

Blue are new market stabilizing or positive leaning information. **Orange** are new neutral to slightly negative information.

Device	Company	Production Profile	Comments
NAND	Overall NAND	3xxL products to ramp in 2025. Slowing bit growth to manage supply.	
	Samsung	Vol.: 236L	- Received verified end user designation, enables continued China investment
	Kioxia	Vol: 218L	- Kitakami Fab 2 construction delayed, 2024 CapEx \$4.9B.
	SK Hynix	Vol.: 238L	- 238L production ready but not ramping; 178L transition continuing - Received verified end user designation, enables continued China investment
	Micron	Vol.: 232L	- Cautious 2024 CapEx
	YMTC	Vol: 128L Ramp: 232L	- Added to US Entity List in Dec'22. Delay to Fab 2 (planned 100K wspm).
DRAM	Overall DRAM	EUV plans firmed: Samsung & SK Hynix for 1a, Micron for 1y	
	Samsung	Vol: 1a nm, Ramp: 1b nm	- Ongoing CapEx for expanding EUV (1a) capacity in Pyeongtaek P3.
	SK Hynix	Vol: 1a nm, Ramp: 1b nm	- Focusing spend on high bandwidth memory (1z node) to meet AI demand - Received verified end user designation, enables continued China investment
	Micron	Vol: 1a nm Ramp: 1b nm	- Delays in Boise and NY fabs, awaiting CHIPS funding announcements. - Cautious 2024 CapEx
	ChangXin Mem. Tech. (CXMT)	1y ramp	- Expect impact of new US restrictions on node transition to 1y. - Fab2 (Hefei) delayed until '24 or '25; not on entities list, WFE licenses likely
	Other Memory	1x	- Nanya: Delay new fab, 2026 ramp now expected - Winbond: slow Kaohsiung P1 (20K) ramp
Foundry/Logic	Foundry/Logic	Leading & trailing nodes investment planned. Fab utilization at significantly lower level.	
	≤16nm	TSMC	3nm - FY'24 CapEx est. \$30-32B, 70-80% for leading edge - AZ Fab 1 delayed to 2025, 2 nd AZ fab (3nm, 2026), 2 nd Japan fab (6nm, 2026)
		Intel	4nm - Delay to Ohio fab (2026) - Licensing agreement with UMC announced for 14nm, Tower for 65nm
		Samsung	≤14nm - Germany fab government funding renegotiated; 2 fabs (\$30B, 2027+ ramp).
			3nm GAA - No expected change in CapEx. - Taylor, TX delayed (\$17B total CapEx). - Yongin fab complex planned, target building 5 logic fabs in 20 years (\$230B).
		GlobalFoundries	14nm - Malta new fab planned, \$1.5B CHIPS funding announced, build timing TBD.
		SMIC	14nm - No discussion on expanding 14nm capacity
	≥20nm	TSMC	22/28nm 12/16nm - Japan fab opening Feb'2024 - Dresden JV fab (construction 2H'24, ramp 2027-end)
		UMC	28nm - 2024 CapEx ~\$3.3B, Singapore (2024) expansions.
		SMIC	28nm - Continuing high spending level with \$7.5B forecast for 2024. - Fab ramps depend US license timing (Shenzhen, Shanghai, Tianjin).
		Powerchip	>28nm - Ramp of new Tongluo (+19K) pending tool deliveries - Formed Japanese JV with SBI Holdings; seeking site & subsidies for \$5.4B fab
		GlobalFoundries	28nm, FDSOI - New Singapore Fab (\$4B) - Confirmation of gov. funding for France fab (\$5.7B, 2026) with ST
		Other	>28nm US: TI Ramping Richardson, Lehi F2 ('26, \$11B), Sherman (F1 '25, \$30B) China: CanSemi (Guangzhou, +40K wmp), Hua Hong (Wuxi, \$6.7B +30K), Wingsky (Shanghai, 45K), Zensemi (MEMS, Quangshou), CR Micro (Shenzhen) Japan: Toshiba (power semi, 2024), Renesas (convert to 300mm, 2024) Europe: ST (Crolles 2024); Infineon (Dresden, 2026) India: Possible tech partners Powerchip, Tower Semiconductor
Pkg	TSMC	-	- \$3.2B (10% CapEx), incl. expanding CoWoS capacity to support AI demand - Japan packaging facility, joint with Japanese research center
	Intel		- Rio Rancho investment (\$3.5B) for advanced 3D packaging