

Nipron Wave

Vol.65



Highlights

- 1 Medical standard certified power supply**
New products such as the mFZP series are available one after another! Introducing highly reliable and highly efficient power supplies with medical standards.
- 2 Newly upgraded PV Maximizer 4STQ-12KSD400VM**
A single unit supports four string inputs. Achieved significantly smaller size, and can be installed anywhere!

Ideal for medical equipment required high reliability

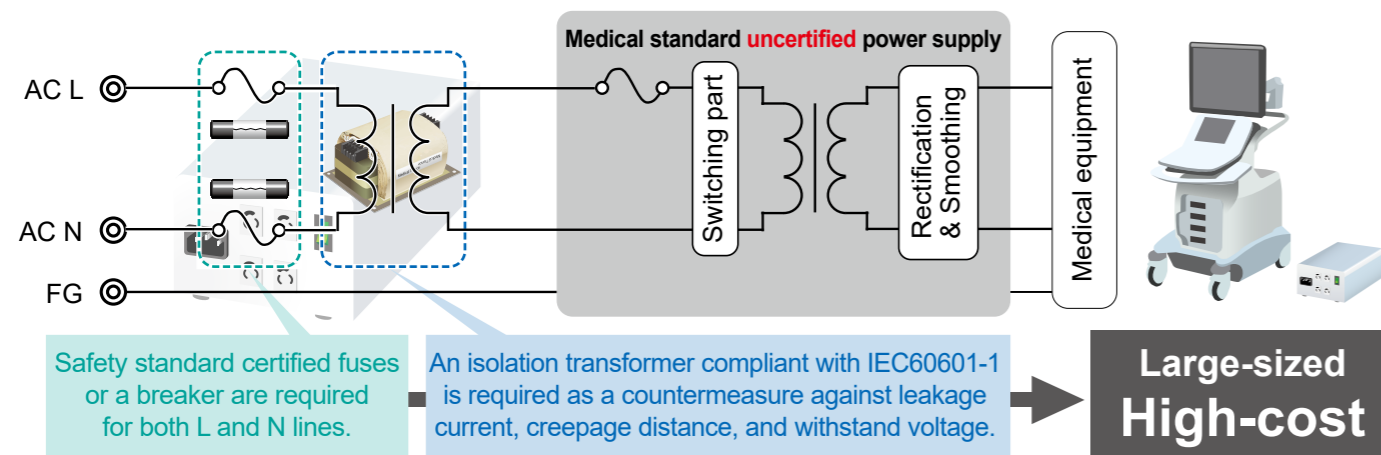
IEC60601-1 certified power supply

Benefits of using certified power supplies in medical equipment

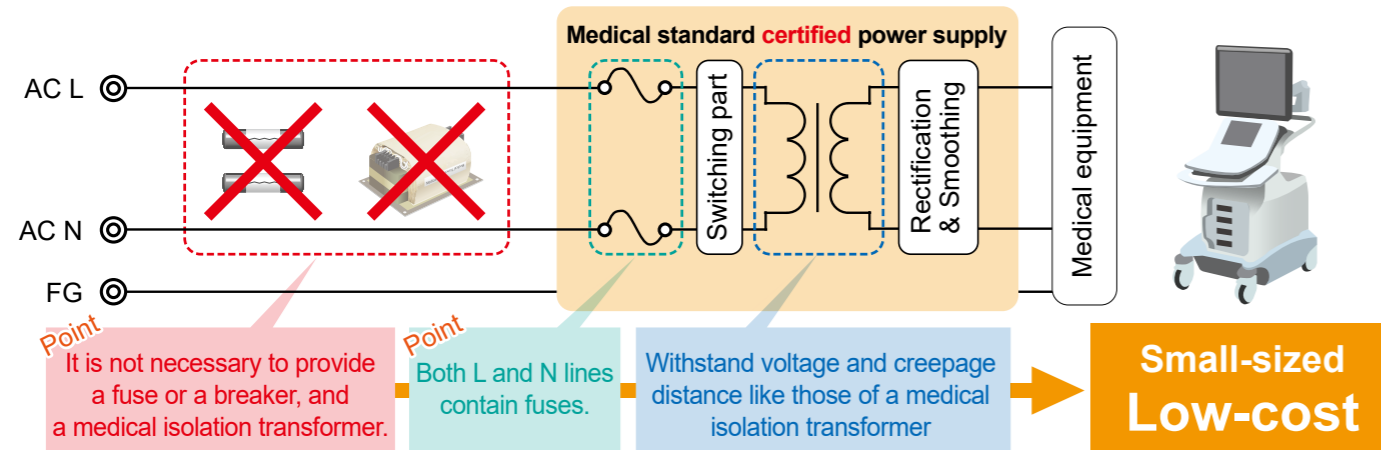
In order to obtain certification of compliance with a medical standard, a company must apply to a certification agency and undergo an examination. If one of that company's products includes a power supply without the medical standard, the power supply undergoes testing that entails high costs and a very long waiting period from submission of the application until certification is obtained. If the product incorporates a power supply with the medical standard, testing of the power supply is essentially unnecessary, resulting in a reduction in the application period and application costs.

To be clear, a power supply listed as certified according to the medical standard must incorporate features such as integrated fuses in both the L and N lines, compatibility with reinforced insulation, and low leakage current characteristics. This eliminates the need for preparation of expensive separate medical isolation transformers, fuses, and breakers, resulting in low-cost, secure, and safe medical electrical equipment.

Medical standard uncertified power supply



Medical standard certified Nipron power supply



Point Other companies have some medical standard certified power supplies where the user must install external fuses. All Nipron medical standard certified power supplies have build-in fuses on both L and N lines.

The necessities for medical equipment, Nipron's m series

<http://www.nipron.com>

List of Medical Standard Certified Power Supplies

Single output power supply lineup

Series	IEC60601-1 Ed.2	IEC60601-1 Ed.3.1		Backup for instantaneous power failure or blackout	Output voltage (single output)	Continuous output	Peak output
		2MOPP	2MOOP				
mFZP-040 series	✗	To be certified	To be certified	To be certified	5, 12, 15, 24V	30-40W	40-60W
mFZP-075 series	✗	✓	✓	✓	5, 12, 15, 24V	50-75W	75-150W
mUZP-120 series	✗	✗	✓	Note 1	12, 24V	100.8-120W	200.4-201.6W
mUZPT-120 series	✓	✓	✓	Note 1	12, 15, 24V	100.5-120W	200.4-201.6W
mUZP-150 series	✓	✓	✓	✗	12, 18, 24, 48V	150-153.6W	400.8-401.4W
mUZP-220 series	✓	✓	✓	✓	12, 18, 24, 48V	180-220.8W	400.8-401.4W
mUZP-220/520P-24S05	✗	Application pending	Application pending	Application pending	24V	220.8W	520.8W
mOZP-200 series	✗	✗	Ed.3	Note 1	3.3, 5, 12, 15, 24, 36, 48V	132-201.6W	198-403.2W
mOZP-350 series	✓	✓	✗	✓	12, 15, 24, 30, 36, 48V	300-352.8W	504-601W
mUZP-400 series	✗	To be certified	To be certified	To be certified	12, 24, 36, 48V	330-403.2W	504-601.2W
mGPSA-360 series	✓	✗	Ed.3	✓	12, 24V	360W	480-600W
mUZP-600 series	✗	To be certified	To be certified	To be certified	24, 48V	600W	1200W

*1 Not certified with safety standards

*2 The 36V output is adjustable to 30V with a variable resistor.

PC power supply unit lineup

Series	IEC60601-1 Ed.2	IEC60601-1 Ed.3.1		Blackout backup	Continuous output	Peak output	Form factor
		2MOPP	2MOOP				
mHNSP4-1000P series	✗	✗	Ed.3	✓	822W	1000W	ATX
mNSP3-450P series	✓	Ed.3	✗	✓	301W	450.5W	ATX
mPCSA-500P-X2S	✓	Ed.3	✗	✗	301W	500.5W	ATX
mHPCSF-400P-X2S1	✗	✗	✓	✗	310W	400W	SFX

Protective measures

- MOOP Means of Operator Protection ⇒ Protective measures to reduce the risk of electric shock to people other than the patient.
- MOPP Means of Patient Protection ⇒ Protective measures to reduce the risk of electric shock to the patient.

Leakage current (an example of actual measurement at rated load)

Series	110 VAC input	264 VAC input
mFZP-040 series	0.14mA typ	0.29mA typ
mFZP-075 series	0.13mA typ	0.30mA typ
mUZP-120 series	0.06mA typ	0.15mA typ
mUZPT-120 series	0.06mA typ	0.14mA typ
mUZP-150 series	0.06mA typ	0.15mA typ
mUZP-220 series	0.06mA typ	0.15mA typ
mUZP-220/520P-24S05	0.06mA typ	0.16mA typ
mOZP-200 series	0.05mA typ	0.15mA typ
mOZP-350 series	0.06mA typ	0.20mA typ
mUZP-400 series	0.05mA typ	0.16mA typ
mGPSA-360 series	0.09mA typ	0.20mA typ
mUZP-600 series	0.05mA typ	0.16mA typ
mHNSP4-1000P series	0.13mA typ	0.31mA typ
mNSP3-450P series	0.09mA typ	0.22mA typ
mPCSA-500P-X2S	0.09mA typ	0.23mA typ
mHPCSF-400P-X2S1	0.09mA typ	0.23mA typ

Extensive lineup of medical single output power supplies and PC power supplies

<http://www.nipron.com>

Medical Standard Certified Single Output Power Supplies

NEW mFZP-075 series

IEC60601-1 Ed.3.1 MOPP, MOOP certified



Continuous: 50-75W Peak: 75-150W

Output voltage: 5/12/15/24V

Supports 200% higher peak load (except 5V type)

The product supports 5-second output of peak power, which makes it optimal for devices requiring an inrush current, such as motors.

Peak 150W

Continuous 75W | 200% at most

The power supply clears VCCI Class B for the conducted emissions.

Small size and large capacity

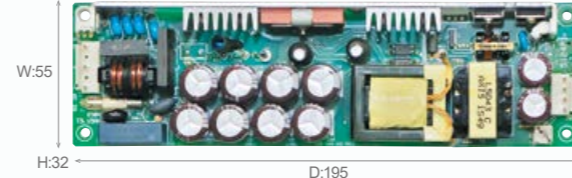
Compared with Nipron's past/current model, OZ-060, this model keeps approx. 40% smaller size and approx. 125% larger capacity.

mFZP-075 Continuous: 75W Peak: 150W



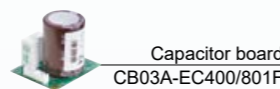
- Small-sized
- Large capacity
- Supports peak power

OZ-060 Continuous: 60W



Backup for instantaneous power failure

Instantaneous power failures can be addressed by connecting a capacitor board.



NEW mFZP-040 series

To be IEC60601-1 Ed.3.1 MOPP, MOOP certified



Continuous: 30-40W Peak: 40-60W

Output voltage: 5/12/15/24V

Supports 150% higher peak load (except for 5V type)

It supports 5-second output of peak power, which makes it optimal for devices requiring an inrush current, such as motors.

Peak 60W

Continuous 40W | 150%

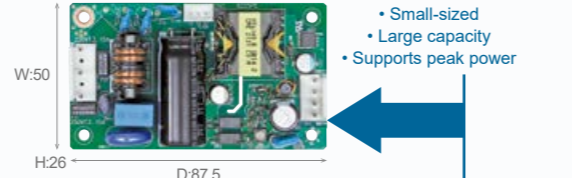
Without output derating until the ambient temperature of 50°C

Achieved high efficiency of 92.5% typ with 240VAC input, which allows less heat generation. It helps for the cost cut off for heat management in the customer's system.

Small size and large capacity

Compared with Nipron's past/current model, OZ-030, this model keeps approx. 44% smaller size and approx. 130% larger capacity.

mFZP-040 Continuous: 40W Peak: 60W



- Small-sized
- Large capacity
- Supports peak power

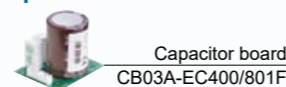
OZ-030 Continuous: 30W



The power supply clears VCCI Class B for the conducted emissions.

Backup for instantaneous power failure

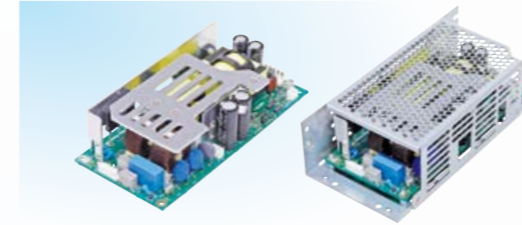
Instantaneous power failures can be addressed by connecting a capacitor board.



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

NEW mUZP-400 series

To be IEC60601-1 Ed.3.1 MOPP certified



Continuous: 330-403.2W Peak: 504-601.2W

Output voltage: 12/24/36/48V

Arrestor and varistor against lightning surges

The built-in arrestor and varistor enhance the resistance against external surges due to lightning or other causes.

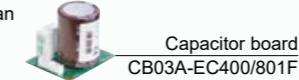


The power supply clears VCCI Class B for the conducted emissions.

There is no need to install an external noise filter, and it facilitates reductions in the cost and man-hours required.

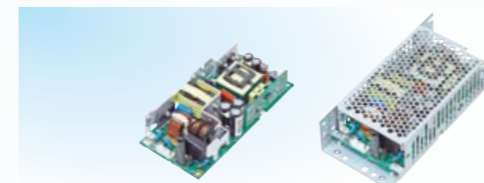
Backup for instantaneous power failure

Instantaneous power failures can be addressed by connecting a capacitor board.



NEW mUZP-220/520P-24S05

To be IEC60601-1 Ed.3.1 MOPP, MOOP certified



Continuous: 220.8W Peak: 520.8W

Output voltage: 24V (5VSB) (W×H×D) Size: 75×36×160 mm

Support the peak load approx. 2.3 times higher than the continuous power

It supports 5-second output of peak power, which makes it optimal for devices requiring an inrush current, such as motors.

Peak 520W

Continuous 220W | 230%

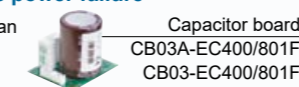
Supports standby output (5V/1.5A)

No need to prepare a separate power supply for standby output, which contributes to small-sized design and cost cut off of the equipment.

The power supply clears VCCI Class B for the conducted emissions.

Backup for instantaneous power failure

Instantaneous power failures can be addressed by connecting a capacitor board.



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

NEW mUZP-600 series

To be IEC60601-1 Ed.3.1 MOPP, MOOP certified



Continuous: 600W Peak: 1200W

Output voltage: 24/48V (12VSB) (W×H×D) Size: 127×44×228.6 mm

Support the high peak approx. twice higher than the continuous power

It supports 5-second output of peak power, which makes it optimal for devices requiring an inrush current, such as motors.

Peak 1200W

Continuous 600W | 200%

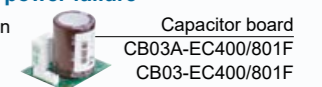
Low-level heat generation by reducing power loss

A high level of efficiency 95% typ has been achieved for a 24 V output type. Low heat generation by high efficiency helps for miniaturization and service life.

The power supply clears VCCI Class B for the conducted emissions.

Backup for instantaneous power failure

Instantaneous power failures can be addressed by connecting a capacitor board.



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mUZP-120 series

IEC60601-1 Ed.3.1 MOPP certified



Continuous: 100.8-120W
Peak: 200.4-201.6W
Output voltage: 12/24V
(W×H×D)
Size: 62×27×155 mm

- High efficiency of 94% typ
High efficiency which allows less heat generation helps for the cost cut off for heat management in the customer's system.
- Ultra-thin with 27mm height
- The power supply clears VCCI Class B for the conducted emissions.
There is no need to install an external noise filter, and it facilitates reductions in the cost and man-hours required.

mUZP-150 series

IEC60601-1 Ed.2, Ed.3.1 MOPP, MOOP certified



Continuous: 150-153.6W
Peak: 400.8-401.4W
Output voltage: 12/18/24/48V
(W×H×D)
Size: 75×35×160 mm

- Support max. 260% high peak
- The power supply clears VCCI Class B for the conducted emissions.
There is no need to install an external noise filter, and it facilitates reductions in the cost and man-hours required.
- Low standby power
Reduce standby power with remote OFF

mOZP-350 series

IEC60601-1 Ed.2, Ed.3.1 MOPP certified



Continuous: 300-352.8W
Peak: 504-601W
Output voltage: 12/15/24/30/36/48V
(W×H×D)
Size: 95×47×222 mm

- The power supply clears VCCI Class B for the conducted emissions.
There is no need to install an external noise filter, and it facilitates reductions in the cost and man-hours required.
- Backup for instantaneous power failure
Instantaneous power failures can be addressed by connecting a capacitor board.



Capacitor board
CB03-EC400/801F

mUZPT-120 series

IEC60601-1 Ed.2, Ed.3.1 MOPP, MOOP certified



Continuous: 100.5-120W
Peak: 200.4-201.6W
Output voltage: 12/15/24V
(W×H×D)
Size: 62×38×155 mm

- High efficiency of 94% typ
High efficiency which allows less heat generation helps for the cost cut off for heat management in the customer's system.
- IEC60601-1 Ed.3.1 MOPP certified
- The power supply clears VCCI Class B for the conducted emissions.
There is no need to install an external noise filter, and it facilitates reductions in the cost and man-hours required.

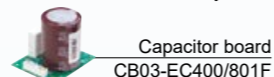
mUZP-220 series

IEC60601-1 Ed.2, Ed.3.1 MOPP, MOOP certified



Continuous: 180-220.8W
Peak: 400.8-401.4W
Output voltage: 12/18/24/48V
(W×H×D)
Size: 75×36×160 mm

- The power supply clears VCCI Class B for the conducted emissions.
There is no need to install an external noise filter, and it facilitates reductions in the cost and man-hours required.
- Backup for instantaneous power failure
Instantaneous power failures can be addressed by connecting a capacitor board.



Capacitor board
CB03-EC400/801F

mGPSA-360 series

IEC60601-1 Ed.2, Ed.3 MOOP certified



Continuous: 360W
Peak: 480-600W
Output voltage: 12/24V (12VSB)
(W×H×D)
Size: 41×128×230 mm

- The power supply clears VCCI Class B for the conducted emissions.
There is no need to install an external noise filter, and it facilitates reductions in the cost and man-hours required.
- Backup for blackout



Battery pack
BS14A-H24/2.5L

Medical standard certified PC power supply

mHPCSF-400P-X2S1

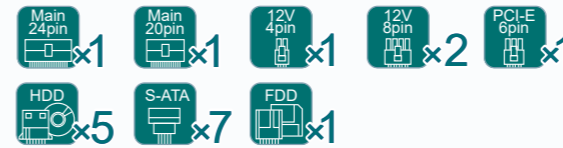
IEC60601-1 Ed.3.1 MOOP certified



Continuous: 310W Peak: 400W
(W×H×D)
Size: 125×63.5×125 mm

- Highly reliable SFX power supply

Maximum number of respective output connectors*



mNSP3-450P series

IEC60601-1 Ed.2, Ed.3 MOPP certified

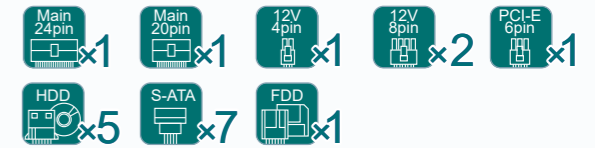


Nonstop power supply

Continuous: 301W Peak: 450.5W
(W×H×D)
Size: 150×86×140 mm

- CCC certification Nonstop power supply

Maximum number of respective output connectors*



mPCSA-500P-X2S

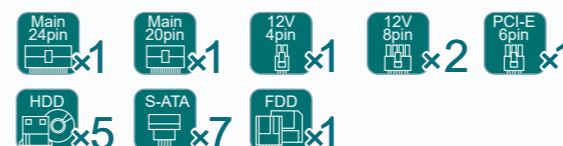
IEC60601-1 Ed.2, Ed.3 MOPP certified



Continuous: 301W Peak: 500.5W
(W×H×D)
Size: 150×86×140 mm

- The best-selling ATX power supply

Maximum number of respective output connectors*



mHNSP4-1000P series

IEC60601-1 Ed.3 MOOP certified

*This power supply has obtained safety standards as a set with the battery pack, BS25A-H350/2.5L, therefore, please use them together.

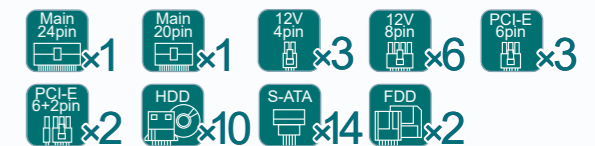


Nonstop power supply

Continuous: 822W Peak: 1000W
(W×H×D)
Size: 150×85×190 mm

- Large capacity backup Nonstop power supply

Maximum number of respective output connectors*



* Maximum number of respective connectors. For details, please check them on our website or catalogs.

Isolation transformer, fuse, or breaker are unnecessary with Nipron medical power supplies.

<http://www.nipron.com>

Medical Nonstop PSU does not stop even in a blackout

<http://www.nipron.com>

DC/DC converters
for solar power generation

Newly upgraded PV Maximizer

4STQ-12KSD400VM

Maximizing the power generated
by the MPPT control for 4 strings individually



* Image

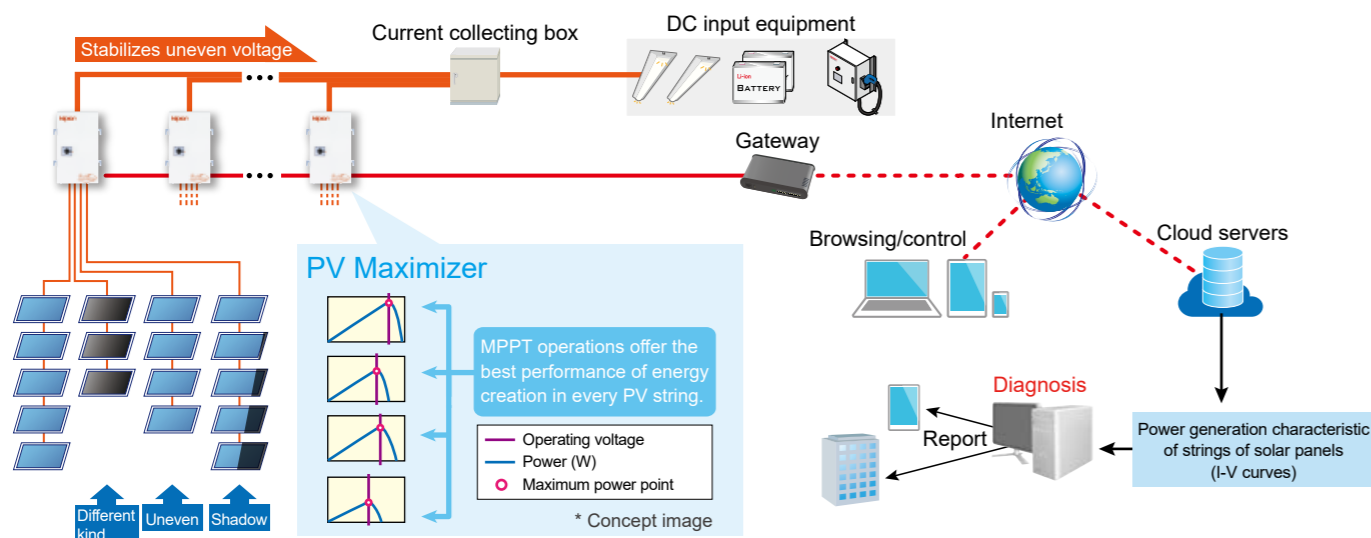
Input voltage range
1 string: **160-400VDC**

Input current
1 string: 10A Max.: **40A**

Input power
1 string: 3.2kW Max.: **12.8kW**

Output voltage configurable range
200-400VDC

Connecting concept



Features of PV Maximizer 4STQ

- 1 unit supports 4 strings of open-circuit voltage 400V
- Maximizing the power generated by the MPPT control for each string
- Integrated remote monitoring function (PV Guardmyan)
- Various settings such as output voltage are available from the cloud
- >IP44: waterproof and dustproof
- The power density is more than 200% higher than that of Nipron's past/current models.

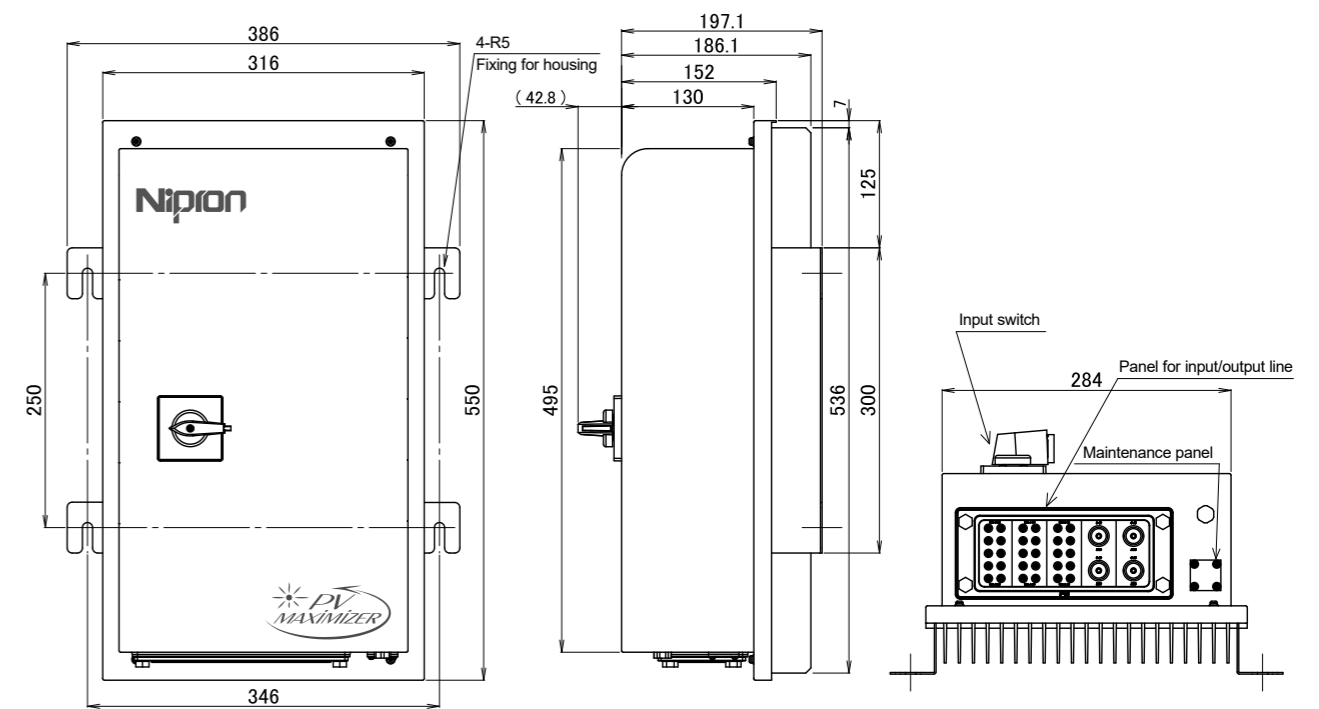
Installation in a solar carport



Specification

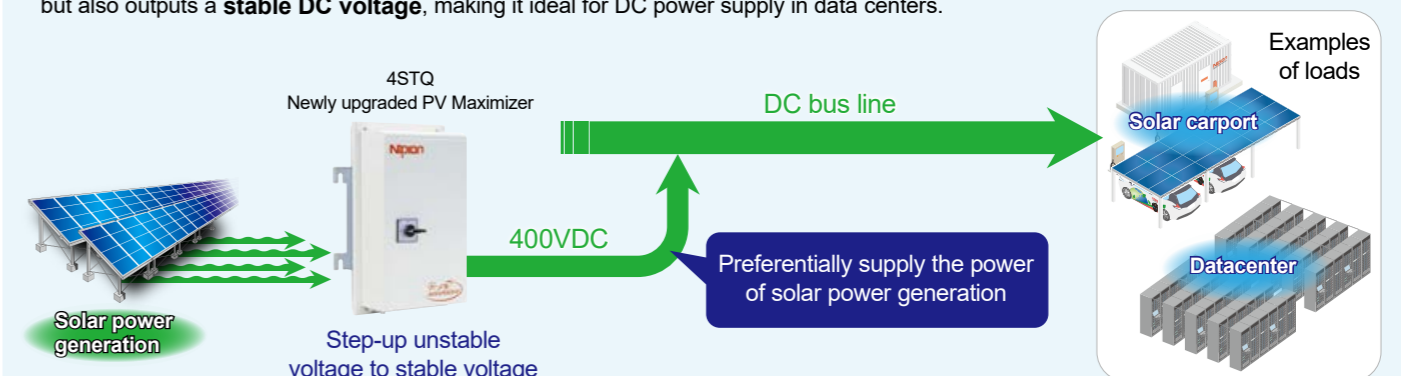
Item	Specification	Notes	
Solar cell input circuit		4 circuits	
Input specification	Input voltage range	160-400VDC	
	Max. input voltage	400VDC	PV string open circuit voltage
	Continuous input current	10A/ 1 circuit	
	Continuous input power	3.2kW/ 1 circuit	Voltage of PV maximum power point at 320V
Output specification	Output voltage configurable range	200-400VDC	
	Max. output current	40A	
	Max. output power	12.6kW	Input voltage 320V/ 1 circuit
	Efficiency of power conversion	98.5% typ	320V10A/ 1 circuit input 400V output
Monitoring function	Function of the power monitoring and error monitoring Wired type	Max. number: 96 units	

Outline drawing



PV Maximizer is optimal for DC power supply

The PV Maximizer not only optimally controls unstable solar power generation to maximize the amount of power generated, but also outputs a **stable DC voltage**, making it ideal for DC power supply in data centers.



Newly upgraded PV Maximizer supports input of 4 strings

<http://www.nipron.com>

Products and solutions for carbon-neutral society

<http://www.nipron.com>

Recommended by Japan's Ministry of the Environment

The Ideal Solution for Zero Carbon Driving

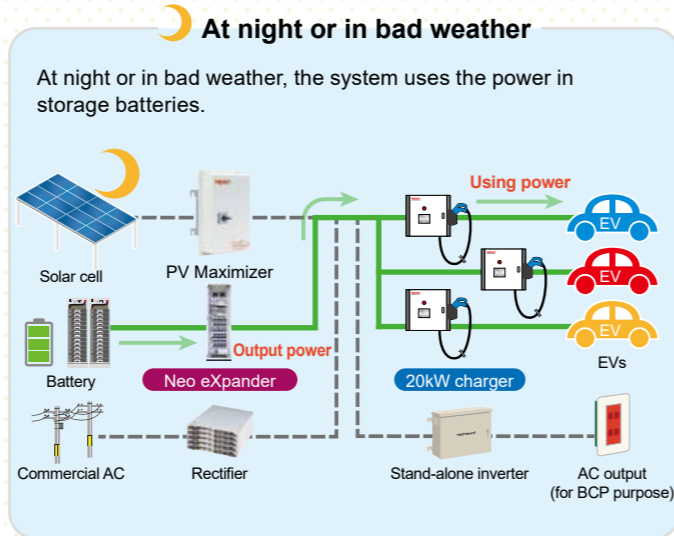
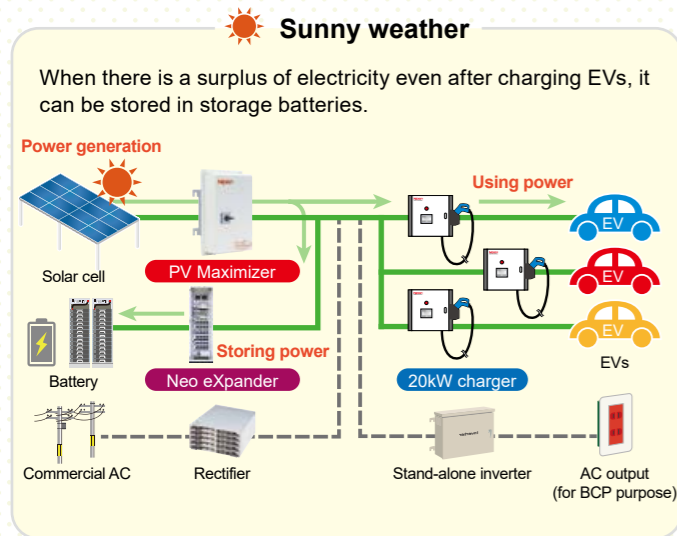
EV Charging with 100% Solar-generated Power



EV charging using 100% renewable energy generated in a parking lot

ZERO CARBON DRIVING

EV charging stations, which use renewable energy from solar panels, can be set up in any parking space. Surplus electricity can also be stored in battery systems and used at night.



What is zero carbon driving?

It is essential to decarbonize the transportation to realize the carbon neutral society. Zero carbon driving refers to the driving systems with no CO2 emission utilizing the power generated by renewable energies, such as photovoltaic power generation, electric vehicles (EVs), plugin hybrid vehicles (PHEVs) and fuel cell vehicles (FCVs). The Ministry of the Environment supports the dissemination of zero carbon driving in various districts, workplaces and households.



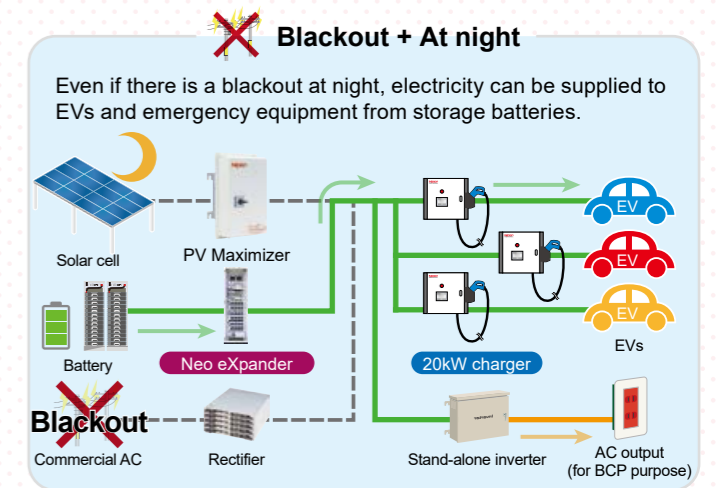
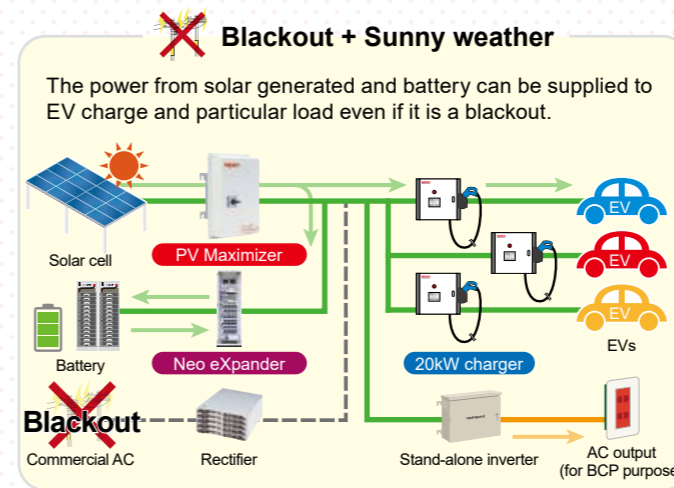
Campaign logo of ZERO CARBON DRIVING

Zero carbon driving with 100% renewable energy — Leave it to Nipron!

<http://www.nipron.com>

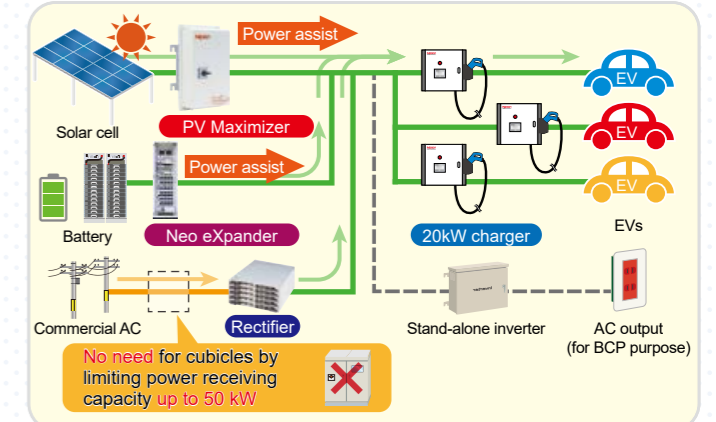
Provides solar-generated electricity even in an emergency.

The Solar Carport can also serve as a shelter, where electricity from solar power generation and rechargeable batteries is available, in a wide-area power failure (blackout) caused by a natural disaster. Thus it is possible to use it as a renewable energy power plant & EV charging station in a normal situation and as a shelter in the event of a disaster, fulfilling the need of the country and local governments.



Fast charging of multiple EVs at the same time without a cubicle

Even for a charging operation (quick charge or simultaneous multi-unit charging) with an aggregate capacity of 50 kW or larger, a low-voltage power feed system (of capacity less than 50 kW) will suffice with an assist of solar power and/or a stationary rechargeable battery. For the low-voltage power feed, the installation of an electrical cubicle and a contract with a licensed electrical service engineer is not required and, thus, it can be introduced and maintained easily.



The system can also be expanded in various other applications such as VPP (Virtual Power Plant).

Please consider the solar carport for disaster resilience.

<http://www.nipron.com>

48V battery can drive the AC motor

Boost DC-DC converter

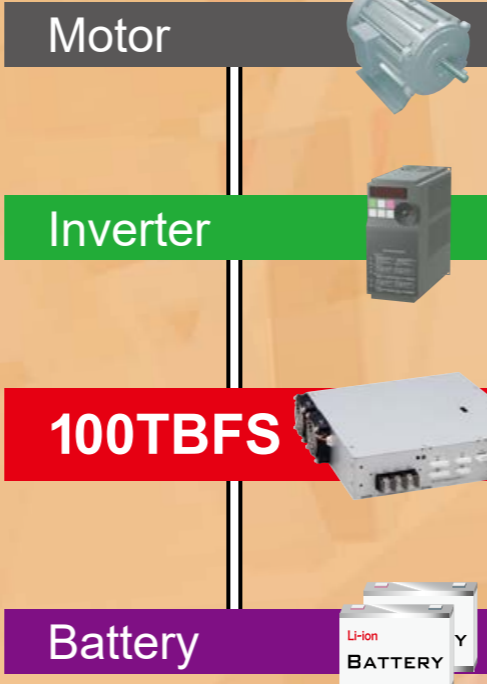


100TBFS-2500-280

Large capacity

High efficiency

System configuration example



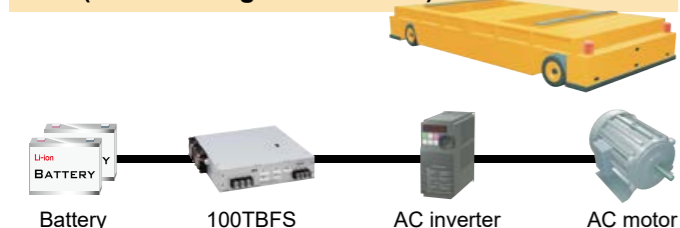
It is common to use DC motors for products on which motors are driven by batteries, such as AGVs. However, sometimes DC motors cannot support large AGVs because there are few DC motors with a power capacity large enough for them.

On the other hand, AC motors are available in a variety of power capacities from small to large and there are products like general purpose inverters and servo amplifiers to drive AC motors with the power supplied at or near 280 VDC. Because the 100TBFS-2500-280 can raise the battery voltage (24V, 48V, 96V, etc.) to about 280 VDC, at which inverters can operate, it makes it possible to drive AC motors using batteries.

This expands options in selecting the motor, making it possible to drive an AC motor in the high-power range, in which there are few DC motors available, using batteries.

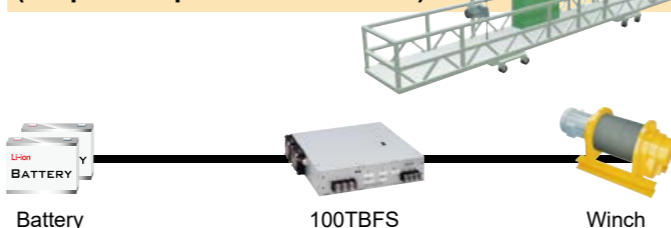
Application example

AGV (Automated guided vehicle)



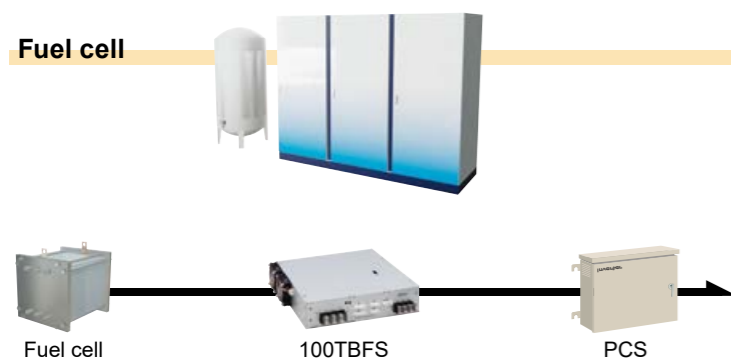
By stepping up the battery voltage to a voltage at which inverters and servo amplifiers (servo drivers) can operate, it will be possible to drive AGVs with AC motors.

Construction equipment (suspended platform and crane)



Although electric hoists (winches) normally work on the voltage of 200 VAC, products that operate on the voltage at or near 280 VDC are also available and, therefore, it is possible to drive hoists with batteries by using the 100TBFS.

Fuel cell



While fuel cells are attracting much attention as a source of clean energy, some cells can only supply low voltage and, to utilize the generated power effectively, the voltage needs to be raised by using a DC/DC converter or similar products. The 100TBFS makes it possible to drive various devices, including power conditioners, using a clean power generated by fuel cells.

Note: Modification to the 100TBFS is necessary for this solution.

100TBFS has a wide range of input from 19 to 128V DC

<http://www.nipron.com>

Features

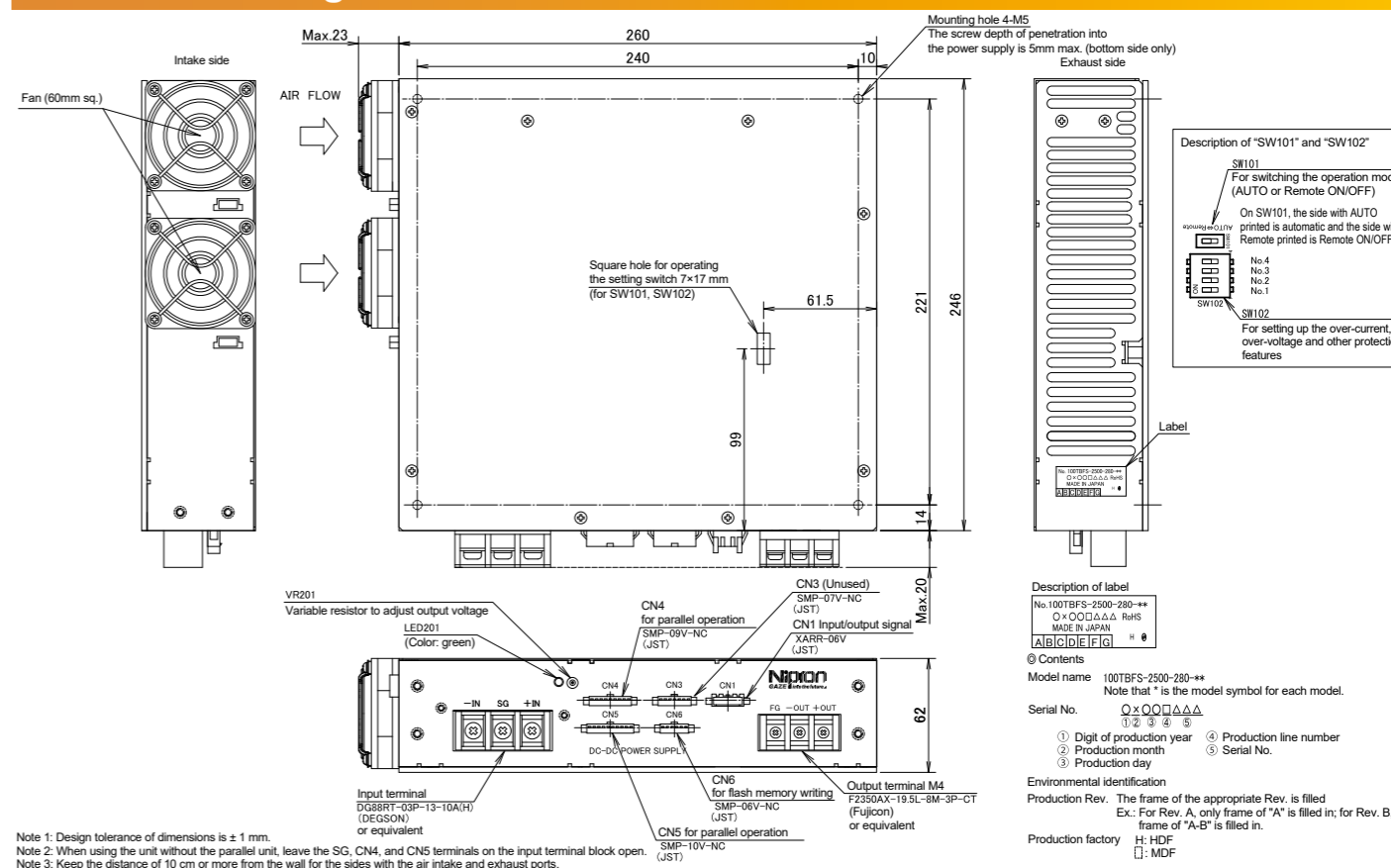
- Wide input range of 19 to 128VDC (input voltage range setting with a DIP switch)
- Increased capacity with a parallel connection
- Remote ON/OFF feature
- The volume decreases about 15%, and the output power increases 20-50% (at rated power) compared to Nipron's conventional model.
- Energy-saving design to reduce the power consumption
 - At no load: 15W (48V input, Remote ON)
 - At Remote OFF: 30mW (48V input)
 - Automatic fan stop at light load and no load conditions: lower power consumption and longer fan lifetime.
- Various protective functions
 - Two-stage over-current protection
 - Input over-voltage protection
 - Output over-voltage protection
 - Under-voltage protection
 - Overheating protection

Specifications

	Setting [1]	Setting [2]	Setting [3]
Input voltage	24VDC	48VDC	96VDC
Input voltage range	19-37VDC	37-74VDC	74-128VDC
Output voltage	284VDC		
Output capacity (continuous)	1200W*	2500W*	4500W
Output capacity (peak)	1500W*	4000W*	5000W
Efficiency	90% typ	94.5% typ	97% typ

* Derating required (please contact us for details.)

Outline drawing



Our multifunction boost-type DC/DC converter. High capacity in a compact design.

<http://www.nipron.com>

Invitation to Exhibition

8th INT'L SMART GRID EXPO Osaka.

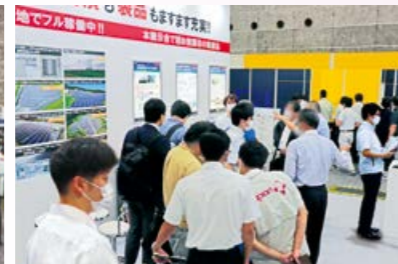
Held inside World Smart Energy Week OSAKA 2021

8th SMART GRID EXPO OSAKA

Nipron will take part in the 8th INT'L SMART GRID EXPO Osaka, which will be held for three days from the 17th to 19th of November at INTEX Osaka. This exhibition specializes in and collects all products and technologies required to build smart grids and distributed energy systems. The introduction of virtual power plant (VPP), which shoulders an important role in attaining the carbon-neutral society, is just around the corner. Therefore, at the Nipron booth, the PV Maximizer - Neo eXpander, a product aimed at the photovoltaic power generation and power storage systems, and the PV Guardmyan, which enables the management and control of power generation and storage information using a cloud server, will be presented. Also, centered around the energy-storage type PV for in-house consumption system without the grid connection, PV Oasis, which is useful in materializing the carbon-neutral society and enhancing the social resilience, Nipron will propose various solutions suitable for customers budgets and building conditions, including the Solar Carport System (photovoltaic power station, power storage & EV chargers at a carpark) and the Zero Energy Room (an autonomous power supply system that can be introduced room by room using renewable energy). The readers are encouraged to visit the Nipron booth as it will also feature popular demonstrations and conceptual presentations.



A scene from last year



A scene from last year



Demonstration of the solar carport and Zero Energy Room

Productivity Improvement Presentation

The productivity improvement presentation for manufacturing departments on August 12 and for sales & administrative departments on August 20 was held.

Productivity Improvement Presentation for Manufacturing Departments

On August 12, the Productivity Improvement Presentation was held by the Manufacturing Department.

A total of ten teams participated in the competition and presented improvement activities and achievements they made in the previous term. After a strict and fair examination, the top three teams were awarded. The gold prize went to the MDF board implementation team who presented their kaizen activity in which approximately 20% man-hour reduction and approximately 70% increase in the productivity was achieved by visualizing the production lead-time and eliminating wastes by reviewing the lines of movement in the process.

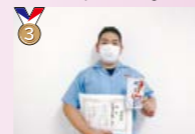
We believe that the kaizen activities and the achievements made in the manufacturing department will bring further enhancement in the product quality and reliability, as well as an innovation in the way people work.



Gold prize
MDF Board Implementation Team



Silver prize
HDF Pre-processing Team



Bronze prize
MDF Machine Implementation Team

Productivity Improvement Presentation for Sales & Administrative Departments

On August 20, the Productivity Improvement Presentation was held by the Sales and Administrative Departments.

It was an assembly in which ten teams competed by presenting their kaizen activities and achievements made in respective functions. After a strict and fair examination, the top three teams were awarded. The presentation meeting was fruitful with various departments sharing their routine kaizen activities. The production management team, who won the gold prize, presented how they made it possible to figure out actual time required for the improvement of cost management and manufacturing tasks and automation of clerical tasks, on which a lot of time was spent in the past.

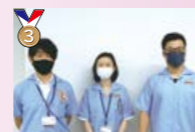
The Sales and Administrative Departments aim to enhance the satisfaction of customers by continuing their kaizen activities.



Gold prize
Production Management Team



Silver prize
Air Force Sales Team



Bronze prize
Purchasing Department Team

A wide range of power supply units is available. Call us to find out more.

<http://www.nipron.com>

Customer Interview: Reason to have taken up a Nipron power supply

Interview

Even without a talk on the quality and warranty, bringing out the name of Nipron is sufficient to convince the customers.

Many Nipron products have been adopted by Portwell Japan, Inc., one of the leaders in industrial PCs and embedded motherboards.

Portwell Japan, Inc.

Ryoji Miyamoto from the Business Development Dept.



What are the properties considered important in selecting the PC power supply unit?

What the customer wants in our industrial PC are robustness, lasting supply and analytical power. In addition, the properties often talked about recently is those concerning the compliance to standards. Naturally, the PSE recognition is required for the Japanese market and it is often the case that our customers, manufacturers of testing devices and machine tools, have many clients in foreign countries even if their factories are located in Japan. Concerning PCs, certifications for the safety standards like CE, CCC and KC are often required. In such a case, it is advantageous if the power supply unit, the core of the system, was certified.

What was the background in selecting our power supply units?

Once the quality of power supply units from Taiwanese manufacturers dropped in the past. The capacitors used had become swollen, broken or defective and, at the time, we thought it would be beneficial to our customers if we offered quality products and it led to the introduction of Nipron's power supply units.

While the quality of Taiwanese power supply units is becoming better, it is easier for us to propose Nipron especially to customers who want a product "that should never fail" or give priority to the quality rather than the price. Even if we did not bring out the subject of quality and warranty, simply mentioning your name is often sufficient to convince the customer and that is a big help.

What do you think the reputation and customer satisfaction for the PCs using our power supply units?

In the first place, Nipron's products seldom break down and, therefore, we seldom receive complaints. If the PSU did break down, Nipron never fails to submit analysis reports. That is why their reputation is high. Also, the sense of security for them after the sale support gives us an added advantage to us and our customers. Although we are a PC manufacturer, sometimes it is difficult for us to pursue the in-depth component constructions like power supply units and HDDs and, for that reason, some customers would voice the feeling of "have you checked it with the manufacturer?" or make a request to "have a meeting with the manufacturer to check everything." We feel it very assuring that Nipron can support us by joining the meeting in such an occasion.

Also, as the number of such experiences increase, it will be easier for us to explain to the users. We are thankful because we can explain that "the progress, Nipron's response and result for some case we experienced were like this but things would probably be different with foreign suppliers." Amassing such experiences is very important for us because it provides us a point of appeal and we are content about it.

Have you had any problem in the compatibility between the motherboard and the power supply unit?

As far as the compatibility with the board is concerned, we have not experienced many problems. On the contrary, the Taiwanese power supply unit we have been using the most had presented a startup problem in the combination with new generation PCs and CPU boards and we are using Nipron's power supply units if that happens. Taiwanese PSU manufacturers do not offer causal analysis for singular problems in principle. They do not analyze the components, do not request the component manufacturers to analyze the problem and usually say that "they want to see the development since it is a singular failure." However, Nipron never fails to provide us with an analysis report and that is very helpful. Although it rarely happens, they have participated in a video meeting with a customer recently and we are very satisfied with their response.

Can you explain why you devote to the made-in-Japan concept?

Although we supply completed PC in a box as well, that alone does not enable us to offer products with specifications desired by the customers. Therefore, we ask the customer on desired specifications including the housing, CPU, board, etc. and, if a box PC cannot satisfy the need, we build a BTO PC optimized to the customer and ship it. Taking the housing as an example, we even buy products of other Taiwanese manufacturers. The philosophy that it is best to offer what the customer wants and best fit for the customer has led to the present system. It is our strength to have our engineering and manufacturing departments in Japan. The general trend is that customers select what are easily available and easier to use. But if we were relegated to select all expansion boards, graphics boards and I/O boards, it will be contractually possible to analyze the problem in response to a failure or problem once the customer returns the component to us.



HPCSA-1000P-E2S

1000W peak power large capacity ATX PSU
Highly reliable design enables continuous running for 24 hours, 365 days

GEDA-High
NVIDIA® Quadro RTX6000 equipped
GPU server, workstation

If you are having trouble with your power supply, please contact Nipron.

<http://www.nipron.com>

**The Nipron Story,
by Our President**

Envisioning sales of 7 billion yen for this fiscal year

In the previous fiscal year (the 40th term), we planned a big event to commemorate the 50th anniversary of Nipron's founding but were forced to cancel it due to the COVID-19 pandemic. Our business performance was disappointing with sales of 5.5 billion yen, falling below 6 billion yen for the third consecutive year.

However, the amount of orders received has been hitting new highs every month since October 2020 and looks set to achieve a new record of 7 billion yen, which significantly exceeds the target of 6.5 billion yen, in the 41st term. This is the result of our efforts in developing new products, markets, and customers that we have made for these three to five years.

On the other hand, unfortunately, the results of our GP (Green Power) business, which is being vigorously promoted at the same time, have not yet increased sales. Nipron's management strategy requires a long-term effort, which means that, once it is built, it will not easily collapse as it has fundamental strength.

The strong sales are attributable to the global economic recovery. Especially, it is likely that the major trend of EV conversion on a global scale has created demand comparable to the Industrial Revolution, and the shift to EVs of the automobile industry around the world and capital investment by new entrants are behind the machine tool industry's being in great shape. Meanwhile, with the progress of EV conversion, shortage of semiconductors rising from dramatic increase in demand for in-vehicle semiconductors has created a social problem of delay in vehicle production. In response to these, demand for semiconductor manufacturing equipment has increased and demand for medical equipment has simultaneously increased amid the pandemic. We have developed products suitable for these fields, and I think that is the reason for the increase in orders received.

On the other hand, the difficulty in sourcing electronic components caused by the global shortage of semiconductors has become an industry-wide major problem. Our company was also directly affected by this, and unfortunately, we missed delivery deadlines because we could not increase production for the first two months of this fiscal year.

As an urgent measure, we have decided to procure electronic components, such as semiconductors (especially ICs) sourcing of which is unpredictable, from the secondary market, though they are very expensive. Taking all possible measures to maintain quality, and even with a big loss from increased material cost, now we are recovering production promptly in line with the Nipron's company policy that places the highest priority on meeting delivery date to win the trust of customers.

Amid the recent challenges in global sourcing of electronic components and overseas-made semiconductor parts (which have been often experienced in the past history), I strongly felt that we need to have a more effective purchasing policy and improve responsiveness to avoid confusion and loss. Going forward, since decline of the Japanese manufacturing industry in the electrical and electronic field is certain, we are determined to take fundamental measures as a BCP policy. For example, we will promptly take steps to have strong bargaining power with well-known manufacturers and distributors that deal with reliable products made overseas (US, South Korea, Taiwan, etc.), rebuild relationships of trust with major domestic customers and have discussions with them, review supply chain, and establish a department specialized in lowering electronic parts procurement cost (material cost). While pushing ahead with these reforms, we will make a company-wide effort to achieve sales of 7 billion yen in the current fiscal year (the 41st term).

*Setsuo Sakai
October 2021*

 **Nipron Co., Ltd.** <http://www.nipron.com>

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