Goldman Sachs Research

Equity Research

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GLOBAL OPTICAL TRANSCEIVERS

Raising 800G and above shipment by 14% / 29% / 33% for 2026-28E; AI to drive growth ahead

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We remain positive on the growth of optical transceiver demand ahead, driven by the AI server infrastructure cycle (scale out, scale up, and scale across), the trend of fiber optics replacing copper cables, specification upgrade toward high-speed connection, and the diversification trend from GPU to ASIC servers will support further demand expansion for optical transceivers, as ASIC chips rely more on networking capabilities to achieve inferencing workload and to mitigate the lower computing power per chip. **Read more** on our latest views: Optical networking thematic; Server TAM update; Optical initiation on Robotechnik/YJ Semi/ YOFC.

In 2026/27/28E, we expect the global optical transceiver market to reach US$51bn/73bn/69bn, with 800G and above segment increasing at a +31% CAGR and reaching US$32bn/ 55bn/ 56bn. We expect 800G/1.6T shipment volume at 34m/26m units in 2026E, growing to 45m/46m in 2027E, with 3.2T shipment ramping up to 13m in 2027E. Silicon photonics will account for 60%/ 80%/ 100% of 800G/1.6T/3.2T optical transceivers, in our view.

Within the optical transceivers supply chain, we are Buy rated on (1) Optical transceiver or engines makers: Innolight, Eoptolink, TFC Optical; (2) CW lasers or Epiwafer suppliers: Landmark, VPEC; (3) Data center switch: Ruijie; (4) Equipment: RoboTechnik.

Related reports: Global Optical transceivers: Raising value TAM by 43% / 46% in 2026-27E with 800G / 1.6T at 38m / 14m units in 2026E on AI trend (Jan 8, 2026)

Global Server: ASIC servers expanding; AI full racks see diversifying chip platform (Jan 4, 2026)

Global Optical transceivers: TAM introduced; rising 800G / 1.6T driven by growing AI servers infrastructure (Dec 13, 2025)

Global Server: 2027E estimates introduced; Raising baseboard-based AI servers with rising ASIC penetration (Sep 27, 2025)

Global Switch: Raising TAM on higher AI Data Center Switch ASP; Global Switch TAM to grow at 21% CAGR in 2025-27E (Nov 17, 2025)

TAIWAN TECHNOLOGY: Silicon Photonics / CPO: LandMark and VPEC the early beneficiaries of 800G / 1.6T upgrade; Initiate with Buys (Feb 13, 2025)

Optical transceivers: 800G / 1.6T at 34m / 26m units in 2026E

Global Optical module market opportunity

US$ m	1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2025	2026E	2027E	2028E
Global Optical module TAM												
Global TAM (US$m)	**6,570**	**7,969**	**9,607**	**10,066**	**10,142**	**12,047**	**12,770**	**15,925**	**34,211**	**50,883**	**72,593**	**69,135**
Below 400G	4,195	4,315	4,286	4,031	4,077	4,432	4,283	4,093	16,827	16,886	16,166	13,196
400G	1,804	1,023	950	432	359	422	523	441	4,209	1,745	969	287
800G	571	2,120	2,902	3,725	2,706	3,457	3,557	3,810	9,318	13,530	14,715	10,761
1.6T	-	511	1,469	1,877	3,000	3,736	4,406	7,581	3,857	18,722	27,403	23,264
3.2T	-	-	-	-	-	-	-	-	-	-	13,340	21,625
By Speed Mix	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Below 400G	64%	54%	45%	40%	40%	37%	34%	26%	49%	33%	22%	19%
400G	27%	13%	10%	4%	4%	4%	4%	3%	12%	3%	1%	0%
800G	9%	27%	30%	37%	27%	29%	28%	24%	27%	27%	20%	16%
1.6T	0%	6%	15%	19%	30%	31%	35%	48%	11%	37%	38%	34%
3.2T	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	18%	31%
By Material Mix	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
SiPh	14%	24%	32%	36%	38%	40%	42%	48%	28%	43%	56%	62%
EML	86%	76%	68%	64%	62%	60%	58%	52%	72%	57%	44%	38%

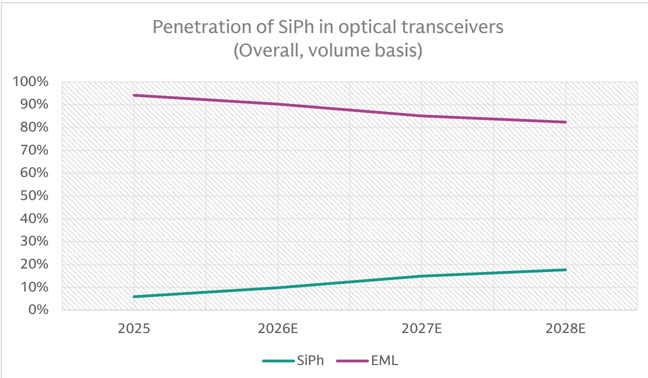
	1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2025	2026E	2027E	2028E
Global Optical module shipment TAM												
Global shipment (k units)	**98,631**	**101,929**	**103,907**	**98,580**	**103,818**	**114,888**	**113,138**	**120,425**	**403,046**	**452,269**	**528,286**	**556,429**
Below 400G	89,489	92,054	91,433	85,999	91,563	99,529	96,186	97,013	358,975	384,292	419,238	428,689
400G	7,845	4,448	4,129	1,880	1,673	1,968	2,439	2,214	18,301	8,295	5,268	2,007
800G	1,297	4,819	6,596	8,466	6,666	8,514	8,760	10,243	21,178	34,183	44,993	44,047
1.6T	-	608	1,749	2,235	3,916	4,877	5,753	10,955	4,591	25,500	45,719	53,525
3.2T	-	-	-	-	-	-	-	-	-	-	13,067	28,162
Mix	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Below 400G	91%	90%	88%	87%	88%	87%	85%	81%	89%	85%	79%	77%
400G	8%	4%	4%	2%	2%	2%	2%	2%	5%	2%	1%	0%
800G	1%	5%	6%	9%	6%	7%	8%	9%	5%	8%	9%	8%
1.6T	0%	1%	2%	2%	4%	4%	5%	9%	1%	6%	9%	10%
3.2T	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	5%
SiPh penetration rate	**4%**	**5%**	**7%**	**8%**	**8%**	**9%**	**10%**	**13%**	**6%**	**10%**	**15%**	**18%**

	1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2025	2026E	2027E	2028E
ASP (US$)												
By speed (US$)	**71**	**81**	**94**	**97**	**103**	**116**	**111**	**141**	**85**	**113**	**137**	**124**
Below 400G	50	48	47	44	47	48	43	43	47	44	39	31
400G	234	130	214	105	191	252	266	181	230	210	184	143
800G	456	1,635	602	565	320	519	418	435	440	396	327	244
1.6T			2,416	1,073	1,342	954	904	1,318	840	734	599	435
3.2T												768
YoY					**45%**	**44%**	**18%**	**45%**		**33%**	**22%**	**-10%**
Below 400G					-6%	0%	-8%	-3%		-6%	-12%	-20%
400G					-18%	93%	25%	72%		-9%	-13%	-22%
800G					-30%	-68%	-31%	-23%		-10%	-17%	-25%
1.6T							-63%	23%		-13%	-18%	-27%
3.2T												-25%

Source: Company data, Goldman Sachs Global Investment Research

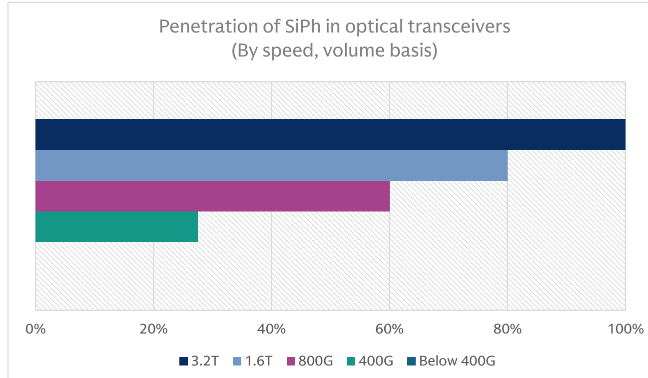
Optical transceivers: Rising adoption of SiPh under high-speed connection

Exhibit 1: Penetration of SiPh: reaching 18% by 2028E



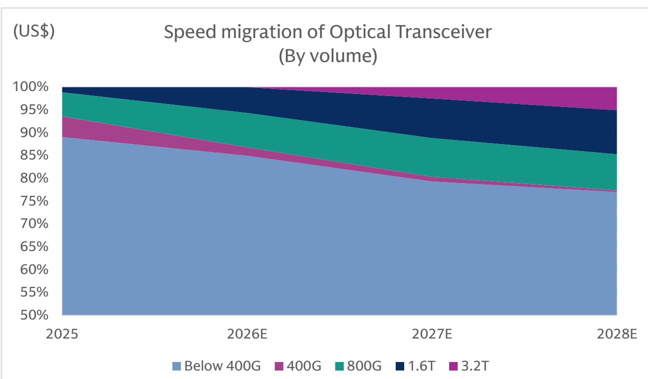
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 2: Penetration of SiPh: 3.2T will 100% adopt SiPh



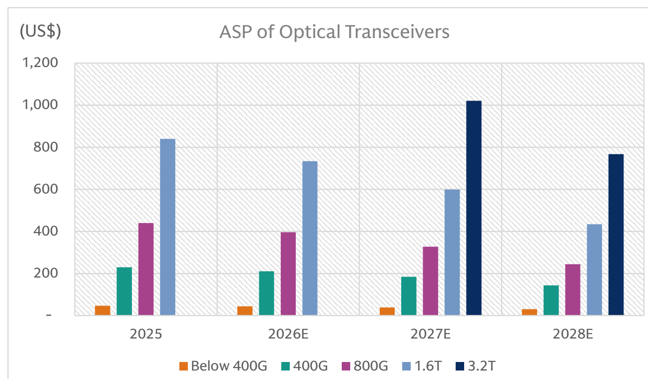
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 3: Global Optical transceivers: 800G/ 1.6T/ 3.2T accounts for 8%/ 10%/ 5% by 2028E (by volume)



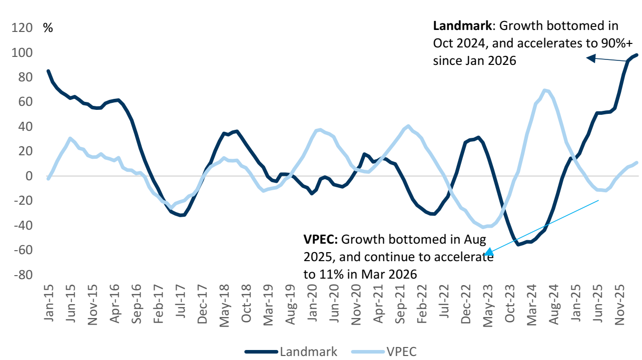
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 4: Global Optical transceivers: Assuming ASP decline YoY for like-for-like products



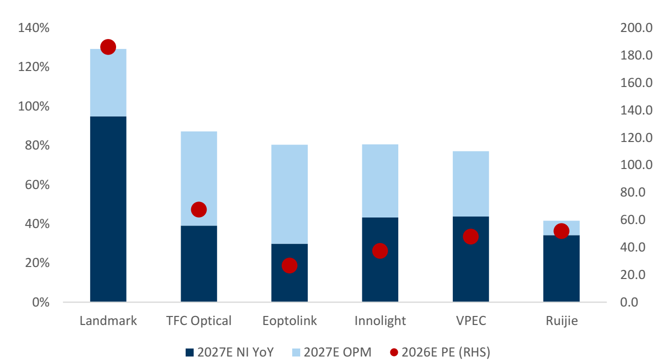
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 5: CW laser / Epiwafer suppliers monthly Rev YoY (last 12M months)



Source: TEJ

Exhibit 6: Optical transceiver supply chain: 2026E PE vs. 2027E NI YoY and OPM



Source: Goldman Sachs Global Investment Research

Optical transceiver outlook

AI data center optical transceivers accelerates specification migrations. We expect a total demand of 452m/ 528m/ 556m units for optical transceivers globally in 2026-28E, with the high end market (800G+) demand mainly driven by AI data center applications growing at +45% CAGR in 2026-28E to 126m by 2028E. General data center and Telecom applications still require products of 400G or lower, and we expect 400G or below shipment contribution to decline from 87% in 2026E to 77% in 2028E.

High speed migrations: 800G has become the mainstream specification for large scale data centers, and we expect 1.6T will see strong volume ramp in from 2026, with 3.2T starting adoption in 2027E. **800G's demand volume** will increase from 34m in 2026E to 45m/ 44m in 2027-28E, and **1.6T's volume** will increase from 26m in 2026E to 46m/ 54m in 2027-28E, growing from 6% of total shipments in 2026E to 10% in 2028E.

AI data center networking migration: AI servers networking continues to migrate. Take NVIDIA's rack-level AI servers for example: GB200 uses 400G (GPU layer) and 800G networking (leaf, spine, core layer), GB300 uses 800G (GPU layer) and 1.6T (leaf, spine layer), and we expect Rubin and Rubin Ultra to further migrate to 1.6T and 3.2T. As inferred by our global server estimates, we expect rack-level AI servers powered by NVIDIA at 50k / 77k / 121k racks in 2026-28E, implying AI chips at 3.6m / 5.5m / 8.7m in 2026-28E, and we expect the migration from GB300 to Rubin would drive the usage of 1.6T optical transceiver per GPU from 3.0 units to 6.0 units (assuming 3 layer netowrking), driving 1.6T usage in 2026-27E.

ASIC AI servers in expansion: We expect the diversification trend from GPU to ASIC AI servers to continue in coming years, which will support demand expansion of optical transceivers, as ASIC chips rely more on networking capabilities to achieve AI workload and to mitigate the lower computing power per chip. As inferred by our global server estimates, we expect ASIC to account for 43%/ 50%/ 55% of total AI chips in 2026/ 27/ 28E. Across ASIC users, Google and Meta are more aggressively expanding high-speed connection (800G+), with Google migrating to 1.6T in 2026E, and Meta set to use more optical transceiver per ASIC than GPU servers (i.e. on GPU servers typically there are 2-3 optical transceivers per GPU), according to our channel checks.

SiPh penetrations: We expect SiPh solutions to see increasing adoption as they have cost advantages over traditional EML modules in high speed products. Based on our industry checks, the 1.6T SiPh optical transceiver uses four 70mW CW lasers, or US$15-20 laser content per module, while the 1.6T EML optical transceiver uses eight 200G EMLs, or US$160 of laser content, leading to different GMs to optical module makers. We expect that the higher the speed, the higher penetration of SiPh, driving SiPh modules to account for 10% to 18% of the total market in 2026-28E, or 69%-77% to the 800G+ market in 2026-28E.

Exhibit 7: Summary of 800G+ optical transceiver shipments

k units	2025	2026E	2027E	2028E		2025	2026E	2027E	2028E
Global	25,769	59,683	103,779	125,733					
YoY		132%	74%	21%					
By laser					By format				
SiPh	16,380	40,910	76,638	97,410	Pluggable	25,769	58,603	97,443	117,813
EML	9,389	18,773	27,141	28,324	CPO		1,080	6,336	7,920
Mix					Mix				
SiPh	64%	69%	74%	77%	Pluggable	100%	98%	94%	94%
EML	36%	31%	26%	23%	CPO	0%	2%	6%	6%
YoY					YoY				
SiPh		150%	87%	27%	Pluggable		127%	66%	21%
EML		100%	45%	4%	CPO			487%	25%

Optical transceiver revision

We raise global optical transceiver value TAM by 18% / 35% / 40% in 2026-28E mainly on (1) higher Nvidia rack-level AI server and Google ASIC AI server shipments in our Global Server TAM Updates, and (2) higher estimates on the usage of 1.6T+ optical transceivers per Nvidia GPU in rack-level AI servers. We raised our Nvidia and Google's AI chip shipment estimates in 2026-28E, which are major customersor 1.6T+ optical transceivers. We also raise the per GPU usage of 1.6T+ optical transceivers in Nvidia rack-level AI servers, including (1) 1.6T usage per GPU in GB300 raised to 3 (vs. 1.6 previously), (2) 1.6T usage per GPU in Rubin raised to 6 (vs. 5 previously), (3) 3.2T usage per GPU in Rubin Ultra raised to 3 / 3 in 2027-28E (vs. 0 / 1.5 previously), (4) adding Feynman rack-level server into our 2028E estimate with per GPU 3.2T optical transceivers used at 6,urther supporting the value TAM growth. Our estimates still consider the pull in one quarter to reflect component supplier (optical transceiver) delivery time gap compared to ODM final system shipment.

Exhibit 8: Global Optical Transceiver TAM revision

New	2026E	2027E	2028E
Global TAM (US$m)	**50,883**	**72,593**	**69,135**
Below 400G	16,886	16,166	13,196
400G	1,745	969	287
800G	13,530	14,715	10,761
1.6T	18,722	27,403	23,264
3.2T	-	13,340	21,625

New	2026E	2027E	2028E
Global TAM shipment (k units)	**452,269**	**528,286**	**556,429**
Below 400G	384,292	419,238	428,689
400G	8,295	5,268	2,007
800G	34,183	44,993	44,047
1.6T	25,500	45,719	53,525
3.2T	-	13,067	28,162

Old	2026E	2027E	2028E
Global TAM (US$m)	**43,188**	**53,579**	**49,476**
Below 400G	16,114	14,450	11,602
400G	1,439	1,186	689
800G	15,223	12,176	9,805
1.6T	10,412	24,977	18,500
3.2T	-	790	8,881

Old	2026E	2027E	2028E
Global TAM shipment (k units)	**425,469**	**461,270**	**477,117**
Below 400G	366,238	374,554	377,601
400G	6,844	6,559	5,101
800G	38,220	37,421	40,131
1.6T	14,167	41,855	42,405
3.2T	-	882	11,879

New vs. Old	2026E	2027E	2028E
Global TAM (US$m)	**18%**	**35%**	**40%**
Below 400G	5%	12%	14%
400G	21%	-18%	-58%
800G	-11%	21%	10%
1.6T	80%	10%	26%
3.2T		1589%	144%

New vs. Old	2026E	2027E	2028E
Global TAM shipment (k units)	**6%**	**15%**	**17%**
Below 400G	5%	12%	14%
400G	21%	-20%	-61%
800G	-11%	20%	10%
1.6T	80%	9%	26%
3.2T		1382%	137%

Source: Goldman Sachs Global Investment Research

Servers: AI training server volume +75%/+38%/+31% in 2026-28E; General server volume +4%/ +2%/ +3% YoY

Global Server market opportunity

(Shipments in k units/ k racks)

Our Bottom up method

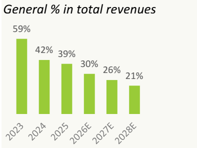
Global server TAM = **General server** + **AI** server (high power) + **AI** server (others) + **HPC**

General server

General server shipments = shipments of Top 6 server brands + ODM direct + others

General server revenues = shipments of each company x ASP of each company

General % in total revenues

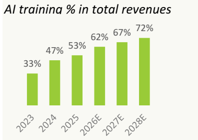


AI server

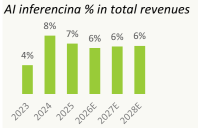
AI server shipments = shipments of Top 6 server brands + ODM direct + others

AI server revenue = shipments x ASP

AI training % in total revenues



AI inferencing % in total revenues

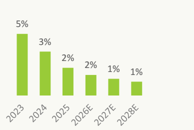


HPC server

HPC server shipments = shipments of Top 6 server brands + ODM direct + others

HPC server revenue = shipments X ASP

HPC % in total revenues



Revenues by type		1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025	2026E	2027E	2028E
Global server revenues	**US$ m**	**95,261**	**110,833**	**114,917**	**128,072**	**142,195**	**155,449**	**166,478**	**187,953**	**140,392**	**253,023**	**449,082**	**652,074**	**826,682**	**1,067,254**
General servers	US$ m	42,743	45,961	41,437	43,038	45,076	50,885	50,749	52,057	82,354	105,441	173,179	198,766	211,350	224,675
AI servers - training	US$ m	41,537	56,893	64,484	73,757	86,128	93,123	102,848	122,055	46,008	119,375	236,671	404,155	553,918	765,068
AI servers - high power	US$ m	37,014	48,077	48,485	48,508	54,521	58,349	61,561	64,907	46,008	118,160	182,085	239,338	267,087	304,305
AI servers - full racks	US$ m	4,523	8,815	15,999	25,249	31,607	34,774	41,287	57,148	-	1,215	54,586	164,817	286,831	460,763
AI servers - inferencing	US$ m	8,620	5,522	6,706	8,884	8,672	8,962	10,348	11,186	5,128	19,487	29,732	39,168	51,380	67,163
HPC	US$ m	2,361	2,458	2,289	2,393	2,319	2,478	2,533	2,655	6,903	8,720	9,500	9,985	10,034	10,349
Mix		1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025	2026E	2027E	2028E
Total	**%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
General servers	%	45%	41%	36%	34%	32%	33%	30%	28%	59%	42%	39%	30%	26%	21%
AI servers - training	%	44%	51%	56%	58%	61%	60%	62%	65%	33%	47%	53%	62%	67%	72%
AI servers - inferencing	%	9%	5%	6%	7%	6%	6%	6%	6%	4%	8%	7%	6%	6%	6%
HPC	%	2%	2%	2%	2%	2%	2%	2%	1%	5%	3%	2%	2%	1%	1%
Revenues YoY		1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025	2026E	2027E	2028E
Total	**%**	**134%**	**97%**	**60%**	**52%**	**49%**	**40%**	**45%**	**47%**	**13%**	**80%**	**77%**	**45%**	**27%**	**29%**
General servers	%	105%	114%	58%	17%	5%	11%	22%	21%	-12%	28%	64%	15%	6%	6%
AI servers - training	%	196%	106%	67%	89%	107%	64%	59%	65%	241%	159%	98%	71%	37%	38%
AI servers - high power	%	164%	74%	25%	28%	47%	21%	27%	34%	241%	157%	54%	31%	12%	14%
AI servers - full racks	%				1978%	599%	294%	158%	126%			4393%	202%	74%	61%
AI servers - inferencing	%	102%	15%	44%	54%	1%	62%	54%	26%		280%	53%	32%	31%	31%
HPC	%	55%	6%	-5%	-3%	-2%	1%	11%	11%	-59%	26%	9%	5%	0%	3%
Revenues QoQ		1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025	2026E	2027E	2028E
Total	**%**	**13%**	**16%**	**4%**	**11%**	**11%**	**9%**	**7%**	**13%**						
General servers	%	16%	8%	-10%	4%	5%	13%	0%	3%						
AI servers - training	%	6%	37%	13%	14%	17%	8%	10%	19%						
AI servers - high power	%	-2%	30%	1%	0%	12%	7%	6%	5%						
AI servers - full racks	%	272%	95%	81%	58%	25%	10%	19%	38%						
AI servers - inferencing	%	50%	-36%	21%	32%	-2%	3%	15%	8%						
HPC	%	-4%	4%	-7%	5%	-3%	7%	2%	5%						
Shipments by type	Units	1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025	2026E	2027E	2028E
Global server shipments															
General servers	k units	3,371	3,674	3,609	3,695	3,530	3,865	3,782	3,678	11,409	12,544	14,350	14,855	15,199	15,644
AI servers - training	k units*	147	198	219	302	311	347	391	464	234	554	866	1,513	2,082	2,730
AI servers - high power	k units	133	170	168	221	215	242	267	292	234	551	692	1,016	1,272	1,506
AI servers - full racks	k racks	2	3	6	9	11	12	14	19	-	0	19	55	90	136
AI servers - inferencing	k units	132	89	107	142	127	129	147	158	192	464	469	560	663	791
HPC	k units	196	164	175	175	214	163	181	168	643	683	710	726	734	758
Shipments YoY		1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025	2026E	2027E	2028E
General servers	%	17%	17%	15%	8%	5%	5%	5%	0%	-14%	10%	14%	4%	2%	3%
AI servers - training	%	91%	31%	37%	81%	111%	75%	79%	54%	193%	137%	56%	75%	38%	31%
AI servers - high power	%	73%	13%	5%	35%	62%	42%	59%	32%	193%	135%	26%	47%	25%	18%
AI servers - full racks	%				2221%	582%	278%	145%	113%			4879%	187%	63%	51%
AI servers - inferencing	%	25%	-23%	-6%	10%	-4%	45%	37%	12%	1457%	141%	1%	19%	18%	19%
HPC	%	47%	-8%	-8%	-5%	9%	0%	3%	-4%	-55%	6%	4%	2%	1%	3%
Shipments QoQ		1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025	2026E	2027E	2028E
General servers	%	-1%	9%	-2%	2%	-4%	9%	-2%	-3%						
AI servers - training	%	-12%	34%	11%	38%	3%	12%	13%	19%						
AI servers - high power	%	-18%	28%	-1%	31%	-3%	12%	10%	9%						
AI servers - full racks	%	303%	98%	82%	59%	18%	10%	18%	39%						
AI servers - inferencing	%	2%	-33%	21%	32%	-11%	2%	14%	8%						
HPC	%	7%	-17%	7%	0%	23%	-24%	11%	-7%						
Shipments by vendor		1Q25	2Q25	3Q25	4Q25	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025	2026E	2027E	2028E
General server	**k units**	**3,371**	**3,674**	**3,609**	**3,695**	**3,530**	**3,865**	**3,782**	**3,678**	**11,409**	**12,544**	**14,350**	**14,855**	**15,199**	**15,644**
Dell	k units	334	307	299	355	317	286	269	319	1,399	1,363	1,295	1,191	1,181	1,193
HP	k units	165	161	161	182	168	159	137	186	764	770	669	650	663	676
Super Micro	k units	156	173	134	130	165	135	135	142	783	810	592	578	557	579
Lenovo	k units	166	168	193	246	164	175	185	239	591	736	773	763	816	846
Gigabyte	k units	24	31	23	21	28	26	25	23	45	84	99	101	107	112
Quanta - ODM direct	k units	576	650	483	541	639	702	521	584	1,274	1,533	2,249	2,447	2,519	2,569
Hon Hai- ODM direct	k units	207	256	221	211	218	255	229	242	236	412	895	944	971	971
Wiwynn- ODM direct	k units	455	527	596	428	492	569	644	462	964	1,278	2,006	2,166	2,318	2,480
Inventec- ODM direct	k units	207	168	169	161	174	192	171	181	365	347	705	719	728	728
Others	k units	1,080	1,234	1,332	1,421	1,165	1,366	1,466	1,299	4,987	5,212	5,067	5,298	5,341	5,491
AI server - high power	**k units**	**133**	**170**	**168**	**221**	**215**	**242**	**267**	**292**	**234**	**551**	**692**	**1,016**	**1,272**	**1,506**
Dell	k units	8	30	22	38	25	30	35	40	7	41	97	130	170	186
HP	k units	2	5	3	2	4	8	6	6	1	15	13	24	23	26
Super Micro	k units	9	12	12	29	29	30	31	33	22	45	62	123	146	168
Lenovo	k units	1	4	4	3	1	6	8	6	0	6	12	21	29	40
Gigabyte	k units	4	9	5	5	6	7	5	5	4	20	23	24	26	28
Quanta - ODM direct	k units	19	20	24	34	29	27	30	39	24	59	97	125	127	131
Hon Hai- ODM direct	k units	6	15	11	12	26	27	32	32	41	71	44	117	192	269
Wiwynn- ODM direct	k units	20	39	50	51	44	44	45	55	4	34	160	188	225	270
Inventec- ODM direct	k units	13	15	17	21	29	33	42	44	15	51	66	149	165	165
Others	k units	50	23	22	26	22	29	33	32	116	208	120	116	168	223
AI server - full racks	**k racks ****	**2**	**3**	**6**	**9**	**11**	**12**	**14**	**19**	**-**	**0**	**19**	**55**	**90**	**136**
Dell	k racks	0	1	1	0	1	1	1	1	-	0	2	5	6	8
HP	k racks	0	0	0	0	0	0	0	0	-	0	0	0	0	0
Super Micro	k racks	0	0	0	0	1	1	1	1	-	0	1	2	6	7
Gigabyte	k racks	-	0	0	0	0	0	0	0	-	-	0	1	2	2
Quanta - ODM direct	k racks	1	1	1	1	2	2	3	4	-	-	4	11	15	22
Hon Hai- ODM direct	k racks	0	1	4	6	6	7	8	11	-	-	11	31	54	86
Wiwynn- ODM direct	k racks	-	-	-	1	1	1	1	2	-	-	1	4	6	9
Inventec- ODM direct	k racks	-	-	-	-	-	0	0	0	-	-	-	1	1	1
Others	k racks	-	-	-	-	-	-	0	0	-	-	-	0	1	1

*8 GPU equi. **144 GPU equi. Full racks include Nvidia and AMD

Source: Company data, Goldman Sachs Global Investment Research, IDC

Disclosure Appendix

Reg AC

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