

Technology

2026 Outlook: AI compute momentum expands to edge AI revolution

Looking ahead to 2026, we expect distinct divergence in global technology end-markets. While AI computing supply chain is set to continue strong momentum driven by rapid LLM upgrade and sustained CSP capex, we believe edge AI cycle (AI smartphones/PCs/glasses) is just beginning to accelerate. However, we anticipate near-term pressure on low-end consumer electronics demand due to macro uncertainty, fading China subsidies and rising memory costs. We believe expansion of AI computing demand and edge AI innovation will become major growth drivers in 2026, and recommend two key structural themes: **1) AI infra supercycle**: Rubin/ASIC platform upgrade will unlock content value growth for ODMs/components (interconnects, thermal, power). **2) Edge AI**: Product launches from foldable iPhones and AI phone/glasses/PC is set to accelerate mix shift towards higher component spec. For stock picks, we favor quality leaders such as Luxshare, FIT Hon Teng, BYDE, Sunny Optical, AAC Tech and Xiaomi.

- **Servers: AI server momentum continues with VR/ASIC spec upgrades.** Backed by robust global AI infra investment, we forecast global AI server shipments to grow 50% YoY to 2.32mn in 2026, driven by "GPU + ASIC" dual growth engines. We expect rollouts of new Blackwell/Rubin platform and in-house ASIC upgrade will boost value content gain. **1) Interconnects**: new Rubin/ASIC launch will drive spec upgrade and breakthroughs in connectors/cables and OCS/CPO. **2) Thermal**: With single-chip TDP reaching 1,000W+, liquid cooling penetration is poised to accelerate, with mass production of micro-channel cold plates expected in 2027. **3) Power**: HVDC/BBUs will become mainstream, driving volume/ASP growth for power components. We like leading ODMs/component suppliers such as Luxshare, FIT and BYDE.
- **Smartphones: memory cost headwinds; Focus on foldable iPhone & AI upcycle.** Given macro uncertainties, rising memory costs and fading subsidy tailwinds, we forecast 2026 global smartphone shipments to decline 5% YoY to 1.18bn, with low-end models impacted the most, while high-end segment will remain resilient thanks to AI innovations. We expect 2026 to be a strong year for Apple, featuring iPhone 18, foldable iPhone, smart home products and Apple Intelligence upgrade, consolidating its leadership in the premium segment. For Android, all OEMs are accelerating transition to AI smartphones, enhancing user experience through on-device LLMs. We recommend optics (periscope/hybrid), structural components (titanium/hinges) and thermal (VC) names, including Luxshare, AAC and Xiaomi.
- **AR/VR: AI LLMs to kick off Smart Glasses 2.0 era.** We estimate global AI glasses shipments to surpass 10mn in 2026, becoming the key wearable category following TWS. In the long run, we expect AR glasses will be the ultimate form factor, and we forecast shipments to reach 32mn by 2030, as optical waveguide and micro-LED/LCOS technologies become mature. Beneficiaries include suppliers with optical technologies (waveguides/CCM) and OEMs, such as Sunny, AAC Tech and Q-Tech.
- **PC/Auto electronics: AI PC inflection point; L4+ ADAS accelerates.** We expect global PC market to face pressure in 1H26E as Win-11 replacement cycle nears its end and memory costs soar. We forecast global PC shipments to decline 2% YoY to 275mn in 2026. The bright spot lies in AI PC penetration to reach 50% in 2026. For auto, given favourable policies and declining costs, we expect mass adoption of L4 autonomous driving to speed up. We favor high-voltage/high-speed connectors, optics, smart cockpit displays, and domain controllers, such as Luxshare, FIT, BYDE, Sunny, AAC and BOEVx.

OUTPERFORM
(Maintain)

China Technology Sector

Alex NG

(852) 3900 0881

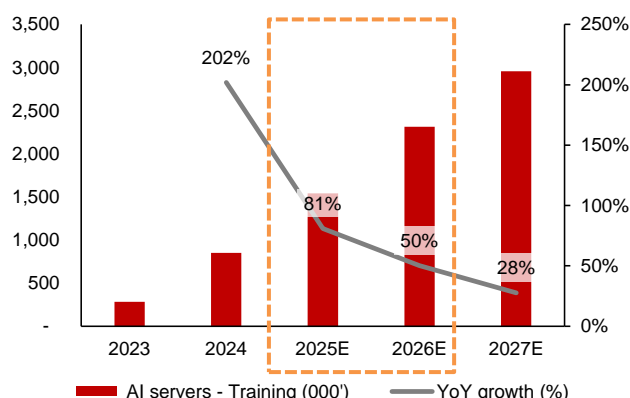
alexng@cmbi.com.hk

Hanqing LI

lihanqing@cmbi.com.hk

Focus Charts

Figure 1: Global AI training server market (2023-27E)



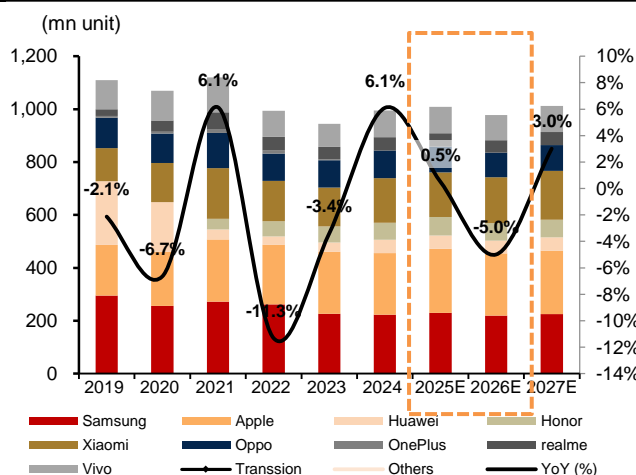
Source: Trendforce, CMBIGM estimates

Figure 2: GB/VR AI server ODM vendors (2025/26)

| | GB/VR rack | | | | | | | |
|--------------|---------------|---------------|-----|-----|------|-----|------|------|
| | 2025E | 2026E | QD | HH | InvC | Wiw | Dell | SMCI |
| Microsoft | 25% | 21% | 40% | 60% | - | - | - | - |
| AWS | 7% | 8% | 70% | 30% | - | - | - | - |
| Meta | 16% | 12% | 70% | 30% | - | - | - | - |
| Google | 10% | 8% | 70% | 10% | 10% | - | - | - |
| Oracle | 23% | 25% | - | 80% | - | 20% | - | - |
| Tesla/XAi | 11% | 11% | - | - | - | - | 80% | 20% |
| Coreweave | 7% | 9% | - | - | - | - | 100% | - |
| Others | 1% | 6% | - | - | - | - | - | - |
| Total | 29,000 | 58,500 | | | | | | |

Source: Trendforce, CMBIGM estimates

Figure 3: Global smartphone shipment forecast



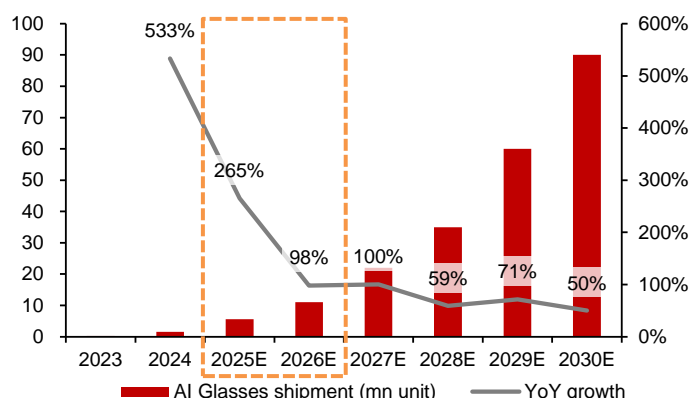
Source: IDC, CMBIGM estimates

Figure 4: Global smartphone shipment (by brand)

| (mn unit) | 2022 | 2023 | 2024E | 2025E | 2026E | 2027E |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Samsung | 262 | 227 | 223 | 230 | 220 | 225 |
| Apple | 226 | 234 | 232 | 242 | 235 | 240 |
| Xiaomi | 153 | 146 | 168 | 169 | 173 | 185 |
| Huawei | 31 | 35 | 50 | 50 | 48 | 50 |
| Honor | 57 | 61 | 65 | 70 | 66 | 67 |
| Oppo | 166 | 154 | 154 | 148 | 141 | 146 |
| Vivo | 99 | 88 | 101 | 100 | 95 | 99 |
| Transsion | 73 | 95 | 107 | 121 | 110 | 115 |
| Others | 139 | 125 | 134 | 112 | 92 | 88 |
| Total | 1,206 | 1,165 | 1,236 | 1,242 | 1,180 | 1,215 |
| YoY growth | -11% | -3% | 6% | 0.5% | -5% | 3% |

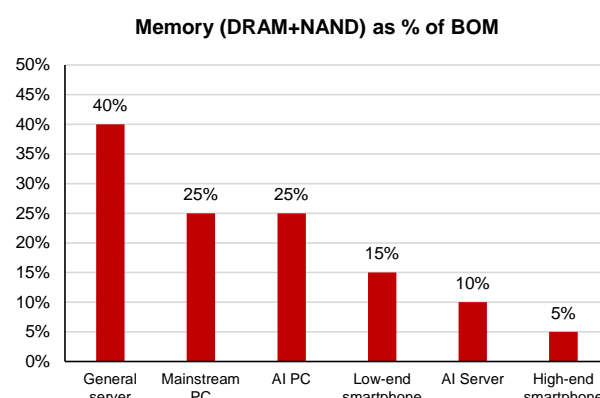
Source: IDC, CMBIGM estimates

Figure 5: Global AI Glasses shipment forecasts



Source: IDC, CMBIGM estimates

Figure 6: Memory as % of BOM cost



Source: CMBIGM estimates

Figure 7: Global AI server TAM forecasts

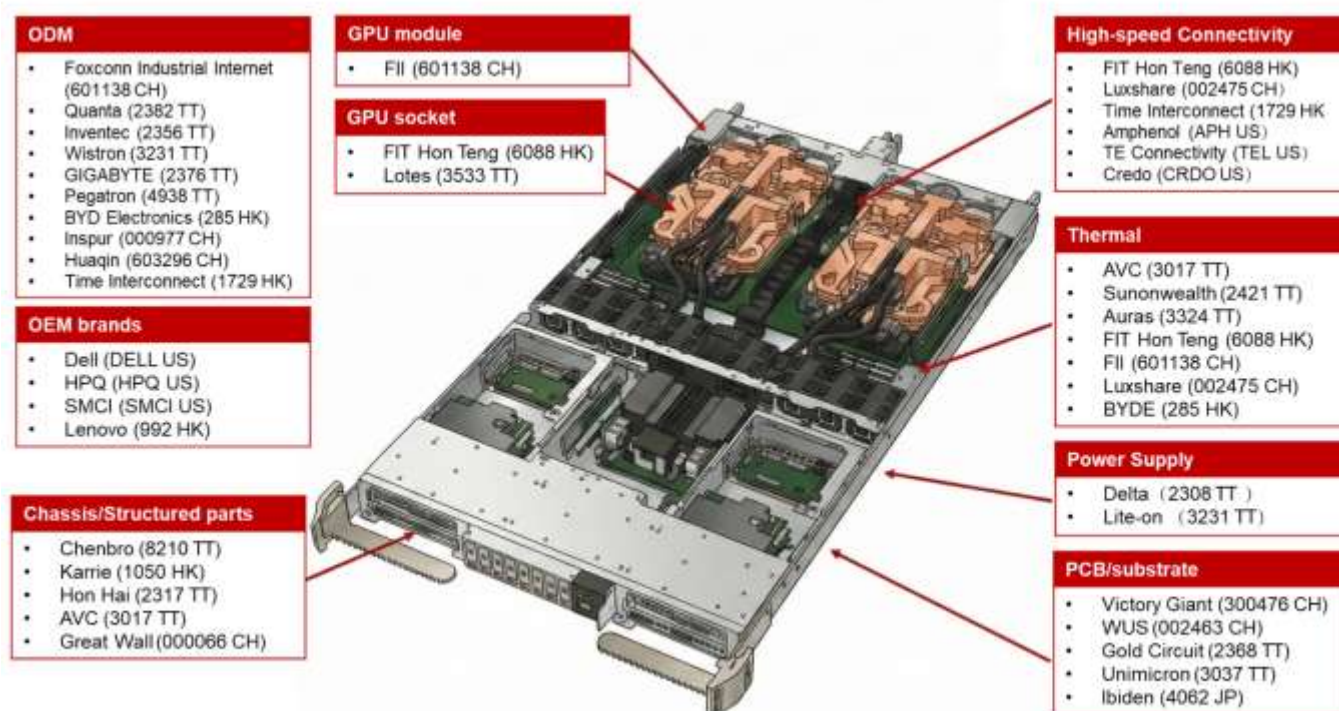
| | 2023 | 2024E | 2025E | 2026E |
|---|---------------|---------------|---------------|---------------|
| Total AI accelerator volume ('000) | | | | |
| GPU chips | 1,856 | 5,492 | 8,046 | 10,350 |
| YoY growth | | 196% | 47% | 29% |
| Nvidia | 1,563 | 5,048 | 7,321 | 9,084 |
| YoY growth | | 223% | 45% | 24% |
| AMD | 293 | 444 | 725 | 1,265 |
| YoY growth | | 51% | 64% | 74% |
| ASIC chips | 1,288 | 2,756 | 5,571 | 9,030 |
| YoY growth | | 114% | 102% | 62% |
| Total | 3,144 | 8,248 | 13,617 | 19,380 |
| YoY growth | | 162% | 65% | 42% |
| AI server - Training ('000) | | | | |
| GPU AI server | 200 | 626 | 1,171 | 1,714 |
| YoY growth | | 213% | 87% | 46% |
| ASIC AI server | 82 | 226 | 371 | 600 |
| YoY growth | | 176% | 64% | 62% |
| Total | 282 | 852 | 1,542 | 2,315 |
| YoY growth | | 202% | 81% | 50% |
| Nvidia AI server rack ('000) | | | | |
| HGX/MGX Rack | 45.5 | 147.6 | 150.8 | 145.6 |
| GB200/300/VR200 NVL72 | - | 0.4 | 29.0 | 58.5 |
| Total | 45.5 | 148.0 | 179.9 | 204.1 |
| YoY growth | | 226% | 22% | 13% |
| Global server shipment ('000) | | | | |
| General and other servers | 13,098 | 12,773 | 13,159 | 13,754 |
| YoY growth | | -2% | 3% | 5% |
| AI server – Training | 282 | 852 | 1,542 | 2,315 |
| YoY growth | | 202% | 81% | 50% |
| AI server – Training mix (%) | 2.2% | 6.7% | 11.7% | 16.8% |
| Total | 12,370 | 14,476 | 16,684 | 17,366 |
| YoY growth | | 17% | 15% | 4% |

Source: IDC, Trendforce, CMBIGM estimates

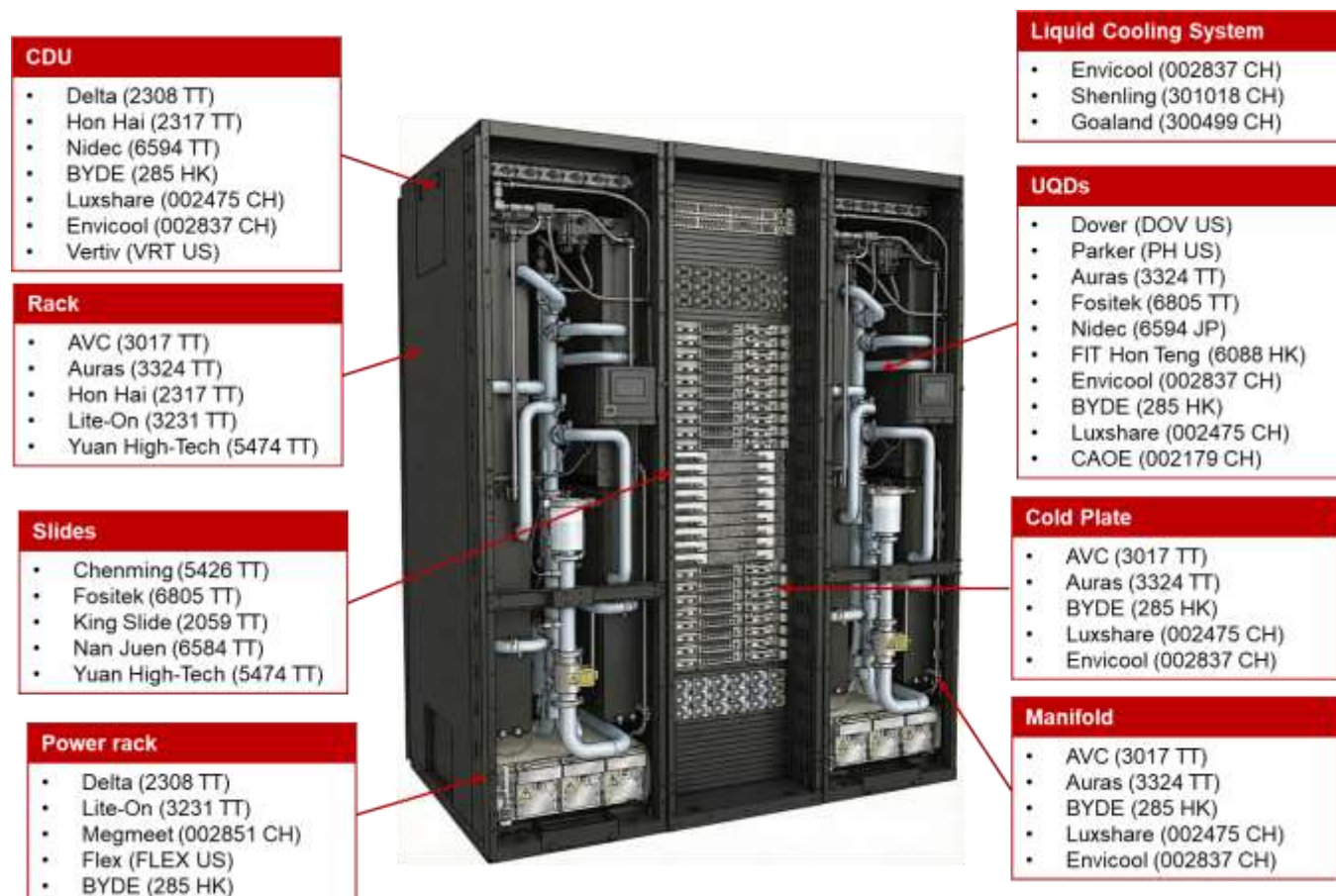
Figure 8: AI server ODM suppliers (2026)

| | Quanta | Hon Hai | Inventec | Wiwynn | Dell | SMCI | Inspur | Huaqin | Nettrix | Lenovo | Others |
|--------------------|--------|---------|----------|--------|------|------|--------|--------|---------|--------|--------|
| US CSP | | | | | | | | | | | |
| Microsoft | 20% | 40% | 15% | 15% | - | - | - | - | - | - | 10% |
| AWS | 25% | 45% | 20% | 5% | - | - | - | - | - | - | 5% |
| Meta | 55% | 10% | 5% | 25% | - | - | - | - | - | - | 5% |
| Google | 40% | 15% | 40% | - | - | - | - | - | - | - | 5% |
| Oracle | - | 70% | - | - | 20% | 10% | - | - | - | - | 0% |
| Tesla/Xai | - | - | - | - | 30% | 60% | - | - | - | - | 10% |
| Coreweave | - | - | - | - | 60% | 30% | - | - | - | - | 10% |
| Chinese CSP | | | | | | | | | | | |
| ByteDance | - | 5% | 5% | - | - | - | 35% | - | 30% | 10% | 15% |
| Tencent | - | 5% | 5% | - | - | - | 25% | 40% | - | 10% | 15% |
| Alibaba | - | 5% | 5% | - | - | - | 35% | 25% | 15% | 10% | 5% |
| Baidu | - | - | 10% | - | - | - | 50% | - | - | - | 40% |

Source: Trendforce, CMBIGM

Figure 9: Global AI Server supply chain

Source: CMBIGM

Figure 10: Global AI Server rack/ liquid cooling supply chain

Source: CMBIGM

Figure 11: Smart Glasses supply chain



Source: CMBIGM

Figure 12: Foldable smartphone supply chain



Source: CMBIGM

2026 Outlook: Robust AI computing momentum; Focus on Edge AI innovation opportunities

Global demand divergence; AI computing and edge innovation remain key growth drivers

Rapid development of AI LLMs and robust CSP capex have boosted exponential growth across AI supply chain in the past 2 years, while innovations in edge AI devices accelerates penetration of AI smartphones, AI glasses and AI PCs, as well as AI wearables and smart home devices. Looking into 2026, we expect near-term pressure for low-to-mid-end consumer electronics due to macro uncertainties, fading China subsidy and memory cost hike, while AI computing and edge AI supply chains are poised for new innovation cycle, backed by upgrade in general/AI servers and accelerated product launches for edge AI devices. We recommend two themes: 1) AI computing expansion and spec upgrade; 2) Accelerated edge AI proliferation (smartphones/PCs/wearables/glasses/smart home).

1) Servers: We expect general server recovery to continue and AI server momentum to remain strong. We forecast global server shipments to grow 7% YoY to 18.5mn. Ramp-up of Rubin platform and ASIC servers will further accelerate AI server demand, driving AI server shipment growth of 50% YoY to 2.32mn in 2026. **2) PCs:** We remain cautious on global PC demand for 2026, forecasting 2% YoY shipment decline to 275mn, given slowing Win-11 replacement and slower consumer demand on rising BOM costs. **3) Smartphones:** Given global macro uncertainties, fading China subsidy tailwinds and rising memory costs, we forecast 2026 global smartphone shipments to decline 5% YoY to 1.18bn.

Figure 13: Global TAM estimate: servers, PCs, smartphone, AR/VR, TV, iPhone/iPad/AirPods/Watch/Mac

| (mn unit) | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025E | 2026E | 2027E |
|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Server | 9.6 | 10.2 | 11.8 | 12.7 | 13.5 | 14.9 | 12.4 | 14.5 | 16.7 | 17.4 | 18.5 | 19.7 |
| YoY growth | -1% | 6% | 16% | 7% | 7% | 10% | -17% | 17% | 15% | 4% | 7% | 6% |
| AI Server- Training | | | | | | | | 0.3 | 0.9 | 1.5 | 2.3 | 3.0 |
| YoY growth | | | | | | | | | 202% | 81% | 50% | 28% |
| PC | 260.2 | 259.7 | 259.6 | 267.9 | 304.2 | 350.1 | 292.0 | 258.3 | 262.6 | 281.0 | 275.4 | 269.9 |
| YoY growth | -6% | 0% | 0% | 3% | 14% | 15% | -17% | -12% | 2% | 7% | -2% | -2% |
| Smartphones | 1,469 | 1,465 | 1,403 | 1,373 | 1,281 | 1,360 | 1,206 | 1,165 | 1,236 | 1,242 | 1,180 | 1,215 |
| YoY growth | 2% | 0% | -4% | -2% | -7% | 6% | -11% | -3% | 6% | 0.5% | -5% | 3% |
| AI Glasses | | | | | | | | 0.2 | 1.5 | 5.6 | 11.0 | 22.0 |
| YoY growth | | | | | | | | | 533% | 265% | 98% | 100% |
| AR Glasses | | | | | | | | | 0.6 | 0.6 | 0.9 | 1.7 |
| YoY growth | | | | | | | | | | 9% | 50% | 89% |
| VR headsets | 1.6 | 3.6 | 3.3 | 3.4 | 6.0 | 10.3 | 9.9 | 7.5 | 7.6 | 6.1 | 6.7 | 8.3 |
| YoY growth | | 120% | -7% | 3% | 74% | 72% | -4% | -24% | 1% | -19% | 9% | 24% |
| TV | | | | | 239.5 | 220.7 | 211.6 | 202.3 | 207.5 | 207.8 | 227.3 | 231.0 |
| YoY growth | | | | | | -8% | -4% | -4% | 3% | 0% | 9% | 2% |
| Apple Products | | | | | | | | | | | | |
| iPhone | 215.4 | 215.8 | 208.0 | 200.5 | 204.9 | 228.6 | 224.8 | 224.1 | 218.7 | 233.2 | 235.1 | 240.5 |
| YoY growth | -7% | 0% | -4% | -4% | 2% | 12% | -2% | 0% | -2% | 7% | 1% | 2% |
| AirPods | | | 27.5 | 58.2 | 73.7 | 83.8 | 82.1 | 74.4 | 58.8 | 57.6 | 54.8 | 52.0 |
| YoY growth | | | | 112% | 27% | 14% | -2% | -9% | -21% | -2% | -5% | -5% |
| iPad | 42.5 | 43.8 | 44.8 | 46.0 | 57.3 | 62.2 | 63.6 | 52.4 | 59.6 | 61.0 | 62.9 | 66.0 |
| YoY growth | -14% | 3% | 2% | 3% | 25% | 9% | 2% | -18% | 14% | 2% | 3% | 5% |
| Watch | 11.6 | 18.2 | 21.4 | 27.2 | 34.2 | 43.4 | 42.8 | 40.6 | 37.1 | 36.7 | 36.0 | 37.0 |
| YoY growth | 32% | 57% | 18% | 27% | 26% | 27% | -1% | -5% | -9% | -1% | -2% | 3% |
| Mac | 18.5 | 19.0 | 18.1 | 18.0 | 20.7 | 24.7 | 23.7 | 20.6 | 22.8 | 26.2 | 27.0 | 29.1 |
| YoY growth | -9% | 2% | -4% | -1% | 15% | 19% | -4% | -13% | 11% | 15% | 3% | 8% |
| HomePod | | | 4.6 | 6.1 | 7.1 | 10.5 | 10.7 | 10.0 | 8.3 | 7.5 | 6.7 | 6.9 |
| YoY growth | | | | 33% | 16% | 48% | 2% | -7% | -17% | -9% | -10% | 3% |
| Vision Pro | | | | | | | | | 0.5 | 0.4 | 0.4 | 0.5 |
| YoY growth | | | | | | | | | | -21% | 5% | 5% |

Source: IDC, Gartner, S&P, Trendforce, CMBIGM estimates

Potential implications of memory super cycle on supply chain

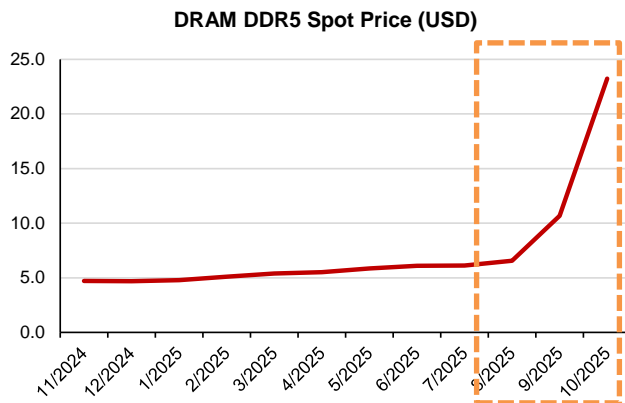
Since last year, rapid surge in memory prices has had a profound impact on technology supply chain. We expect rising cost will squeeze gross margins for downstream brands and ODMs in the near term, particularly in low-to-mid-end consumer market. Cost pressures will subsequently transfer to brands and component suppliers, ultimately reflected in higher ASPs and structural upgrades. Overall, vendors possessing strong pricing power (high-end/commercial) and robust inventory management will be able to buffer the short-term cost shock, while vendors with low inventory levels or slow turnover will face significant pressure from high-cost procurement.

1) AI Servers: Limited impact with low customer sensitivity. Traditional DRAM/NAND accounts for 8-15% of BOM cost, while HBM accounts for a higher proportion (30-40%) and remains in tight supply. Therefore, we expect price hike to have minor impact on overall AI server costs. For AI server ODMs, in collaboration with CSPs, memory is often regarded as pass-through component. Purchase price fluctuations are directly transferred to clients, and therefore we do not expect ODMs to be materially affected by rising memory prices. For AI server OEMs (e.g., SMCI, HPE, Dell), due to intensified competition and eroding price premium for GPU supply, we expect OEM gross margins to face pressure.

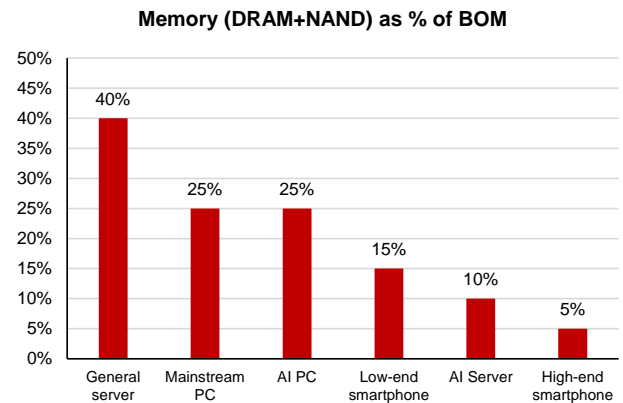
2) General servers: Significant cost pressure; recovery cycle prolonged. Memory accounts for 30-40% of BOM for general-purpose servers. As customers in this segment have high price sensitivity, we expect OEMs to face margin pressure, with companies like Dell and HP anticipating that rising memory prices will impact their server businesses. Overall, we expect demand for low-end servers may be postponed, and some customers will delay the transition to DDR5. Shortages in enterprise SSDs will accelerate the migration toward QLC/PLC technologies. To alleviate cost pressures, we expect OEM brands to reduce specifications (de-spec) for non-memory components, focus on high-margin models, and raise product prices.

3) PC: Intensified cost pressure; accelerating differentiation and transformation. DRAM accounts for 8-15% of the BOM for mainstream notebooks, while NAND SSDs account for 7-12%. We estimate recent memory price hikes will push up per-unit costs by US\$15–30, creating a substantial shock for low-margin products. For OEM brands, we believe costs for high-end/commercial products can be partially passed on due to lower customer price sensitivity, while low-to-mid-end products have limited room for price hikes, leading to margin compression. For ODMs, although they utilize a "Cost Pass-Through" model, their bargaining power is weaker than brand vendors, and thus we expect ODMs to face pricing pressure. In the long term, We expect structural upgrade (QLC replacing NAND, LPDDR5 upgrades), and products such as AI PCs will see volume growth, driving technical upgrades across industry.

4) Smartphones: Low-end models hit hard with emerging de-spec trends. Memory accounts for 10-15% of BOM costs (4-5% for high-end). With 4Q25 DRAM contract prices rising 75% YoY, per-unit costs have increased by US\$10–25, leading to higher margin pressure on low-to-mid-range models than on flagships. For value-focused Android OEMs, we believe recent price hikes will directly impact GPM by 2-3 ppt., while high-end models (iPhone/Samsung Galaxy S) will see smaller impact due to stronger bargaining power and long-term supply agreements (LTA). Overall, we expect brands will reduce promotions or raise new model prices, potentially leading to shipment decline, while mid-priced models will see de-spec and non-core component suppliers may face pricing pressure or delays in spec upgrades. Given tight supply, smaller brands will face increasing difficulties in securing resources. We expect industry consolidation in 2026 with top-tier brands likely gaining further market share.

Figure 14: DDR5 spot up 250% in past 2 months

Source: DRAMeXchange, CMBIGM

Figure 15: Memory as % of BOM cost

Source: CMBIGM estimates

Global servers: general server recovery, VR/ASIC AI server upgrade accelerating

GPU/ASIC dual-engines: robust momentum in AI server supply chain

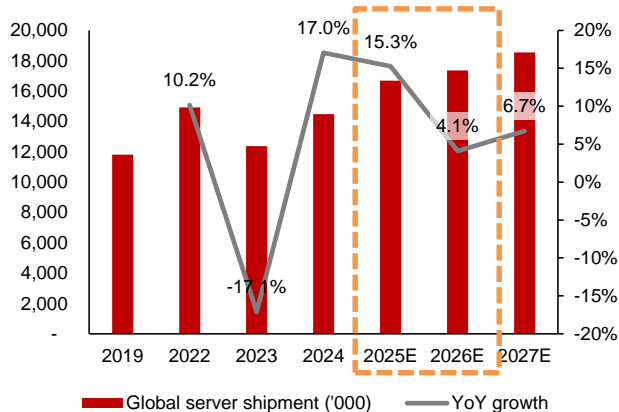
Looking ahead to 2026, global server industry's growth trajectory remains centered on AI, driven by HPC and AI applications. We forecast global AI server shipments (high-end + mid/low-end) to maintain strong growth at 24% YoY to 2.67mn in 2026. While AI remains the primary growth driver, overall server shipments are expected to see a moderate recovery of +4% YoY.

In terms of demand drivers, we expect CSPs and sovereign clouds will lead the way. We believe aggressive capex expansion from US CSPs will sustain market momentum in 2026, while Chinese CSPs are poised for robust growth, driven by ramp-up of DeepSeek adoption and accelerated localization of AI supply chain. In addition, while GPUs remain dominant, we expect penetration of ASICs to rise further as CSPs actively invest in in-house AI platforms—a key structural trend to watch in the coming years.

With Nvidia set to launch VR200 NVL144 rack solution in 2026, we believe the business model will accelerate its transition from JDM to L10 delivery. As key components become highly standardized, ODMs are required to leap from "standard assembly" to "Integrated Mechanical, Electrical, and Thermal Design." We expect this shift will raise technical barriers, which will accelerate market share concentration toward top-tier players. Overall, we maintain a positive view on AI hardware sector in 2026, and ODMs and suppliers of critical components (Interconnects, Liquid Cooling, Power) are well positioned to benefit from both volume growth and ASP expansion.

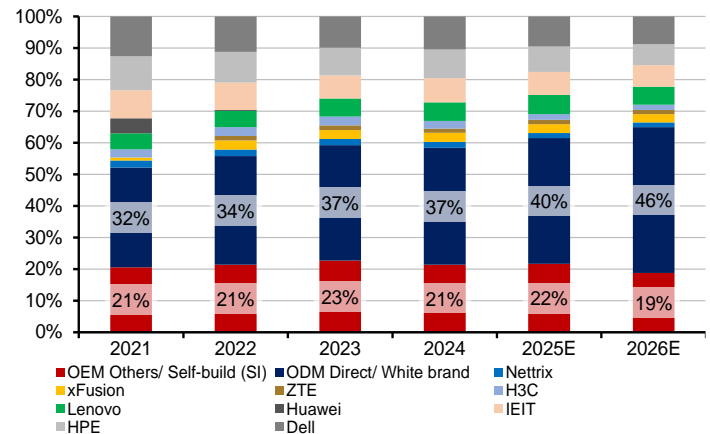
General servers: cloud demand resilient; enterprise better than expected. We forecast general server market to achieve moderate growth in 2026, with shipments up 4% YoY, driven by three key factors: 1) AI inference spillover: the surge in AI workloads is leading to spillover demand for storage servers and traditional computing servers. 2) CSP Capex: robust cloud spending provides a stable baseline for general server procurement. 3) Refresh Cycle: Replacement cycle, supported by rollout of new CPU platforms, will underpin market recovery. As noted by Dell, legacy infrastructure is being consolidated into more efficient, high-performance multi-core servers.

Figure 16: Global server shipment (2019-27E)



Source: IDC, CMBIGM estimates

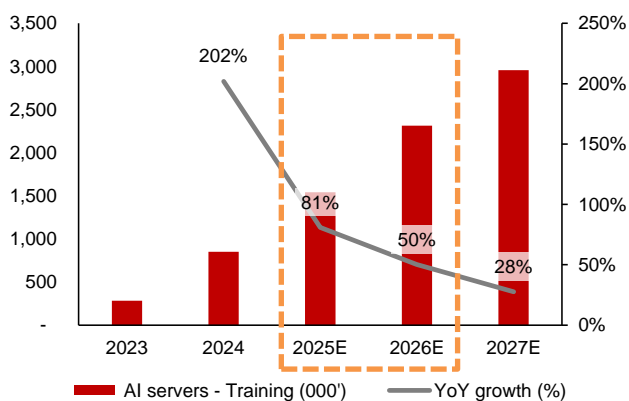
Figure 17: Global server shipment by brand (2021-26)



Source: Trendforce, CMBIGM estimates

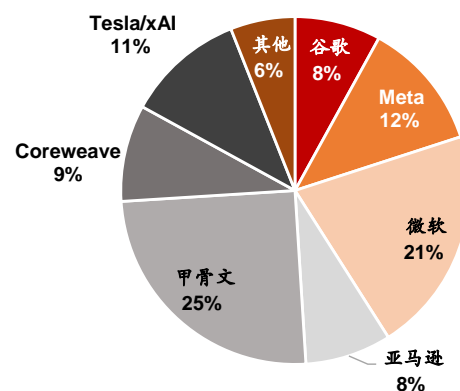
GPU AI servers: GB300 smooth transition; VR200 gearing up for 2026. For 2026, we expect GPU AI servers to account for 75% of total AI server shipments. We forecast high-end GPU AI server shipments to grow 87%/46% YoY to 1.17mn/1.71mn in 2025/26. **1) GB200/300 servers:** We expect Blackwell-based servers to capture >80% of Nvidia's high-end server mix. With GB300 racks ramp-up in 2H25E, we expect shipments in 2026 will be dominated by GB300 series. We forecast GB200/300 rack shipments to reach 290k/350k in 2025/26. **2) VR200 servers:** Nvidia is expected to continue promoting its full-rack AI solutions in 2026, with potential customer demand approaching 590k racks (GB/VR combined). As VR200 mass production will likely commence in 2H26E, we forecast VR200 rack shipments to reach 23k in 2026, positioning it to become the mainstream solution by 2027. **3) AMD servers:** AMD MI450 is expected to be launched in 2H26E, offering semi-custom solutions for major clients like Meta and OpenAI. Additionally, we expect AMD Helios server rack solution to gain market traction.

Figure 18: Global AI training server shipment



Source: IDC, Trendforce, CMBIGM estimates

Figure 19: Global VR/GR rack demand (2026)



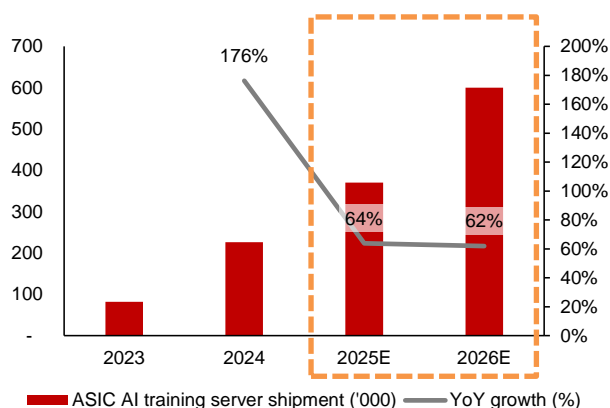
Source: Trendforce, CMBIGM estimates

ASIC servers: momentum accelerates; potential upside for 2026 AI server market.

Major CSPs are increasingly accelerating the development of in-house ASICs due to their advantages in performance and customization. TrendForce forecasts that market share of ASIC AI servers will rise from 21% in 2025 to 25% in 2026, driven by aggressive CSP infrastructure investments. **1) Google TPU:** With a relatively mature ASIC ecosystem, we expect TPU v7 to become the mainstream platform by early 2026. We forecast TPU ASIC server shipments to reach 220k/500k in 2025/26. **2) AWS Trainium:** We believe AWS ASIC demand will remain robust throughout 2026. We view 4Q25-1Q26 as a transition

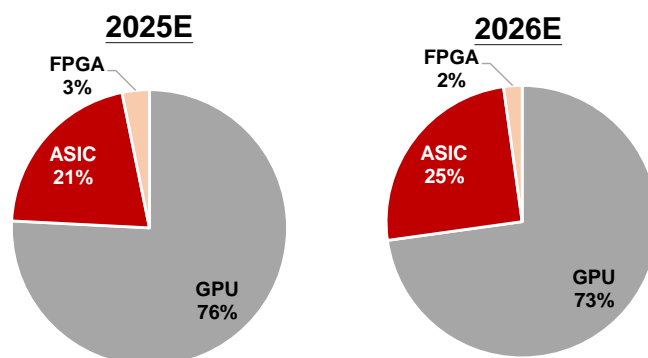
period from Trainium 2 to Trainium 3, with strong growth momentum resuming in 2Q26. Notably, we expect Trainium 3 scale-up network to significantly enhance rack-level value. We forecast AWS ASIC server shipments to reach 410k/520k units in 2025/26. **3) Meta MTIA:** We expect the launch of Meta MTIA3 in 1H26E to be a market highlight. The growth of Meta's ASIC server shipments is poised to accelerate, which will reach 9k/32k in 2025/26, based on our estimates.

Figure 20: Global ASIC AI training server shipments (2023-26E)



Source: IDC, Trendforce, CMBIGM estimates

Figure 21: Global AI server mix by AI chip type (2025-26E)



Source: Trendforce, CMBIGM estimates

Figure 22: AI accelerator (GPU / ASIC) product roadmap

| | | 1H24 | 2H24 | 1H25 | 2H25E | 1H26E | 2H26E | 2027E |
|-----------|------|------|---------------------|---------------------|---------|----------------------|---------------------|-------------------|
| Nvidia | GPU | H200 | B200 GB200 NVL72 | B300 GB300 NVL72 | | R200 VR200 NVL144 | VR200 NVL144 CPX | VR300 |
| AMD | GPU | | MI300 | | MI350 | | MI450 | MI500 |
| Google | ASIC | | TPU v6e | | TPU v6p | TPU v7p | TPU v7e | TPU v8e / TPU v8p |
| Amazon | ASIC | | Trainium 2 | | | Trainium 3 | | Trainium 4 |
| Meta | ASIC | | | | MTIA 2 | | MTIA 3 | MTIA 4 |
| Microsoft | ASIC | | Maia 100 | | | | Maia 200 | Maia 300 |
| OpenAI | ASIC | | | | | | AI Accelerator 1 | AI Accelerator 2 |
| xAI | ASIC | | | | | | X1 | |

Source: Company CMBIGM estimates

Figure 23: AI server TAM forecasts

| | 2023 | 2024E | 2025E | 2026E |
|---|---------------|---------------|---------------|---------------|
| Total AI accelerator volume ('000) | | | | |
| GPU chips | 1,856 | 5,492 | 8,046 | 10,350 |
| YoY growth | | 196% | 47% | 29% |
| Nvidia | 1,563 | 5,048 | 7,321 | 9,084 |
| YoY growth | | 223% | 45% | 24% |
| AMD | 293 | 444 | 725 | 1,265 |
| YoY growth | | 51% | 64% | 74% |
| ASIC chips | 1,288 | 2,756 | 5,571 | 9,030 |
| YoY growth | | 114% | 102% | 62% |
| Total | 3,144 | 8,248 | 13,617 | 19,380 |
| YoY growth | | 162% | 65% | 42% |
| AI server - Training ('000) | | | | |
| GPU AI server | 200 | 626 | 1,171 | 1,714 |
| YoY growth | | 213% | 87% | 46% |
| ASIC AI server | 82 | 226 | 371 | 600 |
| YoY growth | | 176% | 64% | 62% |
| Total | 282 | 852 | 1,542 | 2,315 |
| YoY growth | | 202% | 81% | 50% |
| Nvidia AI server rack ('000) | | | | |
| HGX/MGX Rack | 45.5 | 147.6 | 150.8 | 145.6 |
| GB200/300/VR200 NVL72 | - | 0.4 | 29.0 | 58.5 |
| Total | 45.5 | 148.0 | 179.9 | 204.1 |
| YoY growth | | 226% | 22% | 13% |
| Global server shipment ('000) | | | | |
| General and other servers | 13,098 | 12,773 | 13,159 | 13,754 |
| YoY growth | | -2% | 3% | 5% |
| AI server – Training | 282 | 852 | 1,542 | 2,315 |
| YoY growth | | 202% | 81% | 50% |
| Alserver – Training mix (%) | 2.2% | 6.7% | 11.7% | 16.8% |
| Total | 12,370 | 14,476 | 16,684 | 17,366 |
| YoY growth | | 17% | 15% | 4% |

Source: IDC, Trendforce, CMBIGM estimates

Figure 24: GB/VR AI server ODM vendors (2025/26)

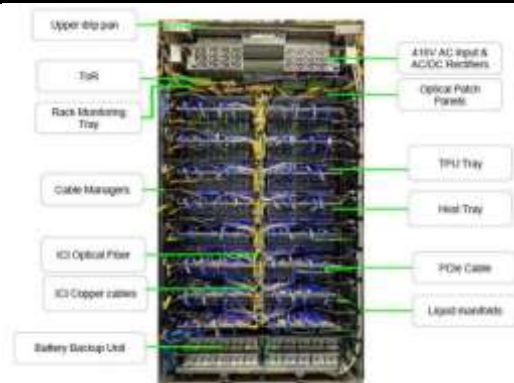
| | <u>GB/VR rack</u> | | Quanda | HonHai | Inventec | Wiwynn | Dell | SMCI |
|--------------|-------------------|---------------|--------|--------|----------|--------|------|------|
| | 2025E | 2026E | | | | | | |
| Microsoft | 25% | 21% | 40% | 60% | - | - | - | - |
| AWS | 7% | 8% | 70% | 30% | - | - | - | - |
| Meta | 16% | 12% | 70% | 30% | - | - | - | - |
| Google | 10% | 8% | 70% | 10% | 10% | - | - | - |
| Oracle | 23% | 25% | - | 80% | - | 20% | - | - |
| Tesla/XAi | 11% | 11% | - | - | - | - | 80% | 20% |
| Coreweave | 7% | 9% | - | - | - | - | 100% | - |
| Others | 1% | 6% | - | - | - | - | - | - |
| Total | 29,000 | 55,500 | | | | | | |

Source: Trendforce, CMBIGM estimates

Figure 25: AI server ODM suppliers (2026)

| | Quanta | Hon Hai | Inventec | Wiwynn | Dell | SMCI | Inspur | Huaqin | Nettrix | Lenovo | Others |
|--------------------|--------|---------|----------|--------|------|------|--------|--------|---------|--------|--------|
| US CSP | | | | | | | | | | | |
| Microsoft | 20% | 40% | 15% | 15% | - | - | - | - | - | - | 10% |
| AWS | 25% | 45% | 20% | 5% | - | - | - | - | - | - | 5% |
| Meta | 55% | 10% | 5% | 25% | - | - | - | - | - | - | 5% |
| Google | 40% | 15% | 40% | - | - | - | - | - | - | - | 5% |
| Oracle | - | 70% | - | - | 20% | 10% | - | - | - | - | 0% |
| Tesla/Xai | - | - | - | - | 30% | 60% | - | - | - | - | 10% |
| Coreweave | - | - | - | - | 60% | 30% | - | - | - | - | 10% |
| Chinese CSP | | | | | | | | | | | |
| ByteDance | - | 5% | 5% | - | - | - | 35% | - | 30% | 10% | 15% |
| Tencent | - | 5% | 5% | - | - | - | 25% | 40% | - | 10% | 15% |
| Alibaba | - | 5% | 5% | - | - | - | 35% | 25% | 15% | 10% | 5% |
| Baidu | - | - | 10% | - | - | - | 50% | - | - | - | 40% |

Source: Trendforce, CMBIGM

Figure 26: Google TPU v7 rack

Source: Google, CMBIGM

Figure 27: Amazon EC2 Trn3 UltraServer rack

Source: Amazon, CMBIGM

ODM/OEM: Strong AI server momentum; Focus on VR/ASIC ramp-up

Sustained strong growth in 2026 driven by global AI capex. Global AI infrastructure investment remains the primary engine driving global server market in 2026. Benefiting from continued capex expansion by global CSPs, we expect ODM/OEM to achieve strong revenue growth. We project global AI server shipments (high-end + mid/low-end) to grow 24% YoY in 2026, with high-end AI training server shipments expected to surge +40% YoY. We believe CSPs remain the dominant customer base, accounting for 51% of AI server shipments in 2026. Regarding profitability, we expect rising memory costs will lead to near-term margin pressure for OEM brands (Dell, HPE, SMCI) in 2026. For ODMs, while "cost-plus" model offers some buffers, initial yield rates during new product introduction remain a key point to watch. That said, we expect GB300 ramp-up and rising liquid cooling penetration will offset margin pressure for server brands/ODMs in 2026-27.

Trend 1: The rise of ASIC platforms and accelerated customization. We believe ASICs are becoming the preferred solution for CSPs to enhance compute autonomy and efficiency. TrendForce projects share of ASIC AI servers to jump from 11% in 2025 to 25% for global AI server market in 2026, reflecting massive shift in CSP capex toward in-house silicon. We expect multiple next-gen ASIC platforms to ramp up in 2026, including AWS Trainium 3 (2Q26), Meta MTIA 3, Google TPU v7p (4Q26), and OpenAI's debut ASIC product (2H26-1Q27). On the supply side, we expect FIH to secure projects across multiple CSPs, positioning it to benefit significantly from the ASIC trend.

Trend 2: GB/VR rollout and L10 standardization to drive consolidation. Nvidia's new GB/VR platforms will continue to drive industry evolution. GB300 rack is set for ramp-up in 1H26E, followed by VR200 mass production in 2H26E. We expect VR200 to bring several upgrades, including TDP increase to 1.8kW/2.3kW per chip and system power rising to 220-250kW, significantly boosting server complexity and value content. In addition, for VR200, we believe Nvidia will start to shift its model from traditional chip/board level (L6) to Level 10 (fully integrated compute tray), aiming to accelerate time-to-market and deepens Nvidia's transition from a "chip supplier" to a "system supplier". We believe this trend will raise entry barriers for L11 rack-level integration and global delivery, favoring top-tier ODMs. Furthermore, qualifications barrier for core components (thermal, connectors) will rise significantly, benefiting suppliers already within Nvidia's Reference Design.

Trend 3: Power supply upgrade and rising liquid cooling penetration. To cope with exponential growth in AI chip TDP, power and thermal systems are undergoing structural upgrades, unlocking significant value. Regarding power supply architecture, AI server power solutions are migrating toward 800V HVDC architectures. For instance, VR200 rack systems will adopt 110kW power shelves/cabinets, driving a substantial increase in power component value. As for liquid cooling, VR200 (2H26E) will feature liquid cooling as a standard solution, while next-gen CSP ASIC platforms will also increasingly adopt liquid cooling. We expect the market for liquid cooling systems (Sidecars/CDUs) to expand significantly. We expect these structural upgrades to significantly benefit AI server ASPs and the margins of ODMs/component suppliers. ODMs with leading capabilities in system integration and L11 rack assembly will be the core beneficiaries of this upgrade cycle.

Overall, we believe the supply chain will continue to benefit from robust AI demand, the rollout of GB/VR systems, and enterprise orders. **FIH**: Tier-1 ODM supplier for GB/VR servers. **BYDE**: Mass production and shipment of server-related components. **FIT Hon Teng**: Server interconnect products and liquid cooling components. **Luxshare**: Connector products and liquid cooling thermal components.

Figure 28: Server OEM brands 2026 outlook/guidance

| Company | 2026 Server Outlook (FY26/CY26) | Growth Drivers |
|-----------------------------|--|--|
| Dell (DELL US) | <ul style="list-style-type: none"> FY26 AI server revenue: ~US\$20bn ISG revenue: >30% YoY growth | <ul style="list-style-type: none"> AI server backlog: ~US\$18.4bn (as of Oct) Client expansion: Expanding to Tier-2 CSPs, Neo-cloud, and Sovereign clients Traditional servers: Benefiting from consolidation and upgrade cycles |
| HPE (HPE US) | <ul style="list-style-type: none"> FY26 server revenue: >10% YoY growth AI servers: Double-digit growth Traditional servers: Mid-single-digit growth | <ul style="list-style-type: none"> Strategic focus: Sovereign and Enterprise-grade clients |
| SMCI (SMCI US) | <ul style="list-style-type: none"> FY26 revenue: Target at least US\$33bn, with sustained QoQ growth | <ul style="list-style-type: none"> Product cycle: Strong shipments of Blackwell/ Ultra AI servers |
| Lenovo (00992 HK) | <ul style="list-style-type: none"> FY26 ISG revenue: Maintain double-digit growth CSP business: Strong growth momentum Profitability: FY26 ISG to achieve breakeven or gradual profitability improvement | <ul style="list-style-type: none"> Order book: Strong orders for AI GPU servers |

Source: Company data, CMBIGM

Figure 29: Server ODM 2026 outlook/guidance

| Company | 2026 Server Outlook (FY26/CY26) | Growth Drivers |
|------------------------------|--|--|
| FII (601138 CH) | <ul style="list-style-type: none"> Revenue: AI server-related revenue to grow >100% YoY. Volume: AI server rack demand expected to double to 50k-60k units (Bullish case: 100k). Mix: AI servers to account for >80% of Cloud Computing revenue Market Share: Targeting 40%+ global AI server market | <ul style="list-style-type: none"> NVIDIA: GB200/300 rack deliveries; Secured Vera Rubin series orders. ASIC: Mass production of ASIC server orders in 2026, projected to contribute 5-10% of AI server revenue. |
| Quanta (2382 TT) | <ul style="list-style-type: none"> Revenue: AI server revenue to achieve triple-digit percentage growth; Capacity expected to double. Mix: AI servers to exceed 80% of total server revenue. Visibility: AI order visibility extends into 2027. General Purpose: Revenue expected to remain flat. | <ul style="list-style-type: none"> Platform: Smooth transition to GB200/300 platforms. Strategy: Raising competitive barriers through complex design capabilities. Order wins: Secured new ASIC projects. |
| Wiwynn (6669 TT) | <ul style="list-style-type: none"> Revenue: AI server sales to grow +40-50% YoY. Mix: AI server revenue contribution expected to reach 55%. General Purpose: expected to grow >20% YoY | <ul style="list-style-type: none"> AWS: ASIC T3 servers (2H26). Oracle: GB300 project. Meta: AMD Helios platform project (shipments beginning 2H26). |
| Inventec (2356 TT) | <ul style="list-style-type: none"> Mix: AI servers to account for >50% of total server revenue (vs. 40-45% in 2025). | <ul style="list-style-type: none"> NVIDIA: HGX shipments remain strong; VR200 (Vera Rubin) project L11 assembly. Google: TPU v6p mass production in 2H25; L6 models shipping in Q4. Roadmap: Advancing next-gen TPU v7 series in 2Q26. |

Source: Company data, CMBIGM

Server components: VR200/ASIC upgrade to drive volume and ASP expansion

AI server/rack upgrade to boost content value. Backed by robust capex from US CSPs and rising demand from sovereign clouds, global AI server market is poised to maintain strong growth momentum in 2026, and architecture upgrade of Nvidia's next-gen Rubin platform and CSP in-house ASICs will drive structural growth in server rack value, primarily stemming from enhanced computing performance, interconnect upgrades, and system-level enhancements. Beyond tier-1 CSPs, OEM brands like Dell and HPE are actively promoting AI servers (GB200/300, HGX) to Tier-2 CSPs, new cloud service providers, and sovereign AI developers, further fueling market demand. Furthermore, ASIC AI server will follow upgrade trends in GPU servers, where higher customization requirements will yield better margins for component and ODM suppliers. Overall, we believe AI server market will maintain rapid growth in tech space in 2026. With CSPs accelerating in-house ASIC adoption to drive autonomy and efficiency, we believe ODMs and component suppliers (power, thermal, interconnects) will be major beneficiaries of this structural growth trend.

VR200 servers: Rising power and rack density to drive system-level transformation.

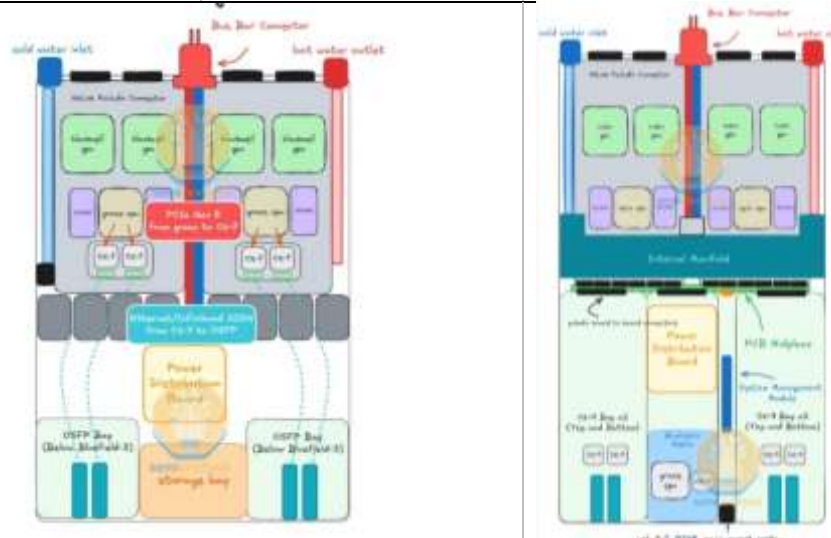
We anticipate the VR200 server to enter mass production in 2Q26, featuring significant design changes: **1) SOCAMM:** VR200 will adopt LPDDR SOCAMM sockets to reduce failure costs and mitigate supply chain risks. **2) Power supply:** TDP for VR200 chips is expected to rise from 1,400W (GB300) to 1,800W-2,300W, pushing total TDP of VR200 NVL144 rack to 240-260kW (vs. 136-140kW for GB300 NVL72). We expect CSPs to adopt 400V HVDC solutions in 2026, moving to 800V HVDC for Kyber in 2027. **3) Liquid cooling:** VR200 will adopt full liquid cooling design, with plans to adopt Micro-Channel Cold Plates (MCL) by 2027 for chip cooling. High-power platforms will drive strong demand and content value gain for cold plates, Quick Disconnects (QDs), sidecars, and CDUs. **4) Midplane:** We expect Rubin platform to introduce midplane architecture to replace cable harness solutions used in GB200/300. Additionally, scale-up solutions are evolving from copper connectivity toward orthogonal backplanes. **5) L10 delivery model:** we expect high rack density of VR200 will accelerate migration of liquid cooling. Under L10 delivery model, we expect Nvidia to directly specify or procure cold plates and UQDs, which will significantly raise qualification barriers for components like thermal and connectors, favoring suppliers already within Nvidia's Reference Design.

ASIC servers: strong demand for interconnects; inflection point for 800V HVDC and liquid cooling. Looking ahead to 2026, multiple next-gen ASIC platforms will enter mass production, including Trainium 3 (2Q26), MTIA 3, TPU v7p (4Q26), and OpenAI's ASIC (2H26-1Q27). Upgrade trend for ASIC servers will mirror GPU servers, focusing on computing performance, network interconnects, thermal and power supply.

- 1) **Interconnects:** With deployment of next-gen products like TPU v7 and Trainium 3 in 2026, we expect complexity of scale-up networks will rise significantly. Google TPU v7 cabinet will introduce OCS to support ultra-large-scale cluster expansion, while AWS Trainium 3 will employ PCIe Gen 6 switch chips for scale-up network. We expect strong demand for high-speed connectors and copper cables (DAC/AEC).
- 2) **Power supply:** Single-rack power density for ASIC servers will increase rapidly to 100kW or above (e.g., Meta/Google) in 2026, and power supply architectures will accelerate the transition from traditional 48V/54V to $\pm 400V$ or 800V HVDC. We also expect Google and Meta to adopt ORV3 high-power rack standard in 2026.
- 3) **Liquid cooling:** In 2026, mainstream CSPs will shift from air cooling to liquid (or hybrid) solutions. Trainium 3 (Teton 3 rack) is expected to introduce liquid cooling designs at scale in 2026, while MTIA 3 (Minerva rack), Maia 100/200 racks, and TPU v7 (Zebrafish) are also expected to adopt liquid cooling solutions to manage chip TDPs exceeding 1,000W.

Figure 30: AI server architecture and suppliers: GB200 vs GB300 vs VR200

| | GB200 NVL72 | GB300 NVL72 | VR200 NVL144 |
|---|-------------------------------|-------------------------------|--|
| Chip/Module (L6) | | | |
| Launch Timing | 1Q25 | 2H25 | 2H26 |
| GPU | B200 | B300 | R200 |
| CPU | Grace | Grace | Vera |
| FP4 Dense FLOPS | 720 PFLOPs | 1,100 PFLOPs | 2397.6 PFLOPs |
| HBM Bandwidth | 576 TB/s | 576 TB/s | 1476 TB/s |
| GPU TDP | 1,200W | 1,400W | 1,800W |
| GPU/SOCAMM2 Sockets | -- | - | Yes |
| System Board (L10) – Compute Tray/ Switch Tray | | | |
| Compute Tray Connectivity | Overpass cables | Overpass cables | Midplane PCB |
| Front-end NIC (BF) | Bluefield-3 | Bluefield-3 | Bluefield-4 |
| Scale-out NIC (CX) | 4 CX7 (400Gbps) | 4 CX8 (800Gbps) | 8 CX8 (1.6 Gbps) |
| Cooling | Liquid (85%) + Air (15%) | Liquid (85%) + Air (15%) | Liquid (100%) |
| ... Cold plates | 72 (compute) + 18 (switch) | 72 (compute) + 27 (switch) | 72 (compute) + 72 (switch) |
| ... QD | 180 (compute) | 180 (compute) + 180 (switch) | 180 (compute) + 180 (switch) |
| NVSwitch | 2 ASICs | 2 ASICs | 4 ASICs |
| Rack (L11 – L12) | | | |
| Rack design | 18 compute + 9 switch | 18 compute + 9 switch | 18 compute + 9 switch |
| # of CPU | 36 Grace | 36 Grace | 36 Vera |
| # of GPU | 72 B200 | 72 B300 | 144 R200 |
| Rack power (W) | 130kW | 140kW | 200-220kW (Max Q) 240-260kW (Max Q) |
| Powerself | 1RU 3+3 33kW power shelves | 1RU 3+3 33kW power shelves | 3RU 2+2 110kW power shelves |
| Busbar | Air cooling | Air cooling | Liquid cooling (50V) |
| Suppliers | | | |
| GPU socket | - | - | FIT, Lotes |
| CPU socket | FIT, Lotes, APH | FIT, Lotes, APH | FIT, Lotes, APH |
| Compute board | Wistron, Hon Hai/FII | Wistron, Hon Hai/FII | Wistron, Hon Hai/FII |
| NVLink switch board | Hon Hai/FII | Hon Hai/FII | Hon Hai/FII |
| Compute trays | ODMs | ODMs | ODMs |
| Switch trays | ODMs | ODMs | ODMs |
| Air cooling/ Liquid cooling | Cooler Master, AVC | Auras, AVC | Auras, AVC |
| ... Cold plates | Cooler Master, AVC, Auras | | |
| ... CDU | Vertex, Delta, Hon Hai | | |
| ... Fan | Delta, AVC, Sunon | | |
| Power Supply | Delta, Lite-On, Flextronics | | |
| Rack ODM | Hon Hai/FII, Quanta, Wistron | Hon Hai/FII, Quanta, Wistron | Hon Hai/FII, Quanta, Wistron |



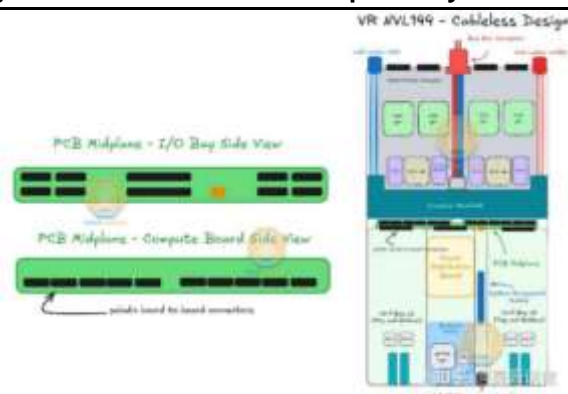
Source: Company data, SemiAnalysis, CMBIGM

Interconnects: architecture upgrade to drive value content; Upcoming breakthroughs in connectors/cables/CPO

Intra-tray interconnects: VR200 returns to midplane design with connector upgrade.

Following design changes in VR200 platform, we expect a significant shift in intra-tray interconnects to transition from GB200's overpass cable (flyover) solution back to a high-end midplane design for connecting GPUs/CPU's with ConnectX-9 NICs. This shift addresses the need for higher rack density, standardized production and improved yield. This transition will also boost midplane value content, reduce usage of overpass cables, and increase adoption of mezzanine connectors. These components will be essential for transmitting high-speed signals between main board and midplane, driving a structural increase in demand for high-performance connectors.

Figure 31: VR200 NVL144 compute tray

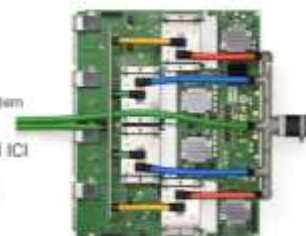


Source: SemiAnalysis, CMBIGM

Figure 32: Google TPU v4 board

The Board

- 4 TPUs per board
- Liquid cooled
 - 4 chips with parallel water flow
 - Flow rate controlled by valve
 - Similar to fan speed control in an air-cooled system
- PCIe Gen3x16 per TPU for host I/O
- 4 OSFP¹ connectors per TPU for off-board ICI
 - Each OSFP supports 400Gbs each direction
 - 2 more links per chip on-board for interconnect



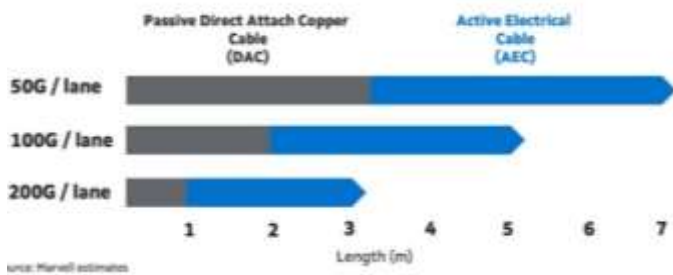
Source: Google, CMBIGM

Scale-up (intra-rack): AEC/DAC as mainstream; NPC/CPC to drive cable upgrades.

For 2026, we believe NVLink 6 adoption in scale-up will double the bandwidth of intra-rack interconnects. We expect copper backplanes to remain the mainstream solution for NVL 72/144 architectures. However, for NVL 576, we expect a shift from copper cabling to orthogonal backplanes. For intra-rack interconnects, we also expect penetration of AEC will increase, and short-distance intra-rack interconnects will transition from "DAC + partial AEC" mix to "AEC as core with NPC/CPC for critical connections."

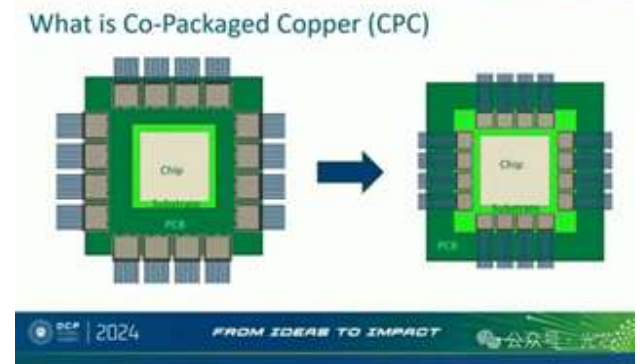
- 1) **DAC (Direct Attach Copper):** Given DAC's cost advantages for short-reach connections (0.5-3m), we expect DACs will remain mainstream solutions for these use cases. However, as interconnect density increases, traditional DAC is facing physical limitations on wire gauge and transmission distance.
- 2) **AAC/AEC (Active Copper/Electrical Cable):** We expect AEC (DAC with Retimers) to become mainstream for intra-rack connections in 3-7m range. AECs effectively address signal attenuation issues while offering lower power consumption and cost compared to optical cables.
- 3) **NPC (Near-Packaged Copper):** NPC integrates high-speed copper connectors directly onto chip substrate or in extremely close proximity to the chip. This creates an ultra-short channel that significantly reduces equalization complexity.
- 4) **Co-Packaged Copper (CPC):** CPC involves copper interconnect modules directly integrated with the connector and chip substrate. This technology effectively shortens signal transmission paths and reduces transmission loss, serving as the electrical connectivity mirror to CPO (Co-Packaged Optics).

Figure 33: Scale-up: DAC vs AEC



Source: Marvell, CMBIGM

Figure 34: Scale up: CPC solution

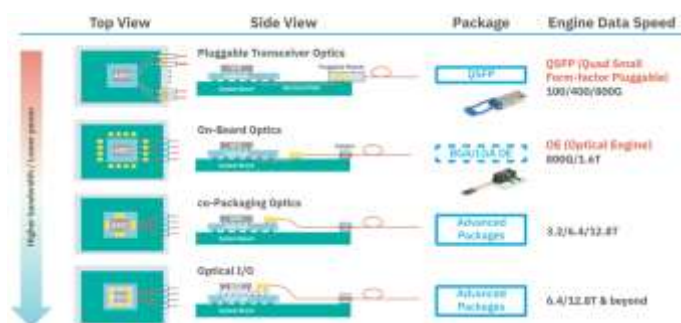


Source: Luxshare, CMBIGM

Scale-out (inter-rack): LPO enters 1.6T era; CPO/OCS adoption to accelerate. Scale-out networks are set to upgrade to 1.6T (ConnectX-9) in 2026. Google TPU will lead the deployment of OCS, while CPO is expected to commence mass production in Nvidia's Spectrum-6 switches. We expect two technologies to co-exist in 2026. Short-to-mid range LPO will be preferred for its low power consumption and low latency, while ultra-high density/long range CPO will be adopted to enhance energy efficiency, and hybrid solution of OCS with electrical switches will be introduced for massive cluster.

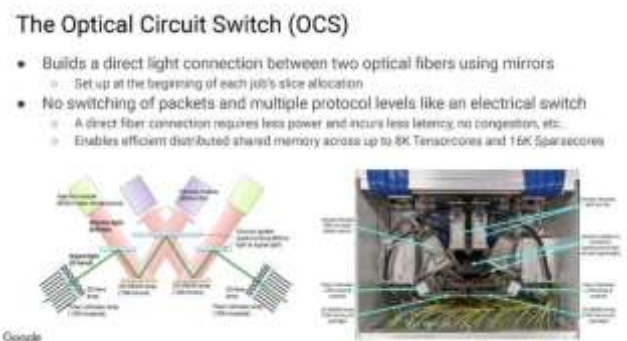
- 1) **LPO (Linear Pluggable Optics):** By replacing DSPs with linear drive and adopting switch ASIC for signal compensation, LPO offers significant power and cost advantages. We expect wide adoption by CSPs during 1.6T network rollout in 2026-27E.
- 2) **CPO (Co-Packaged Optics):** Nvidia's networking roadmap plans to introduce CPO technology in 2026-27. By co-packaging optical engine with switch silicon, CPO shortens the electrical domain and reduces power consumption and thermal density. Despite challenges in maintenance, we view its superior energy efficiency as the ultimate solution for future AI interconnects.
- 3) **OCS (Optical Circuit Switches):** Utilizing physical mirrors to reflect optical signals, OCS eliminates the need for optical-electrical-optical (O-E-O) conversion, achieving ultra-low latency and dynamic topology reconfiguration. Google has deployed OCS at scale in TPU v5/v6, using MEMS mirrors for all-optical switching to drastically reduce power and latency. With rapid expansion of TPU v7 servers in 2026, we believe the OCS market will continue rapid adoption.

Figure 35: CPO roadmap



Source: ASE, CMBIGM

Figure 36: Google OCS solutions



Source: Google, CMBIGM

Overall, we have identified three major trends in high-speed interconnect sector for 2026:

- 1) Intra-tray: VR200 architecture will adopt midplane design, driving an upgrade cycle for high-speed connectors.
- 2) scale-up (intra-rack): AEC will supersede DAC as the mainstream solution, while NPC/CPC technologies are expected to achieve significant breakthroughs.
- 3) Scale-out (inter-rack): LPO penetration will rise, ASIC platforms will drive OCS upgrades, and CPO is set to reach a commercial inflection point. We believe these trends will benefit:

1) Luxshare: The company offers a comprehensive portfolio of high-speed interconnect cables and connectors. Major products include Koolio Co-Packaged Copper (CPC) solution, OmniStack Near-Packaged Copper (NPC) solution, and Intrepid Cable Cartridge high-speed backplane solution. Leveraging a dual-track strategy of "CPO for high-end + CPC for mainstream," Luxshare is well-positioned to benefit from diversified product demand from global top-tier clients.

2) FIT Hon Teng: The company provides a robust portfolio of AI server connector products, covering intra-rack MCIO/Gen-Z/DDR connectors, high-speed backplane connectors & cables, DAC/ACC copper cables, OverPass solutions, and CPU/GPU sockets, alongside optical communication (400G/800G/CPO), power busbars, and liquid cooling products. FIT also collaborates with key chip solution vendors like MediaTek and Broadcom to develop CPO sockets and connection solutions.

Figure 37: FIT Hon Teng CPO solutions



Source: FIT Hon Teng, CMBIGM

Figure 38: Luxshare CPC interconnect solution



Source: Luxshare, CMBIGM

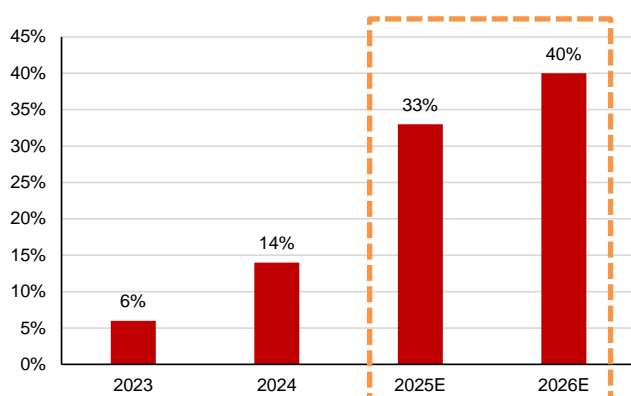
Thermal: Liquid cooling becomes ubiquitous; Micro-channel lids set for 2027 mass production

Liquid cooling penetration to reach 40% in 2026; Full liquid-cooled racks become mainstream for AI training. With rapid development of AI chips, chip TDP (Thermal Design Power) will exceed 1,000W in 2026, marking the year when liquid cooling becomes mainstream in AI servers. TrendForce forecasts liquid cooling penetration in global AI training servers to surge from 33% in 2025 to 40% in 2026.

Driven by GB300/VR200 ramp-up and liquid cooling adoption for CSP ASICs, we expect thermal architectures to accelerate transition from "hybrid air-liquid" to "full liquid cooling".

1) Nvidia platforms: In GB300/VR200 servers, liquid cooling will extend beyond compute trays to switch trays, significantly increasing thermal value content per rack. **2) ASIC platforms:** while AWS retains a "hybrid air-liquid" approach, we expect the other CSP ASIC servers (MTIA 3/TPU v7/Maia 100) will start to adopt "full liquid cooling" solutions in 2026.

Figure 39: Global AIDC liquid cooling penetration



Source: Trendforce, CMBIGM

Figure 40: Global AI server liquid cooling supply chain

| | CDU | Cold Pplates | Manifolds | UQDs |
|---------------------|--------------------------|-------------------------------|---------------------------|---|
| MSFT | Delta, Foxconn | AVC, Cooler Master | AVC, Cooler Master | Danfoss, CPC, Parker, Auras, Fositek, FIT Hon Teng, Envicool, BYDE, Nidec |
| Meta | Delta, Quanta | AVC, Cooler Master | AVC, Cooler Master, Auras | |
| Google | Delta | AVC, Cooler Master | AVC, Cooler Master | |
| AWS | Delta | AVC, Cooler Master | AVC, Cooler Master, Auras | |
| SMCI | Nidec, CoolIT | Auras, Jentech | Karori, Auras | |
| Chinese OEMs | BYDE, Luxshare, Envicool | BYDE, Luxshare, Envicool, FRD | BYDE, Luxshare, Envicool | BYDE, Luxshare, Envicool, Jonhon |

Source: CMBIGM

GB300/VR200: liquid cooling adoption to drive rack content value

1) GB300 spec: We expect major change for GB300 rack is to adopt liquid cooling in switch tray rather than air cooling in GB200. We estimate this will add around 180 UQDs and 27 cold plates per rack. Consequently, we forecast liquid cooling value content per GB300 rack to increase by 10-20% compared to GB200. **2) VR200 spec:** VR200 is to be launched in 2H26, and we expect single-chip TDP for VR200 platform to increase to 2.3kW (MaxP version), and VR200 NVL144 system will adopt a full liquid cooling design. Driven by increased compute density (CPX design), we estimate each compute tray will require an additional 3 cold plates and 6 pairs of UQDs, further fueling demand for thermal components. **3) CDU/sidecar upgrade:** As rack power density approaches 200kW+, thermal systems will gradually transition from Liquid-to-Air (Sidecar) to higher-efficiency Liquid-to-Liquid (CDU) solutions, favoring suppliers with robust system integration capabilities.

ASIC Servers to enter liquid cooling Era; AWS/Meta to lead adoption in in 2026

We believe mainstream CSP ASIC projects are set to reach inflection point for liquid cooling in 2026. **1) Trainium servers:** AWS T3 project (Teton 3 rack) is expected to formally adopt liquid cooling in 2026. With power consumption below 1,000W, we estimate a liquid cooling adoption of ~20%. We expect usage of cold plates and UQDs in T3 racks to exceed GB300 racks (99 cold plates, 456 UQDs). **2) MTIA servers:** Meta's MTIA 3 (Minerva rack) are set to adopt liquid cooling solutions in 2026 to support power consumption exceeding 1,000W. **3) TPU servers:** Google TPU v7 will commence liquid cooling adoption in 2026. We expect that growth of ASIC liquid cooling market value will outpace Nvidia platform in 2026, becoming a major growth engine for thermal solution providers.

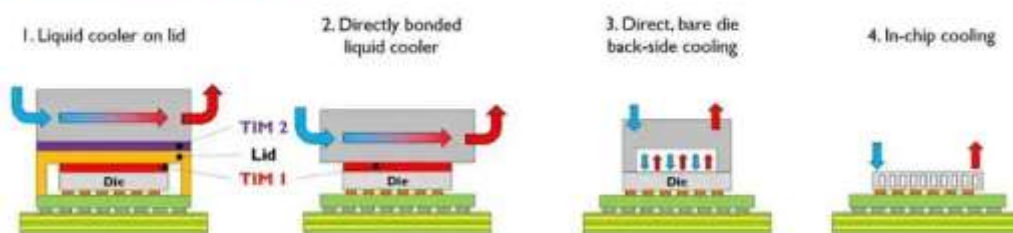
Micro-channel lids (MCL): Ultimate solution for 3000W TDP targeting mass production in 2027. As single-GPU TDP is projected to exceed 3,000W threshold in 2027 (e.g., Rubin Ultra or Feynman), traditional thermal solutions with cold plates and TIM will face bottlenecks. Consequently, we believe the supply chain is developing the micro-channel lid (MCL) solution to integrate micro-channels directly into heat spreader of the chip package, which will effectively eliminate thermal resistance layer associated with TIM2. In terms of timeline, we expect MCL to see wide adoption in Rubin Ultra by 2027, and small-batch pilots are likely to commence with VR200 in 2H26E. Regarding manufacturing process, we believe MCLs require extreme metal processing precision and tight coordination with CoWoS packaging processes, which we believe will significantly raise entry barriers, favoring manufacturers with advanced precision manufacturing and packaging capabilities.

Overall, we identify the following supply chain leaders as major beneficiaries:

- 1) FIT Hon Teng:** The company boasts a robust AI server product matrix. Its UQD products have begun mass production and shipment for GB200 since last year. Leveraging its competitive edge in backplanes, high-speed connectors and power busbars, FIT provides a comprehensive "Power + Liquid" one-stop interconnect solution.
- 2) BYDE:** BYDE successfully secured Nvidia qualification for its liquid cooling products, including cold plates, UQDs and manifolds. BYDE has demonstrated mass production capability for a full series of critical liquid cooling components.
- 3) Luxshare:** the company is strategically positioned as "Connectivity + Thermal + Power" solution vendor. Its core liquid cooling offerings include cold plates, CDUs, and manifolds. Furthermore, Luxshare has established product roadmap in micro-channel technology, with mass production target in 2026.

Figure 41: Thermal solution: Micro-channel lids (MCL)

Liquid cooling options



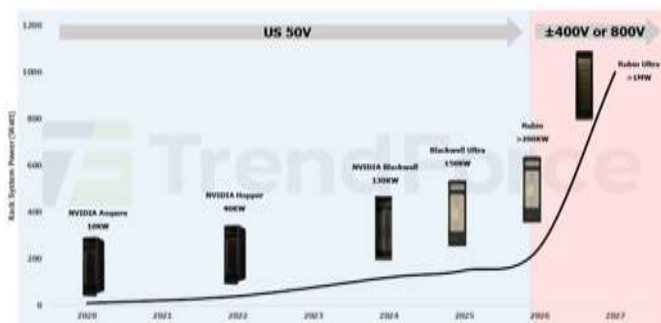
Source: IMEC, CMBIGM

Power supply: Entering the MW era; HVDC/BBU as the new standard

Power density to exceed 200kW; Power system to become "Core Infrastructure"

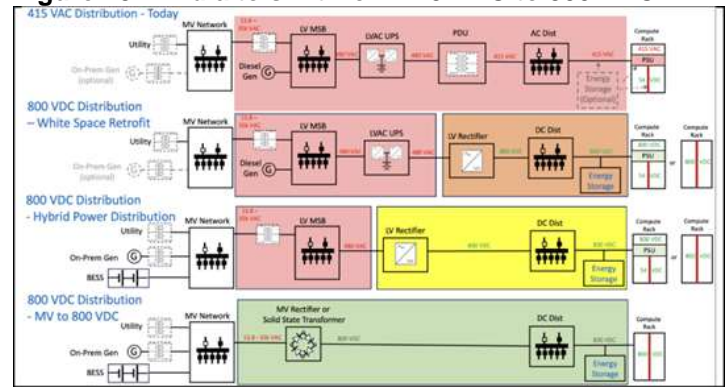
With VR200 to launch in 2H26E, we expect AI server power spec upgrades to accelerate as single-rack power density to surge from 130-150kW (GB200) / 180-200kW (GB300) in 2025 to 200-300kW for VR200 in 2H26E (350-400kW with CPX). Looking ahead, Kyber density is expected to increase to 600kW-1MW range in 2027. Since traditional 12V/48V power architectures are facing physical limitations due to copper-based busbar weight and high transmission losses, the industry trend is shifting toward sidecar or row-based power cabinet solutions.

Figure 42: MW-scale racks necessitate HVDC



Source: Trendforce, CMBIGM

Figure 43: Nvidia to shift from 415 VAC to 800 VDC



Source: Nvidia, CMBIGM

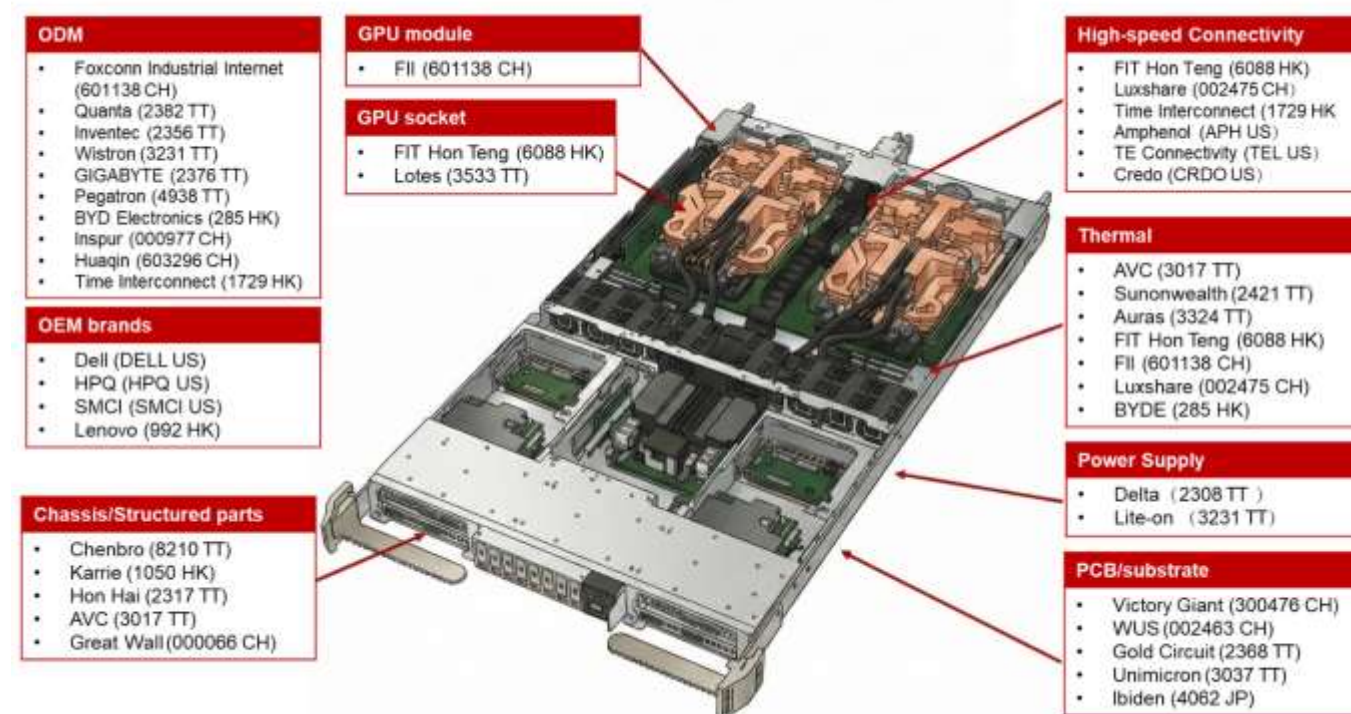
400V/800V HVDC: The new standard in 2026 to break 54V limitations

To reduce conversion losses and copper usage, power architectures are shifting from AC to 800V HVDC. Although Nvidia is promoting a 0-800VDC standard, we expect CSPs like Microsoft, Meta, and Google to initially deploy $\pm 400V$ HVDC solutions at scale in 2026, prioritizing safety regulations and supply chain maturity while preparing for the future 800V era. Compared to traditional 48V/54V architectures, HVDC solutions drastically reduce current for the same power output, thereby minimizing copper wiring usage and boosting end-to-end energy efficiency. While solid state transformers (SST) may not see large-scale adoption until 2027/28, we view 2026 as a critical period for power supply chain and module design evolution.

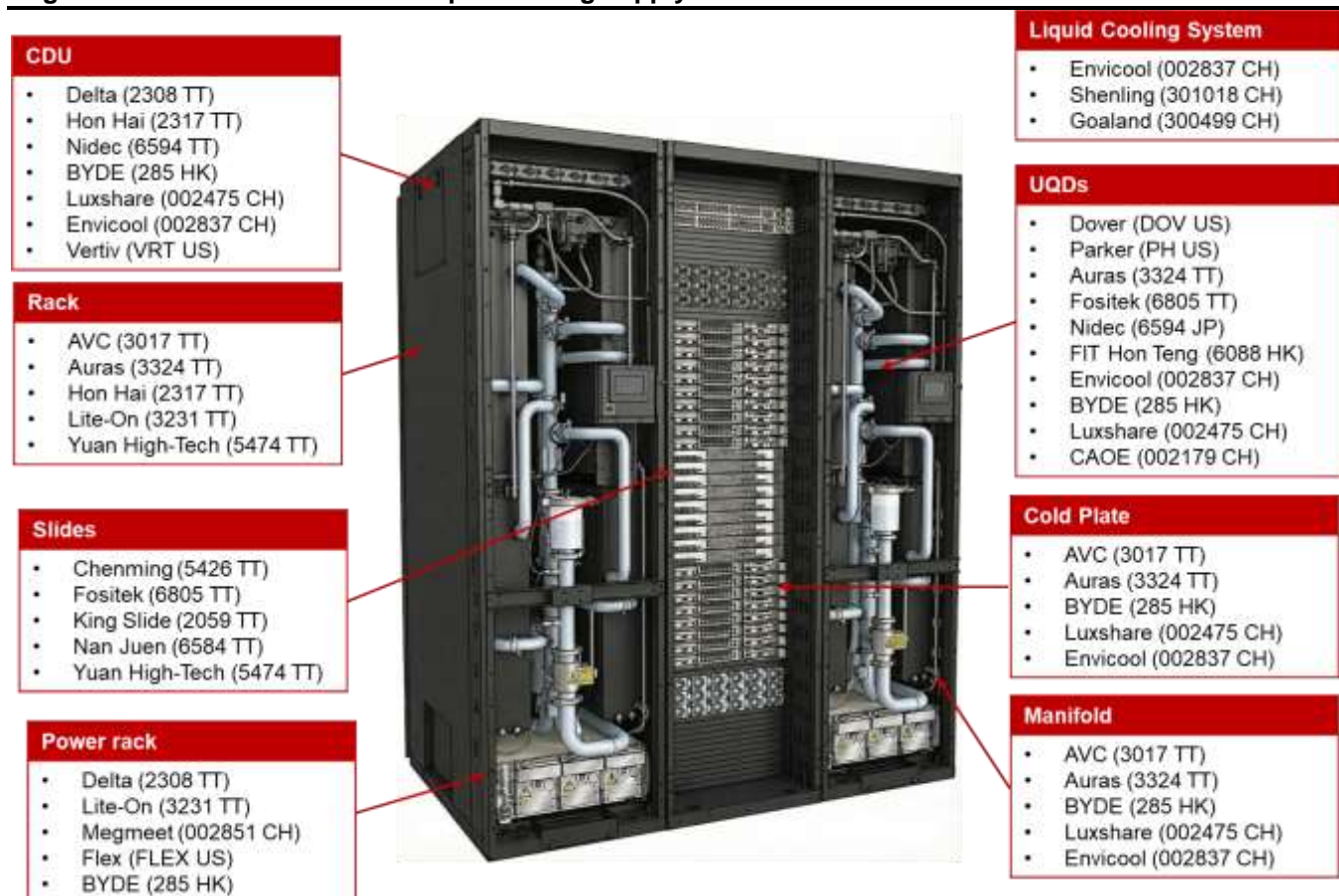
Spec upgrade: PSU power toward 12kW+; BBU become mainstream

We expect a significant upgrade in power specifications and per-rack value in 2026. Core components include PSUs (power supply units), BBUs (battery backup units), busbars, and power whips. **1) PSU density doubling:** To meet higher rack densities, mainstream AI server PSU spec will upgrade from current 5.5kW (GB200) to 12kW-18kW (VR200) in 2026. We expect penetration of next-gen power modules to rise significantly. **2) Rising BBU demand:** Under high power density, BBU will evolve into a standard configuration for AI power racks. We forecast BBU market to sustain rapid growth from 2026 to 2028. **3) Busbar/power whip:** With surging power requirements (VR200>100A), we expect busbars to upgrade to liquid-cooled designs, and spec/ASP of power whips will see a notable uplift.

In 2026, power supply will shift from capacity increases to architectural upgrade, and we identify the following companies as key beneficiaries. **1) FIT Hon Teng:** FIT possesses Crown Clip and Power Clip product series, supporting ultra-high currents of 300A–500A+ with blind-mate capabilities. **2) BYDE:** BYDE has established a footprint in BBU products and power shelf assembly. Combined with its liquid cooling capabilities, BYDE offers a comprehensive "Liquid Cooling + Power" infrastructure solution. **3) Luxshare:** The company offers a complete power product portfolio, including DC/DC conversion modules, AC/DC PSUs, busbars, power whips, and HVDC solutions.

Figure 44: Global AI server supply chain

Source: CMBIGM

Figure 45: Global AI server rack/liquid cooling supply chain

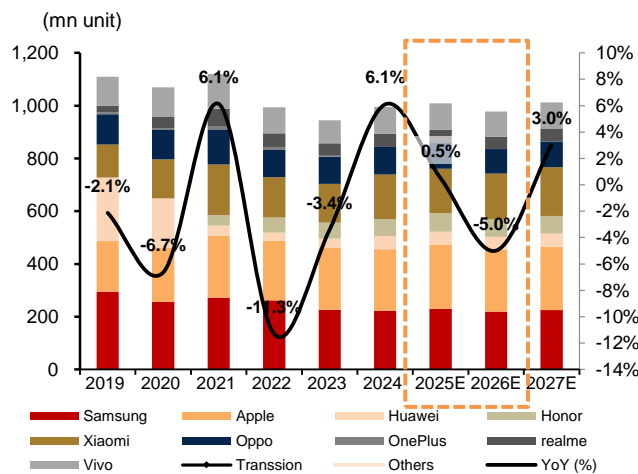
Source: CMBIGM

Global smartphones: memory price hike weigh on demand; focus on foldable iPhone/ AI phones as catalysts

Global smartphone: 2026 shipments to decline by 5% YoY. After two consecutive years of recovery in 2024-2025, we expect global smartphone shipments to decline by 5% YoY in 2026 due to global macroeconomic uncertainties, fading China's subsidy impact, and memory price hike leading to higher BOM cost. We expect rising retail price will suppress demand, particularly for low-end consumer segment. If memory supply-demand imbalances further intensify, we expect downside risk to smartphone shipment forecasts.

China smartphone: cautious outlook in 1H26 followed by stabilization. We maintain a cautious view on China smartphone market for 2026. In near term, we expect 1H26E shipments to remain under pressure, due to high base on subsidies in 1H25, supply chain uncertainties and memory shortages impacting low-to-mid-end shipments. For 2H26E, we expect supply chain shortage to improve gradually. Overall, we hold a cautiously optimistic view for the full year, forecasting China smartphone shipments to be flat or slightly up YoY.

Figure 46: Global smartphone shipment forecast



Source: IDC, CMBIGM estimates

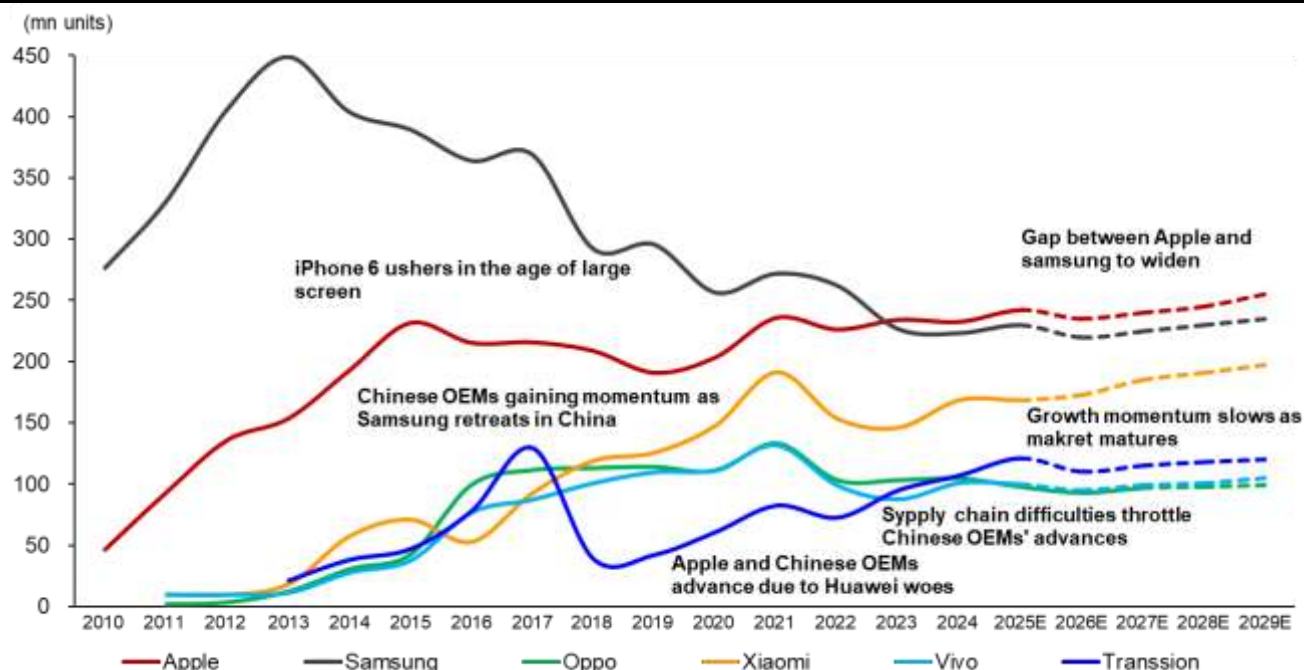
Figure 47: Global smartphone shipment by brand

| (mn unit) | 2022 | 2023 | 2024E | 2025E | 2026E | 2027E |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Samsung | 262 | 227 | 223 | 230 | 220 | 225 |
| Apple | 226 | 234 | 232 | 242 | 235 | 240 |
| Xiaomi | 153 | 146 | 168 | 169 | 173 | 185 |
| Huawei | 31 | 35 | 50 | 50 | 48 | 50 |
| Honor | 57 | 61 | 65 | 70 | 66 | 67 |
| Oppo | 166 | 154 | 154 | 148 | 141 | 146 |
| Vivo | 99 | 88 | 101 | 100 | 95 | 99 |
| Transsion | 73 | 95 | 107 | 121 | 110 | 115 |
| Others | 139 | 125 | 134 | 112 | 92 | 88 |
| Total | 1,206 | 1,165 | 1,236 | 1,242 | 1,180 | 1,215 |
| YoY growth | -11% | -3% | 6% | 0.5% | -5% | 3% |

Source: IDC, CMBIGM estimates

Apple: Solidifying global leadership with 17e, foldables and AI upgrade. We expect Apple's 2025 shipments to be robust, poised to overtake Samsung for the top spot, driven by replacement cycle, positive reception of iPhone 17, and lower-than-expected tariff impact. Counterpoint forecasted Apple's market share to reach 19.4% in 2025, while Samsung's shipments will grow 4.6% YoY to reach 18.7% global share. Looking ahead to 2026, we expect iPhone 17e to be launched in 1H26E, and the first foldable iPhone to debut in 2H26E, followed by a flip-style foldable in late 2027. Furthermore, Apple Intelligence features—positioned as a "more personalized Siri"—along with software enhancements are expected to roll out in 2026, further stimulating replacement demand. Overall, we remain constructive on Apple retaining its No. 1 position by global smartphone shipments in 2026.

Android: Samsung to focus on premium segment amidst fierce low-end competition. Driven by A-Series' improved spec and competitive pricing strategy, we expect rapid growth for Samsung in emerging markets (India, SEA, Middle East & Africa). In addition, as the Android premiumization trend continues, we expect Samsung to maintain a solid market share in North America, Europe, and East Asia. However, given intense competition from Chinese smartphone brands, we expect low-to-mid-end smartphone market to remain under pressure. Consequently, we believe it will be difficult for Samsung to regain the global No. 1 spot in the coming year.

Figure 48: Major smartphone brands shipment trend

Source: Counterpoint, CMBIGM estimates

Figure 49: Apple new products timeline (2026-2028)

| | 1H26 | 2H26 | 1H27 | 2H27 | 1H28 | 2H28 |
|-------------------|--|---|-------------------------|--|--------------------------------------|-------------------------------|
| Smartphone | iPhone 17e | iPhone 18 Pro/Max iPhone Fold | iPhone 18 iPhone 18e | iPhone 19 (20th Anniversary Edition) iPhone Fold 2 iPhone 19 Air/Pro/Max | | iPhone 20 series |
| PC/NB | MacBook Air/Pro (M5 chip) | Mac miniStudio (M5 chip) Brand new MacBook Pro | | New Mac Studio (M5 Ultra chip) | MacBook Air (15 inch OLED edition) | Mac Pro (Modular ARM version) |
| Tablet | iPad Air (M4 chip) entry-level iPad (A18 chip) New iPad mini | iPad mini (A19 chip) | iPad Pro (OLED edition) | | Foldable iPad (1st-gen) | |
| Wearables | | Apple Watch 12 AirPod Pro 3 (camera) | AirPods 5 | Apple Watch X (10th Anniversary Edition) | | Apple Watch 14 |
| Smart home | New Apple TV 4K HomePod mini 2 | Display HomePod Home camera Video doorbell | Desktop robot | | | |
| AR/VR | | | Apple Vision Pro 2 | | Apple Glasses (AR glasses prototype) | |

Source: Company data, CMBIGM estimate

Apple: 2026 is a year of innovation; Focus on iPhone 18, foldables, and material upgrades

1. iPhone 18: variable aperture, 48MP ultra-wide, single-hole display and transparent back cover

For 2026, we remain bullish on iPhone share gains, and we expect iPhone 18 to deliver significant innovations in both hardware spec and AI capabilities. Key spec upgrades include **1) Transparent back cover**: 18 Pro will adopt transparent design within back glass splicing. **2) Single-hole display & under-display Face ID**: 18 Pro/Max will further shrink Dynamic Island size, with Face ID technology moving under display to achieve a single-hole design. **3) Variable aperture**: 18 Pro/Max will introduce variable aperture technology. By dynamically adjusting the aperture size, users will gain more flexible control over depth-of-field effects and achieve cleaner image quality in low-light environments. **4) 48MP Ultra-wide**: "Air" model will feature 48MP sensors for both its main and ultra-wide cameras. Other updates include in-house 5G modem across entire iPhone 18 series, steel-cased battery for Pro Max model, and memory upgrade for iPhone 18 (DRAM 12GB, vs. 8GB in iPhone 17).

Figure 50: iPhone 18 series and iPhone Fold spec comparison

| Categories | iPhone 18 | iPhone 18 Pro | iPhone 18 Pro Max | iPhone Fold |
|-------------------------------|--|---|---|--|
| Release time | Sep 2026 | Sep 2026 | Sep 2026 | Sep 2026 |
| Chip | A20 | A20 Pro | A20 Pro | A20 |
| Memory/storage | 12GB / starting at 128GB | 12GB / starting at 128GB | 12GB / starting at 128GB | 12GB / 1TB |
| Display /refresh rate | 6.3 inch / 120Hz | 6.3 inch/ 120Hz adaptive refresh rate | 6.9 inch/ 120Hz adaptive refresh rate | 7.8 inch foldable/ 120Hz adaptive refresh rate |
| Screen and facial recognition | 2+1 punching, Face ID | Single hole screen +under screen Face ID | Single hole screen +under screen Face ID | Side Touch ID |
| Dynamic Island | Dynamic Island | Smaller dynamic island | Smaller dynamic island | - |
| Rear camera | 48MP main camera 12MP Ultra-wide angle | 48MP variable aperture main camera 48MP Ultra-wide angle 48MP periscope telephoto lens Macro photography/spatial photos 4K 120fps video | 48MP variable aperture main camera 48MP Ultra-wide angle 48MP periscope telephoto lens Macro photography/spatial photos 4K 120fps video | 48MP main camera Ultra-wide-angle +wide-angle +telephoto lens Telephoto lens OIS Night scene mode |
| Front camera | 24MP | 24MP | 24MP | 24MP |
| Body/back panel/middle frame | Aluminum metal middle frame Glass back plate | Aluminum metal one-piece formed body Glass back panel, Transparent back cover VC liquid cooling | Aluminum metal one-piece formed body Glass back panel, Transparent back cover VC liquid cooling, Steel shell battery | Middle frame: aluminum alloy or titanium metal Body: titanium metal Hinge: titanium alloy+ stainless steel composite |
| Others | Self-developed C2 baseband chip Solid-state /camera control buttons | Self-developed C2 baseband chip Solid-state /camera control buttons Lidar scanner | Self-developed C2 baseband chip Solid-state /camera control buttons Lidar scanner | UTG glass, crease-free screen technology Remove Face ID and use side Touch ID power button |
| Starting price (USD) | \$799 - \$849 | \$1,099 - \$1,149 | \$1,199 - \$1,299 | \$2,399 |

Source: Company data, CMBIGM estimates

Figure 51: main component supply chain names

| | iPhone 17 series | iPhone 18 series |
|---|--|---|
| Baseband | Qualcomm, Apple | Qualcomm, Apple |
| Lens | Largan, Genius, Sunny Optical | Largan, Genius, Sunny Optical |
| VCM/OIS | Alps, Mitsumi, Luxshare , Mitsumi | Alps, Mitsumi, Luxshare , Largan |
| Variable aperture | - | Sunny Optical , Luxshare , Largan |
| Camera module | LGI, FIT Hon Teng, Cowell | LGI, Hon Hai Precision, Cowell |
| Structural components | FII, BYDE, Lens Tech, Luxshare | FII, BYDE, Lens Tech, Luxshare |
| Shell structural components (folding model) | - | FII , BYDE |
| Ultra-thin glass (folding phones) | - | Lens Tech , GIS |
| Hinge (folding phones) | - | Amphenol , Shin Zu Shing |
| Display panel | Samsung, LGD, BOE | Samsung, LGD, BOE |
| Acoustics | AAC Tech, QD co., Luxshare | AAC Tech, QD co., Luxshare |
| Haptics | AAC Tech, Luxshare, Nidec | AAC Tech, Luxshare, Nidec |
| Vapor Chamber | AVC , AAC Tech | AVC, AAC Tech |
| Glass back cover | Lens Tech, Biel, BYDE | Lens Tech, Biel, BYDE |
| Battery steel shell | Shineway, Ruilong, Lingyi | Shineway, Ruilong, Lingyi |
| Battery pack | SZ co., Desay, Simplo, TDK | SZ co., Desay, Simplo, TDK |
| Assembly | Hon Hai, Luxshare , TATA | Hon Hai, Luxshare , TATA |

Source: company data, CMBIGM.

Note: suppliers marked red suggest their market share gain

2. Apple Fold: Fall 2026 Debut; Flagship positioning to underpin premium pricing

We expect foldable iPhone to debut in September 2026 along with iPhone 18 Pro series, forming a flagship product lineup, but the official sales date may be delayed until Oct-Nov. In addition, Apple may forgo the industry-standard name "iPhone Fold" in favor of "iPhone Ultra." The main reasons include aligning with M-series chip naming convention (Ultra is higher than Max), redefining AI capabilities via Apple Intelligence, and justifying the "Ultra" premium price point. We summarize five key highlights across camera, materials, display, and hinge technologies:

Highlight 1: Quad-48MP camera system. We expect the device to feature four cameras with 48MP, including two rear main cameras and front cameras located on the outer screen and the inner screen. The two rear cameras will have 48MP, likely a primary wide angle plus either an ultra-wide or telephoto lens. The front camera spec highlights 1) external cover screen to adopt common punch-hole design, 2) internal main screen to equip with screen camera (USC) technology, allowing for video calls and selfies while enjoying a complete and unobstructed full-screen view.

Highlight 2: titanium reintroduction for chassis and hinge. We expect titanium to be reintroduced for both the chassis and hinge structure. Its high strength-to-weight ratio and scratch resistance make it ideal for foldables, balancing durability with portability to reinforce the premium positioning. We expect a hybrid metal frame, utilizing titanium for structural rigidity and aluminum for weight reduction. We expect the hinge components to combine titanium and stainless steel to ensure stability and alignment precision over repeated folding cycles.

Highlight 3: UTG substrate; Lens as primary supplier. We expect Ultra-Thin Glass (UTG) will be used as screen substrate, as UTG (thickness 0.1-1.2mm; with <0.2mm offering >90% light transmission) provides superior visual quality. We expect Lens

Technology to be the primary supplier, securing a 70% of UTG orders. The use of UTG reduces module weight and thickness, freeing up internal volume for larger batteries.

Highlight 4: "crease-free" visuals and ultra-slim profile. We expect iPhone Fold to adopt a brand-new screen technology to achieve a crease-free visual effect, significantly improving the user experience. The design emphasizes extreme thinness—approx. 9-9.5mm when folded and 4.5-8mm when unfolded—potentially thinner than the rumored "iPhone Air." This suggests significant breakthroughs in hinge and panel materials, proving that foldable structures need not be bulky.

Highlight 5: Liquid Metal Hinge for Perfect Flatness. We expect the proprietary hinge utilizes Liquid Metal (nano-alloy materials) to disperse folding stress at the molecular level. Crafted from liquid metal (2.5x the hardness of titanium) and integrated with a dynamic tension system featuring 200 micro-pressure sensors, the hinge allows for micro-hovering when folded and uniform tension when unfolded. We expect Durability is estimated to be 300% higher than industry standards (implied lifespan of 13 years at 100 folds/day). The hinge cost is significant at ~US\$80, accounting for 15% of total BOM. Apple has reportedly booked full-year capacity from Sumitomo Metal to secure the 7mn first-year shipment target.

3. iPad: Focus on OLED, AI Services & Waterproofing

1) iPad Air (1H26E): M4 Performance & Connectivity Boost. We expected the new iPad Air to launch in 1H26E, which is powered by M4 chip, delivering 10-20% performance uplift over the M3. Following the iPad Pro's lead, we expect the integration of Apple's in-house N1 network chip and C1X modem, enabling Wi-Fi 7 support and faster cellular connectivity.

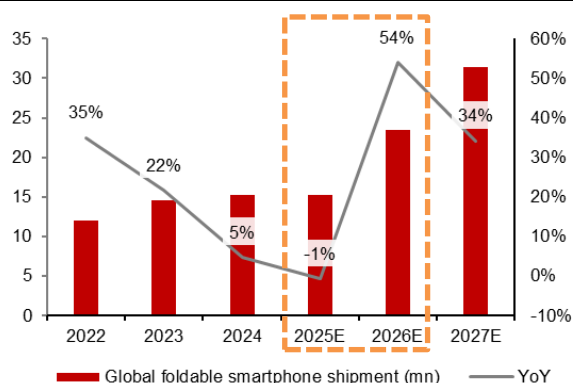
2) A18 iPad (1H26E): Bringing AI to Entry-Level This standard iPad also target for a 1H26 release, which will feature A18 chip. This marks the debut of Apple Intelligence features on the entry-level model. Similar to the Air, this device is expected to adopt Apple's proprietary network and modem chips for a comprehensive connectivity upgrade. **3) A19**

iPad mini (2H26E): OLED Upgrade & Rugged Features Scheduled for 2H26, the new iPad mini will likely sport the A19 Pro chip. It is set to become the second iPad product line (after the Pro) to adopt an OLED screen, offering significantly enhanced visual quality. We also expect improved waterproofing capabilities.

Foldables: Apple entry to boost premium demand; Focus on screens, hinges, and UTG upside

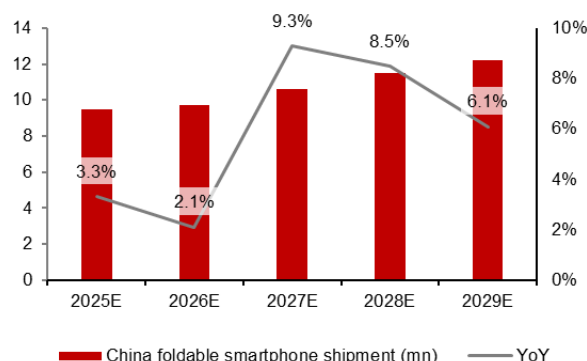
We estimate global foldable shipment to grow 51% YoY in 2026. Despite intensified competition, global foldable shipments remained flattish in 1H25E, based on Canalys. China market, delivering 32.8% YoY growth, was driven by Huawei's Mate and Pura X series, while US market delivered moderate growth at 7% YoY, supported by Motorola Razr 2025 series. For FY25E, we expect global foldable shipments to stay flattish at 15.2mn. However, we believe 2026 is poised to be an inflection point. Driven by intense competition and improved affordability of flip-style models, we expect the market will return to high growth at 51% YoY in 2026 and sustain momentum into 2027. We believe Apple's entry will be a significant catalyst for consumer demand in premium segment. Consequently, we expect global foldable shipment growth will outpace that of domestic Chinese foldables.

Figure 52: Global foldable smartphone shipment forecast



Source: Omdia, Canalys, CMBIGM estimates

Figure 53: China foldable smartphone shipment forecast

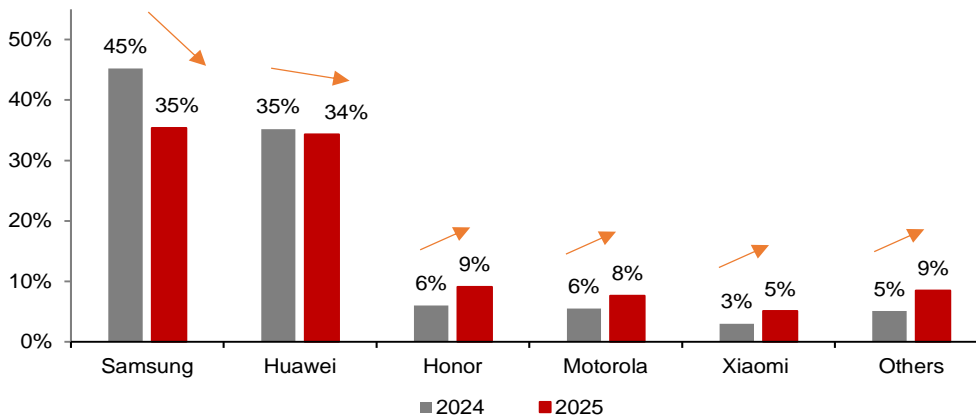


Source: IDC, CMBIGM estimates

Competitive Landscape: Diverse & evolving; Samsung & Huawei lead. Although growth for foldable smartphones has moderated this year, this segment remains the primary focus for innovation in the mid-to-high-end segment, driven by technology advancement and cost decreases. OEMs are accelerating product launches, expanding product lines and price bands to position themselves for robust demand growth in 2026. Currently, the market is a duopoly led by Samsung and Huawei, but challengers are gaining ground.

- **Samsung (Global Leader):** Samsung continues to dominate the global market. The newly launched Galaxy Z Fold 7 features notable improvements in hinge structure, screen crease reduction, and form factor (weight/thickness). However, due to intensifying competition from other brands, we project its market share to contract from 45% in 2024 to 35% in 2025.
- **Huawei (Global #2):** Backed by robust performance in the Chinese market, Huawei ranks second globally with a projected 2025 market share of 34.3%.
- **Honor & Lenovo (Motorola):** Both brands are showing significant growth momentum in 2025, driven by aggressive expansion in the mid-to-high-end market. Honor: Share expected to rise from 6% (2024) to 9.1% (2025). Motorola: Share expected to rise from 5.5% (2024) to 7.6% (2025).
- **Xiaomi:** Leveraging MIX Flip series to penetrate the lightweight/clamshell foldable market, Xiaomi's share is projected to grow from 3% (2024) to 5.1% (2025).
- **Others (OPPO/Vivo, etc.):** Projected to hold a combined share of 8.5%.

Figure 54: 2024-25E Global foldable smartphone market share



Source: Trendforce, CMBIGM

Apple vs. Samsung: Prioritizing Display, Hinge & Camera; Pricing to rival Z Fold. For Samsung Galaxy Z Fold series, the two core components—display and hinge—account for ~50% of total cost, effectively defining the high cost for foldable smartphones. As for Apple's strategy, we believe Apple's BOM structure will differ significantly from Samsung's. We expect Apple to prioritize top-tier spec for three critical components to address user experience: screen, hinge, and camera. In addition, Apple can leverage cost advantage through its in-house A-series silicon. While positioned along with "Pro Max" tier, iPhone Fold's BOM cost significantly exceeds that of a top-spec iPhone Pro Max, necessitating a premium price tag. We estimate BOM will exceed US\$750, and retail price will range at US\$1,800-2,000, directly competing with Samsung Galaxy Z Fold 7.

Figure 55: Major foldable flagship smartphone comparison

| Brand | Model | Folding form | Outer display size | Inner display size | Processor | Camera system | Special technology/notes |
|---------|----------------|---------------------------|--------------------|--------------------|-------------------------------|---|--|
| OPPO | Find N5 | Horizontal inward folding | 6.5 inch | 7.8 inch | Snapdragon 8 Gen 4 | 50MP main-cam/ultra-wide-angle/periscope telephoto | New hinge (thinner and lighter), UTG ultra-thin glass, AI image enhancement |
| Huawei | Mate X6 | Horizontal inward folding | 6.7inch | 8.1 inch | Kirin 9100 (5G) | 50MP quad-cam (variable aperture)/periscope | Xuanwu body + second-generation Kunlun glass, satellite communication 3.0, HarmonyOS 5.0 |
| Samsung | Galaxy Z Fold7 | Horizontal inward folding | 6.2 inch | 7.6 inch | Snapdragon 8 Gen 4 for Galaxy | 200MP main-cam/12MP ultra-wide-angle +10MP telephoto lens | Enhanced UTG, S Pen support, IPX8 water resistance, AI multi-task optimization |
| VIVO | X Fold4 | Horizontal inward folding | 6.6 inch | 8.0 inch | Snapdragon 8 Gen 4 | 50MP V3 image chip/Zeiss full focal range | Super durable hinge, 3D ultrasonic under-screen fingerprint, Zeiss T coating |
| Honor | Magic V3 | Horizontal inward folding | 6.5 inch | 7.9 inch | Snapdragon 8 Gen 4 | 50MP triple-cam (Hawk-eye camera) | Luban Titanium hinges, nano-crystalline glass, enhanced privacy and security |
| Apple | iPhone Fold | Horizontal inward folding | 6.3 inch | 8.0 inch | A19 Pro/ M series | 48MP main-cam/multi-cam system, integrated with computational photography | Brand-new hinge design, super porcelain crystal glass panel, supporting Apple Pencil, ecological integration is the core selling point |

Source: company data, CMBIGM

Supply chain analysis: Hinges & displays dominate >50% of BOM. The BOM cost for foldable smartphones is heavily concentrated in mechanical structural components (hinges) and display modules, which together account for over 50% of total cost, significantly higher than in traditional smartphones. **1) Hinges (14-22%):** A single hinge unit costs between RMB 800-1,200, representing 3-4x the cost found in traditional phones. **2) Display Modules (30-40%):** The most expensive component category. **3) Batteries (10-12%):** Costs have risen to support the higher power consumption requirements of foldables. **4) Others:** Processors, memory, and chips make up the remainder.

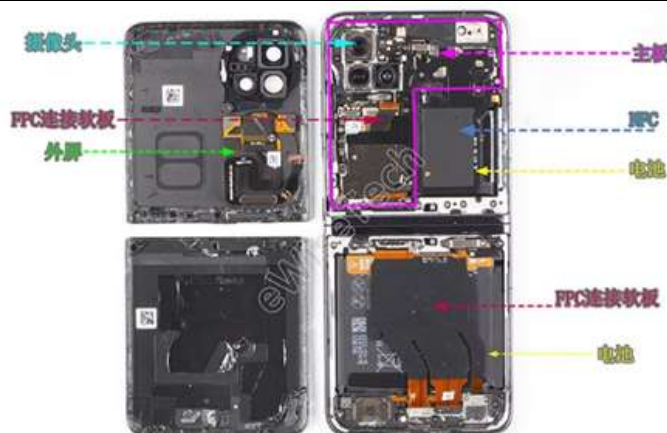
Apple 2026 entry: Upside for key components. With Apple to launch its foldable phone in 2026, we expect significant growth opportunities for screens, hinges, and cover glass suppliers. **1) Screens: Advanced LTPO.** While iPhones already utilize LTPO for ProMotion, foldables are hypersensitive to power consumption. We expect Apple to adopt advanced LTPO backplane technology, supporting a wider variable refresh rate range (1-120Hz or beyond) to optimize efficiency, benefiting BOE (000725 CH). **2) Hinges: The core of user experience.** As the component determining crease visibility, folding feel, lifespan, and device thinness, we believe Apple is likely to adopt a complex multi-axis linkage structure or an optimized water-drop hinge to achieve a seamless "crease-free" effect and a tighter folding radius. Beneficiaries include Everwin Precision (300115 CH) and Gian Technology (300709 CH). **3) Cover glass: UTG adoption.** Similar to Samsung, we expect Apple to select UTG (ultra-thin glass) as the cover material for its superior optical properties and durability. Beneficiaries include Lens Technology (300433 CH) and Kaisheng Technology (600552 CH).

Figure 56: Samsung Galaxy Z Fold 6 breakdown



Source: company data, CMBIGM

Figure 57: Huawei P50 Pocket breakdown



Source: eet-China, CMBIGM

AI Smartphones: Doubao AI empowers ecosystem; Apple set for major AI upgrades

SoC advancements to drive performance and application upgrade. Major mobile SoC vendors have successively released their latest generation of AI processors, laying the technical foundation for enhanced AI performance and deeper application integration. **1) Apple: A19 Pro.** Powering iPhone 17 Pro series and iPhone Air, it features significantly stronger CPU and GPU performance, and introduces hardware-accelerated ray tracing and hardware-accelerated AI capabilities to handle high-demand gaming and complex applications. **2) Qualcomm: Snapdragon 8 Gen 5.** It features 3rd Gen Oryon CPU, which delivers 36% CPU boost, 11% GPU boost, and a 46% increase in AI performance, compared to Snapdragon 8 Gen 3. It is equipped with the same Adreno 840 GPU and X80 5G Modem as "Ultimate Edition". However, the lack of Adreno High-Performance Memory (HPM) results in slightly lower performance under ultra-high gaming loads compared to the top-tier variant. It targets models in ~RMB 3,000 price band. **3) MediaTek: Dimensity 9500.** It is positioned as flagship 5G AI Chip, which Integrates a Generative AI engine alongside robust CPU/GPU capabilities, and supports 4K 120fps video recording and console-level ray tracing. It utilizes multiple AI technologies to optimize communication power efficiency, network connectivity, and positioning accuracy. Overall, we believe continuous upgrade of mobile processors by major SoC vendors will be the major growth engine supporting upgrade of AI smartphone performance and applications.

Figure 58: Major smartphone SoC manufacturers release updated AI phone processor chips

| | Qualcomm | MediaTek | Apple | Google |
|-------------------------------|--|--|---|--|
| Type | Qualcomm Snapdragon 8 Gen 5 | Mediatek Dimensity 9500 | Apple A19 Pro | Google Tensor G5 |
| Release date | 1/10/2025 | 1/9/2025 | 1/9/2025 | 1/10/2025 |
| First release model | Oneplus Ace 6T | vivo X300 | iPhone 17 Pro | Pixel 10 Pro |
| Process | TSMC 3nm N3P | TSMC 3nm N3P | TSMC 2nm N3E | TSMC 3nm N3P |
| CPU frequency | Super large core 4.61GHz | Super large core 4.21GHz | performance core is 4.25GHz | Super large core 3.5GHz |
| CPU architecture | Self-developed Oryon (2+6) full large core | The third-generation all-large core (1+3+4) | Self-developed (2+4) six-core | Self-developed (2+6) octa-core |
| CPU core configuration | 2x 4.6GHz Prime + 6x 3.62GHz | 1x 4.21GHz C1-Ultra + 3x 3.5GHz C1-Premium + 4x 2.7GHz C1-Pro | 2x 4.26GHz performance cores + 4x 2.6GHz efficiency cores | 2x 3.5GHz performance cores + 6x 2.7GHz efficiency cores |
| GPU type | Adreno 840 | G1-Ultra MC12 | Self-developed 6-core (96EU) | Mali-G720 MC12 |
| Memory | LPDDR5X 7500MHz | LPDDR5X 7500MHz | LPDDR5 7500MHz | LPDDR5X 7500MHz |
| Wireless | Wi-Fi 7, bluetooth 5.4 | Wi-Fi 7, bluetooth 5.4 | Wi-Fi 7, Bluetooth 5.4 | Wi-Fi 7, Bluetooth 5.4 |
| Modem | Integrated X75 | Integrated M80 | Integrated X75 | Integrated X75 |
| AI chip/NPU | Hexagon NPU (220 TOPS) | APU 7.0 | 16-core neural network engine | Self-developed TPU (AI performance improved by 34%) |
| Core highlights | all-large core design enhances the energy efficiency ratio | All-large core architecture with optimized energy efficiency ratio | 2nm process, leading single-core performance | AI capabilities on the edge side are outstanding |

Source: company data, CMBIGM

Doubao AI phone: Shifting competition toward AI ecosystem

Marking the "AI Native Era"; From components to ecosystems. The emergence of Doubao AI smartphone marked the beginning of "AI Native Era," highlighting a shift in OEM competition from hardware spec to AI ecosystem. On Dec 1, 2025, ZTE unveiled Nubia M153 engineering prototype (priced at RMB 3,499), featuring "Technical Preview Edition" of Doubao Assistant. The device delivers enhancements in system-level operation capabilities and accessibility/portability of invoking LLMs. Users can invoke the assistant directly via voice commands, a dedicated side button, or Doubao Ola Friend headphones. High-frequency features (e.g. voice calls, video calls, screen sharing) are integrated in the assistant and can be accessed via a double-click of the side AI button. Overall, we believe competition among smartphone OEMs will no longer be limited to hardware spec (chips, screens, cameras) but will shift toward the maturity and openness of AI ecosystems.

Figure 59: Doubao AI smartphone



Source: ZTE official website, CMBIGM

Figure 60: Doubao phone technical preview version



Source: ZTE official website, CMBIGM

Apple Intelligence: New AI features to drive service revenue growth. Leveraging upgraded App Intents technology, Apple aims to enable precise control over applications via voice commands. **1) Enhanced Siri:** Siri will support advanced NLP, and integrate with apps like Safari and Photos to perform tasks such as summarization, object recognition, and calculations. **2) Productivity:** Across Mail, Notes, and Pages, AI will offer one-click proofreading, tone adjustment, and summarization. **3) iMessage:** New features include "background chat" capabilities and AI-generated shortcuts to enhance messaging efficiency. **4) System-Level & Ecosystem Integration (iOS 27):** AI integration is planned to expand to more native applications, including smart battery management and Genmoji, enriching usage scenarios. Apple Intelligence will be integrated across iOS, iPadOS, and macOS, enabling seamless cross-device interoperability. We believe the deployment of server-side Apple Intelligence, combined with Siri's intelligent upgrades and the rollout of new features, will drive revenue growth for App Store and Subscription Services in 2026.

Figure 61: Apple Intelligence key features



Source: Apple, CMBIGM

Figure 62: Siri AI/Apple Intelligence blend



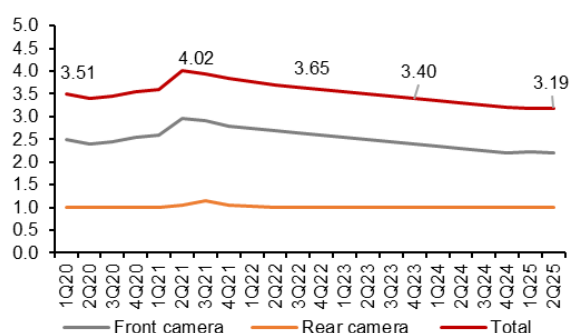
Source: Apple, CMBIGM

Smartphone Components: Focus on optics, structural parts, hinges and thermal management

Optics: Multi-cam, periscope, hybrid lens and variable aperture

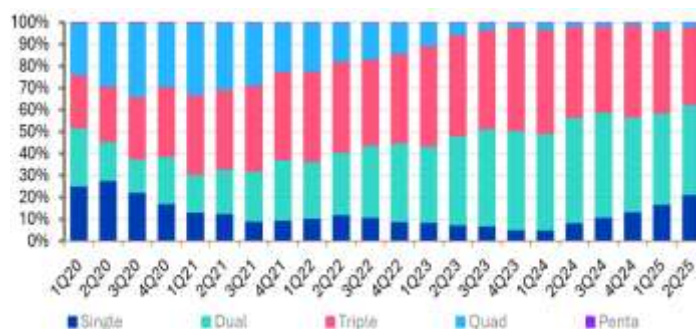
Multi-cam adoption to diversify in 2026; Low-end retains single-cam. We expect smartphone camera spec to show increasing diversification in 2026. According to Omdia, average number of cameras per smartphone in 2Q25 was 3.19, down from 3.37 in 2Q24. For low-end segment, 21% of models still feature a single-camera design, primarily concentrated in the budget/low-end market. For flagship models, triple-camera setups have become the industry standard, enhancing user experience through multi-focal length coverage and scenario-based photography. For instance, Apple adopts a "Golden Triangle" structure (Ultra-wide + Main + Telephoto) to achieve full focal length coverage and breakthroughs in computational photography. The Xiaomi 17 Ultra features a 1-inch main sensor + 200MP periscope telephoto + ultra-wide, bolstering professional-grade imaging capabilities. Currently, while triple-camera is penetrating from premium flagships into mid-range models, core value proposition remains focused on main camera quality rather than increase of camera numbers. Looking ahead, we expect a potential shift toward quad-camera configurations. We recommend focusing on leading camera lens and module manufacturers, including Sunny Optical (2382 HK) and Q Tech (1478 HK).

Figure 63: 1Q20-2Q25 smartphone average number of cameras



Source: Omdia, CMBIGM

Figure 64: Smartphone camera shipment market share contribution



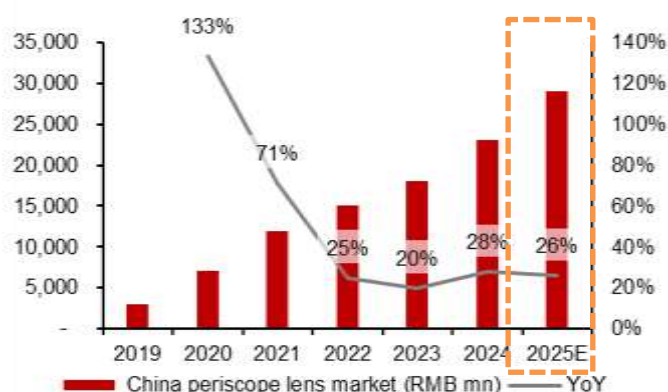
Source: Omdia, CMBIGM

Periscope telephoto: Penetration to accelerate in 2026. We expect penetration of periscope telephoto cameras to accelerate in 2026. While periscope camera adoption has extended from flagship models to mid-to-high-end devices, camera spec varies significantly. Premium models feature large-sensor, high-resolution units, whereas mid-range models often utilize smaller sensors with lower resolution. For 2026, we expect the periscope spec as the mature solution for achieving optical zoom due to space constraints of smartphones. Driven by increasing consumer interest in telephoto use cases (e.g., portraits, close-ups, and long-range shots), the periscope lens is poised to become the second most important lens after the main camera. We expect periscope telephoto lenses will become increasingly ubiquitous in smartphones priced at RMB 3,000 and above in 2026. According to QYR Research, global periscope telephoto lens market sales stood at US\$61.18bn in 2025 and are expected to reach US\$138.59bn by 2031, representing a CAGR of 15%.

Glass-plastic hybrid lenses: Expanding in the premium Segment. We expect glass-plastic hybrid lenses will see broader adoption in high-end smartphones. Over the past few years, nearly 20 models across brands like Xiaomi, Sony, vivo, and Transsion have adopted this technology, mostly for rear main cameras. In 2025, **Huawei Pura 80 series** main camera adopted a glass-plastic hybrid lens, with stocking volume in the tens of

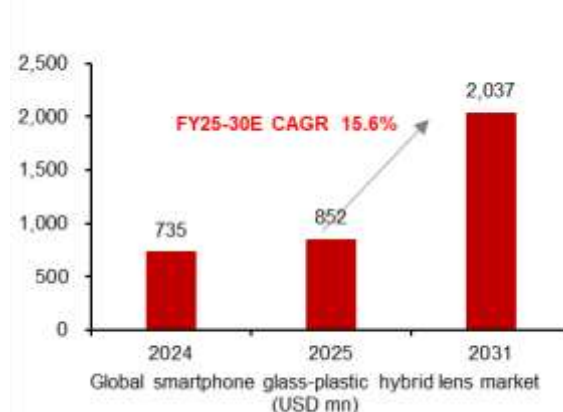
millions. Currently, this technology is utilized on a small scale only in top-tier flagships (e.g., Xiaomi 14 Ultra, vivo X100 Ultra), serving as a symbol of ultimate imaging capability. Glass lenses (molded aspherical glass) offer higher refractive indices, lower dispersion, and better thermal stability compared to plastic. This effectively resolves issues such as edge quality degradation, chromatic aberration, and focus drift caused by thermal expansion/contraction in large-sensor setups. For 2026, while we do not expect rapid mass-market adoption, we believe glass-plastic hybrid technology will serve as a "moat" for top-tier imaging flagships to maintain differentiation. As supply chain technologies (e.g., Sunny Optical, AAC Tech) mature and costs decline, we expect adoption will increase but remain concentrated in ultra-premium models. Furthermore, we expect to see this technology applied to periscope telephoto lenses to further enhance resolution and chromatic aberration control, which is crucial for high-quality high-magnification zoom. Leading global optics suppliers, such as Sunny Optical, Largan and AAC Tech (WLG), have all established product offerings and achieved mass production delivery.

Figure 65: China periscope telephoto lens market sales forecast



Source: Guanyantianxia, CMBIGM

Figure 66: Global smartphone glass-plastic hybrid lens market size



Source: GIR, CMBIGM

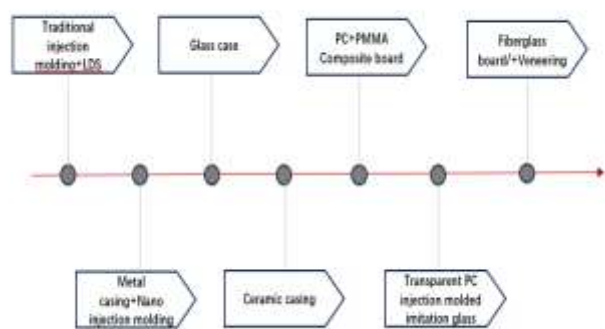
Variable aperture: integration with computational photography in 2026. Variable aperture technology has been adopted in flagship models from Samsung, Huawei, Xiaomi, and Honor. However, the industry is still exploring the optimal technical pathways and practical use cases for this feature. Early implementations primarily focused on creating background bokeh (using large apertures) and enhancing starburst effects in night scenes (using small apertures). For 2026, we expect the value proposition of variable aperture to evolve significantly through integration with computational photography. Key advancements include **1) image quality optimization:** Systems will feature intelligent stepless or multi-stage adjustment (e.g., between f/1.4 and f/4.0) based on the scene. The aperture will automatically stop down in well-lit conditions to improve edge sharpness and depth of field, while opening up in low-light environments to maximize light intake. **2) Video recording:** The technology will enable smoother exposure transitions during video recording, thereby reducing the reliance on ND filters for exposure control.

Structural Parts/Casings: Apple returns to Titanium/Aluminum; Android material diversification

iPhone 18: Pro returns to Titanium; Standard retains Aluminum; Stainless steel frame returns. To achieve comprehensive optimization in efficiency and battery life, iPhone 17 Pro/Pro Max adopted a lighter, thermally superior aluminum unibody design. The back cover featured a clever splicing of aluminum alloy and glass, with antennas integrated into the chassis periphery to satisfy wireless charging and high-performance signal transmission requirements. Looking ahead to 2026, we expect a strategic shift in materials for the iPhone 18 lineup: **1) Pro models (return to titanium):** The iPhone 18 Pro chassis is expected to revert to titanium alloy, continuing to enhance scratch and drop resistance. Additionally, reports suggest a return of the stainless steel frame. **2) Standard models (retain aluminum):** Due to cost pressures resulting from the upgrade in starting memory specifications (RAM), the standard iPhone 18 models are expected to retain the aluminum alloy chassis. **3) iPhone 18 Pro Max (aesthetics):** The back glass will utilize a new "Color-infused Glass" process. This innovation aims to significantly minimize the color disparity between the glass material and the metal chassis, thereby enhancing the overall seamlessness and unibody aesthetic of the device.

Material diversity: Wide adoption of glass, plastic, fiberglass, and ceramics. **1) Nano-microcrystalline glass: The new standard for durability.** We believe Nano-microcrystalline glass has achieved wide adoption across major brands (Apple, Huawei, Honor, Xiaomi, Meizu, OPPO, and vivo), ushering in a new era of drop resistance and protection for smartphones. **2) Plastic: The budget-friendly solution.** PC/PMMA composite sheets and transparent PC injection molding remain the primary cover materials for mid-to-low-end models. **3) Fiberglass (GFRP): The lightweight mainstream.** Composed of high-performance resin and glass fiber reinforcement, fiberglass offers low density, superior mechanical properties, a low dielectric constant, excellent heat resistance, and chemical stability. It offers good processability via die-cutting/CNC (for flat designs) or thermoforming (for 3D designs). Combined with decorative finishes, its characteristics of being light, thin, and strong have made it a mainstream back cover material for smartphones and tablets. **4) Ceramics: The ultra-premium niche.** With a Mohs hardness of ~8 (far exceeding metal and glass), ceramics offer superior scratch resistance, longevity, and biocompatibility, and provides a comfortable and premium, "jade-like" aesthetic. Adoption is constrained by high processing difficulty and cost. Ceramics are generally thicker and heavier than glass, and limited to specific ultra-premium flagship models.

Figure 67: smartphone cases' material innovation and upgrade trend



Source: Aibang, CMBIGM estimates

Figure 68: fiberglass and glass cover/composite comparison

| Phone cover | 3D Fiberglass Board(New) | Glass cover board (mature) | Composite board (mature) |
|----------------------|--------------------------|----------------------------|--------------------------|
| Weight | * | *** | ** |
| Strength | **** | * | ** |
| Surface hardness | *** | **** | ** |
| Thickness | * | ** | ** |
| Cost | ** | ** | ** |
| Resistance | *** | *** | *** |
| Heat dissipation | ** | ** | ** |
| Environment friendly | ** | ** | *** |
| Process maturity | *** | *** | **** |
| Yield rate | ** | ** | *** |
| Texture | *** | *** | *** |
| Molding process time | *** | *** | ** |
| Fire resistance | **** | **** | ** |
| Forming process | Hot pressing | Hot bending | High pressure |

Source: Aibang, CMBIGM, Note: more * means higher the attribute

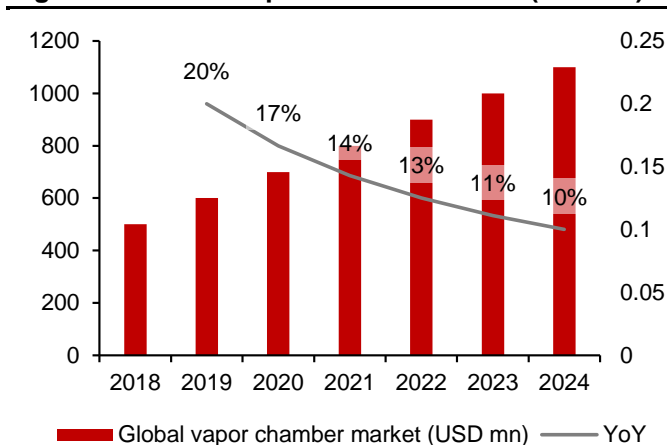
Thermal Management: Apple adopts VC as standard; AI drives cooling upgrades

Rising thermal demand in computing era. In the era of AI smartphones, continuous upgrade of computing power and power consumption has made thermal management a critical component to ensure device stability. Meanwhile, the industry's pursuit for thinner, lighter, and more integrated designs has constrained internal cooling space. The combination of high-frequency, high-power components within shrinking form factors is compelling the development of more efficient heat dissipation solutions.

Global VC market size to grow 14.5% CAGR in FY25-31E. Driven by upgraded thermal requirements across electronic devices, vapor chamber (VC) market will maintain fast growing. The market size is projected to reach US\$2,984mn by 2031, reflecting a robust CAGR of 14.5% during 2025-2031, based on GIR. During 2010-2020 (Explosive Growth), the trend toward miniaturization and high performance in consumer electronics (smartphones/tablets) drove VCs toward extreme thinness (down to 0.25mm) and higher efficiency. Flagship models from Xiaomi and Huawei were early adopters, leveraging process improvements like multi-layer copper mesh microstructures and diffusion bonding to meet dual demands for space savings and thermal efficiency. Starting from 2020 (High-End Transition), the market has entered a transformation phase, with 5G base stations, NEVs, and AR/VR devices emerging as new growth engines.

Apple strategy: VC becoming standard across iPhone & iPad. Apple introduced VC technology for the first time in the iPhone 17 Pro/Max. The adoption came with the return to an aluminum chassis and system-level thermal optimization, passive cooling efficiency improved by 300%. In high-load gaming scenarios (e.g., Genshin Impact), device temperature dropped by 6-12°C, significantly enhancing frame rate stability. This upgrade marks a major breakthrough for Apple in passive thermal management, signaling a new industry standard for thermal efficiency. Looking ahead, we expect Apple to continue utilizing VC solutions for its upcoming foldable device, with AVC (3017 TT) serving as the manufacturer. For 2027 iPad Pro, we expect Apple to introduce a VC liquid cooling system into iPad Pro. Similar to iPhone 17 Pro structure, this will further improve stability and heat resistance under high-performance computing workloads. We believe the proliferation of VC vapor chambers in premium handsets will provide a strong tailwind for manufacturers within the Apple supply chain that possess VC production capabilities. Key beneficiaries include Jones Tech (300684 CH), Lingyi iTech (002600 CH), and AAC Tech (2018 HK).

Figure 69: Global vapor chamber market (2018-24)



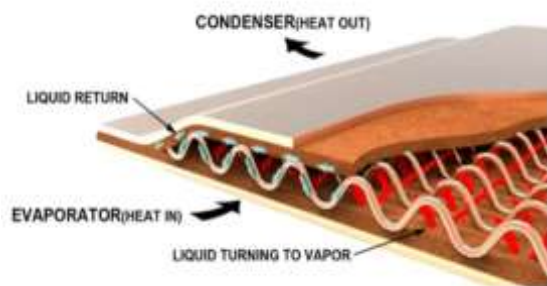
Source: Chyxx, CMBIGM estimates

Figure 70: Heat dissipation module/VC suppliers

| Name | Core products | Competitive advantage and customers |
|--------------------|--|---|
| Lingyi iTech | Stainless steel ultra-thin VC, heat dissipation module, graphite sheet | <ul style="list-style-type: none"> Full-stack capabilities in heat pipes, vapor chambers, water-cooling modules, Clients: Apple, Huawei, OPPO, and vivo |
| Jones Tech | Graphite film, VC thermal interface material | <ul style="list-style-type: none"> Graphite heat dissipation with solid position and actively expanding into VC Clients: Apple, Huawei, OPPO, and vivo |
| AAC Tech | Ring-shaped cold pump, ultra-thin VC, precision components | <ul style="list-style-type: none"> Exclusive supply of ring-shaped cold pump cooling system for Xiaomi 13 Ultra Clients: Xiaomi, Honor, OPPO, etc. |
| Frd Science & Tech | Micro-pump liquid cooling module, VC, thermal conductive material | <ul style="list-style-type: none"> Micro-pump liquid cooling modules and solutions including graphite sheets and thermal conductive adhesives |
| Tianmai Thermal | Heat pipes, VC, thermal interface materials | <ul style="list-style-type: none"> Profound technical and patents in VC Clients: Samsung, OPPO, vivo, Huawei |
| Suqun New Material | Graphite film, VC, thermal conductive gasket | <ul style="list-style-type: none"> Products: synthetic graphite, heat dissipation films Clients: major US clients, mainstream domestic brands |

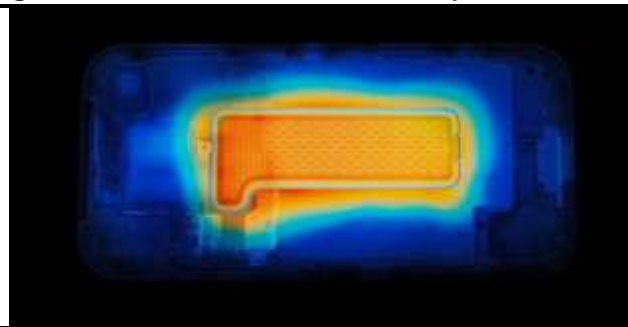
Source: Chyxx, CMBIGM estimates

Figure 71: Smartphone vapor chamber structure



Source: CIME 2025, CMBIGM

Figure 72: iPhone 17 Pro uses VC vapor chamber



Source: Apple, CMBIGM

Foldable UTG: Innovation, Material Demand & Cost Reduction

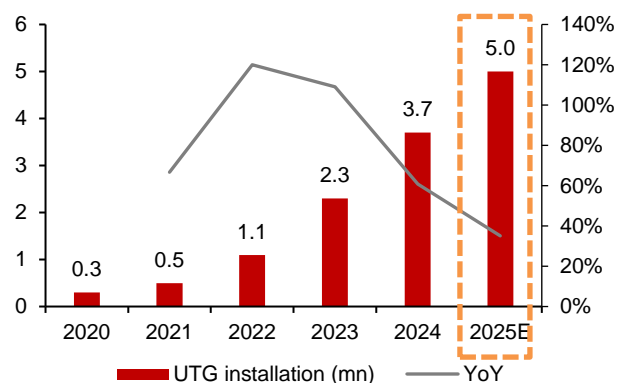
We believe the shift from CPI to UTG CPI (colorless polyimide) and UTG (ultra-thin glass) are the primary cover materials for foldable screens and are critical in addressing the screen crease issue. While CPI was the initial choice for foldable covers in 2019, OEMs have increasingly shifted focus toward UTG since 2020. Samsung Galaxy Z Flip marked the industry's pivot as the first foldable device to adopt UTG technology. According to CINNO, UTG shipments in Chinese foldable market reached 5mn in 2025, representing a +35.1% YoY growth. Looking ahead, we believe UTG market is poised for rapid expansion, driven by three key factors: **1) Tech innovation:** Continuous improvements addressing key user experience pain points, such as crease visibility, weight, and durability. **2) New entrants:** The entry of major OEMs, specifically for Apple Foldable. **3) Cost reduction:** The ongoing decline in unit costs making the technology more accessible.

Figure 73: Lens Tech's UTG glass for Apple foldable smartphone



Source: QYResearch, CMBIGM

Figure 74: China foldable smartphone's UTG installation

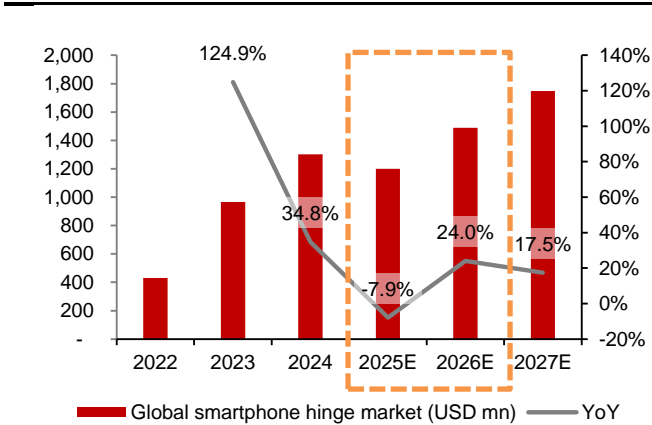


Source: CINNO Research, CMBIGM

Hinges: Crease elimination and lightweighting drive rapid growth

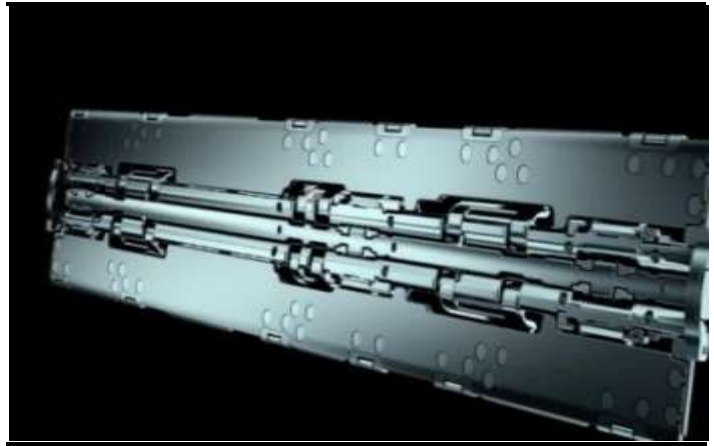
The water-drop hinge has emerged as the mainstream solution in foldable smartphone industry. This structure is favorable to minimize screen wear, enhance overall durability, and facilitate ultra-thin chassis designs. To address the critical requirement for lightweighting, the industry is accelerating technological innovation. Notably, we expect Apple's upcoming foldable to adopt liquid metal hinges, a move poised to significantly enhance mechanical performance. We expect that the dual mandates of crease elimination and weight reduction will be the primary drivers of rapid expansion in the hinge market. TrendForce projects the foldable smartphone hinge market to reach US\$1.2bn in 2025. In 2025, Huawei will maintain #1 market share position, followed by OPPO (#2) and Samsung (#3). With Apple entering the market in 2026, leveraging proprietary hinge patents to drive technical innovation, we expect the competitive landscape for hinges to become increasingly diversified.

Figure 75: Global foldable phone hinge market



Source: Trendforce, CMBIGM

Figure 76: Vivo's liquid metal hinge solution



Source: vivo, CMBIGM

Figure 77: Global hinge supply chain

| Tier | Supplier | Country/region | Technology features | Major customers |
|--|-----------------------------|----------------|--|--------------------------------------|
| Tier 1 Hinge module supplier | Shin Zu Shing | China Taiwan | Precision hinge module, integrated sliding mechanism, dust-proof | Apple, Samsung, OPPO, Huawei, Xiaomi |
| | KH Vatec | South Korea | Dual-axis water-drop hinge, ultra-thin module | Samsung Galaxy Z series |
| | Shinhan Precision | South Korea | High-precision module processing | Samsung |
| | Amphenol | US | Precision mechanical components, hinge module parts | Apple, Samsung |
| Tier 2 Precision components Metal parts | Fositek | China Taiwan | Metal structural components, sliding guide rails, frame supports | New Dayung, Huawei |
| | Everwin | China | High-precision metal processing, hinge components | OPPO, Honor |
| | Jarlllytec | China Taiwan | Precision hinges and sliding components | New Dayung, tier-1 module integrator |
| | Pacific Union | China Taiwan | Hinge metal structural components, CNC precision machining | New Dayung, Samsung |
| | Kersen Science & Technology | China | CNC precision structural components, hinge brackets | Huawei, OPPO |

Source: Trendforce, CMBIGM

Figure 78: Foldable smartphone supply chain



Source: CMBIGM

Figure 79: Supply chain names and revenue contribution (2026E)

| Company | Stock code | Apple | Huawei | Samsung | Other brands | Others | Main products |
|---------------|------------|-------|--------|---------|--------------|--------|---|
| AAC Tech | 2018 HK | 34% | 10% | 10% | 33% | 12% | Acoustics, haptics, optics, casing, auto acoustics, VC |
| FIT Hon Teng | 6088 HK | 25% | - | - | - | 75% | Connectors, AirPods, accessories, EVs, servers |
| Sunny Optical | 2382 HK | 5% | 5% | 15% | 60% | 15% | Camera modules, lens, auto lenses/modules, AR/VR |
| BYDE | 285 HK | 60% | 5% | 5% | 15% | 15% | Casings, ODM/OEM, auto components, servers |
| Luxshare | 002475 CH | 60% | 10% | 3% | - | 27% | Wireless, iPhone/AirPods/watch OEM, acoustic/haptics |
| Lens Tech | 6613 HK | 50% | 25% | - | 7% | 18% | Glass/metal/sapphire/ceramic cover, structural components, functional modules, ODM, servers |
| FII | 601138 CH | 13% | - | - | - | 87% | Precision structural components, server ODM |
| Cowell | 1415 HK | 95% | - | 3% | - | 2% | Camera module |
| Tongda | 698 HK | - | 5% | 5% | 40% | 50% | Metal/plastic casing, home appliances |
| Q-Tech | 1478 HK | - | 5% | - | 85% | 15% | Camera module/lens, fingerprint module, automotive CCM |
| TK Group | 2283 HK | - | - | - | 10% | 90% | Plastic molding, plastic precision |
| Truly | 732 HK | - | - | 3% | 62% | 35% | Camera module, fingerprint, display module |

Source: company data, CMBIGM estimates

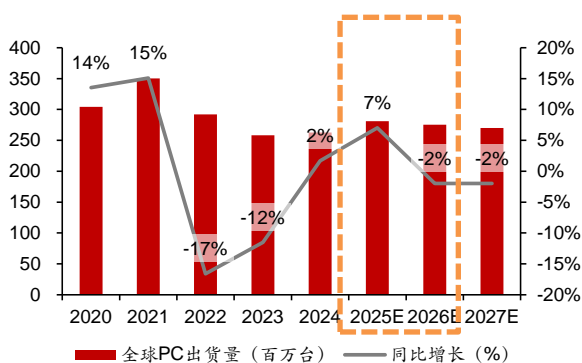
Global PCs: Consumer segment faces near-term pressure; AI PC penetration set to reach 50% in 2026

PC: 2025 better than expected; rising memory costs to dampen demand in 2026

Following inventory destocking and post-pandemic correction in 2022-23, global PC market recovered in 2024-25E thanks to replacement cycle and recovery in enterprise IT budgets. We forecast 2025 global PC shipments to grow 7% YoY to 281mn, backed by lower-than-expected tariff impacts and robust commercial demand driven by Windows 11 upgrade.

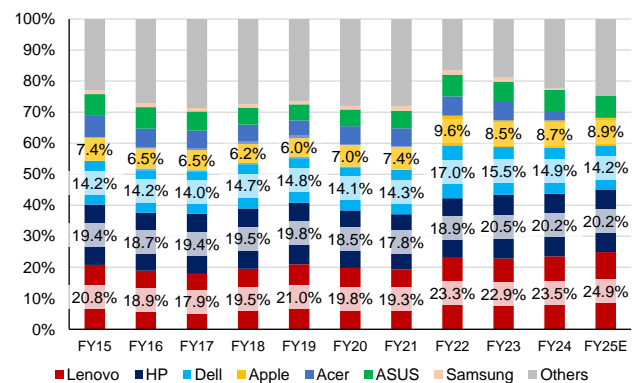
For 2026, we maintain cautious on global PC demand, and estimate shipments to decline 2% YoY to 275mn, mainly attributed to: 1) fading replacement cycle of Windows 11, 2) rising memory price leading to higher ASP and thus weaker demand for low-end consumer models, and 3) shortages in mainstream Intel Raptor Lake supply. Overall, we expect the commercial market to outperform the consumer market, supported by enterprise refresh cycles. Conversely, consumer segment, which has higher price sensitivity, will face demand pressure due to rising retail prices.

Figure 80: Global PC shipment estimates



Source: IDC, CMBIGM

Figure 81: Global PC market share (2015-2024E)



Source: IDC, CMBIGM

Figure 82: Global PC processor chips development roadmap

| | 1H24 | 2H24 | 1H25 | 2H25E | 1H26E | 2H26E | 2027E |
|----------|-------------------------------------|--|------------------------------------|---------------------|--|--|---------------------------------------|
| Intel | Meteor Lake 11 TOPS (4nm) | Lunar Lake 48 TOPS (3nm) Arrow Lake 13 TOPS (3nm) | | | Arrow Lake Refresh 13 TOPS (3nm) | Nova Lake 74 TOPS (18A / TSMC N2) | |
| AMD | Hawk Point 16 TOPS (4nm) | | Strix Point 48 TOPS (4nm) | | | Olympic Ridge (2nm) | Medusa Halo (2nm) |
| Apple | M4 38 TOPS (3nm) | | | M5 45 TOPS (N3P) | M5 Pro / Max 50 TOPS (N3P) | M5 Ultra 80 TOPS M6 60 TOPS (2nm) | M6 Pro / Max 70 TOPS (2nm) |
| Qualcomm | Snapdragon X Elite 45 TOPS (4nm) | | Snapdragon X Plus 45 TOPS (4nm) | | Snapdragon X2 Elite 80 TOPS (3nm) | | Snapdragon X3 Elite 100 TOPS (2nm) |
| MediaTek | | | Kompanio Ultra 50 TOPS (3nm) | | Kompanio "N1X" (w/ NVIDIA) 60 TOPS (3nm) | Kompanio Refresh 40 TOPS (4nm) | Next-Gen AI PC Chip 100 TOPS (2nm) |

Source: Company data, CMBIGM

Rising memory costs to weigh on brands' earnings in 2H26E

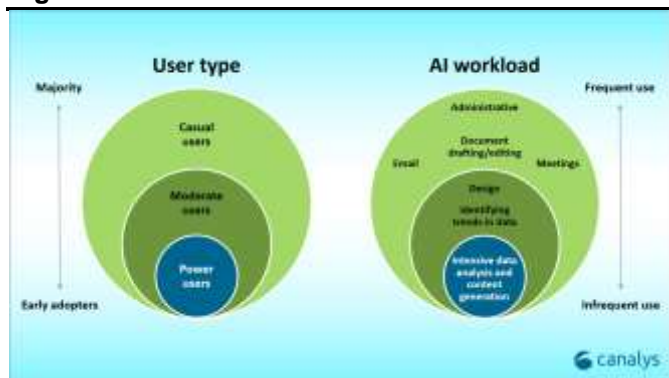
NAND/DRAM prices began an upcycle since early 2024, with significant price hikes in 2H24 and 2025. We expect prices will fluctuate at high levels throughout 2026, which will become the largest headwind for PC sector in 2026. With memory accounting for 15-20% of PC BOM costs, we expect price hikes to exert margin pressure on PC brands, particularly in the low-end segment. Without price adjustments, rising costs will erode OEM GPM. Notably, HP recently acknowledged that memory cost headwinds will negatively impact profitability in the coming year. For 2026, we expect PC brands to adopt the following mitigation strategies: 1) absorb costs temporarily at the expense of GPM; or 2) raise retail prices to pass through costs, potentially impacting demand in the price-sensitive consumer segment. We believe major vendors currently hold 2-3 quarters of low-cost memory inventory, which should buffer the cost impact in 1H26E. However, margin pressure is expected to intensify significantly in 2H26E after low-cost inventory is depleted. Overall, we view Lenovo and Dell as more defensive relative to HPQ and Asus, given their stronger pricing power and supply chain bargaining leverage.

AI PC: Penetration breakout; Mix optimization to cushion cost headwinds

AI PCs feature heterogeneous computing power combining CPU + GPU + NPU, delivering on-device AI inference capabilities ranging from 10 TOPS to 100 TOPS, which can support local LLMs, real-time multi-modal interaction, and private knowledge base retrieval. We expect AI PC penetration to accelerate in 2026, becoming the standard configuration for mainstream models. Lenovo indicated that its AI PC shipment mix reached 33% in 3Q25 and expects double-digit growth in the coming quarters. With the proliferation of Intel Lunar Lake/Arrow Lake, AMD Ryzen AI, and Qualcomm X Elite chips, the NPU is becoming a standard feature. Although "killer apps" are still in the incubation phase, we believe consumer interest in AI functionalities is rising. Given that AI PCs are equipped with higher memory specifications and more robust thermal modules, we expect a structural upgrade in product ASPs.

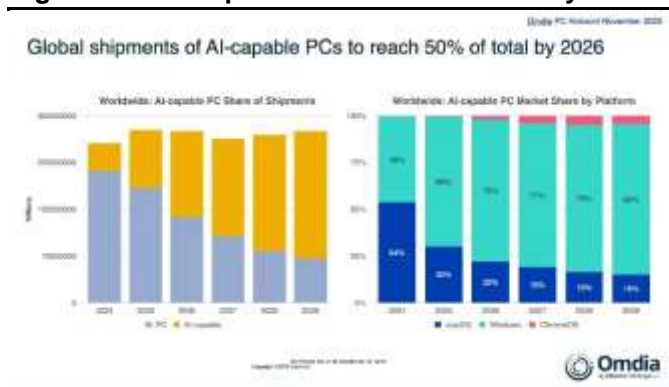
For 2026, we expect brand vendors to leverage the premium product mix driven by AI PCs to offset a portion of cost pressure from memory price hikes. Overall, we believe Lenovo offers the strongest near-term defensiveness, underpinned by its high inventory levels of low-cost components. Dell demonstrates strong resilience, supported by its direct sales model and "second growth curve" driven by its AI server business. Conversely, we believe HP will face greater near-term pressure, as mgmt. highlighted the cost impact and subsequently lowered its margin guidance.

Figure 83: AI PCs to become mainstream



Source: Canalsys, CMBIGM

Figure 84: AI PC penetration to reach 50% by 2026



Source: Omdia, CMBIGM

Lenovo: Strategic inventory mitigates near-term impact; Leading AI PC share at 31%

Lenovo delivered robust performance in FY2Q26 (Sep-quarter), with PC revenue growing 17% YoY and global market share reaching a historic high of 25.6%. AI PC penetration reached 33%, and the company secured a commanding 31% global market share in AI PCs, ranking first globally. This leadership position is expected to accelerate product mix upgrades. Benefiting from premiumization strategy and superior supply chain management, Intelligent Devices Group (IDG) maintained a healthy OPM of 7.3%. Facing soaring memory prices, Lenovo currently holds 7-8 months of memory inventory, significantly higher than peer average of 2-3 months. We believe this strategic stocking will effectively shield the company from direct cost shocks over the next two quarters. However, as low-cost inventory begins to deplete starting in 2H26E, margins may face pressure.

Looking ahead, management remains optimistic on 2026 outlook, projecting mid-single-digit growth for overall PC market and targeting to outperform the industry. We believe market concern currently lies in whether raising ASPs to pass through costs might dampen end demand. Overall, as a leading global PC brand, Lenovo's close collaboration with upstream processor vendors and OS providers positions it as a core leader in the AI PC wave, and we believe it is poised to benefit from the trend of AI PC adoption.

Dell: Solid commercial recovery; Direct model offers edge in cost pass-through

Dell's Client Solutions Group (CSG) revenue grew 3% YoY. Growth in Commercial PCs (+5%) was partially offset by decline in Consumer PCs (-7%). While PC business remained stable, major highlight was AI server segment with orders surging to US\$12.3bn and recording high backlog of US\$18.4bn. Management acknowledged the "unprecedented" memory cycle but emphasized that its direct sales model and supply chain scale allow for faster pricing adjustments compared to competitors. Historically, Dell has been able to recover approximately two-thirds of cost increases within 90 days. Management believes its ability to secure components in a shortage environment will be a key competitive advantage, expressing confidence in margin resilience for 2026. For 2026, Dell expects overall PC market to remain flat, with key growth driver being the refresh cycle triggered by Windows 10 EOS. For FY27E, the company's outlook aligns with its long-term growth framework (CSG growth of 2-3%), demonstrating strong confidence in navigating market risks.

HP: FY26 guidance weighed down by memory costs; PC margin outlook cut

In FY4Q25, HP's Personal Systems (PS) revenue grew 8% YoY and shipments rose 7%, driven by market share gains in commercial and premium consumer segments. Regarding cost impacts and margin guidance, the company provided a cautious outlook for FY26E. OPM target for Personal Systems business was set at lower end of 5-7% range (previously higher), reflecting challenges in passing through cost increases to customers. To address cost pressures, HP announced a new cost-saving initiative targeting US\$1 billion in gross savings by the end of FY28, with US\$300 million expected to be realized in FY26. The company projects FY26E PC revenue growth to slightly outpace the market (low-single-digit), driven by AI PC mix improvement and price hike rather than shipment growth.

Figure 85: PC OEM brands 2026 outlook/guidance

| Company | 2026 PC Guidance/Outlook (FY26/CY26) | Growth Drivers |
|-----------------------------|---|---|
| Lenovo (00992 HK) | <ul style="list-style-type: none"> The most bullish among peers; expects the 2026 PC market to achieve Mid-Single-Digit (MSD) growth. Revenue: Aims to outperform the broader market, targeting double-digit YoY growth in the upcoming two quarters (4Q25-1Q26). Margins: Confident that margins will remain unaffected by memory price hikes over the next two quarters due to strategic stocking. | <ul style="list-style-type: none"> Strategic Inventory: Holding 7-8 months of memory inventory (vs. peers' 2-3 months), providing a cost competitive advantage in 1H26. Market Share: F2Q26 share reached a historical high of 25.6%, with AI PC share at 31%, showing strong momentum. Hybrid AI: Advancing the "One AI, Multiple Devices" strategy, leveraging synergies between AI PCs and AI Phones to drive premiumization. |
| Dell (DELL US) | <ul style="list-style-type: none"> Shipment: Expects CY26 PC shipments to remain flat YoY; Maintain cautious stance on market recovery. Revenue: Expects Client Solutions Group (CSG) revenue to achieve Low-to-Mid Single-Digit (LSD-MSD) growth in CY26, primarily driven by Commercial PC ASP uplifts. Margins: Reiterate long-term CSG operating margin target of 5-7%. | <ul style="list-style-type: none"> Refresh Cycle: US\$500mn opportunity in PC & peripherals refresh, targeting installed base of 4+ year-old devices incompatible with Windows 11. Pricing Power: Emphasized Direct Sales model allows faster pricing adjustments than peers (typically recouping ~2/3 of cost increases within 90 days), a key advantage in supply-constrained environments. AI PC Mix: despite consumer softness, commercial demand is accelerating; rising AI PC mix will support ASP expansion. |
| HPE (HPE US) | <ul style="list-style-type: none"> Revenue: Personal Systems (PS) revenue growth guided to be slightly above the market average. Margins: Expects FY26 PS OPM at low end of long-term target range (5-7%). Headwinds: Notes significant pressure in 2H FY26; estimates memory price hikes will result in a net negative impact of approx. US\$0.30 EPS for the full year. | <ul style="list-style-type: none"> Memory Costs: Noted DRAM/NAND price hikes exceeded expectations (30-50%); while 1H FY26 is buffered by inventory, 2H faces severe margin challenges. Cost Savings: Announced new "Future Ready" plan targeting US\$1bn in total savings by FY28 (~\$300mn in FY26), including a workforce reduction of 4,000–6,000 to protect profitability. AI PC Penetration: AI PC shipment mix reached 30% in F4Q25; expected to rise further in FY26, improving product mix and ASP. |

Source: Company data, CMBIGM

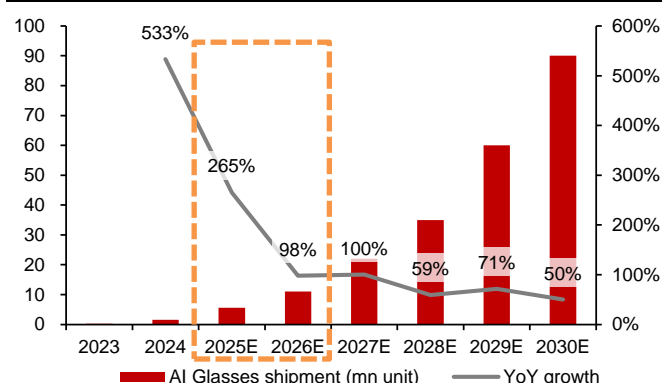
AR/VR: AI enablement to kick off Smart Glasses 2.0 Era

The smart glasses industry is undergoing a profound transformation. The "Glasses 1.0" era, represented by Google Glass, failed to expand into mass market due to hardware bottlenecks, prohibitive costs, and lack of disruptive applications. Driven by rapid development of Generative AI and LLMs since 2023, we believe the industry is entering an AI-driven "Glasses 2.0" era.

The launch of 2nd-Gen Ray-Ban Meta smart glasses in 2023 received positive feedback from global consumers, and shipments exceeded 2mn during Sep-2023 to Feb-2025. Its success not only validates the business model of combining "AI features with Fashionable Design" but has also reignited consumer interest in smart wearables. Based on WellsennXR, global AI smart glass shipments are forecasted to reach 5.5mn in 2025 (vs. 1.52mn in 2024). We expect shipments to exceed 10mn mark in 2026, positioning AI glasses as the next core wearable category following TWS device.

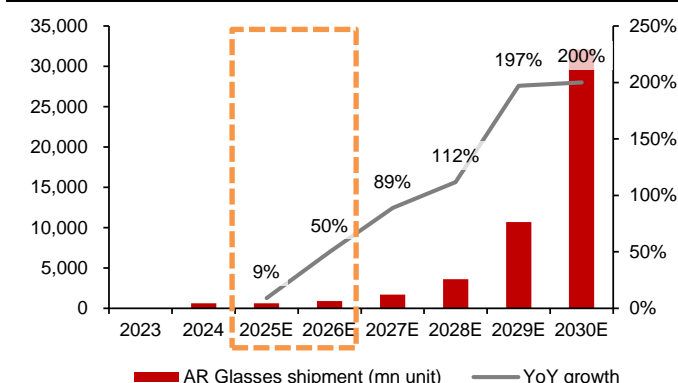
We view AR glasses as the ultimate form factor for AI glasses industry. By overlaying virtual information onto the real world to achieve "Virtual Reality," AR glasses unlock use cases far richer than audio-based AI glasses, such as immersive navigation, real-time translation subtitles, and remote collaborative guidance. The enrichment of use cases by AI, combined with investments from global tech giants, is driving technical advancements and building ecosystem. TrendForce forecast global AR glasses shipments will reach 32mn by 2030, representing a CAGR of 97% during 2024 and 2030.

Figure 86: Global AI glasses shipment trend



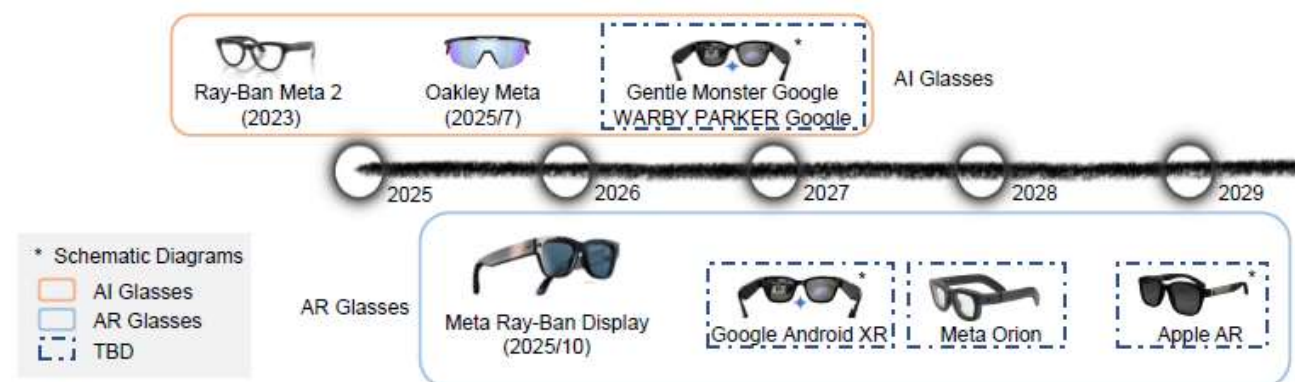
Source: Wellsenn XR, CMBIGM

Figure 87: Global AR glasses shipment trend



Source: Trendforce, CMBIGM

Figure 88: Global AI/AR glasses product launch timeline



Source: Trendforce, CMBIGM

Tech giants set to accelerate product launches; Apple Glasses in focus

We expect 2025-2027 will be critical period for smart glasses industry. Product roadmaps from major tech brands will not only shape the competitive landscape but also mark the technology roadmap for the supply chain. From Meta, Google, and Apple to leading Chinese internet/tech companies, players are expanding their strategic roadmap to seize first-mover advantages in this emerging market. Internet companies could leverage their strengths in applications and content (e.g., AI, short-video, social media), while smartphone brands possess massive user bases (Apple's installed base of 1bn+ devices; Xiaomi's global MAU above 70mn). We believe the entry of these giants will unlock upside potential for smart glasses market.

Based on our checks, industry product roadmap is evolving as follows: **1) Meta:** Following 2H25E launch of Meta Ray-Ban Display (monocular full-color AR glasses with LCoS and Geometric Waveguide), we expect Meta to unveil its first high-end AR glasses featuring LEDoS technology in mid-2027. **2) Amazon:** it planned launch of two AR glasses models in 2026, one targeting internal user case (e.g., logistics) and another designed for consumer market. **3) Samsung:** it plans to launch its AI Glasses in 2026. **4) Apple:** We expect Apple's smart glasses to be unveiled in 2028, with mass production slated for 2029. The form factor is expected to resemble the Ray-Ban Meta smart glasses. **5) ByteDance:** Its AR glasses is under development and target to launch in 1Q26E. **6) Alibaba:** it released Quark AI Glasses in Dec 2025. Powered by Quark/Tongyi Qianwen LLMs. These glasses focus on information search and object recognition, and aim at domestic market with a high cost-performance strategy.

Figure 89: Global smart glasses roadmap

| Brand | Model / Project | Launch Time | Category | Key features/ Strategy |
|-----------|-------------------------|-------------|------------------------|---|
| Meta | Oakley | Sep 2025 | AI Glasses | No display; built-in camera and AI. Focuses on sports & training scenarios . |
| | Hypernova | Sep 2025 | AR Glasses (Monocular) | Display on the right lens ; capable of showing notifications, AI information, etc |
| | Orion | 2027 | AR Glasses (Binocular) | Meta's flagship full-function holographic AR glasses project. |
| Amazon | Amelia | 2026 | AR Glasses | Targeted at internal use (e.g., logistics/warehouse). |
| Samsung | XR Glasses | 2026 | AI Glasses | Core device of the Android XR camp; powered by Google Gemini . |
| Google | Project Astra | 2026 | AR Glasses | Based on Android XR OS and Gemini AI ; supports advanced features like real-time translation and navigation. |
| Apple | Smart Glasses | 2028/29 | AI Glasses | Equipped with camera and microphone; features deep integration with Siri and Apple Intelligence . |
| ByteDance | AI Glasses | 1Q26 | AR Glasses | Active R&D in AR glasses; noted for aggressive specification configurations . |
| Alibaba | Quark AI Glasses(G1/S1) | Nov 2025 | AR Glasses | G1: Focuses on AI Audio/Capture. S1: Equipped with Micro-OLED screen. Core Strategy: Integration of Quark's visual search and recognition capabilities. |
| Xiaomi | Xiaomi AI Glasses | Jun 2025 | AI Glasses | Smart glasses focused on AI and Camera functions; deeply bound to Xiao AI assistant and the Xiaomi EV/IoT ecosystem . |
| Rokid | Rokid Glasses | Nov 2024 | AR Glasses | Integrates multiple global LLMs (e.g., Ernie Bot, Gemini); focuses on AI interaction . |

Source: Company, CMBIGM

AI Glasses: Lightweight form factor leads the way, capturing the mass market

We believe 2025-27 will enter the nascent phase, display-free AI glasses are set to be the primary growth engine. Their simpler design, lower cost structure, and form factor, which closely resembles traditional eyewear, make them the ideal entry-level product to capture mass-market consumer market.

AI glasses can be defined by AI-enabled and transparent visual experience. Based on hardware spec, they can be grouped into two categories: **1) Camera-free AI Glasses:** Relying on microphones and speakers for voice interaction, these devices focus on audio assistance and real-time notifications. **2) Camera-equipped AI Glasses:** Exemplified by Ray-Ban Meta, these devices capture images and video to interact with multimodal AI models, unlocking richer use cases such as real-time image recognition and environmental understanding. Overall, while AI glasses are rapidly gaining market share due to their lightweight nature and high cost-performance ratio, we believe the next major leap in functionality and value will stem from AR glasses with display capabilities.

Figure 90: Ray-Ban Meta Smart Glasses



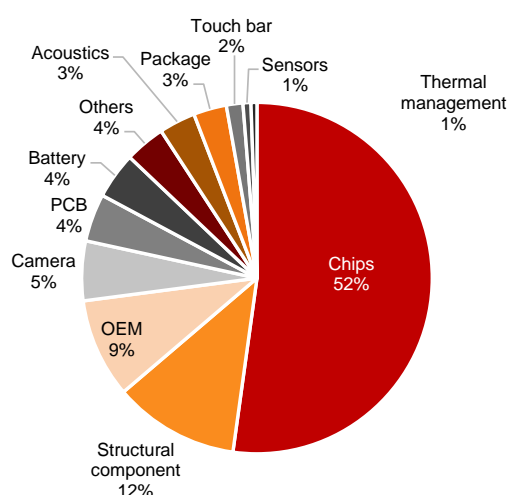
Source: Company, CMBIGM

Figure 91: Xiaomi AI Glasses



Source: Company, CMBIGM

Figure 92: Ray Ban Meta BOM cost breakdown



Source: Wellsenn XR, CMBIGM

AR glasses: virtual-real fusion; Defining the future form factor

We view AR glasses as the ultimate form factor for smart glasses. Utilizing optical see-through technology, AR glasses offer distinct advantages over VR headsets: they are lighter, provide a more realistic visual experience, and closely mimic the form factor and wearing comfort of traditional eyewear. However, this functional leap will lead to a price premium. BOM cost of AR glasses is significantly higher than that of AI glasses. Retail prices range from US\$400 to over US\$1,000, primarily driven by costs of two high-value optical components: optical waveguides and micro-displays. Each technology will lead to differences across light transmission, optical path designs, and device volume/form factors.

Figure 93: MetaOrion AR Glasses



Source: Wellsenn XR, CMBIGM

Figure 94: Meta Ray-Ban Display glasses



Source: Meta, Trendforce, CMBIGM

Component teardown: optics and display as key innovation drivers

One of the major bottlenecks for AR glasses lies in the breakthroughs of two critical optical components: **Optical Waveguides** and **Micro-displays**.

Optical waveguides:

Waveguide is the key component to transmit light signals generated by micro-display to the human eye, blending it with ambient light from the real world. This enables the user to view overlaid virtual information while maintaining a view of the physical environment. We expect that geometric waveguides and diffractive waveguides will coexist in the near term, catering to distinct product positionings. **1) Geometric waveguides:** Superior optical performance and display quality and better suited for high-end flagship products. **2) Diffractive waveguides:** Greater flexibility for cost performance and production scalability.

Figure 95: AR optical waveguide technology comparison

| Technology | Advantages | Challenges / Disadvantages | Key Suppliers |
|--|--|---|---|
| Geometric Waveguide | <ul style="list-style-type: none"> • High Image Quality: Excellent color reproduction. • No Artifacts: Free from dispersion issues ("rainbow effect"). • FOV: Relatively large Field of View. | <ul style="list-style-type: none"> • Manufacturing: Complex process (coating, stacking, cutting). • Yield: Low production yields. • Cost: High unit cost. | <ul style="list-style-type: none"> • Himax Technologies • Crystal-Optech • Lingxi AR • SCHOTT |
| Diffractive Waveguide | <ul style="list-style-type: none"> • Scalability: Design is relatively simple; suitable for mass production via semiconductor processes. • Form Factor: Lenses are thinner and lighter. | <ul style="list-style-type: none"> • Optical Issues: Prone to dispersion ("rainbow effect"). • Efficiency: Lower light/optical efficiency. • FOV: Limited Field of View. | <ul style="list-style-type: none"> • Sunny Optical • AAC Technologies • Vuzix |
| SiC-based Diffractive Waveguide | <ul style="list-style-type: none"> • Refractive Index: Silicon Carbide (SiC) offers an extremely high index (2.6-2.7). • Ultra-Wide FOV: Enables massive FOV (e.g., Meta Orion's 70°). • Quality: Superior image clarity. | <ul style="list-style-type: none"> • Cost: Extremely high material costs. • Processing: High hardness makes processing difficult; yield rates are a massive challenge. • Maturity: Still far from consumer-level commercialization. | <ul style="list-style-type: none"> • Meta (Project Orion) |

Source: CMBIGM

Micro-displays:

Micro-displays serve as the "optical engine" of AR glasses, which generate virtual images, convert image data into light signals, and couple them into the optical waveguide via collimating lenses. Their performance will determine brightness, contrast, power consumption, and form factor. In terms of technology roadmap, LCoS is currently the mainstream solution for consumer-grade AR glasses, underpinned by its cost-efficiency and technological maturity. For instance, Meta Ray-Ban Display launched in 2025 adopted LCoS, which pivoted its display solution from expensive Micro-LEDs to the more mature LCoS technology, addressing the challenges of high BOM costs and mass-market viability.

In the long term, we believe Micro-LED will become the next evolution, given its superiority in brightness, power efficiency and lifespan. However, high cost and mass production challenges remain the near-term barriers. Overall, we believe commercialization for high-performance, low-cost display solutions will be the battleground in the coming year.

Figure 96: Micro-Display: LCoS vs. Micro-OLED vs. Micro-LED

| Technology | Advantages | Disadvantages / Challenges | Key Suppliers |
|-------------------|--|---|--|
| LCoS | <ul style="list-style-type: none"> • Maturity: Highly mature technology with an established supply chain. • Cost: Low manufacturing cost. • Specs: High resolution. | <ul style="list-style-type: none"> • Mechanism: Reflective imaging requires an external light source, leading to bulkier modules. • Performance: Low optical efficiency and relatively lower contrast. | <ul style="list-style-type: none"> • OmniVision • Himax • Sony • Kopin • Raontech |
| Micro-OLED | <ul style="list-style-type: none"> • Mechanism: Self-emissive. • Performance: Extremely high contrast and fast response time. • Efficiency: Lower power consumption. • Form Factor: Compact size. | <ul style="list-style-type: none"> • Brightness: Relatively low brightness makes it unsuitable for bright outdoor environments. • Lifespan: Organic materials degrade over time (shorter lifespan). | <ul style="list-style-type: none"> • Sony |
| Micro-LED | <ul style="list-style-type: none"> • Performance: Self-emissive with ultra-high brightness (multiples of OLED) and high contrast. • Efficiency: Extremely low power consumption and nanosecond-level response speed. • Durability: Long lifespan. | <ul style="list-style-type: none"> • Manufacturing: Extremely complex process (specifically Mass Transfer). • Cost/Yield: Extremely high cost and currently low yields. • Color: Full-color technology remains immature. | <ul style="list-style-type: none"> • JBD • Aledia • Porotech • PlayNitride |

Source: CMBIGM

Meta vs. Google: Diverging strategies; ecosystem as the new moat

As hardware technology matures, we believe long-term competitive advantages will shift from spec to ecosystem, and Meta and Google have adopted different strategies as below.

Meta: "Apple" strategy (vertical integration). We believe Meta is replicating iPhone's model through vertical integration of software and hardware to deliver a seamless user experience. Meta's massive user base can provide an established distribution channel and a rich data source for training AI models. Meta aims to launch AI glasses early and define future use cases, and roll out mid-to-high-end products later for broader consumer base.

Google: "Android" strategy (platform openness). Mirroring its smartphone strategy, Google aims to become the industry standard-setter by opening the Android XR platform, inviting diverse brands to operate within its ecosystem. We believe this platform-centric strategy effectively leverages synergies across the supply chain to rapidly expand market scale and enrich application ecosystem, particularly in the enterprise market.

Figure 97: Strategic Comparison: Meta vs. Google in AR/AI Glasses

| | Meta | Google |
|---------------------------|--|--|
| Strategic Focus | Social & Consumer Interaction: Glasses as the primary gateway to redefining how humans interact with AI. | Productivity & Enterprise: Focuses on AI as a productivity tool, prioritizing enterprise-grade applications and an open platform ecosystem. |
| Ecosystem Strategy | Closed Route: leverages in-house Meta OS and Meta AI , combined with social media dominance, to create a sticky, integrated user experience. | Open Route: Launches the Android XR platform to attract third-party OEMs, aiming to become the foundational Operating System for the industry. |
| Hardware Strategy | Vertical Integration: Deeply involved in hardware development; leads product design and definition through exclusive partnerships with industry giants like EssilorLuxottica . | Horizontal / Platform Model: Focuses on providing Reference Designs and software platforms; collaborates with hardware partners (e.g., Avegant , Xreal) rather than manufacturing first-party hardware. |
| AI Integration | Data-Centric: Meta AI is deeply integrated into social apps; leverages first-person (egocentric) data to train and optimize multimodal AI models. | Service-Centric: Gemini AI serves as the core engine of Android XR, providing cloud-based and generative agent services. |

Source: CMBIGM

Optics & Assembly supply chain poised to benefit

Driven by smart glasses booming market, we are bullish on players with critical components. We prefer ODMs with a strong client portfolio, such as Luxshare. For Optical waveguides, we recommend vendors with collaborations with major international clients, including Sunny Optical and AAC Tech. For optics, we favor Sunny Optical and Q Tech.

Figure 98: Smart Glasses supply chain



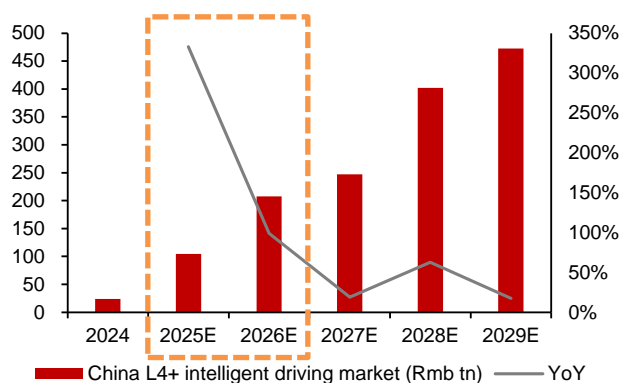
Source: CMBIGM

Auto Electronics: rapid development in L4+ intelligent driving and rising NEV penetration

Evolution of AI, computing power platforms and sensor technologies are driving the intelligent driving industry towards deep intelligence. The intelligent driving solution is a complete set of system capabilities that achieve perception, semantic understanding and dynamic modeling of the vehicle's surrounding environment through the combination of a multi-sensor system and AI algorithms, and rely on the vehicle-end computing platform for real-time decision-making and control. In terms of functional architecture, intelligent driving solutions can cover different stages from single assisted driving functions to full-scenario autonomous driving. Intelligent driving solutions can be classified into driving solutions and parking solutions based on their functions. The continuous evolution of AI, computing power platforms and sensor technologies, coupled with the government's constant improvement of regulations and standards, is driving the industry to move from functional superimposition to deep intelligence.

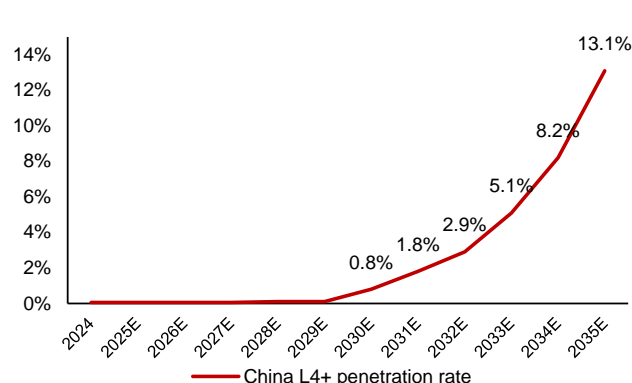
L4+ level intelligent driving commercialization has significantly accelerated. Intelligent driving solutions that achieve L1 to L5 levels of automation are often referred to as autonomous driving solutions, which can perform varying degrees of continuous vehicle motion control in dynamic driving tasks. At present, the penetration rate of L2-level assisted driving has generally exceeded 50%, and L3-level assisted driving has entered a small-scale industrialization stage. According to data from Yicai, the market penetration rate of L4 and higher-level intelligent driving in China will only be 5% in 2025, but it is expected to rise significantly to 50% by 2040. The main driving forces include: 1) Policies: National-level planning and the pilot program of full opening in five cities (i.e., Shanghai, Guangzhou, Shenzhen, Chongqing and Hangzhou) clearly define the division of accident responsibilities and remove institutional obstacles; 2) Technology: The system cost continues to decline, the vehicle-road-cloud collaboration capability is enhanced, and the reliability in complex environments is improved. 3) Scenarios: Pilot projects in multiple scenarios such as Robotaxi, unmanned delivery, and long-haul logistics are accelerating the transition from low-speed closed scenarios to medium and high-speed open scenarios. Under the combined effect of the release of policy dividends, the advancement of core technologies and the expansion of application scenarios, the number of L4 vehicles in the five cities is expected to exceed 100,000 by 2025, driving the scale of the related industrial chain to exceed RMB 20bn.

Figure 99: China L4+ intelligent driving market



Source: CAAM, CMBIGM

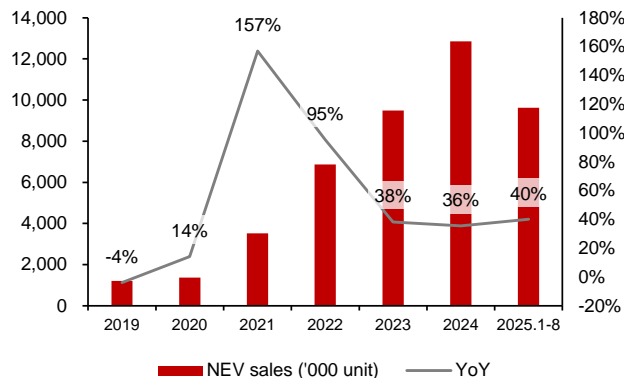
Figure 100: China L4+ smart driving penetration



Source: iyiiou, CMBIGM

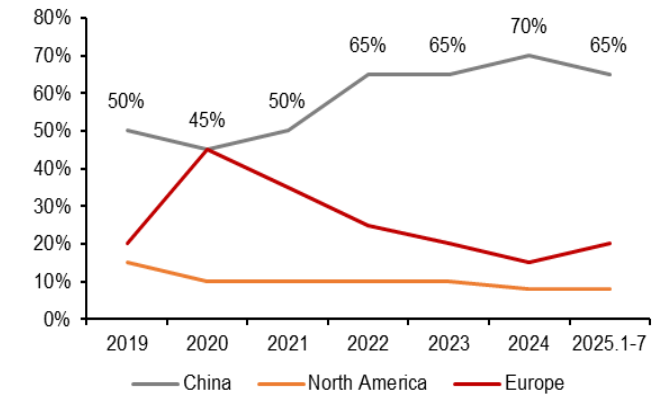
NEV penetration to exceed 60% in 2026 (vs. 50% in 2025). According to CAAM, in October this year, monthly penetration of NEVs in China exceeded 50% for the first time. Looking ahead to 2026, sales volume and ownership of new energy vehicles will continue to reach new highs, and penetration of NEVs is expected to exceed 60%, thanks to new product launches and technology upgrade by Chinese NEV manufacturers. According to "Technical Roadmap 3.0 for Energy-saving and New Energy Vehicles", penetration of NEVs in China will reach 80% by 2040.

Figure 101: China NEV sales



Source: CAAM, CMBIGM

Figure 102: China/North America/Europe NEV penetration

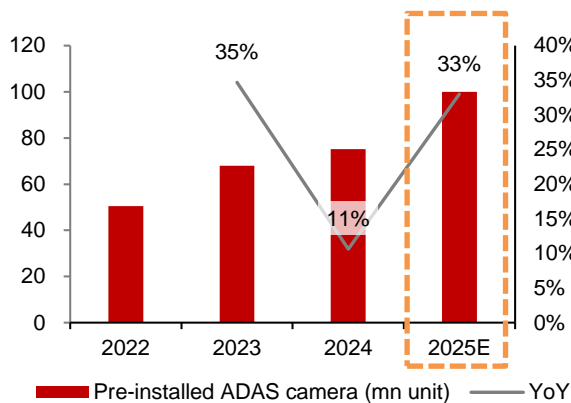


Source: CADA, CMBIGM

ADAS popularization to drive auto cameras to grow rapidly

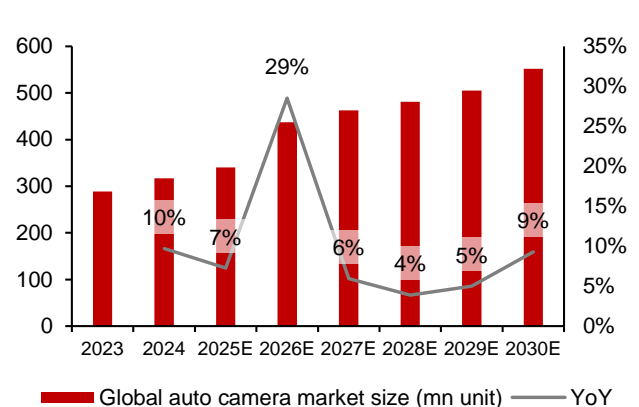
ADAS market in China is expanding rapidly, driving demand for high-end intelligent driving (L2+ and above) multi-cam systems. We believe in-vehicle camera is a core component of vision technology. Average number of L2+ cameras per car will exceed 7, and average number of L2++ cameras per car will exceed 11. Sunny Optical expected that advanced intelligent driving will rely on multi-cam perception, and average number of L3 cameras per car will increase to 11-13 while the number of L4/L5 cameras per car will exceed 15. Shipment mix of 8MP and above will also rapidly increase. Due to rapid ADAS adoption in China, total number of ADAS cameras installed in China's passenger vehicles will exceed 100mn by 2025, driving rapid growth of global automotive lens market. Sunny Optical estimated that global demand for automotive lenses will reach 437mn by 2026.

Figure 103: China pre-installed ADAS camera market



Source: auto gasgoo, CMBIGM

Figure 104: Global automotive cam module market

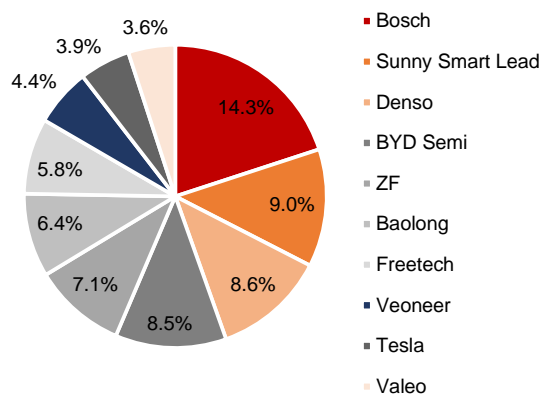


Source: Sunny Optical, CMBIGM

High-resolution cameras and multi-cameras as future trends. The resolution of in-vehicle cameras has been improving, evolving from 1.2MP to the later 2MP, 3MP and 5MP. Currently, mainstream HD cameras are all 8MP, and cameras with higher resolutions will emerge in the near future. With the improvement of perception accuracy of assisted driving, the presentation of information and the demand for long-distance monitoring, 8MP cameras have become the standard spec for advanced intelligent driving, and we expect higher-resolution cameras will continue to upgrade. In addition, average number of cameras per car is increasing, evolving from single V (one front-view camera) to current 11V (multiple front-view, rear-view, side-view, and surround-view cameras) solution, to meet the demands for more complex driving scenarios.

In terms of competition landscape, tier-1 suppliers include BOSCH, which secured project wins of 3rd-gen multi-functional camera evo version (MPC3 evo) from several mainstream Chinese brands, including Chery, BYD, and Changan, providing them with the perception solutions for L2 assisted driving. The tier-2 suppliers consist of leading domestic Tier1 suppliers and system suppliers, including Huayu Automotive, Desay SV, Huawei and other domestic companies. The tier-3 suppliers consist of optical module manufacturers and cross-industry suppliers, including Sunny Optical, Lianchuang Electronics, Ofilm, and other companies with optical business. In particular, Sunny Optical has been deeply engaged as its core business. Leverage "three highs and one rapid" (high base, high quality, high-cost performance and rapid response), we expect Sunny's automotive lenses will continue to gain share in global auto lens market. In addition, its high-pixel 17M automotive lens has secured project wins from an internationally renowned client and is expected to enter mass supply in 2026.

Figure 105: Front-view camera supplier market



Source: auto gasgoo, CMBIGM

Figure 106: Sunny Optical product roadmap

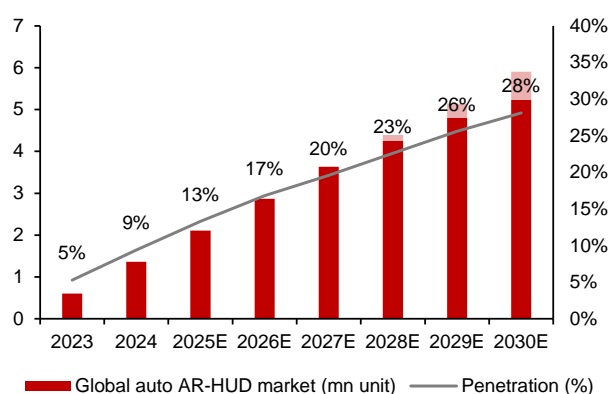


Source: Sunny Optical, CMBIGM

Auto display: AR-HUD penetration rises; Mini-LED/OLED demand booms

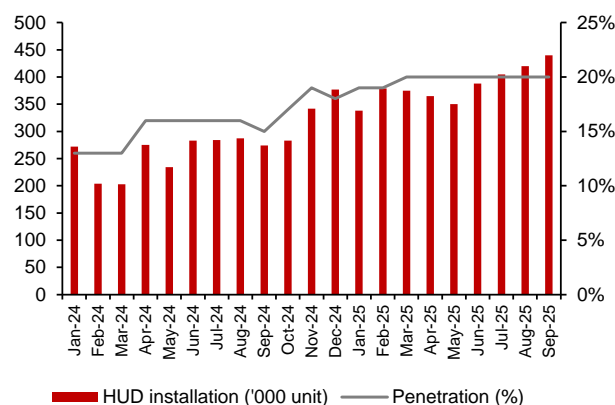
Intelligent NEV upgrades drive sustained AR-HUD growth. Driven by the wave of intelligent upgrades in NEVs, penetration of augmented reality head-up displays (AR-HUD) is poised for sustained growth. By seamlessly fusing navigation information with real-world scenes, this technology significantly enhances driving safety and convenience. According to GAC, HUD penetration in China passenger car market continues to climb. In Sept 2025, installation volume reached 440,000, with penetration reaching 20% for the first time. Looking ahead, we believe automakers will continue to expand AR-HUD adoption. Against the backdrop of performance homogeneity resulting from EV platformization, the smart cockpit and autonomous driving experience have become core competitive differentiators. As one of the most intuitive spec delivering a "high-tech" feel and direct user engagement within the cockpit, AR-HUD has become a critical battleground for OEMs.

Figure 107: Global auto AR-HUD market



Source: Sunny Optical, CMBIGM

Figure 108: China auto HUD market



Source: auto gasgoo, CMBIGM

Mini-LED: Mainstream choice for mid-to-high-end; Cost reduction unlocks demand.

Mini-LED technology is now widely adopted in mid-to-high-end models given its superiority in cost, brightness, lifespan and contrast. Latest models include Cadillac LYRIQ (33-inch integrated instrument/center stack), Zeekr (center screen), and Xiaomi YU7 (PHUD Horizon Display), all utilizing Mini-LED technology. Technologically, improved yields combined with economies of scale have lowered unit costs. This cost reduction is driving penetration from RMB 300k-500k premium segment to RMB 200k-300k mass-market bracket. Leading domestic Mini-LED backlight module suppliers with mass production capabilities and high yields include Hisense Visual, MTC, Coretronic, and HKC.

OLED: Targeting premium segment; BOEVx to accelerate capacity expansion.

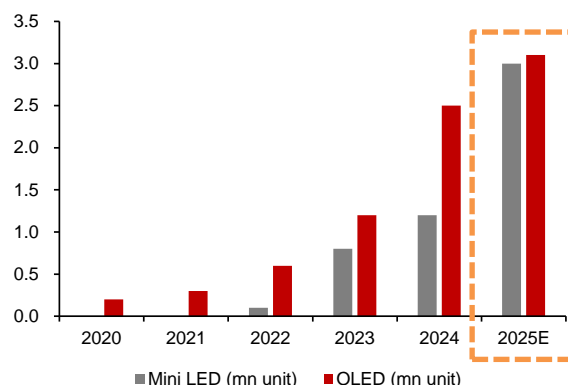
Despite cost and lifespan challenges, OLED is leveraging its distinct advantages—self-emission, ultra-thin profile, and flexibility—to penetrate in premium vehicle center stacks and instrument panels, further solidifying its leadership in high-end market. **BOE Varitronix**, the global automotive display leader, invested RMB 2bn in Heyuan Manufacturing Base Phase III project. With mass production target in Dec 2026, this facility will add over 10mn annual capacity, focusing on high-end products like OLED smart cockpits. We believe BOEVx's strong partnership with automakers, coupled with its support for upgrading OLED demand amidst the vehicle intelligence trend, will drive sustained growth in its automotive business.

Figure 109: Mini-LED/OLED feature comparison

| | Mini LED backlit display | OLED display |
|-----------------------|--|--|
| Light source | Mini LED Backlight | OLED Self Emission |
| LED chip size | 100~300μm | Not required |
| Process features | Upgrading the existing LED equipment does not increase the cost much | The cost of reinvesting capital expenditure is quite high |
| Relationship with LCD | Use LCD and replace the backlight with Mini LED | Substitution relationship, no need for liquid crystal and LED backlighting |
| LED used | The number of controls depends on the panel size and the area | Not required |
| HDR effect | Medium to high | High |
| Cost | Medium | High |

Source: Trendforce, CMBIGM

Figure 110: Global auto Mini LED/OLED shipments



Source: Sigmaintell, CMBIGM

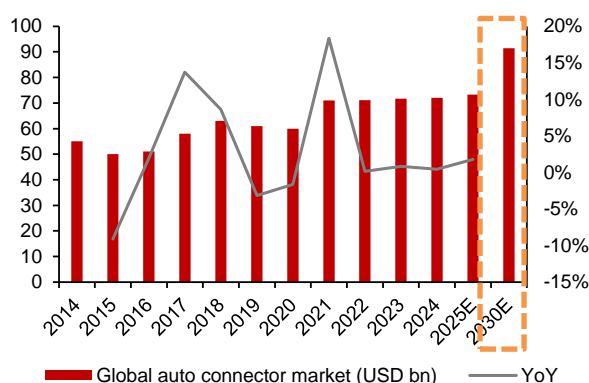
Auto connector: strong demand for high-voltage and high-speed connectors

Electrification & Intelligence drive dual growth engines. As the industry trends from traditional 500-600V platforms toward 800V, demand for HV connectors is increasing. The transition to 48V and 800V electrical architectures is fundamentally reshaping connector requirements, shifting from 12V systems to support electric turbochargers, regenerative braking, and high-power charging capabilities. Rapid penetration of ADAS and autonomous driving demands for high-speed connectors. According to Mordor, global auto connector market is projected to reach US\$9.14bn by 2030, reflecting a CAGR of 4.5% (2025-2030).

Global concentration remains high; Chinese players innovating to catch up. Global connector market is highly concentrated, with top 10 players capturing over 60% market share. TE Connectivity, the world's largest manufacturer, captures over 40% share in NEV HV connector segment. Amphenol, leveraging its telecom leadership (supplying Huawei, Ericsson), holds a 60% share in global 5G base station connectors. Yazaki commands a 30% share of global automotive wire harness market and serves as a core supplier to Tesla.

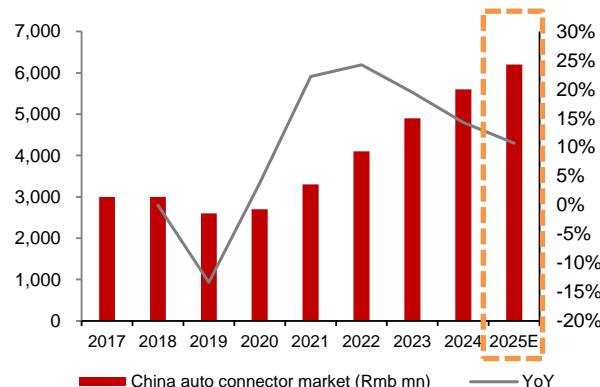
Chinese companies are rapidly closing the gap through innovations: **1) Luxshare:** It launched full product portfolio of auto connectors in 2025, covering low-voltage, high-voltage, high-speed and custom components. With qualifications from global OEMs and overseas orders for HV connectors, Luxshare targets to become the largest Chinese auto connector supplier by 2027. **2) Recodeal:** It is a core supplier for Nio's battery swap connectors, and its HV products accounts for a significant portion of its new energy business, driving rapid growth in recent years.

Figure 111: Global auto connector market



Source: Mordor Intelligence, CMBIGM

Figure 112: China auto connector market



Source: auto gasgoo, CMBIGM

Figure 113: Peers valuation – Smartphone/Smart Glasses/Smart Home supply chain

| Figure 16: Peers valuation. Smart phone, Smart Glasses, Smart Home Supply chain | | | | | | | | | | |
|---|-----------|----------------------|---------------|---------|-------|---------|-------|---------|-------|-----------------|
| Company | Ticker | Mkt Cap (US\$ mn) | Price (LC) | P/E (x) | | P/B (x) | | ROE (%) | | Perf YTD (%) |
| | | | | FY25E | FY26E | FY25E | FY26E | FY25E | FY26E | |
| Brand | | | | | | | | | | |
| Apple | AAPL US | 4,106,201 | 277.9 | 37.6 | 33.6 | 64.5 | 45.6 | 177.8 | 145.7 | 11.0 |
| Xiaomi | 1810 HK | 138,227 | 41.3 | 22.3 | 17.4 | 3.5 | 2.9 | 15.5 | 16.6 | 19.7 |
| Transsion | 688036 CH | 10,989 | 67.5 | 21.2 | 15.2 | 3.6 | 3.1 | 16.8 | 20.4 | (29.0) |
| Samsung | 005930 KS | 434,247 | 107,900 | 18.6 | 10.1 | 1.7 | 1.5 | 9.4 | 16.2 | 102.8 |
| LG | 066570 KS | 10,531 | 95,100 | 10.9 | 9.2 | 0.8 | 0.7 | 6.9 | 7.5 | 13.9 |
| TCL Electronics | 1070 HK | 3,642 | 11.2 | 12.0 | 10.0 | 1.5 | 1.4 | 12.6 | 14.0 | 82.8 |
| | | Average | | 20.4 | 15.9 | 12.6 | 9.2 | 39.8 | 36.7 | 33.5 |
| ODM/EMS | | | | | | | | | | |
| BYDE | 285 HK | 9,929 | 34.3 | 16.1 | 12.6 | 2.0 | 1.8 | 12.2 | 14.0 | (18.5) |
| Luxshare | 002475 CH | 63,054 | 61.2 | 25.5 | 20.3 | 4.3 | 3.5 | 16.7 | 17.4 | 50.2 |
| Lens Tech | 6613 HK | 21,717 | 25.5 | 25.1 | 18.0 | 2.3 | 1.9 | 9.4 | 12.0 | - |
| Hon Hai Precision | 2317 TT | 105,341 | 235.0 | 16.1 | 13.3 | 1.9 | 1.8 | 11.7 | 13.3 | 27.7 |
| | | Average | | 20.7 | 16.1 | 2.6 | 2.3 | 12.5 | 14.2 | 19.8 |
| Optics | | | | | | | | | | |
| Sunny Optical | 2382 HK | 9,570 | 68.0 | 19.8 | 16.2 | 2.5 | 2.3 | 12.7 | 29.0 | (1.2) |
| Q Tech | 1478 HK | 1,436 | 9.4 | 13.4 | 11.1 | 1.7 | 1.5 | 13.1 | 13.9 | 44.9 |
| Truly | 732 HK | 416 | 1.1 | - | - | - | - | - | - | (6.1) |
| Cowell | 1415 HK | 3,240 | 29.0 | 17.1 | 13.4 | 4.7 | 3.5 | 30.0 | 28.7 | 2.6 |
| Largan | 3008 TT | 8,912 | 2,080 | 13.1 | 11.3 | 1.5 | 1.3 | 11.2 | 12.4 | (22.2) |
| Genius | 3406 TT | 1,616 | 446.5 | 14.1 | 12.4 | 1.9 | 1.7 | 14.2 | 14.8 | (11.9) |
| O-Film | 002456 CH | 5,295 | 11.2 | 485.2 | 97.0 | 7.6 | 6.7 | 1.6 | 8.1 | (6.9) |
| Lg Innotek | 011070 KS | 4,610 | 286,500 | 15.1 | 11.6 | 1.2 | 1.1 | 8.2 | 9.8 | 76.9 |
| | | Average | | 82.5 | 24.7 | 3.0 | 2.6 | 13.0 | 16.7 | 9.5 |
| Acoustics/Haptics | | | | | | | | | | |
| AAC Tech | 2018 HK | 5,792 | 38.5 | 15.9 | 12.6 | 1.6 | 1.4 | 10.0 | 11.5 | 2.7 |
| Luxshare | 002475 CH | 63,054 | 61.2 | 25.5 | 20.3 | 4.3 | 3.5 | 16.7 | 17.4 | 50.2 |
| Merry | 2439 TT | 823 | 101.0 | 18.0 | 13.1 | 1.4 | 1.4 | 6.8 | 9.8 | (6.5) |
| Knowles | KN US | 1,994 | 23.4 | 21.4 | 19.1 | - | - | - | - | 17.5 |
| Nidec | 6594 JP | 15,922 | 2,081 | 13.1 | 13.5 | 1.3 | 1.3 | 10.8 | 10.2 | (27.1) |
| | | Average | | 20.3 | 17.3 | 2.3 | 2.1 | 10.8 | 11.9 | 9.3 |
| Connector | | | | | | | | | | |
| FIT Hon Teng | 6088 HK | 5,351 | 5.7 | 27.4 | 16.9 | 1.9 | 1.8 | 7.1 | 10.4 | 56.2 |
| Luxshare | 002475 CH | 63,054 | 61.2 | 25.5 | 20.3 | 4.3 | 3.5 | 16.7 | 17.4 | 50.2 |
| TE | TEL US | 68,834 | 234.0 | 27.2 | 21.9 | 5.5 | 5.0 | 20.4 | 23.5 | 63.7 |
| Amphenol | APH US | 171,441 | 140.1 | 42.4 | 34.1 | 12.9 | 10.4 | 36.0 | 34.2 | 101.7 |
| | | Average | | 30.6 | 23.3 | 6.2 | 5.2 | 20.1 | 21.4 | 67.9 |
| Structured Components | | | | | | | | | | |
| BYDE | 285 HK | 9,929 | 34.3 | 16.1 | 12.6 | 2.0 | 1.8 | 12.2 | 14.0 | (18.5) |
| Tongda | 698 HK | 112 | 4.5 | 235.8 | 172.3 | 14.0 | 12.7 | 5.9 | 7.4 | 10.6 |
| TK Group | 2283 HK | 275 | 2.6 | 7.8 | 6.8 | 1.2 | 1.1 | 15.3 | 16.7 | 14.1 |
| Everwin | 300115 CH | 8,458 | 43.9 | 85.7 | 60.7 | 7.0 | 5.0 | 8.1 | 10.8 | 170.6 |
| Lens Tech | 300433 CH | 21,717 | 25.5 | 25.1 | 18.0 | 2.3 | 1.9 | 9.4 | 12.0 | - |
| Catcher | 2474 TT | 3,914 | 195.5 | 17.5 | 14.0 | 0.8 | 0.8 | 4.2 | 4.8 | 0.8 |
| Jabil | JBL US | 24,083 | 225.4 | 24.0 | 20.3 | 16.8 | 15.6 | 63.3 | 71.5 | 56.7 |
| | | Average | | 58.9 | 43.5 | 6.3 | 5.5 | 16.9 | 19.6 | 39.0 |
| Hinge | | | | | | | | | | |
| AAC Tech | 2018 HK | 5,792 | 38.5 | 15.9 | 12.6 | 1.6 | 1.4 | 10.0 | 11.5 | 2.7 |
| Jiangsu Gian | 300709 CH | 1,185 | 45.0 | - | - | - | - | - | - | 12.1 |
| KH Vatec | 060720 KS | 187 | 11,600 | 11.5 | 8.5 | 1.0 | 0.9 | 8.6 | 13.6 | 42.5 |
| Foseltek | 6805 TT | 3,356 | 1,525 | 49.0 | 27.9 | 15.8 | 11.6 | 33.3 | 44.9 | 88.3 |
| Jarlytec | 3548 TT | 197 | 90.8 | 30.4 | 15.8 | 1.1 | 1.1 | - | - | (47.3) |
| NBTM | 600114 CH | 2,608 | 29.2 | 31.4 | 24.7 | 5.8 | 5.0 | 18.6 | 20.8 | 80.6 |
| Dongguan Eontec | 300328 CH | 1,601 | 16.4 | - | - | - | - | - | - | 122.7 |
| | | Average | | | 17.9 | 5.1 | 4.0 | 17.6 | 22.7 | 43.1 |

Source: Bloomberg, CMBIGM estimates, as of 12/8/2025 close price

Figure 114: Peers valuation – PC/Server supply chain

| | | Mkt Cap | Price | P/E (x) | | P/B (x) | | ROE (%) | | Perf |
|-------------------|-----------|-----------|----------|---------|-------|---------|-------|---------|---------|---------|
| Company | Ticker | (US\$ mn) | (LC) | FY25E | FY26E | FY25E | FY26E | FY25E | FY26E | YTD (%) |
| PC/Server | | | | | | | | | | |
| Lenovo | 992 HK | 15,659 | 9.8 | 11.1 | 10.2 | 2.5 | 2.2 | 23.9 | 24.7 | (2.6) |
| Dell | DELL US | 94,922 | 140.4 | 17.9 | 14.1 | - | - | (173.2) | (344.6) | 21.8 |
| HPE | HPE US | 31,471 | 23.9 | 12.6 | 10.1 | 1.3 | 1.3 | 10.9 | 13.3 | 11.8 |
| HP Inc | HPQ US | 23,433 | 25.1 | 8.0 | 8.1 | - | 110.4 | (405.1) | 273.8 | (23.2) |
| Super Micro | SMCI US | 21,115 | 35.4 | 16.9 | 17.3 | 3.5 | 3.1 | 21.3 | 22.2 | 16.0 |
| ASUSTeK | 2357 TT | 14,354 | 602.0 | 11.2 | 11.6 | 1.6 | 1.6 | 13.9 | 13.4 | (2.3) |
| Inspur | 000977 CH | 13,466 | 64.8 | 35.4 | 26.2 | 4.3 | 3.7 | 12.3 | 14.1 | 25.0 |
| Dawning | 603019 CH | 20,949 | 101.2 | 58.4 | 46.8 | 6.6 | 5.9 | 11.4 | 12.8 | 40.0 |
| | | Average | | 21.4 | 18.1 | 3.3 | 18.3 | (60.6) | 3.7 | 10.8 |
| ODM/OEM | | | | | | | | | | |
| FII | 601138 CH | 189,538 | 67.5 | 38.9 | 22.3 | 7.8 | 6.3 | 20.5 | 29.5 | 213.9 |
| Huaqing | 603296 CH | 14,072 | 97.9 | 24.6 | 19.7 | 3.9 | 3.3 | 16.0 | 17.2 | 38.0 |
| BYDE | 285 HK | 9,929 | 34.3 | 16.1 | 12.6 | 2.0 | 1.8 | 12.2 | 14.0 | (18.5) |
| Time Interconnect | 1729 HK | 4,165 | - | - | - | - | - | - | - | 308.4 |
| Quanta | 2382 TT | 36,640 | 295.5 | 16.6 | 13.6 | 5.1 | 4.5 | 30.8 | 34.6 | 3.0 |
| Wistron | 3231 TT | 15,314 | 150.0 | 16.5 | 11.5 | 2.8 | 2.4 | 18.4 | 22.8 | 44.2 |
| Wiwynn | 6669 TT | 27,084 | 4,540.0 | 17.0 | 14.6 | 6.9 | 6.0 | 47.2 | 43.1 | 73.3 |
| Inventec | 2356 TT | 5,240 | 45.5 | 19.1 | 16.0 | 2.4 | 2.3 | 12.4 | 13.9 | (9.2) |
| GigaByte | 2376 TT | 5,249 | 243.5 | 12.9 | 10.8 | 2.7 | 2.5 | 21.8 | 23.1 | (10.6) |
| | | Average | | 20.2 | 15.1 | 4.2 | 3.6 | 22.4 | 24.8 | 71.4 |
| Connectors | | | | | | | | | | |
| FIT Hon Teng | 6088 HK | 5,351 | 5.7 | 27.4 | 16.9 | 1.9 | 1.8 | 7.1 | 10.4 | 56.2 |
| Luxshare | 002475 CH | 63,054 | 61.2 | 25.5 | 20.3 | 4.3 | 3.5 | 16.7 | 17.4 | 50.2 |
| Time Interconnect | 1729 HK | 4,165 | - | - | - | - | - | - | - | 308.4 |
| TE Connectivity | TEL US | 68,834 | 234.0 | 27.2 | 21.9 | 5.5 | 5.0 | 20.4 | 23.5 | 63.7 |
| Amphenol | APH US | 171,441 | 140.1 | 42.4 | 34.1 | 12.9 | 10.4 | 36.0 | 34.2 | 101.7 |
| | | Average | | 30.6 | 23.3 | 6.2 | 5.2 | 20.1 | 21.4 | 116.0 |
| Switch/Storage | | | | | | | | | | |
| Cisco | CSCO US | 311,583 | 78.9 | 20.8 | 19.2 | 6.8 | 6.3 | 31.9 | 33.2 | 33.2 |
| Arista | ANET US | 162,586 | 129.1 | 45.1 | 38.7 | 12.7 | 9.8 | 31.0 | 28.0 | 16.8 |
| Keysight | KEYS US | 35,887 | 209.6 | 29.6 | 25.9 | 6.2 | 5.5 | 22.3 | 21.1 | 30.5 |
| Seagate | STX US | 60,952 | 285.4 | 35.9 | 25.2 | - | 88.2 | (159.3) | 660.9 | 230.7 |
| Western Digital | WDC US | 58,048 | 169.8 | 32.3 | 22.1 | 10.6 | 7.5 | 24.9 | 42.9 | 276.8 |
| | | Average | | 37.7 | 28.1 | 8.5 | 18.6 | 0.5 | 105.4 | 105.4 |
| Substrate | | | | | | | | | | |
| Unimicron | 3037 TT | 11,520 | 232.0 | 68.3 | 25.7 | 3.7 | 3.3 | 5.5 | 13.7 | 65.8 |
| Ibiden | 4062 JP | 11,988 | 13,265.0 | 61.5 | 44.6 | 3.6 | 3.5 | 6.1 | 8.2 | 178.1 |
| NYPCB | 8046 TT | 5,777 | 278.5 | 111.8 | 31.0 | 3.9 | 3.6 | 3.6 | 12.4 | 113.4 |
| | | Average | | 80.5 | 33.8 | 3.8 | 3.5 | 5.1 | 11.5 | 119.1 |
| Power Supply | | | | | | | | | | |
| Delta | 2308 TT | 80,631 | 967.0 | 40.4 | 28.5 | 9.5 | 8.0 | 23.6 | 28.6 | 124.6 |
| Lite-on | 2301 TT | 11,862 | 159.5 | 23.2 | 18.3 | 3.9 | 3.7 | 17.0 | 20.5 | 60.3 |
| | | Average | | 31.8 | 23.4 | 6.7 | 5.8 | 20.3 | 24.6 | 92.5 |
| Thermal | | | | | | | | | | |
| Vertiv | VRT US | 70,966 | 185.6 | 45.3 | 35.4 | 19.4 | 14.7 | 50.4 | 46.7 | 63.4 |
| FII | 601138 CH | 189,538 | 67.5 | 38.9 | 22.3 | 7.8 | 6.3 | 20.5 | 29.5 | 213.9 |
| Sunowealth | 2421 TT | 2,667 | 903.0 | 30.4 | 16.9 | 7.9 | 6.1 | 27.4 | 40.9 | 34.4 |
| AVC | 3017 TT | 17,507 | 1,405.0 | 28.5 | 19.8 | 12.9 | 9.1 | 52.5 | 49.3 | 126.1 |
| | | Average | | 35.8 | 23.6 | 12.0 | 9.1 | 37.7 | 41.6 | 109.4 |

Source: Bloomberg, CMBIGM estimates, as of 12/8/2025 close price

Figure 115: Peers valuation – Auto electronics

| | | Mkt Cap | Price | P/E (x) | | P/B (x) | | ROE (%) | | Perf |
|------------------|-----------|-----------|-------|---------|-------|---------|-------|---------|-------|---------|
| Company | Ticker | (US\$ mn) | (LC) | FY25E | FY26E | FY25E | FY26E | FY25E | FY26E | YTD (%) |
| Auto Electronics | | | | | | | | | | |
| BYDE | 285 HK | 9,929 | 34.3 | 16.1 | 12.6 | 2.0 | 1.8 | 12.2 | 14.0 | (18.5) |
| Sunny Optical | 2382 HK | 9,570 | 68.0 | 19.8 | 16.2 | 2.5 | 2.3 | 12.7 | 29.0 | (1.2) |
| AAC Tech | 2018 HK | 5,792 | 38.5 | 15.9 | 12.6 | 1.6 | 1.4 | 10.0 | 11.5 | 2.7 |
| FIT Hon Teng | 6088 HK | 5,351 | 5.7 | 27.4 | 16.9 | 1.9 | 1.8 | 7.1 | 10.4 | 56.2 |
| BOE Varitronix | 710 HK | 521 | 5.1 | 9.9 | 8.1 | 0.4 | 0.3 | 3.7 | 3.6 | (24.3) |
| Intron Tech | 1760 HK | 287 | 2.1 | 13.1 | 8.8 | 0.8 | 0.7 | 5.9 | 8.3 | 69.4 |
| Luxshare | 002475 CH | 63,054 | 61.2 | 25.5 | 20.3 | 4.3 | 3.5 | 16.7 | 17.4 | 50.2 |
| Desay SV | 002920 CH | 9,278 | 109.9 | 24.2 | 19.0 | 4.9 | 4.1 | 21.5 | 22.3 | (0.2) |
| Jingwei Hirain | 688326 CH | 1,604 | 94.5 | 475.0 | 45.5 | 2.7 | 2.5 | 0.6 | 5.7 | 12.4 |
| Foryou | 002906 CH | 2,190 | 29.5 | 18.6 | 14.4 | 2.2 | 2.0 | 12.2 | 14.0 | (4.1) |
| O-Film | 002456 CH | 5,295 | 11.2 | 485.2 | 97.0 | 7.6 | 6.7 | 1.6 | 8.1 | (6.9) |
| LianChuang | 002036 CH | 1,642 | 11.0 | 112.2 | 43.1 | 4.7 | 4.2 | 4.0 | 10.5 | 17.0 |
| Average | | | | 166.6 | 37.0 | 4.1 | 3.6 | 9.6 | 12.8 | 20.2 |

Source: Bloomberg, CMBIGM estimates, as of 12/8/2025 close price

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NOT RATED : Stock is not rated by CMBIGM

OUTPERFORM : Industry expected to outperform the relevant broad market benchmark over next 12 months
MARKET-PERFORM : Industry expected to perform in-line with the relevant broad market benchmark over next 12 months
UNDERPERFORM : Industry expected to underperform the relevant broad market benchmark over next 12 months

CMB International Global Markets Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

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