

Bin Yuan Capital All China Strategy – May 2026

Bin Yuan Opinion

Montage Technology: A Critical Enabler of AI Memory Infrastructure

Montage Technology is the global leader in memory interface chips, a critical component that enables servers to access increasingly large volumes of memory at high speed and with high reliability. As artificial intelligence workloads drive a step-change in memory intensity across data centres, the content value and unit demand for these devices are rising materially, creating a powerful structural growth opportunity.

- 1) **Strong Moat & Profitability:** The industry only has three major suppliers. Montage stands out with solid tech advantages, standard-setting capabilities, long customer certification barriers and deep ties with top DRAM makers, supporting steady pricing power and profitability.
- 2) **Business Expansion:** Powered by proprietary SerDes technology, the company extends its layout to high-growth PCIe/CXL interconnect markets, broadening market space and diversifying growth beyond DDR5/MRDIMM upgrades.
- 3) **Key Growth Catalysts:** DDR5 and MRDIMM upgrades greatly raise the usage and value of RCD/DB chips; booming AI inference reduces GPU-CPU ratio from 8:1 to 4:1 and potentially lower to 1:1 over time, and more deployed CPUs further boost product demand.

AI workloads are driving a fundamental increase in memory intensity across data centres. Large-scale training, inference and emerging agent-based applications require significantly greater memory capacity and bandwidth, making memory architecture an increasingly important determinant of overall system performance.

Memory interface chips, including registering clock drivers (RCDs) and data buffers (DBs), enable reliable communication between processors and high-speed DRAM. As the industry migrates towards DDR5 and next-generation MRDIMM architectures, both the quantity and value of these devices increase. Consequently, semiconductor content per server rises alongside memory performance requirements.

High-Growth Market and a Concentrated Global Competitive Landscape

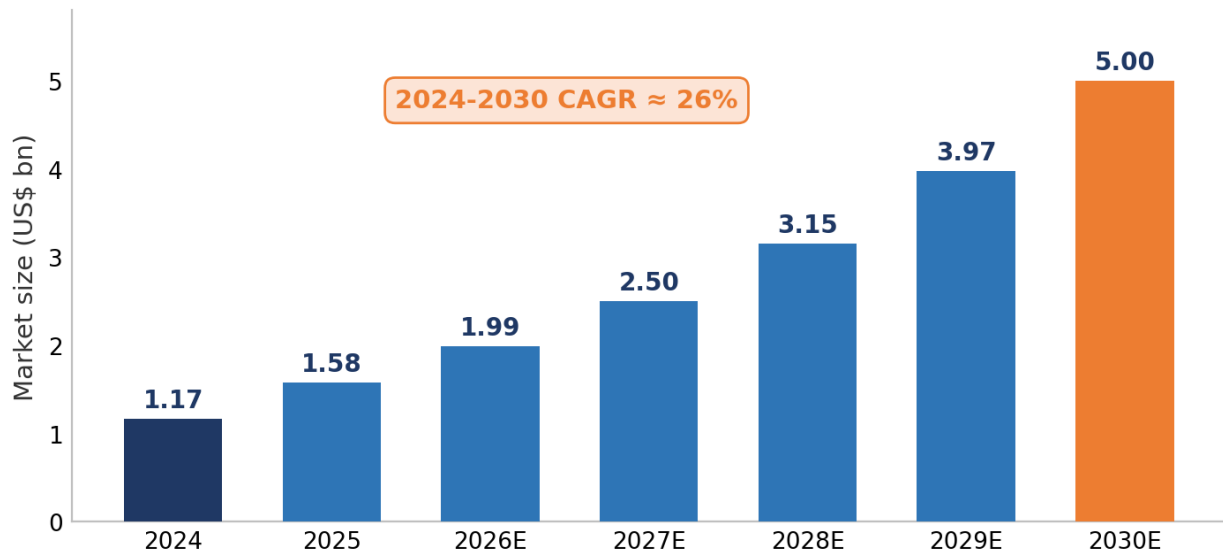
The markets in which Montage operates are benefiting from powerful structural growth drivers linked to AI infrastructure investment. According to Frost & Sullivan, the global memory interface chip market is expected to expand from approximately US\$1.2 billion in 2024 to US\$5.0 billion by 2030, representing a CAGR of around 26% (Chart 1).

Importantly, Montage's opportunity extends beyond its core memory-interface franchise. The adjacent PCIe/CXL interconnect market is forecast to grow from approximately US\$2.3 billion in 2024 to US\$9.5 billion by 2030, equivalent

to a CAGR of 27% (Chart 2). Through its expanding portfolio of PCIe Retimers, CXL memory-expansion controllers and related interconnect products, Montage is increasingly positioned to participate in this larger addressable market.

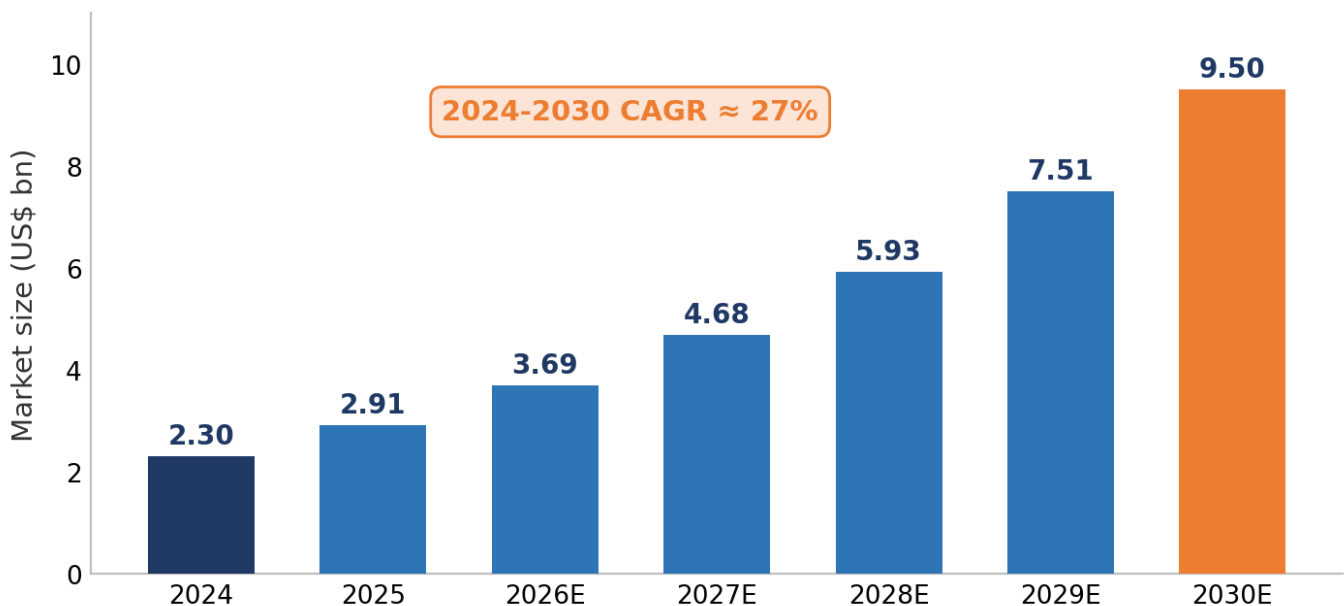
The significance of this expansion is that the company is no longer reliant solely on growth within the memory-interface segment. Instead, it is leveraging its core high-speed connectivity expertise to address multiple layers of the AI infrastructure stack, extending both its addressable market and long-term revenue opportunity.

Chart 1: Global Memory Interface Chip Market Size, 2024–2030E (US\$ bn)



Source: Frost & Sullivan, Bin Yuan Capital

Chart 2: Global PCIe/CXL Interconnect Chip Market Size, 2024–2030E (US\$ bn)



Source: Frost & Sullivan, Bin Yuan Capital

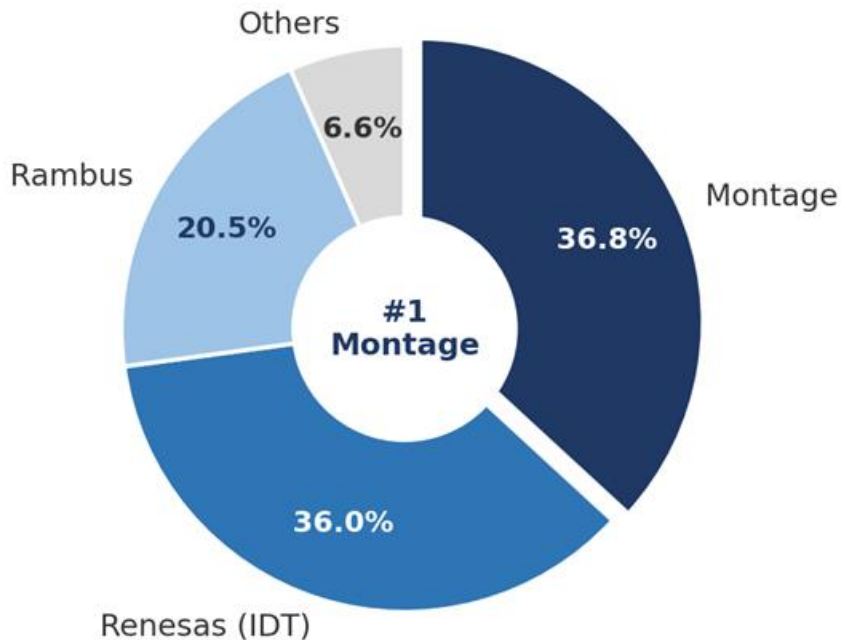
The memory interface chip industry exhibits an unusually concentrated market structure. Following successive DDR technology transitions over the past two decades, the supplier base has consolidated to three scaled participants—Montage Technology, Rambus and Renesas—which collectively account for more than 93% of the global market.

Within this oligopoly, Montage held the leading position in 2024 with a 36.8% market share, marginally ahead of Renesas (36.0%) and Rambus (20.5%), according to Frost & Sullivan. The stability of this competitive landscape reflects substantial barriers to entry, including proprietary high-speed analogue and SerDes design expertise, participation in JEDEC standards development, and customer qualification cycles that typically extend over multiple years.

Notably, this three-player market structure has remained intact through multiple DDR technology transitions, suggesting that technological change has reinforced, rather than disrupted, incumbent positions.

As a result, new entrants have struggled to gain meaningful share, allowing incumbents to sustain attractive margins and returns on capital.

Chart 3: 2024 Global Memory Interface Chip Market Share



Source: Frost & Sullivan, Bin Yuan Capital

Value Chain Analysis

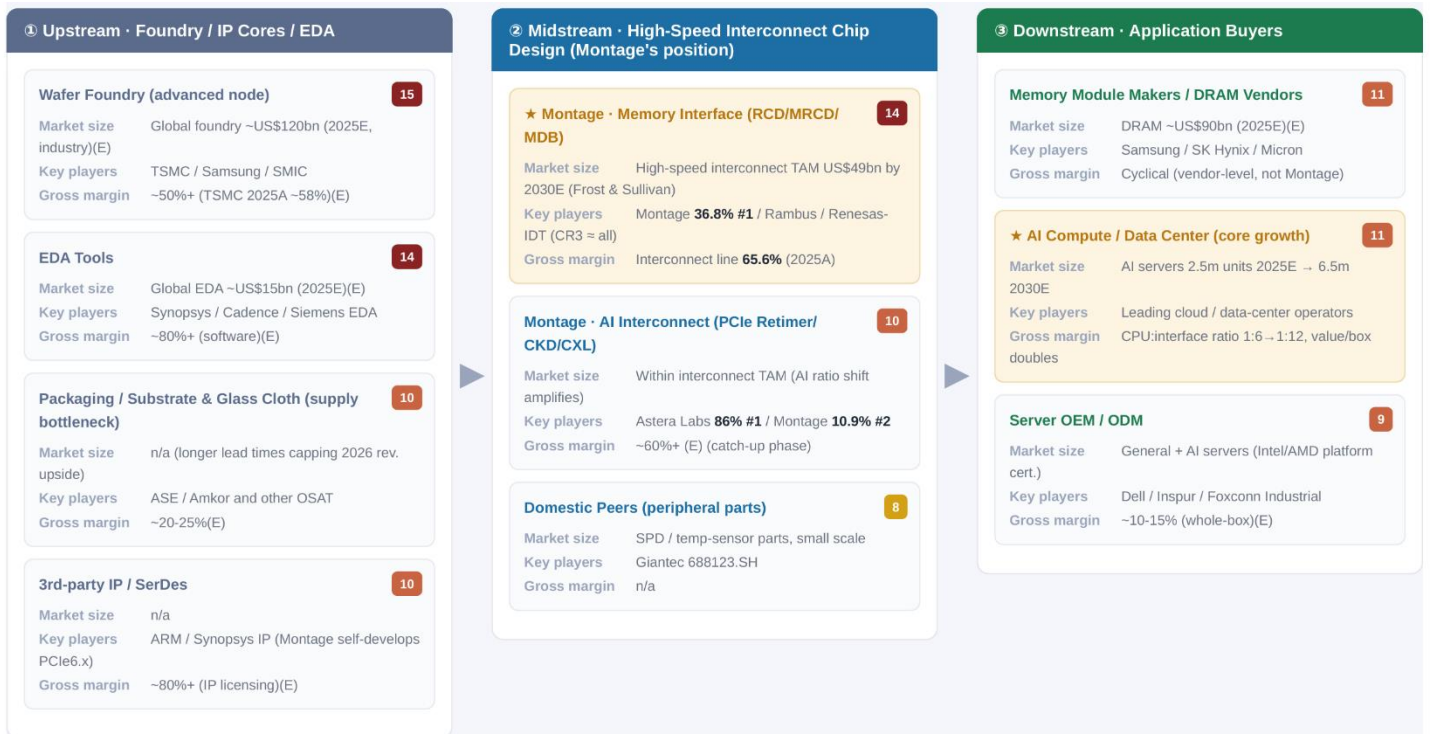
Montage operates a capital-light, fabless business model, focusing on chip design while outsourcing manufacturing, packaging and testing to specialist partners. This approach allows the company to concentrate resources on product

development, intellectual property and customer relationships, while avoiding the capital intensity associated with semiconductor fabrication.

The company's position within the value chain is strategically important. Competitive differentiation is driven primarily by high-speed analogue and SerDes design expertise, proprietary intellectual property and participation in industry standards, rather than manufacturing scale. As a result, a significant proportion of industry value accrues to the design layer where Montage operates.

On the demand side, the customer base is highly concentrated but characterised by substantial switching costs. The three global DRAM manufacturers—Samsung, SK Hynix and Micron—account for more than 90% of the server DRAM market and have worked with Montage across multiple product generations. Qualification cycles are lengthy, reliability requirements are stringent and product roadmaps are developed collaboratively over several years, creating durable customer relationships and a high degree of revenue visibility. Montage's top five customers accounted for approximately 77% of revenue in 2025.

Chart 4: Memory Interface Chip Value Chain



*Upper-right segment scores reflect value-chain pricing power: higher = better.

The supply chain is not entirely immune to constraints. Tightness in substrate availability affected industry shipments during late 2025, contributing to longer lead times across the sector. Management expects these pressures to ease through the second quarter of 2026 as additional suppliers complete qualification.

Strong entry barriers — global standard participation, proprietary SerDes IP, multi-year customer qualification and established supply-chain partnerships — underpin resilient industry competition and restrict new entrants' market gains. As a result, competitive advantages in the sector tend to reinforce themselves over time.

Competitive Positioning and Growth Outlook

Montage's competitive position is underpinned by three key strengths: technological leadership, expansion into adjacent markets and strong financial performance.

First, the company occupies an influential position within the memory-interface ecosystem. It played a leading role in the standardisation of DDR5 RCD, MDB and CKD devices, maintains representation on the JEDEC board and has developed deep expertise in high-speed SerDes design over more than two decades. Participation in industry standards, combined with long customer qualification cycles and proprietary intellectual property, creates meaningful barriers to entry and supports durable competitive advantages.

Second, Montage has successfully extended its technology platform beyond its traditional memory-interface franchise. Leveraging its proprietary SerDes capabilities, the company has established positions in the PCIe/CXL interconnect market, including PCIe 5.0 Retimers and CXL memory-expansion controllers. This expansion broadens the company's addressable market and reduces reliance on any single product category or technology cycle.

Third, the business combines attractive profitability with a strong balance sheet. Interconnect-chip gross margin reached 71.5% in the first quarter of 2026, while group return on equity increased to 18.25% in 2025. These metrics compare favourably with global semiconductor peers and reflect the value of the company's intellectual property, market position and capital-light business model.

The interconnect-chip segment is the primary growth driver, generating RMB 5.14 billion of revenue in 2025, representing growth of 53% year-on-year and approximately 94% of total revenue. The portfolio spans memory-interface chips, module-supporting devices, CKD clock drivers and PCIe/CXL interconnect products. Importantly, the company's newest product categories—MRCD/MDB, PCIe Retimers, CKD and CXL MXC controllers—delivered combined growth of 93.8% year-on-year in the first quarter of 2026, indicating an increasing contribution from higher-value and higher-content products.

The product roadmap provides visibility into several years of potential growth. Second-generation MRCD/MDB products supporting data rates of up to 12,800 MT/s are currently sampling with customers, while broader adoption of CXL-based memory pooling is expected as next-generation CPU platforms enter production. Beyond this, PCIe 6.x Retimers, PCIe Switch products and Ethernet PHY/Retimer solutions further expand the company's addressable market. Development of DDR6 memory-interface products is already underway ahead of expected commercial deployment later this decade, positioning Montage to participate in the next major memory upgrade cycle.



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Summary

AI is overhauling data center setups, where memory has become a key bottleneck; memory interface chips deliver the bandwidth and reliability needed for advanced AI computing.

Montage stands out in this ecosystem thanks to leading market status, standard-setting power and successful expansion into adjacent interconnect fields, backing steady market share and solid profits.

Driven by DDR5 penetration, MRDIMM rollout, climbing server memory loading and booming PCIe/CXL memory expansion, the firm is poised for sustained above-industry growth over the long run. Despite risks from concentrated clients, supply chain and geopolitics, its tech edge, robust profitability and growing market space make Montage a prime long-term play on global AI infrastructure expansion.



Sincerely,

Ping and the Team

June 5, 2026



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Principles for Responsible Investment

Bin Yuan on the Road

May 11, 2026

We visited Hygon to review its CPU and GPU roadmap and to assess its growth potential in the AI computing landscape.

Hygon remains one of the most compelling opportunities in domestic AI compute, built on a dual-engine CPU and GPU strategy pursued since 2014 and an x86 ecosystem moat now spanning more than 6,000 alliance members. GPU revenue doubled year on year, and management targets 50–60% group revenue growth over the next three years, with revenue outpacing expenses. Fourth-generation CPUs already account for over half of CPU sales at 10% higher average selling prices, and the entire GPU line-up is new; CPU performance has reached near-parity with overseas peers, with the remaining GPU gap mainly in power efficiency. Demand is strong—some customers require three to four times current capacity—and the emerging agent era is shifting the server CPU-to-GPU ratio from 1:4 toward 1:1, a structural tailwind for Hygon's dual-engine model. We believe that, leveraging its profound technological strengths and robust customer base, Hygon is well-positioned to continue creating significant value in the domestic AI compute sector.



" In the Agent era, the CPU is the brain and the GPU the hands—we are the only domestic player driving both, and we see the server CPU-to-GPU ratio moving from 1:4 back toward 1:1. " – Management of Hygon.

May 26, 2026

We paid a visit to iRay Technology to learn about a new growth opportunity in X-ray inspection for advanced PCBs and update on its detector business.

iRay is China's leading digital X-ray detector maker, and the focus of our visit was the emerging PCB X-ray inspection market. As PCB material systems change—faster transmission, more layers and tighter tolerances—defect rates rise and inspection is shifting from spot-checks toward much higher coverage. Capacity and lead-time problems at incumbent Omron have opened the door to iRay, with only two or three players reaching head-customer sampling; iRay differentiates through its own first-tier detectors and self-made X-ray sources. The sales team expects demand of 1,000–2,000 units a year over 2026–27, with a sizable addressable market; at an attractive unit price and a targeted market share, iRay could generate substantial revenue and healthy profit contributions from this segment.



" With PCB materials, layer counts and tolerances all tightening, X-ray inspection is moving from spot-checking toward far higher coverage—and that is the new demand we are now sampling into. " – Board secretary of iRay.

May 30, 2026

We travelled to Taipei for on-the-ground research, to take stock of the AI value chain and test our judgment on the direction of demand, where the bottlenecks lie, and the opportunities they create.

Demand across the AI value chain already runs well ahead of supply, and we expect this to persist: order growth continues to outpace capacity additions, and companies keep raising their market-size estimates, now revisiting them on a quarterly basis. The strain is concentrated in a handful of physical bottlenecks that cannot be scaled quickly—TSMC advanced-process capacity and CoWoS advanced packaging, semiconductor test, fiber array units, glass substrates and high-power lasers. In our view, it is precisely this scarcity that creates a genuine strategic opening for mainland Chinese companies: as incumbents keep raising prices, customers are accelerating the qualification of mainland second sources at these choke points, and we expect domestic players to gain share steadily through this cycle. The main beneficiaries sit in test and components—Maxone and Huafeng Test stand to benefit from the release of semiconductor-test demand as customers bring on second sources, while Sanhuan and Sunlord gain from the steadily rising use of ceramic substrates and passive components in every AI server. We believe these companies will benefit materially from the AI industry's development, with profitability improving over time.

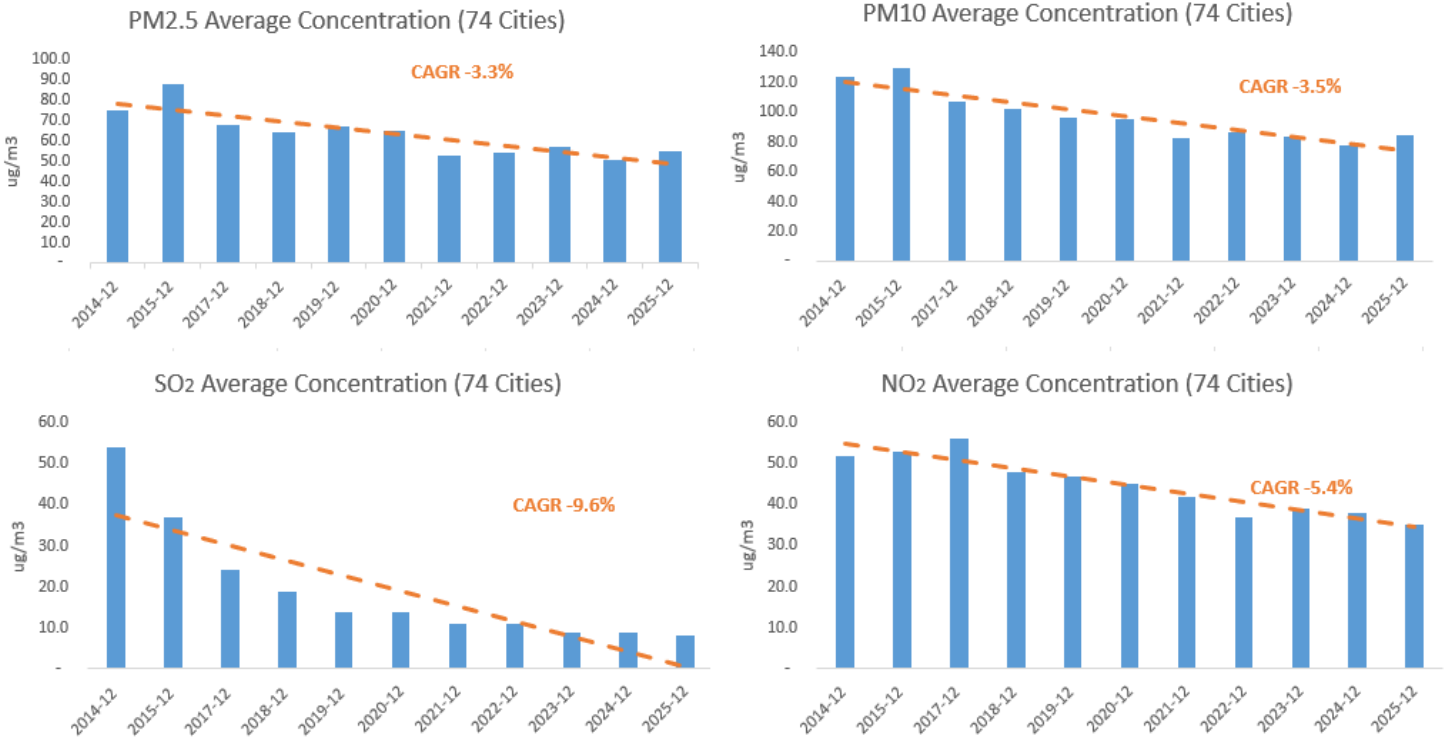


" Our probe card is a tiny part of the customer's total cost, but it sits right at the step that decides yield—so what they really care about is reliability, not shaving the price. " –A manager at an OSAT company.

Bin Yuan Environment Tracking

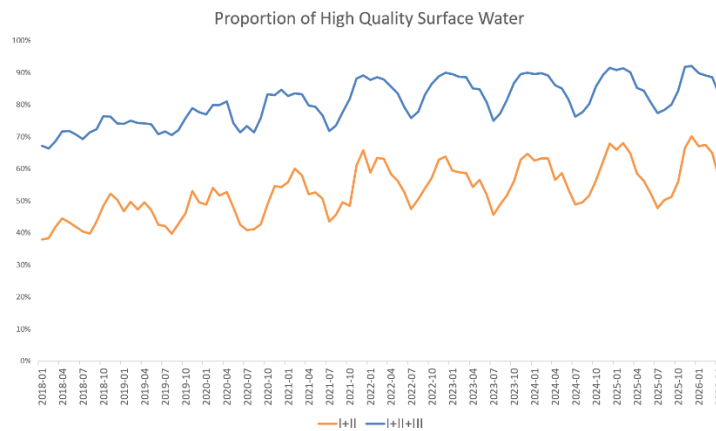
This tracker covers monthly air and water quality data, both of which have shown a steady improving trend over the last five years. Air pollutant concentrations have fallen on the back of reduced coal combustion, a rising share of new energy vehicles and tighter emission controls. Water quality has improved largely on the back of stronger control of wastewater discharges since 2017.

China air pollutant concentration data June 2015-2026



*PM_{2.5}, PM₁₀ and SO₂ are mainly from fossil fuel combustion, and NO₂ is mainly from vehicle emissions.

The proportion of high-quality water in China data June 2015-2026



*Water quality in China is graded across five levels, with Level I the best and Level V the worst. Levels I–II denote water suitable for drinking; Levels I–III denote water safe for direct human contact.



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