

SECTOR UPDATE

IT Hardware – China

AI Investments To Remain Elevated But Edge AI Plays Are More Attractive

We are shifting our preference to edge AI picks, as we see an improved visibility on the recovery in global smartphone and PC shipment in 2H24. With this, coupled with the pick-up in AI device shipment towards year-end and a more undemanding valuation, we expect edge AI plays to outperform the AI infrastructure supply chain, which is now under pressure from profit-taking, and mounting geopolitical risks. Maintain OVERWEIGHT. Top picks: Lenovo and BYDE.

WHAT'S NEW

- **AI devices (edge AI) are our preferred play in 2H24.** We are seeing better visibility of a recovery in consumer devices, primarily in smartphones and PCs, with growth driven by a combination of replacement demand, and a low base effect. Shipment numbers for both smartphones and PCs in 2Q24 had surpassed our expectations, and our checks show that the demand recovery will likely be sustainable at a gradual pace in 2H24. On top of that, although AI-ready devices' demand remains relatively muted, we believe the new launches (such as AI-enabled OS for smartphones) in 2H24 will be able to provide more meaningful boost to growth by end-24, bolstering replacement demand in the upcoming upcycle.
- **Smartphones – Apple and Huawei taking the lead in AI features.** Thanks to Apple and Huawei's self-owned ecosystems, we believe both brands are ahead of Android in integrating GenAI features into their devices, OS and ecosystems. Notably, we believe Huawei has a meaningful edge in integrating its GenAI features into the ecosystem, given the strong support from domestic developers, but nevertheless its reach could remain limited in China given the lack of access to leading edge processors and crucial services such as Google services. For Android players, we expect key players to catch up to Apple and Huawei, with better ecosystem support and improved applications. Google's upcoming Pixel 9 Pro launch will be an important benchmark of what Android AI is capable of.
- **PCs – Demand recovery playing out; AI PC volume may pick up more meaningfully by 4Q24.** We expect the global PC market to maintain a stable low-mid single-digit yoy shipment growth in 2024 from a low base, as enterprises start to replace their devices prior to the Windows update cycle. AI PC adoption may remain slow in 3Q24, as most potential customers will likely continue to wait for: a) more killer app launches, and b) more new PC launches that can support Copilot+ on edge (NPU with >40TOPs). We believe with the launch of Intel's Lunar Lake, and better support on the Windows on Arm (WoA) framework, AI PC shipments should start to pick up towards the end of the year.

OVERWEIGHT
(Maintained)

SECTOR PICKS

Company	Ticker	Rec	Share Price (lcy)	Target Price (lcy)
Lenovo	992 HK	BUY	10.18	13.50
BYDE	285 HK	BUY	33.70	47.70

Source: UOB Kay Hian

PEER COMPARISON

Company	Ticker	Rec	Price @ 19 Jul 24 (lcy)	Target Price (lcy)	Upside/ (Downside) to TP (%)	Market Cap (lcy)	PE		P/B		EV/EBITDA		ROE (%)	Net Gearing (%)
							2024F (x)	2025F (x)	2024F (x)	2025F (x)	2024F (x)	2025F (x)		
Sunny Optical	2382 HK	BUY	48.25	63.00	30.6	52,919	25.5	17.2	2.4	2.2	8.7	6.9	8.1	(42.7)
Xiaomi	1810 HK	BUY	16.52	23.80	43.9	412,147	22.8	21.2	2.6	2.3	16.6	15.1	9.5	(45.7)
Q Tech	1478 HK	BUY	4.87	6.50	33.5	5,769	17.7	13.9	1.1	1.1	6.1	5.6	5.3	(65.5)
AAC	2018 HK	HOLD	30.80	28.70	6.8	36,914	23.7	18.0	0.9	0.9	6.4	5.5	6.1	(5.7)
BYDE	285 HK	BUY	33.70	47.70	41.5	75,933	13.8	10.0	2.5	2.2	8.4	6.7	16.0	1.2
ASMPT	522 HK	BUY	114.50	130.00	13.5	47,518	36.3	21.2	3.1	3.0	26.7	18.1	8.1	(30.7)
FII	601138 CH	BUY	24.66	30.00	21.7	489,892	17.0	13.6	3.1	2.8	16.3	13.1	19.4	(29.6)
Lenovo	992 HK	BUY	10.18	13.50	32.6	126,140	12.1	8.0	2.5	2.0	4.1	3.4	21.7	21.5
ZTE	763 HK	BUY	18.02	21.00	16.5	86,194	7.4	6.5	1.8	2.5	7.2	6.3	17.7	9.6

Source: Bloomberg, UOB Kay Hian

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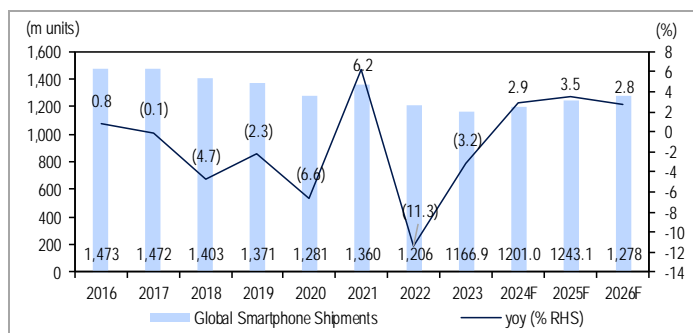
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- **Cloud investments to remain elevated in 2025.** TSMC's (2330 TT/Not rated) comments on tight CoWoS supply for the entire 2025 indicate that demand for AI chips has strengthened over the past quarter. We also see robust investment in China, as reception for NVIDIA H20 chip turns out to be much stronger than expected with volume doubling to about 1m units in 2024, with further demand growth in 2025. Consumption of domestic AI chips is also expected to surge meaningfully in 2025-26, driven by import substitution, the ramp-up of new production capacity, and an improvement in supportive software/framework.
- **AI infrastructure investment growth will be driven by steep demand for power efficiency...** with all major AI developers and hyperscalers racing to scale up their data centre clusters in order to push forward the development of next generation large language models (LLM), power demand is also rapidly increasing. For a 100,000 H100 GPU cluster, power consumption can reach well over 120-150MW, and electricity expense can reach >US\$120m p.a.. Of which, we estimate that the utilisation of NVIDIA's Blackwell platform can cut down energy expense by at least US\$50m per year vs hopper chip at the same level of compute performance.
- **...and a sharp jump in GenAI compute efficiency/performance in new-generation products.** NVIDIA's GB200 NVL racks boast significant improvements in AI compute workloads, particularly on the inference front (>18x better vs H100 racks). Coupled with the power efficiency, and the potential to reach a higher Model Flops Utilisation (MFU), the launch of Blackwell will trigger a meaningful replacement cycle over the next 2-3 years.
- **So why do we prefer edge over cloud in 2H24?** While we remain bullish on the AI infrastructure investment theme, and expect growth to remain elevated over 2024-26, as we see the following risks: a) market is now more focused on growth in 2026, and there will be very limited visibility in the next few months, likely until Dec 24 quarter results in mid-Jan 25; b) the cloud AI sector registered robust share price performance in 1H24. With limited visibility in 2026, we believe further meaningful upside will be limited in the near term; and c) a mounting geopolitical risk after the US election will likely be an ongoing concern, as NVIDIA's H20 chip is widely expected to face further restriction by 4Q24. On the contrary, edge AI names are seeing more killer apps, more product launches, and a visible recovery cycle by year-end regardless of AI devices' reception. As such, we believe risk-reward becomes more attractive for edge AI plays.

ACTION

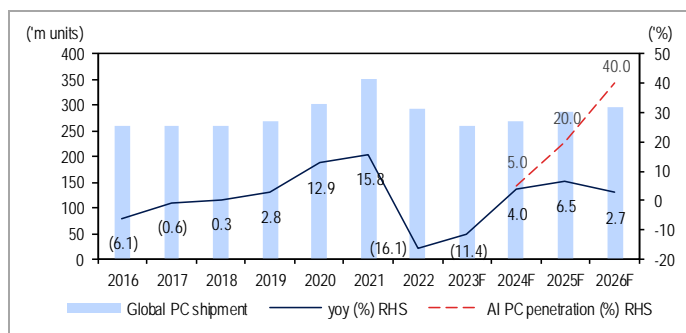
- **We expect the global smartphone market to grow 2.9%/3.5%/2.8% yoy in 2024-26 respectively.** We updated our smartphone forecast numbers earlier this month, and we turned more positive on iOS sales, as we expect Apple Intelligence to drive a new demand upcycle. We still expect Android to outperform iOS in 2024, but unless Android brands can catch up in their AI capabilities, we believe they will be overtaken by iPhones again.

GLOBAL SMARTPHONE SHIPMENT FORECAST



Source: IDC, UOB Kay Hian

GLOBAL PC SHIPMENT FORECAST



Source: IDC, UOB Kay Hian

- **As such, we like suppliers with higher exposure to Apple supply chain, such as BYDE (285 HK).** We also like Sunny (2382 HK) and Q Tech (1478 HK) as Android suppliers are enjoying a visible recovery in both shipment and margins through 2024, thanks to improvements in end-demand, resumption in spec upgrades, and a mutual agreement to stop aggressive price competition among top suppliers.

- **We expect PC shipments to grow 4.0%/6.5%/2.7% in 2024-26 respectively**, with growth primarily driven by Windows update cycle, and AI-driven replacement demand. Note that we expect AI PC penetration to reach 5%/20%/40% in 2024-26, which is actually more conservative vs market estimates of 50-60% by 2026 given the relatively immature AI PC ecosystem at the moment. We recommend BUY on Lenovo for exposure to edge AI for its large exposure and leadership in the development of AI-ready devices.
- **Recommend to accumulate shares on cloud AI plays after correction.** While we prefer the edge AI supply chain for now, we remain confident in the multi-year Gen-AI related investments in the next few years. As such, we believe the share price correction in the next few months will provide a great opportunity to accumulate shares.
- **We are updating our forecasts on the AI server market size for 2024-26** as we factor in the Blackwell platform and higher H20 GPU sales. We are now expecting a significantly higher GPU server market size at US\$118b/195b/264b in 2024-26 respectively, which is 46-69% higher vs our old estimates. This big boost is due to a combination of higher end-demand assumption, as well as a significantly higher ASP as the most popular Blackwell sever racks, GB200NVL36 has a 70-80% higher ASP vs comparable Hopper racks. Our new forecasts imply yoy growth rate of 153.6%/65.6%/35.4% yoy over the same period.
- **We raise our estimates for Foxconn Industrial Internet (FII) accordingly.** We view FII as one of the biggest beneficiaries in the AI server supply chain over 2024-25, as it is registering share gains in the Blackwell platform thanks to its world-leading design capabilities (GB200 NVL racks are extremely complicated to set up), and its capabilities in offering a full-stack solution (from GPU module, baseboard, to liquid cooling power modules, rack assembly to design and testing). With this, coupled with the higher ASP and much lower consignment mix, we believe the Blackwell platform would provide a close to Rmb300b boost to its 2025 revenue. However, due to its higher component costs, margins are also diluted, and as such, we are modelling a >40% higher revenue for 2025-26, but margins are also expected to narrow by 1.6-1.7ppt to 7.2%/7.4% respectively. With this, coupled with higher R&D expenses, our net profit ended up 5-7% higher for 2025-26. We also shifted our product mix slightly in 2024, and our revenue for the year remains largely unchanged, but margins end up slightly higher. This should lead to a 2% higher net profit for 2024. As a result, we lift our target price slightly to Rmb30.00, based on 20.7x 2024F PE, still pegged to 2SD above the historical forward mean.
- **We lift our target price for ASMPT to HK\$130.00, maintain BUY.** The company is scheduled to release its 2Q24 results next Tuesday, and we expect its results to be in line with its guidance (revenue range of US\$380m-440m). More importantly, we are looking for more updates on its advanced packaging business, mainly on its Thermo Compression Bonding tools' progress in new orders/new client wins. We are also more hopeful for better visibility on a recovery in mainstream tools, albeit at a gradual pace. Our new target price is now based on 2025F 24.0x PE, which is pegged to its one-year forward mean valuation.
- **We downgrade AAC Technologies' rating to HOLD for now.** Raise target price to HK\$28.70 based on higher 2024 estimate as we are now more positive on the recovery of both its iOS and Android businesses. However, while we are positive on the company's large exposure to the Apple supply chain, we believe its current valuation of 24.2x is already relatively fair. We will wait for its 1H24 results/briefing for further updates.

GLOBAL SMARTPHONE SHIPMENT FORECAST

	2023	2024	2025	2026
Market Size (US\$m)				
Total server market	123,815	199,196	281,498	354,801
Traditional server market	77,295	81,241	86,216	90,319
GPU servers	46,520	117,956	195,282	264,482
NVIDIA GPU servers	43,400	108,231	181,082	243,682
AMD GPU servers	1,680	6,125	7,000	11,200
China GPU servers	1,440	3,600	7,200	9,600
AI server % of total sales	37.6	59.2	69.4	74.5
Yoy growth (%)				
Total server growth	16.8	60.9	41.3	26.0
Traditional server growth	(14.3)	5.1	6.1	4.8
GPU servers	194.1	153.6	65.6	35.4
NVIDIA GPU servers	205.6	149.4	67.3	34.6
AMD GPU servers	50.0	264.6	14.3	60.0
China GPU servers	188.0	150.0	100.0	33.3

Source: IDC, UOB Kay Hian

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