

SG CONNECT

**YOUR BRIDGE TO ENERGY
SELF-SUFFICIENCY**



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justCHARGE



Your Bridge to Energy Self-Sufficiency

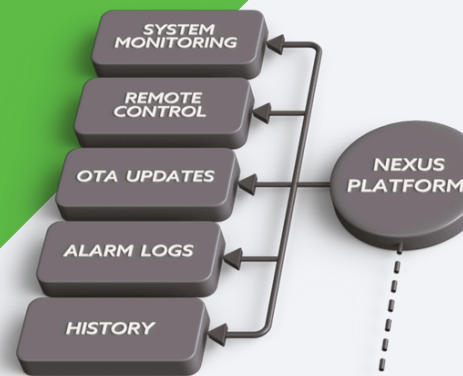
INTRODUCTION

SG Connect



Smart Grid Connect is an **independent** digital energy platform that creates a virtual environment in which generators and consumers of electrical energy connect.

All users of the platform benefit from the advantages of smart, real-time energy flow control. The dynamic production of electrical energy and the ability to utilize battery system capacities, both at the household and industrial levels, enable the **Smart Grid Connect** community to reliably and optimally manage energy resources, while also promoting energy savings.

**1**

User friendly software solution with centralized management via mobile application.

2

Energy cost reduction by using dynamic market prices and smart management of our own resources.

3

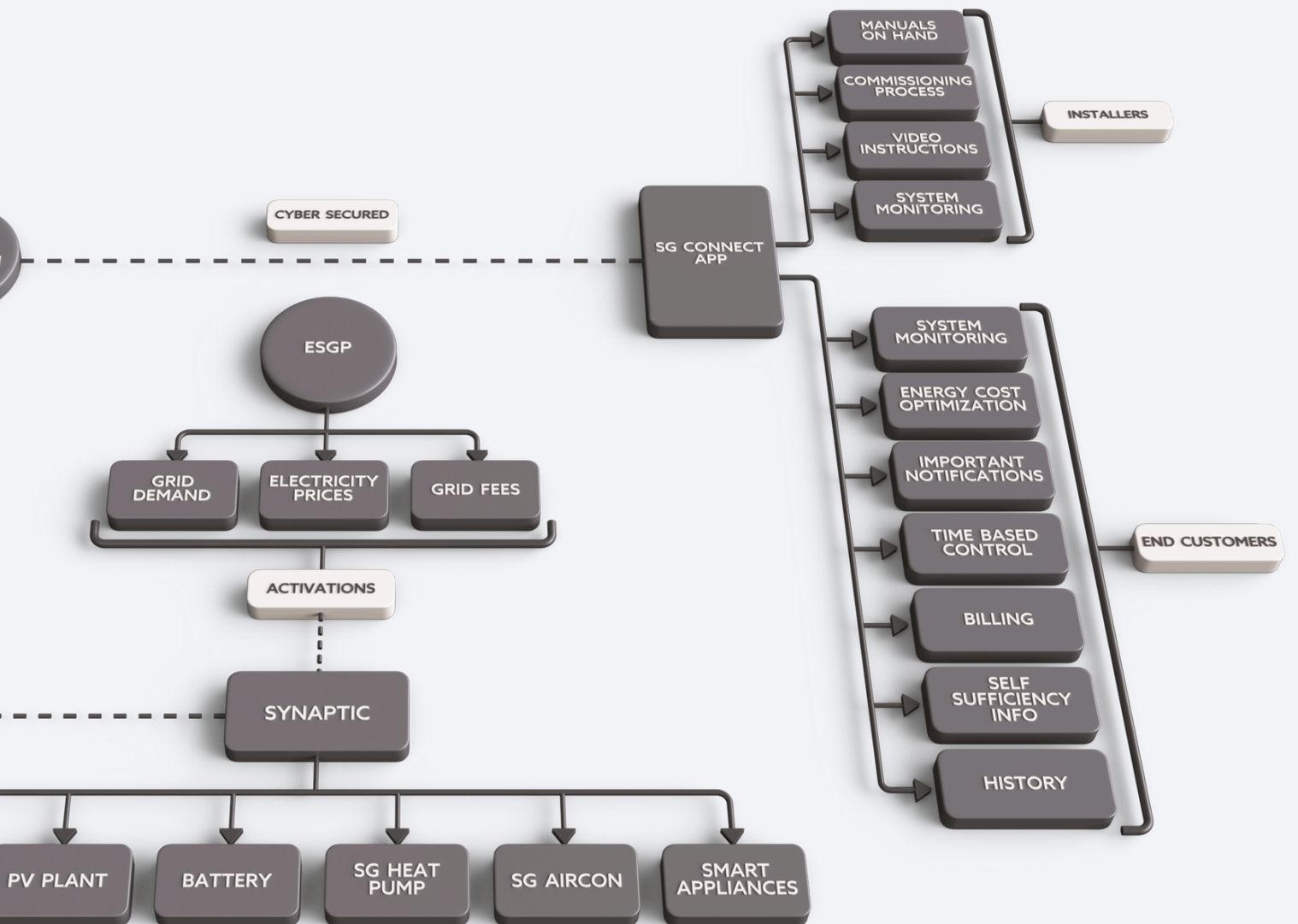
Increase of self consumption and reduction of carbon footprint.

4

Highest level of cyber security, using EU based servers and our own security software.

5

Highest level of reliability and comfort with the possibility of emergency power supply.



SG CONNECT

Benefits



DYNAMIC PRICES

If your energy provider offers dynamic electricity tariffs, SG-Connect allows you to charge the battery and activate devices connected to the SG-Ready interface during favorable time frames. By combining this with the load shifting function, you can efficiently take advantage of price fluctuations on the European spot and day-ahead markets. **(Country-specific function)**

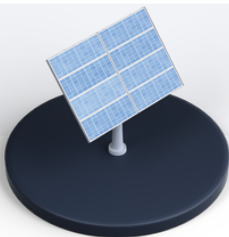
Your benefit: Low prices and free electricity during certain time frames.



DYNAMIC FEED IN

The SG-Connect platform adjusts the feed-in power of the photovoltaic system based on the grid loads and allows for feeding-in that exceeds the export limit defined by the grid operator. With dynamic feed-in, solar energy can be partially or fully injected into the grid during low grid loads. **(Country-specific function)**

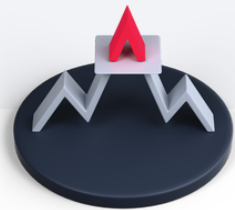
Your benefit: Significant reduction in the amortization time of the system.



SELF CONSUMPTION OPTIMISATION

The most effective energy savings result from increasing self-consumption. By storing energy, the surplus from the photovoltaic system can be stored and used when there is little or no sunlight.

Your benefit: Energy costs as well as grid fees are reduced.



PEAK SHAVING

It optimizes energy consumption from the electricity grid by limiting to a predefined threshold. If the actual consumption exceeds this limit, the difference is compensated by activating the battery.

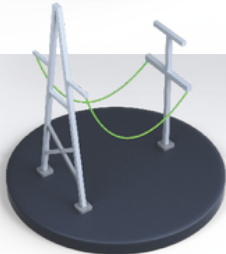
Your benefit: Grid fees are effectively reduced.



BACKUP POWER

In the event of a blackout, the SG-Connect system swithes to emergency power suuply within 20ms.

Your benefit: Ensuring the continuous functionality of your household appliances.



GRID SERVICES

As an owner of an SG-Connect system, you can actively participate in national system services. The electricity transmission system, for example, is crucial for European independence, economic prosperity, and social security. **(Country-specific function)**

Your benefit: A stable electricity grid reduces maintenance costs and increases the competitiveness of the local economy.



LOAD SHIFTING

Energy demand is shifted from peak to off-peak times. With the in-house ESGP platform, time frames with low electricity prices can be specifically utilized.

Your benefit: Energy costs are reduced.



DEMAND RESPONSE

Together with the ESGP platform and the SG-Connect system, we enable you to respond flexibly to requirements for relieving the electricity grid. In the event of an overload caused by the feed-in of unstable energy producers, the request is activated by the transmission system operator and forwarded to the Synaptic unit. This unit activates battery charging and additionally connected SG-Ready devices. **(Country-specific function)**

Your benefit: During activation, only reduced grid fees apply.



CARBON FOOTPRINT REDUCTION

Stabilizing the electricity grid and management of production and consumption fluctuations lead to a reduction in backup devices based on conventional energy sources such as diesel or natural gas.

The benefit for all of us: Improved efficiency of photovoltaic systems means a reduction in CO₂ emissions and other greenhouse gases.

INTRODUCTION

Synaptic^{CE}

Synaptic is an advanced hardware solution for real-time optimization and control of energy systems, connected to the SG Connect platform. It enables the collection and analysis of data from various sources, using artificial intelligence and machine learning to accurately forecast demand and supply, as well as manage energy efficiently.

Synaptic improves grid stability, reduces operational costs, and enhances supply reliability, making it a crucial component for energy system operators and renewable energy providers.



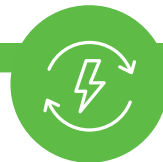
**NGEN DEVELOPED
MACHINE CODE**



**PLUG&PLAY
CONNECTIVITY**



SMART METER



**LOCAL ENERGY
MANAGEMENT**



**SELF SUFFICIENCY AND
ENERGY STORAGE SYSTEMS**



**INDUSTRIAL
APPLICATIONS**



**ACCESS TO ENERGY
SPOT MARKET**



**SMART GRID
CONNECT APP**



SMART GRID

Connect App



Follow your
electricity
production



Control
your energy
sources



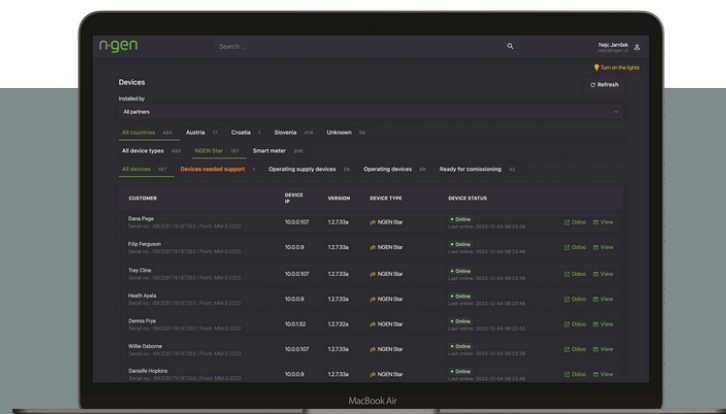
Participate
in virtual
groups



Recieve
personalized
notifications

ADVANTAGES

Nexus



PLATFORM
FOR SYSTEM
MONITORING



REMOTE
CONTROL



PERFORMANCE
TRACKING



TROUBLE-
SHOOTING



REAL TIME
DATA TRACKING



COMMISSIONING
WIZARD IN 5 STEPS

NEW ERA OF SELF-SUFFICIENCY

NGEN Star

NGEN Star is a hybrid system that includes a solar power plant and an electrical energy storage system with an integrated hybrid inverter and a electrical smart meter.



**Simple
Installation**



**High
Efficiency**



**Expandable
System**



**90% Discharge
Range**



**Heatpump
Integration**

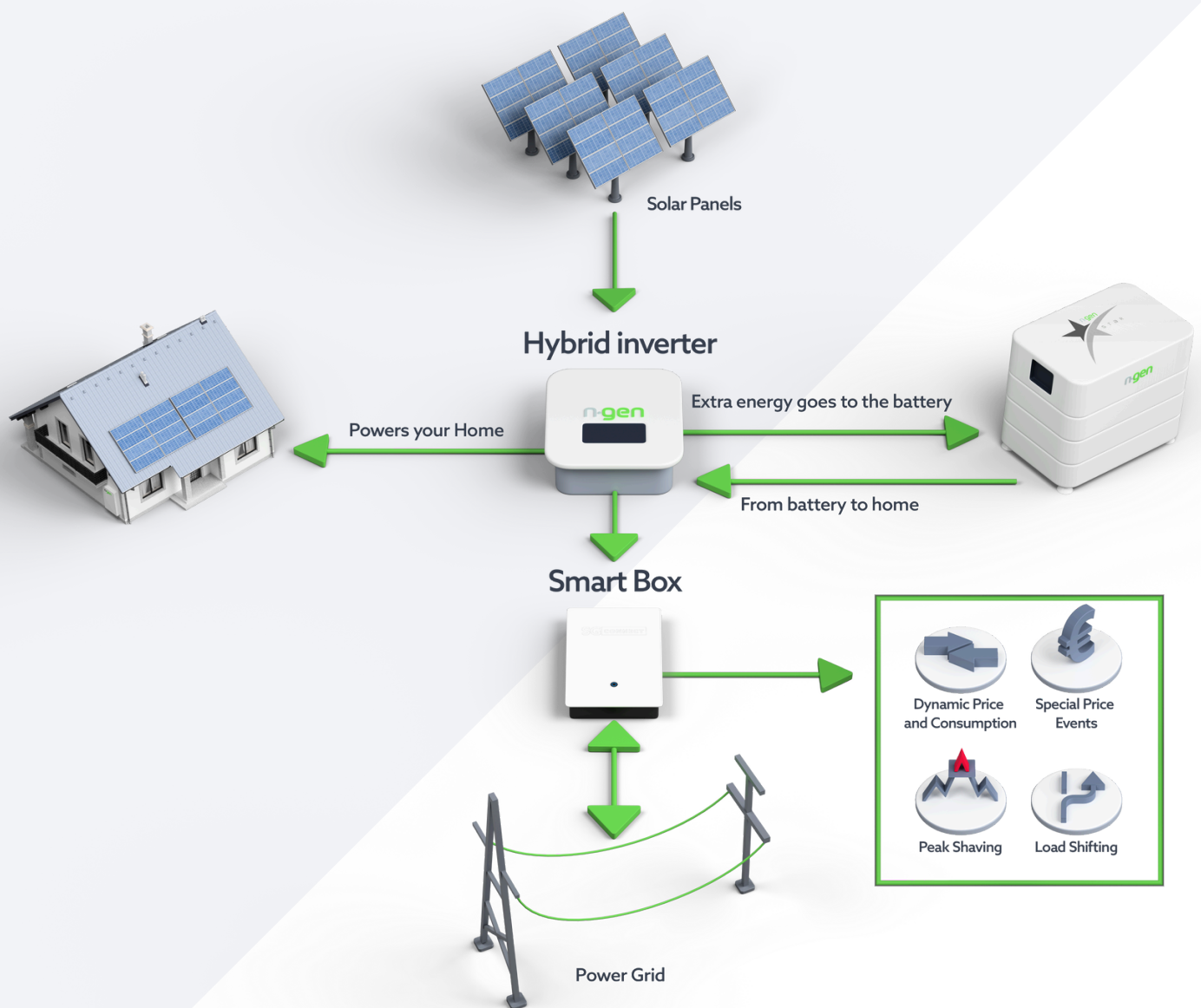


**EV Charger
Ready**



**Backup power
4,5-30 kW**





INTRODUCTION

Smart Box



**PREINSTALLED FOR
PLUG&PLAY
INTEGRATION**



**EASY INSTALLATION
VIA CONNECTION
POINTS**



**COMPREHENSIVE
SOLUTION**



**IN ACCORDANCE
WITH INSTALLATION
REGULATIONS**



**COMPATIBLE
WITH SMART GRID
CONNECT**



**SMART METER
INCLUDED**



**2 SECONDS
LIVE DATA**



**SYNAPTIC
INCLUDED**



READY TO CONNECT WITH:



**HYBRID INVERTER WITH
BACK-UP POWER SUPPLY**



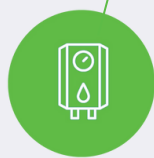
**NON BACK-UP
APPLICATIONS**



HEAT PUMP



EV CHARGER



WATER HEATER



**MODULE OPTIMIZERS
(Only Box Type A)**



**OTHER
APPLICATIONS WITH
SG READY CONTACT**

Smart box represents a revolution in home electrical networks. It is designed to combine all necessary components in one package, simplifying the installation. Moreover, it optimizes energy consumption and reduces costs, while the built-in safety switch and protective components ensure high safety level.



SPECIFICATIONS

Model	A163	A363	B163	B363	C300
Rated voltage (Un):	1 x 230 VAC 50 Hz	3 x 230 VAC 50 Hz	1 x 230 VAC 50 Hz	3 x 230 VAC 50 Hz	3 x 230 / 400VAC 50 Hz
Rated current (In):	63 A	63 A	63 A	63 A	63 A
Protection (IP):	54	54	54	54	54
Dimensions (H x W x D) (mm):	640x420x130	640x420x130	640x420x130	640x420x130	640x420x130
TIGO:	YES	YES	NO	NO	NO
Item No.:	504644 OR 4	504648 OR 8	504645 OR 5	504649 OR 9	504650 OR 10
Standard:	SIST EN 61439-1 & SIST EN 61439-2				

Smart Box Lite

For upgrading FOX ESS or its OEM Hybrid inverters with SG Connect System Solution.

Item Number: 505538



Model	Rated voltage (Un)	Rated current (In)	Protection (IP)	Dimensions HxWxD (mm)
Smart Box Lite	3 x 230 VAC 50Hz	63 A	54	200 x 300 x 140

Inverters

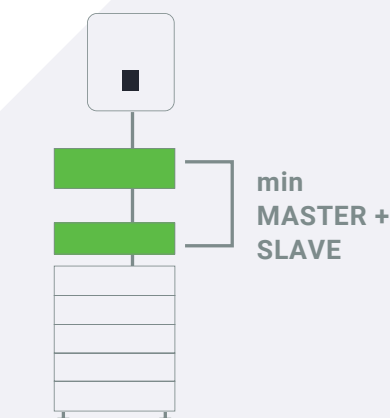
INVERTER

Star H1

STAR-H1-3.7-E/6.0-E

Item Number: 505104, 504631

Rated AC Power [W]	3680	6000
Max. AC Current	16,7	27,3
Max. EPS Power [W]	3680	6000
Max. EPS Current [A]	16,7	27,3
Max. Input Power [W]	5500	9000
No. of Independent MPP Trackers	2	
No. of Strings per MPP Tracker	1 / 1	
Max. Storage Capacity [Wh]	41930	
Dimensions (WxHxD) [mm]	434 x 418 x 185	
Warranty	Standard 10 / Advanced 12 *	



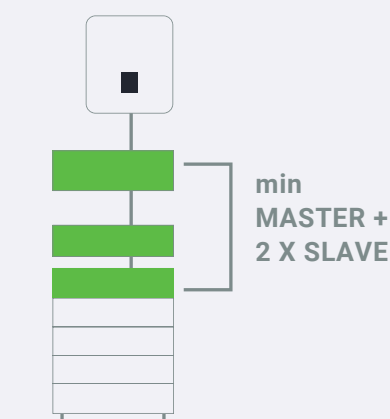
Bundle	Inverter type	Power [kW]	Smart Box	Item Number
H1-3.7-A163	H1	3,7	A163	505179
H1-3.7-B163	H1	3,7	B163	505180
H1-6-A163	H1	6	A163	504657
H1-6-B163	H1	6	B163	504658

* Standard Warranty: 10 years / Advanced Warranty: 12 years when the System is connected to the SG Connect System Solution.

INVERTER

Star H3**STAR-H3-12.0-E****Item Number:** 504632

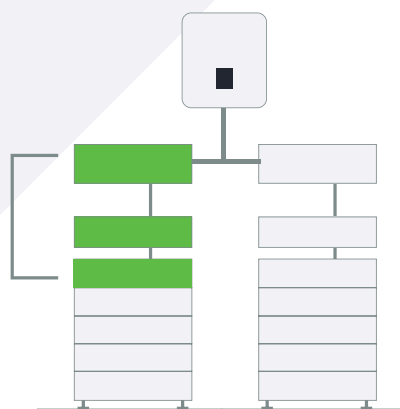
Rated AC Power [W]	12000
Max. AC Current	19,2
Max. EPS Power [W]	12000
Max. EPS Current [A]	22,7
Max. Input Power [W]	15000
No. of Independent MPP Trackers	2
No. of Strings per MPP Tracker	2 / 1
Max. Storage Capacity [Wh]	41930
Dimensions (WxHxD) [mm]	449 x 519 x 198
Warranty	Standard 10 / Advanced 12 *



Bundle	Inverter type	Power [kW]	Smart Box	Item Number
H3-12-A363	H3	12	A363	504661
H3-12-B363	H3	12	B363	504662

* Standard Warranty: 10 years / Advanced Warranty: 12 years when the System is connected to the SG Connect System Solution.

INVERTER

Star H3 Pro

min MASTER +
2 X SLAVE

**STAR-H3-15.0/22.0/29.9/30.0-PRO**

Item Number: 504633, 504634, 505116, 504635

Rated AC Power [W]	15000	22000	29900	30000
Max. AC Current	25	36,7	45,4	50
Max. EPS Power [W]	15000	22000	30000	30000
Max. EPS Current [A]	22,7	33,3	45,5	45,5
Max. Input Power [W]	22500	33000	45000	45000
No. of Independent MPP Trackers	3			
No. of Strings per MPP Tracker	2 / 2 / 2			
Max. Storage Capacity [Wh]	83880			
Dimensions (WxHxD) [mm]	600 x 560 x 225			
Warranty	Standard 10 / Advanced 12 *			

Standard Warranty: 10 years / Advanced Warranty: 12 years when the System is connected to the SG Connect System Solution.

Star H3 Pro Bundles

STAR-H3-15.0-PRO

Bundle	Inverter type	Power [kW]	Smart Box	Item Number
H3P-15-A363	H3 PRO	15	A363	504665
H3P-15-B363	H3 PRO	15	B363	504666

STAR-H3-22.0-PRO

Bundle	Inverter type	Power [kW]	Smart Box	Item Number
H3P-22-A363	H3 PRO	22	A363	504669
H3P-22-B363	H3 PRO	22	B363	504670

STAR-H3-29.9-PRO

Bundle	Inverter type	Power [kW]	Smart Box	Item Number
H3P-29.9-A363	H3 PRO	29.9	A363	504673
H3P-29.9-B363	H3 PRO	29.9	B363	504674
H3P-29.9-C300	H3 PRO	29.9	C300	504675

STAR-H3-30.0-PRO

Bundle	Inverter type	Power [kW]	Smart Box	Item Number
H3P-30-A363	H3 PRO	30	A363	504673
H3P-30-B363	H3 PRO	30	B363	504674
H3P-30-C300	H3 PRO	30	C300	504675

Star Parallel Box

for parallel connection of multiple Star-H3-Pro inverter.

Item Number: 505106

Model	Max number of Inverters in Parallel	Item Number
Star Parallel Box	10 in On-Grid Operation 4 in Off-Grid Operation	505536



MICRO INVERTER

Star M1**M1-1000, 1200****Item Number:** 505488, 505535

Model	M1 - 1000 / M1 - 1200
Applicable module power [Wp]	355 - 670
Max. Input Voltage [V]	60
Start-up Voltage [V]	24
No. of Independent MPP-Tracker	2
No. Of Strings per MPP-Tracker	2 / 1
Operating Temperature [°C]	-25 to +60
Dimensions (WxHxD) [mm]	270 x 182 x 34.5

Storage units

STAR S2-S9

Battery type	4300	4800
Model	Nominal capacity [Wh]	
STAR S2*	8300	9320
STAR S3	12450	13980
STAR S4	16600	18640
STAR S5	20750	23300
STAR S6	24900	27960
STAR S7	29050	32620
STAR S8	X	37280
STAR S9	X	41940

Cycle Life	>6000
Recommend Discharge Current [A]	25
Max. Charge/Discharge Current [A]	50
Depth of discharge [%]	90
Operating Temperature [°C]*	Charging from 0 to +55 Discharging from -10 to +55
Dimensions (WxHxD) [mm]	570 x (366 - 1352) x 380
Warranty	Standard 10 / Advanced 12 *

* Charge derating will occur between 0°C and +15°C.

** Standard Warranty: 10 years or 6000 Cycles.

** Advanced Warranty: 12 years or 6000 Cycles when the Battery is connected to the Hybrid Inverter and the SG Connect System Solution.





* S2 Compatible with 1-phase inverter STAR-H1.

** S8 and S9 available only for 4800 system.

Model	Battery type	Capacity [Wh]	Item Number
Master 4300	ESM4300	4150	504627
Slave 4300	ECS4300	4150	504628
Master 4800	ESM4800	4660	504629
Slave 4800	ECS4800	4660	504630

Storage units

STAR-EP5

Item Number: 505106

Nominal Energy [Wh]	5180
Nominal Voltage [V]	192
Cycle Life	≥4000
Recommend Discharge Current [A]	13,5
Max. Charge/Discharge Current [A]	27
Depth of Discharge [%]	90
Operating Temperature [°C]	Charging from 0 to +55 Discharging from -10 to +55
Dimensions (WxHxD) [mm]	380 x 625 x 147
Warranty	Standard 5 / Advanced 10 *



* Standard Warranty: 5 years or 4500 Cycles / Advanced Warranty: 10 years or 4500 Cycles when the Battery is connected to the Hybrid Inverter and the SG Connect System Solution.

Model	Battery Type	Capacity [Wh]	Item Number
STAR-EP5	EP5	5180	505106

STAR-EP11

Item Number: 505107

Nominal Energy [Wh]	10360
Nominal Voltage [V]	384
Cycle Life	≥4000
Recommend Discharge Current [A]	13,5
Max. Charge/Discharge Current [A]	27
Depth of Discharge [%]	90
Operating Temperature [°C]	Charging from 0 to +55 Discharging from -10 to +55
Dimensions (WxHxD) [mm]	710 x 625 x 147
Warranty	Standard 5 / Advanced 10 *



* Standard Warranty: 5 years or 4500 Cycles / Advanced Warranty: 10 years or 4500 Cycles when the Battery is connected to the Hybrid Inverter and the SG Connect System Solution.

Model	Battery Type	Capacity [Wh]	Item Number
STAR-EP11	EP11	10360	505107

HV Junction Box

for the parallel connection of up to 4 EP-Batteries.

Item Number: 505106

Model	Max. Batteries in parallel	Max. Current [A]	Item Number
HV Junction Box	4	50	505537

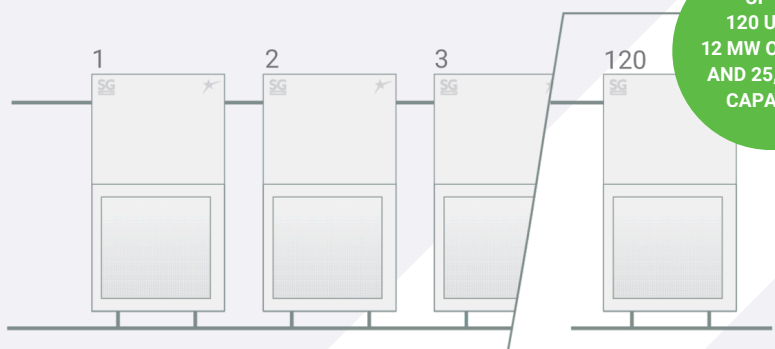


AC-Coupled G-MAX Battery

STAR-G-MAX

Item Number: 505503

The NGEN-STAR G-MAX follows an “All-In-One” design philosophy, integrating a battery with longevity, intelligent battery management system (BMS), powerful power conversion system (PCS), preventive safety system, smart distribution system, and efficient thermal management within a single enclosure. This concept ensures standardized manufacturing and simplifies installation.





POWERFUL PERFORMANCE

100 kW AC-Output,
200kWh AC-Storage capacity and
a peak AC-Output of 110 kW.



EFFICIENT COOLING

Liquid cooling ensures optimal
temperature control and maximum
performance.



FLEXIBLE COMPATIBILITY

Integrates with solar, wind, and
other energy sources, either
standalone or hybrid.



SCALABLE SOLUTION

Cluster capability allows connection
of up to 120 units, achieving 12 MW
output and 25,8 MWh capacity.



USER-FRIENDLY MANAGEMENT

SG Connect app for intuitive control
and real-time optimization.



LOW MAINTENANCE

Designed for easy installation
and long-term reliability.

Battery System Capacity [kWh]	200 (AC) / 215 (DC)
Battery DC-Operating Voltage Range [V]	672 – 876
Discharge Energy throughput [MWh]	1.084 (AC) / 1.184 (DC)
Cycle life	6570 full cycles @70% SOE
Max. AC-Output Power [kW]	110
Depth of Discharge [%]	100
Cooling-Type	Liquid cooling
Battery-Type	LiFePO4 (lithium iron phosphate)
Operating Temperature [°C]	-25 to +55
Dimensions (WxHxD) [mm]	1040 x 2200 x 1500
Warranty	Standard 10 years / Extended 15 years *

Model	Capacity [kWh] (DC/AC)	Item Number
STAR-G-MAX	215/200	505503

* The G-Max 10-year and 15-year warranty is valid only if the system remains connected to SG Connect and an active Maintenance Agreement is maintained with SG Connect's authorized partners.

INTRODUCTION

Supply Kit

SG Connect has developed a system for measuring electrical energy flows which enables our customers to integrate into the SG Connect platform, transforming them into active users. In this way, they can connect to virtual groups for transferring excess energy produced by PV system and receive electricity based on a dynamic tariff.

MID **CE**
APPROVED



**24V DC SUPPLY
VOLTAGE**

**P1 PORT FOR SUPPLY
METER READINGS**

**LED LIGHT PORT FOR SYSTEM
OPERATION SIGNALISATION**

**WAN AND LAN PORTS FOR
RELIABLE WIRED ETHERNET
CONNECTION**

**2 MODBUS PORTS FOR
QUICK AND PRECISE
DATA TRANSFER**

**LARGE BATTERY INSIDE
FOR OFF-GRID OPERATIONS**

**LTE CARD FOR
UNINTERRUPTED
ETHERNET CONNECTION**

**3 RELAYS FOR SMART HOME
INTEGRATION AND ENERGY USE
OPTIMISATION:**

**INTEGRATED METER FOR
PRECISE SITE
MEASUREMENTS**

**RELAY 1
INCREASES
POWER
CONSUMPTION**

**RELAY 2
DECREASES
POWER
CONSUMPTION**

**RELAY 3
DECREASES
POWER
PRODUCTION**



**PRE-INSTALLED FOR PLUG & PLAY
INSTALLATION**



**CONNECTIVITY POINTS
EASY TO CONNECT**



**IN ACCORDANCE TO
INSTALLATION REGULATIONS**



**COMPATIBLE WITH
SG CONNECT**



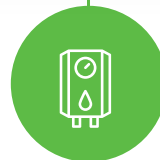
**READY TO
CONNECT
WITH:**



**HEAT
PUMPS**



**EV
CHARGERS**



**ELECTRICAL
HEATER**



**APPLIANCES
WITH SG READY**

AC EV CHARGING STATION

NGEN



Solar Energy Management

Option to direct excess power from own production to the charging station.



Flexible Option

Charging cable type 1 or type 2, operation via application or 'Plug & Play'. wall or ground installation.



Secure and Safe

6mA DC residual current protection, Anti-welding protection, IP54 rated.



Energy Saving

Standby power consumption is less than 2 W, excellent energy efficiency.



Smart Management

Wireless communication (WiFi/bluetooth), OCPP communication protocol with the server, smart charging or scheduled via app.



MODEL	Rated current [A]	OCPP	Dynamic	Item Number
EV7	32	YES	YES	504636
EV11	16	YES	YES	504636
EV22	32	YES	YES	504636
Dynamic meter DT	63	/	/	504636
Dynamic meter CT	>63	/	/	504636

EV7	MODEL		NGEN-EV7
	Type		Charging Plug
INPUT	Voltage		230 VAC, $\pm 20\%$
	Max. Current		32 A
	Frequency		50/60 Hz
OUTPUT	Max. Current		32 A
	Rated Power		7,3 kW
USER INTERFACE AND CONTROL	Connection Type		2. Type 6m cable
	Commissioning		Plug & Play / RFID card / App
	Warranty		5 years

EV11	MODEL		NGEN-EV11
	Type		Charging Plug
INPUT	Voltage		400 VAC, $\pm 20\%$
	Max. Current		16 A
	Frequency		50/60 Hz
OUTPUT	Max. Current		16 A
	Rated Power		11 kW
USER INTERFACE AND CONTROL	Connection Type		2. Type 6m cable
	Commissioning		Plug & Play / RFID card / App
	Warranty		5 years

EV22	MODEL		NGEN-EV22
	Type		Charging Plug
INPUT	Voltage		400 VAC, $\pm 20\%$
	Max. Current		32 A
	Frequency		50/60 Hz
OUTPUT	Max. Current		32 A
	Rated Power		22 kW
USER INTERFACE AND CONTROL	Connection Type		2. Type 6m cable
	Commissioning		Plug & Play / RFID card / App
	Warranty		5 years

CHARGE AND PAY ONLINE **justCHARGE**

justCHARGE is a platform that enables comprehensive establishment and management of charging infrastructure and payment system.

- Automated management of all transactions, no hidden costs
- User-friendly experience, no RFID cards or apps
- AutoCharge - support for vehicle recognition
- Complete overview and control of energy consumption
- Ability to set charging rates based on charging station groups
- Connection to company vehicles and benefits management
- Comprehensive on-site and remote support
- 24/7 support
- Compatible with ALL charging stations with OCPP 1.6 JSON specification



NAVIGATION - easily find locations with available charging stations.

PAYMENTS - credit and debit cards, Google and Apple pay

CHARGING HISTORY - overview of past charging sessions

ELECTRIC VEHICLES - management of vehicles for automatic recognition

COMPREHENSIVE PLATFORM FOR ESTABLISHING AND MANAGING CHARGING INFRASTRUCTURE AND PAYMENT SYSTEM





SG **CONNECT**



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