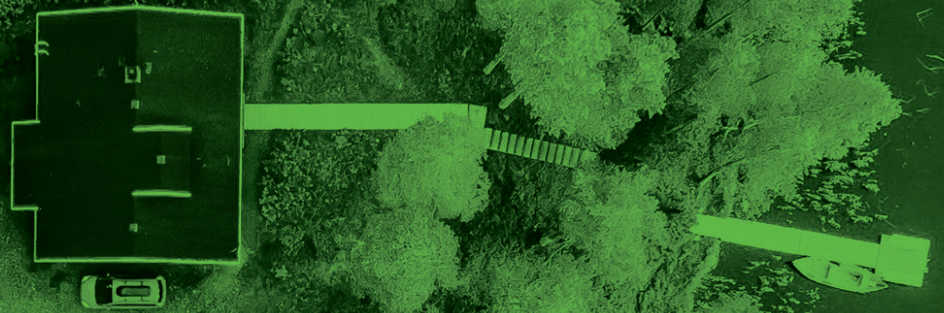


# Innovation and digitalization: on the path towards sustainable development





Well aware that global energy challenges are changing rapidly, at Studer we are focusing on creating simple solutions to complex problems. Access to electricity for all, the energy transition, automation, digitalization and electric mobility are all topics and issues that set the pace and influence the creation of all our products and services.

In energy management the needs are increasing, systems are becoming more complex, and technology and innovation must respond to these new imperatives. We develop products that enrich peoples' lives and are constantly on the lookout for groundbreaking developments and trends.

A few years ago, a battery inverter was a single device working alone. Today, it communicates with other devices in a system, there is remote supervision, an interaction with the end user and the rest of the elements in the energy chain. There is real added value in having an eco-system around the inverter.

Studer service does not end when a product is placed on the market, on the contrary, it goes one step more, committing itself to constant development, with a team of specialized professionals fully dedicated to this.

Innovation is essential and it is not just about creating the next range of new products, but also about improving existing products to try to meet the needs of our special niche energy market. Our products have a long field life of around 15-20 years.

These are not consumer electronic products, but rugged energy converters that you install and then can forget for years. The maintenance and upkeep of the existing range is therefore essential. It is also with

these additions that a product evolves towards a maturity that bolsters its reputation. We will continue to engage in this systemic aspect, with a set of professional converters and the tools and services to best meet the needs of our customers. This applies to the existing range and to the new products that we are currently developing.

#### vt-40, the variotrack's little brother

Among the improvements of the current product range, we are introducing a new solar charge controller to the variotrack family. The vt-40 solar charger has the characteristics of the existing variotrack in its genes, from its appearance to software that has been tried and tested for years.

The hardware has been optimised to operate at lower power with the same robustness as the vt-80 and vt-65 models. Inside is a state-of-the-art power electronic technology, with interlaced multi-channel and modern Mosfets of the highest efficiency. This new device has a real place in the family of products for building autonomous systems with lower energy requirements than we had with its big brothers and the product is available to order today!

#### Openstuder, integrating converters in an environment

Studer converters are plug & play in the

traditional stand-alone energy systems. They can also be used for customized installations. This is achieved through two-way communication that means it's possible to read all the information from the devices and also to take control of the system. Thus, enabling you to develop your own systems and even to create your own products ready to integrate Studer converters. This is the Openstuder concept.

Looking beyond the means of communication, we want to go further than just an open door. Openstuder is about making developers' lives easier. We want to shorten the development time by providing open source libraries and sample implementations, a toolbox for our professional customers. And this state of mind is implemented in the Xtender range and will also be there for the new developments.

#### What's next?

We have the firm conviction that innovation must be broader than just technological research, there must also be evidence. 2020 marks an important turning point in the history of our company with the launch of our new generation of smart inverters: the next range.

#### next1, low frequency single-phase smart inverter-charger

Our new smart inverter-charger for off-grid and grid-tied applications, the next1 is single-phase smart inverter-charger with low frequency topology ensuring the highest overload capability and the minimum standby consumption. The device has an AC input, with double disconnect relay for distribution networks. This input complies with all the new regulations of the European Union and the North America region. Another new feature is the AC-flex interface, that can be configured as a second AC input, or as a second, controllable AC output for built-in load shedding management.

The next1 will come in a 230 V version as well as a UL certified, 120 V version. Like the Xtender range, the next1 will be available for different power categories, as well as for the usual variety of battery voltages.

We are currently designing a 19" rack version for system integration, which will be available a few months after the release of the wall



next1

version. In addition, for the next family our production range now benefits from a on a standard coating for all electronic assemblies. This provides high reliability in dusty environments.

### next3, the new powerful player for off-grid, on-grid and hybrid installations

For the very first time, we have developed a 3-phase inverter charger with 2 built-in solar high voltage MPPT inputs. A revolutionary device with great and innovative technical features, designed for maximizing the efficiency in battery-based systems. This all-in-one solution facilitates the installation and wiring, with only one device replacing up to 6 in a typical installation.

In addition, the next3 offers a unique modular hardware combination, with 4 different options for the solar and transfer modules for multi-unit configuration. Multiple units can be combined in parallel with a unique transfer and a common battery in the usual way. And for the very first time it is also possible to combine multi-unit and multi-battery systems using an external transfer. This gives the added possibility of combining different battery technologies and increasing the versatility with a centralized management. Studer's R&D team has made a huge effort to provide a unique innovative solution for distributed electrification.

The next3 as well as the rest of the devices from the range, is a full grid interactive inverter. Along with the AC input for grid-tied application and AC-flex, the next3 includes other features common to the next range.

There are unique technical features for this top of the range device for outstanding energy management of battery systems. The



next3

improved smart-boost2 function assists with adapting the battery to the source limitations in the most versatile way, facilitating for example phase balancing or peak-shaving. The new power flow dispatcher centralizes the power management of the complete system integrally.

### nextOS

On top of the hardware and technical features, we have developed a new comprehensive interface, one single and

central user interface per system. nextOS is an intuitive smart platform to configure, control and analyse your system. Making life easier for both professional installers and final users.

Digitalisation is the path for more comprehensive solutions towards the power management of tomorrow. The systems are meant to progress with the user and the context. The AI and powerful energy management tools will result in constantly evolving solutions.

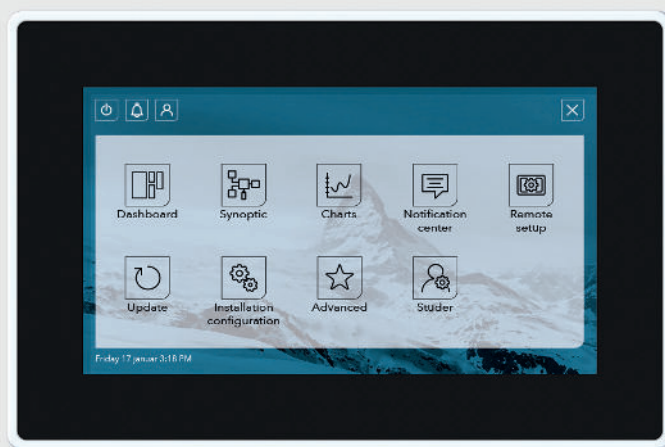
Today, Studer stands out once again from its competitors by being not only a high-tech manufacturer, but also a service provider with the goal of providing tools to help customers close deals.

Studer will soon be offering unique services accompanying the high-end devices, designed and implemented specifically to improve business opportunities. We have devised financial and digital services that are unique in the world and essentially adapted to the markets that affect our clients, thereby confirming Studer's position as a top-of-the-range player in the field of power electronics.

### next, challenge accepted

The next environment is the new revolutionary ecosystem to strive every upcoming challenge. A series of devices embracing innovation and setting up the line for future evolution.

Go to the next level: visit [www.studerlive.ch](http://www.studerlive.ch)



nextOS