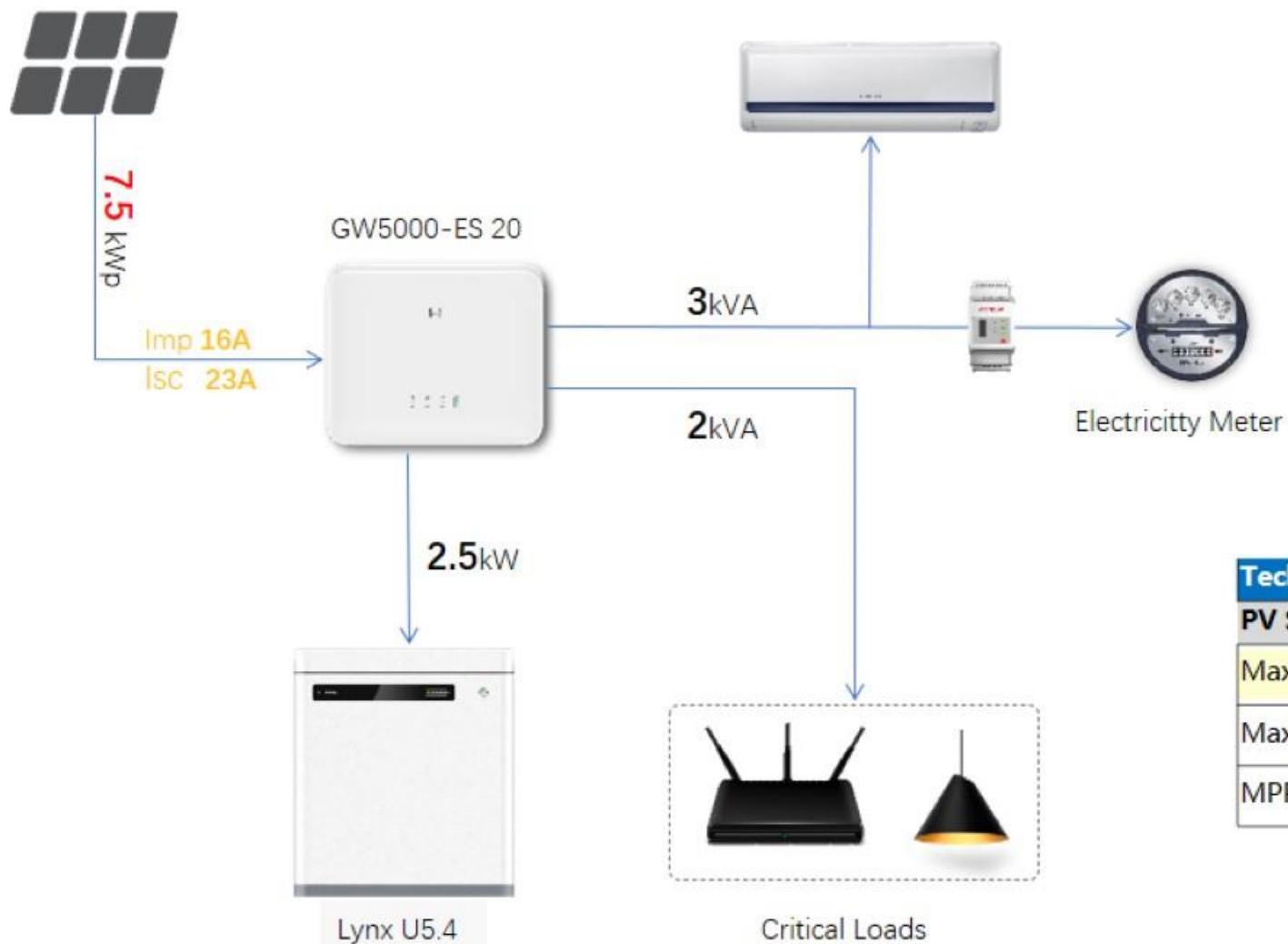
Backup support max **10kVA** consumption with utility and **2\*Pn** for 10s to withstand heavy loads like air conditioner, even during blackout.

With **Paralleling** of multiple units, power supply is safer for essential loads.



# Features - PV Overloading

More than the capacity you paid



Maximized Usage of the Oversized Solar Capacity

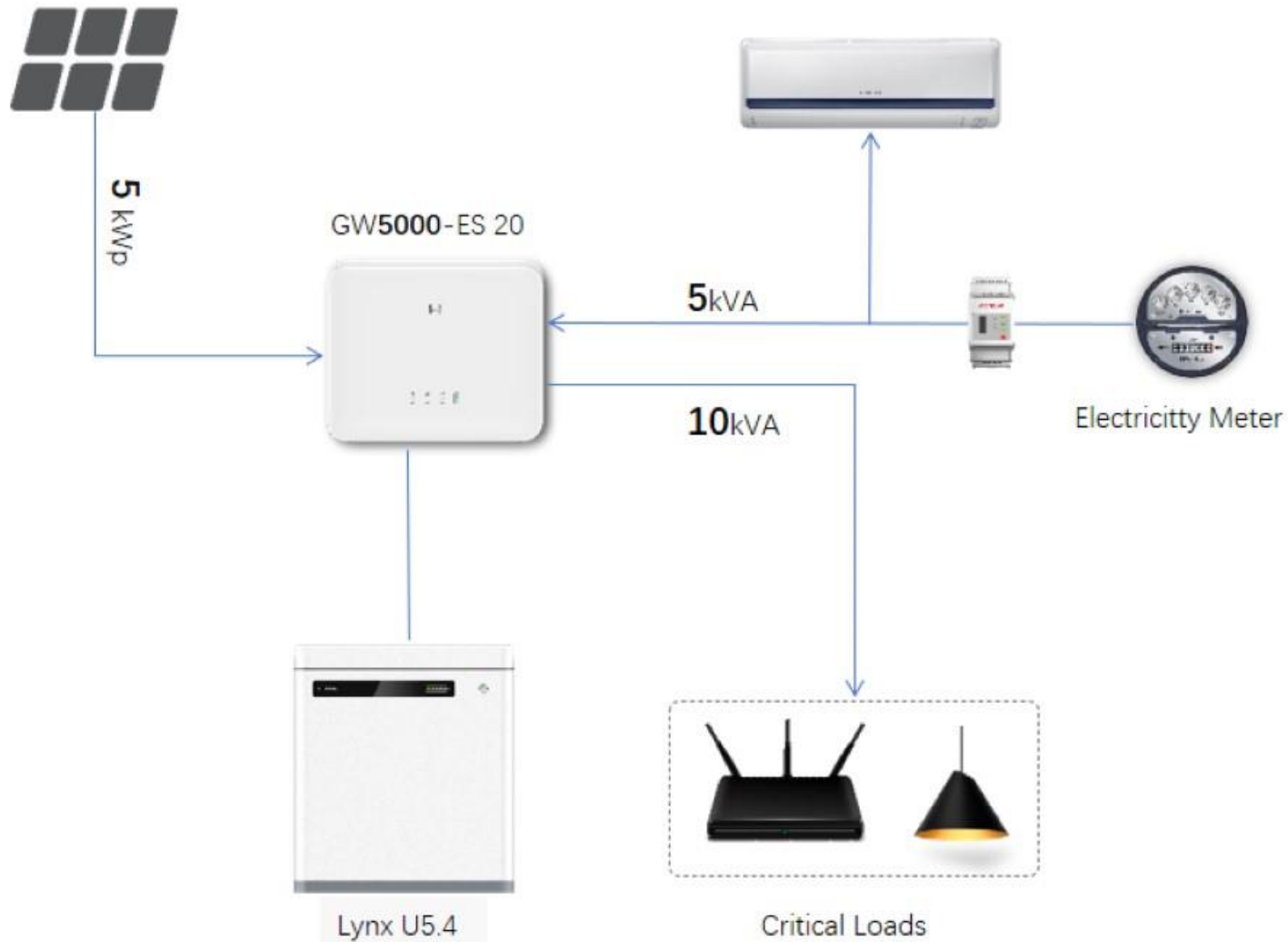
ES G2 inverter support max **1.5\*P<sub>n</sub>** PV overload ability, which means the access power will charge battery.

Suitable for large solar Panels (16A/String)

Technical Data	GW5000-ES-20	GW6000-ES-20
<b>PV String Input Data</b>		
Max. Input Power (W) <sup>2</sup>	7,500	9,000
Max. Input Voltage (V)	600	600
MPPT Operating Voltage Range (V)	60~550	60~550

# Features - Backup Overloading

*More than the capacity you paid*



*Less Limited for Whole-Home Backup Usage*

ES G2 inverter support max **2\*Pn** output with grid availability.

And **2\*Pn** output without utility

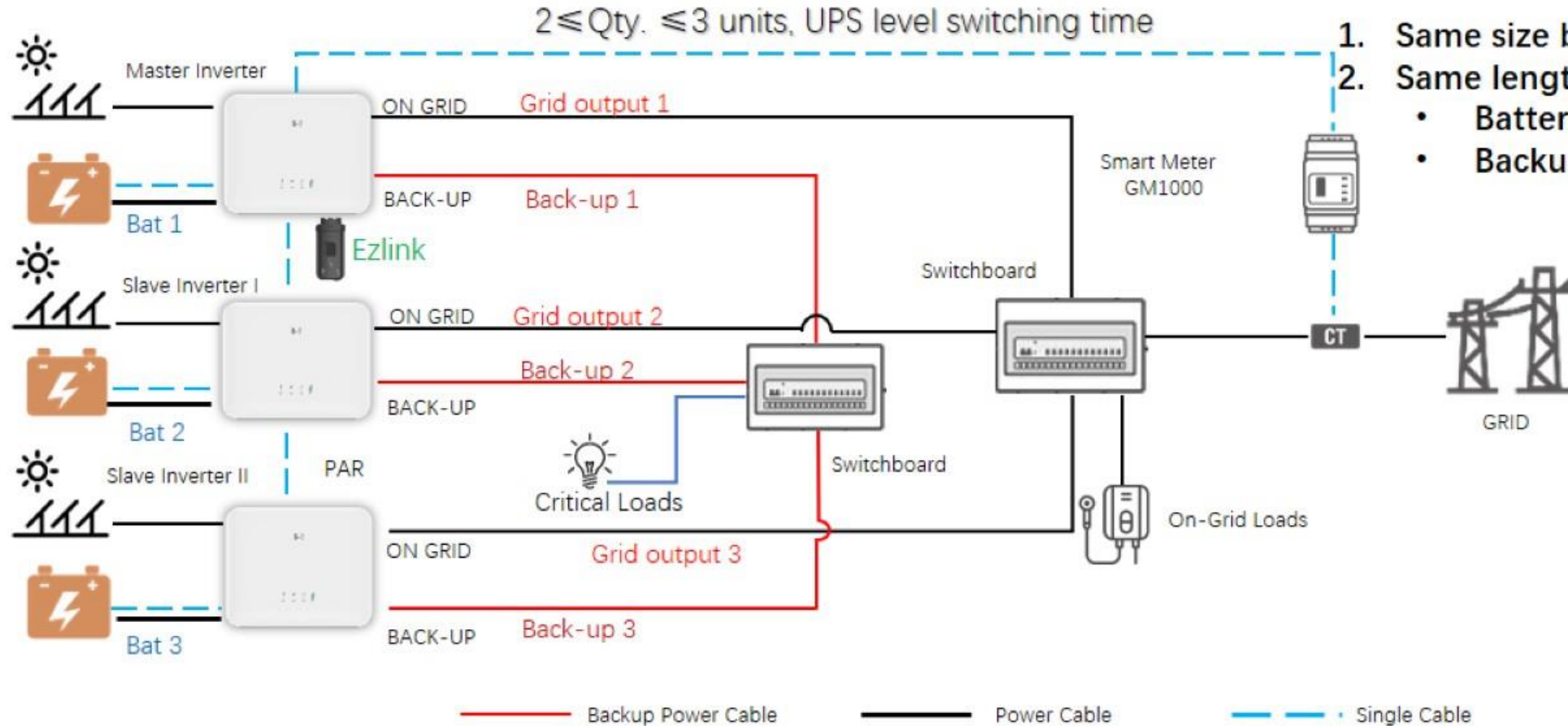


# Paralleling System (Single phase)

## Wiring Schematic

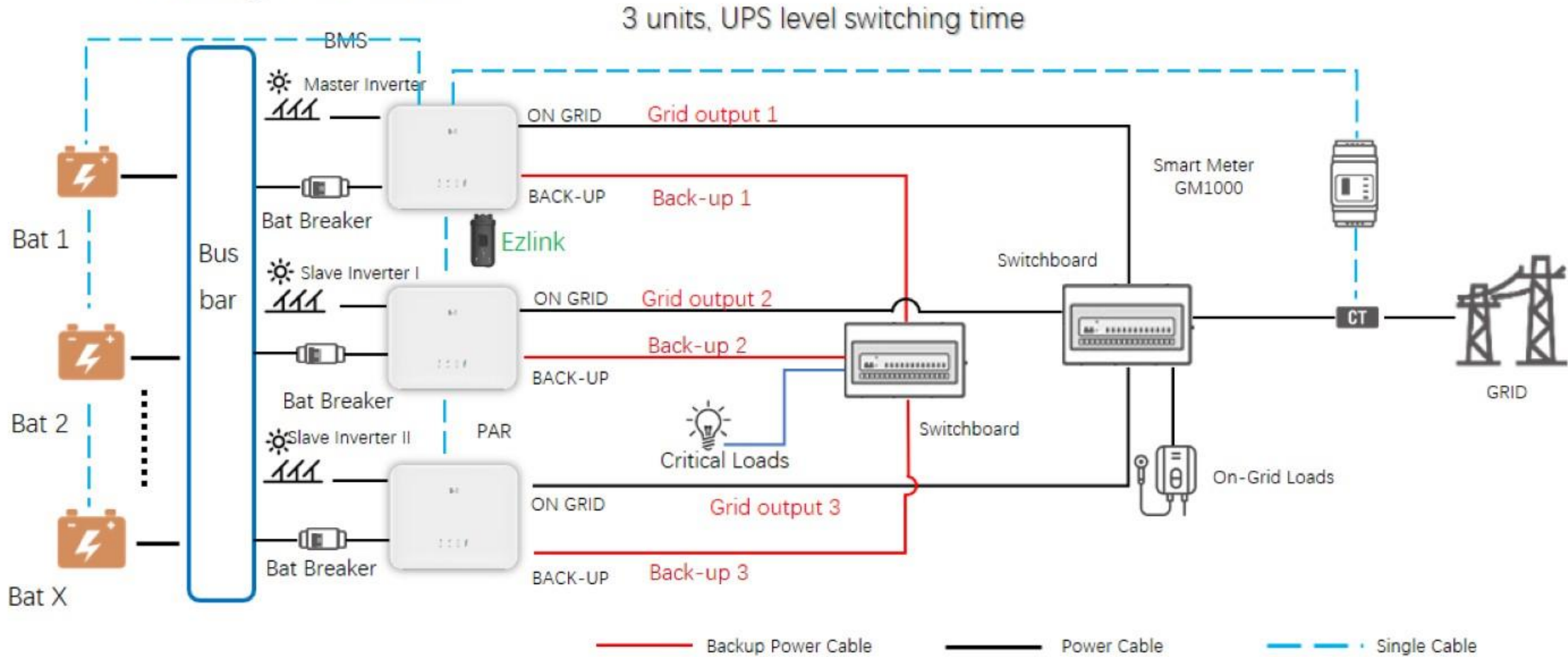
This solution requires the following:

1. Same size battery bank per device
2. Same length cable:
  - Battery DC
  - Backup AC



# Paralleling System(Single phase) - Bus Bar Solution

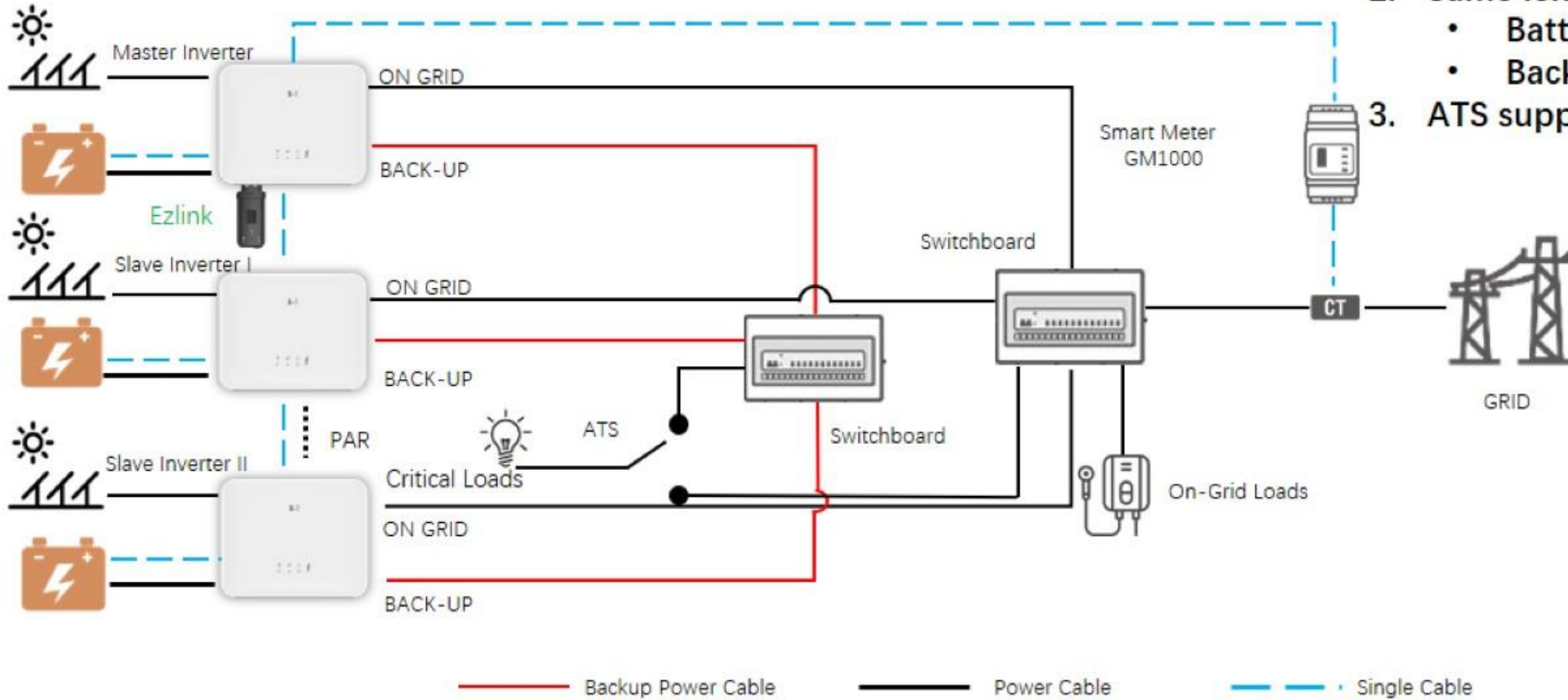
## Wiring Schematic



# Paralleling System (Single phase)

## Wiring Schematic

3 < Qty. ≤ 16 units, EPS level switching time

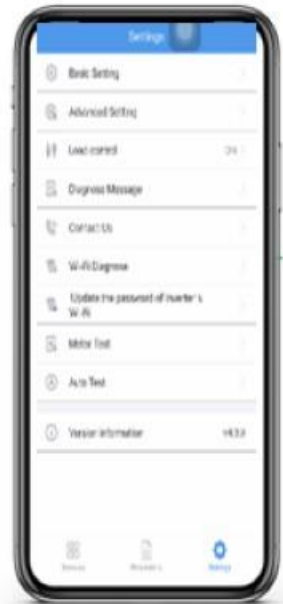


This solution requires the following:

1. Same size battery bank per device
2. Same length cable:
  - Battery DC
  - Backup AC
3. ATS supplied by customer

# Paralleling System

## Configuration



Bluetooth

Master inverter



Ezlink

Setting WiFi/LAN parameters



# Compatible Batteries



Function	GoodWe Lynx U	LG RESU LV	BYD Box Flex Lite	Pylontech Force L1/L2	Dyness Powerbox
Operation Data	Yes	Yes	Yes	Yes	Yes
Paralleling	Up to 32.4kWh	Up to 24kWh	Up to 320kWh	Up to 24kWh	Up to 38kWh
BMS Update	Yes	Yes	No	No	No
Throughput Energy	Yes	No	No	No	No

# Compatible Batteries




Function	Solar MD SS	Freedom Won	Blue Nova	WECO	UZ Energy
Operation Data	Yes	Yes	Yes	Yes	Yes
Paralleling	Up to 22,2kWh	Up to 80kWh	Up to 46,8KWh	Up to 79,5kWh	Up to 80kWh
BMS Update	No	No	No	No	No
Throughput Energy	No	No	No	No	No

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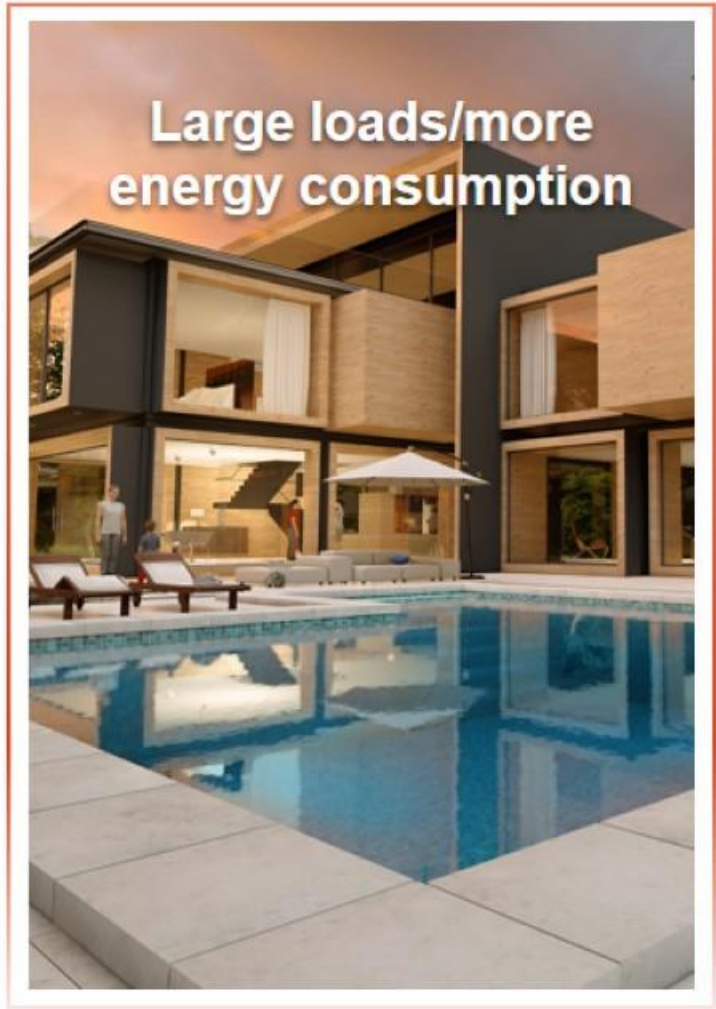
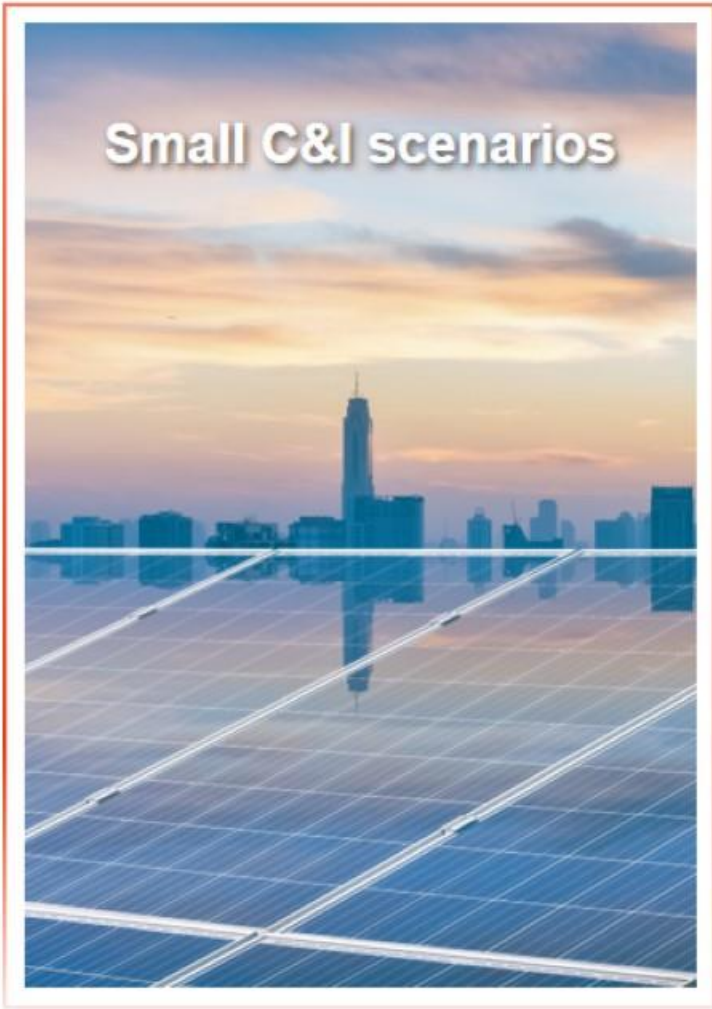
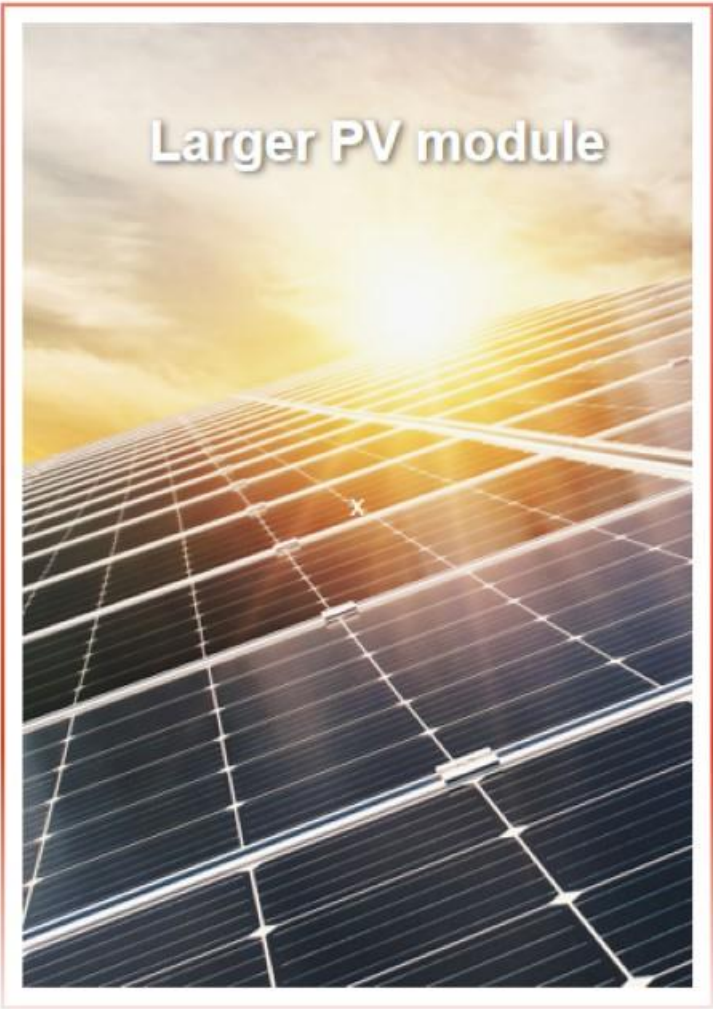
# GOODWE ET 15-30

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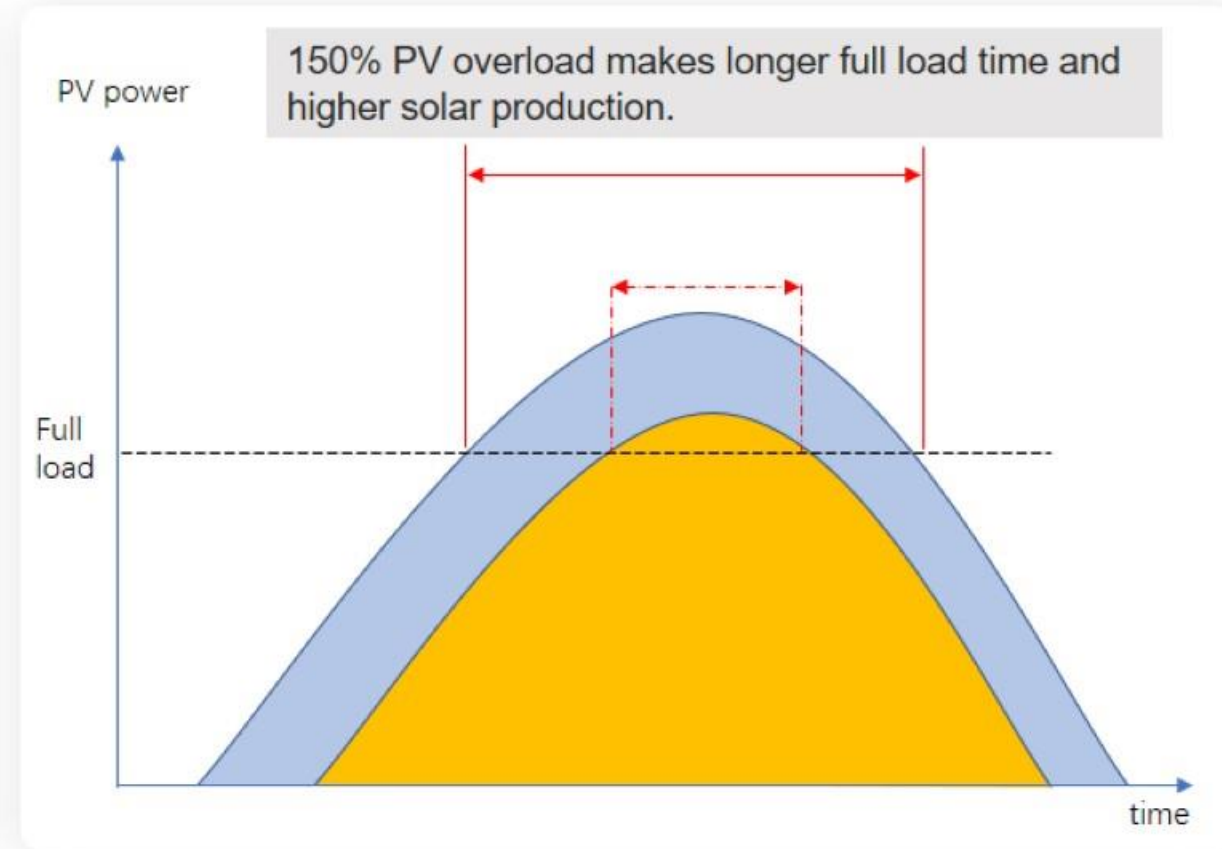
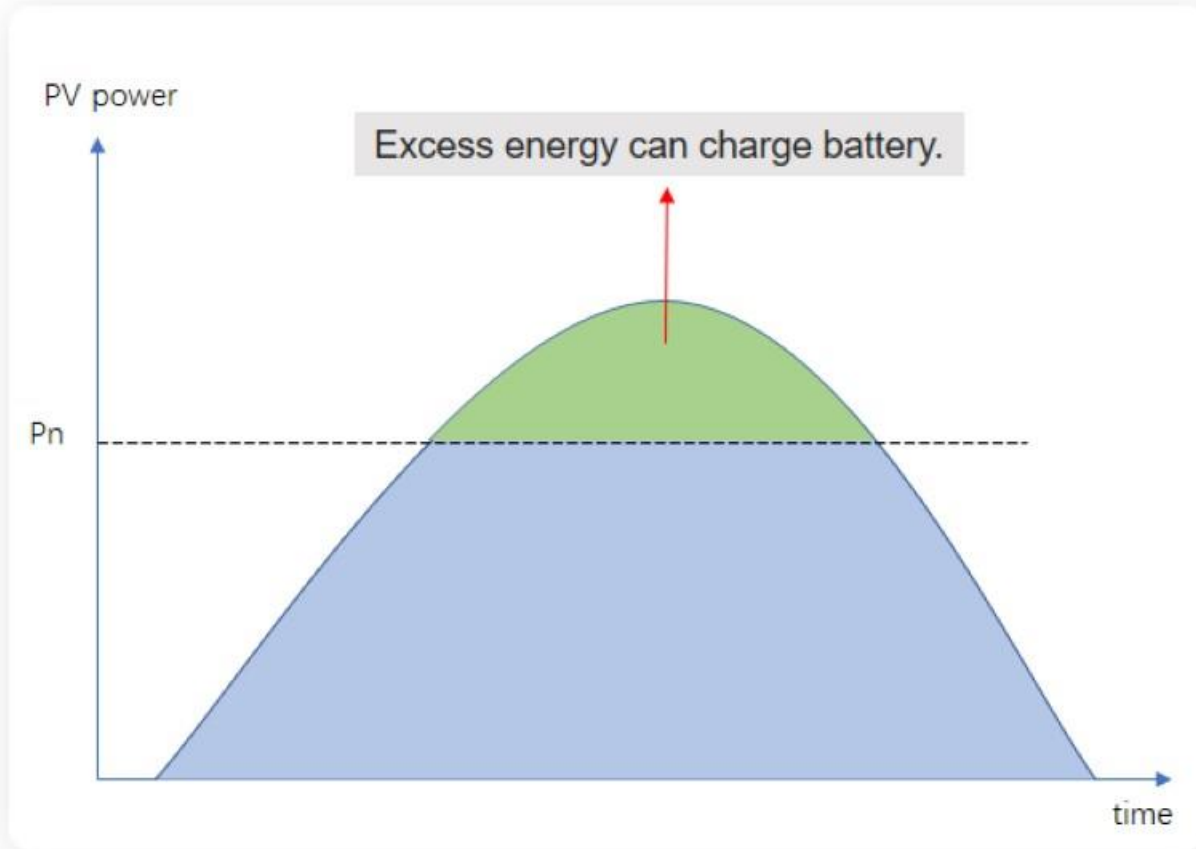
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# Background





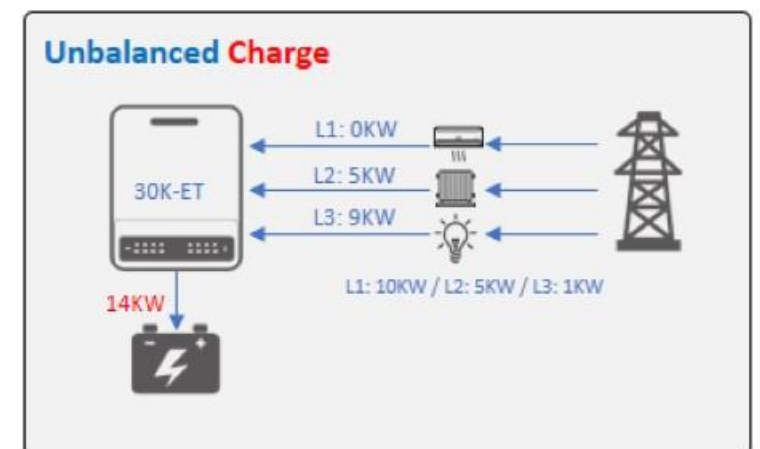
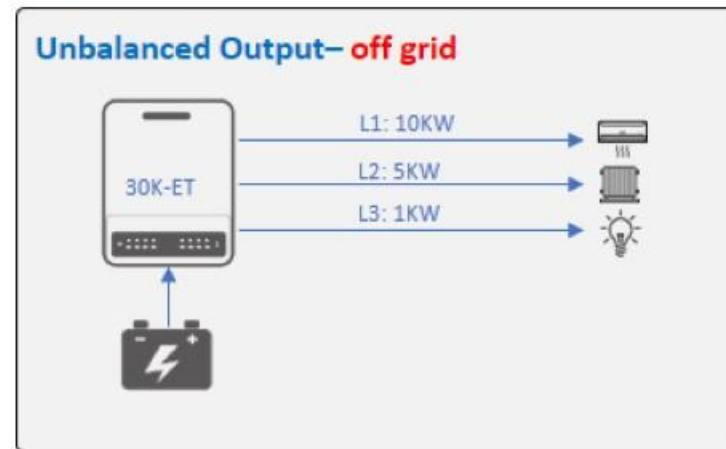
# PV overload



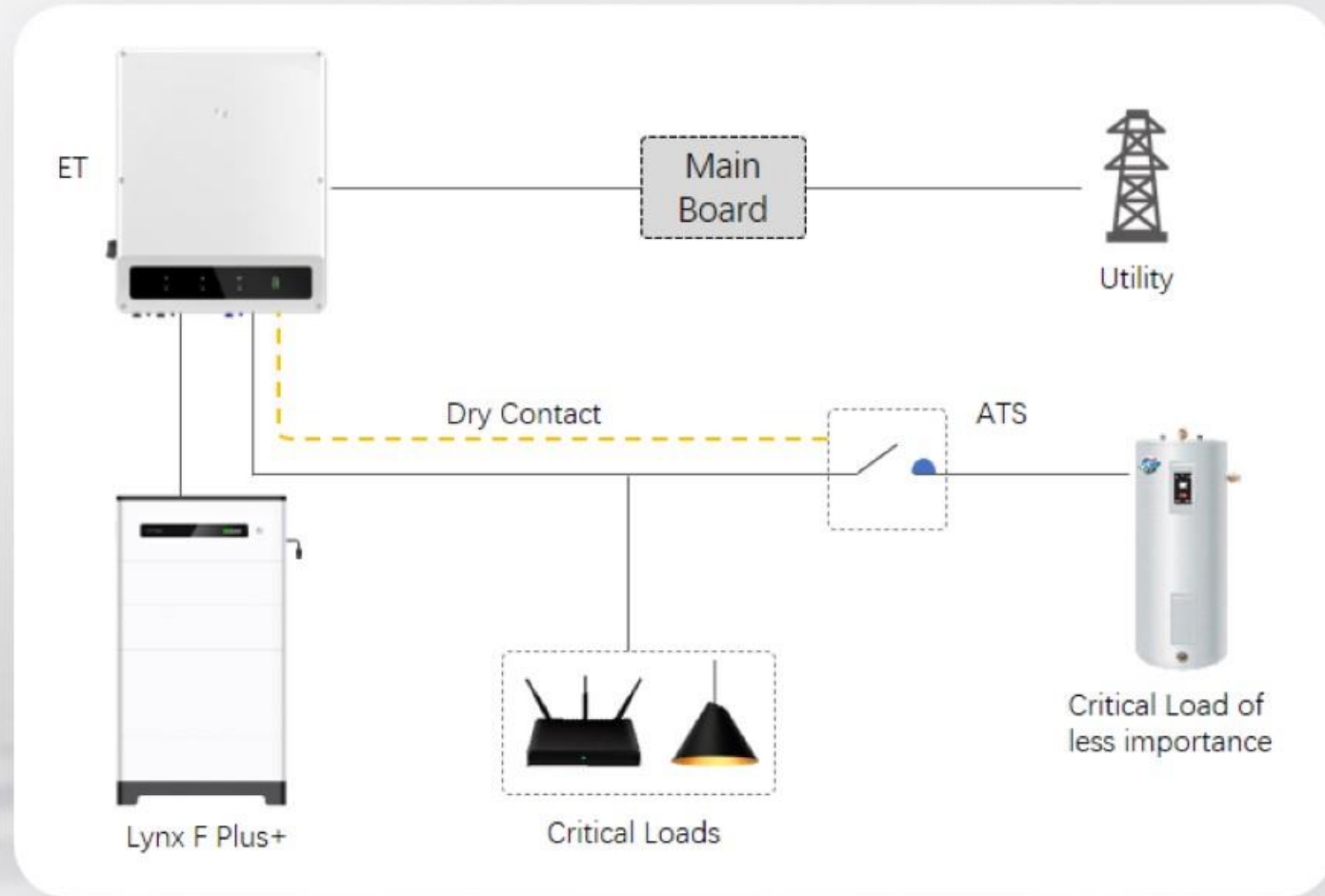
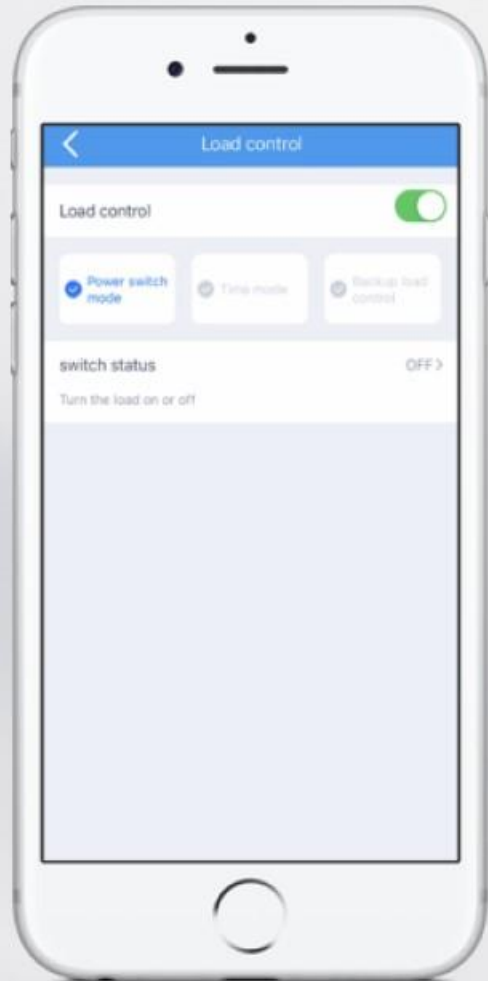
# Unbalanced output

- 100% unbalanced output
- Both Back-Up & On-Grid
- Optional on APP
- No extra devices

**Note:** unbalanced output on Grid side works only if Smart Meter works fine & communicates to inverter successfully

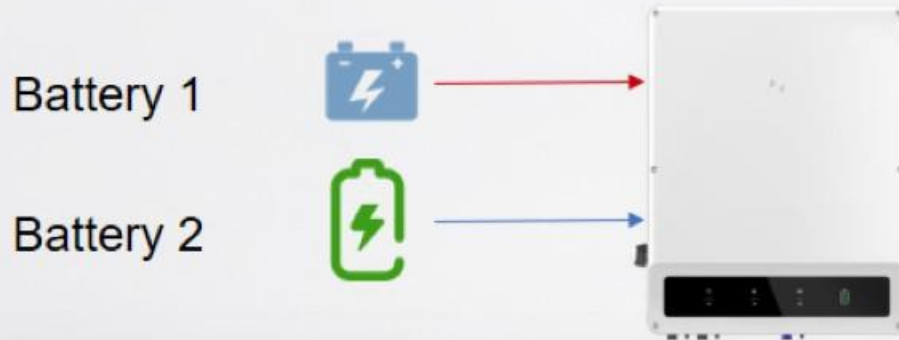


# Smart load control



Control large loads with DO contact based on the preset conditions to make sure solar power is used under max-efficiency way

# Separate battery input



- 1 Battery input for ET 15/20K,  
2 Battery input for ET 25/30K
- Max. 50A for each battery input
- Different brand battery can be used(BYD, Pylontec and Goodwe)

Compatible battery is listed below, open BMS protocol can also be provided.



GoodWe Lynx F Plus+  
(Up to 50A after paralleling)



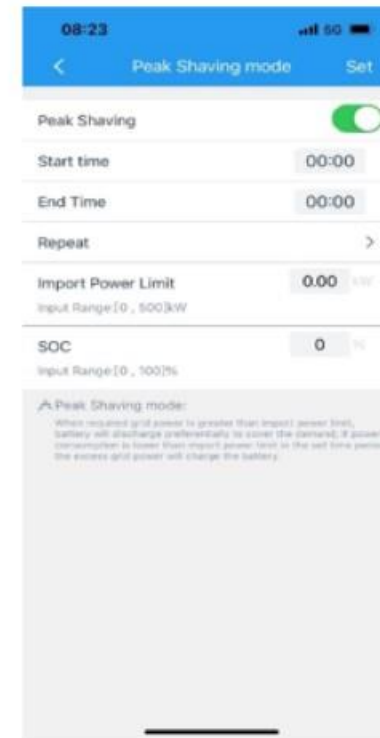
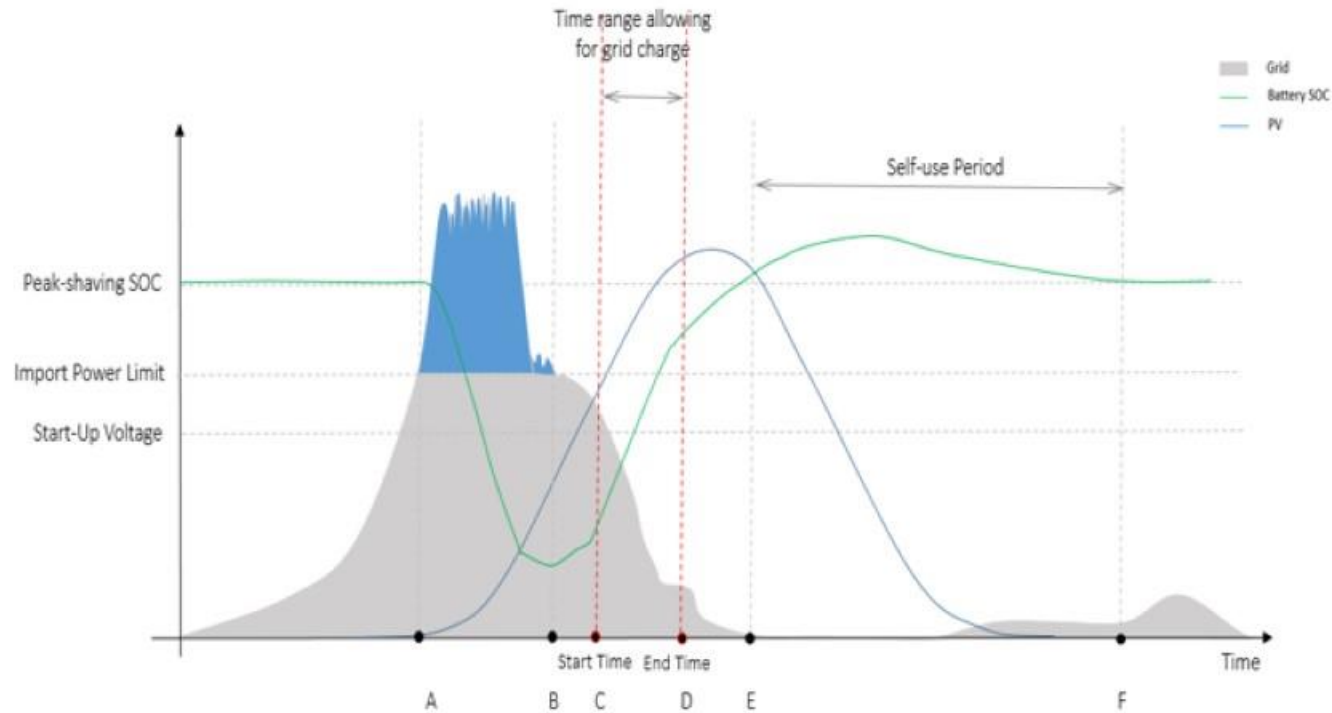
BYD HVM/HVS



Pylon PowerCube



# Peak Shaving



# Easy commission with Solar Go

## Basic setting

- Change the safety code
- Time
- Grid type
- Work mode
- ....

## Advanced setting

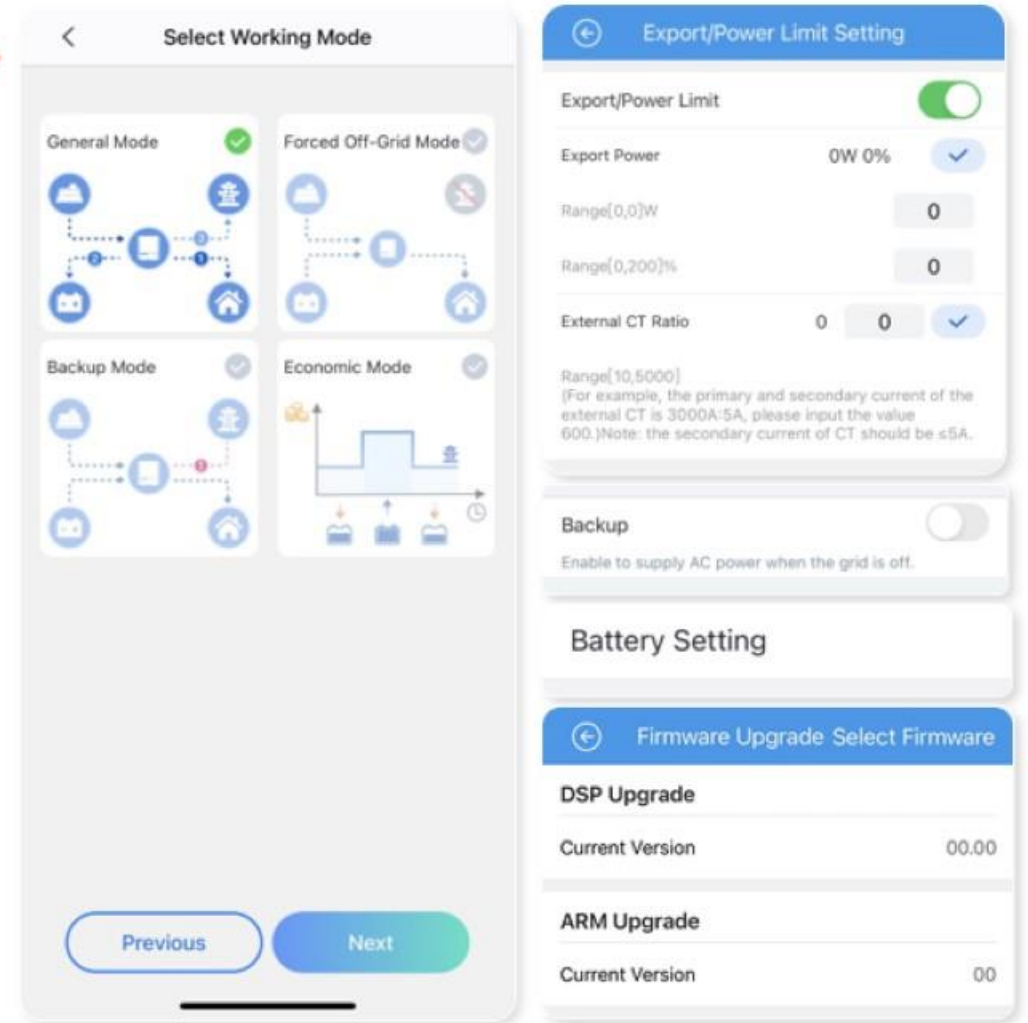
- Export Power Limitation
- Back-up setting
- Custom Safety Parameters
- Power Factor Setting
- Battery setting
- .....

## Maintenance

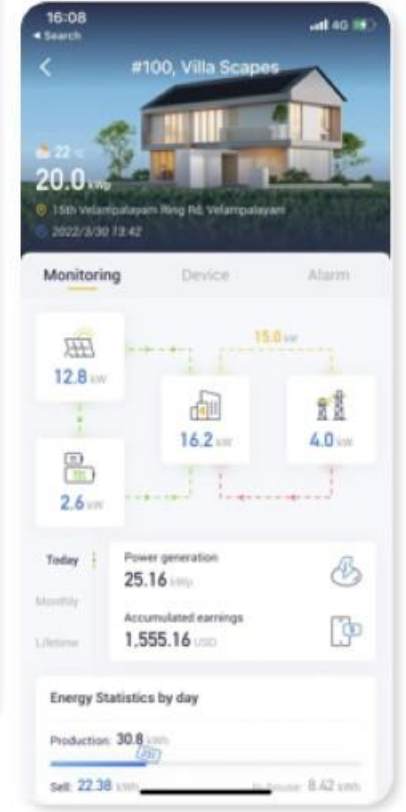
- Grid switch
- Firmware upgrade



You can do a lot of things in this APP!



# Convenient Maintenance with SEMS





THANK YOU