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Asia-Pacific Technology | Asia Pacific

AI Supply Chain: Cloud Capex Strength; More CoWoS Allocation for TPU

Further cloud capex hikes should be a strong catalyst for the global AI semi supply chain. TPU demand from MediaTek surprised to the upside.

Strong global AI cloud capex – ties to semi supply chain expansion? Recently, in [Cloud Semis: Read-across from Top 4 US CSP 1Q26CY Earnings Calls \(1 May 2026\)](#), we summarized Top Four CSP capex. In general, we see that consensus for 2026 capex has increased 11% since last week's earnings calls, driven by both higher memory costs and strong AI demand. Most CSPs commented that 2027 capex will remain strong. Top Four CSP capex is expected to rise 75% Y/Y ([Exhibit 13](#)), aligning with our bullish TSMC capex forecast ([Exhibit 14](#)) and [EUV booking](#). Given the alignment of key semiconductor capacity (TSMC wafers, CoWoS, HBM, ABF substrates), we expect global AI semi TAM to expand another 50%-60% Y/Y in 2027e.

Meanwhile, China's AI GPU demand is surging with support of SMIC foundry supply: China's leading AI GPU companies reported strong revenue growth with increased customer prepayment, see [Cambricon: Riding China's AI localization with improving supply visibility \(4 May 2026\)](#). China's AI inference demand remains strong and is gradually shifting to local AI computing systems. We anticipate capex hikes from Chinese CSPs as well.

AI ASIC TAM further expands: Almost all US CSPs emphasize their ASIC strategy, echoing the trend in our [ASIC 2.0 report](#). Our supply chain checks suggest that Chinese CSP ByteDance is also working with global design service vendors for custom silicon. Separately, during its recent earnings call, MediaTek raised its global AI ASIC TAM assumption to US\$70-80bn in 2027 (from US\$70bn in 2028), see [MediaTek: "Target Price Up" again on TPU upside; OW and Top Pick \(30 Apr 2026\)](#).

We are fine-tuning our CoWoS model (see [Exhibit 1](#)):

- TSMC will allocate more CoWoS capacity to MediaTek TPU in 2026 and 2027, positive for MediaTek (OW, Top Pick). Other TPU proxies in Asia include KYEC, Aspeed, Winway, MPI, and Hon Precision (all OW).
- ASE sees strong bookings from AMD for Venice server CPU, echoing our global insight [Rise of the AI Agent – Global Implications \(19 Apr 2026\)](#).
- AWS CoWoS is shifting to 3nm Trainium3 (from Trainium2) in 2026. Small 2nm Trainium4 production in 2027 is possible, positive for Alchip (OW), which reports on May 8.

MORGAN STANLEY TAIWAN LIMITED+

Charlie Chan

Equity Analyst

Charlie.Chan@morganstanley.com

+886 2 2730-1725

Daniel Yen, CFA

Equity Analyst

Daniel.Yen@morganstanley.com

+886 2 2730-2863

MORGAN STANLEY ASIA LIMITED+

Daisy Dai, CFA

Equity Analyst

Daisy.Dai@morganstanley.com

+852 2848-7310

MORGAN STANLEY TAIWAN LIMITED+

Tiffany Yeh

Equity Analyst

Tiffany.Yeh@morganstanley.com

+886 2 7712-3032

Lucas Wang

Research Associate

Lucas.Wang@morganstanley.com

+886 2 2730-2875

MORGAN STANLEY ASIA LIMITED+

Ethan Jia

Research Associate

Ethan.Jia@morganstanley.com

+852 3963-2287

Henry Zhao

Research Associate

Henry.Zhao@morganstanley.com

+852 2239-7731

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Global CoWoS Capacity Update

CoWoS capacity – update on customer demand

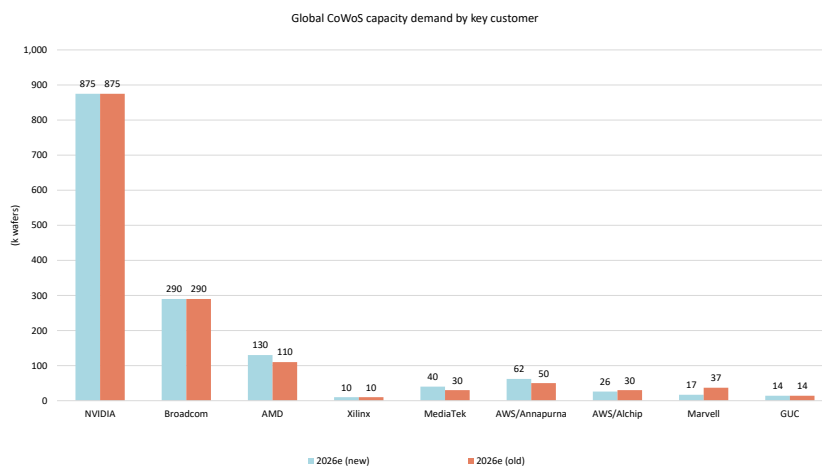
- **Google TPU**
 - TSMC will allocate more CoWoS capacity to MediaTek TPU in 2026 and 2027, positive for MediaTek (OW, Top Pick).
 - However, we see TSMC now winning all TPU CoWoS demand, instead of letting OSATs take the overflowing demand as we previously expected.
- **AMD CPU**
 - ASE/SPIIL sees strong bookings from AMD for Venice server CPU, with 2026 CoWoS bookings increased from 30k to 50k. We expect further pickup in 2027.
 - This echoes our global insight [Rise of the AI Agent – Global Implications \(19 Apr 2026\)](#). AWS CoWoS is shifting to 3nm Trainium3 (from Trainium2) in 2026.
- **AWS Trainium**
 - We see 2026 Trainium total CoWoS booking at 100k, including 70k at TSMC and 30k at ASE, with all ramps now Trainium3. Our latest supply chain checks suggest all Trainium2 production wrapped in 2025.
 - Small 2nm Trainium4 production in 2027 is possible, positive for Alchip (OW), which reports on May 8. See more details in [our Alchip report](#).

Exhibit 1: Key changes in 2026 CoWoS allocation (see numbers marked in red)

(k wafer)	2023	2024	2025	2026e (new)	2026e (old)	Changes	2023	2024	2025e	2026e
NVIDIA	53	200	425	875	875		45%	54%	62%	59%
TSMC			390	680	680					
CoWoS-L			390	650	650					
CoWoS-S			0	20	20					
CoWoS-R			0	10	10					
Non-TSMC			35	165	165					
Amkor			35	135	135					
CoWoS-S			20	75	75					
CoWoS-R			15	60	60					
ASE/SPIL			0	30	30					
CoWoS-S			0	0	0					
CoWoS-R			0	30	30					
Broadcom	23	68	85	290	290	0	20%	18%	12%	20%
TSMC			83	260	230	30				
CoWoS-L			0	15	15					
CoWoS-S			83	245	215	30				
ASE/SPIL			2	30	30					
CoWoS-L			0	0	0					
CoWoS-S			2	30	30					
Amkor			0	0	30	-30				
CoWoS-S			0	0	30	-30				
AMD	7	40	60	130	110	20	6%	11%	9%	9%
TSMC			60	80	80					
CoWoS-L			0	70	70					
CoWoS-S			60	10	10					
ASE/SPIL			0	50	30	20				
CoWoS-L			0	50	30	20				
CoWoS-S			0	0	0					
Xilinx	3	10	10	10	10		3%	3%	1%	1%
MediaTek				40	30	10				3%
TSMC				40	20	20				
CoWoS-S				40	20	20				
Amkor				0	10	-10				
CoWoS-S				0	10	-10				
AWS/Annapurna			60	62	50	12			9%	4%
TSMC			60	32	30	2				
CoWoS-R			60	32	30	2				
ASE/SPIL			0	30	20	10				
CoWoS-R			0	30	20	10				
AWS/Alchip	9	16	5	26	30	-4	8%	4%	1%	2%
Marvell	1	18	15	17	37	-20	1%	5%	2%	1%
TSMC			0	17	17					
CoWoS-L			0	5	5					
CoWoS-R			15	12	12					
ASE/SPIL			0	0	20	-20				
CoWoS-R			0	0	20	-20				
GUC	1	1	2	14	14		1%	0%	0%	1%
Others	20	10	19	15	15		17%	3%	3%	1%
Total demand	117	370	690	1,479	1,461	18	100%	100%	100%	100%

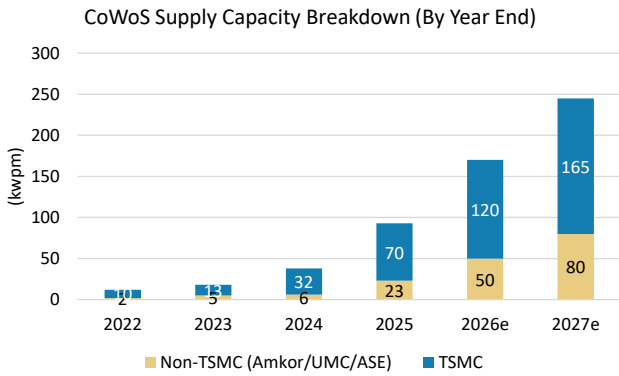
Source: Company data, Morgan Stanley Research (e) estimates; Note: Estimates are compiled using our Asian supply chain checks, not from US covering analysts.

Exhibit 2: Key changes in 2026 CoWoS allocation



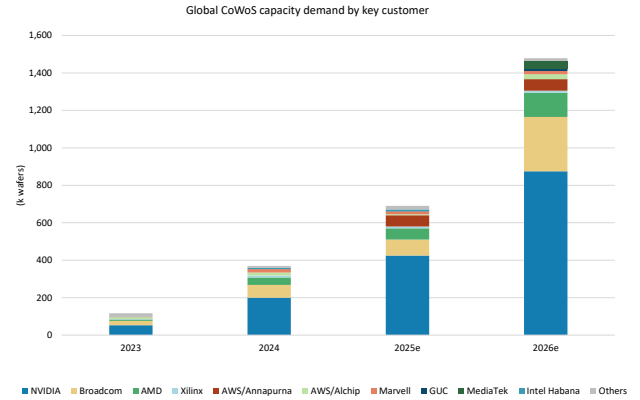
Source: Company data, Morgan Stanley Research (e) estimates; Note: Estimates are compiled using our Asia-based supply chain checks, not from US covering analysts.

Exhibit 3: CoWoS capacity: TSMC and non-TSMC camp



Source: Company data, Morgan Stanley Research (e) estimates. Note: Estimates are compiled using our Asian supply chain checks.

Exhibit 4: Global CoWoS consumption, by customer



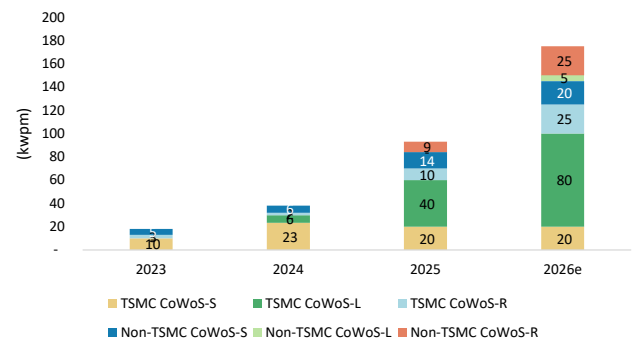
Source: Company data, Morgan Stanley Research (e) estimates. Note: Estimates are compiled using our Asian supply chain checks.

Exhibit 5: Global CoWoS demand Y/Y growth profile

Y/Y	2023	2024	2025	2026e
NVIDIA	119%	280%	113%	106%
Broadcom	56%	191%	25%	241%
AMD	485%	470%	50%	117%
Xilinx	63%	242%	0%	0%
AWS/Annapurna				3%
AWS/Alchip		71%	(69%)	420%
Marvell	(22%)	1438%	(17%)	13%
GUC		(15%)	300%	600%
Others	23%	(49%)	90%	(21%)
Total demand	95%	216%	87%	114%

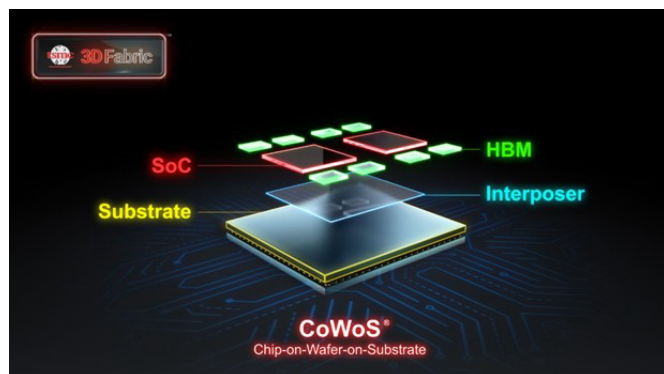
Source: Company data, Morgan Stanley Research (e) estimates. Note: Estimates are compiled using our Asian supply chain checks.

Exhibit 6: CoWoS: Capacity breakdown



Source: Company data, Morgan Stanley Research (e) estimates. Note: Estimates are compiled using our Asian supply chain checks.

Exhibit 7: CoWoS: Chip on Wafer (interposer) on Substrate



Source: TSMC

Exhibit 8:

AI HBM consumption: up to 33bn Gb in 2026

AI chip vendor	Product name	CoWoS capacity allocation (k wafers)	Chips per CoWoS wafer	Implied shipments (k)	HBM chip density (GB)	HBM chip units	Total HBM size (GB)	HBM generation	HBM vendor	Total HBM demand (k GB)	
AI GPU (2026e)											
NVIDIA	B300	390	14	5,460	36	8	288	HBM3e 12hi	Hynix/Micron/Samsung	1,572,480	
	Vera CPU	90	23	2,070							
	Spectrum/CPX	60		-							
	Rubin R200	260	8	2,080	36	8	288	HBM4	Hynix/Micron/Samsung?	599,040	
AMD	H200	75	27	2,025	24	6	141	HBM3e 8hi	Hynix	285,525	
	MI300	3	12	36	24	8	192	HBM3	Samsung	6,912	
	MI350/375	7	12	84	36	8	288	HBM3e 12hi	Samsung/Micron	24,192	
	MI400	65	10	650	36	12	432	HBM4	Samsung/Micron	280,800	
AI ASIC (2026e)											
Google	TPU v7p (Ironwood; AVGO)	145	16	2,320	24	8	192	HBM3e 8hi	Hynix/Samsung	445,440	
	TPU v8i (Sunfish; AVGO)	80	12	960	36	8	288	HBM3e 12hi	Hynix/Samsung/Micron	276,480	
	TPU v8t (Zebrafish; MediaTek)	40	20	800	36	6	216	HBM3e 12hi	Hynix/Micron	172,800	
AWS	Trainium 3	100	17	1,700	36	4	144	HBM3e 12hi	Hynix/Samsung/Micron	244,800	
Microsoft	Maia 200	4	29	116	16	4	64	HBM3	Samsung	7,424	
	Maia 300	5	11	55	36	8	288	HBM4	Samsung	15,840	
Total		1,479								4,034,885	
										Total HBM demand (mn Gb)	32,279

Source: Company data, Morgan Stanley Research (e) estimates. Note: Estimates are compiled using our Asian supply chain checks.

Exhibit 9: AI wafer consumption: up to US\$27bn in 2026

AI chip vendor	Product name	CoWoS capacity allocation (k wafers)	Chips per CoWoS wafer	Implied shipments (k)	Compute die size	Geometry	Compute die units	Wafer consumption (k wafers)	Wafer price (US\$)	Wafer revenue TAM (US\$ mn)
AI GPU (2026e)										
NVIDIA	B300	390	14	5,460	850	4nm	2	433	21,945	9,510
	Vera CPU	90	23	2,070		3nm				
	Spectrum/CPX	60		-						
	Rubin R200	260	8	2,080	850	3nm	2	165	26,000	4,292
AMD	H200	75	27	2,025	814	4nm	1	57	21,945	1,243
	MI300	3	12	36	110	5nm	8	1	18,000	19
	MI350/375	7	12	84	110	3nm	8	2	26,000	64
	MI400	65	10	650	110	2nm	8	32	28,125	886
AI ASIC (2026e)										
Google	TPU v7p (Ironwood; AVGO)	145	16	2,320	700	3nm	2	152	26,000	3,942
	TPU v8i (Sunfish; AVGO)	80	12	960	800	3nm	2	72	26,000	1,864
	TPU v8t (Zebrafish; MediaTek)	40	20	800	800	3nm	2	60	26,000	1,554
AWS	Trainium 3	100	17	1,700	700	3nm	2	91	26,000	2,357
Microsoft	Maia 200	4	29	116	700	3nm	1	3.0	26,000	79
	Maia 300	5	11	55	850	2nm	1	2.9	28,125	82
Total		1,479						1,117		27,019

Source: Company data, Morgan Stanley Research (e) estimates. Note: Estimates are compiled using our Asian supply chain checks.

SoIC capacity and demand breakdown

TSMC now targets 45kwpm and 78kwpm SoIC capacity in 2027e and 2028e. This includes capacity builds in Miaoli AP6 and Chiayi AP7, and in Arizona, which will start in 2028.

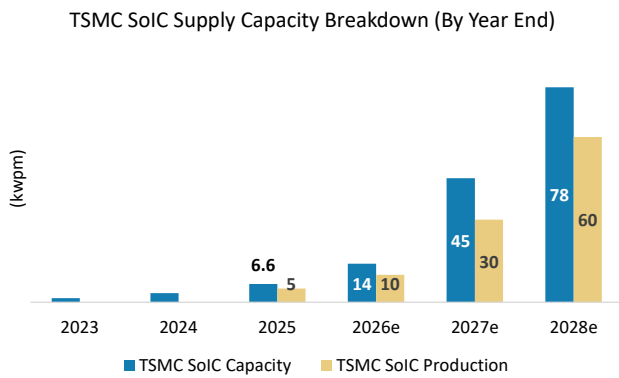
However, because overall equipment qualification takes longer for SoIC than CoWoS — roughly six months or more — it would lower conversion from capacity to production. We see production at 10kwpm, 30kwpm, and 60kwpm in 2026e, 2027e, and 2028e.

Current customers adopting SoIC include:

- **NVIDIA (covered by Joseph Moore):** We expect annual SoIC consumption of 6k in 2026e, rising to 120k in 2027e. This includes demand for CPO's COUPE. We see more clues from the Asian supply chain that NVIDIA's next-generation GPU Feynman would require 1-2GB of SRAM stacked on each die within the Feynman package. On the other hand, we also see NVIDIA studying GPU-to-GPU stacking, which should also translate to SoIC demand.
- **AMD (covered by Joseph Moore):** AMD adopts SoIC on its AI and gaming GPU and high-end CPU, and we do not rule out future adoption for its ASIC business. We expect AMD's SoIC consumption at 42k in 2026e, increasing to 60k in 2027e.

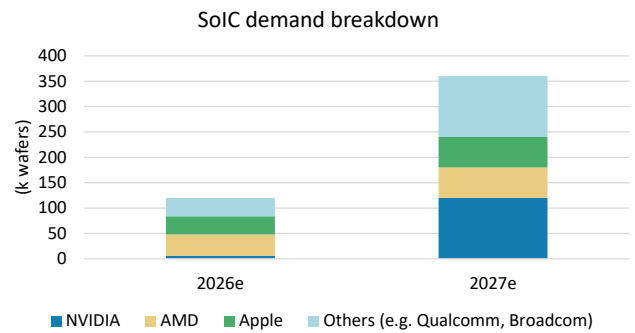
- **Apple (covered by Erik Woodring):** Apple's data center and Mac Pro chips rely on SoIC. We expect Apple's SoIC consumption at 36k in 2026e, increasing to 60k in 2027e.
- **Others:** Several customers are now trying TSMC's SoIC capacity, including Broadcom, Qualcomm (both covered by Joseph Moore), and AWS. We think this is in line with our understanding that Broadcom would start to introduce SoIC packaging for its networking chips and ASIC solutions. However, some appear to be still in the design and trial stage and not yet finalized.

Exhibit 10: TSMC – SoIC capacity: we project 2026e, 2027e and 2028e capacity at 14kwpm, 45kwpm and 78kwpm



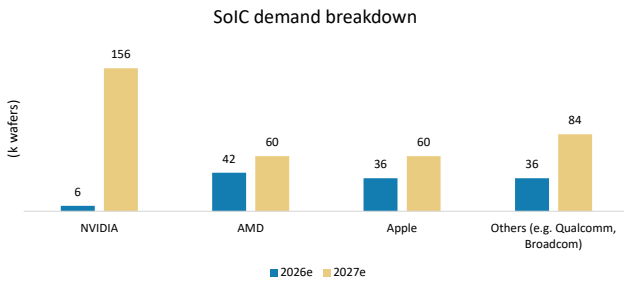
Source: Company data, Morgan Stanley Research estimates

Exhibit 11: TSMC – SoIC demand breakdown



Source: Company data, Morgan Stanley Research estimates

Exhibit 12: TSMC – SoIC demand breakdown by customer



Source: Company data, Morgan Stanley Research estimates

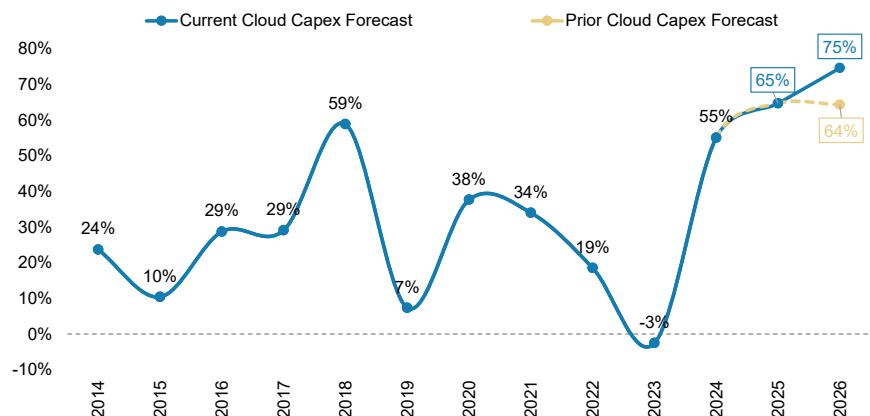
Read-across from Top Four US CSPs 1Q26CY Earnings Calls

Key takeaways from Google, Meta, Microsoft and Amazon's 1Q26CY earnings calls:

- Google (GOOGL.O, covered by Brian Nowak):** Raised 2026 capex guidance to US \$180-190bn from US\$175-185bn and expects a significant 2027 increase vs. 2026. Cloud revenue rose 63% Y/Y, to ~US\$20bn. The cloud backlog nearly doubled Q/Q, to US\$462bn, with 50%+ expected over the next 24 months. The company sees unprecedented internal and external AI computing demand.
- Meta (META.O, covered by Brian Nowak):** Lifted FY2026 capex to US\$125-145bn from US\$115-135bn, driven by higher component costs (especially memory) and added data center capacity. It plans to invest aggressively to meet AI and computing needs by expanding its data center footprint, entering multi-year cloud agreements, and deploying a heterogeneous computing stack with custom ASICs (MTIA) plus GPUs and systems from third-party providers such as NVIDIA and AMD.
- Microsoft (MSFT.O, covered by Keith Weiss):** Guided to ~US\$190bn capex for CY26, with C3Q capex of US\$31.9bn and C4Q expected to exceed US\$40bn, driven by continued AI infrastructure investment and higher component costs. Microsoft is scaling its silicon strategy: Maia 200 AI accelerators are live in the US offering 30%+ better tokens per dollar, Cobalt CPUs are expanding across nearly half its regions, and partnerships with NVIDIA and AMD support AI workload demand.
- Amazon (AMZN.O, covered by Brian Nowak):** Reiterated its US\$200bn 2026 capex plan. It highlighted strong momentum in custom silicon: Trainium has over US\$225bn in customer revenue commitments, newer generations are largely or nearly fully subscribed, and Trainium4 capacity is reserved ahead of availability.

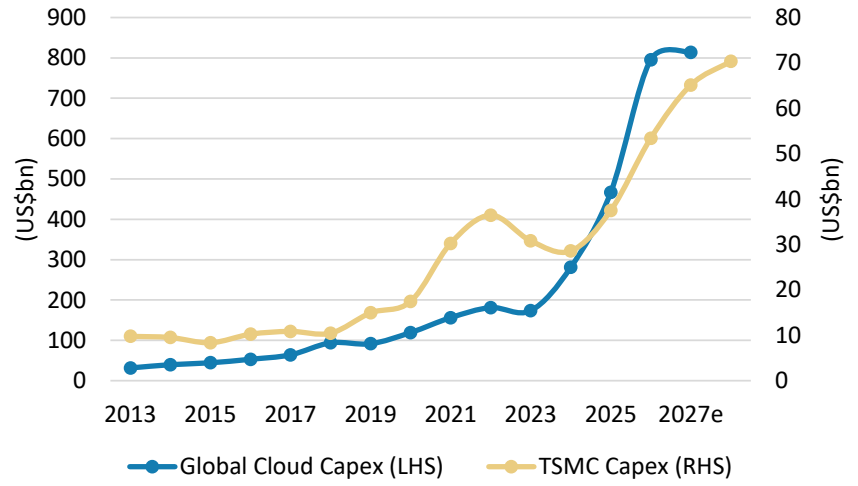
Exhibit 13: After major CSP earnings calls, we see consensus now expecting Top Four CSPs' cloud capex to increase +75% Y/Y in 2026e vs. 64% previously

Top 4 Cloud Providers: Cloud Capex Y/Y Growth



Source: Company data, Factset consensus estimates, Morgan Stanley Research

Exhibit 14: We now expect global cloud capex up 75% Y/Y, aligning with our bullish TSMC capex forecast

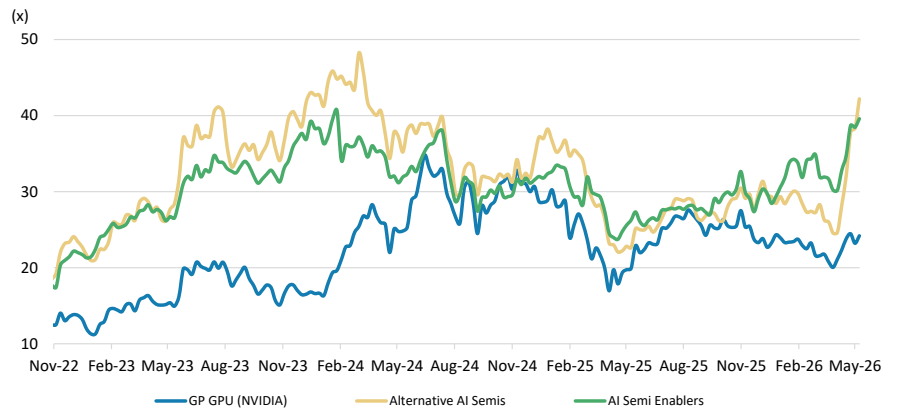


Source: Company data, Factset, Morgan Stanley Research estimates

AI semis – stock implications, P/E multiples, revenue exposure

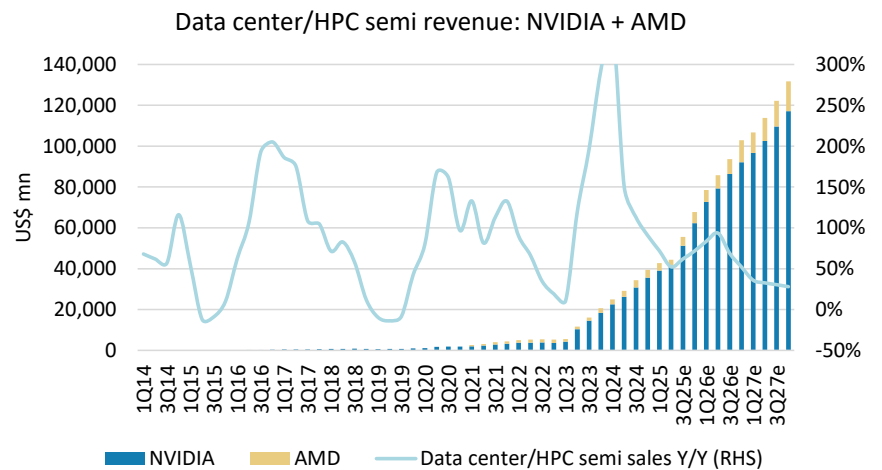
- In Asian semis, we are OW on TSMC, KYEC, ASE, Samsung (covered by Shawn Kim), and Aspeed.
- We are also positive on Asian ASIC design service providers Alchip and GUC, and CPO suppliers FOCI and Himax.

Exhibit 15: P/E multiple trend of AI semis



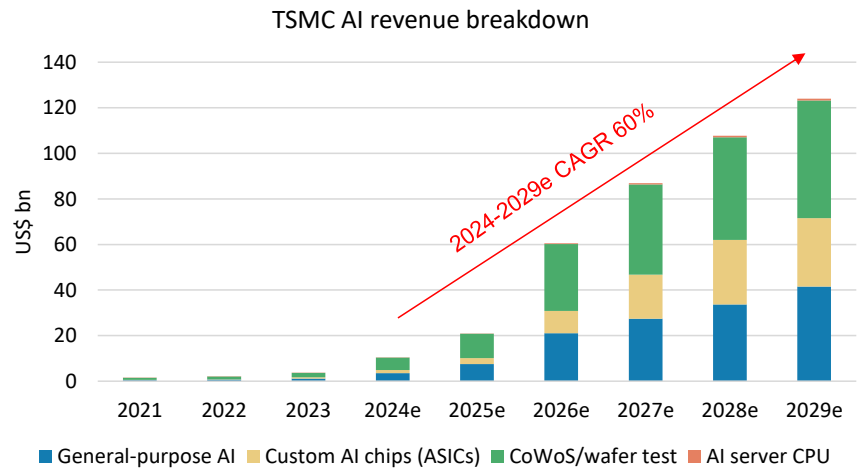
Note: Alternative AI semis group: AMD, Alchip, Andes, Marvell, Broadcom. AI semi enablers group: TSMC, Synopsys, Cadence, ASML, BESL, Ibiden, KYEC, Advantest. Source: Company data, Morgan Stanley Research.

Exhibit 16: We still expect AI chip revenue to rise QoQ



Source: Company data, Refinitiv, Morgan Stanley US Research (e) estimates.

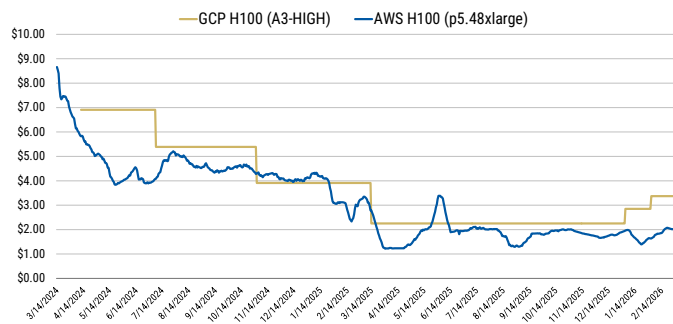
Exhibit 17: TSMC's AI-related revenue 2024-29e CAGR could reach 60%



Source: Company data, Morgan Stanley Research (e) estimates

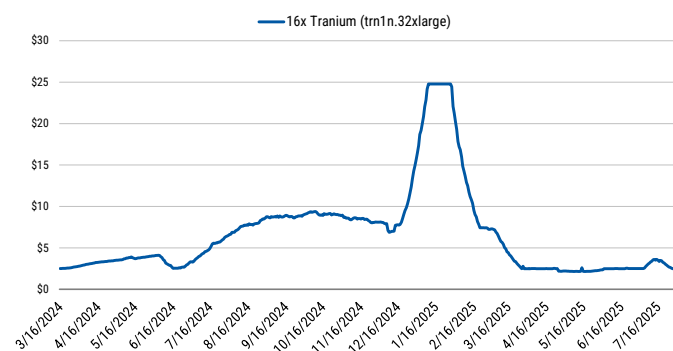
AI GPU and ASIC rental price tracker

Exhibit 18: AI GPU H100 per GPU per hour as of end-March



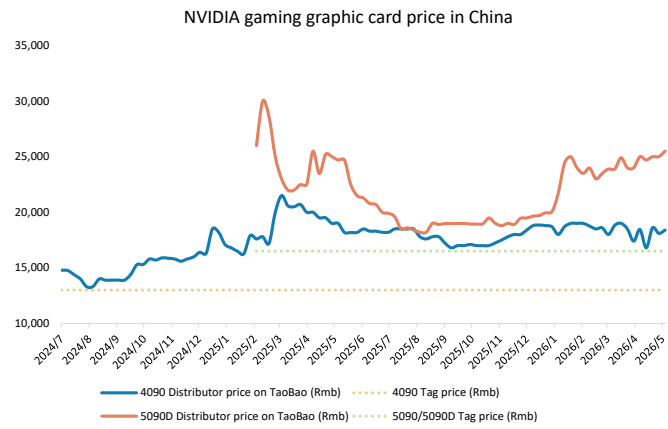
Source: Company data, Morgan Stanley Research

Exhibit 19: AI ASIC equivalent computing power – 16x Inferentia 2 per hour



Source: Company data, Morgan Stanley Research

Exhibit 20: NVIDIA 5090 graphic cards pricing rebounded recently, mainly due to market expectations for price hikes and strong AI inference demand from China



Source: TaoBao, Morgan Stanley Research, various media (e.g., Vice, Jan. 3, 2026)

Key Featured Reports on the AI Supply Chain

Asia-Pacific Technology: AI Supply Chain: Addressing Questions on Nvidia GPU/LPU and Google TPU (9 Apr 2026)

Greater China Semiconductors: AI Supply Chain Tracker: Key Investor Feedback from GTC/OFC (23 Mar 2026)

Asia Technology: AI Supply Chain: CPO and ASIC Dynamic Update (3 Mar 2026)

Asia-Pacific Technology: AI Supply Chain: CES implications, ASIC production, China AI chips (6 Jan 2026)

Asia-Pacific Technology: AI Supply Chain: TSMC CoWoS Expansion; ASIC Dynamics; Asia Field Trip (1 Dec 2025)

Greater China Semiconductors: 2026 CoWoS Expansion to Catch Up After TSMC's 3nm Capacity Increase (17 Nov 2025)

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Technology: Rise of the AI Agent – Global Implications (19 Apr 2026)

Global Technology: Supply-chain Reorientation (24 Jul 2025)

Global Technology: China – AI: The Sleeping Giant Awakens (13 May 2025)

Global Technology: AI Cloud Capex in the Spotlight (26 Feb 2025)

Global Semiconductors: AI ASIC 2.0: Potential winners (15 Dec 2024)

Global Technology: Global Technology – Dawn of the AI Smartphone Era: Edge AI – Apple Intelligence Fuels Innovation – More Charts, Fewer Words (17 Jul 2024)

Global Technology: AI PCs To Usher In The Next Leg Of PC Market Growth (21 May, 2024)

Key Upstream AI supply chain companies

Aspeed Technology: Riding the AI GPU and CPU Wave to Revenue Growth; OW (5 May 2026)

Gudeng Precision: Beneficiary of strong TSMC capex and EUV delivery; OW (4 May 2026)

Greater China Semiconductors: China CIO survey on cloud, old memory and edge AI (4 May 2026)

Cambricon Technology Corporation: Riding China's AI localization with improving supply visibility (4 May 2026)

Winway Technology Co Ltd: AI Growth and Smartphone Share Gain Propel 2Q Prospects; OW (4 May 2026)

Global Unichip Corp: 1Q26 margin beat driven by automotive and AI NRE; OW (4 May 2026)

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(as of April 30, 2026)

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Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1546	42%	467	51%	30%	709	44%
Equal-weight/Hold	1568	43%	358	39%	23%	715	44%
Not-Rated/Hold	4	0%	0	0%	0%	1	0%
Underweight/Sell	555	15%	84	9%	15%	202	12%
Total	3,673		909			1627	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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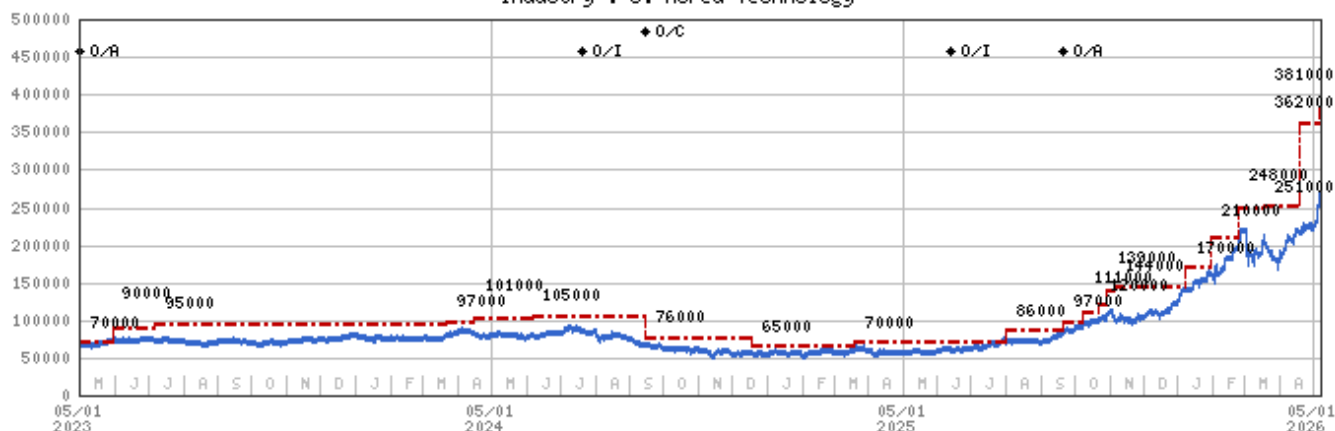
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Stock Price, Price Target and Rating History (See Rating Definitions)

Samsung Electronics (005930.KS) - As of 05/07/26 GMT in KRW
Industry : S. Korea Technology



Stock Rating History: 5/1/21 : O/A; 7/19/21 : O/I; 8/12/21 : O/C; 10/4/22 : O/A; 7/21/24 : O/I; 9/15/24 : O/C; 6/13/25 : O/I; 9/21/25 : O/A

Price Target History: 2/25/21 : 115000; 5/18/21 : 93000; 6/8/21 : 98000; 8/12/21 : 89000; 9/15/21 : 95000; 12/3/21 : 97000; 3/18/22 : 95000; 4/28/22 : 85000; 6/10/22 : 80000; 7/5/22 : 75000; 7/22/22 : 70000; 9/17/22 : 68000; 3/21/23 : 70000; 5/30/23 : 90000; 7/7/23 : 95000; 3/22/24 : 97000; 4/16/24 : 101000; 6/6/24 : 105000; 9/15/24 : 76000; 12/18/24 : 65000; 3/19/25 : 70000; 8/1/25 : 86000; 9/21/25 : 97000; 10/8/25 : 111000; 10/23/25 : 120000; 10/30/25 : 139000; 11/5/25 : 144000; 1/8/26 : 170000; 1/30/26 : 210000; 2/24/26 : 248000; 3/18/26 : 251000; 4/19/26 : 362000; 5/6/26 : 381000

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target --- No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst) ■
Stock and Industry Ratings (abbreviations below) appear as ♦ Stock Rating/Industry View
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Ryan Kim		
Ecopro BM (247540.KQ)	U (03/20/2023)	W235,500
Fadu Inc (440110.KQ)	O (09/21/2025)	W83,800
Hanmi Semiconductor Co. Ltd. (042700.KS)	O (08/16/2024)	W393,000
HD Hyundai Electric Co Ltd (267260.KS)	O (03/25/2025)	W1,420,000
Isu Petasys Co. Ltd. (007660.KS)	O (02/03/2025)	W147,400
L&F Co Ltd (066970.KS)	E (04/03/2025)	W211,000
Leeno Industrial Inc. (058470.KQ)	O (04/03/2025)	W113,500
Lotte Energy Materials Corp (020150.KS)	U (04/03/2025)	W74,000
LS Electric (010120.KS)	O (01/22/2026)	W318,500
POSCO FUTURE M (003670.KS)	U (04/03/2025)	W296,000
SK IE Technology (361610.KS)	U (04/03/2025)	W27,000
SK Square Co Ltd. (402340.KS)	O (05/06/2026)	W1,099,000
Wonik IPS Co Ltd (240810.KQ)	O (08/08/2025)	W132,900
Shawn Kim		
LG Display (034220.KS)	E (06/11/2025)	W12,450
LG Electronics (066570.KS)	E (04/07/2025)	W148,700
LG Innotek (011070.KS)	E (03/12/2025)	W637,000
Samsung Electro-Mechanics (009150.KS)	O (07/31/2025)	W917,000
Samsung Electronics (005935.KS)	O (11/18/2019)	W185,400
Samsung Electronics (005930.KS)	O (11/18/2019)	W271,500
Seoul Semiconductor (046890.KQ)	U (04/04/2018)	W16,620
SK hynix (000660.KS)	O (09/21/2025)	W1,654,000

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INDUSTRY COVERAGE: Greater China Technology Semiconductors

COMPANY (TICKER)	RATING (AS OF)	PRICE* (05/07/2026)
Charlie Chan		
ACM Research Inc (ACMR.O)	O (03/07/2023)	US\$59.20
Advanced Micro-Fabrication Equipment Inc (688012.SS)	O (11/06/2023)	Rmb384.60
Advanced Wireless Semiconductor Co (8086.TWO)	U (07/14/2025)	NT\$155.00
Alchip Technologies Ltd (3661.TW)	O (05/14/2021)	NT\$4,795.00
ASE Technology Holding Co. Ltd. (3711.TW)	O (09/15/2024)	NT\$540.00
Cambricon Technology Corporation (688256.SS)	O (04/27/2026)	Rmb1,868.00
Global Unichip Corp (3443.TW)	O (07/27/2024)	NT\$5,450.00
GlobalWafers Co Ltd (6488.TWO)	O (09/19/2025)	NT\$793.00
Gudeng Precision (3680.TWO)	O (11/25/2025)	NT\$585.00
Hua Hong Semiconductor Ltd (1347.HK)	E (03/12/2026)	HK\$141.40
Iluvatar CoreX Semiconductor Co., Ltd. (9903.HK)	O (04/27/2026)	HK\$597.00
King Yuan Electronics Co Ltd (2449.TW)	O (03/03/2023)	NT\$339.00
Maxscend Microelectronics Co Ltd (300782.SZ)	U (01/11/2021)	Rmb106.56
MediaTek (2454.TW)	O (11/28/2025)	NT\$3,420.00
MetaX Integrated Circuits (688802.SS)	E (04/27/2026)	Rmb842.97
Nanya Technology Corp. (2408.TW)	E (03/20/2026)	NT\$287.00
NAURA Technology Group Co Ltd (002371.SZ)	O (11/06/2023)	Rmb552.14
OmniVision Integrated Circuits Group Inc (603501.SS)	E (11/17/2025)	Rmb100.26
Phison Electronics Corp (8299.TWO)	E (02/25/2026)	NT\$2,390.00
SG Micro Corp. (300661.SZ)	E (11/03/2025)	Rmb89.95
Silergy Corp. (6415.TW)	E (04/21/2026)	NT\$424.50
SMIC (0981.HK)	O (10/21/2025)	HK\$76.75
TSMC (2330.TW)	O (02/07/2022)	NT\$2,310.00
UMC (2303.TW)	E (04/20/2026)	NT\$96.50
Vanguard International Semiconductor (5347.TWO)	E (01/14/2026)	NT\$185.50
WIN Semiconductors Corp (3105.TWO)	U (07/14/2025)	NT\$500.00
Daisy Dai, CFA		
ASMPT Ltd (0522.HK)	O (07/24/2025)	HK\$177.20
China Resources Microelectronics Limited (688396.SS)	U (03/02/2026)	Rmb57.03
Elan Microelectronics Corp (2458.TW)	O (10/03/2025)	NT\$144.00
Empyrean Technology Co Ltd (301269.SZ)	E (01/17/2025)	Rmb92.53
Hangzhou Silan Microelectronics Co. Ltd. (600460.SS)	U (08/25/2025)	Rmb29.65
Innoscence (2577.HK)	E (10/13/2025)	HK\$69.80
JCET Group Co Ltd (600584.SS)	E (01/16/2026)	Rmb48.76
Shanghai Fudan Microelectronics (1385.HK)	O (03/07/2025)	HK\$42.26
SICC Co Ltd (688234.SS)	O (03/20/2026)	Rmb111.12
StarPower Semiconductor Ltd (603290.SS)	O (03/01/2022)	Rmb106.00
Unigroup Guoxin Microelectronics Co Ltd (002049.SZ)	U (01/10/2023)	Rmb79.01
Universal Scientific Ind. (Shanghai) (601231.SS)	O (11/05/2025)	Rmb42.03
Yangjie Technology (300373.SZ)	O (06/10/2022)	Rmb78.96
Daniel Yen, CFA		
AP Memory Technology Corp (6531.TW)	O (07/11/2025)	NT\$925.00
ASMedia Technology Inc (5269.TW)	U (10/03/2025)	NT\$1,370.00
Aspeed Technology (5274.TWO)	O (06/09/2025)	NT\$17,890.00
Egis Technology Inc (6462.TWO)	E (01/28/2026)	NT\$126.50
Espressif Systems (688018.SS)	O (05/15/2023)	Rmb179.49
GigaDevice Semiconductor Beijing Inc (603986.SS)	O (05/15/2025)	Rmb350.16
Macronix International Co Ltd (2337.TW)	O (09/18/2025)	NT\$164.50
Montage Technology Co Ltd (6809.HK)	O (03/18/2026)	HK\$357.60
Montage Technology Co Ltd (688008.SS)	O (03/18/2026)	Rmb209.91
Novatek (3034.TW)	U (02/04/2026)	NT\$453.00

Nuvoton Technology Corporation (4919.TW)	U (11/10/2025)	NT\$177.00
Parade Technologies Ltd (4966.TWO)	E (01/30/2026)	NT\$609.00
Powerchip Semiconductor Manufacturing Co (6770.TW)	O (10/27/2025)	NT\$63.90
Realtek Semiconductor (2379.TW)	E (01/30/2026)	NT\$539.00
Shenzhen Goodix Technology Co Ltd (603160.SS)	U (07/14/2025)	Rmb66.01
Winbond Electronics Corp (2344.TW)	E (03/20/2026)	NT\$114.00
WPG Holdings (3702.TW)	O (03/16/2026)	NT\$103.50
WT Microelectronics Co. Ltd. (3036.TW)	O (01/27/2026)	NT\$219.00
Duan Liu		
Dosilicon Co Ltd (688110.SS)	U (09/06/2024)	Rmb155.43
Shenzhen Longsys Electronics Co Ltd (301308.SZ)	E (02/25/2026)	Rmb483.33
Tiffany Yeh		
AllRing Tech Co. (6187.TWO)	O (09/23/2025)	NT\$1,130.00
FOCI Fiber Optic Communications Inc (3363.TWO)	O (01/15/2025)	NT\$815.00
Himax Technologies Inc (HIMX.O)	E (02/04/2026)	US\$16.03
Hon Precision (7769.TW)	O (04/17/2026)	NT\$5,835.00
MPI Corporation (6223.TWO)	O (04/17/2026)	NT\$5,030.00
Silicon Motion (SIMO.O)	O (05/06/2024)	US\$242.71
Winway Technology Co Ltd (6515.TW)	O (04/17/2026)	NT\$9,860.00

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