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About This Report

About This Report

Winbond Electronics Corporation (as "Winbond") 2024 Sustainability Report (as "this report") transparently and comprehensively presents the impacts and sustainability-related actions of Winbond's operations in the three ESG dimensions: Environmental, Social, and Governance. Through the promotion and implementation of related measures in operational activities, Winbond addresses the expectations and needs of stakeholders regarding the company's sustainable development and operations.

Editorial Principles and Guidelines

This report is compiled in accordance with the GRI Standards issued by the Global Reporting Initiative (GRI), the industry standards of the Sustainability Accounting Standards Board (SASB), and the TCFD framework released by the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB).

Management Process

1. **Annual performance review**
2. **Identify the key focus areas**
   Collaborate with each unit to understand their execution, then highlight each major issue
3. **Collect the information**
4. **Compile the report**
   Compile the report
   The contents of this report were reviewed and approved by the heads of departments, Winbond ESG Committee, the general manager and the chairman of the board
5. **Verify by third-party**
   Independent verification of this report was conducted by BSI Taiwan in April 2025 in accordance with the AA 1000 Av3 Type II moderate Assurance Standard. Please refer to the independent assurance declaration included in the appendix of this report for more details on the results
6. **Review by ESG committee**
   All chapter content is reviewed and approved by the ESG Committee, the President, and the Chairman.
7. **Report to the Board of Directors**
   Being raised to the level of the Board of Directors, the ESG Committee established the ESG Office and five functional teams, including Environmental Sustainability, Green Products, Human Rights and Social Inclusion, Sustainable Supply Chain, and Corporate Governance. The committee reported the execution results to the Board of Directors at least twice annually, with the Chairman also serving as the Committee Chair.

ESG website
Launch on Company Website

Reporting Scope

The reporting period for this report is from January 1, 2024, to December 31, 2024. The scope of information disclosure in this report aligns with the boundaries of the consolidated financial statements, including Winbond (Taiwan) fab and offices (Central Taiwan Science Park), Kaohsiung Fab, Zhubei Building, Taipei Office, Tainan Office), Nuvoton (Taiwan), Nuvoton (Japan), and other subsidiaries. These entities are collectively referred to as the "Winbond Group." If the scope of disclosure differs from above, it will be noted in the respective section. Compared to the previous year's "2023 Sustainability Report," there is no restatement of information in this year's "2024 Sustainability Report".

External Audit

- This report was independently verified by BSI Taiwan, a branch of the British Standards Institution, in April 2025, in accordance with the AA 1000 Accountability Principles 2018 Type II assurance standard. For detailed results, please refer to the Independent Assurance Statement in the Appendix of this report.

Internal Audit

- The contents of this report were reviewed and approved by the heads of departments, Winbond ESG Committee, the general manager and the chairman of the board.
- Being raised to the level of the Board of Directors, the ESG Committee established the ESG Office and five functional teams , including Environmental Sustainability, Green Products, Human Rights and Social Inclusion, Sustainable Supply Chain, and Corporate Governance. The committee reported the execution results to the Board of Directors at least twice annually, with the Chairman also serving as the Committee Chair.

Publication Date

This report is published annually, and this is the 11th report. Paperless operations are promoted by Winbond to save energy, reduce carbon emissions, protect the environment, and care for planet Earth. This report therefore continues the tradition of being published in an electronic format on the Winbond website for all stakeholders to read.

- Current Version: Published in July 2025
- Previous Version: Published in July 2024
- Next Version: To be published in July 2026

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Message from Our Chairman

Rooted in our core business, Winbond Group adopts a holistic ESG mindset and implements diverse actions to address corporate sustainability risks. From a risk management perspective, the company identifies operational opportunities and leverages the integration of digital technologies and AI to enhance organizational resilience.

Over the past year, the scope of sustainability management has become increasingly nuanced and complex amid rapidly evolving global dynamics and frequent black swan events. Agile response capabilities have become essential for companies to mitigate operational risks.

In response to these challenges, Winbond is not only strengthening its resilience but also actively advancing digital transformation and green product development. We have established five major digital platforms—including the iMX system, monitoring system, data platform, business intelligence platform, and AIP smart application platform—to enhance manufacturing efficiency and optimize processes. To build internal capabilities, Winbond provides AI and data science training programs to improve employees' data analysis and machine learning skills. At the Central Taiwan Science Park (CTSP) Fab, ESG carbon reduction initiatives are integrated with factory equipment. Looking ahead, Winbond plans to source 50% of the electricity used in its Taiwan fabs from renewable energy by 2030. In 2024, we launched the first renewable energy product, marking a significant milestone in sustainable product innovation. Winbond will continue to adopt new technologies, share energy-saving practices with industry peers, and jointly promote sustainable development.

Winbond is also deeply committed to biodiversity conservation. Through a tripartite collaboration with industry, government, and academia, the company partnered with National Chung Hsing University to plant five native tree species at its Kaohsiung Fab as part of a 30-year afforestation initiative. Additionally, Winbond participates in the Forestry and Nature Conservation Agency's tree adoption program, taking responsibility for national forest lands in Tainan City and Chiayi County. These efforts aim to restore slope vegetation and support long-term ecological stewardship. The company also engages in environmental activities such as mountain, stream, and beach cleanups. Subsidiary Nuvoton collaborates with the Wilderness Conservation Association to protect the endangered Sauters brown frog habitat. Moving forward, Winbond will continue to promote biodiversity initiatives, forest carbon sequestration programs, and community-based forest management and conservation.

Winbond has successfully established a carbon accounting system to assess product carbon footprints and conduct greenhouse gas inventories, covering the entire lifecycle from raw materials to production and shipment. To improve energy efficiency, we have implemented the ISO 50001 energy management system and procured renewable energy. Winbond is committed to enhancing the transparency and traceability of carbon data through continuous improvement of its carbon accounting system. By 2025, we aim to achieve 8–10% renewable energy usage across all operations. Furthermore, Winbond plans to initiate a 30-year renewable energy purchase agreement totaling approximately 4.8 billion kWh, starting from the completion of the first phase of the third-stage offshore wind power development.

These efforts reflect our comprehensive commitment to biodiversity, digital transformation, carbon accounting, and green product innovation. Looking ahead, Winbond will continue to prioritize innovation and responsibility, striving to lead sustainable development, set a benchmark in the global market, and create a better living environment for future generations. Through continuous progress and dedication, Winbond will remain at the forefront of industry advancement, achieving a harmonious balance between enterprise growth and environmental stewardship.

Arthur Yu-Cheng Chiao
Chairman and Chief Executive Officer

Message from Our President

Winbond focuses on its core business while adjusting its sustainable development strategies, goals, and actions in response to international trends. This approach enhances organizational resilience in sustainability and proactively strengthens long-term corporate value to meet the expectations of diverse stakeholders. In 2024, Winbond received multiple sustainability accolades, including the National Sustainable Development Award, a CDP Climate Change A-rating, and inclusion in the S&P Global Sustainability Yearbook.

On the environmental front, Winbond (Taiwan) reduced Scope 1 and 2 greenhouse gas emissions by 1.1% compared to the previous year and established a unique carbon accounting system, enabling more transparent management of carbon emissions. Products manufactured using renewable energy have also been officially launched. In the social dimension, Winbond values talent development and has continued its sponsorship of the Semiconductor Academy at National Cheng Kung University. The company also emphasizes the enhancement of employees' digital capabilities and AI skills. In 2024, Winbond was honored with the Ministry of Labor's Family-Friendly Workplace Award for its efforts in promoting work-life balance.

In terms of governance, both Winbond and Nuvoton ranked in the top 20% in corporate governance evaluations and received the highest platinum certification under the RBA Validated Assessment Program (VAP).

The dual engines of digital transformation and the transition to net-zero emissions are key to the company's future development. Winbond Group will continue to deepen its ESG practices, uphold the principles of sustainable development, and pursue continuous innovation and growth amid challenges. These efforts aim to enhance operational resilience, maintain market competitiveness, and create long-term value. Winbond Group actively plays a pivotal role in the semiconductor industry chain, contributing to a smarter, more sustainable, and convenient way of life.

James Pei-Ming Chen
President

Driving sustainable manufacturing by diverse carbon reduction measures
Create new value by low-carbon energy-saving products

E

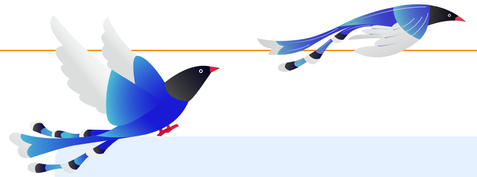
Winbond is committed to green production by leveraging cross-functional teams to integrate resources and promote low-carbon, eco-friendly operations. These initiatives address climate action, energy efficiency, water resource management, resource recycling, and air pollution control, while also advancing carbon reduction goals in collaboration with the semiconductor supply chain.

With core innovative technologies and a focus on energy efficiency and carbon reduction in product design, Winbond continues to develop a range of low-power memory products, including the HYPERRAM and CUBE product lines. HYPERRAM reduces operating power consumption by 70% compared to conventional SDRAM. The CUBE series, designed for edge AI computing, offers ultra-low power consumption and exceptional performance. Additionally, Winbond has launched the industry's first NOR Flash supporting a 1.2V operating voltage, reducing power consumption by 50% compared to 1.8V solutions.

Implementing energy strategies and carbon reduction measures, Winbond has developed a proprietary carbon accounting system for comprehensive carbon inventory and product carbon footprint calculations. The company has introduced renewable energy into its manufacturing processes and extended its use to downstream packaging and testing facilities. In 2024, products made with renewable energy began shipping to ESG-conscious customers, achieving approximately 60% lower carbon emissions than standard products.

In greenhouse gas management, all of Winbond's manufacturing sites, including subsidiaries, have obtained ISO 14064-1 verification. The company is also committed to achieving a net positive water impact, with both the Kaohsiung and CTSP fabs certified under the ISO 46001 water efficiency management system in 2024.

From 2022 to 2024, Winbond signed power purchase agreements (PPAs) totaling 27MW of solar and 12.84MW of wind energy. By 2025, the company expects renewable energy to account for 8–10% of its total electricity usage. In supply chain management, embracing a mutually beneficial approach to sustainability, Winbond actively promotes carbon reduction by guiding suppliers to track their usage of electricity, energy, water, waste, and greenhouse gases, set reduction targets, and undergo regular evaluations. Through collaboration with supply chain partners, over NT$200 million has been invested in initiatives to reduce process gas emissions, conserve electricity, and save water.



Promoting corporate human rights mindset
Establishing friendly workplace concepts

S

Winbond integrates human rights principles into its corporate culture, striving to create a work environment that respects employee rights, embraces diversity, and fosters sustainable development.

In 2024, both Winbond and its subsidiary Nuvoton received the highest platinum certification in the RBA VAP (Validated Assessment Program) audit. Together, they jointly formulated human rights policies, completed human rights due diligence, and extended these principles across the supply chain. This included conducting human rights risk education for suppliers, requiring them to sign the codes of conduct, and integrating due diligence into supplier management processes.

To build a friendly and inclusive workplace, Winbond offers childcare subsidies, wellness leave, paid volunteer leave, and a variety of family-friendly benefits that exceed industry standards. The company is committed to diversity and inclusion, raising the proportion of female board members to 27%, and actively safeguarding the rights of underrepresented and vulnerable groups, with the employment rate of people with disabilities far surpassing legal requirements.

In talent development, Winbond systematically cultivates AI expertise internally and offers cross-functional rotation programs. In 2024, the group invested NT$42.87 million in training, with employees averaging 70 hours of training. Winbond also upholds fair and equitable compensation policies, earning both Winbond and Nuvoton a place in the 2024 High Salary 100 Index. Externally, the company continues to support youth talent development through ongoing collaboration with National Cheng Kung University's Semiconductor Program and sponsorship of the Chair Professor Research Fund at National Yang Ming Chiao Tung University, actively fostering platforms for technological innovation and collaboration in the semiconductor industry.

Winbond also leads employees in social engagement, with a focus on environmental and biodiversity conservation. The company introduced the "Winbond Biodiversity Commitment" to demonstrate its resolve in minimizing environmental impact. Initiatives include organizing beach and stream cleanups, restoring the habitat of the Great Purple Emperor butterfly (Sasakia charonda), protecting the endangered Rana sauteri frog, cultivating species from the Theaceae family, and preserving the rare Habenaria radiata (Egret Flower). Committed to nature-based solutions, Winbond has carried out afforestation projects across national forest lands in Chiayi, Tainan, and Yilan, covering nearly 25 hectares, in support of Taiwan's 2050 net-zero emissions strategy through natural carbon sequestration.

Enhancing sustainable governance
Building climate resilience

G

Winbond maintains close communication with stakeholders and proactively addresses their concerns, integrating sustainability principles into its governance framework and continuously refining its processes accordingly.

Operational risk and information security controls are fundamental to corporate governance. Winbond has established a comprehensive risk management mechanism and standard procedures for responding to information security incidents, with clearly defined processes and measures. We also actively contribute to the development of wafer equipment cybersecurity standards (SEMI E187), continually enhancing the security standards of its wafer equipment.

Winbond incorporates climate change risks into its long-term corporate operations and evaluates them using the Task Force on Climate-related Financial Disclosures (TCFD) framework. To address transitional risks such as low-carbon technology shifts, carbon pricing mechanisms like carbon fees and taxes, and international agreements—as well as physical risks like tropical cyclones—Winbond has implemented various measures. These include adopting energy management systems, utilizing renewable energy, establishing carbon accounting systems, and fully implementing intelligent energy-saving production solutions.

Sustainability-driven innovation is a core part of Winbond's organizational culture. The company encourages employees to propose creative ideas related to green products and integrates these ideas into process design and testing workflows to ensure alignment with its ESG-driven development strategy. In 2024, Winbond received the National Sustainable Development Award, and the Winbond Group was selected in the Clarivate Top 100 Global Innovators list for the third consecutive year, demonstrating its strong R&D capabilities and earning recognition from international professional evaluations.

Winbond Group Overview

About Winbond Group

Winbond Electronics Corporation (referred to as "Winbond") is dedicated to providing comprehensive niche memory solutions to customers worldwide. Its main products include Code Storage Flash Memory, TrustME® Secure Flash, and Customized Memory Solutions (CMS). Its subsidiary, Nuvoton Technology Corporation (referred to as "Nuvoton"), was established by spinning off Winbond's logic IC product line and focuses on microcontrollers (MCUs) and logic ICs. Collectively referred to as the "Winbond Group," Winbond and Nuvoton are committed to the development of green semiconductor technology. The Winbond Group is one of the few global companies that combine memory and logic businesses and is the only company in Taiwan with capabilities in process development, product design, and marketing for CMS, Flash, and Logic technologies.

We leverage product synergies to provide customers with more comprehensive and diverse solutions, strengthening the foundation for stable company operations. The Winbond Group's memory business focuses on the design, manufacturing, service, and sales of niche memory solutions, offering customers memory solutions with special specifications. The logic business encompasses microcontroller/voice applications, cloud security, image sensing, battery monitoring, IoT applications, semiconductor components, and wafer foundry services

Corporate Culture

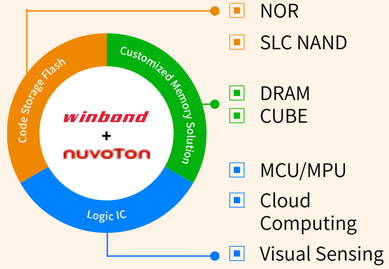
Be a hidden champion in providing sustainable semiconductors to enrich human life

Industry Status

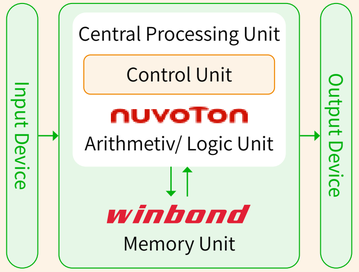
Winbond

Serial NOR Flash	Market Share TOP 1	SLC NAND	Market Share TOP 3

Solutions Across Memory and Logic

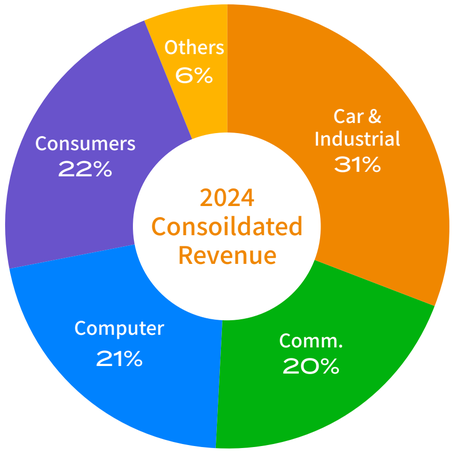


Coutinuous Innovation

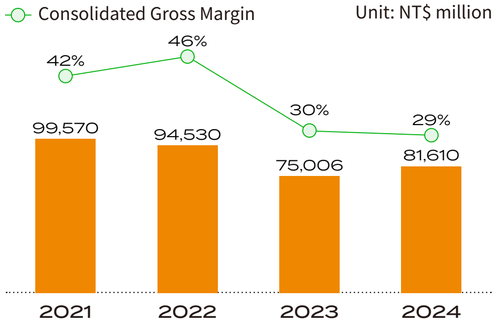


Board Range of End-Use Application

Proportion of 2024 Consolidated Revenue by Application Category

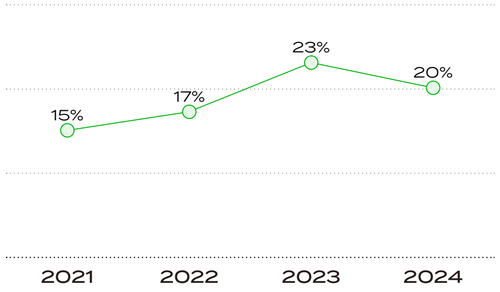


Operational Performance of Logic and Memory Products



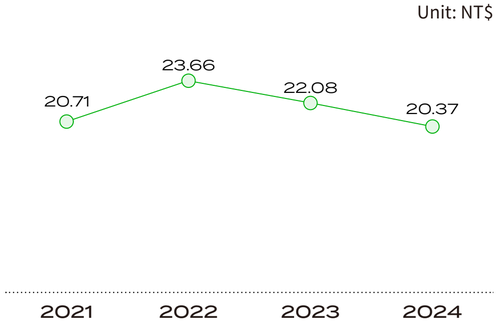
Investment in Technology Research and Development

Winbond Group's R&D Expenditure and Its Proportion of Total Revenue



Value

BVPS

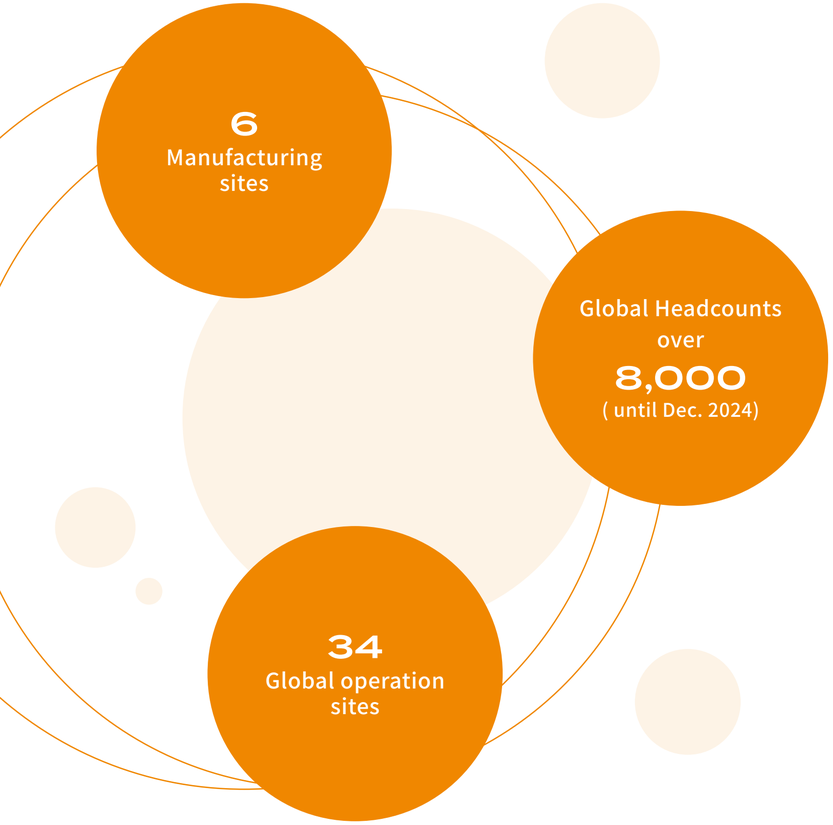


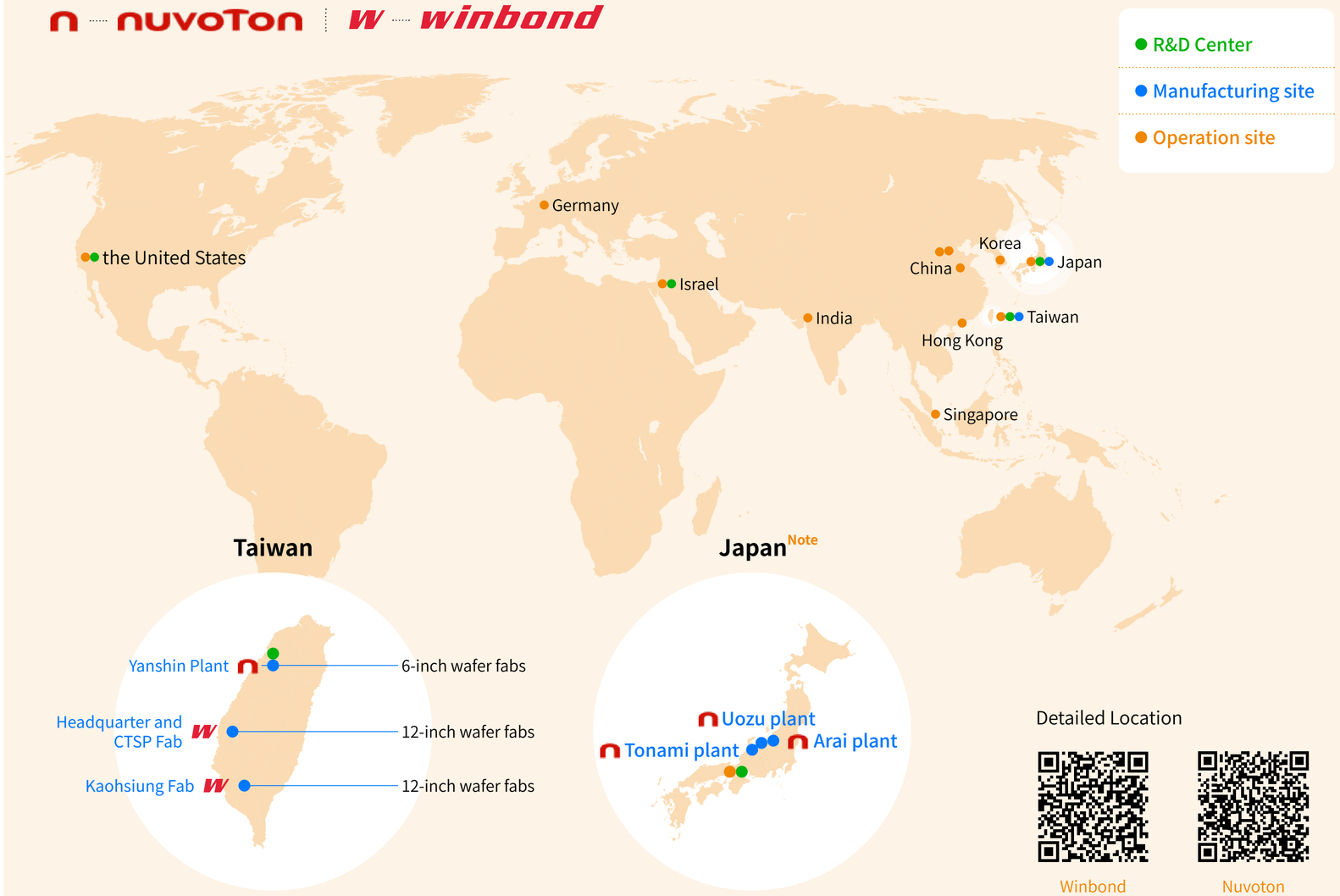
Manufacturing Site

Winbond Group has 4 manufacturing sites, including two 12-inch wafer fabs and one 6-inch wafer fab.

Global Operation

Headquarter is located in Taiwan, with global operations in Taiwan, China/ Hong Kong, Japan, Singapore, South Korea, India, the United States, Germany, and Israel.





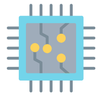
Note Held by Tower Partners Semiconductor Co., LTD. ("TPSCo."); TPSCo. is a joint venture between Nuvoton(Japan) and Tower Semiconductor, with Nuvoton(Japan) holding 49% equity in TPSCo.

Milestone

1987
Established in Hsinchu Science Park

2008
- Spun off the Logic Product Business Unit to establish Nuvoton Technology

2010
Launched WLCSP (Wafer Leve Chip Scale Packaging) for serial NOR



2014
- Became the world's number 1 supplier of Serial NOR Flash
- The SpiStack product line has been launched to bolster data storage capabilities. In addition, Winbond's SPI products feature encoding-based storage, Over-The-Air (OTA) software update applications, and small- form-factor packaging

2018
- Became the world's number 1 supplier of NOR Flash
- Launched the high-performance QspiNAND to support the automotive industry

2024
Winbond Group was selected as one of Clarivate's Top 100 Global Innovators for two consecutive years

1995
Listed on Taiwan Stock Exchange (TWSE: 2344)

2006
Launched Multi I/ OSpiFlash (Dual 2006, Quad 2007), achieving the highest performance in the industry

2009
The mass production of the industry's first 16Mb Serial Flash using advanced 90-nanometer technology

2013
Launched QspiNAND with continuous read, embedded ECC, and bad block management capabilities

2017
Introduced the world' s first ultra-low voltage 1.2V 8Mb Serial NOR Flash product

2020
Acquired Japan's Panasonic Semiconductor Business and renamed it to Nuvoton Technology Corporation Japan

Scope: Unless otherwise noted, the scope refers to Winbond; Nuvoton Technology is presented as .

Winbond Group Value

Foresight In Trends, Value in Practice

With a deep understanding of market trends for next-generation products, Winbond continually invests resources in semiconductor design, production technology, and sustainable product innovation. We provide customers with low-carbon and low-power green products, enhancing our competitive advantage and market share in green business opportunities. Also, we continuously improve our ESG performance to enhance Winbond's sustainable competitiveness.

Design and Development Focus

- ✓ Minimize the generation and emissions of hazardous substances in the manufacturing process
- ✓ Shorten manufacturing lead time
- ✓ Reduce manufacturing costs

Products Innovation Advantages

- ✓ Utilize low-carbon raw materials
- ✓ Reduce production energy consumption
- ✓ Enhance product performance
- ✓ Achieve smaller size
- ✓ Increase product energy efficiency

Technology catalyzes innovation and enhances the quality of life		Applications and Products	
Automotive Electronics	From vehicle body, power systems, information and entertainment systems, to intelligent driving and advanced safety systems, our technology is used in emerging electric vehicles to achieve a safer, smarter, and more environmentally friendly transportation environment.	▣ Vehicle-to-Everything (V2X) ▣ Advanced driver-assistance systems (ADAS) ▣ Vehicle dashboards ▣ In-Vehicle Infotainment (IVI)	▣ Telematics ▣ Automotive sensing components ▣ Automotive gateways
Industrial Electronics	For industrial systems, Winbond brings higher performance, information security, and advanced safety in intelligent networking, remote monitoring, human-machine interaction, and on-site machine learning.	▣ Real-time sales information devices ▣ Smart factories ▣ Smart dashboards ▣ Programmable logic controllers ▣ Graphical user interfaces	▣ Industrial gateways ▣ Industrial machine vision ▣ Industrial computers ▣ Unmanned Aerial Vehicles (UAVs) ▣ Surveillance cameras
5G Communications	With higher data transmission speeds, Winbond provides a foundational platform for the Internet of Things, enabling efficient communication that transcends time and location, enhancing productivity, entertainment, and learning.	▣ Network digital video converters ▣ High-speed Ethernet switches ▣ Wireless terminal access equipment and customer premises equipment (CPE)	▣ Long-Term Evolution (LTE) technology ▣ LTE/5G base stations
IoT	In the world of interconnected devices, Winbond accelerates digital transformation while ensuring information security and functional safety, achieving energy efficiency, convenience, and a higher level of safety protection for everyday life.	▣ Smart cities ▣ Smart transportation systems ▣ Self-driving cars ▣ Smart factories	▣ Telehealth ▣ Smart home ▣ Smart meter
Consumer electronics	For consumer products, Winbond delivers more powerful, energy-efficient, and feature-rich solutions, offering an enhanced product experience.	▣ Smartphones ▣ Smartwatches ▣ AR smart glasses ▣ Tablet computers ▣ Smart TV	▣ Smart home ▣ Satellite navigation ▣ Digital cameras ▣ True wireless earphones ▣ Set-top boxes

Winbond Group Value

The product development goals of Winbond Group focus on enhancing product performance and quality. Our strategies include reducing chip size to lower production energy consumption and costs, and strictly controlling pollution and hazardous substance emissions to achieve low-carbon production.

Additionally, our product designs also strengthen information security, enhance patent and intellectual property protection, and realize a more energy-efficient, convenient, and higher level of security in daily life.

Product Development Focus

1 Enhancing Product Performance
Manufacturing IC products with higher computational efficiency and enhanced performance.

2 Improving Quality
Continuously improving product quality in three major aspects: quality control, reliability assurance, and failure analysis.

3 Controlling Pollution
Reducing consumables generated during the manufacturing process, lowering carbon footprint emissions. Establishing a system for managing hazardous substances in products, reducing or eliminating harmful substances included in products in a "process-oriented" manner.

4 Layout of Patents and Intellectual Property Protection
Adopting international standards in the internal proposal stage of patent applications to enhance patent quality and application success rates. Improving the protection of intellectual property rights through internal education and training, signing confidentiality agreements, etc.

5 Ensuring Information Security and Confidentiality
Strengthening information security technologies, continuously providing advanced security function designs in products.

6 Achieving Smaller Size
Continuously developing technologies to shrink wafer chip area compared to the previous generation of products.

7 Reducing Production Energy Consumption
By reducing wafer chip area and shortening production time, more products are produced with the same process, reducing energy consumption per wafer.

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Product types	Areas of application	
Microcontroller	5G energy management smart IoT industrial control edge AI IoT security base stations servers Smart Home	Communication Devices Electric Vehicle Electronics Consumer Electronics Audiovisual Equipment Gaming Devices
Audio	Smart industry smart robots conference systems Smart Appliances Smart Speakers	Smart Home Entertainment Smart Cars Smart Interactive Toys
Cloud Computing	Edge computing remote management forserver-specific purposes power management	computer hardware monitoring Communication Devices (Mobile Phones and Laptops) Remote Work
Semiconductor Components	Industrial equipment fiber optics communication	Wearable Devices Smartphones Tablets
Image Sensing Technology	Autonomous mobile robots (AMR) human behavior recognition	Photographic Equipment Medical Endoscopes
Battery Monitoring	Electric vehicles Home Appliances Fan Motors	

[1] This includes products from Nuvoton's Microcontroller Business Group and IoT with Security Business Group.

winbond

Product types	Diverse Product	Solution	
Customized Memory Products	CUBE SDRAM & DDR 2/3/4 Pseudo SRAM (HYPERRAM™) Lower Power SDR/ DDR 2/3/4/4X	**Automotive** ADAS Instrument Clusters Infotainment V2X application **Industrial** Point of Sales (PoS) systems Human Machine Interface (HMI) Programmable Logic Controller (PLC) Smart Meter Industrial Networking **Consumer** Wearable Electronics GPS Digital Cameras Bluetooth and WiFi Modules	**Communication** Set-Top Box (STB) Switches Routers Passive Optical Networks (PON) xDSL Wireless Access Point Mobile Phones Base Stations **Computer** Notebooks Servers Gaming Notebooks Ultrabooks Tablets HDD/SSD
Flash Memory	Serial NOROctal NOR Qspi NAND Octal NAND NAND BASE MCP Secure Memory		

Awards and Recognition

Sustainability Recognition

Selected for the S&P Global Sustainability Year Book
- Listed on the 2025 S&P Global Sustainability Yearbook for the first time

National Sustainable Development Awards
- Awarded by the National Development Council

ECOVADIS – Gold
- Recognized by the Global Supply Chain Sustainability Evaluation Platform

CDP
- Climate Change: A-
- Water Security: B

Taiwan Corporate Sustainability Award
- Taiwan's Top 100 Sustainable Companies Award
- Corporate Sustainability Reporting Awards - Platinum Level
- Talent Development Leadership Award
- Human Rights Practice and Development Leadership Award
- Water Resource Management Leadership Award
- Sustainable Supply Chain Leadership Award
- Innovation Growth Leadership Award
- Workplace Well-being Leadership Award

Nuvoton
- Corporate Sustainability Reporting Awards - Platinum Level
- Workplace Well-being Leadership Award

FTSE4Good
- FTSE4Good Emerging Index
- FTSE4Good TIP Taiwan ESG Index

British Standard Institution (BSI)
- 2024 BSI ESG Sustainability Practice Award

1111 Job Bank
- 2024 Happy Enterprise: Gold

Outstanding Enterprise for Promoting Workplace Equality
- the Southern Taiwan Science Park

Southern Taiwan Science Park Bureau
- Kaohsiung fab was awarded the 113th Southern Taiwan Science Park Outstanding Environmental Protection Unit.

Responsible Business Alliance (RBA)
- Winbond and Nuvoton both received the highest Platinum level certification from the VAP

Ministry of Labor Work-Life Balance Award: Family-Friendly

Top 100 Carbon Competitiveness
- Nuvoton selected as one of the Top 100 Carbon Competitiveness Enterprises by Business Weekly

Corporate Governance

11th Corporate Governance Evaluation
- Ranked in the top 6% to 20% among listed companies

Taiwan Index Plus
- Winbond and Nuvoton both selected as TWSE Corporate Governance 100 Index
- TWSE RAFI® Taiwan High Compensation 100 Index
- TWSE RA Taiwan Employment Creation 99 Index

Taiwan FINI 100
- Nuvoton awarded as "2024 Taiwan FINI 100 Companies"

Product Innovation

Clarivate
- Selected as one of the Top 100 Global Innovators for 3 consecutive years

Industrial Development Administration, MOEA
- Passed TIPS A-level certification for 2 consecutive years

Intellectual Property Office, MOEA (TIPO)
Top 100 Patent Applicants in 2024:
- 13th Place among the Applicants of the Taiwanese Juridical Persons
- 17th Place among the Patentees of the Taiwanese Juridical Persons

Taiwan Continuous Improvement Awards
- 2 Golden Tower Awards
- 2 Silver Tower Award

Best MCU/ Driver IC of the Year
Nuvoton received the 2024 EE Awards Asia - Taiwan Product Award.

International Standards Compliance and Verification

Certification/Facilities	Winbond		Nuvoton	
	CTSP Fab	Kaohsiung Fab	Yanshin Plant	Nuvoton (Japan)
ISO 9001 Quality Management System	✓	✓	✓	✓
QC 080000 Hazardous Substance Process Management System	✓	✓	✓	
IATF 16949 Automotive Quality Management System	✓	✓	✓	
ISO 26262 Functional Safety for Road Vehicles	✓	✓		
ISO 21434 Cybersecurity for Road Vehicles	✓	✓		✓
ISO/IEC 27001 Information Security Management System	✓	✓	✓	✓
ISO 50001 Energy Management System	✓	✓	✓	✓
ISO 46001 Water Efficiency Management System	✓	✓		
ISO 14064-1 Greenhouse Gas Emissions Quantification and Reporting	✓	✓	✓	✓
ISO 14001 Environmental Management System	✓	✓	✓	✓
ISO 45001 Occupational Health and Safety Management System	✓	✓	✓	✓

Scope: the scope refers to Winbond; Nuvoton is presented with a gray background.

Sustainability Highlights

Environment

Received an A-rating in the CDP
Winbond's Fabs follow the GHG protocol standard for measuring greenhouse gas emissions and has obtained ISO 14064-1 verification

Officially launched products made by renewable energy
Products reduce 60% of carbon emissions compared to standard products

Launched the world's first NOR Flash supporting a working voltage of 1.2V
Saves 50% power consumption than 1.8V NOR Flash

Winbond's procurement and self-use of renewable energy
Reached 43.96 million kWh

Obtained ISO 46001 Water Efficiency Management System
- All Winbond fabs have obtained ISO 460001
- Winbond (Taiwan) achieved an overall water recycling rate of 81.9% and a process water recycling rate of 89.3%

Average volatile organic compound removal rate is **99%** in Winbond(Taiwan)

Announced the《Winbond Biodiversity Commitment》
- Restoration of the Great Purple Emperor butterfly habitat
- Habitat conservation for the Sauter's Brown Frog
- Collection and cultivation of Camellia species
- Protection of the endangered wild plant, *Spiranthes* sinensis

Social

Winbond received the Ministry of Labor's
Work-Life Balance Award : Family-Friendly

From 2011 to 2024, the cumulative employee childcare subsidies
amounted to NT$390 million
Winbond Group provides employees with "Workplace Childcare Allowance"

Full-time employee salary of non-management of Winbond (Taiwan).
Average - NT$1.73 million

Total training expenses amounted to
NT$42.87 million

37 digital transformation promotion activities and training sessions
Winbond Group established an AI learning map and certification system, promoting data analysis tools

Social welfare investment of
NT$23.7 million

"Winbond Semiconductor Talent Cultivation Program"
Sponsored NT$10 million to the Semiconductor Academy

Governance

First time selected for the S&P Global Sustainability Yearbook
Winbond has been selected for the 2025 S&P Global Sustainability Yearbook

Top 20% of Corporate Governance Evaluation
Top 20% in Corporate Governance Evaluation of Listed Companies

Selected as one of the Top 100 Global Innovators for 3 consecutive years
Winbond Group has accumulated around **10,000** approved patents worldwide until 2024

Received TIPS A-level certification
Winbond has received Taiwan's Intellectual Property Management Standards for 2 consecutive years

RBA VAP certification rating - Platinum
Winbond group obtained VAP (Validated Assessment Program)

Established carbon accounting system
Winbond Group integrated ERP to achieve carbon inventory and carbon footprint transparent management

Accumulated hours of supply chain ecosystem co-learning
reached 38,646 hours