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Semiconductor Capital Equipment | North America

Taiwan Takeaways

We come away from Taiwan more positive on the broadening of foundry spend and on Teradyne’s networking test demand.

Key Takeaways

- Foundry: Intel TBC, Samsung alive and well.
- Teradyne: orders for Rubin chip proving, CPO situation fluid.

Foundry competition is as dynamic as it has ever been. Our biggest takeaway was that the resurgence of Intel and Samsung, coupled with unprecedented demand, is creating ripples across the three leading foundries as well as OSATs.

Intel EMIB traction vs. foundry TBD. The impression we received was that traction for EMIB is far outpacing Intel’s foundry business. On the foundry side, Apple appears to be the only high-profile customer, with the company likely to commit A-series chips for HVM in 2029. Intel could possibly receive orders related to NVDA’s gaming chips, and before TeraFab comes online, the company could receive AI6 orders from Tesla. 18A yield is hovering at approximately 50%, with work underway to drive further improvement. Our general impression was that customer interest is high, but customer acquisition remains a work in progress. By contrast, EMIB demand is extremely strong from MediaTek, Trainium, and other customers looking for an alternative to TSMC.

Samsung foundry is alive and well. It was not only Intel seeing strong customer inquiries; we also came away with the impression that Samsung’s foundry business is alive and well, with Google likely to use Samsung for CPUs in 2028 HVM ([further details/GUC Downgrade](#)). However, the challenge for Samsung appears to be that almost all U.S. customers want to shift toward Taylor, where capacity is still in development.

Test continues to be a bottleneck. Overall, the test environment remains very strong, with demand continuing to outpace supply. Our understanding is that Teradyne’s initial orders related to NVDA GPU test are for Rubin chip probing, with the company now testing a majority of NVDA applications outside of GPU FT, including Mellanox, RTX, Vera CPU, and LPU/Groq. We came away with the impression that, as Teradyne incrementally gains RTX, LPU, and chip probing work, its share at NVDA is unlikely to shift meaningfully with Rubin Ultra or Feynman. Furthermore, with GPU FT time likely to increase from roughly 850 seconds on Blackwell to 1,200 seconds on Rubin, the need for Teradyne at GPU FT does not appear critical. We would not view a lack of incremental share gain in NVDA AI GPU as a negative, as Mellanox-related testing demand alone is likely to keep Teradyne extremely busy. On CPO, our impression is that the situation remains more fluid than definitive. ATE share across the various test insertions has not been finalized, and test times remain uncertain, making clear 2027 demand signals more speculative than definitive. Our understanding is that Insertions 1 and 2 fall under

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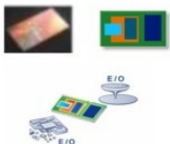
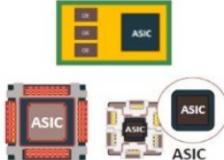
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TSMC's jurisdiction, with Insertion 1, EIC/PIC, led by Advantest, while Insertion 2 skews toward Teradyne. However, given the difficulty of Insertion 2, outcomes appear more open than settled. Insertion 4 for NVDA applications appears to sit with Teradyne, while Advantest is approaching AMD and Amazon. Outside of NVDA and CPO, China and Tesla stood out as two areas where demand remains quite strong. For more details on CPO test see: [Hon Precision: CPO Insert Test Update; Key Takeaways from TWSE Investor Conference \(30 Apr 2026\)](#)

Exhibit 1:

Test Insertion	Insertion 1	Insertion 2	Insertion 3	Insertion 4		Insertion 5 (potential)
				Insertion 4O	Insertion 4E	
Test content	Electronic IC (EIC) & Photonic IC (PIC)	EIC die to PIC wafer (after SoIC)	Optical engine (die-to-die)	CPO package (ASIC+OE) Optical Testing	CPO package (ASIC+OE) Electrical Testing (2025-2026) Optical+Electrical Testing (starting 2027e)	CPO package (ASIC+OE) SLT?
Testing surface						
Key Product timeline	2025-2026 Scale-out CPO switch (Spectrum+Quantum) products 2027e onward: Scale-out CPO switch (Spectrum+Quantum) + Scale-up CPO switch products					
Testing details	El. & opt. DC, (power, loss, dark current etc.)	E/O, O/E, O/O, high speed, S-parameters	Full calibration/DC, high-speed functional, optical loopback, alternatively: S-parameters	Optical Light Transmission Testing, optical loopback	BER testing, signal testing	Full system functional validation
Testing service provider	Foundry (Wafer-level) TSMC	Foundry (Wafer-level) TSMC	OSAT (Die/chip level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)
Equipment and Consumable Vendor	PIC ATE tester: 1) Advantest + TEL + Formfactor 2) Chroma (underqualification) EIC tester: 1) Teradyne + TEL EIC Probe card: FormFactor	Wafer level testing: 1)Ficontec +Formfactor +Teradyne 2) Advantest+ MPI	Die-to-die prober: 1. TEL 2. MPI Optical engine E/O tester+laser reliability test+ELS source test head: Chroma Optical and Electrical Test Socket: Winway	CPO switch tester: Chroma Coaxial socket/Hypersocket: Winway	ATE tester: 1) Advantest (under qualification) 2)Teradyne FT Handler+ELS source test head+optical alignmnet stage : Hon Precision Coaxial socket/Hypersocket: Winway	CPO SLT tester: Chroma (under qualification) Coaxial socket/Hypersocket: Winway

Source: Morgan Stanley Research

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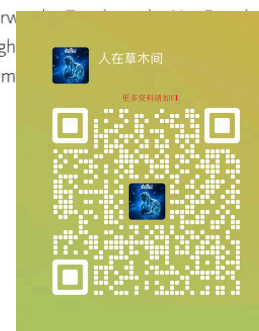
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Total	3,673		909			1627	

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Camtek (CAMT.O)	E (12/01/2025)	\$174.78
KLA Corp (KLAC.O)	O (01/15/2026)	\$1,927.63
Lam Research Corp (LRCX.O)	O (05/18/2026)	\$318.00
MKS Inc. (MKSI.O)	O (08/04/2024)	\$323.41
Nova Ltd (NVMI.O)	E (12/01/2025)	\$505.97
Teradyne Inc (TER.O)	E (07/30/2025)	\$382.65

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* Historical prices are not split adjusted.