Power Systems Division

Minoru Yanagisawa

This document summarizes the main product developments for the Power Systems Division in 2006.

Standalone and charging functions were added to the 100 kW power conditioner in the lineup of power conditioners for photovoltaic power generation.

The power switching device capable of redundant operations with a dual system power supply "SANUPS S11A"was developed as a small capacity power supply in response to increasing reliability for single system input devices.

The hybrid UPS with 3-mode method "SANUPS E11A" was expanded into a series as part of the small capacity UPS lineup.

The UPS management system "SANUPS SOFTWARE" was developed to handle 64-bit OS and to enable the construction of systems with increased efficiency and reliability.

The following information provides an overview and features for each product.

■ Development of the power conditioner for photovoltaic power generation "SANUPS P83B"

Recently, there are an increasing number of proposals for large scale systems that exceed 100 kW. Examples of these systems include accident disaster systems or heat cutting systems designed for load leveling.

To meet the needs of the marketplace, we developed the 100 kW power conditioner "SANUPS P83B" that can easily handle standalone operation and charging operation.

The "SANUPS P83B" product lineup includes a basic model, the linked operations type "P83B104R". In addition to this basic model, the following two products were also added to the lineup in order to meet a wide variety of demands: the standalone operation type "P83B104S" with the standalone auto-switching circuit, and the standalone/charging type "P83B104C" with the accumulator connection circuit that can be used for disaster prevention

The standalone/charging type "P83B104C" measures 1350 mm × 800 mm ×1950 mm (W×D×H), weighs 1150 kg, and has an installation area of 1.1 m^2. This installation area measures at 78% of the size for two units of the conventional 50 kW model, "SANUPS PMC-TD".

By optimizing the conversion frequency and the main circuit with a commercial insulation transformer, this product realizes a conversion efficiency of 93%, which is among the top in the industry for its class of 100 kW products (rated load efficiency based on JIS C 8961 during utility connected system operation with standalone operation).

■ Development of the power switching device “SANUPS S11A”

The servers and routers that make up a network system in a data center must be able to provide stable maintainability and reliability. Therefore, customers look for highly reliable power supplies for the equipment.

In modern network systems, the servers use highly reliable dual power receiving systems for the power supply, but peripheral devices such as routers usually use single system power supplies. These devices need the same high reliability that is found with servers.

The power switching device capable of redundant operations with a dual system power supply “SANUPS S11A” was developed in order to provide single system input devices with high reliability.

The “SANUPS S11A” has the following features:

- Rated: 100 VAC, 30 A
- Switching time: 2 ms or less
- Voltage drop: 2 V or less
- Shape: Built-in rack type (Device height: 2U)

■ Expansion of the hybrid UPS “SANUPS E11A” series

The hybrid UPS “SANUPS E11A” with 3-mode method went on sale in 2005 around the world. Now, the “SANUPS E11A” has been expanded into a series.

The following four models have been added to the lineup.

100 V system: 1.5 kVA, 2 kVA

200 V system: 2 kVA, 3 kVA

All models can be used with racks or placed on the floor (device height: 2U). They also comply with the foreign safety standards UL and CE.

■ Development of UPS management system “SANUPS SOFTWARE”

When a UPS is used to deal with problems from the power supply on a computer, a UPS management system is also used in many cases to control shutdown when there is a power outage.

Our company developed a UPS management system that answered modern needs by providing not only computer shutdown but also effective system operations. But recently, there have been demands for compliance to 64-bit OS systems and for a more stable and effective system.

The new UPS management system “SANUPS SOFTWARE” was developed for these demands.

The “SANUPS SOFTWARE” has the following features:

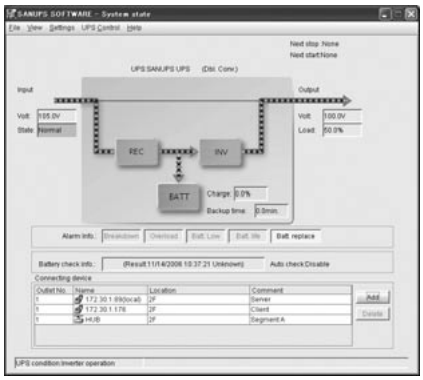
• Handles both 64-bit and 32-bit OS. This allows the system to operate on more types of OS.

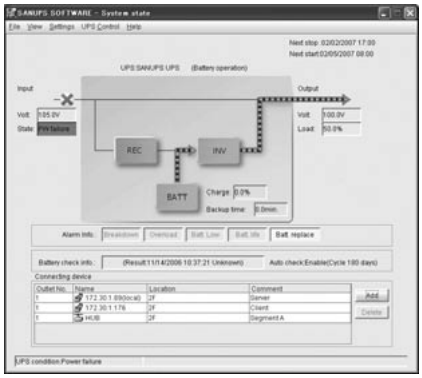
• By adding the setting function with the Web browser and Telnet, settings can be changed from anywhere if connected to a network.

• By adding the e-mail transmission function, information can be received instantly after situations such as a power outage on the network. This function can also be used to request status updates and receive the current status.

• By adding the cyclic notification function, notifications are sent when batteries need to be replaced.

• By providing a shutdown delay by client function, the shutdown time can be shifted for each client.





Minoru Yanagisawa
Joined Sanyo Denki in 1980.
Power Systems Division, 1st Design Dept.
Worked on the development and design of static type power supply systems.