SANYODENKI

Company Profile 2023-2024

山洋電気株式会社 SANYO DENKI CO., LTD.

Three Core Technologies and Six Sectors

Under a corporate philosophy that aims to "help all people achieve happiness," SANYO DENKI is committed to developing new technologies and products in six sectors based on three technological concepts.

Our Philosophy

Philosophy

We at SANYO DENKI Group Companies aim to help all people achieve happiness, and work with people to make their dreams come true.



Technology for protecting the global environment

Three Core
Technologies



Technology for using new energy sources and saving energy



Technology for protecting people's health and safety

To embody our corporate philosophy, we will achieve the following:

For Society and Environment

We will conduct management that contributes to preserving the global environment and enhancing human prosperity through our corporate activities.

For Suppliers and Business Partners

We will conduct management aimed at mutual technical development and prosperity through deals of parts and materials, production contracting, and joint development.

For Competitor Companies

We will conduct management that co-creates industrial and technological developments through technical alliances and competition.

For Customers and Users

We will conduct management that realizes the creation of new value for customers and user through our technologies, products, and

For Investors and Financial Institutions

We will conduct management that increases our investment worth and credit through sound and constructive management and the provision of easily understandable information.

For Employees

We will conduct management aimed at employee self-realization through work and corporate activities.

Six Sectors



Medical

Business sector that manufactures medical and nursing equipment for contributing to human health.



Information and Communications

Business sector that manufactures ICT equipment such as computers, communications equipment, and their peripheral devices



Industrial

Business sector that manufactures industrial automation equipment such as machine tools and robots



Environmental Preservation

Business sector that manufactures equipment for promoting the protection of the global environment



Home Automation

Business sector that manufactures equipment for improving lifestyle



Energy Utilization

Business sector that manufactures equipment for electric power generation and conversion, energy saving, and new energy utilization.

History of SANYO DENKI Group

As We Near the 100th Anniversary of Our Foundation, the SANYO DENKI Group Continues to Manufacture Products That Are Ahead of the Curve.

The SANYO DENKI Group develops five businesses: Cooling Systems, Power Systems, Servo Systems, Electrical Equipment Sales, and Electrical Works Contracting.



History of Our Products

Company Milestones













CPU Cooling Far SAN ACE MC













High Airflow Long Life Fan San Ace L

ACDC Fan San Ace 120AD

5-Phase Stepping Motor

with Integrated Driver SANMOTION F5

Splash Proof Centrifugal Far San Ace W

193

9.





Stepping Motor SANMOTION F2





Multi-axis DC Servo Amplifier with Ether CAT Interface SANMOTION R

Center Magnet Type Linear Servo Motor SANMOTION



Motion Controller with EtherCAT Interface SANMOTION C





Motion Controller S500 series SANMOTION C

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1920 - 1960's

August 1927 Sanyo Shokai founded by Hideo Yamamoto to import and sell electrical components

June 1932

A factory for the production of small AC and DC generators and communications equipment power units established in the Nishi-Sugamo (current Higashi-Ikebukuro) area of Tokvo



December 1936 Reorganized into a joint stock company (Sanyo Shokai Co., Ltd.)

April 1942 Renamed SANYO DENKI CO., LTD.

February 1944 Ueda factories (Ueda Kita Works, former Midorigaoka Works) established



December 1945 Head Office and Tokyo Works relocated to the Sugamo (current North Otsuka) area of Tokyo



September 1962 Listed on the Second Section of the Tokyo Stock Exchange

1**950**'s

power supply

Post-war reconstruction

Increased demand for stable

1970 **-** 1980 's

April 1979 . Shioda Works established in Ueda, Nagano



March 1980 Tsuiii Works established in Ueda, Nagano



November 1984 Aoki Works established in Aoki, Nagano (current Logistics Center)



December 1988 SANYO DENKI EUROPE S.A. (France) established

1970's

1990's

April 1990 Fujiyama Works established in Ueda



April 1995 SANYO DENKI AMERICA, INC. (U.S.A.)

July 1997 Technology Center established in Ueda.



SANYO DENKI Techno Service CO., LTD.

Expanded mass production of home appliances

1990's

Spread of data communication services and expansion of personal computer market

2000's

February 2000 SANYO DENKI PHILIPPINES, INC. (Philippines) established



April 2003 SANYO DENKI SHANGHAI CO., LTD. (China) established

June 2005 SANYO DENKI (H.K.) CO., LIMITED (China) established

June 2005 SANYO DENKI Techno Service (Shenzhen) CO., LTD. (China) established

August 2005 SANYO DENKI SINGAPORE PTE LTD (Singapore) established (Current SANYO DENKI CO., LTD. Singapore Branch)

The Internet has become a major communication tool

2000's

October 2005 SANYO DENKI GERMANY GmbH (Germany) established

November 2005 SANYO DENKI KOREA CO., LTD. (Korea) established

December 2005 SANYO DENKI TAIWAN CO., LTD. (Taiwan) established

January 2008 SANYO DENKI (Shenzhen) CO., LTD. (China) established

January 2009 Kangawa Works established in Ueda.



July 2009 SANYO KOGYO CO., LTD. became a wholly owned subsidiary

2010's - 2020's

April 2011 SANYO DENKI (Zhongshan) CO., LTD. (China) established

July 2011 SANYO DENKI (THAILAND) CO., LTD. (Thailand) established

March 2013 Listed on the First Section of the Tokyo Stock Exchange

August 2013 Head Office relocated to its current



SANYO DENKI ENGINEERING (Shanghai) CO ITD (China) established

February 2015 SANYO DENKI INDIA PRIVATE LIMITED (India) established

March 2019 Technology Center established at SANYO DENKI PHILIPPINES, INC.



April 2019 SANYO DENKI (Tianjin) CO., LTD. (China) established

Anril 2021 SANYO DENKI IT Solution CO., LTD.

2010's

2020's

Rapid increase in PV installations

Growing interest in carbon neutrality

Market Trends

San Ace

Cooling Systems Business

San Ace is a brand name for SANYO DENKI's Cooling Systems products, such as cooling fans and cooling fan units. Devices using electronic components do not operate properly without heat control solutions.

Our San Ace Cooling Systems products can ensure the stable operation of these devices.

By developing products that feature industry-leading performance, quality, and reliability, we will contribute to improving the performance and reliability of our customers' equipment.

Product Lineup



DC Fan

These are DC cooling fans with high

















reliability and high performance. In addition to standard DC cooling fans, the lineup includes products with special features, such as Counter Rotating Fans, Centrifugal Fans, Blowers, and Low Power Centrifugal Fan Consumption Fans, allowing customers to Blower select the optimal fan for their application.

Reversible Flow Fan They are suitable for cooling servers, storage, and ICT equipment.

 High Static Pressure Fan Low Power Consumption Fan Silent Fan

Counter Rotating Fan

DC Fan

stably even in severe environments, including the Wide Temperature Range Fans for use in a temperature range of October Long Life Fan -40 to +85°C, Splash Proof Fans for use OLong Life Counter Rotating Fan in water-exposed environments, Long Life Fans with continuous operability of up to 20 years. Oil Proof Fans for use in

oil mist environments.

Endurance fans are DC fans that feature

Wide Temperature Range Fan

high environmental durability. The series Osplash Proof Fan lineup has a variety of fans that operate Splash Proof Centrifugal Fan Splash Proof Blower Oil Proof Fan

G Proof Fan

AC Fan

We offer high-reliability AC Fans. In addition to standard AC Fans, the lineup also includes high-efficiency, long-life ACDC Fans, which internally convert AC power to DC power. These are suitable for cooling ICT equipment, control panels, and factory automation equipment.

ACDC Fan

AC Fan

Airflow Tester

This is a compact and portable measuring instrument for measuring the airflow and system impedance within a device. By using measurement results during thermal design simulation, you can easily and accurately select the optimum fan for your equipment





PWM Controller

This device can remotely control the speed of a PWM fan. With this product, PWM fans can be fully utilized without the need for preparing new circuits. The lineup has two types: Box type that only requires wiring and PCB type that needs to be integrated into the equipment



San Ace Controller

This IoT-enabled product can perform automatic control and remote monitoring of PWM fans

It can control the individual speeds of up to four fans.

It can monitor and control fans in remote locations via a cloud server, contributing to equipment failure detection and preventive



San Ace Clean Air

This air purifier with low noise and high airflow can filter, sanitize, and deodorize air in large rooms.

The air is drawn in from both sides of the product and blown out from the top for smooth air circulation, efficiently keeping rooms comfortable.

The built-in fan has been newly developed based on our proprietary low-noise technology as a cooling fan Manufacturer.

SANUPS

Power Systems Business

SANUPS is a brand name for SANYO DENKI's Power Systems products such as uninterruptible power supplies (UPSs), inverters, engine generators, and renewable energy inverters.

The electronic devices and communication networks indispensable for our daily lives cannot be maintained without a stable power supply. Our SANUPS Power Systems products, including uninterruptible power supplies (UPS) and renewable energy inverters, supply highquality and stable power to customers' equipment in the event of unexpected power outages as well as in normal situations. They can be used for disaster management and business continuity planning purposes as well.

Product Lineup



■ UPS (Uninterruptible Power Supply)

This device constantly supplies power so that a system can function safely without abnormal stoppages or damage in the event of a power outage. UPSs with lithium-ion batteries had been added to our product lineup. UPSs are used as backup power for critical applications such as information systems and financial systems which are required to operate without interruption.



Hybrid UPS Parallel Processing UPS

Standby UPS



■ Renewable Energy Inverter

This device supplies power by converting DC power generated by photovoltaic generation systems into AC power. For use in public facilities and industrial installations. By combining it with the SANUPS NET cloud service and internet access the PV system status can be monitored from devices such as computers or smartphones. A power conditioner (renewable energy inverter) for wind and hydro power generation systems is also available.



■ Grid Management System

This unit enables efficient electricity use within a microgrid small-scale energy network. One of its main features is storing excess power generated from distributed energy sources, such as photovoltaic and wind power in lithium-ion or other types of batteries to use power economically.



■ Voltage Dip Compensator

This device supplies power without interruption in the event of an instantaneous power outages or voltage dips, preventing factory facilities from failing or malfunctioning. It is suitable for factory facilities and power equipment.



Inverter

This inverter converts DC to stable AC power. The inverter provides the highest possible stability by maintaining a one unit reserve capacity. It prevents equipment malfunction due to waveform disturbance by outputting complete sine waves. It is essential for ICT equipment.



Static Transfer Switch

This device constantly monitors two power sources, a regular and spare, and when a voltage dip or power failure occurs, it switches the power supply from the regular source to the spare source without interruption to continue the power supply. It is suitable for ICT equipment and other critical load equipment requiring reliability.



Emergency Diesel Generator Power Generation Vehicle

These are a diesel generator and power generation vehicle that supply power to public. telecommunication, infrastructure facilities during emergencies. Combined with a SANYO DENKI uninterruptible power supply (UPS), they ensure continuous supply of stable power over long periods without interruption.

Operating Results by Business Segment Company Overview

SANMOTION

Servo Systems Business

SANMOTION is a brand name for SANYO DENKI's Servo Systems products, such as servo motors, servo amplifiers, stepping motors and drivers, motion controllers, and encoders.

Servo systems are used to drive a wide variety of machines including machine tools, industrial robots, and medical equipment. Our SANMOTION Servo Systems products contribute to improving the productivity of customers' equipment with high-speed and high-precision positioning capability, as well as fine customization.

Product Lineup













AC Servo Systems

These are high-precision, high-performance servo systems. These achieve high-speed, precision positioning with vibration suppression function, shortening the cycle time of equipment. The lineup also includes high-speed spindle motors. These are suitable for high, speed, high-precision equipment such as semiconductor manufacturing equipment, robots, and machine tools. With a wide variety of models available, you can build the optimum system for your device.

■ DC Servo Systems

These are DC servo systems with low vibration and low noise. They operate stably at low speeds, and the use in combination with an encoder realizes high-precision positioning control. These are ideal for use with measuring instruments.





These servo motors move in straight lines. Compared with ball screw-based linear systems, they have higher speed and precision and can simplify your system. They are suitable for semiconductor manufacturing equipment and chip mounters.









2-Phase Stepping Systems

3-Phase Stepping Systems

5-Phase Stepping Systems

Closed Loop Stepping Systems

Stepping Systems

These are stepping systems that can achieve high-precision positioning with simple control. In addition to 2-phase, 3-phase, and 5-phase stepping systems, our lineup also includes closed-loop stepping systems, which offer all the advantages of both AC servo systems and stepping systems. These are suitable for a wide range of applications, including semiconductor manufacturing equipment, chip mounters, analysis/ inspection equipment in the medical and environmental fields, ATMs, and surveillance cameras.





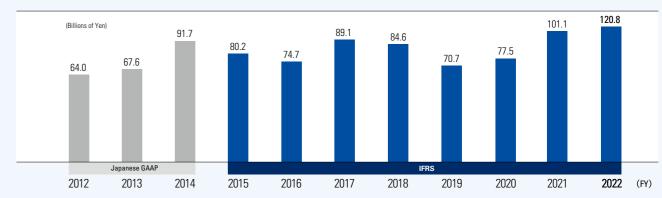
■ Motion Controllers

This controller can control a range of robots easily, contributing to in-house robot motion planning. It supports various open networks, helping make factories automated and IoT-ready.

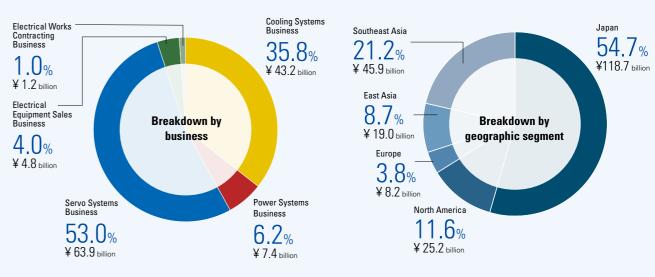
Founded	August 1927
Incorporated	December 1936
Capital	¥ 9.9 billion (as of March 31, 2023)
Consolidated Operating Revenues	¥ 120.8 billion (FY 2022)
Representatives	Shigeo Yamamoto, Chairman of the Board & CEO
	Nobumasa Kodama, President & COO
Number of Employees	SANYO DENKI Group: 3,720 (as of Mar. 31, 2023)
Head Office	3-33-1 Minami-Otsuka, Toshima-ku, Tokyo 170-8451
Stock Listing	Tokyo Stock Exchange Prime Market
Security Identification Code:	6516

Operating Revenues

¥120.8 billion



FY 2022 Consolidated Operating Revenues Composition



Note: "FY 2022" represents the period from April 2022 to March 2023.

SANYO DENKI CO., LTD.

Ueda, Nagano

Kangawa Works

Total floor area: 67,140 m² Number of employees: 619 ISO 9001, ISO 14001

Products produced:



This factory has large-scale automated production lines for producing servo motors. Also, it utilizes resources with its rainwater treatment facility and large PV generation system that can power the entire factory.



Fujiyama Works

Total floor area: 95,632 m² Number of employees: 479 ISO 9001, ISO 14001

Products produced:

Fan



Cooling



Energy











Amplifier Controller

Fujiyama Works is a production site with highefficiency automated production lines for our Cooling, Power, and Servo Systems products. It also has a large PV generation system that can power the entire factory, saving energy.



Shioda Works Total floor area: 6,503 m² ISO 9001, ISO 14001

Tsuiji Works

Total floor area: 11,517 m²

ISO 9001, ISO 14001



SANYO DENKI PHILIPPINES, INC.

Energy

Total floor area: 61,114 m² Number of employees: 1,268 ISO 9001, ISO 14001,

ISO 45001

Products produced:

Fan









This facility has three production factories and a Technology Center for research and development, and develops and produces Cooling Systems, Power Systems, and Servo Systems products.

Subic Bay Freeport Zone, Philippines







SANYO DENKI (Zhongshan) CO., LTD.

Zhongshan, China

Total area: 2,110 m² Number of employees: 39 ISO 9001, ISO 14001, OHSAS 18001

Products produced:

Systems

SANYO DENKI (Zhongshan) CO., LTD. was established in 2011. This is the production site of fan finger guards.



Assembly Factories

The following group companies also function as assembly factories to ensure prompt product delivery to customers around the world. SANYO DENKI ENGINEERING (Shenzhen) CO., LTD. / SANYO DENKI AMERICA, INC. / SANYO DENKI EUROPE S.A.

Research and Development Sites Technology Center Group Companies in Japan

SANYO DENKI CO., LTD.

Ueda, Nagano

Total floor area: 44,926 m² Number of employees: 354 ISO 9001, ISO 14001

Established as a research and development base in 1997, Technology Center engages in product development using state-of-the-art technology in cooperation with production bases in Japan and the Philippines.









SANYO DENKI PHILIPPINES, INC.

Subic Bay Freeport Zone, Philippines









SANYO KOGYO CO., LTD.

SANYO KOGYO CO., LTD. was founded in 1944, and organized as a SANYO DENKI group company in July 2009. As an engineering trading company, it deals with a wide range of businesses such as the sales of electrical and electronic products, and planning, design, installation, and maintenance of industrial control systems.

Number of employees: 111 Head Office: Meguro, Tokyo

Sales bases: Tokyo, Kanagawa, Tochigi, Nagano, Osaka, Hiroshima Main business: Electrical contracting and sales of industrial electrical equipment, control devices, and electrical materials.











SANYO DENKI Techno Service CO., LTD.

SANYO DENKI Techno Service CO., LTD. was founded in 1999 as a SANYO DENKI group company, and has contributed to the group's production and services.

Number of employees: 595 ISO 9001, ISO 14001 Head Office: Ueda, Nagano

Main business: Electronics manufacturing, repair, and maintenance; field service; logistics service; facility maintenance; recycling; solar power generation; car maintenance service; insurance agency business, etc.







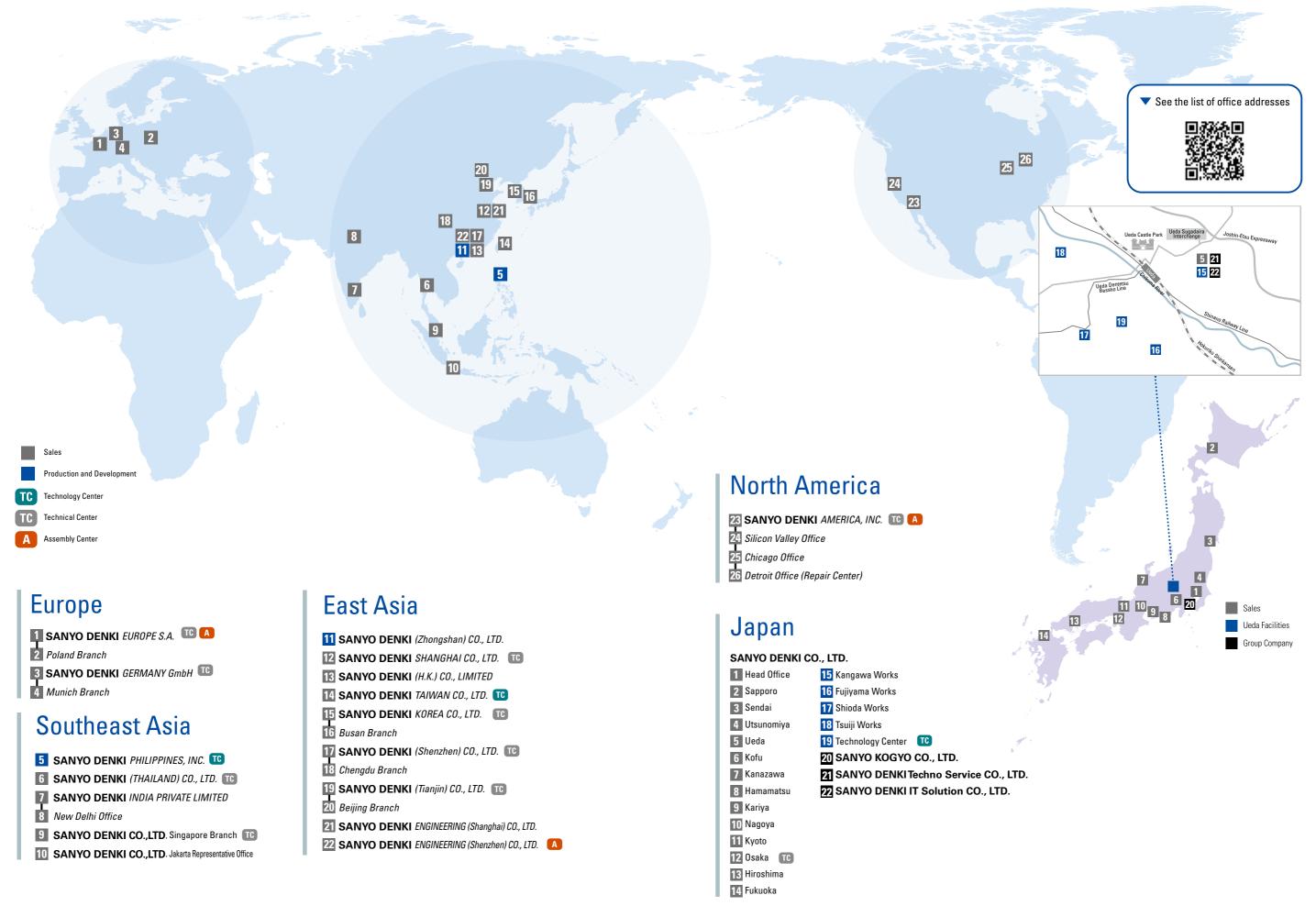
SANYO DENKI IT Solution CO., LTD.

SANYO DENKI IT Solution CO., LTD. was founded in April, 2021 with the aim of integrating the IT systems of the entire group by using the group's IT networks and the IT-related know-how that we had accumulated through our past business operations.

Head Office: Ueda, Nagano
Main business: Develop and operate IT systems of the
Group; manage and maintain the Group's network security;
plan, develop, and consult on IT-related issues and projects.

Note: Numbers of employees are as of March 31, 2023

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