



THEMATICS

Semiconductors in Singapore

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KEY FINDINGS



KEY FINDINGS #1

Singapore's semiconductor industry is experiencing strong growth, driven by strategic government initiatives, robust infrastructure, and significant investments in R&D and advanced manufacturing capabilities. With a sharp focus on innovation, industry collaboration, and global competitiveness, Singapore continues to attract major international semiconductor firms, reinforcing its status as a premier global hub for semiconductor manufacturing and technology development.



KEY FINDINGS #2

Singapore's consistent investment in semiconductor R&D, coupled with robust investor confidence and successful SGX-listed semiconductor companies, presents substantial growth opportunities. Nevertheless, challenges persist, particularly in talent acquisition, supply chain resilience, adapting to evolving global regulations, and ensuring sustainability in semiconductor manufacturing processes for long-term competitive advantage.

OVERVIEW

Singapore's stable political environment, world-class infrastructure, and business-friendly policies have firmly established it as a leading global semiconductor hub. The nation's strong economic fundamentals are supported by a robust research ecosystem, advanced manufacturing capabilities, and pro-innovation regulations. According to the Singapore Economic Development Board (EDB), the country hosts over 60 semiconductor companies as of 2025, marking significant expansion over the past few decades. These firms operate under stringent regulatory frameworks aligned with global standards, which has enabled Singapore to maintain a resilient and trusted position in the global supply chain.

As highlighted by MOS Alvin Tan at the SSIA Semiconductor Business Connect 2022, Singapore accounted for **11% of the global semiconductor market** in 2022 and produced **20% of the world's semiconductor equipment**. The country also contributes to **over 50% of the world's lithography tools and 20% of microfluidic chips**, emphasizing its role across various critical sub-segments. With global demand for semiconductors projected to exceed **US\$1 trillion by 2030**, Singapore is intensifying efforts to scale talent development, deepen R&D, and attract frontier investments to reinforce its competitiveness in this fast-evolving industry.

The semiconductor ecosystem in Singapore spans several segments, including integrated circuit design, wafer fabrication, assembly, testing, and packaging. This dynamic and diversified environment has facilitated significant industry developments, notably through specialized industrial parks and research hubs:

- Jurong Innovation District: A dedicated high-tech park promoting collaboration among semiconductor manufacturers, technology developers, and research institutions.
- Pasir Ris Wafer Fab Park: An industrial complex offering specialized infrastructure tailored for semiconductor wafer fabrication, enabling streamlined and efficient production processes.

Singapore also acts as a strategic regional base for global semiconductor giants, including Micron Technology, GlobalFoundries, Infineon Technologies, and STMicroelectronics, each having substantial manufacturing and R&D operations within the country. These global entities underscore Singapore's critical role within the semiconductor value chain, particularly for the Asian and global electronics markets.

The country's conducive business climate, characterized by advantageous tax regimes and robust access to domestic and international capital markets such as the Singapore Exchange (SGX), attracts significant venture capital and private equity investments into the semiconductor sector. Notable semiconductor companies contributing significantly to Singapore's global semiconductor prominence include:

- UMS Holdings Ltd: A leading manufacturer specializing in semiconductor equipment and precision engineering solutions.
- AEM Holdings Ltd: Renowned globally for advanced semiconductor testing and handling solutions, particularly for complex high-performance chips.
- Micro-Mechanics Holdings Ltd: A prominent supplier of precision components critical to semiconductor manufacturing processes.

These companies exemplify Singapore's innovative capacity and technological leadership within the global semiconductor industry.

MAIN POINT SUMMARY

Singapore's stable political environment, strong infrastructure, and business-friendly policies have positioned it as a leading global semiconductor hub. The country's robust economic fundamentals, well-developed research ecosystem, rigorous regulatory frameworks, and proactive government strategies underpin sustained industry growth.

Supported by targeted national initiatives, advanced semiconductor manufacturing parks, and strategic global partnerships, Singapore excels in high-value semiconductor activities including integrated circuit design, wafer fabrication, advanced packaging, and precision testing—reinforced by consistent venture capital funding and direct SGX access

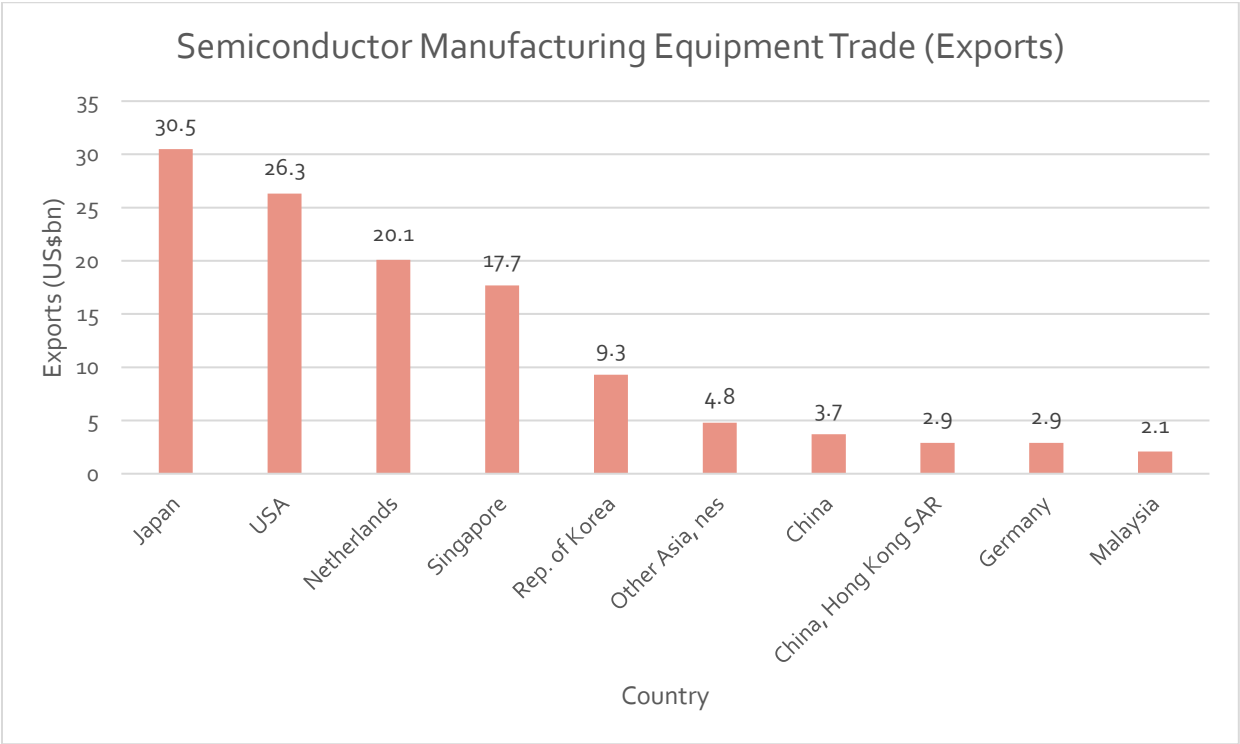


Despite the strong growth trajectory, the sector faces critical challenges, including:

- **Geopolitical Risks:** Navigating complexities in global trade and diplomatic relations which impact semiconductor supply chains.
- **Talent Shortage:** Sustained demand for highly skilled professionals, especially in advanced semiconductor design and manufacturing, highlights the ongoing need for extensive workforce development.
- **Supply Chain Vulnerabilities:** Reliance on global raw materials and complex supply chains that are susceptible to disruptions.

Nevertheless, Singapore’s sustained strategic investments, robust regulatory framework, and commitment to innovation continue to drive growth and secure its standing as a pivotal global semiconductor hub.

Chart 1: SEMICONDUCTOR MANUFACTURING EQUIPMENT TRADE (2021)



Source: UN Comtrade Database (2021)

MACROECONOMIC OVERVIEW

Singapore's Economic Stability Driving Semiconductor Sector Growth

A Robust and Innovation-Centric Economy

Singapore's semiconductor industry benefits significantly from the nation's stable political environment, comprehensive infrastructure, and strategic location within Southeast Asia. The country is consistently ranked highly for economic freedom, ease of doing business, and strong rule of law, establishing an ideal foundation for sophisticated, technology-intensive industries such as semiconductors. Proactive government policies have further positioned Singapore as a crucial hub for advanced electronics manufacturing and innovation, supporting sustained confidence in long-term industry investments.

Economic Fundamentals and Strategic R&D Commitments

Singapore's semiconductor sector flourishes in an economy characterized by high GDP per capita, strong fiscal reserves, and a AAA sovereign credit rating. These attributes ensure economic resilience, enabling sustained investments in technological infrastructure and human capital development. Singapore annually dedicates a significant proportion of its GDP—approximately 1%—to public research and development (R&D), a commitment among the highest globally. Under the Research, Innovation, and Enterprise 2025 Plan (RIE2025), the government has earmarked SGD 25 billion (approximately USD 18 billion) specifically for technological innovation, with a substantial allocation directly benefiting semiconductor-related research initiatives.

These strategic commitments underscore Singapore's deliberate policy to position the semiconductor sector as a key economic pillar, supporting transformative technologies such as artificial intelligence, advanced manufacturing, autonomous vehicles, and 5G infrastructure.

Semiconductor Industry as an Economic Pillar

Since establishing electronics as a strategic growth sector in the 1970s, Singapore has consistently developed and adapted its semiconductor capabilities to maintain relevance amid global technological advancements. Initially focusing on basic electronics manufacturing and assembly, Singapore rapidly transitioned toward higher-value-added activities like wafer fabrication, integrated circuit design, and advanced testing and assembly processes. By leveraging its skilled workforce, government support, and industry partnerships, Singapore now hosts operations of major global semiconductor manufacturers, including Micron Technology, Infineon Technologies, GlobalFoundries, STMicroelectronics, and NXP Semiconductors.

In 2024, Singapore's semiconductor sector directly contributed approximately 7% to the national GDP, highlighting its integral role in national economic stability. The broader electronics sector—including semiconductor equipment manufacturing—contributes over 20% of the country's total manufacturing output, reflecting its extensive impact on Singapore's economy. Semiconductor manufacturing alone attracted fixed asset investments exceeding SGD 13 billion in the past year, demonstrating continued investor confidence in the country's semiconductor infrastructure.

Semiconductor Manufacturing and Global Competitiveness

Singapore's strength in semiconductor manufacturing lies in its advanced wafer fabrication capabilities, precision equipment production, and leading-edge testing and packaging services. The nation hosts several high-capacity wafer fabrication parks, notably the Pasir Ris Wafer Fab Park and Tampines Advanced Manufacturing Park, offering advanced facilities and infrastructure necessary for high-volume semiconductor production. Singapore's semiconductor manufacturing ecosystem is further strengthened by world-leading equipment providers such as Applied Materials, Lam Research, and ASM Pacific Technology, each maintaining substantial regional operations.

The strategic location of Singapore, at the crossroads of major global trade routes and in proximity to rapidly expanding Asia-Pacific markets, amplifies its competitiveness as a manufacturing and logistics hub for semiconductors. Robust intellectual property protection, adherence to international quality standards, and a highly efficient regulatory framework also significantly contribute to the nation's attractiveness for semiconductor production investments.

Recent significant investments, including GlobalFoundries' USD 4 billion expansion plan announced in 2023 and Micron's commitment to advanced memory manufacturing capabilities, underscore ongoing global confidence in Singapore's semiconductor industry.

Human Capital and Research Infrastructure

Singapore's semiconductor sector benefits immensely from the nation's highly educated workforce, a result of strong emphasis on STEM education and targeted skills training. Major educational institutions, including the National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore University of Technology & Design, and polytechnic institutes, continuously produce highly skilled graduates specializing in electrical engineering, materials science, semiconductor manufacturing, and microelectronics.

Currently, over 35,000 professionals are employed within Singapore's semiconductor industry, many occupying roles requiring specialized knowledge in integrated circuit design, wafer processing, semiconductor equipment manufacturing, and precision engineering. The Singaporean government actively promotes specialized training initiatives, partnerships with industry leaders, and ongoing workforce upskilling through entities such as SkillsFuture Singapore, ensuring continuous capability development aligned with global technological trends.

Complementing the robust human capital is Singapore's advanced research and development infrastructure. Institutes under the Agency for Science, Technology and Research (A*STAR), including the Institute of Microelectronics (IME) and the Institute of Materials Research and Engineering (IMRE), spearhead cutting-edge semiconductor research in areas such as advanced packaging, MEMS technology, nanotechnology, and photonics. The nation's specialized semiconductor research hubs foster industry collaboration, providing crucial support for innovation, intellectual property development, and commercialization.

Market Access and Regional Integration

Singapore's semiconductor industry benefits significantly from extensive international trade networks and comprehensive free trade agreements (FTAs). These agreements provide preferential market access to key global markets including the United States, European Union, China, and ASEAN member states. As the gateway to the rapidly growing Asia-Pacific region, Singapore provides semiconductor manufacturers strategic logistical advantages, enabling efficient distribution networks and timely access to emerging markets.

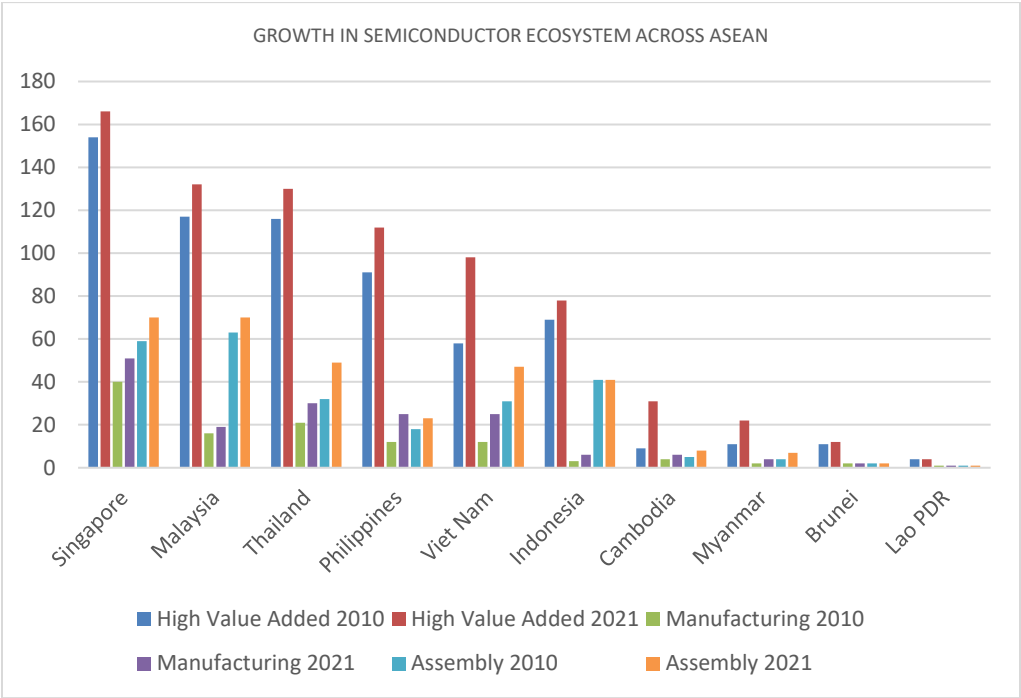
The country's role as a regional headquarters for global semiconductor firms further enhances Singapore's integration into global value chains, solidifying its strategic importance within global supply chain ecosystems. Singapore is also proactive in international research collaboration, participating in global semiconductor consortiums and initiatives aimed at tackling industry-wide challenges, such as semiconductor shortages and the push toward sustainability in manufacturing practices.

Conclusion

Singapore's macroeconomic strengths—including political stability, strategic economic planning, and a relentless commitment to innovation-driven growth—establish a solid foundation for its semiconductor industry. Continuous investments in advanced infrastructure, human capital development, and targeted industry support ensure sustained competitiveness and resilience in the face of global market volatility and geopolitical challenges.

By strategically aligning national economic policies with technological advancement, Singapore has effectively positioned its semiconductor sector as a vital engine of economic growth and innovation, contributing significantly to the nation's prosperity and technological leadership in the global marketplace.

Chart 2: INDEX OF ASEAN COUNTRIES' PARTICIPATION IN SEMICONDUCTOR PRODUCTION PROCESSES (2010–2021) IN SEMICONDUCTOR ECOSYSTEM ACROSS ASEAN COUNTRIES



Source: ERIA

KEY REGULATORY DEVELOPMENTS IN THE SINGAPORE SEMICONDUCTOR SECTOR

Singapore’s government has significantly influenced the development and sustained growth of its semiconductor industry through targeted policy initiatives and regulatory frameworks. A balanced approach—focusing on innovation, stringent quality control, and environmental sustainability—has been crucial to establishing Singapore as a global semiconductor hub. National strategies, funding programs, and supportive regulatory conditions collectively underpin Singapore’s position as a leading player in the global semiconductor market.

National Electronics and Semiconductor Strategies

A pivotal milestone in Singapore’s semiconductor journey was the Electronics Industry Transformation Map (ITM), initially launched in 2017 and significantly expanded under ITM 2025. This strategic framework formally recognized semiconductor technology as a key economic pillar, unlocking substantial government funding and leading to the creation of specialized semiconductor-focused initiatives. A flagship project is the Jurong Innovation District (JID), which co-locates advanced manufacturing facilities, research institutes, startups, and multinational corporations, fostering collaboration and signaling Singapore’s strategic emphasis on advanced semiconductor technology.

Over the past decade (2015–2025), the Singapore government invested more than SGD 10 billion specifically aimed at strengthening semiconductor infrastructure and innovation capabilities. The commitment has been consistently reflected under successive Research, Innovation, and Enterprise (RIE) plans. Under RIE2020 (2016–2020), Singapore allocated approximately SGD 4 billion to electronics and advanced manufacturing research, with semiconductors being a significant focus. In the current RIE2025 plan (2021–2025), one of four strategic domains is “Manufacturing, Trade and Connectivity,” ensuring a substantial allocation from the SGD 25 billion budget is directed towards semiconductor innovation. Key focus areas include advanced packaging technologies, integrated circuit design, quantum computing, AI-driven semiconductor development, and sustainable manufacturing processes. The government’s phased approach demonstrates an evolution from building foundational manufacturing infrastructure to strengthening technological capabilities and global competitiveness. The latest phase (2021–2025) emphasizes semiconductor advancements that directly support broader digital transformation initiatives, including investments in 5G infrastructure, autonomous vehicles, AI integration, and smart-city technology.

Chart 3: SINGAPORE’S STRATEGIC SEMICONDUCTOR’S INTIATIVES

Year	Initiative/Event	Investment/Highlight
2016	Launch of RIE2020	SGD 4 billion allocated
2017	Electronics Industry Transformation Map (ITM)	Strategic recognition of semiconductor industry
2018	Jurong Innovation District (JID) established	Semiconductor-focused research and innovation hub
2020	Conclusion of RIE2020	Completed SGD 4 billion investment
2021	Launch of RIE2025	SGD 25 billion total RIE budget; significant semiconductor allocation
2023	Expansion of ITM 2025	Enhanced semiconductor funding and initiatives
2025	Completion of RIE2025	Over SGD 10 billion cumulative semiconductor investment

Source: Economic Development Board

R&D Incentives and Institutions

Singapore offers substantial R&D tax deductions (up to 250% on qualifying R&D expenses), benefiting semiconductor firms with significant research expenditures. Grants and incentive schemes provided through Enterprise Singapore and the National Research Foundation (NRF) support semiconductor startups, innovation projects, and proof-of-concept studies. Notably, the Early Stage Venture Fund and Startup SG Equity program provide co-investment funding for early-stage semiconductor startups.

The Agency for Science, Technology and Research (ASTAR) plays a central role in the semiconductor ecosystem, managing specialized institutes such as the Institute of Microelectronics (IME), Institute of Materials Research and Engineering (IMRE), and Singapore Institute of Manufacturing Technology (SIMTech). These institutes specialize in integrated circuit (IC) design, advanced wafer processing, semiconductor packaging, nanotechnology, and materials innovation. ASTAR's commercialization arm, A*ccelerate, actively facilitates technology licensing, industry collaborations, and supports semiconductor startups emerging from local universities and research institutions.

To foster deep-tech semiconductor startups, SGInnovate—a government-owned entity—provides targeted funding, mentorship, and industry networking platforms. Additionally, semiconductor-focused immigration policies, including programs like the Tech.Pass, facilitate talent attraction by providing visa and residency pathways for semiconductor entrepreneurs and technical experts. Workforce development initiatives, such as SkillsFuture and TechSkills Accelerator (TeSA), strengthen the local talent pipeline through specialized semiconductor training, internships, professional conversion programs, and fellowships.

Regulatory Agencies and Frameworks

Singapore's semiconductor sector operates under rigorous regulatory frameworks overseen by efficient and internationally recognized agencies:

- **Economic Development Board (EDB):** Oversees strategic industrial initiatives and investments in the semiconductor industry. EDB facilitates global investment partnerships, infrastructure planning, and advanced manufacturing projects, directly supporting semiconductor companies with tailored incentives and regulatory efficiency.
- **Enterprise Singapore (ESG):** Provides funding support, capability development grants, and internationalization programs specifically tailored for semiconductor enterprises. ESG plays a pivotal role in aiding local semiconductor startups and SMEs to expand globally and integrate into international value chains.
- **JTC Corporation (JTC):** Manages specialized infrastructure critical for semiconductor manufacturing, including wafer fabrication parks such as Pasir Ris Wafer Fab Park and Tampines Advanced Manufacturing Park. JTC ensures dedicated industrial spaces meet stringent requirements essential for semiconductor manufacturing, logistics, and advanced technology research.
- **National Environment Agency (NEA):** Oversees environmental compliance across semiconductor manufacturing operations, regulating waste management, chemical safety, emissions standards, and sustainability initiatives. The NEA ensures semiconductor manufacturing aligns with stringent global ESG practices and environmental sustainability goals.
- **Intellectual Property Office of Singapore (IPOS):** Provides robust protection for intellectual property rights, crucial for semiconductor R&D and innovation. IPOS ensures patent registration processes are streamlined and internationally recognized, making Singapore an attractive base for global semiconductor research and innovation.
- **Workforce Singapore (WSG):** Collaborates with semiconductor companies to implement targeted workforce development initiatives, including specialized training and professional conversion programs. WSG's programs directly address skills gaps, promoting sustained industry capability and competitiveness.

Capital Markets and Funding Regulations

Recognizing that semiconductor enterprises require substantial capital investments, Singapore Exchange (SGX) maintains an industry-specific framework facilitating listings and capital raising for semiconductor companies. The SGX Catalyst platform, in particular, supports pre-revenue semiconductor firms, provided they meet transparent disclosure and market capitalization criteria.

Additionally, Singapore's SPAC (Special Purpose Acquisition Company) framework, introduced in 2021, offers semiconductor companies innovative pathways for accessing public capital markets via mergers and acquisitions. SPACs backed by institutional investors like Temasek Holdings actively target high-growth semiconductor technology firms, enhancing funding avenues available to the sector.

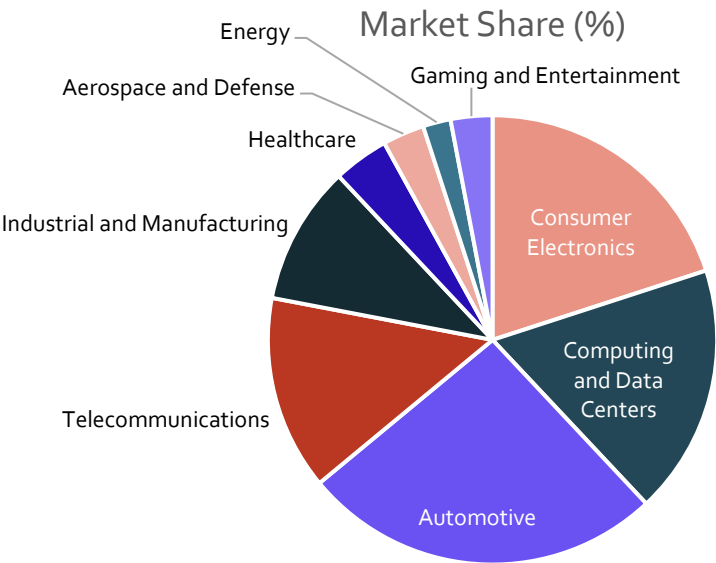
Conclusion

Singapore's semiconductor-friendly regulatory landscape, robust governmental commitment, and sophisticated institutional frameworks have firmly established it as a major player in the global semiconductor industry. National strategies offer targeted funding and strategic direction, specialized institutions nurture advanced R&D capabilities, and transparent, efficient regulatory practices facilitate commercial operations and global competitiveness.

Through continuous policy adaptation, industry collaboration, and strategic investment, Singapore's semiconductor sector is well-positioned for sustained growth, balancing technological innovation with economic and environmental sustainability.

SEMICONDUCTOR SUB-THEMES: TRENDS AND DRIVERS

Chart 4: SEMICONDUCTOR MARKET SHARE BY END USER INDUSTRY (2023)



Source: maximizemarketresearch

The chart above illustrates the distribution of semiconductor market share across key end-user industries in 2023. Notably, Consumer Electronics, Computing and Data Centers, and Automotive represent the largest demand segments—collectively accounting for a significant portion of global semiconductor consumption. This distribution highlights why Singapore is prioritizing advancements in specific sub-sectors such as Advanced Manufacturing & Packaging, Automotive & Industrial Electronics, and AI/Data Infrastructure. These focus areas align with global demand patterns and reinforce Singapore’s strategic positioning in the global semiconductor value chain.

This section highlights three critical sub-themes shaping the industry: (1) Advanced Manufacturing & Packaging, (2) Automotive & Industrial Electronics, and (3) AI, Cloud Computing & 5G Infrastructure. Each sub-theme presents distinct growth opportunities driven by market dynamics and government-backed initiatives.

Advanced Manufacturing & Packaging

Advanced Packaging and Heterogeneous Integration

In the semiconductor context, packaging refers to the aggregation and interconnection of components before traditional integrated circuit packaging. Allows multiple devices to be merged and packaged as a single electronic device. Advanced packaging has emerged as a pivotal area in Singapore’s semiconductor industry, driven by global demands for miniaturization, improved device performance, and reduced energy consumption. Technologies such as wafer-level packaging, fan-out wafer-level packaging (FOWLP), and heterogeneous integration have become essential for producing increasingly sophisticated semiconductor components. Singapore hosts operations of leading packaging technology companies like ASE Group, Amkor Technology, and STATS ChipPAC, leveraging advanced capabilities to produce chips integral to smartphones, high-performance computing, and automotive applications.

Significant government and private investments have focused on R&D and infrastructure enhancements in advanced packaging technologies, further strengthening Singapore's competitive edge. Institutes like A*STAR's Institute of Microelectronics (IME) collaborate closely with industry players on cutting-edge innovations, significantly contributing to the nation's global leadership in semiconductor packaging.

Smart Manufacturing and Industry 4.0 Adoption

Singapore's semiconductor manufacturers increasingly integrate Industry 4.0 technologies, including AI-driven automation, IoT-enabled systems, and advanced robotics, to enhance efficiency, productivity, and yield. Jurong Innovation District exemplifies this vision, integrating smart manufacturing technologies throughout its semiconductor manufacturing clusters, setting new global benchmarks in operational excellence.

Government initiatives, including the Smart Industry Readiness Index and targeted funding for digitalization projects, actively encourage semiconductor manufacturers to adopt advanced manufacturing processes, maintaining Singapore's global competitiveness.

Automotive & Industrial Electronics

Electric and Autonomous Vehicles Growth

The global transition to electric and autonomous vehicles significantly accelerates semiconductor demand, driving substantial growth in automotive-grade semiconductor components produced in Singapore. Local facilities operated by Infineon Technologies, STMicroelectronics, and NXP Semiconductors manufacture critical automotive chips, including microcontrollers, power management ICs, sensors, and advanced driver assistance systems (ADAS) components.

Singapore's strategic location and comprehensive logistics network facilitate seamless integration within global automotive semiconductor supply chains. Additionally, research collaborations and public-private partnerships actively foster innovations in automotive electronics, including battery management systems and autonomous driving platforms, ensuring Singapore remains central to automotive semiconductor development.

Industrial Automation and IoT Integration

Industrial sectors worldwide increasingly embrace automation and IoT technologies, significantly elevating semiconductor consumption for industrial applications. Singapore's semiconductor firms produce microcontrollers, sensors, actuators, and communication modules vital to industrial automation and smart manufacturing solutions.

Government-supported research and development initiatives such as A*STAR's Industrial IoT Innovation (I³) platform promote innovation in semiconductor-driven IoT technologies, enabling local semiconductor companies to leverage growth opportunities in global industrial automation markets.

AI, Cloud Computing & 5G Infrastructure

Artificial Intelligence and High-Performance Computing

The rapid adoption of artificial intelligence (AI) technologies continues to drive exponential semiconductor growth, particularly in GPUs, CPUs, specialized AI processors, and memory solutions. Singapore hosts critical semiconductor manufacturing and R&D operations that produce advanced processing solutions essential for AI-driven applications, from machine learning and neural networks to high-performance computing and big data analytics.

Government-backed initiatives actively encourage industry-academia collaborations, leveraging local research strengths from universities and institutes such as NUS, NTU, and A*STAR's Institute of High Performance Computing (IHPC). Such initiatives ensure Singapore's semiconductor sector remains strategically positioned to exploit global AI-driven semiconductor demand.

Cloud Computing Infrastructure Expansion

With robust global demand for cloud services, semiconductor companies in Singapore significantly benefit from growing requirements for data centers and cloud infrastructure. Firms such as Micron, GlobalFoundries, and UMS Holdings manufacture essential semiconductor solutions like DRAM, NAND memory, and advanced processors, directly supporting global cloud service providers.

Singapore's strategic initiatives, including targeted investments in data center infrastructure and sustainability-driven practices, enhance its attractiveness as a key hub for semiconductor solutions powering cloud computing.

5G Infrastructure and Connectivity Solutions

The global rollout of 5G networks dramatically increases demand for advanced semiconductor components, including RF chips, base station processors, and specialized communication modules. Singapore semiconductor manufacturers actively engage in global 5G deployments, supplying critical components to telecommunications providers and equipment manufacturers.

Government efforts, including national-level 5G trials and network investments, amplify the semiconductor sector's opportunities, positioning Singapore as a vital node in the global 5G semiconductor supply chain. Furthermore, public-private partnerships foster local R&D initiatives, driving innovation in semiconductor technologies tailored explicitly to high-speed communication networks and infrastructure.

Conclusion

Singapore's semiconductor industry continues to grow dynamically, driven by robust government support, sustained R&D investment, and alignment with global technology trends. Advanced Manufacturing & Packaging, Automotive & Industrial Electronics, and AI, Cloud Computing & 5G Infrastructure represent key growth areas, ensuring Singapore's sustained competitiveness in the global semiconductor market.

Strategic partnerships, government incentives, and continuous innovation further cement Singapore's position as a critical global semiconductor hub, providing both economic and technological leadership within the Asia-Pacific region and beyond.

Stocks listed on Singapore Stock Exchange that offer exposure to Semiconductor Theme

SGX: 42C SGX: 558 UMS HOLDINGS LTD

UMS Holdings Ltd specializes in precision engineering and semiconductor equipment manufacturing, notably partnering with global industry leader Applied Materials. UMS provides critical components for wafer fabrication equipment used extensively in chip manufacturing. Strong growth is driven by increasing semiconductor demand in sectors like automotive, data centers, and consumer electronics. Consistent profitability and strategic partnerships position UMS as a key player in Singapore's semiconductor landscape.

SGX: AWX AEM HOLDINGS LTD

AEM Holdings Ltd is recognized globally for advanced semiconductor testing and handling solutions, primarily serving semiconductor giants such as Intel. Its customized testing solutions ensure high-quality semiconductor device performance. Strong industry demand, driven by growing complexity in chip production for artificial intelligence, 5G infrastructure, and autonomous vehicles, supports AEM's growth. Strategic acquisitions and investments further enhance its capabilities, maintaining a competitive edge in advanced semiconductor testing markets.

SGX: 5DD MICRO-MECHANICS HOLDINGS LTD

Micro-Mechanics manufactures precision tools, components, and consumables vital for semiconductor packaging and assembly processes. Its products, including wire-bonding tools and precision consumables, serve semiconductor manufacturers globally. Driven by the robust growth of the semiconductor industry and the increasing complexity of chip packaging, Micro-Mechanics maintains consistent profitability, dividend payments, and strong investor confidence.

SGX: P8A SGX: S71 SUNRIGHT LIMITED

Sunright Limited provides semiconductor burn-in, testing, and electronic manufacturing services, serving major semiconductor corporations worldwide. Its advanced reliability testing ensures semiconductor device performance and longevity, critical for automotive electronics and telecommunications. Sunright's regional presence across key Asian markets strengthens its role in supporting semiconductor companies addressing fast-growing demand from industrial and consumer electronics sectors.

SGX: BN2 SGX: AEM EVERTECH HOLDINGS

AEM Evertech is engaged in providing semiconductor backend solutions, including advanced burn-in and test handler systems. The company serves major semiconductor integrated device manufacturers (IDMs) across Asia and the U.S., with a focus on reliability testing and yield enhancement. With growing semiconductor complexity and AI adoption, AEM Evertech's tailored solutions help clients meet stringent quality standards. The firm continues to invest in R&D and automation to maintain leadership in backend testing equipment.

SGX: 5RC SGX: AVI-TECH ELECTRONICS LIMITED

Avi-Tech Electronics offers engineering services such as burn-in, failure analysis, and reliability testing for semiconductor components. Its clientele includes global players from the automotive, telecommunications, and consumer electronics sectors. Avi-Tech's solutions are integral to ensuring device longevity and reliability, particularly as chips become more integrated and critical in safety applications. Its sustained profitability and operational scale make it a notable SGX-listed play on the semiconductor value chain.

FUND FEATURE

The following funds provide exposure to Semiconductor theme and can be found on the [GROW Fund Center](#)

FIDELITY FUNDS – GLOBAL TECHNOLOGY FUND

The fund seeks long-term capital growth by investing in a diversified portfolio of global technology companies driving digital transformation across industries. It focuses on innovators at the forefront of key secular trends such as cloud computing, artificial intelligence (AI), digital payments, and semiconductors.

- The fund actively invests across the technology value chain, including semiconductors, software, IT services, and hardware.
- Key holdings often include leading global tech firms with strong R&D capabilities, sustainable competitive advantages, and exposure to high-growth end markets.
- Semiconductor-related exposure includes companies like NVIDIA, ASML, Taiwan Semiconductor Manufacturing Co., and Broadcom, which enable foundational technologies powering AI, 5G, and edge computing.
- The portfolio managers employ a bottom-up, research-driven approach, leveraging Fidelity's deep global analyst resources to identify long-term winners.
- With a high active share and a tilt toward mid-to-large cap growth names, the fund is well-positioned to benefit from ongoing tech innovation cycles and digital infrastructure expansion globally.

ALLIANZ GLOBAL ARTIFICIAL INTELLIGENCE FUND

This fund focuses on companies benefiting from or enabling the growth of artificial intelligence, typically maintaining **at least 40% exposure to the IT sector**. The strategy targets firms that apply AI to improve productivity, enhance decision-making, and create disruptive innovation across industries.

- Sector exposure spans semiconductors, cloud infrastructure, data analytics, autonomous systems, and AI-powered enterprise software.
- Key holdings often include **semiconductor enablers like NVIDIA and AMD**, as well as firms involved in AI integration, such as Alphabet and Palantir.
- The fund adopts a future-oriented thematic approach, aiming to capture long-term growth opportunities arising from AI adoption in sectors such as healthcare, manufacturing, and finance.
- Allianz's rigorous stock selection process emphasizes companies with scalable platforms, strong R&D pipelines, and leadership in AI applications.

GS FUTURE ECONOMIC SECURITY EQUITY PORTFOLIO

The fund invests in companies poised to benefit from renewed efforts by developed markets to secure their economic future, centered around three core pillars:

- Supply Chain Security: Includes semiconductors, manufacturing, automation, and healthcare.
- Resource Security: Focuses on energy and essential materials.
- National Security: Covers cybersecurity and defense-related sectors.
- The portfolio is an all-cap strategy with 50–70 holdings, maintaining an active share over 80% (currently 94%).
- The strategy offers complementary exposure to traditional tech portfolios by focusing beyond the "Mag 7"—it underweights Nvidia and targets a more diversified equity mix.
- Investments span Industrials, Semiconductors, Energy, Utilities, and Materials, maintaining a target beta of ~1 vs MSCI World, and balancing value and growth exposures.
- No direct peers offer this integrated approach combining supply chain, resource, and national security in a single thematic fund.

JPM US TECHNOLOGY FUND

This high-conviction, all-cap U.S. technology strategy identifies market leaders across the innovation spectrum—particularly in semiconductors, AI, and digital infrastructure.

- Key semiconductor holdings include NVIDIA, Broadcom, Micron, Taiwan Semiconductor, and Lam Research.
- The strategy emphasizes underappreciated long-term growth drivers in datacenters, AI workloads, memory technology, and network architecture.
- Subsector exposure includes memory, power management, custom processors, and fab equipment, creating diversified access to the full AI hardware stack.
- JPM's rigorous bottom-up process is powered by deep collaboration with sector specialists and includes detailed research into adoption trends, supply chains, and capital investment cycles.

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