

P O W E R  
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T O M O -  
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T 86 755-2747-1900 F 86 755-2747-2131

SHENZHEN GROWATT NEW ENERGY CO.,LTD.

4-13/F, Building A, Sino-German (Europe) Industrial Park,  
Hangcheng Blvd, Bao'an District, Shenzhen, China



Growatt New Energy

GR-CA-007-10



## BALCONY SOLAR STORAGE SYSTEM

**GROWATT**



# Balcony Energy Storage System

## Effortless Installation, Endless Energy

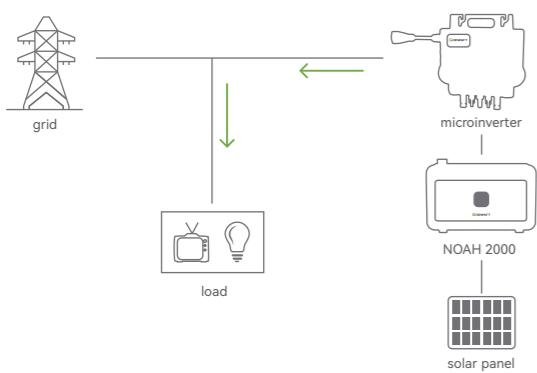


The Growatt balcony solar storage system includes NOAH 2000 DC coupled solution and NEXA 2000 all-in-one solution, designed specifically for balcony integration. When used in conjunction with solar panels, it creates an environmentally friendly home power solution.

## Solution System Diagram

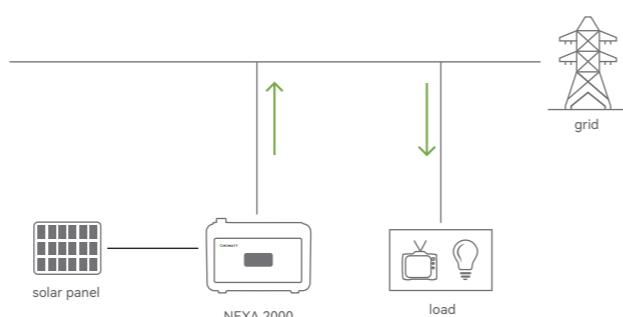
### DC-coupled solution

NOAH 2000 + NEO 800M-X



### All-in-one Solution

NEXA 2000



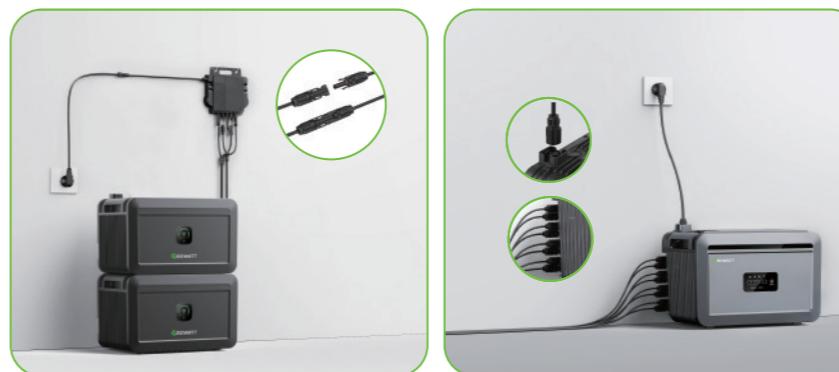
### Fits Anywhere

It has an IP66 waterproof rating, making it safe for use in balconies, terraces/gardens, villas, apartments, and sloping roofs regardless of the weather conditions.



### Plug and Play, quick installation

NOAH 2000 and NEXA 2000 are plug-and-play devices, installable solo in 5 minutes without professional electricians.



### Safe & Reliable LFP Battery

Both NOAH 2000 and NEXA 2000 use the best LiFePO4 battery, providing 6000+ cycles.



### IP66 Waterproof and -20°C Startup

It remains reliable in all weather conditions, even in rainy days or cold winters.

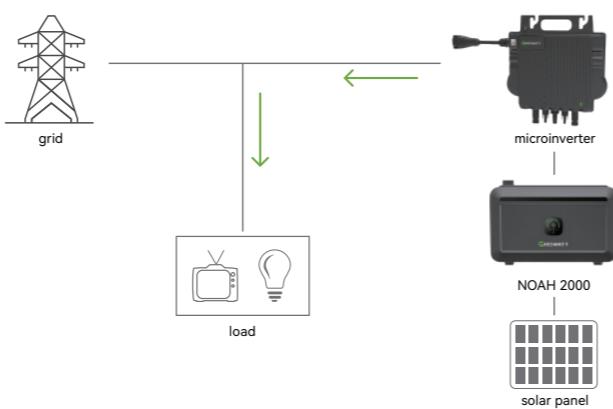


### 10 Years Guaranteed, 15 Years Engineered

Relax with 10 years of warranty and a worry-free LiFePO4 battery built to last 15+ years.



## DC - coupled Solution: NOAH 2000



**1800W Solar Input, Supports Up to 4 Solar Modules**



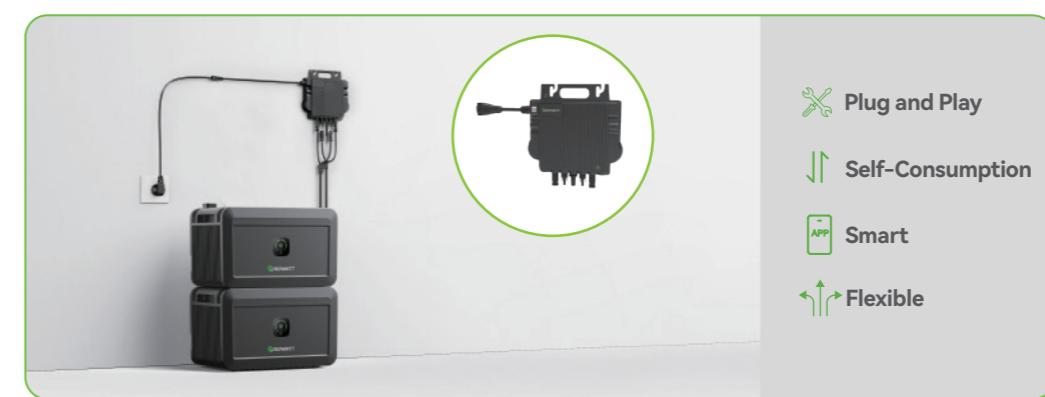
**Flexible Expansion, up to 7200W Solar Input/8192Wh Capacity**

System configuration		
Inverter Model	NEO 800M-X NEO 1600M-X2 NEO-2000M-X2	Also compatible with other brands' microinverters
Battery	NOAH 2000	2kWh, 800W DC Output
Solar Input	2 Mppts, 16-60V, 2x900W Max	
Smart Energy Management	EverHome EcoTracker, Sparky P1 meter, Shelly 3em, Shelly Pro 3em, Groplug-X	
System Characteristics	1. 1800W Solar Input, Supports Up to 4 Solar Modules 2. Plug and Play, quick 5 minutes installation 3. Easy expanded to 8kWh 4. IP66 Waterproof and -20°C Startup	



**Compatible with multiple microinverters**

The NOAH 2000 can be compatible with NEO 800M-X, NEO 1600M-X2, NEO 2000M-X2, as well as microinverters of other brands.

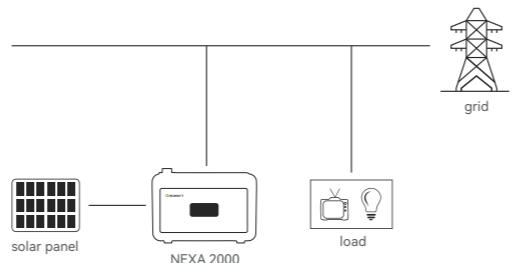


NOAH 2000 Matchable Micro Inverter List

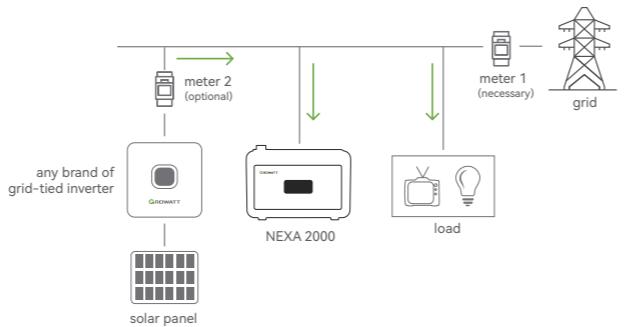
# All-in-one Solution: NEXA 2000



## Newly Installation Application



## Existing Solar Retrofit Application



## System configuration

Battery	NEXA 2000	2kWh, 800W (Rated) / 1000W (Max Adjustable) AC Output
Solar Input	4 Mppts, 16–60V, 4×650W Max	
Smart Energy Management	EverHome EcoTracker, Sparky P1 meter, Shelly 3em, Shelly Pro 3em, SEM5-1, Groplug-X	
System Characteristic	1. 2600W Solar Input, 4 MPPT/20A 2. 700W AC Charge 3. 800W Off-grid Capability 4. 800W (Rated) / 1000W (Max Adjustable) AC Output 5. Plug and Play, quick 2 minutes installation 6. Easy expanded to 8kWh 7. IP66 Waterproof and -20°C Startup	

## 4 MPPT/2600W Solar Input

The total solar input capacity reaches 2600W



## Flexible Expansion, up to 8kWh

With the expansion battery, the NEXA system can be easily expanded to 8 kWh



## Power+ Function Boosts the Power Output To 1000W

NEXA offers the ability to manually adjust the output power up to 1000W



## 800W Off-grid Capability

In case of sudden power outages, the NEXA 2000's 800W off-grid port comes to the rescue. It supplies power to critical loads, including communication devices like routers and emergency lights.



## Truly reliable waterproofing



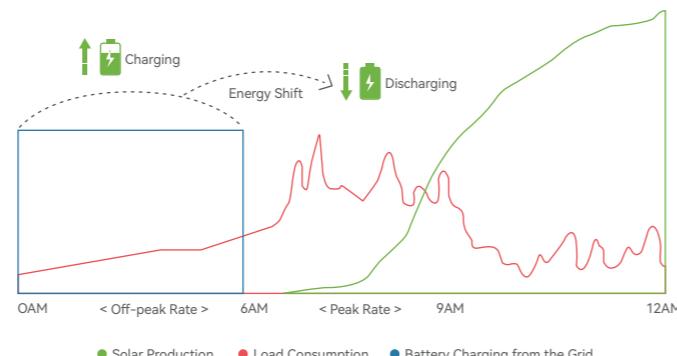
# Smart Energy Management



## AC Charging for TOU Application

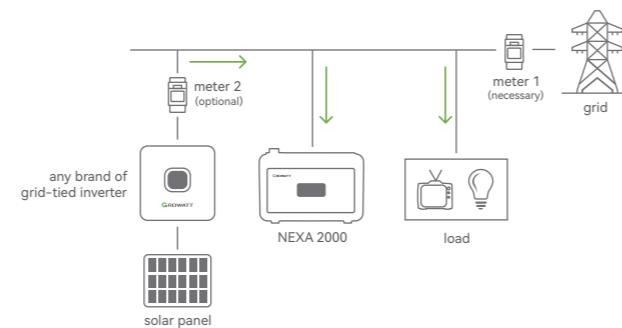
Stores power into the battery during periods of off-peak electricity rates and can be utilized during peak rate periods manually

\*NEXA 2000 only



## AC-Coupled with Existing Solar, 100% Inverter Compatibility

Break brand barriers, upgrade with ease. No need to replace existing equipment, 100% Inverter compatibility for storing surplus energy from existing PV systems.

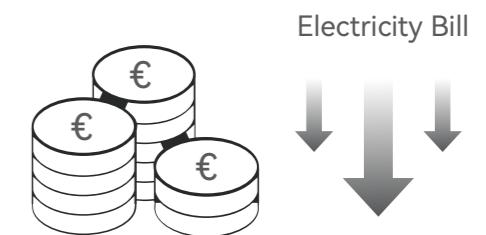


## AI-Powered Smart Scheduling in Dynamic Tariff

Dynamic Tariff Available, Reduce Expenses, Save More

\*Data Source: Nord Pool , AWattar(EPEX Spot AT) , Omie, Ote and Octopus

\*NEXA 2000 only



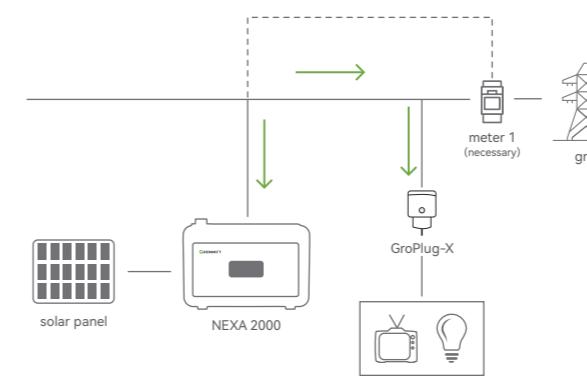
## Energy Optimized, Waste Eliminated

With smart device, it continuously monitors real-time load power, allowing NEXA to adjust output power dynamically based on scheduling needs.

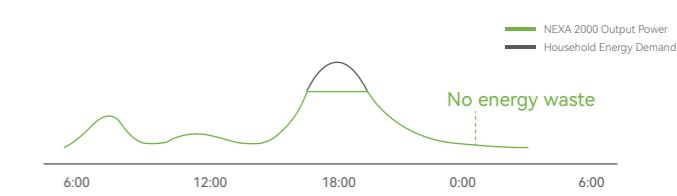
\*Smart meter and plug: Shelly, GroPlug-X

\*Utility meter reader: P1 and Everhome reader

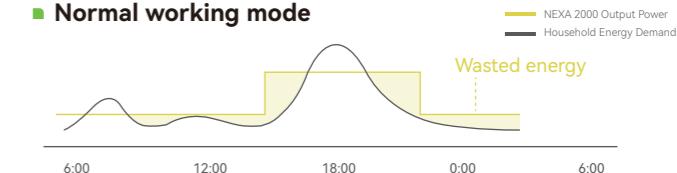
\*Local Lora communication meter: SEM5 (No Network Request)



### Smart Self-consumption Mode



### Normal working mode



# NEXA 2000

All-in-one Balcony Solar Storage



- Flexible expansion, up to 8kWh
- 4 Mppt with 2600W solar Input
- 800W Off-grid Output
- AC Charging for TOU Application
- -20°C Startup Support



Features	Descriptions
<b>PV Input</b>	
Max PV input power	2600W Max
PV input voltage range	16-60VDC
Max PV input voltage	60VDC
Number of MPPT channel	4
Number of PV strings per MPPT channel	1
PV input current	20A Max
<b>On-grid Port</b>	
AC Input	230V a.c., 50/60Hz, 700W
Max AC Input Current	3A
AC Output	230V a.c., 50/60Hz, 800W
Max AC Output Current	3.5A
<b>Versatile AC Port</b>	
Rated off-grid AC output power	800W
Nominal output voltage	230V
Max Output Current	3.5A Max
<b>Battery Specifications</b>	
Battery type	LiFePO4
Battery capacity	2048Wh
Max. expansion capacity	8192Wh
Max. charging power	2000W max
Rated voltage	51.2V
<b>General</b>	
Charging/Discharging temperature range*	0°C ~ 55°C /-20°C ~ 55°C
Dimensions(W/D/H)	406*255*290 mm
Weight	≈24kg
Protection level	IP66
Interface	LED & APP
WiFi/Buletooth	Supported
Warranty	10 years
Certification	VDE-AR-N 4105:2018, EN 62109,EN 62477, EN 62619, EN 61000-6-1, EN 61000-6-3, EN 301 489, EN 300328, EN 300220, ROHS, REACH, UN38.3
<b>Expansion Battery Parameters</b>	
Rated capacity	2048Wh
Max. Charging power	2000W
Max discharging power to nexa 2000	800W
Net weight	≈20Kg
Dimensions (L*W*H)	406*235*270mm

\*Support -20°C startup and automatically self-heat the device for a certain time to the charge temperature range.

# NOAH 2000

NEW

BALCONY SOLAR STORAGE



- Flexible expansion, up to 8kWh
- 2 Mppt with 1800W solar Input
- Plug and play installation
- -20°C Startup Support



Features	Descriptions
<b>PV Input</b>	
Recommended PV input power (for module STC)	2x900W Max.
Max. PV input voltage	60V
MPPT voltage range	16V-60V
MPPT full power voltage range	30-48V
Max. input current	26A+26A
MPPT channels	2
No. of PV strings per MPPT channel	1
<b>Battery Output (DC to Microinverter)</b>	
Max. output power	800W Max.
Output voltage range	40V-50V
Max. output current	20A
<b>Battery Specifications</b>	
Battery type	LiFePO4
Battery capacity	2048Wh
Max. expansion capacity	8192Wh (up to 4 units )
Max. charging power	1800W
Rated voltage	51.2V
Max. charging current	40A
<b>General</b>	
Max. output efficiency	98%
MPPT efficiency	99%
Charging temperature range	0~45°C*
Discharging temperature range	-20~45°C*
Weight	23KG
Dimensions(W/D/H)	406*235*270 mm
Protection level	IP66
LED Display	Supported
APP	Supported
WiFi/Bluetooth	Supported
Warranty	10 years
CE, ROHS, REACH, WEEE	

\*Support -30°C startup and automatically self-heat the device for a certain time to the charge temperature range.

# NEO 800M-X(WiFi)



- 2 independent MPP trackers
- Reactive power control
- Rapid shutdown function
- IP67 protection degree
- Support WiFi/LoRa communication



Datasheet		NEO 800M-X(WiFi)
<b>Input data (DC)</b>		
Recommended PV module power(STC) range		320W to 540W+
Max. DC voltage		60V
Start voltage		16V
Nominal voltage		16-60V
MPP voltage range		28V-60V
No. of MPP trackers		2
No. of PV strings per MPP tracker		1/1
Max. input current per MPP tracker		18A
Max. short-circuit current per MPP tracker		23A
<b>Output data (AC)</b>		
AC nominal power		800W
Max. AC apparent power		800VA
Nominal AC voltage/range		230V (180-253V)
Adjustable output voltage range		150V-280V
AC grid frequency		50/60 Hz
Adjustable output frequency range		45~55Hz/55~65 Hz
Rated output current		3.48A
Power factor		0.8 leading ... 0.8 lagging
THDi		<3%
AC grid connection type		Single phase
Maximum units per 12AWG branch <sup>*1</sup>		6
Maximum units per 12AWG branch <sup>*1</sup>		8
<b>Efficiency</b>		
Max.efficiency		97.3%
MPPT efficiency		99.5%
Night power consumption		30mW
<b>Protection devices</b>		
DC reverse polarity protection		Yes
AC surge protection		Type III
AC short-circuit protection		Yes
Ground fault monitoring		Yes
Grid monitoring		Yes
Anti-islanding protection		Yes
Insulation resistance monitoring		Yes
<b>General data</b>		
Dimensions (W / H / D)		270/252/41.5mm
Weight		3.1kg
Operating temperature range		-40°C ... +65°C
Altitude		4000m
Topology		High frequency transformers, Galvanically isolated
Cooling		Natural convection-No Fans
Protection degree		IP67
Relative humidity		0~100%
DC connection		VP-D4/PV-JK00M2
AC connection		plug and play
<b>Interfaces</b>		
Display		LED+APP
Monitoring		WiFi version/LoRa version (optional)*
Warranty		12 years

\* Refer to local requirements for exact number of microinverters per branch.

\* The AC Voltage and Frequency Range may vary depending on specific country grid standard.

\* Growatt microinverter is available in two versions: WiFi and LoRa, make sure to select the appropriate version when purchasing.

\* All specifications are subject to change without notice.

CE, N 4105, EN 50549-1, UNE 217002, NTS Type A, C10/C11, CEI 0-21, G98, IEC 61727&IEC 62116

# NEO 1600-2000M-X2



- 4 independent MPP trackers
- Up to 2500VA output power
- Max.18A string current
- Support WiFi/LoRa communication
- IP67 protection degree



Datasheet	NEO 1600M-X2	NEO 2000M-X2
<b>Input data (DC)</b>		
Max. recommended PV power (for module STC)	320W to 530W+	400W to 670W+
Max. DC voltage	60V	
Start voltage	20V	
Nominal voltage	16-60V	
MPP voltage range	16V-55V	
No. of MPP trackers	4	
No. of PV strings per MPP tracker	1/1	
Max. input current per MPP tracker	18A	
Max. short-circuit current per MPP tracker	20A	
<b>Output data (AC)</b>		
AC nominal power	1600W	2000W
Max. AC apparent power	1600VA	2000VA
Nominal AC voltage (range*)	220V/230V/240V(180~275V)	
Nominal AC current	7.27A@220V 6.96A@230V 6.67A@240V	9.09A@220V 8.7@230V 8.33A@240V
AC grid frequency (range*)	50Hz(45~55Hz), 60Hz(55~60Hz)	
Max. output current	7.27A	9.09A
Power factor	>0.99	
Adjustable power factor	0.8 leading~0.8 lagging	
THDI	<3%	
AC grid connection type	Single phase	
<b>Efficiency</b>		
Max.efficiency	96.5%	
MPPT efficiency	99.5%	
<b>Protection devices</b>		
DC reverse polarity protector	Yes	
Insulation resistance monitoring	Yes	
AC surge protection	Type III	
AC short-circuit protection	Yes	
Grid monitoring	Yes	
<b>General data</b>		
Dimensions (W / H / D)	396/270/45mm	
Weight	5.1kg	
Operating temperature range	-40°C ... +65°C	
Noise emission (typical)	≤ 25 dB(A)	
Altitude	4000m	
Nighttime power consumption	< 50mW	
Topology	Transformer	
Cooling	Nature convection	
Protection degree	IP67	
Relative humidity	0~100%	
DC connection	VP-D4 / PV-JK00M2	
AC connection	Plug and play	
<b>Interfaces</b>		
Display	LED +APP	
Monitoring	WiFi version/LoRa version (optional)*	
Warranty	12 years	
CE, N4105, EN 50549-1, C10/C11, G98		

\* The AC Voltage Range may vary depending on specific country grid standard.

\* Growatt microinverter is available in two versions: WiFi and LoRa, make sure to select the appropriate version when purchasing

\* All specifications are subject to change without notice.

# SEM5 Smart Meter



- Class 1 measurement accuracy
- Meter with CT for easy installation
- Compatible with Growatt NEXA 2000
- Local lora wireless communication



Datasheet	SEM5 smart meter	
<b>General data</b>		
Dimension (W/D/H)	35/70/90.5mm	
Weight	132.2g	
Mounting type	DIN-Rail Mounting	
Operating temperature range	-25°C to +55°C	
Storage temperature range	-40°C to +70°C	
Operating humidity	0 to 95%, non-condensing	
Environment protection rating	IP20	
<b>Power supply</b>		
Power grid type	1p2w, 3p4w, 3p3w	
Input voltage	100-277V phase voltage 208-480V line voltage	
Frequency	50/60Hz	
<b>Measurement range</b>		
Voltage Accuracy	0.2%	
Current Accuracy	0.2%	
Power Accuracy	1%	
Frequency Accuracy	±0.1%	
<b>Communication</b>		
RF	868MHz	
Maximum transmission distance	120m (depending on the installation environment)	
<b>Others</b>		
Accessories	CT Number	CT*3 (1m)
	CT Specification	120A/40mA/Ø16mm
	CT Image	

CE

# GroPlug-X



- Remote Control
- Overload Protection
- Customize Household Schedules
- Power consumption statistics and analysis
- Compatible with balcony solar storages for PVLinkage



Datasheet	GroPlug-X
Weight	Approximately 85g
Dimensions (W/D/H)	55/49/83mm
Color	White
Shape	Square
Power source	AC
Voltage	100~240 volts
Rated current	10A
Installation method	Plug in
WIFI requirement	2.4GHz Only
Working temp	-20 ~60 °C
Energy monitor	Support
Remote control	Support
Smart schedule	Support
Overload protection	Support
APP supported	ShinePhone
Plug format	EU type
	CE, RoHS