

P O W E R
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T O M O -
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GR-CA-007-10



BALCONY SOLAR
STORAGE SYSTEM

GROWATT

Balcony Energy Storage System

Effortless Installation, Endless Energy

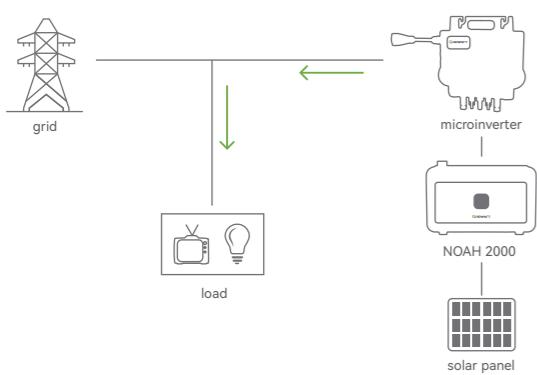


The Growatt balcony solar storage system includes NOAH 2000 DC coupled solution and NEXA 2000 all-in-one solution, designed specifically for balcony integration. When used in conjunction with solar panels, it creates an environmentally friendly home power solution.

Solution System Diagram

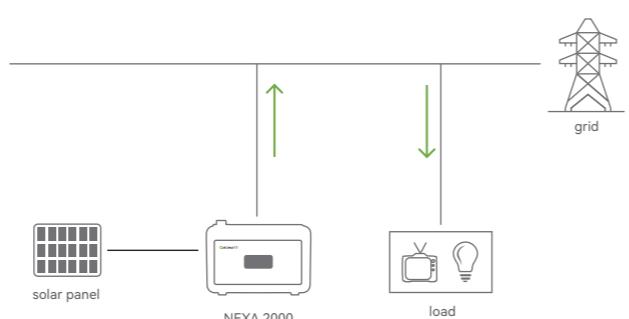
DC-coupled solution

NOAH 2000 + NEO 800M-X



All-in-one Solution

NEXA 2000



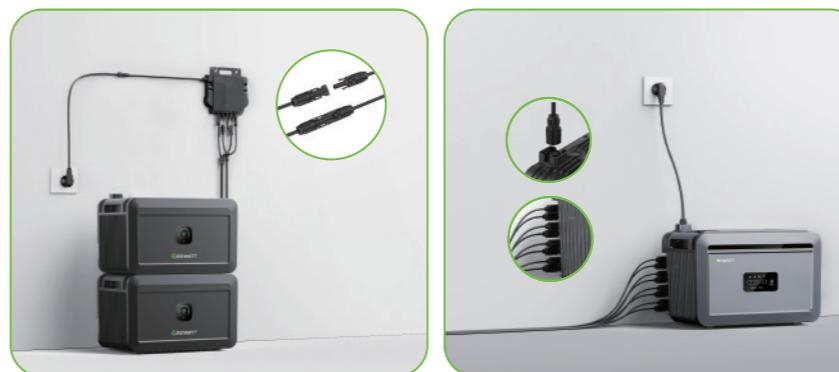
Fits Anywhere

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.

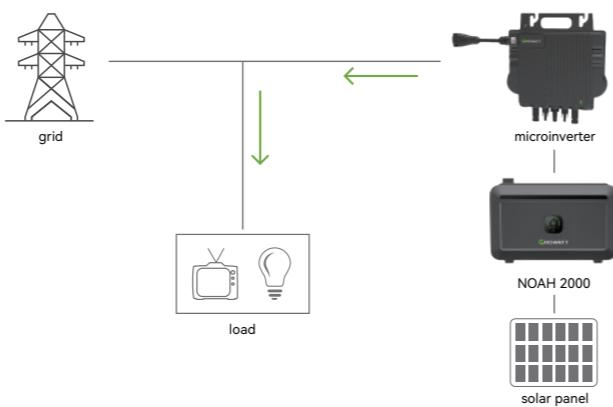


10 Years Guaranteed, 15 Years Engineered

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



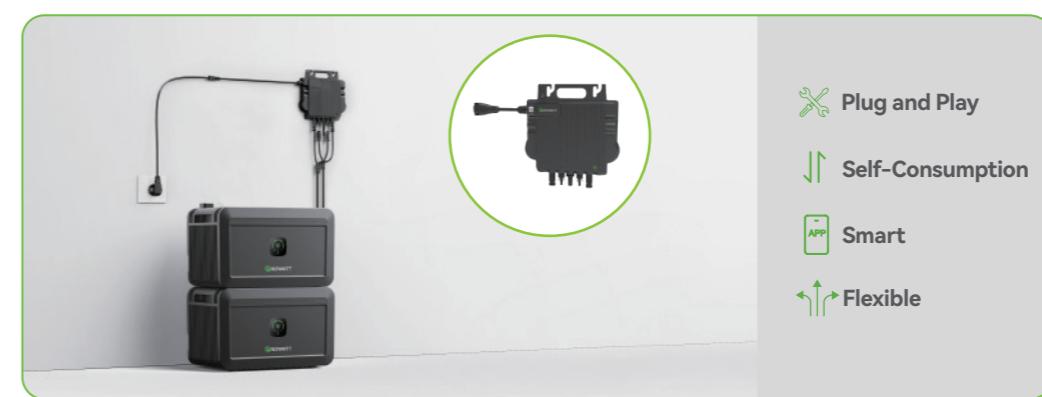
Flexible Expansion, up to 7200W Solar Input/8192Wh Capacity

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	<ol style="list-style-type: none"> 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.

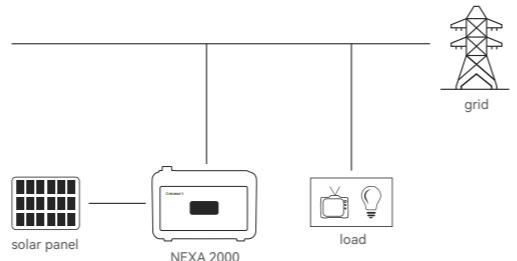


NOAH 2000 Matchable Micro Inverter List

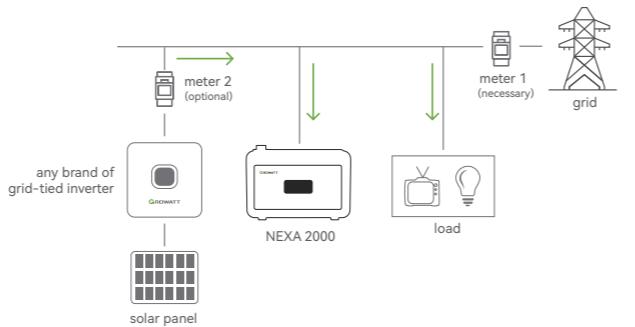
All-in-one Solution: NEXA 2000



■ 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, 4x650W 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



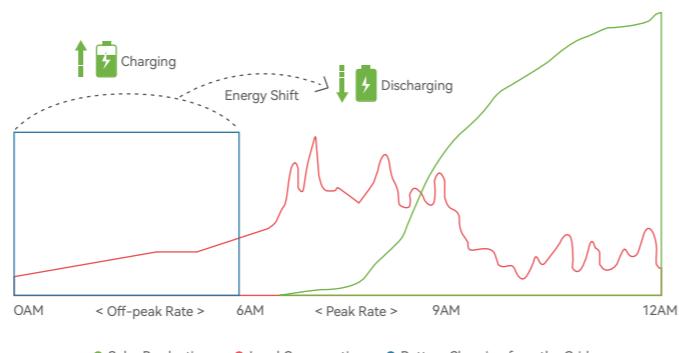
Smart Energy Management



AC Charging for TOU Application

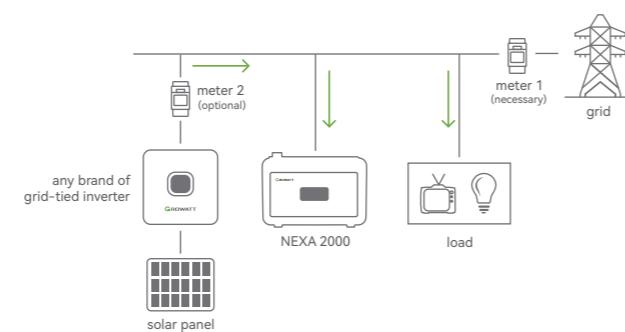
Stores power into the battery during periods of off-peak electricity rates and can be utilized during peak rate periods manually

*NEXA 2000 only



AC-Coupled with Existing Solar, 100% Inverter Compatibility

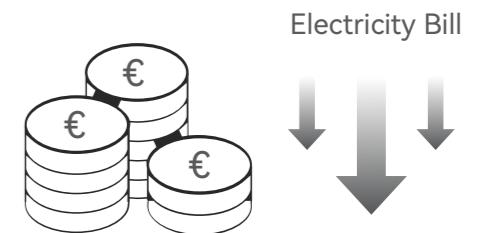
Break brand barriers, upgrade with ease. No need to replace existing equipment, 100% Inverter compatibility for storing surplus energy from existing PV systems.



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



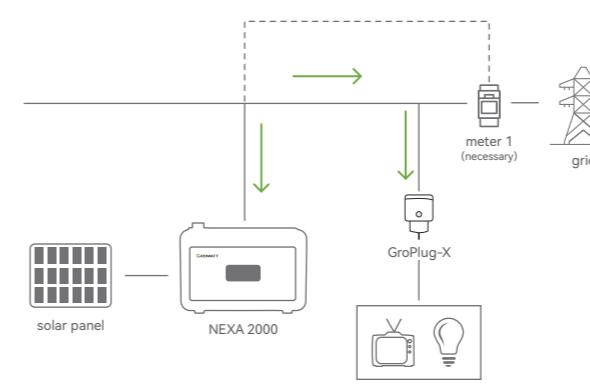
Energy Optimized, Waste Eliminated

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

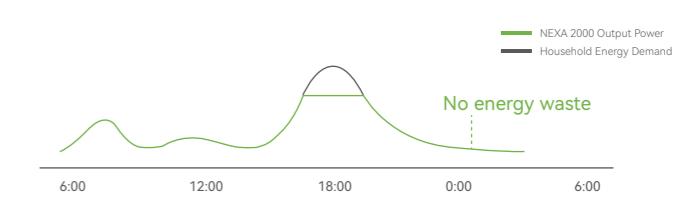
*Smart meter and plug: Shelly, GroPlug-X

*Utility meter reader: P1 and Everhome reader

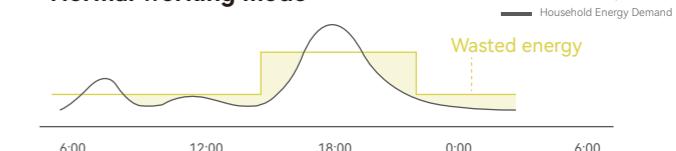
*Local Lora communication meter: SEM5 (No Network Request)



Smart Self-consumption Mode



Normal working mode



NEXA 2000

NEW
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
PV Input	
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
On-grid Port	
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
Versatile AC Port	
Rated off-grid AC output power	800W
Nominal output voltage	230V
Max Output Current	3.5A Max
Battery Specifications	
Battery type	LiFePO4
Battery capacity	2048Wh
Max. expansion capacity	8192Wh
Max. charging power	2000W max
Rated voltage	51.2V
General	
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
Expansion Battery Parameters	
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

BALCONY SOLAR STORAGE

NEW



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



Features	Descriptions
PV Input	
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
Battery Output (DC to Microinverter)	
Max. output power	800W Max.
Output voltage range	40V-50V
Max. output current	20A
Battery Specifications	
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
General	
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)
Input data (DC)		
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
Output data (AC)		
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 ¹		6
Maximum units per 12AWG branch ¹		8
Efficiency		
Max.efficiency		97.3%
MPPT efficiency		99.5%
Night power consumption		30mW
Protection devices		
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
General data		
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
Interfaces		
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
Input data (DC)		
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	
Output data (AC)		
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	
Efficiency		
Max.efficiency	96.5%	
MPPT efficiency	99.5%	
Protection devices		
DC reverse polarity protector	Yes	
Insulation resistance monitoring	Yes	
AC surge protection	Type III	
AC short-circuit protection	Yes	
Grid monitoring	Yes	
General data		
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	
Interfaces		
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	
General data		
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	
Power supply		
Power grid type	1p2w, 3p4w, 3p3w	
Input voltage	100-277V phase voltage 208-480V line voltage	
Frequency	50/60Hz	
Measurement range		
Voltage Accuracy	0.2%	
Current Accuracy	0.2%	
Power Accuracy	1%	
Frequency Accuracy	±0.1%	
Communication		
RF	868MHZ	
Maximum transmission distance	120m (depending on the installation environment)	
Others		
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