BRIOCEAN

March 2026

Monthly Market Research

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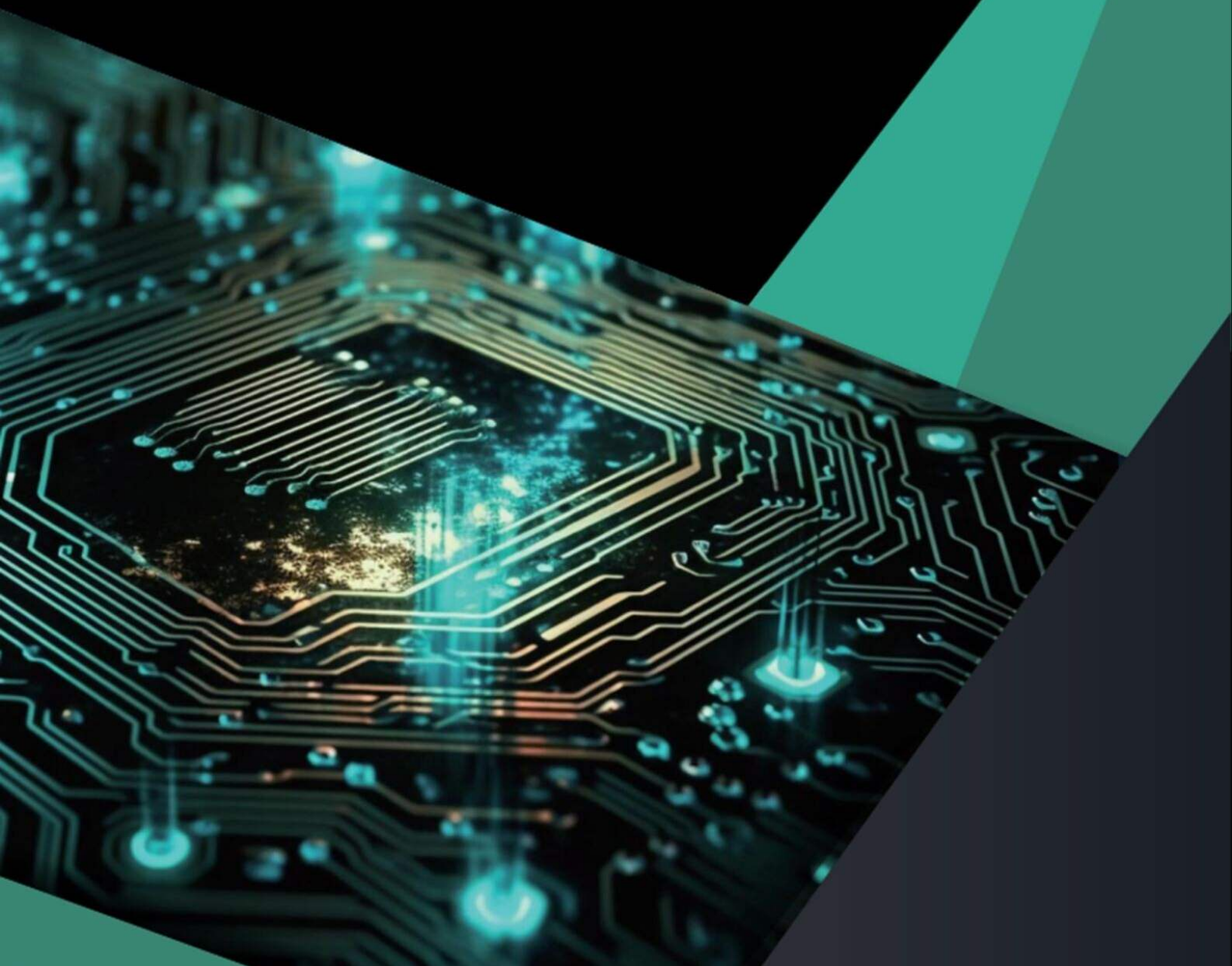

About Briocean

Briocean was established in 2008 as ISO9001:2005, and ANSI/ESD S20.20-2021 certified leading independent electronic component distributor, with our headquarters in Singapore. Our company specialises in sourcing and supply chain management services for the electronic manufacturing clients across a broad range of industries.

Our global network of over 10,000 vetted suppliers allows us to respond to the unique needs of our clients, from reducing component shortages to achieving significant cost savings. Our robust supplier management system and two state-of-the-art quality assurance centres in Shenzhen and Hong Kong ensure that we deliver reliable, traceable procurement services.

At Briocean, quality is our cornerstone. Our commitment is to ensure that every component we source is of the highest quality.

Summary

Category	Trend
Macroeconomics	- Middle East: Strait of Hormuz Blockade Triggers Systemic Risks to the Semiconductor Supply Chain - U.S.: Preparing New AI Chip Export Regulations to Reinforce “Technology-for-Investment” Strategy and Global Compute Leadership - EU: Comprehensive Upgrade of Foreign Investment Screening Framework with Parallel Advancement of FDI Rules and the Industrial Accelerator Act - Japan: Advancing the “AI–Semiconductor–Robotics” Integrated Strategy, Targeting JPY 40 trillion in Sales by 2040 - China: “15th Five-Year Plan” Elevates Semiconductors to Pillar Status, with Phase III of the National IC Fund Entering Intensive Investment Cycle
Industry	- Texas Instruments: Second Across-the-Board Price Increase Effective Apr 1, Up 15%-85%; Industrial/Automotive Spot Prices Up 30%-60% - Analog Devices (ADI): Full Product Line Price Increase 5%-10% Effective Apr 1, PMIC Lines Lead Increases - Infineon: Across-the-Board Power IC Price Increase Effective Apr 1; Automotive IGBT/SiC Up 10%-20%, Lead Times Up to 30 Weeks - NXP: Price Adjustment Effective Apr 1; Automotive MCUs and CAN Transceivers at 40+ Weeks Lead Time - STMicroelectronics: MCU and Core Product Price Increase Effective Apr 26, Up 3%-15%; Power Devices at 10-26 Weeks - Onsemi: Price Increase Notice Issued Mar 16, Effective Apr 1 for Select Products; AI-Server-Related MOSFETs See Largest Increases - Microchip: Automotive-Grade and 32-Bit MCU Demand Rises Significantly; Popular PIC18F Series at 30+ Weeks - Renesas: AI Demand Drives Strong Server/Data Center Power ICs; CPU Multiphase Controllers and SPS at 24-38 Weeks - Samsung: Q1 DRAM Contract Prices Doubled; Q2 Unified Increase of 40%; 2nm Yield Improves to Over 60% - SK Hynix: 2026 HBM Capacity Sold Out Early; DDR4 Production Cut; Chairman Says Wafer Shortages May Last Until 2030 - Micron: Completes USD 1.8 Billion Acquisition of Powerchip's Tongluo P5 Fab; Expected to Contribute Over 10% of Global Capacity in 2H 2027 - Kioxia: Announces End of Production for TSOP-Packaged MLC NAND; Niche Memory Products Accelerate Phase-Out - Broadcom: Q1 AI Revenue Up 106% YoY; Expects AI Chip Revenue to Exceed USD 100 Billion in 2027; High-End Interconnect Shortages Become Norm - Xilinx: AI Computing Demand Drives Full-Series FPGA Price Increases of 10%-20%, Some Models Up 60%; XC7 Lead Times Extended to 23 Weeks - Murata: 15%-35% Price Increase for AI Server and High-End Automotive MLCCs Effective Apr 1, Driven by Surging Silver Prices

Category	Trend
Industry	- Yageo / UNI-ROYAL/ Walsin Technology: Resistor Product Price Increases of 15%-20%; Passive Component Price Hike Spreads - Sitronix / ILITEK / Novatek / Fitipower / Raydium / FocalTech: Six Taiwanese IC Design Houses Raise Prices Collectively Effective Apr 1; Driver ICs Up as Much as 20%
End-market (Artificial Intelligence)	- Microsoft: Capex Surge and Pivot to Dedicated Inference - AWS & Google: Deployment of 1M+ GPUs for Agentic - NVIDIA: Transition from Chip Vendor to Platform Provider - Cambricon: Triple Capacity Expansion to Address High-End AI Chip Gap
End-market (Automotive)	- Tesla & BYD: Market Recovery and Price War Dynamics - Toyota: Hybrid Expansion and Hydrogen Strategic Pivot - MG: Commercialization of Semi-Solid-State Batteries - Global Supply Risk: AI Capacity Competition and Production Impacts
End-market (Healthcare)	- GE HealthCare: AI-Driven Precision Diagnostics - Foxconn: Scaling Vietnam Operations for AI Servers and Chips - Medtronic & Stryker: Surge in Surgical Robotics
End-market (Industrial)	- Siemens: Quality Standards as a Shield Against AI Disruption - Foxconn: Scaling Vietnam Operations for AI Servers and Chips - Huawei: Global Launch of Wi-Fi 7 Solutions for "Industrial Wireless" Transformation
End-market (Robotics)	- UBTech and Siemens: 10,000-Unit Industrial Humanoid Deployment Agreement - Agibot: 10,000th Humanoid Robot Milestone and Industrial Integration - Orbbec and LionsBot: Strategic Partnership for Autonomous Cleaning Fleet - Corvus Robotics: Scaling Drone-Based Inventory Systems with Major Logistics Partnerships
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Component Pricing & Product Insights	□Memory Chip Supply–Demand Imbalance to Persist Until 2028, Driving Price Increases □Tight Memory Supply and Capacity Cuts Accelerate Long-Term Agreements MCU Prices Surge Amid Automotive Supply Constraints and Longer Lead Times

Table Of Contents

01

Macro Environment Updates

1. Macro Environment

1.1 Industry Policy

1.1.1 Middle East: Strait of Hormuz Blockade Triggers Systemic Risks to the Semiconductor Supply Chain

On February 28, following a U.S.-Israel military strike on Iran, Iran announced a full blockade of the Strait of Hormuz and reinforced control through legislation passed in late March. As a vital route for approximately 20% of global oil and 30% of helium transport, the blockage has created multiple shocks to the semiconductor industry chain. A helium plant in Qatar (supplying about one-third of global output) was attacked and halted production, sending spot helium prices soaring over 50%. South Korea relies on Qatar for 64.7% of its helium imports; Samsung Electronics and SK Hynix have urgently activated inventory management. Prices of engineering plastics, a petrochemical byproduct, have risen 5%-20%, directly impacting semiconductor equipment costs (plastics account for 10%-20% of production costs). Japan controls over 90% of the global high-end photoresist market, and its raw materials are highly dependent on naphtha from the Middle East. If the blockade continues, raw material inventories will last only 3-6 months, sharply raising the risk of ArF/EUV photoresist supply disruptions. Three Amazon AWS data centers in the UAE and Bahrain were attacked, and Nvidia closed its Dubai office. Brent crude broke through USD 120/barrel. Rerouting due to shipping disruptions has extended transport lead times by 20-30 days, and war insurance rates have surged more than tenfold. Even if the conflict eases, reconstruction of Ras Laffan Industrial City may take several years. Shortages of helium and photoresist raw materials will become a medium-to-long-term risk, driving global supply chain restructuring toward regionalization, diversification, and self-reliance.

1.1.2 U.S.: Preparing New AI Chip Export Regulations to Reinforce “Technology-for-Investment” Strategy and Global Compute Leadership

In March 2026, the U.S. exhibited a clear trend toward systematic policy adjustments in AI chip export controls. According to reports on March 5, the U.S. Department of Commerce is formulating a new export control framework, using computing power scale as the core classification metric to implement tiered controls on advanced AI chip exports. Even small-scale deployments may fall within licensing requirements; medium-scale deployments would require intergovernmental security assurances; while large-scale procurements (e.g., 100,000–200,000 units or more) would be subject to additional conditions, including investment in U.S.-based AI data centers and acceptance of regulatory review. At the same time, restrictions on chip clustering capabilities would be imposed to prevent the formation of large-scale compute systems.

Meanwhile, in mid-March, the U.S. withdrew a previously stricter draft export rule while launching the "U.S. AI Export Program," promoting the export of compute infrastructure and technical standards in the form of full-stack solutions. This marks a shift from a purely restrictive approach to a combined model of "export controls + technology output + investment linkage." Overall, by tightly linking chip supply with capital flows and infrastructure deployment, the U.S. is reshaping the global distribution of AI computing power and industrial chain leadership—raising short-term barriers to advanced chip access, while accelerating, over the medium to long term, the evolution of the global semiconductor industry toward "technology alliances" and "geopolitically driven supply chain localization."

1.1.3 EU: Comprehensive Upgrade of Foreign Investment Screening Framework with Parallel Advancement of FDI Rules and the Industrial Accelerator Act

In March, the EU introduced two major policy updates in the field of investment screening. First, the revised regulation on foreign direct investment (FDI) screening continued to advance, having been approved by the Committee on International Trade on February 24 and expected to be formally adopted by the European Parliament in the near term. The new framework mandates all Member States to conduct compulsory screening of foreign investments in strategic sectors, including semiconductors, artificial intelligence, quantum technologies, and critical raw materials. It establishes a two-stage process consisting of a 45-day preliminary review followed by an in-depth assessment, while granting Member States retrospective review authority of up to five years.

Second, on March 4, the European Commission formally proposed the Industrial Accelerator Act (IAA), targeting emerging strategic sectors such as battery technologies, electric vehicles, solar photovoltaics, and critical raw material processing. The proposal requires foreign investments exceeding EUR 100 million (USD ~108 million) and involving control acquisition (more than 30% equity stake) to undergo prior notification. It also sets stringent approval criteria, requiring compliance with at least four out of six conditions, including a 49% equity cap and commitments to local R&D and employment. These measures indicate that the EU is building a dual-track policy framework—tightening external access to strategic sectors while strengthening domestic manufacturing capabilities.

1.1.4 Japan: Advancing the “AI–Semiconductor–Robotics” Integrated Strategy, Targeting JPY 40 trillion in Sales by 2040

On March 10, Japanese Prime Minister Sanae Takaichi chaired the “Japan Growth Strategy Council,” formally establishing the integrated “AI–Semiconductor–Robotics” industrial strategy and elevating it to a long-term national competitiveness initiative. The strategy sets a clear target: by 2040, annual sales of Japan-manufactured semiconductors will reach JPY 40 trillion (USD ~270 billion), approximately eight times the 2020 level, and Japan will secure over 30% share of the global AI robotics market.

To support this goal, Japan introduced multiple measures: first, the establishment of three semiconductor support hubs in Tokyo, Chitose (Hokkaido), and Kyushu, focusing respectively on design and R&D, equipment and materials, and compound semiconductor prototyping, equipped with advanced facilities such as EUV lithography systems for low-cost access by startups and universities; second, the selection of 61 key product technologies across 17 strategic sectors for targeted support, covering AI semiconductors, quantum technologies, and advanced packaging, alongside strengthened support for mass production at advanced nodes such as 2nm; third, the launch of the GENIAC program to provide GPU computing resources and datasets, accelerating the adoption of generative AI in manufacturing; fourth, the introduction of the “Watt–Bit Integration” policy to coordinate data centers, power supply, and telecommunications infrastructure, addressing energy consumption constraints of AI computing.

Overall, leveraging its strengths in materials and precision manufacturing, Japan is pursuing a differentiated competitive strategy—transitioning from single-point technological advantages to an integrated “hardware–software ecosystem.” In the short term, it aims to capture AI-driven semiconductor demand growth; in the medium to long term, it seeks to reposition itself in high-value segments of the global supply chain.

1.1.5 China: “15th Five-Year Plan” Elevates Semiconductors to Pillar Status, with Phase III of the National IC Fund Entering Intensive Investment Cycle

In March, China stepped up semiconductor policy support at both strategic and capital levels. On the strategic front, the “15th Five-Year Plan” Outline, released in March 2026, designates integrated circuits as the top priority among ten emerging industries. The focus shifts from “addressing bottlenecks” to “full value chain breakthroughs,” advancing both mature and advanced nodes, with emphasis on high-performance processors, high-density memory, third-generation semiconductors, and ultra-wide bandgap materials. The National Development and Reform Commission (NDRC) also lists integrated circuits as the leading sector among six emerging pillar industries.

On the funding side, Phase III of the National Integrated Circuit Industry Investment Fund (RMB 344 billion, approximately USD 48 billion) entered an intensive investment phase in January, with over 70% allocated to semiconductor equipment, core materials, and advanced packaging, targeting key bottlenecks such as lithography, etching, and photoresists. The Ministry of Industry and Information Technology (MIIT) revised the “Administrative Measures for the Gradient Cultivation of High-Quality SMEs” (effective April 1), incorporating semiconductor-related SMEs into the national support framework.

At the local level, Shenzhen is advancing applications of China-manufactured GPUs and NPUs and RISC-V development, while Qiantang District in Hangzhou provides subsidies of up to 80% for rent and cleanroom fit-out, forming a coordinated central–local policy framework.

1.2 Economic Indicators

1.2.1 Global Manufacturing PMI Rose to 51.9 in February, Reaching a 44-Month High with Strengthening Recovery Momentum

In February 2026, the global manufacturing PMI rose to 51.9, up 1.0 point from 50.9 in January. It remained above the expansion threshold (50) for a seventh consecutive month, reaching the highest level since June 2022, indicating improving conditions and strengthening recovery momentum.

Across major economies, Asia outperformed. China's PMI climbed to 52.1 (up 1.8 points MoM), a more than five-year high, driven by a rebound in new export orders. Japan's PMI rose to 53.0, a nearly four-year high, with solid growth in output and new orders. India's PMI reached 56.9, maintaining the strongest expansion, supported by robust domestic demand. South Korea's PMI stood at 51.1, slightly lower MoM but still in expansion, with continued strength in semiconductors.

In contrast, the U.S. PMI registered 51.6, remaining in expansion for a seventh month but easing to a seven-month low, weighed by tariffs and extreme weather. The Eurozone PMI edged up to 50.8, returning above 50 and signaling a modest recovery.

Overall, global manufacturing output growth reached its fastest pace since December 2021, with faster growth in new and export orders. Business confidence rose to a near two-year high, reflecting improving trade flows and demand. However, regional divergence persists, with Asia leading, North America slowing, and Europe recovering modestly. Meanwhile, geopolitical tensions and tariffs have increased supply chain pressures, with rising input costs and longer delivery times in some regions.

Sustained expansion in PMI suggests a more solid recovery, likely supporting demand in electronics, automotive, and industrial sectors, and underpinning the semiconductor and electronic components markets.

Global Manufacturing by Region PMI

Period	Global	China	Japan	Korea	India	Americas	Eurozone
2023-11	49.30	49.40	48.30	50.00	56.00	46.70	44.20
2023-12	49.00	49.00	47.90	49.90	54.90	47.40	44.40
2024-01	50.00	49.20	48.00	51.20	56.50	49.10	46.60
2024-02	50.30	49.10	47.20	50.70	56.90	47.80	46.50
2024-03	50.60	50.80	48.20	49.80	59.10	50.30	46.10
2024-04	50.30	50.40	49.60	49.40	58.80	49.20	45.70
2024-05	50.90	49.50	50.40	51.60	57.50	48.70	47.30
2024-06	49.50	49.50	50.00	52.00	58.30	51.70	45.60
2024-07	49.80	49.40	49.10	51.40	58.10	46.80	45.80
2024-08	48.90	49.10	49.80	51.90	57.50	47.20	45.60
2024-09	48.80	49.80	49.70	48.30	56.50	47.20	45.00
2024-10	48.80	50.10	49.80	48.30	57.50	46.50	46.00
2024-11	50.00	50.30	49.00	50.60	56.50	48.40	45.20
2024-12	49.60	50.10	49.60	49.00	56.40	49.20	45.10
2025-1	50.10	49.10	48.70	50.30	57.70	50.90	46.60
2025-2	50.60	50.20	49.00	49.90	56.30	50.30	47.60
2025-3	50.30	50.50	48.40	49.10	58.10	49.00	48.60
2025-4	49.80	49.00	48.70	47.50	58.20	48.70	49.00
2025-5	49.60	49.50	49.40	47.70	57.60	48.50	49.50
2025-6	50.30	49.70	50.10	48.70	58.40	49.00	50.50
2025-7	49.70	49.30	49.90	48.00	59.20	48.00	49.80
2025-8	50.90	50.50	52.00	48.30	59.30	53.00	50.70
2025-9	50.70	51.20	48.50	50.70	57.70	52.00	49.80
2025-10	50.90	50.60	48.20	49.40	59.20	52.50	50.00
2025-11	50.50	49.90	48.70	49.40	56.60	52.20	49.60
2025-12	50.40	50.10	50.00	50.10	55.00	51.80	48.80
2026-01	50.90	50.30	51.50	51.20	55.40	52.40	49.50
2026-02	51.90	52.10	53.00	51.10	56.90	51.60	50.80

Source : Wind

1.2.2 Global Semiconductor Sales Increased 3.7% MoM in January, with Asia-Pacific and China Driving Growth

In January 2026, global semiconductor sales reached USD 82.5 billion, up 3.7% MoM from USD 79.6 billion in December 2025, and up 46.1% YoY from USD 56.5 billion in January 2025. The data, based on a three-month moving average, extends the record-high growth trend seen in 2025, indicating continued strong momentum at the start of the year.

By region, Asia-Pacific and China were the primary contributors to both monthly and annual growth. China recorded sales growth of 5.8% MoM and 47.0% YoY; Asia-Pacific and other regions grew 5.0% MoM and 82.4% YoY; Europe increased 5.3% MoM and 26.1% YoY; and the Americas rose 1.2% MoM and 34.9% YoY. Japan was the only major region to decline, with sales down 1.7% MoM and 6.2% YoY.

Regional trends indicate that global semiconductor demand growth is concentrated in Asia-Pacific and China, reflecting their expanding roles in electronics manufacturing, data centers, and end-market consumption.

According to SIA citing WSTS data, global semiconductor sales are projected to approach USD 1 trillion in 2026, with January's performance providing early support for this outlook.

Global Semiconductor Sales (Billion US Dollars)

Source：SIA

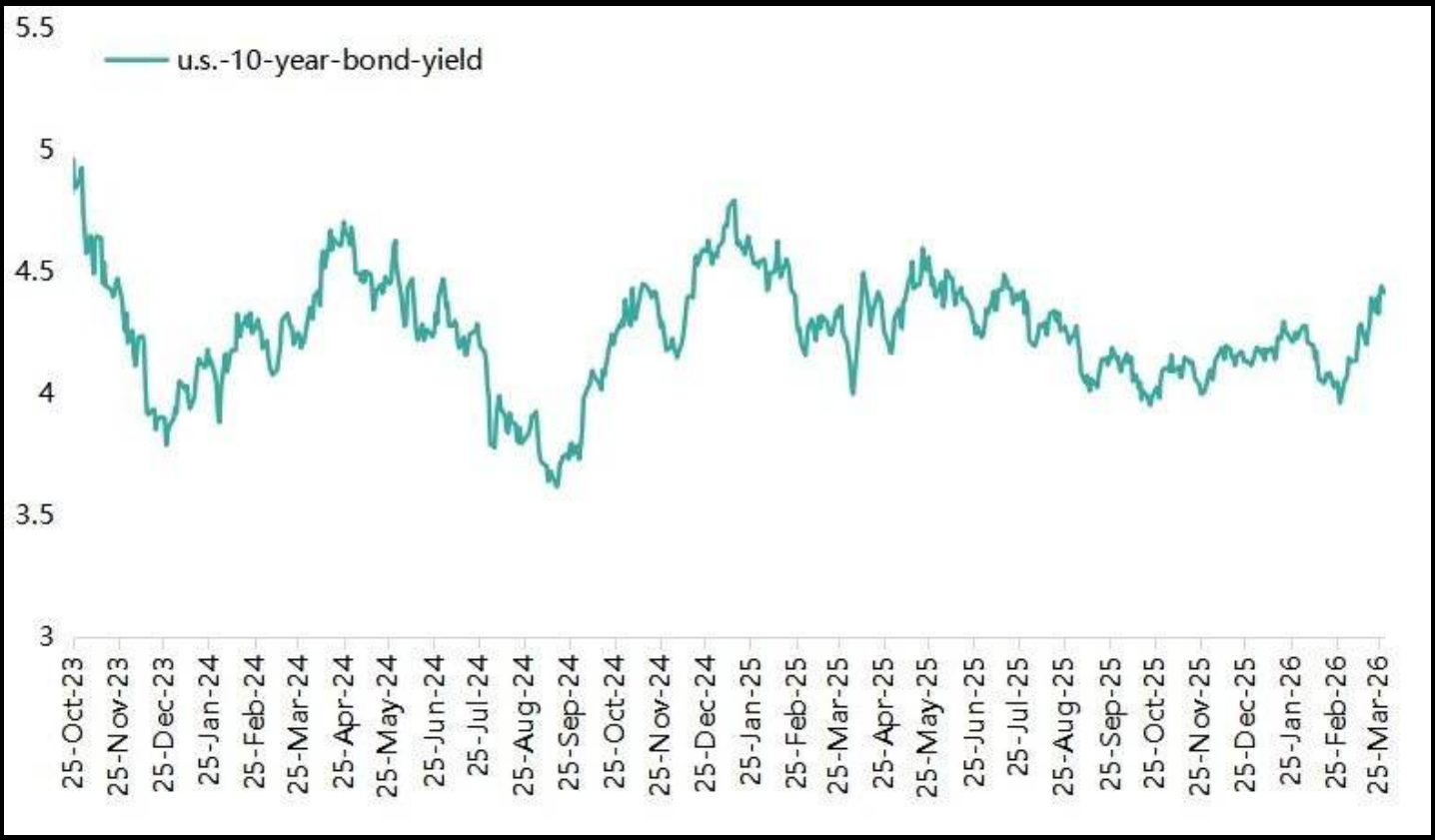
1.2.3 U.S. 10-Year Treasury Yield Rose to 4.44% in March, Reaching a Nine-Month High

In March 2026, the U.S. 10-year Treasury yield surged to 4.44%, a nine-month high since July 2025, up sharply from late February. The rise was primarily driven by two factors: first, inflation remained above expectations, with the January core PCE price index at 3.1%, well above the Federal Reserve's 2% target, slowing the disinflation process; second, escalating Middle East geopolitical tensions pushed energy prices higher, with Brent crude briefly surpassing USD 110 per barrel, heightening concerns of a secondary inflation wave.

Weak demand at the late-February 20-year Treasury auction indicated rising risk premiums for long-term bonds, further boosting yields. In monetary policy, the Fed kept rates unchanged at its March meeting, but the dot plot showed reduced expectations for rate cuts within the year, reinforcing market consensus on a “higher for longer” interest rate environment.

As a global benchmark for asset pricing, sustained high 10-year yields tighten financial conditions, pressuring valuations in high-growth tech sectors including semiconductors. Ongoing monitoring of inflation trends and Fed policy signals is critical for assessing their impact on the yield curve.

U.S. 10-Year Treasury Yield (%)



Source : Investing

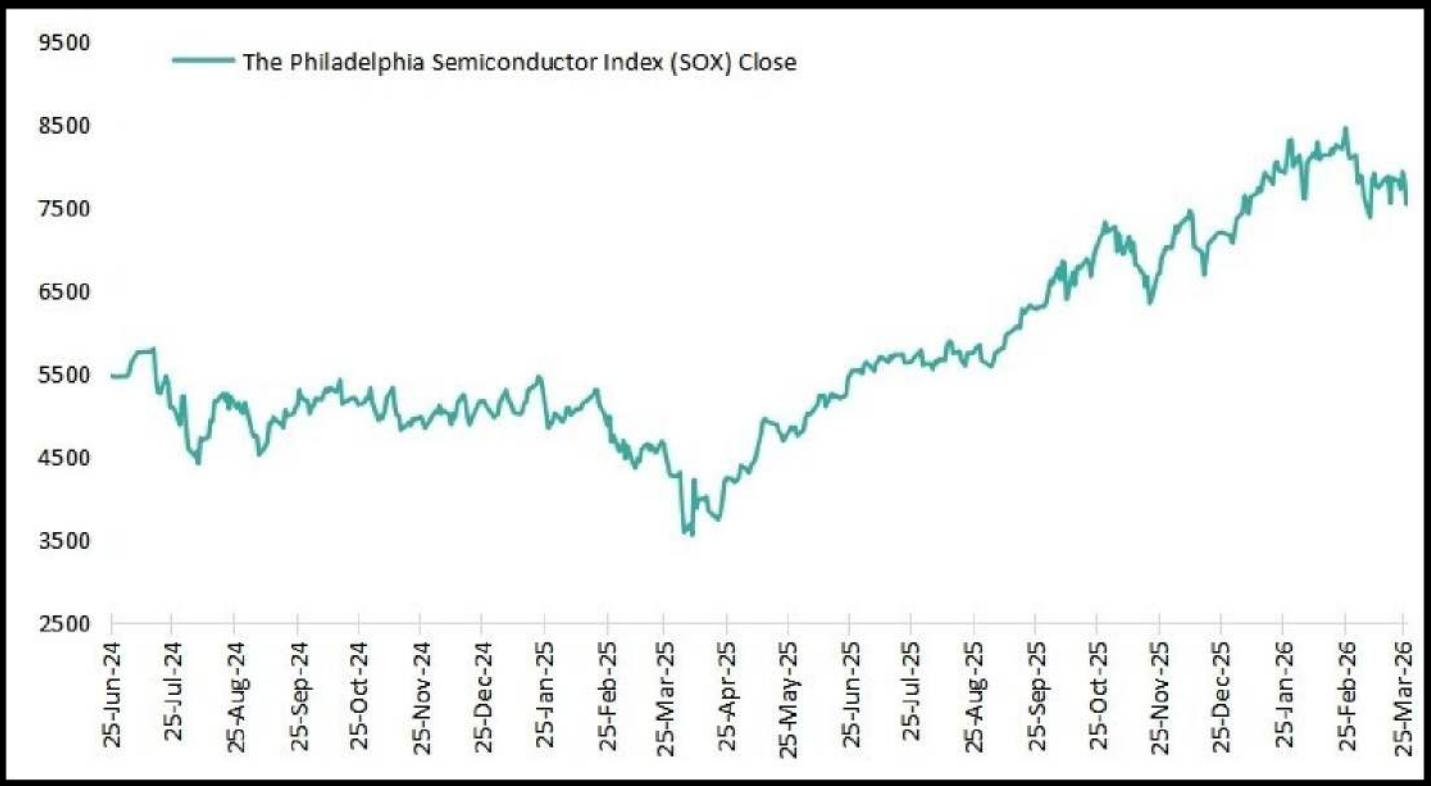
1.2.4 Philadelphia Semiconductor Index (SOX) Trend Analysis: March Pullback to 7500 Range, Showing Consolidation Characteristics

In March 2026, the Philadelphia Semiconductor Index (SOX) entered a “high-level pullback and consolidation” phase after reaching a stage high of around 8467 points in February. At the beginning of the month, the index remained elevated, closing at 8137.36 on March 2, before retreating sharply to a monthly low of 7388.33 on March 9, a cumulative drop of approximately 9.2% from the early-month peak, reflecting profit-taking and reduced risk appetite following prior gains.

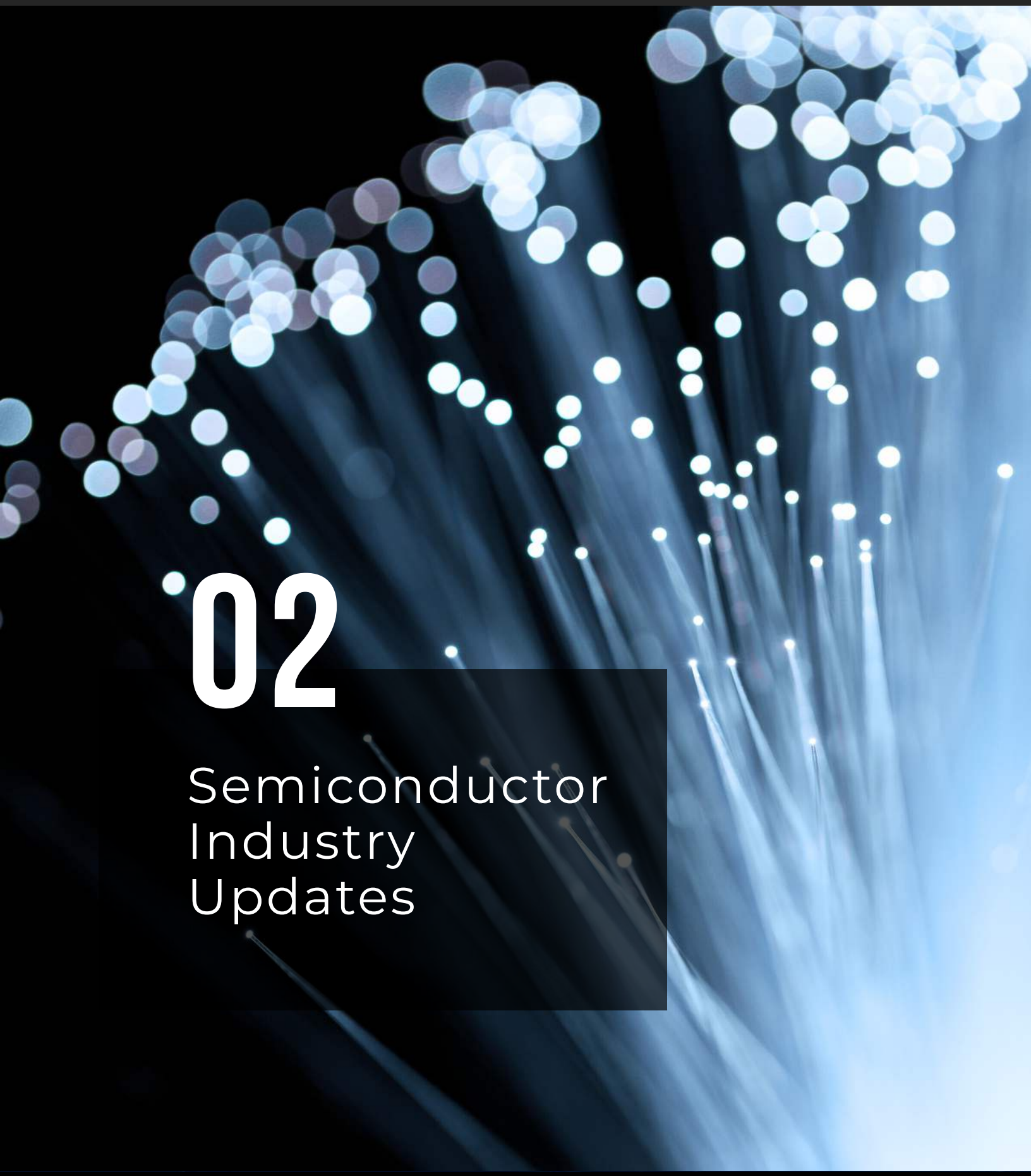
Mid-March saw gradual stabilization and technical recovery, with the index rebounding to 7918.28 on March 11 and oscillating within the 7700–7900 range. Subsequent rebounds on March 20 and 25 reached 7862.66 and 7935.73, respectively, failing to break the 8000-level resistance, indicating strong upper pressure. Overall, the SOX ranged between 7388 and 8137 points for the month, with a volatility of about 9.2%, closing at 7545.42 on March 27, reflecting a downward shift in the consolidation center from above 8000 to the 7500–7800 range.

The adjustment was mainly driven by profit-taking after significant AI-driven gains, short-term uncertainty around AI investment return cycles, and rising U.S. Treasury yields exerting macro pressure on high-valuation tech stocks. Despite increased short-term volatility, the index remained above 7500, within a mid- to long-term uptrend channel. Supported by continued AI compute demand, advanced process investments, and memory cycle recovery, the semiconductor sector fundamentals remain solid, providing a foundation for resuming an upward trend in the medium to long term.

The Philadelphia Semiconductor Index (SOX)



Source : MacroMicro



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Semiconductor Industry Updates

Semiconductor Industry Overview

Manufacturer	Updates	Analysis
Texas Instruments (TI)	Second across-the-board price increase effective Apr 1, up 15%-85%	Covers digital isolators, gate drivers, PMICs for industrial/automotive. Industrial/auto spot prices up 30%-60%, lead times 16-26 weeks. DSPs such as TMS320C6678x at ~18 weeks.
Analog Devices (ADI)	Full product line price increase 5%-10% effective Apr 1, PMIC lines lead increases	Interface isolation ICs, switches/muxes: 19-22 weeks. Linear products: 24-40 weeks. Maxim products: 19-40 weeks. Due to AI capacity usage, lead times extended to 39 weeks.
Infineon	Across-the-board power IC price increase effective Apr 1; automotive IGBT/SiC up 10%-20%	Power switches/ICs/PMICs up 5%-15%. Automotive IGBT/SiC modules: 16-30 weeks, some tight models not accepting orders. AI server power devices: 20-50 weeks.
NXP	Price adjustment effective Apr 1; automotive MCUs and CAN transceivers at 40+ weeks	S32K, MPC57 series MCUs and TJA1042 CAN transceivers: 40-50 weeks. Mid-to-high-end embedded processors and automotive MCUs up to 20% (covering 9,000+ models).
STMicroelectronics	MCU and core product price increase effective Apr 26, up 3%-15%	Low/high-voltage MOSFETs, IGBTs, ESD: 10-26 weeks. 32-bit MCUs: 15-28 weeks. Automotive-grade MCUs: 36-40 weeks. General-purpose STM32F/L series shortened to 12-18 weeks.
Onsemi	Price increase notice issued Mar 16, effective Apr 1 for select products	MOSFETs, transistors, some PMICs prices up. Lead times average 18-40 weeks, some over 46 weeks. AI-server-related products see largest increases.
Microchip	Strong demand for automotive-grade and 32-bit MCUs; popular models at 30+ weeks	PIC18F26K83/46K83 at 30+ weeks. ATMEGA328P etc.: 12-20 weeks. 8/16-bit MCU lead times extended to 16-24 weeks. Automotive-grade PICx at 48 weeks.

Semiconductor Industry Overview

Manufacturer	Updates	Analysis
Renesas	Strong demand for AI server power ICs; lead times 24-38 weeks, spot prices up	CPU multi-phase controllers and SPS (ISL9931, RAA270, ISL95869, etc.) demand surges. Lead times 24-38 weeks, supply tightness not easing.
Samsung	Q1 DRAM contract prices doubled; Q2 unified increase of 40%; 2nm yield improves to 60%+	LPDDR5X (for Apple) up 100%, accepted by customer. Consumer DRAM inventory falls to 4 weeks. 2nm yield at 60%+, offering 2nm foundry services to customers.
SK Hynix	2026 HBM capacity sold out early; DDR4 production cut; CEO says shortages may last until 2030	HBM and DDR5 account for over 40% of revenue. Q1 server DDR5 up 150% QoQ, NAND up 130%-150%. Supply gap may exceed 20%.
Micron	Completes USD 1.8 billion acquisition of Powerchip's Tongluo P5 fab to expand HBM capacity	Tongluo fab will expand advanced DRAM and HBM capacity, expected to contribute over 10% of Micron's Q4 global capacity starting 2H 2027.
Kioxia	Announces end of production for TSOP-packaged MLC NAND; final shipments March 2027	8Gb-64Gb MLC NAND discontinued. Market shifting to TLC/QLC; niche SLC/MLC products accelerating consolidation.
Broadcom	Q1 AI revenue up 106% YoY; PCIe and SX series severely short, prices skyrocketing	PCIe series (SS24/SS26) prices highly volatile. SX series expansion cards long out of stock; some models up over 10x from early 2025. High-end switch chips extremely tight lead times.
Xilinx	Full series FPGA price increase 10%-20% effective March, some models up 60%	16nm/20nm FPGAs: 40-52 weeks. 28nm 7 series: 24-52 weeks. XC7 series extended to 23 weeks. AI server demand exceeds 3.5 million units.

Semiconductor Industry Overview

Manufacturer	Updates	Analysis
Murata	Price increase 15%-35% for AI server and high-end automotive MLCCs, effective Apr 1	Multilayer ferrite inductors, common mode chokes, etc. prices up. Driven by surging silver prices and AI demand. Automotive-grade, AI-server-specific MLCCs up 10%-20%.
Yageo/UNI-ROYAL/ Walsin Technology	Resistor product price increase 15%-20%	Yageo up 15%-20%, UniOhm and Walsin follow. KEMET tantalum capacitors up 40%-50% cumulatively over three increases. Driven by rising silver prices and AI demand.
Sitronix/ILITEK/ Novatek/Fitipower/ Raydium/FocalTech	Collective price increase effective Apr 1; driver ICs up to 20%	Sitronix and ILITEK driver ICs up 15%-20%. Novatek timing controller ICs up. Wafer foundry and packaging/testing costs rising; driver IC capacity tightening.

2. Semiconductor Industry Updates

2.1 Manufacturer Dynamics In-Depth Analysis

2.1.1 Texas Instruments: Second Across-the-Board Price Increase Effective Apr 1, Up 15%-85%; Industrial/Automotive Spot Prices Up 30%-60%

Texas Instruments implemented a new round of price increases effective April 1, 2026, ranging from 15% to 85%, covering industrial and automotive core chips such as digital isolators, gate drivers, and PMICs. Spot prices for core industrial and automotive products rose 30%-60% from last month, with lead times extended to 16-26 weeks. DSPs such as TMS320C6678x/6674x/6416x/6455x have average lead times of around 18 weeks, with upward price pressure ahead. General-purpose parts such as CCx wireless connectivity chips, SNx logic chips, TPSx, TLVx, etc., are extremely active in the spot market, with some supplier quotes valid for only one hour. PPV quotes from distribution channels are currently hard to obtain, and some models ordered earlier this year have been delayed.

2.1.2 Analog Devices (ADI): Full Product Line Price Increase 5%-10% Effective Apr 1, PMIC Lines Lead Increases

ADI issued a price adjustment notice on March 10, 2026, citing rising substrate and precious metal costs. All products will increase 5%-10% effective April 1, with post-Maxim-integration PMIC lines leading the increases. Lead times: interface isolation ICs, switches/muxes at 19-22 weeks; linear products at 24-40 weeks; Maxim products at 19-40 weeks. Due to AI capacity utilization, wafer supply will be tight in 2H, and ADI's forward lead times have extended to 39 weeks from under 20 weeks. In FQ1 2026, communications revenue grew 63% YoY, industrial revenue grew 38%.

2.1.3 Infineon: Across-the-Board Power IC Price Increase Effective Apr 1; Automotive IGBT/SiC Up 10%-20%, Lead Times Up to 30 Weeks

Infineon issued a price adjustment letter on February 5, 2026, with new prices taking full effect from April 1. Mainstream power switches, power ICs, and PMICs rose 5%-15%, while automotive-grade IGBTs, SiC modules, and high-end MOSFETs rose 10%-20%. Lead times: automotive IGBT/SiC modules at 16-20 weeks for standard models, 24-30 weeks for high-end models, with some tight models no longer accepting orders. AI server power devices at 20-50 weeks; high-density power management ICs over 52 weeks. Industrial and general-purpose devices at 12-18 weeks, but supply continues to tighten. Due to shortages of certain automotive-grade MOSFETs and transistors from Nexperia, Infineon's alternative power MOSFETs (IPW/IPB/IKW series) have also started to see price increases.

2.1.4 NXP: Price Adjustment Effective Apr 1; Automotive MCUs and CAN Transceivers at 40+ Weeks Lead Time

NXP Semiconductors adjusted prices on certain product lines effective April 1, 2026, covering over 9,000 models, with mid-to-high-end embedded processors and automotive-grade MCUs up as much as 20%. Automotive microcontrollers (S32K, MPC57 series) and CAN transceivers (TJA1042) remain in tight supply, with lead times generally above 40 weeks, and some at 40-50 weeks. Lead times for legacy 16/32-bit MCUs, general-purpose MCUs, and automotive MCUs range from 14 to 54 weeks, with prices all rising. Strong demand from the automotive industry is the main driver.

2.1.5 STMicroelectronics: MCU and Core Product Price Increase Effective Apr 26, Up 3%-15%; Power Devices at 10-26 Weeks

STMicroelectronics issued a price increase letter on March 24, 2026, raising prices on core product lines including power conversion, MEMS sensors, and STM32 mainstream series effective April 26, with market expectations of 3%-15%. This month, demand for automotive-grade and discrete devices has noticeably increased: low/high-voltage MOSFETs, IGBTs, ESD devices at 10-26 weeks; diodes/transistors at 14-20 weeks; analog drivers at 18-30 weeks; 32-bit MCUs extended to 15-28 weeks. General-purpose STM32F/L series lead times have shortened to 12-18 weeks amid intensifying market competition, but automotive-grade products remain tight at 36-40 weeks. PMICs and EEPROMs are also experiencing intermittent material shortages.

2.1.6 Onsemi: Price Increase Notice Issued Mar 16, Effective Apr 1 for Select Products; AI-Server-Related MOSFETs See Largest Increases

Onsemi notified customers on March 16, 2026, of price adjustments for select products effective April 1. The notice noted significant demand growth supporting power, industrial, and data center (especially AI server) markets, coupled with continued increases in raw material, manufacturing, and energy costs. According to channel sources, MOSFET products will be broadly impacted, with AI-server-related products seeing the largest increases. Current lead times average 18-40 weeks, with some over 46 weeks or longer. New prices apply to new orders and undelivered orders on or after April 1.

2.1.7 Microchip: Automotive-Grade and 32-Bit MCU Demand Rises Significantly; Popular PIC18F Series at 30+ Weeks

In March 2026, Microchip saw a notable rebound in automotive electronics demand, with automotive-grade MCUs becoming supply-constrained. Popular models PIC18F26K83 and PIC18F46K83 have lead times exceeding 30 weeks. While many AVR devices remain in stock, classic models such as ATMEGA328P and ATMEGA32U4 see stable demand with lead times of 12-20 weeks. 32-bit MCU demand has increased notably, with many new designs shifting from 8/16-bit to 32-bit MCUs. 8/16-bit MCU lead times have extended to 16-24 weeks, with some automotive-grade PICx devices extending to 48 weeks. This month, spot prices for EEPROMs (24/25/AT2 prefix) rose 10%-30%, with some doubling.

2.1.8 Renesas: AI Demand Drives Strong Server/Data Center Power ICs; CPU Multiphase Controllers and SPS at 24-38 Weeks

Driven by AI demand, Renesas has seen strong demand for server/data center power ICs, particularly CPU multiphase controllers and SPS (smart power stages), with representative series including ISL9931, RAA270, ISL95869, etc. Overall lead times are expected at 24-38 weeks, with no clear signs of supply tightness easing. Spot prices are beginning to rise, reflecting the continued expansion of AI infrastructure investment on power management ICs.

2.1.9 Samsung: Q1 DRAM Contract Prices Doubled; Q2 Unified Increase of 40%; 2nm Yield Improves to Over 60%

In March 2026, Samsung completed Q1 DRAM contract price negotiations. PC and mobile general-purpose DRAM prices rose 100% QoQ. LPDDR5X (for Apple) increased 100%, accepted by the customer. Overseas customers began prepaying to secure capacity. Contract periods shortened from annual to quarterly or monthly. The company faces potential strike risks. As Samsung and SK Hynix shift substantial standard DRAM capacity to HBM production, a structural gap has emerged in consumer DRAM, with global DRAM inventory falling to a four-week historical low. Separately, Samsung's 2nm yield has improved to over 60% (only ~20% in 2H 2025), gradually closing the gap with TSMC, and it is now offering 2nm foundry services to some customers. DDR5 prices began to decline this month for the first time, signaling a divergence and adjustment phase in the memory market.

2.1.10 SK Hynix: 2026 HBM Capacity Sold Out Early; DDR4 Production Cut; Chairman Says Wafer Shortages May Last Until 2030

In March 2026, SK Hynix disclosed that its 2026 HBM capacity has sold out early, while announcing production cuts for older DDR4 part numbers. HBM and DDR5 products now account for over 40% of revenue, with capacity shifting toward high-value-added products. According to Counterpoint Research, memory chip prices surged in Q1 2026: server 64GB DDR5 RDIMM prices rose 150% QoQ, mobile 12GB LPDDR5X rose 130%, legacy 8GB DDR4 SO-DIMM surged 180%, and NAND flash overall rose approximately 130%-150%. SK Group Chairman Chey Tae-won stated that AI-driven demand continues to outstrip supply, with systemic bottlenecks in chip production. Global memory chip shortages could last until 2030, and adding capacity will take at least four to five years, with a potential supply gap of over 20%.

2.1.11 Micron: Completes USD 1.8 Billion Acquisition of Powerchip's Tongluo P5 Fab; Expected to Contribute Over 10% of Global Capacity in 2H 2027

On March 16, 2026, Micron announced the completion of its acquisition of Powerchip's Tongluo P5 fab site in Miaoli County, Taiwan (China), for USD 1.8 billion. The site includes approximately 300,000 square feet of Class 300mm cleanroom space, which will support Micron in expanding its advanced DRAM (including HBM) supply capabilities. The Tongluo fab will be vertically integrated with Micron's large Taichung fab, with mass shipments expected starting FY2028. According to TrendForce, Phase I of Tongluo is expected to contribute capacity in 2H 2027, equivalent to over 10% of Micron's global capacity in Q4 2026.

2.1.12 Kioxia: Announces End of Production for TSOP-Packaged MLC NAND; Niche Memory Products Accelerate Phase-Out

According to TrendForce and Bitget, Kioxia has announced the end of production for TSOP-packaged MLC NAND products, with final shipment date set for March 15, 2027. Final forecast order deadline is May 30, 2026, and final customer order deadline is September 15, 2026. Affected products cover 8Gb to 64Gb MLC NAND. As the memory market shifts toward high-density TLC and QLC NAND, the cost-effectiveness of MLC products continues to decline, and related applications need to plan alternative solutions in advance. Meanwhile, driven by AI server architecture upgrades, NOR Flash is expected to see another 40%-50% contract price increase in Q2.

2.1.13 Broadcom: Q1 AI Revenue Up 106% YoY; Expects AI Chip Revenue to Exceed USD 100 Billion in 2027; High-End Interconnect Shortages Become Norm

On March 4, 2026, Broadcom reported FQ1 2026 earnings. AI-related semiconductor revenue reached USD 8.4 billion, up 106% YoY, accounting for 67% of semiconductor revenue. The company guided Q2 AI semiconductor revenue to rise to USD 10.7 billion. Hock Tan predicted that by 2027, AI chip business alone could achieve over USD 100 billion in annual revenue. According to market channel feedback, Broadcom's PCIe series (e.g., SS24, SS26) are seeing highly volatile pricing. The SX series expansion cards remain chronically out of stock, with some models up over 10x from early 2025. High-end switch chips are extremely tight, with major customers generally queuing for allocations. During the AI infrastructure build-out cycle, shortages of Broadcom's related products will become the norm.

2.1.14 Xilinx: AI Computing Demand Drives Full-Series FPGA Price Increases of 10%-20%, Some Models Up 60%; XC7 Lead Times Extended to 23 Weeks

AI computing demand has become the core growth driver for Xilinx FPGAs. High-end AI servers use 8-12 FPGAs per unit, 3-5 times that of traditional servers. Global AI server FPGA demand is expected to exceed 3.5 million units in 2026. Supply continues to tighten: 16nm and 20nm FPGAs at 40-52 weeks; 28nm 7-series FPGAs and SoCs at 24-52 weeks; XC7 series lead times have extended from 14 to 23 weeks. Foundries such as TSMC are prioritizing capacity for AI-related advanced nodes, squeezing mature node capacity. Xilinx raised prices across its main product series by 10%-20% effective March 2026, with classic series up 20% and some FPGA models with embedded memory up as much as 60%.

2.1.15 Murata: 15%-35% Price Increase for AI Server and High-End Automotive MLCCs Effective Apr 1, Driven by Surging Silver Prices

In mid-March 2026, Murata issued a price increase notice, raising prices across AI server and high-end automotive-grade MLCC products by 15%-35%, effective April 1. Products affected include multilayer chip ferrite beads, multilayer ferrite power inductors, multilayer RF inductors, and multilayer common mode chokes. Murata stated that these products use silver as a raw material, and the rapid rise in silver prices has driven cost increases beyond what cost reduction efforts can absorb. Automotive-grade and AI-server-specific high-end MLCC prices rose 10%-20%. AI investment is expected to remain strong over the next 3-5 years, and the number of high-end MLCCs required for next-generation AI chips will increase by tens of times.

2.1.16 Yageo / UNI-ROYAL/ Walsin Technology: Resistor Product Price Increases of 15%-20%; Passive Component Price Hike Spreads

In March 2026, passive component manufacturers successively issued price increase notices. Yageo raised prices by approximately 15%-20%, UNI-ROYAL raised prices on 0402-1206 resistor products, and Walsin raised prices on 0201-1206 resistor products. Previously, KEMET tantalum capacitors had three price increases (cumulative 40%-50%) in October 2025 and March 2026: first in June 2025 with over 20% on certain polymer tantalum capacitor specs; then in November 2025 raising T520, T521, T530 series by 20%-30%; and in March 2026 adjusting T523 series by at least 20%. WALSIN and YAGEO also raised prices in January-February. Reasons for this round of increases: first, surging raw material silver prices; second, rapid growth in high-end demand led by AI. Tantalum capacitor lead times: AVX at 20-28 weeks, Kemet/Yageo at 28-47 weeks.

2.1.17 Sitronix / ILITEK / Novatek / Fitipower / Raydium / FocalTech: Six Taiwanese IC Design Houses Raise Prices Collectively Effective Apr 1; Driver ICs Up as Much as 20%

According to Taiwanese media reports, six major Taiwanese IC design companies – Sitronix, ILITEK, Novatek, Fitipower, Raydium, and FocalTech – have successively initiated price increases, with some products up as much as 20%, and many implementing the increases effective April 1. Sitronix and ILITEK raised driver ICs by 15%-20%, Novatek raised timing controller ICs, Fitipower and Raydium followed, and FocalTech is planning increases for touch and display driver integration ICs. Front-end wafer manufacturing and back-end packaging/testing costs continue to rise. Wafer fabs are tightening capacity for driver ICs and raising foundry prices. Packaging/testing costs are affected by rising precious metal, material, and labor costs. The overall supply chain cost increase has exceeded the ability of IC design houses to absorb internally.

03

Application Updates

3. Application Updates Overview

Category	Manufacturer	Updates
Artificial Intelligence	Microsoft	Microsoft increases FY26 Capex to $146B while pivoting to inference clusters.
Artificial Intelligence	AWS Google	AWS deploys 1M+ NVIDIA GPUs to support autonomous Agentic AI systems.
Artificial Intelligence	NVIDIA	NVIDIA transitions from hardware sales to AI platform software subscriptions.
Artificial Intelligence	Cambricon	Cambricon triples 2026 capacity to fill the gap left by NVIDIA embargoes.
Automotive	Tesla BYD	Tesla ends year-long decline, while BYD's vertical integration forces new MCU cost reduction mandates.
Automotive	Toyota	Toyota invests $1B in U.S. hybrid production and shifts hydrogen R&D to commercial vehicles.
Automotive	MG	MG launches the semi-solid-state battery MG4 in Europe, focusing on scaling advanced tech to reduce costs.
Automotive	Global OEMs	AI Data Centers to consume 70% of memory supply, risking a 600k vehicle production cut in 2026.
Heathcare	GE HealthCare	GE Healthcare leads with 115 FDA AI authorizations, focusing on AI-guided MRI and cardiac ultrasound.
Heathcare	Siemens Philips	Philips accelerates shift to Helium-free MRI scanners to mitigate global supply risks, pivoting R&D to cooling chips.
Heathcare	Medtronic Stryker	Surgical Robotics market reaches $30B, driving surge in demand for precision motion control MCUs.

Category	Manufacturer	Updates
Industrial	Siemens	Siemens leverages high-precision standards to shield software from AI disruption, pivoting R&D to Industrial AI.
Industrial	Foxconn	Vietnam investment reaches $4B+, with Foxconn (FII) and Shunsin expanding AI server and chip-packaging capacity.
Industrial	Huawei	Huawei ranks No. 1 in global Wi-Fi 7 shipments (2M+ units), enabling microsecond-level robot synchronization.
Robotics	UBTech	UBTech & Siemens target delivering 10,000 humanoid robots by 2026, marking the start of industrial-scale adoption.
Robotics	Agibot	Agibot completes the 10,000th humanoid robot in Shanghai, doubling production within 3 months.
Robotics	LionsBot	LionsBot strengthens partnership with Orbbec to integrate 3D/LiDAR vision into its 5,000+ robot global fleet.
Robotics	Corvus Robotics	Corvus robotics expands autonomous drone inventory systems via new partnerships with Dermalogica and Southern Glazer's.

3.1 Artificial Intelligence

3.1.1 Microsoft: Capex Surge and Pivot to Dedicated Inference

Microsoft's FY2026 capital expenditure was projected to reach $146 billion (+66% YoY). On the terminal side, Microsoft is pivoting from general-purpose GPUs to dedicated inference clusters. This shift addresses the dual challenges of excessive computing costs and slower-than-expected Copilot user growth, signaling that terminal demand for customized, high-efficiency inference silicon is outpacing general training chips.

3.1.2 AWS & Google: Deployment of 1M+ GPUs for Agentic AI

AWS announced plans to deploy over 1 million NVIDIA GPUs (Blackwell & Rubin) starting in 2026. The client-side focus is shifting from pure model training to "Agentic AI systems." These autonomous workflows require persistent, high-density inference clusters rather than temporary training power, driving long-term consumption of high-bandwidth memory and high-speed interconnect components.

3.1.3 NVIDIA: Transition from Chip Vendor to Platform Provider

NVIDIA officially completed its transition from "selling chips" to "selling platforms" in March. Enterprise customers are no longer solely focused on individual chip specifications but are acquiring AI inference capabilities directly through software platform subscriptions. This model alters traditional component procurement logic, requiring distributors to pivot toward system integration and software ecosystem support.

3.1.4 Cambricon: Triple Capacity Expansion to Address High-End AI Chip Gap

In response to geopolitical supply volatility, domestic computing power demanders are accelerating their shift toward localized solutions. Cambricon confirmed it will triple its production capacity in 2026 to fill the high-end AI chip gap left by NVIDIA embargoes. This move indicates that domestic terminal reliance on high-performance localized silicon is entering a period of rapid acceleration.

3.2 Automotive

3.2.1 Tesla & BYD: Market Recovery and Price War Dynamics

While Tesla successfully ended its year-long market decline in March 2026, the competitive landscape has shifted. BYD, utilizing its superior vertical supply chain integration, has taken the strategic initiative in the ongoing global price war. This shift is forcing traditional automakers to fundamentally adjust their procurement and R&D strategies, specifically demanding more aggressive cost reduction and higher functional density for Highly Integrated MCUs to maintain price competitiveness.

3.2.2 Toyota: Hybrid Expansion and Hydrogen Strategic Pivot

To address unexpectedly high market demand for hybrid vehicles, Toyota announced a $1 billion investment to expand its manufacturing capacity in the United States. Furthermore, the company has executed a major pivot in its long-term energy strategy: its hydrogen research and development focus has moved entirely toward Commercial Applications, such as heavy-duty trucks and taxis, effectively stepping away from its previous primary focus on hydrogen-powered passenger cars.

3.2.3 MG: Commercialization of Semi-Solid-State Batteries

The launch of the MG4 with semi-solid-state batteries in Europe marks a shift in EV battery R&D priorities. Rather than solely chasing laboratory performance indicators, the current R&D focus has moved toward achieving Large-Scale Production efficiencies. The goal is to drive down the cost of high-tech solid-state components through mass manufacturing, moving advanced battery technology from the lab into mainstream commercial use.

3.2.4 Global Supply Risk: AI Capacity Competition and Production Impacts

The global automotive industry is facing significant "downgrade risks" as AI data centers consume a disproportionate share of Advanced Process Storage and Logic capacity. According to industry forecasts, this capacity competition is expected to cause a global production shortfall of 600,000 vehicles in 2026. Automakers are now struggling to secure the necessary advanced semiconductor nodes as priority is shifted toward high-performance computing infrastructure.

3.3 Healthcare

3.3.1 GE HealthCare: AI-Driven Precision Diagnostics

GE HealthCare continues to lead in AI authorizations (115 total) by March 2026. Its R&D has pivoted toward Deep Learning (AIR Recon DL) for MRI image reconstruction and AI-guided cardiac ultrasound (Caption Guidance). These terminal updates are significantly increasing the demand for advanced Image Processors and High-Speed Memory in medical consoles.

3.3.2 Siemens & Philips: Structural Shift to Helium-Free MRI

Siemens Healthineers and Philips are accelerating the transition to Helium-free MRI scanners to mitigate these ongoing supply risks. With medical imaging occupying 31.9% of the healthcare semiconductor market, this shift is driving R&D toward high-efficiency thermal management chips and specialized power semiconductors to replace traditional liquid helium cooling systems.

3.3.3 Medtronic & Stryker: Surge in Surgical Robotics

The surgical robotics market is projected to reach $30B, with Medtronic's Hugo RAS and Stryker's TMINI completing major clinical milestones in March 2026. These robotic platforms require extreme precision, boosting terminal orders for High-Precision Motion Control MCUs and 3D-Visualization SoCs as hospitals globally modernize their digital operating rooms.

3.4 Industrial

3.4.1 Siemens: Quality Standards as a Shield Against AI Disruption

Siemens emphasized that the "zero-tolerance" reliability of sectors like Automotive/Pharma is its core moat. March R&D focused on embedding AI into Digital Twin platforms to ensure designs meet strict industrial certifications, sustaining demand for high-end chip simulation

3.4.2 Foxconn: Scaling Vietnam Operations for AI Servers and Chips

Foxconn increased Vietnam investments in March via Fulian Precision ($381M) and Shunsin ($80M) for AI servers and IC packaging. This signals a shift from assembly to a full HPC infrastructure hub, covering both systems and chip-level packaging.

3.4.3 Huawei: Global Launch of Wi-Fi 7 Solutions for "Industrial Wireless" Transformation

Huawei’s Wi-Fi 7 shipments surpassed 2 million units, ranking No. 1 globally. March R&D prioritized iCSSR technology for microsecond-level robot synchronization, driving a structural shift from wired to wireless and boosting terminal demand for RF/SoC chips.

3.5 Robotics

3.5.1 UBTech and Siemens: 10,000-Unit Industrial Humanoid Deployment Agreement

UBTech and Siemens formally signed a strategic agreement to deliver 10,000 industrial-grade humanoid robots to global factory lines by the end of 2026. This represents the first large-scale terminal deployment of humanoids in real-world logistics, sorting, and assembly environments, signaling a shift from experimental prototypes to scalable commercial labor replacement

3.5.2 Agibot: 10,000th Humanoid Robot Milestone and Industrial Integration

Agibot announced that its 10,000th humanoid robot officially rolled off the production line in Shanghai. CTO Peng Zhihui confirmed the company scaled from 5,000 to 10,000 units in just three months. These units are being deeply integrated into logistics, retail, and industrial workflows, marking a transition from early validation to extensible large-scale real-world deployment.

3.5.3 Orbbec and LionsBot: Strategic Partnership for Autonomous Cleaning Fleet

Singapore-based LionsBot and AI vision provider Orbbec strengthened their strategic partnership. Orbbec will serve as the preferred vision technology partner for LionsBot's R5 autonomous cleaning robots, providing 3D cameras and LiDAR solutions to enhance navigation in high-traffic environments. LionsBot currently has over 5,000 robots deployed across 30 countries.

3.5.4 Corvus Robotics: Scaling Drone-Based Inventory Systems with Major Logistics Partnerships

Corvus Robotics announced a significant scaling of its autonomous drone-based inventory management systems. New terminal partnerships were secured with Dermalogica and Southern Glazer's Wine & Spirits. These autonomous drones are now deployed in multiple high-density warehouses to perform real-time inventory audits, eliminating the need for manual cycle counts and improving supply chain visibility.

04

Product Updates

4. Product Updates

4.1 Memory Chips

Memory Chips Market Key Movements (March 2026)

Product Category	Price Trend	Lead Time (Weeks)	Supply-Demand Status
DDR4	Rising	20-26	Tight
DDR5	Rising	18-24	Tight
HBM	Rising	24-30	Tight
NAND Flash	Rising	16-20	Tight

Source: CFM Flash Memory Market

4.1.1 Memory Chip Supply–Demand Imbalance to Persist Until 2028, Driving Price Increases

1) Product Updates

DDR5: In the contract market, DDR5 prices surged by over 100% quarter-on-quarter in Q1, with growth expected to moderate to 30%–35% in Q2. In the spot market, DDR5 module prices have declined by up to 29%. This divergence may be driven by short-term sell-offs from inventory holders influenced by TurboQuant and related risk control measures.。

DRAM: Automotive-grade DDR4 prices have cumulatively risen by over 150%, while DDR5 spot prices have surged by up to 300%. Over the past three months, overall prices have increased by around 180%, reaching 2–4x previous levels. Specifically, 64GB DDR5 RDIMM prices have risen by 150%, 12GB LPDDR5X by 130%, and 8GB DDR4 SODIMM has seen an increase of up to 180%.

NAND Flash: TrendForce forecasts overall NAND prices to increase by 85%–90% quarter-on-quarter within the current quarter. Samsung plans to raise prices of its key NAND products by around 100% in Q2, bringing the cumulative increase for the first half of the year to over 200%.

MLC NAND: Kioxia will discontinue products using thin small-outline package (TSOP) technology, while global MLC capacity is projected to decline by 41.7% in 2026. MLC NAND contract prices surged by 150% in Q1, and SLC/MLC NAND prices are expected to double in Q2, with some urgent orders potentially rising by up to 5x.

2) Market Trends

Supply–Demand Imbalance to Persist Through 2028: Driven by AI capacity demand, major memory manufacturers in the U.S. and South Korea expect tight supply conditions to continue beyond 2028.

Widening Supply Gap Drives Price Increases in the Automotive Sector: Over the past three months, automotive DRAM prices have risen by 180%, with high-end automotive-grade DDR5 spot prices surging over 300%. Memory costs per new energy vehicle have increased by RMB 1,000–3,000, while supply fulfillment remains below 50%. Several automakers have already raised prices or signaled upcoming increases.

Short-Term Pullback in Consumer DDR5: In late March, mainstream 32GB DDR5 kits saw prices drop by nearly 30% within a month, driven by algorithmic disruptions, the release of domestic capacity, and inventory sell-offs. This decline is considered a technical correction rather than a fundamental reversal of the industry trend.

4.2 Storage Devices

Storage Device Lead Times by Vendor (March 2026)

Manufacturer	Product	Lead Time (Weeks)	Lead Time Trends
Samsung	Enterprise SSD	16 - 24 and above	Delivery delayed
Kingston	Memory Module (RAM Stick / DIMM)	6-12	Delivery delayed
Kingston	Memory Card	6-12	Delivery delayed
Kingston	SSD	24-26	Delivery delayed
Kingston	eMMC	24-26	Delivery delayed
ADATA	Memory Module (RAM Stick / DIMM)	26-52	Delivery delayed
ADATA	Memory Card	26-52	Delivery delayed
ADATA	SSD	26-52	Delivery delayed
ADATA	eMMC	26-52	Delivery delayed
Dell	Enterprise Storage System	18-26	Delivery delayed

Sources: Fuchang Electronics; Sina.com

4.2.1 Tight Memory Supply and Capacity Cuts Accelerate Long-Term Agreements

1) Product Update

SSD: SSD Prices Continue Gradual Rise: SATA prices have increased over 10%, while NVMe remains steadily up. Phison projects that revenue from enterprise SSDs accounted for 30% in Q1 this year, doubling compared with Q4 of last year.

HDD: The average price of 8TB enterprise SAS HDDs has surpassed RMB 2,200, up nearly 20% from RMB 1,800 a year ago. Large-capacity HDDs have seen more moderate increases, with 18TB SATA drives currently stable in the RMB 3,100–3,300 range. Industry HDD production capacity has been reduced, and Q2 shipments are expected to be about half of Q1.

2) Market Trends

HDD Capacity Cuts Drive Moderate Price Increases for Small Drives: According to Nikkei Chinese, bulk prices for mechanical hard drives have risen for four consecutive quarters from January to March, with 3.5-inch 1TB drives up 1% quarter-on-quarter to USD 53.5.

Tighter Supply Terms Drive Prepayment/Long-Term Agreements in Storage Devices: Samsung is negotiating long-term supply agreements with Microsoft and Google, with Microsoft prepaying over USD 10 billion, subject to deductions if purchase targets are not met. Micron has finalized its first five-year strategic customer agreement, with FY2026 capital expenditures doubling to USD 25 billion. Cloud providers' stance has shifted from "rejecting long-term contracts" to "actively committing."

End-User Prices See Significant Increases: Mainstream consumer SSD prices have risen 50%–120% over the past six months. Reflecting this in the PC market, Lenovo, Dell, HP, and other manufacturers have raised product prices by 10%–30%, with some high-end models increasing over RMB 5,000. Smartphone makers have also implemented their largest collective price adjustments in nearly five years due to cost pressures.

4.3 MCU

MCU Lead Times by Vendor (March 2026)

Manufacturer	product	Lead Time (weeks)	Lead Time Trend
NXP	8-bit MCU	16-39	Stable
NXP	32-bit MCU	16-39	Stable
NXP	Automotive-Grade MCU	18-52	Stable
Renesas	8-bit MCU	14-18	Stable
Renesas	32-bit MCU	14-18	Stable
Renesas	Automotive-Grade MCU	24	Stable
STMicroelectronics	8-bit MCU	15-33	Stable
STMicroelectronics	32-bit MCU	15-28	Stable
STMicroelectronics	Automotive-Grade MCU	40-52	Stable
Infineon	8-bit MCU	10-26	Stable
Infineon	32-bit MCU	10-97	Stable
Infineon	Automotive-Grade MCU	32-45	Stable
Microchip	8-bit MCU	4-12	Stable
Microchip	32-bit MCU	4-18	Stable

Source：Fuchang Electronics

4.3.1 MCU Prices Surge Amid Automotive Supply Constraints and Longer Lead Times

1) Product update

Prices Rising Across the Board: Many MCU manufacturers have implemented or announced price increases, ranging from double-digit percentages up to 50%. For example, some Zhongwei Semiconductor MCU products rose 15%–50%, and Protronix announced on March 31 a price adjustment for its general-purpose MCU products.

Significant Lead Time Extensions: Supply of automotive-grade MCUs remains particularly tight. NXP MCU product lines still show lead times of 30–50 weeks; automotive/high-end 32-bit MCUs have lead times of 16–24 weeks, with some models exceeding 30 weeks. Microchip MCU lead times are generally 20–40 weeks, while ATMEGA AVR and PIC18F series extend to 30 weeks. Supply remains constrained in the automotive and industrial sectors.

2) Market Trend

Automotive MCUs Become a Key Growth Engine: Driven by vehicle electrification and smartization, demand for automotive-grade MCUs remains strong. NXP's S32 series is projected to achieve a 20%–30% CAGR from 2023 to 2027, outpacing the expected 9%–12% average growth rate of the automotive industry over the next three years.

Domestic MCU Production Accelerates: The China-produced STM32 MCU wafers, co-manufactured by STMicroelectronics and Huahong Semiconductor, have entered mass delivery. More general-purpose MCU products are planned for domestic mass production by 2026, which is expected to ease supply pressures and drive local substitution.

Continued Pressure on Prices and Lead Times: With global semiconductor inventory largely cleared and downstream demand especially in automotive and industrial sectors recovering, the MCU market faces a new wave of price increases and extended lead times, directly driving up procurement costs for downstream manufacturers.

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Briocean

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