

# Join the solar autarky

The moment is now

EN

# Home sweet home of autarky

### Your renewable energy available day and night, for both city and country life.

The energy transition is here, the energy business model is shifting. The moment has never been more propitious for ecological transition. With our next3 solution we propose our clients to join the solar autarky. The energy independency at home. Our contribution towards decarbonization. The time is now!

### Choose autonomy, go 24h solar

With conventional photovoltaic systems, most of the renewable energy is fed back into the electricity grid. Adding battery storage and intelligent energy management allows you to always have your renewable energy available and to choose how to use your self generated energy.

Renovation, electric heating and cooling, smart home automation, ... Electricity is and will always remain the heartbeat of our houses.

Technology is at our hand and we can benefit from it. With a next3 the energy solution is flexible to last for the next decades. Choosing to start with lower solar coverage and to gain autarky as the energy demand evolves is up to you. There is no limitation, the system matches your personal budget.

You decide when to do it, not your system

The electric mobility becomes solar mobility

> The forecast of electrical car usage is very promising and will have a great impact in our day to day electric profile. Having the solar pump right at your home or industry is a real benefit. Furthermore, your solar pump being cheaper than any other source of electricity for your electric car is a game changer. With the next3 we propose solar mobility.

# Calling all pros, we got news for you



# Flexible solutions that do the job!

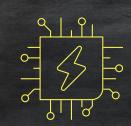
The system should match any client requirements, that's why there is a series of technical features turning the next3 as your best partner for your commercial and industrial applications.

> Phase balancing

3-phase systems are not simply 3 single phases synchronized with each other. Fixed phase distribution in the source for a complex 3-phase loads installation is the dreamed proposal for your grid operator. Shaving is always good, especially in economic terms. Benefit from tariff negotiation with your power fixed term and in addition contribute to the stability of the infrastructure. A potential future service to the grid?

# Peak shaving and load shedding

Our improved iconic smart boost function helps to relieve the grid power by using your solar and battery energy available in priority, opening a wide range of energy strategies at your hand.



# Power flow dispatcher

Not just another smart function Our core management is done by the power flow dispatcher®, a unique and outstanding control algorithm at the power electronic's level for quick reactions and with 1ms synchronization between the units. Our open philosophy is meant to facilitate full control of the device to take the best out of it. Incorporated bidirectional Modbus communication allows professional integration for the highest added value professional solutions. With **open studer** we provide examples, libraries and we encourage you to go beyond the limits.

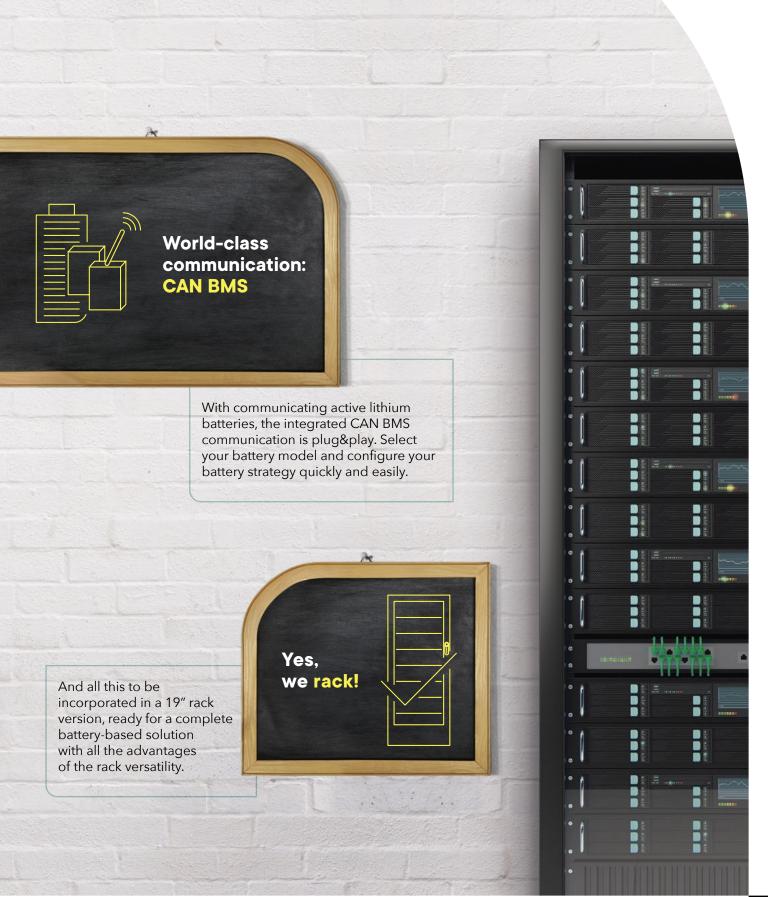
Advanced AC sources and loads management The unique AC flex interface allows to configure a second AC source or a second AC load with a swipe, with an integrated smart energy management simplifying complex installations.

Integration

made easy

To grid or not to grid

The next3 is a full grid interactive device following the EU LV directives and the respective country regulations. Select your country and turn your grid connection into a powerful and dynamic asset.



Li

Pb

**Battery** 

flexibility

The next3 provides the flexibility to work with different battery technologies.

# AC flex, second controlled load

Transform excess of energy in system assets or secure the supply of the critical loads with your battery backup to cover grid failures.



The demand can vary along the day and night, season periods and other variables. Combining two generators with different setups bring you all the flexibility your usage require.



The next3 compiles a wide range of energy data to build an advanced energy management model. Use our tool for advanced energy management strategies. Integrated smart advanced energy strategies

# Manage your offgrid energy to the next level



We go straightforward for more than 30 years. The next3 device is conceived to simplify installations keeping the highest reliability.

Our smart inverter-charger comes with a reference voltage of 3x400Vac, includes 2 MPPT inputs with two 900Vdc strings per input. A powerful internal transfer with 80A per phase for backup generators and hybrid architectures. One AC flex interface for advanced automatic management of a second source or a second controlled load. Two additional fully configurable auxiliary contacts and 2 remote entries. Everything in one single device for the full management of a complex offgrid installation.

#### Is there always room for one more?

Batteries, solar, 3 phase loads, 3 phase generator. Difficult logistics, challenging space usage, limited time planning.

Our objective is to simplify installations and we put ourselves into the installer shoes. This device replaces up to 6 in a typical solar offgrid 3-phase installation.

#### Need more power?

Up to 3 devices can be installed in parallel.

A mountain hut of the Swiss Alpine Club lies at the Tracuit Pass at 3256masl located above Zinal in the canton of Valais. The hut is equipped with Studer devices.



## Inverter + battery charger

Continuous power 25°C	15000 VA	
Power 30 min. 25°C	16000 VA	
Power 5 sec. 25°C with solar / inverter / 1-phase	30000 / 24000 / 10000 VA	
Nominal output voltage, line to neutral	pure sine wave 220 / 230 / 240 Vac (±1%)	
Nominal output voltage, line to line	pure sine wave 380 / 400 / 415 Vac (±1%)	
Nominal output frequency	50/60 Hz (±0.02%)	
Nominal battery voltage (Input range)	48 Vdc	
Battery voltage range	38 - 68 Vdc	
Maximum charging current / power	300 Adc / 15000 W	

Cos φ 0.1-1 | Harmonic distortion < 1 % | Charge characteristic 6 steps: bulk, absorption, floating, equalization, reduced floating, periodic absorption | Temperature compensation with nx tempsensor (included)

# Solar PV

Number of MPPT inputs	2	
Max PV short circuit current per PV input	22 Adc	
Maximum PV open voltage (Voc)	900 Vdc	
Start up voltage / Shut off voltage	350 / 100 Vdc	
Maximum solar power produced (electronic limitation)	2 x 8000 W	
Maximum solar power recommended (@STC)	2 x 12000 W	
MPP voltage range recommended	300 - 700 Vdc	

Max. efficiency solar to grid / EU / CEC 97 / 92 / 93% | MPP efficiency static / dynamic > 99 / 99% | Max. efficiency solar to battery 95 %

# Transfer

AC source (Grid or Genset)		
Maximum rated current	3 x 80 Aac	Maximu
Operating voltage range, line to neutral	176 - 288 Vac	Operati
Nominal voltage, line to neutral / line to line	220, 230, 240 / 380, 400, 415 Vac	Nomina
Nominal frequency	50 / 60 Hz	Nomina
Overvoltage category (OVC)		
Grid code compliance	EN E0E40 1.2010	_

AC flex (Controlled 2 <sup>nd</sup> AC load or Genset)		
Maximum rated current	3 x 80 Aac	
Operating voltage range, line to neutral	176 - 288 Vac	
Nominal voltage, line to neutral / line to line	220, 230, 240 /	
	380, 400, 415 Vac	
Nominal frequency	50 / 60 Hz	

EU Commission Regulation 2016/631 (NC RfG), EN 50549-1:2019, VDE-AR-N 4105:2018, IEC 62116, IEC 61727

# **General data**

320 / 450 / 760 mm
58 kg
6 / 7 / 41 W (+5 W with nx interface)
2 x Input, 2 x Output, rating 16 A each
EU Low Voltage Directive (LVD) 2014/35/EU
EU Electromagnetic Compliance (EMC) 2014/30/EU

Ingress protection according to IEC60529 IP30 | Operating ambient temperature range -20 to 55°C | Relative humidity operation range 5 to 95 % (non condensing) | Mounting location Indoor, unconditioned

Data may change without any notice. Some features are not available in the gamma version.

#### An all-rounder matching any project requirement

All-in-one compact and versatile solution customized according to project needs

Outstanding performance and integration of every energy source: solar, grid, generator

- 3-phase input (AC source), 3-phase output (AC loads) and 3-phase AC flex, configurable as a second input or second controlled output
- Smart energy management with AI models
- Smooth operation with all battery technologies. Lithium-ready, integrated CAN communication with lithium batteries BMS
- Unique modular hardware combination with optional solar and transfer modules
- Multiple combination possibilities: parallel operation with one internal transfer, multi-unit and multi-battery system
- \_ Remote monitoring and control with studer professional portal

#### **Options & accesories**

next3 full option (standard)



Î

nx3



next3 without solar

nx3 t

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nx3 sti

interface





next3 without transfer



nx tempSensor next3 battery temperature sensor



next3 without solar,

without transfer

next3 full option +

nx3 s

The new intuitive smart platform to configure, control and analyze your system. Making life easier for both professional installers and final users.

# **Hello family**

#### The next3 is the first device of a series of devices that are transforming the energy management model.

We are currently working on different products that will complete the next series in the upcoming months.

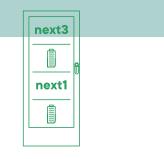


**Next3** series, our versatile and powerful three-phase product range



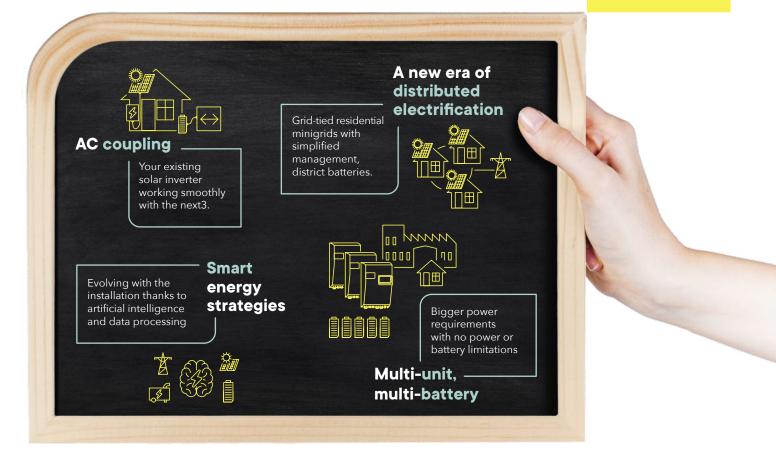


**NextUL** series @120Vac/60Hz for the North American market

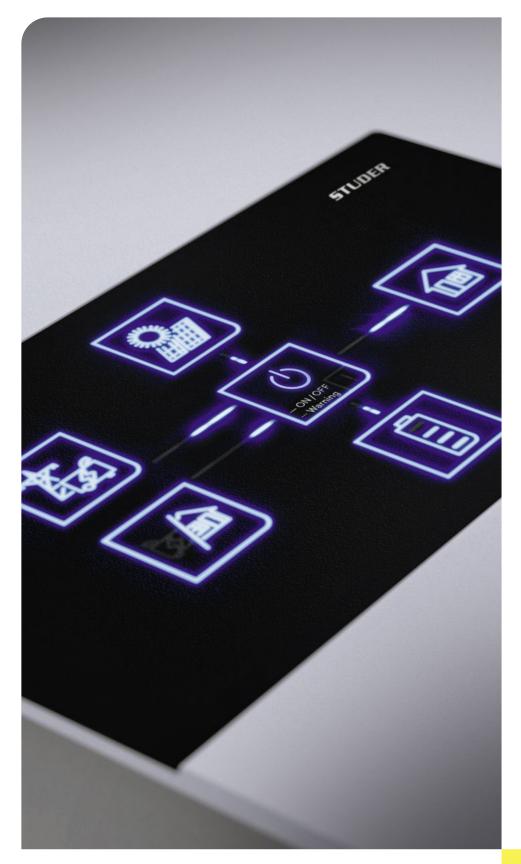


**Rack version,** the next series in 19" rack version for simple battery-based cabinet solutions

## Features coming soon



All the devices from the next series will work with nextOS, a limitless energy management platform. New functionalities and features will be published and made available through regular software upgrades.



Call our specialists **+41 27 205 60 80** or visit **studer-innotec.com/next3**.

Studer Innotec SA rue des Casernes 57 1950 Sion, Switzerland All our products include a 12-year warranty (6+6).

ISO certified factory 9001:2020/14001:2020.



Designed and assembled by studer in Switzerland

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