BRIOCEAN

November 2025

Monthly Market Updates

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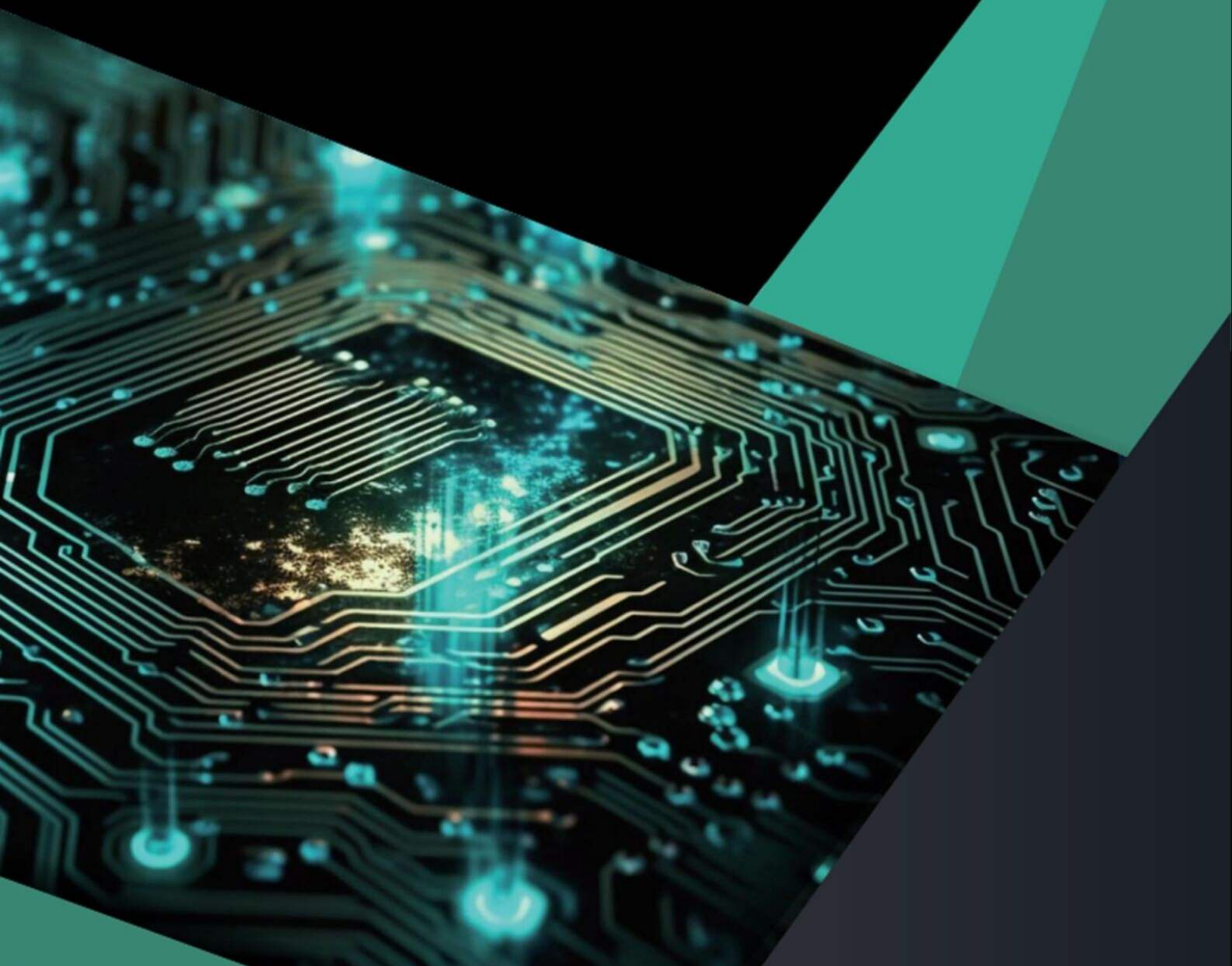

About Briocean

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	- China/EU: China and EU Urge Internal Negotiations at Nexperia, Control Deadlock Awaits Resolution - U.S.: Weighing Approval for Nvidia's H200 Exports to China While Advancing AI Partnerships in the Middle East - EU: Approves EUR 450M Subsidy for Onsemi to Expand Chip Plant - Japan: Invests JPY 100B in 2nm Process Mass Production, Establishes Semiconductors as Core National Strategy - Taiwan: Updates Export Control List, Adds 18 High-Tech Items
Industry (Short-term Impact)	- Micron: HBM Capacity Fully Sold Out; In-House Base-Die Strategy and Clear Shipment Timeline Highlight Short-Term Supply Bottlenecks - SK hynix: Broad-Based DRAM/NAND Contract Price Increases; AI-Driven Memory Demand Continues to Strengthen - Samsung: Driving the Memory Supercycle; DDR5 Contract Prices Surge 60%, Shaking the Supply Chain - AMD: Strong Q3 Performance, Executive Stock Sales Draw Attention - Supermicro: Launches Full-Stack AI Solutions to Streamline Compute
Industry (Mid-term Impact)	- SMIC: Revenue and Utilization Rate Rise in Tandem, Strengthening Its Mid-Term Growth Foundation - Arm: Earnings Surge and Ecosystem Gains Strengthen Its AI Position - Schneider Electric: Secures USD 2.3B in Data Center Orders as Power and Cooling Enter the "Capacity Lock-In" Era - Union Memory: Launches Liquid-Cooled SSD, Driving a New Breakthrough in Full-Stack Server Liquid Cooling
Industry (Long-term Impact)	- NVIDIA: Blackwell Chips Enter Full Mass Production, Secures Approval to Export 35,000 Units to the Middle East - CXMT: First Full Showcase of New DDR5 and LPDDR5X Products - Samsung: Aggressive Expansion of 1c-Node DRAM Capacity to Secure Long-Term Technology Leadership - Foxconn: Heavy Investment in a Supercomputing Center to Build the Foundation for Long-Term AI Services - TSMC: Blackwell Achieves "Made in the USA" Milestone, While 2-nm Capacity Continues Expanding

Category	Trend
End-market (Artificial Intelligence)	- Tesla Announces AI5 Chip Design Near Completion, AI6 Development Initiated - Google Fully Deploys Search Engine AI Model Gemini 3, Taking On OpenAI - NVIDIA And Microsoft Jointly Invest Up To USD 15B In Anthropic - Microsoft To Invest Over USD 15B In UAE AI Data Center Expansion
End-market (New Energy)	- Inovance Technology 50GW Energy Storage Base Officially Operational - Official Images Of All-Electric Porsche Cayenne Released, Maximum Power Exceeds 1000 HP
End-market (Consumer)	- Honor 500 Series Released, Equipped With Multiple Goodix Technologies - Alibaba's Quark AI Glasses To Hold New Product Launch
End-market (Industrial)	- Breton Technology Launches World's First Fully Autonomous Mining Truck - Honeywell Unveils Eight New Products at China Import Expo
End-market (Automotive)	- BAIC And Huawei Collaborate To Launch New Xiangjie S9 - Leapmotor A10 Makes Global Debut At Guangzhou Auto Show
End-market (Telecommunications)	- Broadcom Launches World's First Quantum-Secure 8th-Gen 128G SAN Switch Portfolio - ZTE And Indonesia XLSMART Complete FDD Massive MIMO AAU Trial - Nokia And Japan's NTT DOCOMO Deploy MantaRay SON To Innovate 5G Operations
End-market (Medical Equipment & Devices)	- GE Healthcare Acquires Intelerad For USD 2.3B To Accelerate Cloud And AI Ecosystem
Component Pricing & Product Insights	- Memory Chips: Spot Storage Market Driven By Urgent Orders, Finished Storage Prices Continue To Climb - GPU: GPU Demand Surges, but High-End Supply Remains Tight - MCU: Automotive-Grade MCU Supply Shortage Intensifies, Local Supply Chain Accelerates

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Macro Environment Updates

1. Macro Environment

1.1 Industry Policy

1.1.1 China/EU: China and EU Urge Internal Negotiations at Nexperia, Control Deadlock Awaits Resolution

On November 19, 2025, the Dutch government announced the suspension of its administrative intervention measures against Nexperia. Against this backdrop, China's Ministry of Commerce and the European Commission held a video meeting on November 26. Both sides agreed that the companies involved are the primary actors in resolving the Nexperia issue and jointly urged "Nexperia Netherlands" and "Nexperia China" to promptly engage in constructive dialogue to seek a long-term solution, thereby restoring the smooth flow and stability of the global semiconductor supply and production chain.

Despite the suspension of the Dutch administrative order, the fundamental issues remain unresolved. The ruling made by the Dutch Enterprise Court on October 7, which includes suspending the duties of Zhang Xuezheng, founder of Wingtech Technology, and placing Nexperia shares under the control of designated administrators, remains in effect. This means Wingtech Technology's control over Nexperia is still restricted. China has explicitly stated that the Dutch administrative intervention "has not been lifted" and is the root cause of significant uncertainty facing the global semiconductor supply and production chain. This incident highlights the profound impact of geopolitical factors on the global semiconductor industry chain. Subsequent developments will depend on whether the Dutch side can further revoke the intervention and whether effective dialogue can be achieved between Nexperia Netherlands and Nexperia China.

1.1.2 U.S.: Weighing Approval for Nvidia's H200 Exports to China While Advancing AI Partnerships in the Middle East

In November 2025, the U.S. government signaled a key shift in its AI chip export policy. On one hand, the Department of Commerce is reassessing its export-control framework and considering granting Nvidia permission to sell its H200 AI chips to China. On the other hand, the Department has formally authorized exports of up to the equivalent of 35,000 Nvidia Blackwell-architecture GB300 chips to the UAE's G42 and Saudi Arabia's Humain.

The potential export approval to China reflects internal U.S. deliberations over balancing technology restrictions with market interests, especially as U.S.–China relations show signs of easing. Commerce Secretary Howard Lutnick noted that the final decision will be made personally by President Trump. It is worth noting that the H200 is estimated to deliver roughly double the performance of the H20—currently the highest-performance Nvidia chip permitted for export to China. If approved, this would significantly strengthen Nvidia's competitive position in the Chinese AI chip market.

Meanwhile, the approvals for Middle Eastern exports come with strict security and reporting requirements and are intended to support U.S. collaboration with both countries in artificial intelligence, consistent with its broader global AI leadership strategy. Together, these developments outline a new contour of U.S. semiconductor export policy: deepening technology alignment with key regional partners while pursuing limited and controlled technology exports to strategic competitor markets to balance national security and economic interests.

1.1.3 EU: Approves EUR 450M Subsidy for Onsemi to Expand Chip Plant

On November 19, the European Commission approved EUR 450M in state aid from the Czech government for US chipmaker Onsemi to build a silicon carbide power semiconductor production line in the Czech Republic. The EU stated that the project aligns with the objectives of the European Chips Act, enhancing the bloc's autonomy in key semiconductor technologies and securing the supply of advanced chips required for sectors such as green energy. The project is expected to strengthen the EU's position in the global advanced power electronics market once it becomes operational.

1.1.4 Japan: Invests JPY 100B in 2nm Process Mass Production, Establishes Semiconductors as Core National Strategy

On 21 November, Japan’s Ministry of Economy, Trade and Industry announced an investment of JPY 100B into semiconductor manufacturer Rapidus through the Information-technology Promotion Agency. The goal is to achieve mass production of 2nm chips in the second half of fiscal year 2027, with plans to iterate to 1.4nm and other advanced technologies every two to three years thereafter. Rapidus aims to achieve positive operating cash flow in fiscal year 2029 and complete its listing in fiscal year 2031.

Meanwhile, at the first meeting of the government’s Growth Strategy Headquarters, Japan designated “AI and semiconductors” as the top priority among its 17 strategic focus areas. Through public-private collaboration, technology standardization, and talent development, Japan plans to strengthen its domestic semiconductor supply chain comprehensively. These initiatives are intended to reduce Japan’s reliance on foreign advanced process technologies and rebuild its competitiveness in the global semiconductor industry.

1.1.5 Taiwan: Updates Export Control List, Adds 18 High-Tech Items

On November 17, the Ministry of Economic Affairs' International Trade Administration in China's Taiwan region outlined amendments to the export control list, adding 18 controlled items across three major categories: high-end 3D printing equipment, advanced semiconductor equipment, and quantum computers. The advanced semiconductor equipment category includes critical items such as CMOS integrated circuits, EUV masks, low-temperature cooling systems, and scanning electron microscope equipment.

These amendments aim to align with international export control standards like the Wassenaar Arrangement and represent routine adjustments. It is important to note that control does not equate to an export ban; instead, companies are required to apply for an export license before shipment. Exports will be permitted upon verification of no weapons proliferation risk. This move helps maintain the compliance and credibility of China's Taiwan region within the global high-tech supply chain. The impact on legitimate commercial trade is expected to be limited, though it will prompt relevant enterprises to strengthen their export compliance management.

1.2 Economic Indicators

1.2.1 Global Manufacturing PMI Held at 50.8 in October, Signaling Moderate and Structurally Uneven Recovery Momentum

In October 2025, the global manufacturing Purchasing Managers' Index (PMI) stood at 50.8, remaining in expansion territory for the third consecutive month and marking a relatively high level for the same period in nearly three years. However, the growth momentum remains weak, as moderate increases in new orders and output failed to prevent a decline in backlogs or significantly boost employment levels. Concurrently, the business confidence index fell to a near three-year low, indicating significant downside risks for the manufacturing sector in the coming months.

The performance of major economies showed notable divergence: The US manufacturing PMI was 52.5, maintaining relatively robust expansion amid rising input costs driven by tariff policies; India led globally with a standout figure of 59.2; China's manufacturing PMI was 50.6, staying in expansion territory for the third month but with a moderating growth rate; whereas Japan (48.2) and South Korea (49.4) remained in contraction, reflecting an uneven recovery across Asian manufacturing.

Implications for the Semiconductor Industry: The current global manufacturing landscape – characterized by "low-speed expansion, weak demand, and structural divergence" – suggests that demand from downstream sectors such as electronics, consumer electronics, and industrial electronics will maintain cautious growth. Participants across the semiconductor industry chain should focus on regional economic disparities, order fluctuations, and inventory adjustments. Adopting flexible supply chain management and optimizing customer structures are essential to navigate potential market uncertainties.

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	50.80	50.60	48.20	49.40	59.20	52.50	50.00

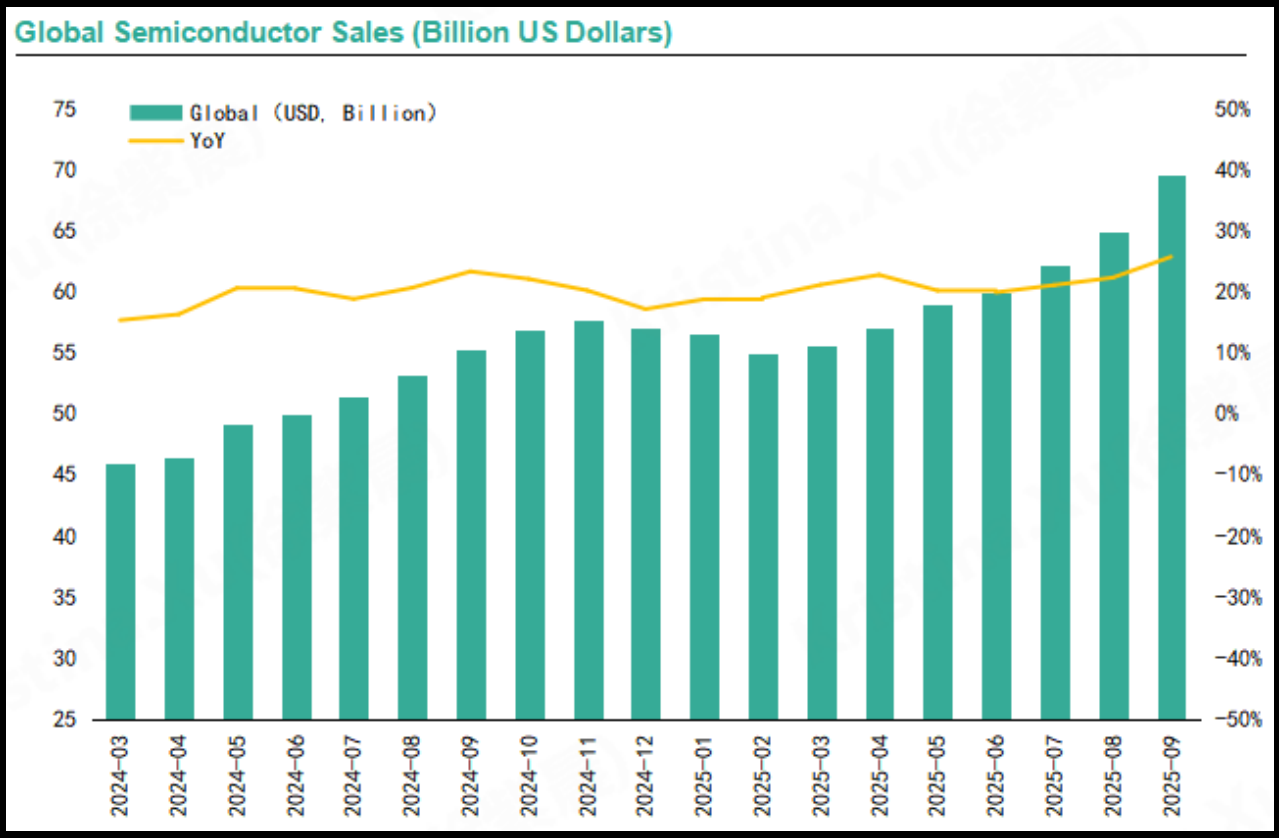
Source : Wind

1.2.2 Global Semiconductor Sales Rise by 21.7% in August 2025, Strong Growth in APAC and Americas

Global semiconductor sales reached USD 208.4B in Q3 2025, a sharp 15.8% quarter-on-quarter increase from Q2, marking the strongest recent quarterly expansion. Monthly performance was particularly robust: September sales hit USD 69.5B, up 25.1% year-on-year and 7.0% month-on-month, indicating that the market has fully emerged from the inventory correction cycle.

Regional performance showed significant divergence, with Asia-Pacific and the Americas leading the growth. In September, Asia-Pacific and other regions (excluding China and Japan) recorded a 47.9% YoY surge and 8.2% MoM growth; the Americas posted 30.6% YoY and 8.0% MoM growth. China maintained solid momentum with 15.0% YoY growth. Japan was the only major region showing weakness, declining 10.2% YoY. This divergence underscores the uneven nature of the current semiconductor market recovery.

Memory and logic chips remained the primary growth engines, supported by sustained demand from cloud computing, AI infrastructure, and intelligent driving applications. Based on the strong current trajectory, the World Semiconductor Trade Statistics (WSTS) maintains its optimistic outlook for 2025, forecasting full-year global semiconductor sales of USD 697.2B, up 11.2% YoY. Despite the notable near-term growth, industry players should remain cautious about potential year-end demand softening, renewed inventory adjustments, and geopolitical risks that could affect the durability of the recovery.



Source：SIA

1.2.3 US 10-Year Treasury Yield Falls Below Key 4% Threshold, Market Rate Cut Expectations Heat Up

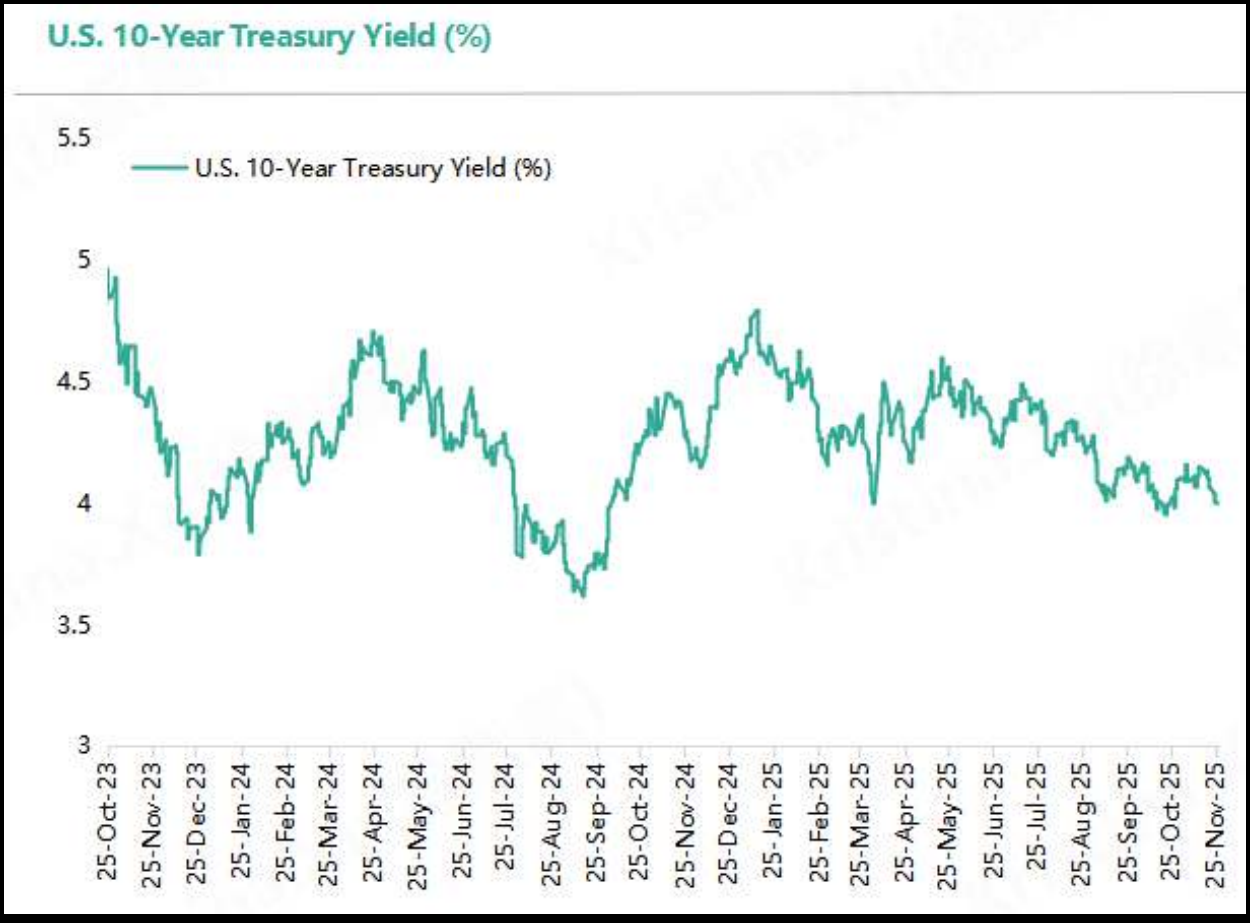
In November 2025, the U.S. 10-year Treasury yield showed a significant downward trend, breaking below the key psychological level of 4% in late November to touch 3.994%, marking its lowest level since the Fed's policy meeting at the end of October. This breach of an important technical level reflects a repricing of monetary policy prospects in the bond market.

Weak economic data provided fundamental support for the yield decline: the labor market showed signs of softening, with ADP data indicating consecutive declines in private-sector employment; the Consumer Confidence Index fell to 88.7, a seven-month low. At the same time, shifts in policy expectations acted as a key driver. Incoming Fed Chair candidate Kevin Hassett is perceived by the market as a proponent of easing, reinforcing expectations of an imminent rate-cut cycle.

Across the yield curve, rates fell in tandem: the 2-year yield dropped to 3.46%, the 5-year yield to 3.57%, with the short end seeing the most significant declines, reflecting market expectations of near-term Fed easing. The steepening of the yield curve further confirms the market's pricing in of looser monetary policy ahead.

For capital-intensive industries such as semiconductors, the 10-year Treasury yield falling below 4% signals potentially lower financing costs, providing a more favorable financial environment for capacity expansion and R&D investment. Particularly during the global semiconductor market recovery cycle, improved financing conditions directly support production scaling and technology upgrade plans.

Although yields have breached this key level, future movements will depend on the evolution of economic fundamentals and policy signals. Markets will closely watch the Fed's December policy meeting for guidance; any rebound in economic data or reversal of policy expectations could trigger a rise in yields, and potential volatility risks remain significant.



Source : Investing

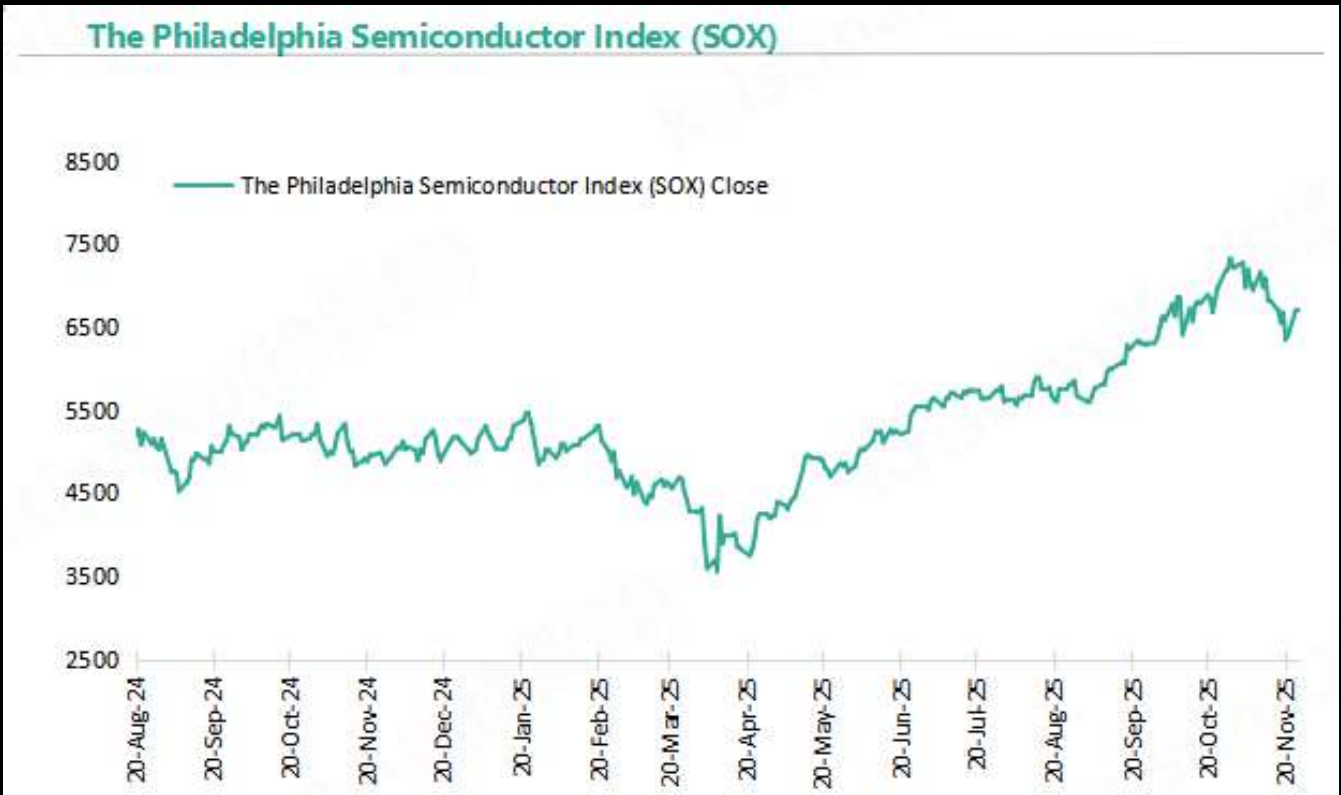
1.2.4 Philadelphia Semiconductor Index October–November Performance: High-Level Volatility and Structural Adjustments Dominate

From October to November 2025, the Philadelphia Semiconductor Index exhibited pronounced high-level volatility and structural adjustment characteristics. In October, the index fluctuated between 4700 and 5100 points, reflecting a tug-of-war driven by robust AI chip demand and weak consumer electronics performance. While leading AI chipmakers remained relatively strong, supported by cloud computing investments, the slow recovery in traditional consumer electronics such as smartphones constrained upward momentum, causing the index to oscillate around key technical levels.

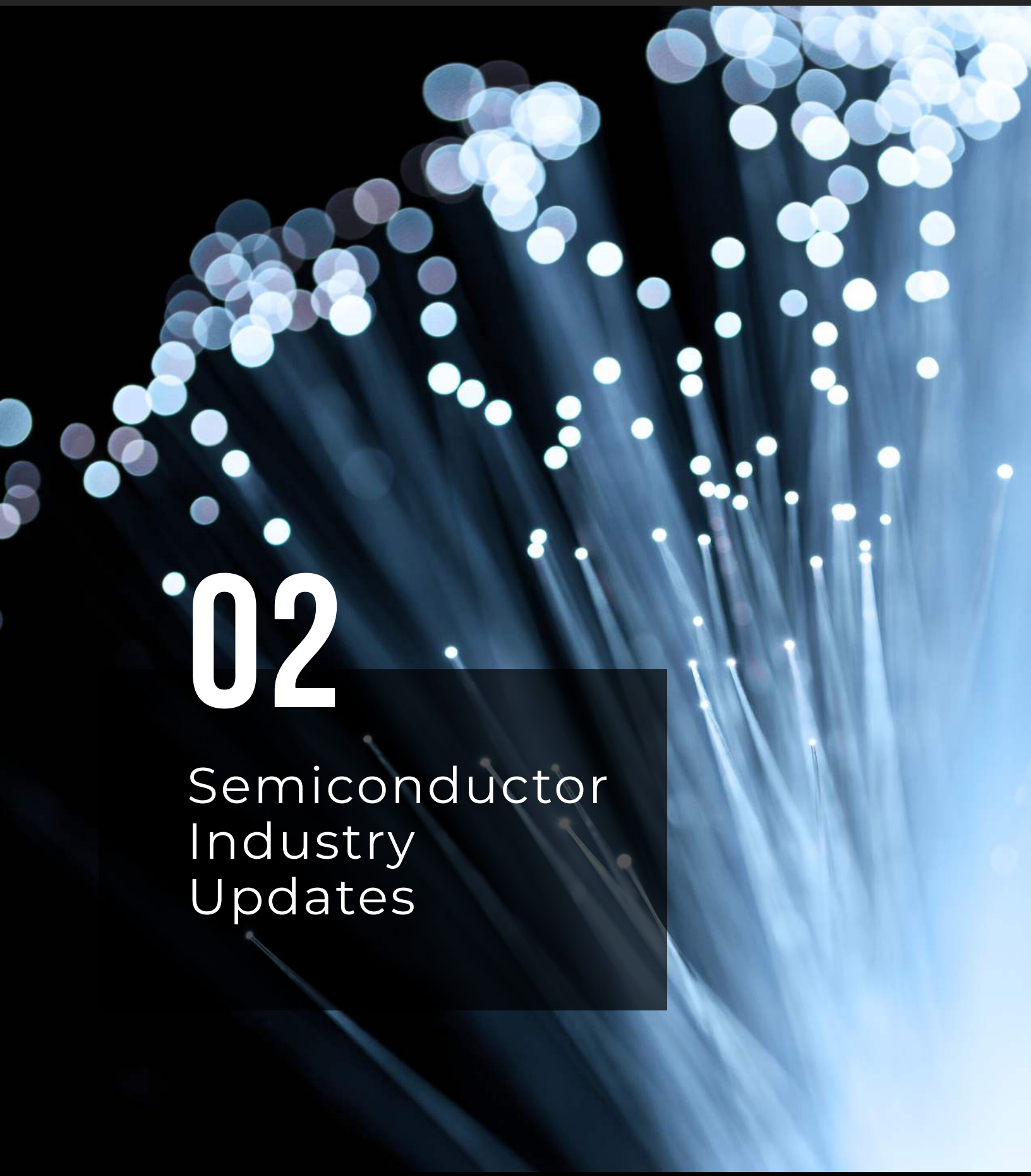
In November, market conditions changed significantly, and the index underwent a deep correction. By 21 November, the index had fallen 3.92% month-to-date, reaching a low of 6406.43 points, a recent trough. This adjustment was mainly driven by macroeconomic concerns and sector rotation, as weak US labor data fueled worries about slowing semiconductor demand, prompting investors to shift from high-valuation tech stocks to defensive sectors. Notably, the memory segment bucked the trend, with DRAM prices soaring 77.40% month-to-date, standing out as a market highlight.

In late November, the index staged a strong rebound. On 24 November, it rose 4.63% in a single day, closing at 6703.20 points. This recovery was primarily supported by shifting monetary policy expectations and improved sentiment in certain sub-sectors. Market expectations of Fed rate cuts surged, especially amid speculation that Kevin Hassett might become Fed Chair, driving valuation recovery in tech stocks. At the same time, AI-related stocks regained capital inflows, with heavyweight names such as Nvidia and TSMC rebounding, combined with rising memory chip prices to jointly propel the index upward.

Overall, the October–November volatility of the Philadelphia Semiconductor Index reflects a global semiconductor industry in structural adjustment. The tug-of-war between AI innovation and weak traditional demand has been the key factor affecting market performance. As monetary policy expectations shift and sub-sector sentiment diverges, the semiconductor sector is expected to maintain structurally-driven market characteristics through the remainder of Q4, with investors advised to focus on core-competitive areas such as AI compute and memory chips.



Source：MacroMicro



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Semiconductor Industry Updates

Semiconductor Industry Overview

Impact	Manufacturer	Updates	Analysis
Short-term	Micron	HBM3E and HBM4 capacity for 2025 has been fully booked, with HBM4 scheduled to begin shipments in 2026 Q2	The early capacity lock-in indicates that tight supply–demand dynamics for AI memory will persist over the next 1–2 years.
	SK Hynix	Expects DRAM average selling prices in Q4 to rise to the "upper end of high single digits" quarter-on-quarter, exceeding initial projections	The price hike, co-led with Samsung, will immediately improve its cash flow and profitability.
	Samsung	Raised prices for some memory chips by up to 60% in November compared to September; 32GB DDR5 module increased from USD 149 to USD 239	The sharp price hikes directly raise hardware costs for AI servers and intensify supply pressure and panic buying among downstream manufacturers.
	AMD	Reported Q3 2025 revenue of USD 9.2B, with net income up 61% year-on-year; completed the acquisition of AI inference team MK1; expects its data center business to surpass USD 100B in annual revenue within five years	Record performance and strategic acquisition have strengthened its near-term competitiveness in high-performance computing and AI inference, providing momentum for the next stage of growth.
	Supermicro	Showcased a rack-scale liquid-cooling solution integrating NVIDIA GB300 NVL72 at SC25, along with a suite of server platforms optimized for HPC and AI workloads	These offerings provide plug-and-play, high-end AI compute solutions that directly address downstream customers' urgent demand for AI infrastructure.

Semiconductor Industry Overview

Impact	Manufacturer	Updates	Analysis
Mid-term	SMIC	Q3 2025 revenue and net profit reached record quarterly highs, with net profit attributable to the parent up 43.1% year-on-year; capacity utilization reached 95.8%, and 12-inch wafer revenue accounted for 77%	Its strong performance and near-full capacity utilization signal a new stage of competitiveness for its mature and specialty process platforms, providing clear growth momentum for its mid-term development.
	Arm	FY2026 Q2 revenue was USD 1.14B, with net profit up 122%; accumulated 19 signed CSS licensing agreements; expects its architecture to reach a 50% market share in data center CPUs	Robust performance and ecosystem expansion reinforce Arm's central position in the AI computing era, with mid-term growth driven by data center penetration and high-value CSS products.
	Schneider Electric	Signed USD 2.3B in critical data center infrastructure contracts with customers including Switch and Digital Realty, adopting a capacity reservation model	Slowing EV Demand Weakens Automotive Power Device Business: However, image sensors and MCUs performed steadily, with short-term performance supported by consumer electronics and industrial markets.
	Union Memory	Jointly launched a dual-socket cold-plate full liquid-cooling server with partners including Intel and H3C, with Union Memory supplying liquid-cooled SSD components	This reflects the rapid shift of data center infrastructure toward liquid cooling and coordinated optimization in response to AI compute power consumption and thermal challenges.

Semiconductor Industry Overview

Impact	Manufacturer	Updates	Analysis
Long-term	NVIDIA	Quarterly revenue reached USD 57B, with full-volume production of Blackwell chips achieved; simultaneously released the next-generation Vera Rubin technology roadmap. Received approval to export 35,000 chips to the Middle East, while sales of the China-specific H20 chip fell short of expectations	Through advanced technology roadmapping and diversified market strategies, NVIDIA is defining AI compute standards while building competitive barriers, securing its sustained dominance in the global high-end accelerator market.
	CXMT	Presented its DDR5 and LPDDR5X products for the first time at IC China 2025, with maximum speeds of 8000 Mbps and 10667 Mbps respectively, covering full-scenario modules	This marks a milestone indicating that Chinese memory manufacturers are now capable of competing in the high-end market, with long-term implications for the global DRAM supply landscape and competitive dynamics.
	Samsung	Plans to significantly expand 1c nm DRAM capacity, targeting monthly output of 200,000 wafers by Q4 2026 as part of its next-generation HBM4 strategy	This move will reshape its competitiveness in advanced DRAM and deeply influence the future supply structure and technology roadmap of the global HBM4 market.
	Foxconn	Announced a USD 1.4B investment to build a 27 MW GB300 supercomputing center in Taiwan, expected to be operational in the first half of 2026; approximately 70–80% of the compute capacity has already been allocated	This will establish Foxconn as a core player in Asia-Pacific AI infrastructure and significantly influence regional AI compute service models and ecosystem development.

Semiconductor Industry Overview

Impact	Manufacturer	Updates	Analysis
Long-term	TSMC	Plans to build three additional 2 nm fabs in Taiwan, with an estimated total investment of around TWD 900B	This large-scale investment in leading-edge process technology will further consolidate its long-term leadership in global semiconductor manufacturing and strengthen its position as a critical node in the global supply chain.

2. Semiconductor Industry Updates

2.1 Short-term Implications

2.1.1 Micron: HBM Capacity Fully Sold Out; In-House Base-Die Strategy and Clear Shipment Timeline Highlight Short-Term Supply Bottlenecks

Micron executives recently confirmed that its 2025 capacity for HBM3E and HBM4 high-bandwidth memory has been fully sold out, with HBM4 shipments scheduled to begin in Q2 next year. This development not only underscores the sustained surge in AI compute demand that continues to strain the high-end memory supply chain, but also draws attention to Micron's decision to adopt an in-house design and production strategy for its HBM4 base die. While competitors rely on TSMC or Samsung for base-die fabrication, Micron opted to internalize this critical process—citing the need for deeper optimization aligned with memory characteristics and last year's delay in foundry readiness. The company expects that this approach, combined with a development strategy that "follows the HBM3E process," will help HBM4 reach mature yields more quickly and improve cost efficiency.

In the short term, the fully booked capacity and defined shipment schedule provide market visibility but also highlight rigid supply constraints. AI server makers and cloud service providers are expected to compete aggressively for limited HBM4 capacity, with delivery and cost pressures unlikely to ease. In the medium term, if Micron can leverage its in-house production strategy to accelerate yield ramp and optimize costs, it may gain market share and improve profitability in the HBM4 generation—potentially influencing the competitive landscape of the global HBM market. Over the longer run, Micron's announcement that it will outsource base-die production to TSMC starting with HBM4E indicates that industry division of labor and collaboration models may shift again at more advanced nodes.

2.1.2 SK hynix: Broad-Based DRAM/NAND Contract Price Increases; AI-Driven Memory Demand Continues to Strengthen

Between October and November 2025, SK hynix initiated a new round of memory price adjustments, with average DRAM contract prices expected to rise quarter-on-quarter to the upper range of high single digits, exceeding earlier forecasts. NAND contract prices have been raised in parallel. These pricing moves reflect a fundamental shift in the memory market: surging demand for high-bandwidth memory driven by AI accelerators, data centers, and high-performance computing is prompting SK hynix to prioritize its limited capacity for high-value HBM products, significantly constraining the supply of general-purpose DRAM and NAND.

In this supply-tight environment—where premium memory receives priority allocation—SK hynix continues to maintain strong pricing power and solid margin levels thanks to its leadership in HBM. As the company's share in the HBM and high-performance DRAM segments continues to grow, its strategic position within the AI and data center memory supply chain is further reinforced. These developments are set to directly improve the company's revenue mix and profitability, while also signaling prolonged tightness in DRAM/NAND supply for consumer electronics. The value distribution across the memory ecosystem is undergoing a profound structural shift.

2.1.3 Samsung: Driving the Memory Supercycle; DDR5 Contract Prices Surge 60%, Shaking the Supply Chain

In November 2025, Samsung Electronics executed a major price adjustment across its memory portfolio. Contract pricing for 32GB DDR5 modules jumped from around USD 149 in September to approximately USD 239, a sharp 60% increase that signals the full onset of the global "memory supercycle." This surge is directly driven by strong demand from AI, large-scale data center expansion, and cloud infrastructure build-out, prompting Samsung to allocate its primary capacity toward higher-margin HBM products and resulting in severe constraints on general-purpose DRAM supply.

This significant price hike underscores Samsung's pricing power and supply chain influence in the global memory market. In the short term, Samsung's memory business will see a notable boost in gross margins and cash flow. However, for downstream device manufacturers, sharply higher memory costs will inevitably be passed on through higher product prices—or will directly compress profit margins—and may even dampen demand for mid- and low-end devices. With increasing supply uncertainty, some customers have already accepted price hikes exceeding 50% and adopted panic-buying strategies, further strengthening the seller's market and creating immediate shockwaves across the global electronics supply chain. Over the longer term, this trend is expected to accelerate the replacement of traditional consumer DRAM/NAND with high-end and enterprise-grade memory products, driving a profound restructuring of the memory industry landscape.

2.1.4 AMD: Strong Q3 Performance, Executive Stock Sales Draw Attention

In November 2025, AMD delivered an impressive Q3 earnings report, posting USD 9.246B in revenue, up 36% YoY, and USD 1.243B in net profit, representing a substantial 61% YoY increase. This performance was primarily driven by record-high results in its Client segment and continued strength in its Data Center business. Meanwhile, AMD completed the strategic acquisition of AI inference team MK1, aiming to integrate its Flywheel engine—capable of processing over 1T tokens per day—to strengthen the competitiveness of Instinct GPUs in AI inference workloads.

However, despite the favorable business momentum, several AMD executives—including CTO Mark Papermaster—conducted consecutive stock sales in November. While these transactions fall within normal financial planning activities, the scale and timing could still influence short-term market sentiment.

2.1.5 Supermicro: Launches Full-Stack AI Solutions to Streamline Compute Deployment

At the SC25 conference in November, Supermicro showcased a series of innovative AI infrastructure solutions. Its cabinet-level liquid-cooled system integrating the NVIDIA GB300 NVL72 consolidates 72 Blackwell Ultra GPUs and 36 Grace CPUs in a single rack, using direct liquid cooling to address high-power-density challenges. The company also introduced a 10U air-cooled AI server based on the AMD Instinct MI355X GPU, offering a flexible option for enterprise customers constrained by infrastructure upgrade limitations.

Notably, Supermicro unveiled turnkey “AI Factory” cluster solutions, providing configurations ranging from 4 nodes with 32 GPUs to 32 nodes with 256 GPUs. These systems come pre-loaded with full software stacks and cabling, enabling plug-and-play functionality and significantly simplifying the deployment process for large-scale AI compute infrastructure.

2.2 Mid-term Implications

2.2.1 SMIC: Revenue and Utilization Rate Rise in Tandem, Strengthening Its Mid-Term Growth Foundation

In its November release of the 2025 Q3 earnings report, SMIC delivered results with clear mid-term implications. Both revenue and net profit hit all-time highs, and the impressive 95.8% capacity utilization rate directly reflects robust demand for its mature nodes and specialty process platforms, as well as strong operational efficiency under current market dynamics. The share of 12-inch wafer revenue continued climbing to 77%, and growth from high-value segments such as industrial and automotive further demonstrated the effectiveness of its product-mix optimization strategy, driving structural improvements in profitability.

Although guidance for Q4 remained conservative, the quarter’s strong execution provides ample capital and confidence for mid-term development. Over the longer horizon, this performance lays a solid financial and operational foundation for continued expansion in its core strengths—advanced packaging, display drivers, and CIS—while enhancing resilience against potentially intensifying market competition.

2.2.2 Arm: Earnings Surge and Ecosystem Gains Strengthen Its AI Position

In its November release of the FY2026 Q2 earnings report, Arm delivered results with clear mid-term significance. Revenue exceeded 1 billion each quarter for three consecutive quarters, net profit surged 122% YoY, and the company secured a cumulative 19 high-value CSS licensing agreements—all reinforcing the success of its business model upgrade. More importantly, its data-center architecture market share is expected to approach 50%, signaling that Arm has successfully evolved from the dominant force in mobile to a foundational compute pillar for AI and cloud infrastructure.

From a mid-term perspective, as major players such as Google, Microsoft, and NVIDIA continue building their core applications and future roadmaps on Arm architectures—and as Arm carefully explores the path toward in-house chip development—the company's growth story is expanding from IP licensing to deeper participation in the broader AI compute ecosystem. This will continue to strengthen its growth momentum and industry influence over the coming quarters.

2.2.3 Schneider Electric: Secures USD 2.3 b in Data Center Orders as Power and Cooling Enter the "Capacity Lock-In" Era

Schneider Electric signed two major contracts in November with US data center operators Switch and Digital Realty, valued at USD 1.9B and USD 373M respectively, totaling USD 2.3B. These contracts adopt an innovative "capacity lock-in" model, marking a fundamental shift in AI data center infrastructure supply and demand—power and cooling systems are, for the first time, becoming constrained resources that require advance capacity reservation, similar to leading-edge chips. This shift highlights the transition of AI data center construction into a fast-paced, short-cycle phase.

Schneider's ability to secure these large-scale deals stems from its integrated "power + cooling" solution capability, strengthened by its acquisition of cooling specialist Motivair. From an industry-chain perspective, these orders signal a profound transformation in competitive dynamics across AI infrastructure: over the next 1–2 years, vendors with end-to-end solutions and rapid delivery capabilities will gain decisive competitive advantages.

2.2.4 Union Memory: Launches Liquid-Cooled SSD, Driving a New Breakthrough in Full-Stack Server Liquid Cooling

In Nov 2025, Union Memory, together with Intel, H3C, and other ecosystem partners, jointly introduced a dual-socket cold-plate full-stack liquid-cooled server, in which Union Memory's liquid-cooled UH812a enterprise SSD serves as a core component of the solution. This collaboration marks the expansion of data-center thermal management from traditional CPU cooling to full-stack liquid cooling across all major heat sources, including memory and SSDs.

As compute density rises, the storage subsystem has emerged as a new thermal bottleneck in data centers. A typical 24-bay server now sees storage subsystem power consumption exceed 600 W, while enterprise NAND must operate below a strict 70°C limit. Union Memory's liquid-cooled SSD, through optimized structural design, delivers up to 25 W of per-drive cooling capability—meeting the thermal demands of PCIe 5.0 enterprise SSDs and ensuring stable performance under sustained high workloads.

This technical breakthrough is enabled by Union Memory's end-to-end innovation across five layers, including controller silicon and thermal-management algorithms. The solution not only addresses today's cooling challenges but also prepares for next-generation high-power storage devices, with scalability toward 40 W and even 70 W cooling requirements.

From an industry impact perspective, Union Memory's liquid-cooling solution will accelerate data-center transition toward greener, more efficient operations—supporting PUE levels below 1.1—while providing a reliable storage foundation for AI training and other high-performance computing workloads. This collaboration demonstrates Union Memory's strength in a specialized segment and positions the company as a key driver of next-generation full-stack liquid-cooling upgrades in data-center infrastructure.

2.3 Long-term Implications

2.3.1 NVIDIA: Blackwell Chips Enter Full Mass Production, Secures Approval to Export 35,000 Units to the Middle East

NVIDIA achieved significant business milestones in November 2025. First, Blackwell-architecture chips entered full mass production, driving the company's fiscal Q3 revenue to USD 57.01B, including USD 51.2B from its data center segment, up 62% year-over-year. Second, the company received approval from the U.S. Department of Commerce to export up to 35,000 Blackwell chips to Saudi Arabia and the UAE, with the order value expected to exceed USD 1B. Meanwhile, the H20 chip designed specifically for the China market underperformed, generating only USD 50M in revenue this quarter.

On the technology side, NVIDIA released its roadmap for the next-generation Vera Rubin superchip, which will integrate HBM4 and is planned through 2027. This forward-looking roadmap, together with Blackwell's mass-production progress, further strengthens NVIDIA's leadership in AI computing.

From a long-term perspective, NVIDIA is building a sustainable competitive advantage through advanced technology and diversified market strategy. Breakthrough progress in the Middle East helps offset policy risks in China, while a clear technology roadmap not only sets a benchmark for global AI development but also lays a solid foundation for NVIDIA to maintain its market leadership in the years ahead.

2.3.2 CXMT: First Full Showcase of New DDR5 and LPDDR5X Products

In November 2025, CXMT unveiled its latest DDR5 and LPDDR5X products at IC China 2025. The new DDR5 lineup reaches speeds up to 8000 Mbps with 24 Gb die capacity, covering multiple module formats including UDIMM, RDIMM, and SO-DIMM. The LPDDR5X offering delivers speeds up to 10667 Mbps and is available in various packaging forms, including die, chip, and module solutions.

This product release is strategically important: on one hand, it signals that China's domestic memory makers have entered the international mainstream in performance and specifications — competing with Korean, Japanese, and U.S. vendors across DRAM speed, density, and module diversity. On the other hand, given the current global tight supply of memory / DRAM / high-bandwidth memory (HBM), and surging demand from AI and data-center workloads, CXMT's participation adds a new source of supply to the global memory market. This may help ease the supply–demand imbalance and contribute to more stable pricing and delivery. If CXMT proceeds smoothly with mass production and shipments, it could secure a meaningful position in the global memory landscape — becoming a new variable worth watching for the broader supply chain and distribution ecosystem.

2.3.3 Samsung: Aggressive Expansion of 1c-Node DRAM Capacity to Secure Long-Term Technology Leadership

In November, Samsung announced an aggressive capacity expansion plan for its 1c-node DRAM, targeting a monthly output of 200,000 wafers by Q4 2026. This scale would account for nearly one-third of Samsung's total DRAM capacity and even surpass the incremental capacity added during the semiconductor boom of 2022.

The strategic intent lies in its long-term impact. Beyond addressing the current AI-driven shortage across the DRAM market, the expansion is designed to secure sufficient wafer-level capacity for Samsung's next-generation HBM4 products. By controlling the most advanced DRAM process technology at the foundational wafer level, Samsung aims to regain leadership in the HBM4 arena — a battleground that will shape the future of AI compute performance.

In the long run, if this expansion is executed successfully, it will significantly strengthen Samsung's supply capability and technical influence in the high-end memory market, while exerting substantial competitive pressure on SK Hynix and other market players.

2.3.4 Foxconn: Heavy Investment in a Supercomputing Center to Build the Foundation for Long-Term AI Services

In November, Foxconn announced a USD 1.4B investment to build a 27-MW GB300 supercomputing center. Its core significance lies in the long-term impact. Beyond being the first GB300 data center in Asia, a critical signal is that 70%–80% of its computing capacity has already been allocated before the facility even comes online — a strong indicator of the urgent market demand for large-scale, enterprise-grade AI compute.

In the long run, Foxconn aims to use its "AI Factory" model to enable AI developers to avoid building their own data centers and instead focus on algorithm and model innovation. This strategy fundamentally redefines how AI compute is supplied. If successfully implemented, it will provide sustained support to the AI ecosystem across the Asia-Pacific region, accelerate Foxconn's transformation from a "global manufacturing powerhouse" into an "AI-driven infrastructure and services leader," and reshape the competitive landscape of the regional AI industry.

2.3.5 TSMC: Blackwell Achieves "Made in the USA" Milestone, While 2-nm Capacity Continues Expanding

In November, TSMC reached a major milestone as its Arizona fab produced the first Blackwell wafer for AI applications, marking the first time an advanced AI chip has been manufactured on U.S. soil. This breakthrough not only helps mitigate geopolitical risks but also demonstrates TSMC's strategic flexibility in global supply-chain deployment.

At the same time, TSMC is accelerating investment in advanced nodes, planning to build three new 2-nm fabs in Taiwan with a total projected investment of around TWD 900B. These large-scale, forward-looking investments will reinforce TSMC's dominant position in leading-edge manufacturing and ensure it can meet the surging global demand for AI compute over the coming years.

03

Application Updates

3. Application Updates Overview

Category	Section	Manufacturer	Updates
Artificial Intelligence	AI Chip	Tesla	Tesla announced that design work for the AI5 chip is nearing completion, and development of the AI6 chip has officially begun
Artificial Intelligence	Cloud Computing & Big Data	Google	Google has fully integrated its Gemini 3 AI model into its search engine
Artificial Intelligence	Cloud Computing & Big Data	Nvidia Microsoft	Nvidia and Microsoft jointly committed USD 15B to invest in Anthropic
Artificial Intelligence	Cloud Computing & Big Data	Microsoft	Microsoft is investing over USD 15B to expand AI data center capacity in the UAE
New Energy	Photovoltaics & Energy Storage	Inovance	Inovance Technology's 50 GW energy-storage manufacturing base has officially entered production
New Energy	New Energy Vehicles	Volkswagen	Porsche unveiled official images of the all-electric Cayenne, delivering peak power exceeding 1,000 horsepower
Consumer	Smartphones	HONOR	HONOR launched the HONOR 500 series, featuring multiple products from Goodix Technology
Consumer	Wearable Technology	Alibaba	Quark, a subsidiary of Alibaba, will hold a launch event for its new Quark AI Glasses
Industrial	Industrial Automation & Control	Breton Technology	Breton Technology released the world's first autonomous-driving, purpose-built mining truck
Industrial	Industrial Automation & Control	Honeywell	Honeywell introduced eight new products at CIIE, covering industrial combustion and industrial automation

Category	Section	Manufacturer	Updates
Automotive	Automotive Supply Chain	BAIC Group Huawei	BAIC and Huawei jointly launched the new Xiangjie S9
Automotive	Automotive Supply Chain	Leapmotor	Leapmotor's A10 made its global debut at the Guangzhou Auto Show
Telecommunications	Communication Networks & Optical Fiber	Broadcom	Broadcom introduced the world's first quantum-safe, eighth-generation 128G SAN switch portfolio
Telecommunications	Communication Networks & Optical Fiber	ZTE	ZTE and Indonesia's XLSMART jointly completed deployment of an FDD Massive MIMO AAU product
Telecommunications	Communication Networks & Optical Fiber	Nokia	Nokia and Japan's NTT DOCOMO deployed MantaRay SON to modernize 5G network operations
Medical Equipment & Devices	Medical Imaging Equipment	GE HealthCare	GE Healthcare acquired Intelerad for USD 2.3B, accelerating its expansion into cloud and AI ecosystems

3.1 Artificial Intelligence

3.1.1 Tesla Announces AI5 Chip Design Near Completion, AI6 Development Initiated

Tesla CEO Elon Musk recently announced on X that the company is about to finalize the design of its in-house AI5 chip and has already started development of the next-generation AI6 chip. The AI5 chip has passed design review, delivering 2,000–2,500 TOPS, five times the compute of the current AI4 chip, and is capable of supporting complex unsupervised autonomous driving algorithms. Its inference performance is roughly 50 times higher than existing chips.

3.1.2 Google Fully Deploys Search Engine AI Model Gemini 3, Taking On OpenAI

Google officially released its latest AI model, Gemini 3, targeting the generative AI market and challenging ChatGPT developer OpenAI. Following the announcement, Alphabet's stock rose against the trend, demonstrating resilience amid recent AI sector pullbacks. Gemini 3 was launched just 11 months after the previous generation. With the release of the Gemini 3 large language model and the Nano Banana Pro image model, Google has taken another significant step toward AGI.

3.1.3 NVIDIA And Microsoft Jointly Invest Up To USD 15B In Anthropic

Microsoft and NVIDIA announced a joint investment of up to USD 15B in AI startup Anthropic, further strengthening their positions in the global AI compute landscape. According to multiple media reports, this new funding boosts Anthropic's valuation to around USD 350B, up significantly from USD 183B after its September fundraising. Under the latest agreement, NVIDIA will contribute up to USD 10B, while Microsoft commits up to USD 5B. Both companies will also participate in Anthropic's next funding round to deepen strategic collaboration.

3.1.4 Microsoft To Invest Over USD 15B In UAE AI Data Center Expansion

US tech giant Microsoft announced on Monday that it will invest more than USD 15B in the United Arab Emirates over the next seven years (through 2029) to expand AI data center capacity. This major investment has received US government approval for the export of high-end NVIDIA chips to the UAE. According to Microsoft, cumulative investment in the UAE will reach USD 7.3B by the end of this year, with an additional USD 7.9B planned from 2026 to 2029 for AI and cloud infrastructure expansion.

3.2 New Energy

3.2.1 Inovance Technology 50GW Energy Storage Base Officially Operational

On November 17, Inovance Technology's Xi'an energy storage and power system manufacturing base in Fengdong New City, Xixian New Area, officially commenced operations. The first batch of smart production lines was simultaneously launched, with an annual design capacity of 50GW, placing it among the world's leading single PCS energy storage factories. This milestone marks a comprehensive upgrade of Inovance's digital energy capabilities and injects new momentum into the green energy industry in Xi'an and Northwest China.

3.2.2 Official Images Of All-Electric Porsche Cayenne Released, Maximum Power Exceeds 1000 HP

Official images of the all-electric Porsche Cayenne were released. The new vehicle is built on the PPE platform with an 800V architecture, featuring significant updates to both interior and exterior design. It will make its domestic debut at the Beijing Auto Show next year. Both models are equipped with a 113kWh battery pack, 13kWh larger than the Macan EV. Thanks to the 800V high-voltage system and optimized cooling, peak charging power can reach 400 kW under ideal conditions, charging from 10% to 80% in less than 16 minutes. Notably, Porsche is also offering, for the first time in the US market, optional wireless inductive charging for production EVs: by parking above a ground charging pad, the vehicle can automatically initiate wireless charging at up to 11 kW.

3.3 Consumer

3.3.1 Honor 500 Series Released, Equipped With Multiple Goodix Technologies

On the evening of November 24, the Honor 500 series was officially launched. All models feature a 200-megapixel main camera, with the Pro version additionally equipped with a 50-megapixel night telephoto lens, supporting AI assistant YOYO features such as single-command low-light enhancement and sticker co-shooting. Industry sources reveal that the device integrates multiple Goodix technologies, including ultrasonic optical fingerprint, smart audio amplifier, touch control, and an NFC+eSE combination solution.

3.3.2 Alibaba's Quark AI Glasses To Hold New Product Launch

Alibaba will host the launch event for its first self-developed flagship dual-display AI glasses, Quark AI Glasses 2025, on November 27. The collaboration between Quark AI Glasses and Alipay has been further upgraded, introducing new exclusive capabilities such as reticle assistance and bone conduction audio capture, in addition to the existing "look-to-pay" functionality. With major players entering the market, the AI smart glasses industry is entering an accelerated development phase. Leveraging a large user base, smart glasses are expected to become the next major consumer electronics category after smartphones.

3.4 Industrial

3.4.1 Breton Technology Launches World's First Fully Autonomous Mining Truck

On November 21, Breton Technology held the "Cabless Electric Mining Truck Rollout and New Vehicle Launch Event" at its Wuhan factory. The event unveiled the world's first truly dedicated autonomous mining truck, the Breton Technology 9M145E, equipped with the company's self-developed E2E intelligent driving system. The new vehicle features a cabless design and is production-ready immediately upon rollout, marking a new stage for autonomous driving—from "feasible" to "fully production-ready."

3.4.2 Honeywell Unveils Eight New Products at China Import Expo

At the China Import Expo, Honeywell launched eight new products covering five key sectors: semiconductors, industrial combustion, industrial automation, smart buildings, and battery safety, precisely addressing Chinese market needs. New semiconductor solutions enhance wafer manufacturing stability, precision, and yield. The ThermJet-pro low-NOx burner made its China debut, combining high-efficiency combustion with low emissions. The CCC Inside and Experion® PKS integrated solutions provide a high-performance control platform covering the full equipment lifecycle. Honeywell also introduced a new battery safety sensor to preempt thermal runaway risks across multiple battery applications. Future-focused building management solutions and Optimizer series controllers were also launched, improving operational efficiency and intelligence through integrated hardware and software.

3.5 Automotive

3.5.1 BAIC And Huawei Collaborate To Launch New Xiangjie S9

The flagship 9-series Xiangjie S9, HarmonyOS Smart Driving's year-end premium model, was recently launched. The new Xiangjie S9 features six major upgrades, excelling across luxury, intelligence, driving control, and safety, potentially setting a new benchmark for luxury sedans. As a flagship 9-series model fully equipped with Huawei's top-tier technology, the S9 now integrates the all-new Huawei Tuling platform, Huawei QianKun Intelligent Driving ADS 4, redesigned smart electric doors, new Nebula tail lights, HarmonyOS ALPS health cockpit, rear zero-gravity seats, Huawei million-pixel smart projection headlights, and Huawei Yuezhang premium audio system, driving a significant leap in luxury sedan value.

3.5.2 Leapmotor A10 Makes Global Debut At Guangzhou Auto Show

On November 21, Leapmotor unveiled the first model on its new A platform—the Leapmotor A10—at the Guangzhou International Auto Show. This marks the completion of Leapmotor's A, B, C, D series matrix, entering a new phase of full coverage in mainstream segments. Positioned as a "smart premium long-range SUV," the A10 emphasizes "quality and affordability with accessible technology," featuring 500 km CLTC long-range, Qualcomm 8295P+8650 dual flagship chips, full-scenario intelligent assistance from parking to driving, oil-cooled electric drive, and 88.1% space utilization. It delivers a comprehensive, high-quality mobility solution for mainstream families and discerning users.

3.6 Telecommunications

3.6.1 Broadcom Launches World's First Quantum-Secure 8th-Gen 128G SAN Switch Portfolio

Broadcom announced the launch of the Brocade X8 Director and Brocade G820 56-port switch, the industry's first 128G Fibre Channel platform designed to meet today's mission-critical workloads and enterprise AI application demands. The eighth-generation Brocade Fibre Channel leverages embedded SAN AI technology, providing storage security for the quantum era and enabling automated infrastructure management.

3.6.2 ZTE And Indonesia XLSMART Complete FDD Massive MIMO AAU Trial

On November 24, ZTE partnered with Indonesia's leading telecom and ICT operator XLSMART to successfully complete trials of its FDD Massive MIMO Active Antenna Unit (AAU). The AAU supports multi-generation wireless access technologies (2G/4G/5G). Conducted in Bandung Regency, Indonesia, the trial demonstrated that this innovative solution not only ensured stable traditional voice services but also significantly enhanced data network performance. Results showed average user data speeds more than doubled, and total sector throughput increased by 20%, improving user experience and creating new revenue opportunities for operators.

3.6.3 Nokia And Japan's NTT DOCOMO Deploy MantaRay SON To Innovate 5G Operations

On November 25, Nokia announced its collaboration with Japan's NTT DOCOMO to deploy the proprietary MantaRay SON self-organizing network solution across DOCOMO's multi-vendor LTE and 5G RAN. This marks the first integration of Nokia 5G base stations with DOCOMO's operational systems in Japan, delivering advanced automation and operational efficiency for 5G networks. Deployment is ongoing, with expected improvements in DOCOMO's operational efficiency and customer experience.

3.7 Medical Equipment & Devices

3.7.1 GE Healthcare Acquires Intelerad For USD 2.3B To Accelerate Cloud And AI Ecosystem

GE Healthcare plans to acquire imaging software developer Intelerad for USD 2.3B in cash, aiming to establish a cloud-first diagnostic ecosystem that spans outpatient, teleradiology, and hospital settings. By combining GE Healthcare's global medical device and AI capabilities with Intelerad's enterprise cloud and imaging expertise, the company will be better positioned to meet the evolving needs of healthcare providers, streamline complex workflows, and drive digital innovation across the industry.

04

Product Updates

4. Product Updates

4.1 Memory Chips

Storage Chip Market Key Movements (Nov 2025)

Product Category	Model	Price Trend	Lead Time (Weeks)	Supply-Demand Status
DDR4	16GB	Rising	4-39	Some Constraints
DDR4	8GB	Rising	4-39	Some Constraints
LPDDR4/4X	8GB	Rising	16-26	Some Constraints
LPDDR5/5X	8GB	Rising	——	Some Constraints
NAND Flash	128GB	Rising	4-24	Some Constraints
NAND Flash	64GB	Rising	4-52	Some Constraints
NAND Flash	32GB	Rising	6-26	Some Constraints
eMMC	16GB	Rising	4-20	Some Constraints
eMMC	8GB	Rising	40	Some Constraints
eMMC	4GB	Rising	10-40	Some Constraints
SSD	120GB	Rising	8	Some Constraints

Source: CFM, 360Bom, DigiKey

4.1.1 Spot Storage Market Driven By Urgent Orders, Finished Storage Prices Continue To Climb

1) Product Updates

DDR4/LPDDR4: In DRAM, DDR4 spot prices surged sharply, with some exceeding the price of equivalent-capacity DDR5, making it difficult for consumer clients to accept such high costs. Currently, factory supply of consumer DDR4 dies to downstream memory makers remains stalled for an extended period. High spot prices, combined with ongoing inventory consumption and limited replenishment, have instead become a strong factor supporting continued upward pressure on DDR4 module prices. DDR4 16GB rose about 20%, while LPDDR4/4X and LPDDR5/5X increased roughly 46.7% and 29.2%, respectively.

NAND Flash: Industry players generally prioritize fulfilling PC clients' procurement needs and delivering as agreed. Meanwhile, after over two months of price increases, spot NAND prices remain elevated. Delays in factory supply have heightened concerns over upstream support and high pricing, leading vendors to adopt more cautious shipment strategies. Representative NAND models—128GB, 64GB, 32GB—saw price gains above 30%.

eMMC: According to supply chain sources, factory-released NAND ASP reached USD 0.1/GB, with higher prices in the spot market. Recently, vendors have been aggressively buying embedded eMMC, with some traders paying premiums. Rising resource prices, coupled with nearly completed annual targets, have driven memory makers to further raise eMMC prices. Aside from fulfilling pre-signed agreements, order intake is generally controlled.

SSD: Rapid shifts in the storage market have caused some channel vendors to pause shipments and orders. Speculative trading has intensified price volatility in the channel market. Currently, certain channel vendors no longer publicly quote prices, offering quotes only to key clients. Channel SSD supply for urgent consumer orders is limited, while DRAM modules are prioritized for system integrators.

2) Market Trends

Core Price Driver: The current price surge is fundamentally driven by the explosion in AI server demand. AI servers consume eight times more DRAM and three times more NAND than traditional servers, heavily crowding out capacity previously allocated to consumer electronics like smartphones and PCs. At the same time, international majors such as Samsung and SK Hynix have shifted more capacity toward higher-margin HBM and server DDR5, sharply reducing supply of consumer-focused LPDDR and DDR4 products.

Extreme Supply-Demand Imbalance: Module vendors report that market tightness is the most severe in 20 years, with some clients only able to obtain around 30% of ordered quantities, creating a "money can't buy" scenario. This imbalance intensified in November, with some smartphone makers even considering dismantling inventory devices to extract memory chips to meet new device demand.

Shift From "De-Stocking" To "Stock Competition": CFMS Flash Market analyst Dai Xiaoyu told Securities Times, "Compared with past memory price increases, this round has been faster, larger, and across more categories. Since Q4, a broad-based rally has emerged, and module vendors' lead times have generally lengthened." Currently, international memory makers prioritize the North American server market, with explosive orders since September, squeezing supply to China. Even limited capacity is prioritized for major internet companies and leading consumer electronics vendors, leaving module vendors relatively under-supplied.

Downstream Chain Reaction: Rising memory costs have already affected downstream manufacturers.

Smartphones and PCs: To cope with cost pressures, some smartphone brands plan to raise new device prices. PC vendors may adjust configurations, with upcoming laptops and desktops potentially reducing standard memory and storage from mainstream 16GB+512GB to 8GB+256GB.

Graphics Cards and Servers: Nvidia and AMD have issued price increase warnings for graphics cards. Server vendors' costs are also rising significantly due to volatile memory chip prices.

4.2 GPU

GPU Market Key Movements (Nov 2025)

Product	Model	Manufacturer	Price Trend	Supply-Demand Status
Consumer	GeForce RTX 50 series	NVIDIA	Rising	In Equilibrium
Consumer	Radeon RX 9070 XT	AMD	Falling	Some Constraints
Data Center	RTX PRO 6000	NVIDIA	Falling	In Equilibrium
Data Center	NVIDIA 5880 Ada	NVIDIA	Rising	Some Constraints
Data Center	Blackwell B300 / GB300	NVIDIA	Rising	Some Constraints

Sources: TweakTown, IC.Net, DigiKey, Quiksol

4.2.1 GPU Demand Surges, but High-End Supply Remains Tight

1) Market Updates

Intensifying GPU Competition: In Germany's latest weekly sales ranking, the AMD Radeon RX 9070 XT recorded 925 units sold, surpassing the combined sales of the entire NVIDIA GeForce RTX 50 series — a rare shift that signals subtle changes in the competitive landscape. NVIDIA continues to dominate the data center GPU sector, but AMD and Intel are rapidly closing the gap, particularly in AI inference and large-scale data computation. As competition accelerates, pricing may stabilize, while technology upgrades and performance gains will become key battlegrounds for market share.

Structural Price Increases: The recent price hikes in GPUs and related hardware stem from the AI industry shifting from an “exploratory” phase to one of “high penetration.” As AI adoption rises sharply, demand for core compute accelerates. This wave of increases has extended beyond AI GPUs to optical module chips and dedicated AI ASICs. For example, AMD has notified partners that GPU prices will rise by at least 10% due to higher memory costs. Institutions forecast that memory prices may climb another 30% by the end of 2025, sustaining cost pressures across the GPU ecosystem.

AI and HPC Demand Surge: Rapid advancements in AI — particularly deep learning and large-scale data processing — have driven a sharp increase in demand for high-performance GPUs. Data centers and research institutions rely heavily on GPUs to accelerate compute-intensive tasks, especially model training and inference. As AI adoption expands across sectors such as autonomous driving, medical imaging, and financial analytics, GPU demand continues to escalate.

2) Market Trends

Short-term: From late this year into early next year, the GPU market will remain constrained by supply chain bottlenecks, keeping prices on an upward trajectory. Demand continues to be driven primarily by AI and high-performance computing, with gaming and virtual reality also providing additional support. The price uptrend is expected to persist, and the overall supply-demand tightness may continue.

Long-term: From 2026 onward, with the rollout of next-generation GPUs, market competition will intensify. Technical differentiation among vendors will accelerate the market’s transition toward greater maturity and stability. New products will not only deliver substantial performance improvements but also introduce innovations in energy efficiency, cost structure, and integration. These advancements will drive the market toward higher efficiency and stronger price–performance ratios.

4.3 MCU

Q4 2025 MCU Lead Time and Pricing Trends

Manufacturer	MCU	Lead Time (Weeks)	Price Trend
Infineon	8-Bit MCU	10-26	Stable
Infineon	32-Bit MCU	10-26	Stable
Infineon	Automotive-Grade MCU	32-45	Stable
Microchip	8-Bit MCU	4-12	Extension
Microchip	32-Bit MCU	4-18	Extension
NXP	8-Bit MCU	13-39	Stable
NXP	32-Bit MCU	13-39	Stable
NXP	Automotive-Grade MCU	18-52	Stable
ST	8-Bit MCU	13-33	Extension
ST	32-Bit MCU	13-37	Extension
ST	Automotive-Grade MCU	40-52	Stable
Renesas	8-Bit MCU	14-18	Stable
Renesas	32-Bit MCU	14-18	Stable
Renesas	Automotive-Grade MCU	24	Stable

Source：Future Electronics

4.3.1 Automotive-Grade MCU Supply Shortage Intensifies, Local Supply Chain Accelerates

1) Supply–Demand Updates

Tight supply and extended lead times: In 2025, recovering demand from automotive and industrial sectors has put pressure on mature process nodes, mainly 40 nm and above. Lead times for major global automotive MCU suppliers have significantly increased. According to data disclosed by Future Electronics, international vendors such as NXP, Infineon, and ST are experiencing “supply shortages + extended delivery cycles” for automotive-grade MCUs this year. Lead times for some brands in Q4 have reached up to 52 weeks.

2) Product Updates

Architecture upgrades driving demand for high-performance MCUs: As NEVs, EVs, multi-domain ECU architectures, smart cockpits, body control, and powertrain functions continue to expand, requirements for MCU performance, functional safety, and customization capabilities grow accordingly. Beyond traditional control tasks, future automotive MCUs increasingly emphasize AI/MCU hybrid architectures, mixed-signal capabilities, safety certifications, and domain-controller compatibility.

3) Market Trends

Local supply chain scaling up: Multiple domestic vendors—such as SemiDrive, NationalChip, and other local semiconductor companies—are actively advancing high-end automotive-grade MCU development, aiming to benchmark international competitors with strengths in “automotive-grade DNA + localization + customization.” Industry analysis suggests that by 2027, domestic automotive-grade MCU market share may rise from the current 5 percent to 20 percent. On the supply side, since most automotive MCUs still rely on mature nodes and international foundry capacity, any lag in future capacity expansion could result in continued shortages or delivery delays.

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