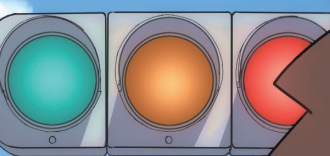


Nipron Wave

Vol.83



Highlights

1 Green power products

Case study of PV Oasis utilization during a large-scale blackout
Introducing the best wall-mount light-weight solar battery using a Japanese cell.

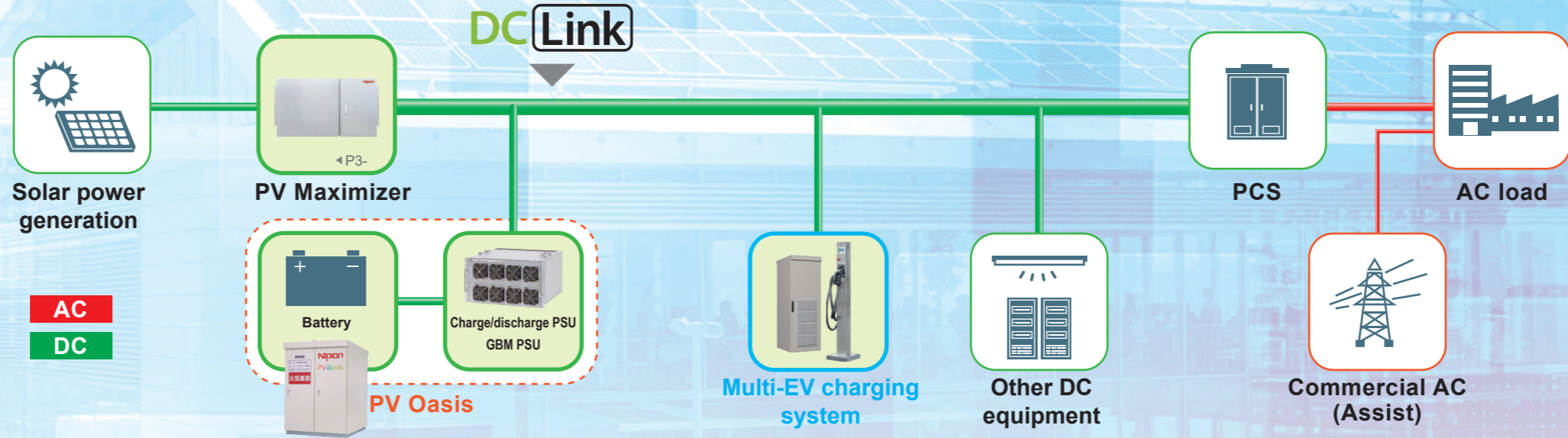
2 New product: SFXL-700P-S

High-capacity SFX power supply designed for high-performance GPUs

Benefits of DC control

Photovoltaic power generation systems and rechargeable batteries operate on direct current (DC). By the adoption of DC Link, which offers DC-to-DC connections for these systems, a significant number of power conversions can be saved in comparison with conventional systems. The power loss due to conversion will be reduced and the energy utilization efficiency will be enhanced as the power can be used with the minimum number of conversions.

Also, the simplification of system configuration helps improve reliability and maintainability and enables the construction of uninterruptible power supply systems.



Nipron Offers a Variety of DC Products to Propose Optimum Solutions

PV Oasis

Self-consumption solar power generation and storage system



This container-type solar power generation and self-consumption system stores excess energy from solar power generation in a rechargeable battery and utilizes it by discharging it whenever necessary.

Devices required are built-in and connected inside the container to minimize electrical works in the installation site.

Container-type design for easy installation

Designed and made in Japan

The PV Oasis is produced by performing all processes, from the design, procurement, manufacture through to the integration in containers, consistently at a Nipron's own factory in Japan to ensure a stable supply and stringent quality control.

Minimize on-site construction work.

As system devices are contained in the container, the onsite installation work can be minimized. It enables speedy and low-cost introduction by reducing troubles of design and installation. The uniform and consistent production system at the factory realizes stable performance with minimum deviation in quality and offers superior reliability without relying on onsite installation.

Off-grid operations become possible

In addition to the commonly disseminated in-house consumption system with the grid connection, construction of off-grid in-house consumption system is also possible.

No major electrical works required

Reduction of construction costs

Easy to start from a small-scale setup

<http://www.nipron.com>

Hybrid (AC/DC) input

Space-saving multi-EV charging system



Power distribution board



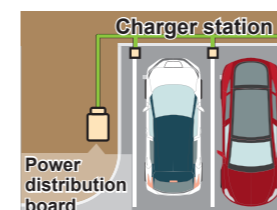
Charger station

Space-saving multi-EV charging system with AC/DC input
It enables the use of DC power from solar power generation as is and efficient system operation is possible. Also, the power supply system and the station are separated and, hence, multiple chargers can be installed in a confined space.

Make effective use of limited parking space

Space-saving

Because the power distribution board for EV charger and charger stations are separated, the system can be installed within a common parking lot.

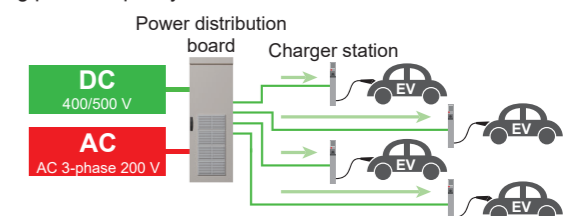


The power distribution board can be installed remotely, allowing for a highly flexible layout

The space-saving design allows installation within parking spaces

Supports simultaneous continuous charging of multiple 20 kW units

As a single EV charger power distribution board can support multiple charger stations, it is possible to connect and charge multiple EVs simultaneously. Also, by controlling the power through the charger control, multiple number of EV chargers can be realized even if the incoming power capacity is restricted.



<http://www.nipron.com>

Maximize Power Generation Efficiency PV Maximizer

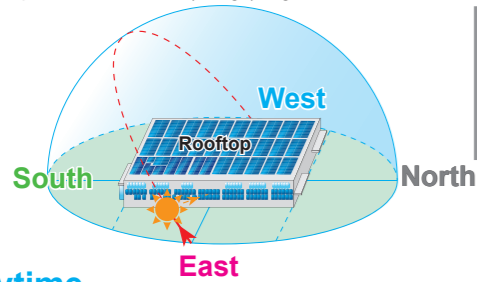


Installation of Solar Battery Modules on the Wall Utilizing PV Maximizer

A power conditioner (PCS) that performs batch control cannot control strings individually. For this reason, if solar battery modules are installed on building walls, the power generation characteristics vary depending on the installation location and the efficiency of power generation will drop because the insolation condition changes significantly depending on the bearing and time of day. Hence, the installation on the wall was usually avoided. However, the PV Maximizer has made it possible to make the maximum use of module capacity on the wall or rooftop, where the power generation condition varies significantly, by controlling the power string by string.

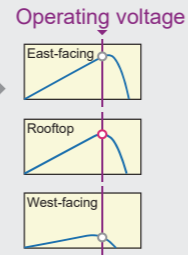
Morning

In the morning, the insolation angle is small and wall-mounted modules facing East are in relatively good condition. On the other hand, those installed on the rooftop or walls facing West will suffer. Since individual control of strings in a multi-string system is not possible with the batch control of PCS, it may not be able to take advantage of capacities of modules (strings) in good condition.

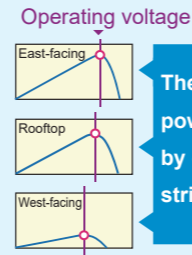


The operating voltage is off the maximum power point due to the batch control

Power conditioner Batch control



PV Maximizer Individual control

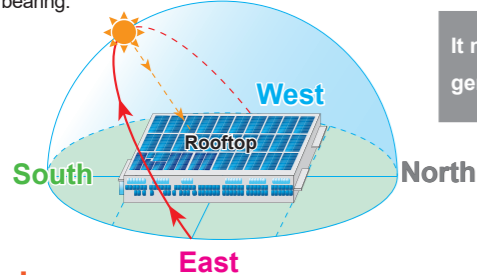


The generated power is maximized by controlling each string individually

*Concept

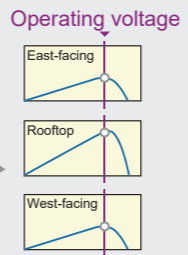
Daytime

In the daytime, the insolation angle is large and this favors modules on the rooftop. On the other hand, those facing East and West will suffer. With the batch control of PCS, it is also possible to influence the power generation of other modules (strings) in addition to the possibility of not being able to bring forth the capacity of some modules completely due to the differences in the power generation characteristics depending on the bearing.

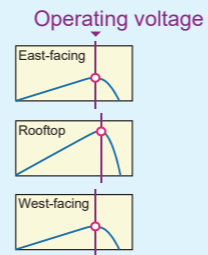


It may also affect power generation of other modules

Batch control Power conditioner



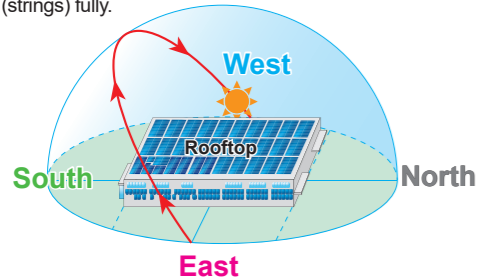
PV Maximizer



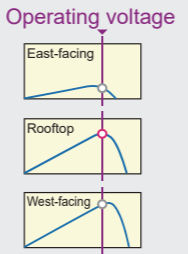
*Concept

Evening

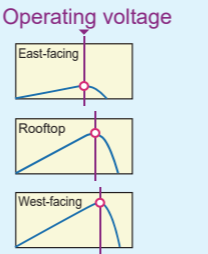
In the evening, the condition of insolation favors modules facing West. Since the batch control of PCS cannot control multiple strings individually, it may not be able to utilize the power generation capacity of modules (strings) fully.



Batch control Power conditioner



PV Maximizer



*Concept

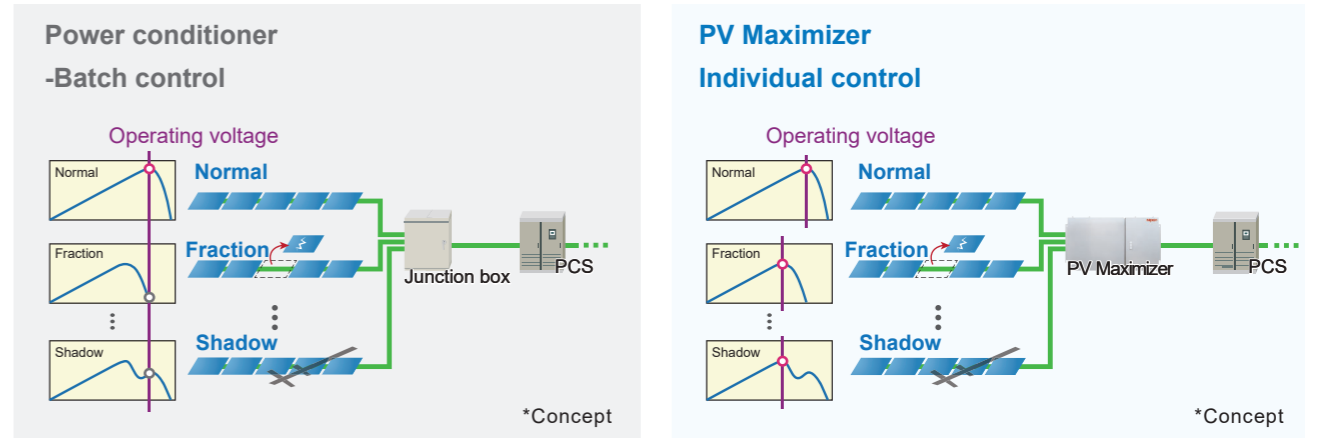
<http://www.nipron.com>

Maximize power generation efficiency

When a solar module malfunctions, its power generation characteristics change. If the issue is not addressed, the overall output decreases. Frequent replacement of faulty modules leads to costly and time-consuming construction work. Another option is to remove the faulty module, but this creates a voltage imbalance with the other strings and prevents sufficient power extraction.

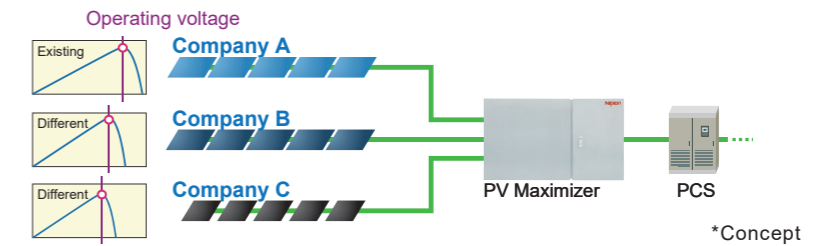
The PV Maximizer controls power on a per-string basis. This allows it to compensate for the voltage shortfall when a module malfunctions and enables continued operation, even with incomplete strings.

Concept of maximizing efficiency



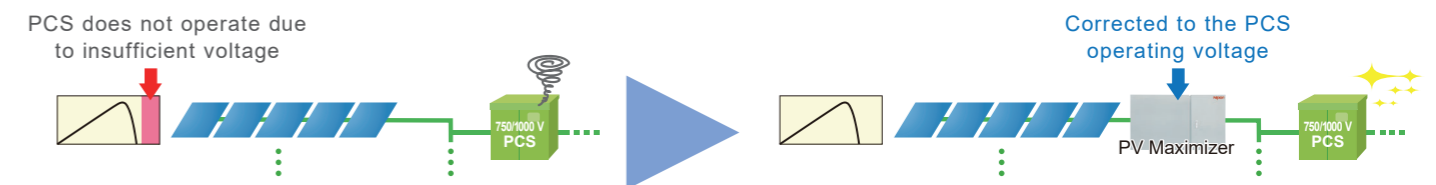
Support mixed use of different manufacturers

Even if there are voltage differences between strings, installing a PV Maximizer boosts each string to a preset voltage. This allows the connection of mixed panels, such as panels from different manufacturers. In addition, after around ten years of operation, replacing solar panels may be considered. With the PV Maximizer, old and new panels can be used together.



Match PCS voltage

The PV Maximizer boosts voltage to a preset level. In recent years, various types of solar panels have been developed, some with lower output voltages that may not match the input requirements of existing power conditioners (PCS). Installing the PV Maximizer boosts the voltage to fall within the PCS input voltage range. The PV Maximizer is also effective in systems with a small number of panels.



<http://www.nipron.com>

SFX SIZE 700W

SFXL-700P-S

Continuous 575 W/ Peak 700 W

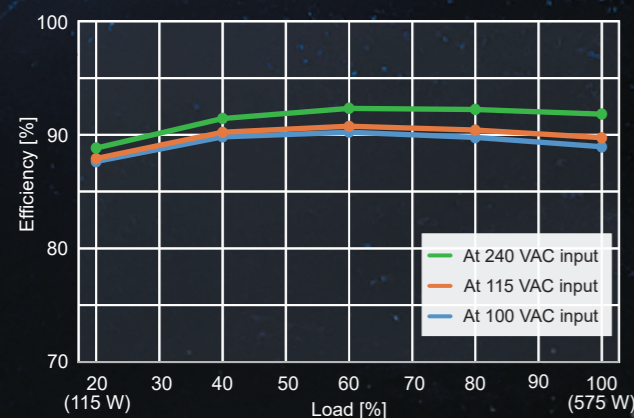
Size: W125×H63.5×D125 mm



Scheduled for release in 2026

Designed to achieve high efficiency

This model maintains stable power supply even in a stressful environment and supports efficient system operation.



Output specification

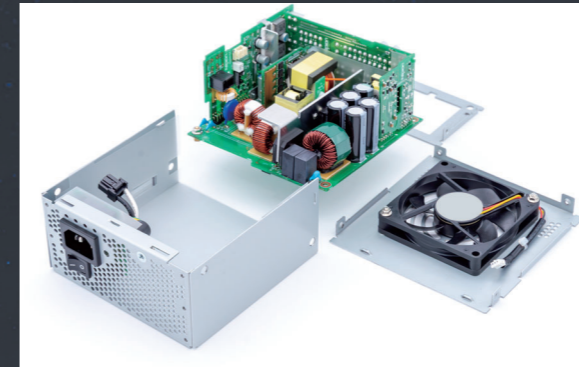
A peak power of 700 W, exceeding the maximum continuous capacity, is available.

Output voltage	+3.3 V	+5 V	+12 V	-12 V	+5 VSB
Continuous max. current/power	12 A	16 A	47.5 A	0.2 A	3 A
	39.6 W	80 W	570 W	2.4 W	15 W
	Total 83 W		Total 570 W		
Peak current/power (within 5 s)	16 A	16 A	57 A	0.2 A	3.5 A
	52.8 W	80 W	684 W	2.4 W	17.5 W
	Total 83 W		Total 685 W		
Total 700 W					

<http://www.nipron.com>

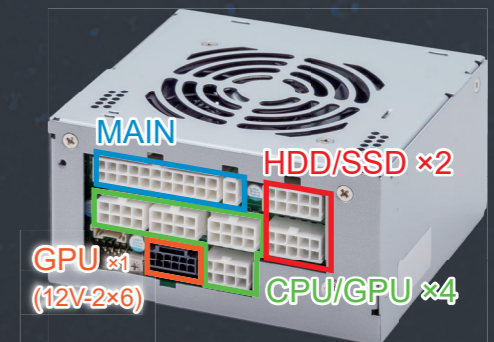
Quieter operation

The larger fan provides sufficient cooling performance even at low rotation speeds, reducing operating noise while ensuring stable operation.



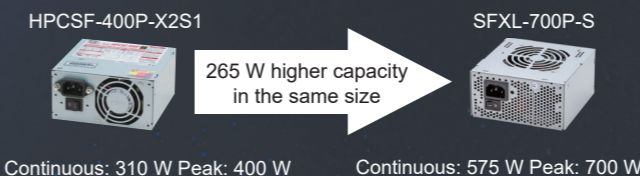
Full modular design

The full modular design allows the user to limit cable connections only to those that are required. The optimization of cable routing prevents interference to the internal airflow, facilitates the ease of assembly and enhances the maintainability.



Achieves approx. 200% of the power density of Nipron's conventional models

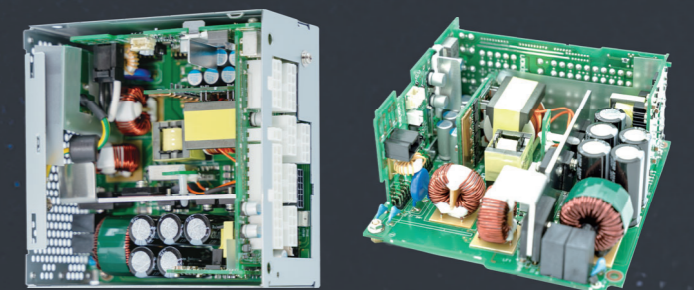
Compared with Nipron's conventional models in the HPCSF-400P series, the SFXL-700P series offers 185% of the power density, contributing to the compact design of embedded devices.



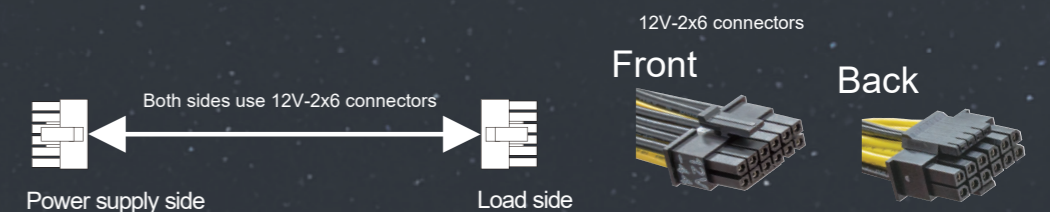
Quality & reliable craftsmanship

The power supply is designed with an optimum component layout which is utilizing a unique thermal analysis/simulation and high reliability is achieved to withstand long-term 24/7 operation at the rated power.

Power supply units for PC are produced at Nipron's Hanshin Factory. We are committed to design and production in Japan.



12V 2x6 harness coming soon

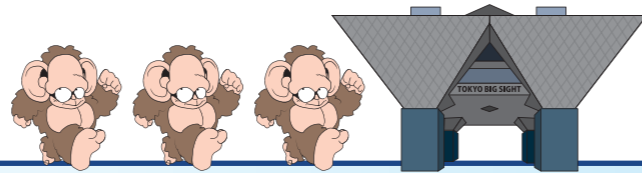


*Please use the 12V-2x6 harness with a compatible PSU.

*Since the product is under development, the specifications and appearance shown here may change without notice.

<http://www.nipron.com>

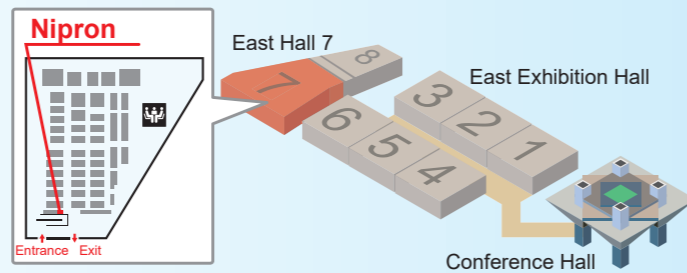
Invitation to Exhibition



We will be exhibiting at JUMBO BIKKURI FAIR 2026.



Period: Friday, April 17-Saturday, April 18
Venue: Tokyo Big Sight East Hall 7 Booth No.061



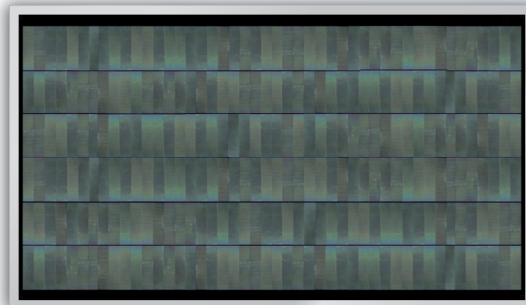
We will be exhibiting at the 52th JUMBO BIKKURI FAIR 2026, held at Tokyo Big Sight from April 17-18. This is a comprehensive exhibition attracting approx. 200 manufacturers specializing in electrical installation fields.

At the Nipron booth, various solutions, including EV charging system, in the fields involving solar power generation and power supply systems will be presented.

Nipron plans to introduce the wall-mount light-weight PV modules using new installation method, the space-saving "multi-EV charging system" and the PV Maximizer that enhances the efficiency of solar power generation. At the same time, different lineups of industrial switching power supply units, including PC power supply units and single output PSUs, will be exhibited with demonstrations of backup power supply effective as a countermeasure against blackout. Please do stop by the Nipron booth.

Highlights of the exhibition

**Wall-mounting & light-weight
Chalcopyrite solar cells made in Japan**



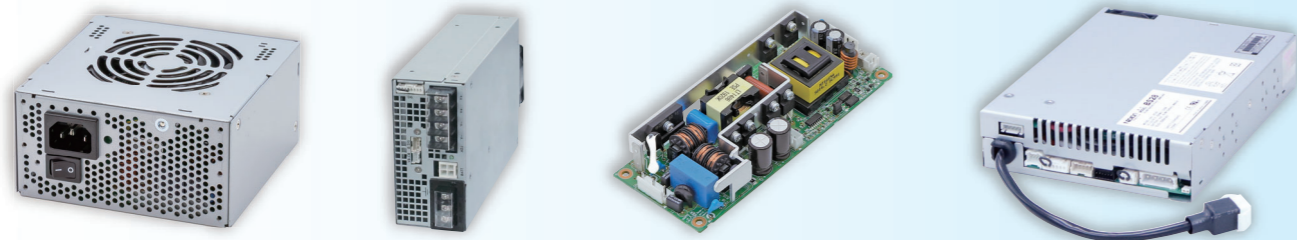
PV Maximizer



**Multi-EV charging
system**



Industrial switching power supplies (PC PSUs, single-output PSUs)



Received a Supplier Award from Suzhou Fujifilm Imaging Equipment Co., Ltd.

Our commitment to quality was recognized.

Our commitment to quality was recognized.

We have received a supplier award from FUJIFILM Imaging Systems (Suzhou) Co., Ltd., a long-standing business partner, in recognition of our quality initiatives. The award was presented during their 30th-anniversary ceremony held with Matsubara, Executive Vice President and Goto, East District Business Office from Nipron in attendance.

As a long-standing business partner, we were invited to the ceremony. Along with attending the ceremony, we toured their factory. This visit served as an opportunity to introduce what Nipron is working on through interactions with everyone concerned on-site and further deepen our mutual understanding.

FUJIFILM Imaging Systems (Suzhou) Co., Ltd. is one of our most important customers. This award will motivate us to continue product manufacturing with a commitment to quality as a trustworthy partner.



**The Nipron Story,
as told by our Chairperson**

Strait of Hormuz blockade triggers oil crisis! Has the time arrived for the world to switch to BEVs?

The world is currently seeing military tensions escalating rapidly between the President Trump-led United States and Israel on one side, and Iran on the other. Reportedly, airstrikes have been conducted on key facilities within Iran. In response, Iran has effectively closed the Strait of Hormuz as a retaliatory measure, raising concerns about serious disruptions to tanker operations by various countries. Against this backdrop, crude oil prices have risen from their previous range of around \$70 to \$80 per barrel to around \$100 to \$120, and some sources suggest that, in the event of a prolonged situation, prices could climb close to \$200.

If the instability of energy supply continues, a global shift from gasoline-powered vehicles to battery electric vehicles (BEVs) will be accelerated,

*Setsuo Sakai
April 2026*



Nipron Co., Ltd.

<http://www.nipron.com>

Sales Department and R&D Department

1-3-30, Nishinagasu-cho, Amagasaki-city, Hyogo, 660-0805, Japan.

TEL: +81-6-7220-3657 FAX: +81-6-6487-2212

