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**Company Profile** 











# **Achievements** of Sunon

#### **Over 60 National Awards**

### Confirming Sunon's International Success in Innovation and Brand Name Execution





2006, Taiwan Business Award

Introduced the world's smallest Mighty Mini Fan & Blower, and modular products with dimensions of 8mm and 3mm thin. Set up the Foshan Plant in Guangdong, China.

> 2006 Introduced Sunon Waturbo CPU cooler. ISO/TS16949 certified. "Certificate of Canon Green Activity" received.

> > OHSAS18001 certified. "Certificate of SAMSUNG Eco-Partner" received All products are RoHS compliant.

> > > 2004 Introduced MagLev AC Fan. Established the worldwide business headquarters in Kaohsiung.

> > > > 2003 "Certificate of SONY Green Partner" received.

2002 Introduced the world's smallest "Mighty Mini Fan" sized 8×8×5mm

Pioneered the introduction of DC brushless vibration motor. QS9000 certified.

2000 Set up the Kun Shan Plant in Shanghai, China. Launched the France and Japan subsidiaries. Listed on the Main Board in Taiwan, capital reached NT\$1209 million.

New series of Green Motor introduced. Launched the U.S. subsidiary. Launched Sunon Research Center Invested in Sunon Motor specializing in precision motors. Introduced the MagLev Motor Fan.

ISO 14001 certified.

Setup the NanHai plant in Guangdong, China, and officially started overseas production. Established U.S. office.

1996 ISO 9001 certified. Set up offices in Singapore and Europe.

1995 ISO 9002 certified. Set up Hong Kong and Taipei office. Introduced extra small & thin cooling fan series.

Launched mass production of self-innovated DC brushless cooling fan.

Received the first patent certification. Established Shehing-Yuan Cerebral Palsy Children Education Center.

Founded the Kaohsiung Plant.

Registered trademark worldwide.

Founded with NT\$1 million capital, Sunon established as a specialist in research, development, production, and marketing of micro cooling fans and precision motors.

Sunon Nears the One Thousand Mark for Worldwide Patents Multiple Invitations to the IEEE Annual **Conference for Announcement of Sunon's Innovative Technologies** 











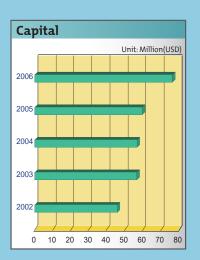




## **About Sunon**

### Brand, Innovation, and Value Sunon is the Worldwide Leader in Precision Motors and Micro Miniature Fans

Sunon was founded in 1980 and has always upheld the philosophy of "Brand, Innovation, and Value" for their business operations. From the start, the Sunon name has become an international trademark that is well recognized and featured on products sold worldwide. Over the years, Sunon has continuously focused on developing and making innovations for their core motor technology, leading the industry in product trends for motors, cooling fans, and cooling modules. Sunon is one of the few operations in the world with a motor R&D team and is fully capable of developing innovative new motor designs. Examples for the R&D efforts are the world's first MagLev design and Sunon Mighty Mini series, featuring a compact sub-centimeter size that is the world's smallest and thinnest fan. Today, Sunon is the worldwide leader in precision motors and micro miniature fans, and is widely recognized by the industry as the designated partner for various multinational corporations. Sunon products are widely used in various applications and industries such as information technology, network communications, optoelectronics, and automobile electronics industries, as well as in industrial production equipment, medical equipment, home applications, OA machines, and others.



### Ranked 4th in Taiwan and 48th worldwide for technological strength by the Massachusetts Institute of Technology magazine *Technology Review*

The Sunon R&D team excels in innovation and strong development capabilities for working with advanced equipment. In the year 2002, Sunon combined their worldwide R&D resources and established the Sunon Research Center in Kaohsiung, Taiwan. This multinational team consists of over 400 engineers aiming to expand the optimized performance and unlimited possibilities for motor applications with the core motor technology. Up to the end of 2006, Sunon received 924 patent approvals from dozens of countries and published multiple technology papers by invitation of the Institute of Electrical and Electronics Engineers (IEEE) in their annual conferences. In an article in the Technology Review magazine published by Massachusetts Institute of Technology, Sunon is ranked 48th worldwide for technological strength in the field of computing. Sunon is also the only manufacturer specializing in cooling motors and fans to be ranked worldwide.

Headquartered in Taiwan, Sunon also has a strong international presence, including 5 subsidiaries in Europe, America, Japan, Hong Kong, Singapore and 5 offices in Taipei, Shanghai, Shen Zhen, Guangzhou, and Saarbrucken, Germany. Through it's over 80 distributors and more than 1,000 sales/services sites worldwide, Sunon has successfully established a comprehensive global network for customer service and R&D technical support.

To satisfy clients with the most flexible design solutions, Sunon has combined the business units of precision motors, cooling fans and cooling modules with the full backing of strong R&D teams, the integration of service and sales departments and production and logistics departments. With innovations that help them advance to new-generation products, the clients will experience firsthand the true meaning of the "Brand Name, Innovation, and Value" philosophy behind Sunon, where the ideals of "peace of mind through Sunon," "realizing system miniaturization and ease of use through Sunon," and "the future and hope of society through Sunon" become realized.



Sunon Research

## Sunon Products











Annual R&D budget up to 10-12%

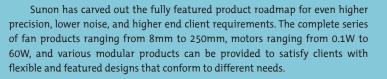
of revenues and a worldwide technological research network

Flexible, client-oriented design capabilities

Averaging 8.85 new designs output per day

to achieve the excellent record of

2,300 customized designs a year.



Their continuous push for innovative inventions enables Sunon to stand at the forefront of the industry curve, providing high-end, innovative technological services to clients from different industry backgrounds. Sunon's motor and fan products with MagLev design benefits from low noise, high temperature resistance, and long lifespan characteristics, while the Mighty Mini product series has solved space limitations to be able to be used with even smaller next-generation electronic products. PDA, new models of smart phones, GPS, UMPC, video phones, and similar products can all benefit from the smaller cooling solutions from Sunon, and the partners will be able to create palm-type devices with the most optimized design.



Sunon Research, the Driving Engine for Inventions and Innovations

Sunon established the "Sunon Research Center" in Kaohsiung in 2002 to promote and execute the innovation blueprint for Sunon Group. Research labs and engineers from Europe, America, Japan, and China are centralized to form a worldwide technological service network for quick and efficient services.

### **Key Modules for Innovating Core Motor Technology**

Sunon has been researching their motor technology for over 30 years and adhering to the Sunon R&D Trinity as their innovation roadmap, focusing on the three major technology fields of "Motor Research," "Motor Applied Research," and "Total Thermal Solution." Sunon strives to expand the endless possibilities and optimization of motor applications and will continue to make breakthroughs and product innovations. The efforts will push Sunon to the front of the technology curve and clients will be able to realize their future dream products with the three key Sunon products of motors, cooling fans, and cooling modules.

Sunon has the capacity to design and implement the complete magnetic, mechanical, and driving circuit of a motor to conform to client design specifications. With the efforts of the mechanism and electrical circuit engineering teams, Sunon recognizes the needs of their clients regarding cooling modules and can provide flexible designs for high performance and high quality cooling fans. Sunon utilizes advanced simulation systems and analysis projects that result in an even more accurate heat analysis and heat dissipation design for the system. Subsequently the most efficient total thermal solution can be provided to the client.

In accordance with the worldwide trend of "Light, Thin, Small, and Compact," Sunon has broken through the design barriers with the advanced miniaturization and micro-scaling capabilities of their products. Sunon has successfully developed micron motors that can be installed in the next generation of handheld communication devices and will continue to advance onwards to the technological frontier of nanoscale products.

# Sunon's World Exclusive Innovation to Be Utilized in Various Fields --MagLev Design, Waturbo Cooling System, Mighty Mini Motor Technology



Motor Invention

Motor

Applied material research

Raw material development

and evaluation

Total thermal solution, Simulation, Certification

Sunon has been recruiting experts from different fields and actively pursuing technology upgrades to provide high quality products and professional services to satisfy clients from various industries.

Sunon fan products feature exceptional performance and high reliability in order to be widely utilized in the IT industry, network communications equipment, optoelectronics, home application, industrial and commercial machines, medical instrument, and automobile electronics.

Sunon, with their excellent customization services, can assist clients with their development of notebook, UMPC, VGA card, Desk Top, Server, LED backlight modules, automobile electronics, and various other fields of application. From the lowest to the highest ends, the Total Thermal Solution and cooling modules can be provided to fit the system requirements.



## Sunon Reliability Verification System

Five worldwide fully equipped reliability testing labs

Continuous equipment updates and upgrades conforming to
development requirements

Complete support and application tools for simulation, testing,
and actual implementation

Sunon has 5 reliability testing labs worldwide equipped with the topmost precision verification instruments for testing from the design phase, through pre-production, and into mass production. The complete verification system is computerized and fully automated for precise analysis of product reliability and quality satisfaction to meet the market requirements.



### **Acoustics Laboratory**

Sunon introduced acoustics engineering in the year 2000 to transform the traditional school of Sound Pressure and Sound Power into the more advanced theory of Sound Quality. Sunon's Sound Quality analysis and research is performed by Head Measurement System (HMS) manufactured by Head Acoustic of Germany. The HMS system records and simulates the auditory senses of the human ears, where the sounds, vibration, rotation speed, and electrical signals are measured. The Artemis software subsequently performs time domain and sound quality parameter analysis to assist the acoustics engineers in allowing Sunon products to feature a more favorable sound quality. The expertise and experience of the acoustics engineer combined with the software analysis will result in an even more user-friendly environment that is rivaled by none.



### Air Flow/Pressure Testing System

Sunon is equipped with a complete air flow/pressure testing equipment for use with a variety of system configurations ranging from a single fan to the complete system. Specifications up to 1200 CFM and 20 inch-H2O can be properly tested for air flow and air pressure. In addition to measuring the high air flow and pressure testing, the internal air flow/pressure testing can be performed during system operation. For testing of miniaturized products and development requirements (for example the Mighty Mini fan series measuring under 1 cm), the Sunon reliability testing lab is capable of measuring the minimum air flow of 0.0046 CFM. This precision testing equipment will be able to satisfy the verification testing required by future microminiature and handheld products.



# Temperature/Humidity Testing System

In order to conform to the verification requirements of the automobile industry, the Sunon temperature/humidity testing system has been upgraded from the original -50  $^{\sim}$  100°C range to the new equipment capable of testing under the environment range -60  $^{\sim}$  150°C. This new system is capable of performing high/low temperature circulation, high-temperature high-humidity, and thermal shock test that will see greater benefits to Sunon products.



# Product-life Automated Testing System

Sunon's product-life automated testing system comprises two main methods: Room Temperature Test and High Temperature Test. The system is computer controlled and monitored on a 24-hour basis and can test as many as 2,800 units of fans at the same time. Hence any fan failure can be detected in real time and their life can be accurately estimated.



### Sunon Safety Testing Lab UL Certified

In order to embed the safety concept into their designs, Sunon founded the UL approved safety testing lab in 2006. The self owned test lab can be more flexible and can reduce the time required to obtain UL certification; thereby shortening the time for the client to go from R&D to pre-production, and then to mass production.

## Sunon Production Network

Sunon Group has a total of five manufacturing plants located in both China and Taiwan for production of 8mm~250mm series of fan products, 0.1Watt~60Watt of motor products, and various cooling module products. The overall monthly production output capacity is 16 million units.

In addition to the MES system that provides clients with the best manufacturing quality, Sunon goes well beyond industry standards in production, assembly, inspection equipment design and deployment. Sunon has also committed large amounts of manpower and material resources, and adopted the newest hardware and software equipment, in our quest for quality. For example, an automated production line for cooling products, the self-developed automated inspection machine for the production line, a heat inspection system capable of six simultaneous measurements, and an independent barcode with each cooling product indicate Sunon's commitment.

Sunon manufacturing bases have obtained certifications for QS9000, ISO9001, ISO14001, ISO/TS16949, and OHSAS18001. Each product has passed UL, TUV, VDE, CCC, CSA certifications and company of the compa



All Sunon products are RoHS compliant from design phase to mass production.
Sunon is the long-term green partner for SONY, CANON, SAMSUNG and various other multinational companies

Sunon deeply recognizes its corporate duty to protect our earth and the ecosystem and to reduce the use of materials that impact the environment. In light of this, Sunon has been actively promoting green product design, green purchasing, and green manufacturing reforms. All current product series conform to EU RoHS and China RoHS, and Sunon has been selected as the green environment partner for multinational corporations such as SONY, CANON, and SAMSUNG. All of the aforementioned efforts will result in greener products that have the least impact on the worldwide environment.

For improving the quality management system and regulations of hazardous materials contained in the products, Sunon further introduces the IECQ QC080000 to their product production. This will complete the approval and certification process for usage of hazardous materials and the reduction management system, thereby setting up a green quality management system that conforms to international standards for the benefit of Sunon and their partners.



Kun Shan plant



Foshan plant I



Kuns Yuan plant





Headquarters



Kaohsiung plant I Kaohsiung Plant II