

# **IT Hardware**

## Al expanding from training to inference & edge

### Key message

- We believe a strong outlook for cloud and edge AI will drive earnings for IT hardware suppliers this year, based on: (1) robust 2025F earnings guidance from US CPU makers Intel and AMD, CSPs Meta, Microsoft, Google and Amazon, and smartphone AP supplier Qualcomm; and (2) our recent Taiwan supply chain checks.
- In 2024, global PC shipments grew by 1.3%, smartphone by 3.9% and server by low single digits. We forecast 2025F PC shipments to grow by 6%, smartphone by 5% and server by 10%.
- Gaming and Al PC will drive PC sales growth and Al will drive smartphone and server demand this year in training, inference and edge. Key beneficiaries are Asustek (2357 TT), MSI (2377 TT) and Dell (US). Our top smarpthone picks are Apple (US) and Largan (3008 TT) and our top server picks are Hon Hai (2317 TT), Quanta (2382 TT), Asia Vital Components (3017 TT), Delta (2308 TT) and King Slide (2059 TT)

#### **Event**

We believe a strong outlook for cloud and edge AI will drive earnings for IT hardware suppliers this year, based on: (1) a positive 2025F PC, smarpthone and server demand outlook from US CPU makers Intel and AMD, CSPs Meta, Microsoft, Google and Amazon, and smartphone AP supplier Qualcomm; and (2) our recent Taiwan supply chain checks.

#### **Impact**

**2024 PC shipments grew 1.3%; we forecast 6% growth in 2025F.** Commercial PC demand growth in the US and Japan, and early pull-in amid tariff uncertainty in 4Q24 caused 2024 shipments growth of 1.3% YoY to 245.4mn units, higher than our estimate. Lenovo (CN), Apple (US) and Acer (2353 TT) gained share last year on 4-6% shipments growth. With x86-based AI CPU (AMD Ryzen, Intel Lunar Lake) and Microsoft Copilot+ features, Windows AI PCs accounted for nearly 10% of 4Q24 PC demand, according to Gartner. The market expects AI PC penetration up to 30-40% in 2025F, boosting PC shipments growth of mid-single-digits, despite 1Q25F shipments fall of 5-10% QoQ. The termination of Windows 10 technical support will also spur PC replacement demand. 2025F gaming PC sales will grow on RTX-50 GPU debut in 1Q25F, boosting PC shipments and ASP and benefiting Asustek (2357 TT), MSI (2377 TT) and Dell (US).

2024 global smartphone shipments grew 3.9%; to grow 4.6% in 2025F. On higher Al smartphone demand and holiday season promotions in 4Q24, 2024 smartphone shipments grew 3.9% YoY to 1.23bn units, beating our forecast by 2.6%. Chinese brands Huawei (up 57% YoY), Xiaomi (up 16% YoY) and Vivo (up 12% YoY) outperformed peers in 2024, while Apple (US) saw shipments fall 2% but still ranked No.1 worldwide. We expect smartphone shipments to grow 4.6% in 2025F on more Gen Al-featured model launches. With subsidies in China and new model rollouts, Android smartphone demand in 1H25F looks solid, and Qualcomm (US) and Mediatek (2454 TT) guide for stable to moderate QoQ sales growth in 1Q25F. Both estimate global smartphone SoC shipments to grow around 4% this year, aligning with our forecast. Apple will launch Apple Intelligence-enabled SE4 in February, and Apple Intelligence will penetrate more non-English speaking regions in April, including China, Japan, Korea, France and Spain. Coupled with a newly designed slim form factor for iPhone 17 in 2H25F, we expect Apple's iPhone shipments to grow this year following three years of decline, and it will maintain the global No.1 smartphone brand in terms of shipments and revenue, benefiting lens maker Largan (3008 TT). We estimate foldable smarpthone shipments growth of 10% this year, vs. 23% in 2024, with Samsung (KR) and Huawei (CN) the major players, and Fositek (6805 TT) the key benefacary.

2024 server demand up by low single digits; we forecast 10% growth in 2025F. We estimate global server shipments rose around 4% last year. Shipments were stable in 4Q24 on growing general server demand, despite GB200 AI server shipments deferrals. Demand from US CSPs outgrew that of China CSPs (down QoQ) on earlier pull-in in 3Q24. With the ramp-up of GB200 Al server from February, we expect Al server shipments will grow QoQ in 1Q25F, though overall server shipments will decline QoQ. GB200 will see significant mass production after 2Q25F and GB300 after 3Q25F. The market expects ASIC Al server demand to grow this year, together supporting overall US CSPs' 2025F capex growth to stay high at around 35% vs. 60% in 2024. Based on shipments of 25-30k racks for GB200 NVL72 and moderate growth in general server demand, we forecast total server shipments growth of 10% in 2025F. We estimate AI server (including GPU and ASIC Al) will comprise around 12% of total server shipments this year and contribute over 70% of server revenue due to skyrocketing ASP. Taiwanese ODMs Hon Hai (2317 TT) and Quanta (2382 TT) are key GB200 Al server assemblers, while Wiwynn (6669 TT) is a major ASIC server assembler. We also expect thermal, power, switch and rail kit makers to benefit from the AI server demand surge in 2025F.

### **Stocks for Action**

Our top PC picks are Asustek, MSI and Dell. In smartphone, we like Apple and Largan, and in server, Hon Hai, Quanta, Asia Vital Components (3017 TT), Delta (2308 TT), and King Slide (2059 TT) are our picks.

#### Risks

Weak demand; further ASP and margin contraction.

11 February 2025



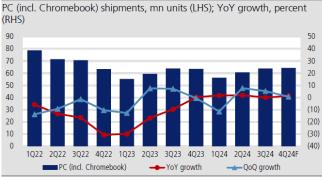
Figure 1: We expect shipments gro	/th for PC. si	martphone &	server in 2025F
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mn units	1023	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	4Q24F	1Q25F	2Q25F	3Q25F	4Q25F	2021	2022	2023	2024F	2025F
Total PC (incl. Chromebook)	55.3	59.6	63.8	63.5	56.3	60.7	64.0	64.4	58.9	64.5	69.8	66.4	341.7	284.2	242.3	245.4	259.6
NB (incl. Chromebook)	40.5	44.4	47.4	47.4	41.8	45.9	48.8	48.4	44.2	48.9	53.0	49.9	256.4	208.1	179.9	184.8	196.0
DT	14.8	15.1	16.4	16.1	14.5	14.8	15.2	16.0	14.7	15.6	16.9	16.5	85.3	76.1	62.4	60.6	63.6
Smartphone	293.8	272.0	292.1	326.6	304.3	288.0	302.8	335.3	334.7	311.1	305.9	335.3	1,432.7	1,274.0	1,184.5	1,230.4	1,286.9
iPhone	58.7	45.6	49.9	76.3	52.2	45.7	51.3	77.0	50.0	53.0	55.0	82.0	239.2	233.9	230.6	226.1	240.0
Android SP	235.0	226.4	242.1	250.3	252.1	242.4	251.6	258.3	284.7	258.1	250.9	253.3	1,193.5	1,040.2	953.9	1,004.3	1,046.9
Server	2.7	2.8	2.8	3.0	2.8	2.9	2.9	3.1	3.0	3.2	3.4	3.4	12.9	13.8	11.4	11.8	13.0
White-box	0.7	0.7	8.0	0.8	0.8	0.8	8.0	0.9	0.9	0.9	1.0	1.2	3.1	3.6	3.0	3.3	3.9
Enterprise	2.0	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.3	2.4	2.2	9.8	10.3	8.3	8.5	9.1
YoY (%)	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	4Q24F	1Q25F	2Q25F	3Q25F	4Q25F	2021	2022	2023	2024F	2025F
Total PC (incl. Chromebook)	(29.7)	(16.7)	(9.6)	0.3	1.7	1.9	0.2	1.4	4.6	6.2	9.2	3.1	10.9	(16.8)	(14.7)	1.3	5.8
NB (incl. Chromebook)	(30.7)	(14.1)	(7.9)	2.4	3.0	3.2	2.8	2.0	5.8	6.6	8.7	3.1	12.3	(18.8)	(13.6)	2.7	6.0
DT	(26.9)	(23.5)	(14.0)	(5.2)	(1.8)	(1.8)	(7.4)	(0.5)	1.0	5.0	11.0	2.9	6.9	(10.9)	(17.9)	(3.0)	5.0
Smartphone	(14.3)	(10.6)	(4.7)	1.9	3.6	5.9	3.7	2.7	10.0	8.0	1.0	0.0	6.0	(11.1)	(7.0)	3.9	4.6
iPhone	(3.8)	(6.7)	(1.9)	4.6	(11.2)	0.1	2.7	0.9	(4.2)	16.1	7.2	6.5	19.7	(2.2)	(1.4)	(2.0)	6.1
Android SP	(16.6)	(11.4)	(5.2)	1.2	7.3	7.1	3.9	3.2	12.9	6.5	(0.3)	(1.9)	3.7	(12.8)	(8.3)	5.3	4.2
Server	(19.0)	(16.5)	(16.3)	(19.6)	5.3	4.2	4.2	2.5	7.0	7.0	15.8	10.1	1.9	7.0	(17.9)	4.0	10.0
White-box	(20.9)	(14.6)	(8.9)	(17.2)	5.0	3.9	11.4	14.9	15.0	15.0	20.0	28.2	3.4	14.3	(15.6)	9.0	20.0
Enterprise	(18.3)	(17.2)	(18.7)	(20.5)	5.4	4.3	1.6	(2.0)	4.1	4.2	14.1	2.3	1.5	4.7	(18.7)	2.2	6.2
QoQ (%)	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	4Q24F	1Q25F	2Q25F	3Q25F	4Q25F	2021	2022	2023	2024F	2025F
Total PC (incl. Chromebook)	(12.6)	7.6	7.2	(0.5)	(11.4)	7.8	5.4	0.7	(8.6)	9.5	8.4	(5.0)					
NB (incl. Chromebook)	(12.5)	9.6	6.7	(0.0)	(11.9)	9.8	6.3	(0.8)	(8.6)	10.6	8.4	(5.8)					
DT	(12.8)	2.1	8.6	(1.9)	(9.7)	2.1	2.4	5.4	(8.3)	6.1	8.2	(2.2)					
Smartphone	(8.3)	(7.4)	7.4	11.8	(6.8)	(5.3)	5.1	10.7	(0.2)	(7.1)	(1.7)	9.6					
iPhone	(19.5)	(22.3)	9.5	52.8	(31.6)	(12.5)	12.3	50.1	(35.1)	6.0	3.8	49.1					
Android SP	(5.0)	(3.7)	7.0	3.4	0.7	(3.9)	3.8	2.7	10.2	(9.3)	(2.8)	1.0					
Server	(28.6)	5.6	0.1	6.6	(6.5)	4.5	0.0	4.9	(2.4)	4.5	8.3	(0.3)					
White-box	(26.4)	2.1	3.7	6.2	(6.6)	1.0	11.1	9.6	(6.6)	1.0	16.0	17.1					
Enterprise	(29.4)	6.8	(1.2)	6.8	(6.5)	5.7	(3.8)	3.0	(0.6)	5.9	5.3	(7.6)					

Source: Gartner, KGI Research estimates

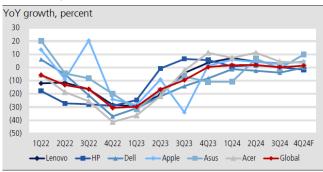
#### PC

Figure 2: PC (incl. Chromebook) shipments grew 1% QoQ and YoY in 4Q24



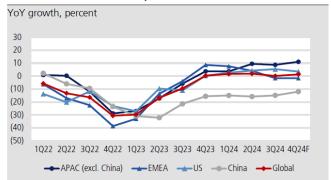
Source: Gartner; KGI Research

Figure 4: Lenovo, Apple, Asustek & Acer gained PC market share in 4Q24



Source: Gartner; KGI Research

Figure 3: PC shipments in US & Japan outgrew the global market in 4Q24; China shipments fell the most at 12% YoY



Source: Gartner; KGI Research

Figure 5: Taiwan top-five NB ODM shipments to fall 7% QoQ in 4Q24, beating our forecast



Source: Company data; KGI Research

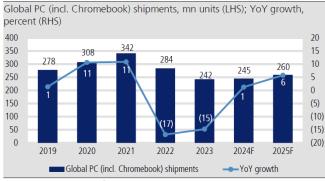


Figure 6: Top-five NB ODMs' shipments were flat YoY in 2024 and will resume YoY growth in 2025F

NB shipme	ent (mn unit	s)																		
Ticker	Company	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	4Q24	1Q25F	2020	2021	2022	2023	2024	2025F
2382 TT	Quanta	16.9	12.4	15.6	12.8	10.8	12.6	13.1	10.4	10.5	11.7	12.6	11.1	10.0	59.8	75.3	57.7	46.9	45.9	47.3
2324 TT	Compal	11.8	10.4	9.3	7.8	7.6	8.7	9.3	8.3	7.5	8.7	8.3	7.8	7.3	47.8	57.5	39.3	33.9	32.3	33.9
3231 TT	Wistron	5.6	5.8	5.2	4.6	3.9	4.6	5.2	5.3	4.6	5.1	5.2	5.3	4.9	20.4	25.6	21.2	19.1	20.2	20.6
2356 TT	Inventec	5.0	5.4	5.0	4.4	4.4	4.9	4.9	4.5	4.5	4.9	5.2	5.4	4.6	20.0	21.3	19.8	18.7	20.0	21.4
4938 TT	Pegatron	2.4	2.0	2.1	1.6	1.7	2.1	2.5	1.7	1.6	2.0	2.5	2.0	1.8	10.2	10.4	8.0	8.0	8.0	8.2
Top-5 NB	ODM	41.7	36.0	37.2	31.2	28.4	32.9	35.0	30.2	28.7	32.4	33.8	31.6	28.5	158.1	190.1	146.0	126.6	126.4	131.4
YoY (%)																				
2382 TT	Quanta	(11.1)	(34.7)	(10.3)	(35.7)	(36.1)	1.6	(16.0)	(18.8)	(2.8)	(7.1)	(3.8)	6.7	(4.9)	70.4	25.9	(23.4)	(18.7)	(2.1)	3.0
2324 TT	Compal	(9.9)	(20.0)	(39.2)	(51.6)	(35.6)	(16.3)	0.0	6.4	(1.3)	0.0	(10.8)	(6.0)	(2.2)	8.8	20.4	(31.7)	(13.7)	(4.7)	5.0
3231 TT	Wistron	3.7	(4.9)	(21.2)	(38.7)	(30.4)	(20.7)	0.0	15.2	17.9	10.9	0.0	0.0	6.0	16.3	25.8	(17.2)	(9.9)	5.8	2.0
2356 TT	Inventec	4.2	8.0	(15.3)	(21.4)	(12.0)	(9.3)	(2.0)	2.3	2.3	0.0	6.1	20.0	2.0	6.1	6.5	(7.0)	(5.6)	7.0	7.0
4938 TT	Pegatron	4.2	(17.3)	(21.3)	(48.4)	(28.7)	4.5	19.9	3.1	(7.5)	(3.4)	(1.0)	18.2	13.2	1.3	2.1	(22.9)	(0.2)	(0.3)	3.0
Top-5 NB	ODM	(6.5)	(20.9)	(22.3)	(40.2)	(31.9)	(8.6)	(5.9)	(3.4)	1.0	(1.4)	(3.5)	4.6	(0.4)	26.1	20.2	(23.2)	(13.3)	(0.2)	4.0
QoQ(%)																				
2382 TT	Quanta	(15.1)	(26.6)	25.8	(17.9)	(15.6)	16.7	4.0	(20.6)	1.0	11.4	7.7	(11.9)	(10.0)						
2324 TT	Compal	(26.7)	(11.9)	(10.6)	(16.1)	(2.6)	14.5	6.9	(10.8)	(9.6)	16.0	(4.6)	(6.0)	(6.0)						
3231 TT	Wistron	(25.3)	3.6	(10.3)	(11.5)	(15.2)	17.9	13.0	1.9	(13.2)	10.9	2.0	1.9	(8.0)						
2356 TT	Inventec	(10.7)	8.0	(7.4)	(12.0)	0.0	11.4	0.0	(8.2)	0.0	8.9	6.1	3.8	(15.0)						
4938 TT	Pegatron	(24.2)	(15.5)	5.0	(23.3)	4.7	23.9	20.5	(34.0)	(6.1)	29.4	23.4	(21.2)	(10.0)						
Top-5 NB	ODM	(20.2)	(13.6)	3.3	(16.1)	(9.1)	15.9	6.5	(13.9)	(5.0)	13.1	4.2	(6.6)	(9.5)						

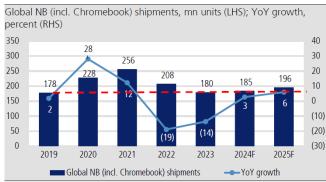
Source: Company data; KGI Research estimates

Figure 7: Global PC shipments grew 1% in 2024F, and will grow 6% YoY in 2025F



Source: Gartner; KGI Research estimates

Figure 8: After a 3% grwoth in 2024F, global NB shipments to grow 6% next year, exceeding pre-COVID-19 level



Source: Gartner; KGI Research estimates

Figure 9: AI PC to be aggressively marketed by CPU & NPU giants

	Intel	Intel	Intel	Intel	AMD 7040	AMD 8040	AMD AI300	AMD AI MAX 300	Qualcomm	Qualcomm	Qualcomm
Platform	Meteor Lake	Lunar Lake	Arrow Lake	Panther Lake	Phoenix	Hawk Point	Strix Point	Strix Halo	Snapdragon X Elite	Snapdragon X Plus	Canim
Microarchitecture	Redwood cove	Lion cove	Lion cove	Cougar cove	Zen 4	Zen 4	Zen 5	Zen 5	Oryon	Oryon	TBC
Launch Date	4Q23	3Q24	4Q24	2025F	2Q23	1Q24	3Q24	2025F	2Q24	3Q24	4Q25F
Process	Intel 4	Intel 18A	Intel 20A	Intel 18A	TSMC N4	TSMC N4	TSMC N4	TSMC N4	TSMC N4	TSMC N4	TSMC N4
Al architecture	Movidius VPU	Movidius VPU	TBD	TBD	Ryzen Al	Ryzen Al	Ryzen Al	Ryzen Al	Hexagon	Hexagon	Hexagon
TOPS	34 TOPS	120 TOPS	TBD	TBD	33 TOPS	39 TOPS	TBD	>70 TOPS	45 TOPS	45 TOPS	45 TOPS
NPU	11 TOPS	48 TOPS	50 TOPS	120 TOPS	10 TOPS	16 TOPS	50 TOPS	50-60 TOPS	45 TOPS	45 TOPS	45 TOPS
CPU	5 TOPS	5 TOPS									
GPU	18 TOPS	67 TOPS									

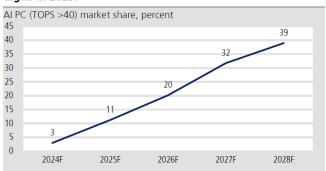
Source: Company data; KGI Research

Figure 10: Canalys & IDC forecast AI PC (equipped with NPU) market share of over 50% by 2027F



Source: Canalys; IDC; KGI Research

Figure 11: AI PC (TOPS >40) market share to reach double digits in 2025F



Source: IDC; Bloomberg; KGI Research



#### **Smartphone**

Figure 12: 4Q24 global smartphone shipments grew 3% YoY and 1% QoQ, beating expectation



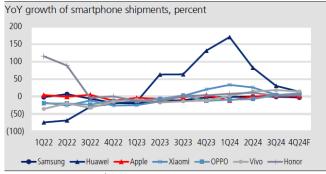
Source: Gartner, KGI Research estimates

Figure 14: Global smarpthone shipments returned to YoY growth of 4% in 2024



Source: Gartner, KGI Research estimates

Figure 13: Oppo, Vivo & Huawei outperformed in 4Q24 smartphone shipments YoY growth



Source: Gartner, KGI Research

Figure 15: China smartphone demand grew 4% in 2024, in line with the industry



Source: Gartner, KGI Research estimates

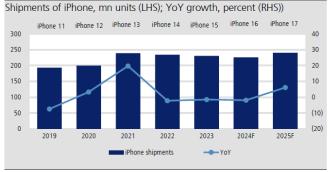
Figure 16: iPhone SE4 will be introduced in February, boosting 1H25F demand; bigger display size, AP upgrade to A18, RAM upgrade to 8GB, with Apple Intelligence capability the key highlights

	iPhone SE 4	iPhone SE3	iPhone 16	iPhone 16 Plus	iPhone 16 Pro	iPhone 16 Pro Max
Processor	A18 Bionic (3nm)	A15 Bionic (5nm)	A18 Bionic (3nm)	A18 Bionic (3nm)	A18 Pro Bionic (3nm)	A18 Pro Bionic (3nm)
Display	6.1" OLED 60Hz refresh rate	4.7" LCD (Retina HD)	6.1" OLED (Super Retina XDR) narrow borders Dynamic island 60Hz refresh rate	6.7 "OLED (Super Retina XDR) narrow borders Dynamic island 60Hz refresh rate	6.3" OLED (Super Retina XDR) narrow borders Always-On display Dynamic island 120Hz refresh rate	6.9" OLED (Super Retina XDR) narrow borders Always-On display Dynamic Island 120Hz refresh rate
Display pixels	2532 x 1170 pixels	1334 x 750 pixels	2556 x 1179 pixels	2796 x 1290 pixels	2622 x 1206 pixels	2868 x 1320 pixels
ppi	460ppi	326ppi	460ppi	460ppi	460ppi	460ppi
Camera	48MP Wide (7P) 12MP Ultra Wide (5P) (same as iPhone 15)	12MP Wide	48MP Wide (7P) 12MP Ultra Wide (5P)	48MP Wide (7P) 12MP Ultra Wide (5P)	48MP Wide (7P) 48MP Ultra Wide (6P) 12MP Telephoto (6P) upgrades to periscope lens ToF	48MP Wide (7P) 48MP Ultra Wide (6P) 12MP Telephoto (1G3P) ToF
Front camera	12MP (6P) (auto focus) (same as iPhone 15)	7MP	12MP (6P) (auto focus)	12MP (6P) (auto focus)	12MP (6P) (auto focus)	12MP (6P) (auto focus)
LiDAR		X	V	V	V	V
Emergency SOS via satellite			V	V	V	V
Connectivity	5G (Apple's own modemn)	5G	5G Wi-Fi 7	5G Wi-Fi 7	5G Wi-Fi 7	5G Wi-Fi 7
Storage	from 128GB	64/128/256GB	128/256/512GB	128/256/512GB	128/256/512GB/1TB	256/512GB/1TB
Memory (RAM)	8GB	4GB LPDDR4X	8GB LPDDR5	8GB LPDDR5	8GB LPDDR5X	8GB LPDDR5X
Color		Midnight (black), Startlight (white), Product Red	Black, White, Green, Pink, Blue	Black, White, Green, Pink, Blue	Black, White, Natural, Desert	Black, White, Natural, Desert
Connector	USB-C	Lightning	USB-C	USB-C	USB-C	USB-C
Wireless charging		X	V	V	V	V
Mechanical parts		Aluminum Frame	Aluminum Frame Ceramic shield	Aluminum Frame Ceramic shield	Titanium alloy frame Ceramic shield	Titanium alloy frame Ceramic shield
Starting price	from US\$499	\$429/\$479/\$579 (64/128/256 GB)	US\$799/\$899/\$1,099 (128/256/512 GB)	US\$899/\$999/\$1,199 (128/256/512 GB)	US\$999/\$1,099/\$1,299/\$1,499 (128/256/512 GB /1TB)	US\$1,199/\$1,399/\$1,599 (256/512 GB/1TB)
Available date	1Q25F	1Q22	3Q24	3Q24	3Q24	3Q24
Dimension		138.4x67.3x7.3mm	147.6x71.6x7.8mm	160.9x77.8x7.8mm	149.6x71.5x8.25mm	163x77.6x8.25
Weight		144g	170g	199g	199g	227g

Source: Apple; KGI Research estimates

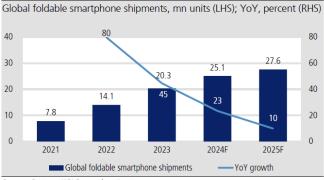


Figure 17: Shipments of iPhones declined in 2023-24F, but will recover in 2025-26F on quickened replacement cycle



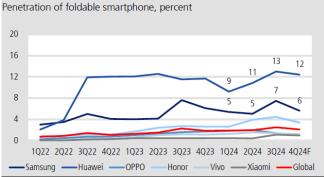
Source: Gartner, KGI Research estimates

Figure 19: Global foldable smartphone shipments to grow rapidly in 2024F, outperforming the overall industry



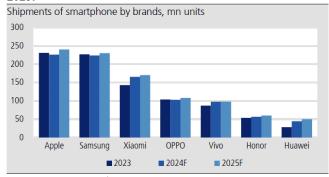
Source: Gartner, KGI Research estimates

Figure 21: Huawei & Samsung have higher foldable smartphone penetration rate among peers



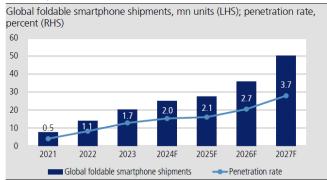
Source: Gartner, KGI Research

Figure 18: Apple to remain No. 1 smartphone vendor in 2025F



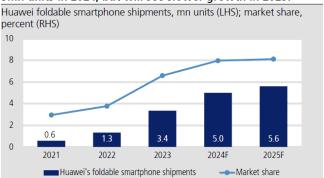
Source: Gartner, KGI Research estimates

Figure 20: Foldable smartphone penetration is rising, to reach 4% in 2027F



Source: Gartner, KGI Research estimates

Figure 22: Huawei's foldable smartphone shipments up to 5mn units in 2024, but will see slower growth in 2025F

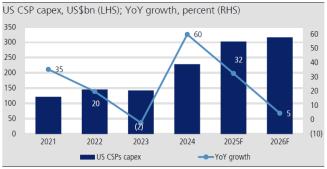


Source: Gartner, KGI Research estimates



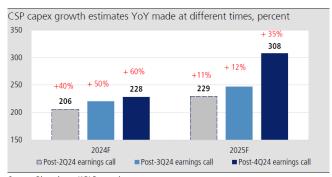
#### Server

Figure 23: Capex of US CSPs skyrocketed in 2024 with 60% YoY growth boosted by AI data center infrastructure expansion



Source: Bloomberg; KGI Research

Figure 24: 2025F top-four US CSPs' capex revised up in recent quarters, to 35% YoY (based on guidance)



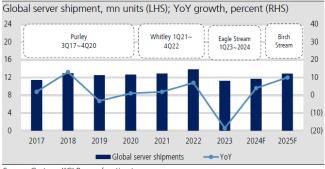
Source: Bloomberg; KGI Research

Capex, US\$mn	2019	h in 2025F stil 2020	2021	2022	2023	2024	2025F	2026F
Meta	15,102	15,115	18,567	31,431	27,266	37,256	60,044	63,953
Amazon	16,861	35,044	55,396	58,321		82,999	99,842	104,390
Microsoft	13,546	17.592	23,216	24.768	48,133 35,202	55,552	67,711	74,478
		,					,	
Google Baidu	23,548 931	22,281 738	24,640 1,689	31,485 1,586	32,251	52,535 1,779	74,886 1,826	73,510
Alibaba	6,517	6,379		5,014	1,580 4,477			1,870
	,	,	8,311	,	,	8,256	7,674	7,577
Tencent	3,927	5,719	4,808	4,611	3,017	6,254	7,011	7,516
Hyperscale subtotal	80,432	102,867	136,627	157,216	151,926	244,632	318,995	333,294
Apple	9,247	8,702	10,388	11,692	9,564	9,995	12,112	13,410
IBM	2,286	2,618	2,062	1,346	1,245	1,127	1,589	1,672
Oracle	1,591	1,833	3,118	6,678	6,935	10,745	15,751	15,850
Paypal	704	866	908	706	623	683	915	980
eBay	508	463	444	420	456	464	491	497
Salesforce	643	710	717	798	736	707	811	890
Netflix	253	498	525	408	349	440	505	561
Uber	588	616	298	252	223	242	330	368
Enterprise subtotal	15,820	16,306	18,460	22,300	20,131	24,402	32,503	34,228
Total	96,793	119,173	155,086	179,516	172,057	269,034	351,497	367,521
YoY growth, percent	2019	2020	2021	2022	2023	2024	2025F	2026F
Meta	8.5	0.1	22.8	69.3	(13.3)	36.6	61.2	6.5
Amazon	25.6	107.8	58.1	5.3	(17.5)	72.4	20.3	4.6
Microsoft	6.0	29.9	32.0	6.7	42.1	57.8	21.9	10.0
Google	(6.3)	(5.4)	10.6	27.8	2.4	62.9	42.5	(1.8)
Baidu	(29.9)	(20.7)	129.1	(6.1)	(0.4)	12.6	2.6	2.4
Alibaba	(11.9)	(2.1)	30.3	(39.7)	(10.7)	84.4	(7.0)	(1.3)
Tencent	17.0	45.6	(15.9)	(4.1)	(34.6)	107.3	12.1	7.2
Hyperscale subtotal	4.0	27.9	32.8	15.1	(3.4)	61.0	30.4	4.5
Apple	(26.7)	(5.9)	19.4	12.6	(18.2)	4.5	21.2	10.7
IBM	(32.7)	14.5	(21.2)	(34.7)	(7.5)	(9.5)	41.0	5.3
Oracle	8.4	15.2	70.1	114.2		54.9	46.6	0.6
Paypal	(14.5)	23.0	4.8	(22.2)	(11.8)	9.6	33.9	7.1
eBay	(22.0)	(8.9)	(4.1)	(5.3)	8.5	1.7	6.0	1.1
Salesforce	8.1	10.4	1.0	11.3	(7.8)	(4.0)	14.7	9.7
Netflix	45.5	96.8	5.4	(22.3)	(14.5)	26.1	14.9	11.0
Uber	5.4	4.8	(51.6)	(15.4)	(11.5)	8.5	36.2	11.8
Enterprise subtotal	(22.0)	3.1	13.2	20.8	(9.7)	21.2	33.2	5.3
Enterprise subtotal	(22.0)	3.1	13.2	20.0	(3.1)			

Source: Company data, Bloomberg, KGI Research

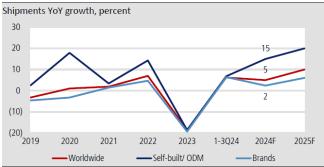


Figure 26: Server demand to grow in 2025-26F



Source: Gartner, KGI Research estimates

Figure 28: Self-build/ ODM server demand outgrew brands in 1Q-3Q24



Source: Gartner, KGI Research estimates

Figure 30: Intel to see Eagle Stream penetration rise in 1H24; Birch Stream to launch in 3Q24

Platform	Intel Whitley	Intel Eagle Stream	Intel Eagle Stream	Intel Birch Stream	Intel Birch Stream	Intel Birch Stream	Intel Oak Stream
Time of launch	2Q21	1Q23	4Q23	2Q24	3Q24	1H26F	2026F
CPU	Ice Lake	Sapphire Rapids (Intel 7)	Emerald Rapids (Intel 7)	Sierra Forest (Intel 3, E-core)	Granite Rapids (Intel 3, P-core)	Clearwater Forest (Intel 18A, E-core)	Diamond Rapids (Intel 20A, P-core)
Process	10nm	10nm	10nm++	3nm ( equivalent to TSMC's 5nm node)	3nm ( equivalent to TSMC's 5nm node)	1.8nm ( equivalent to TSMC's 2nm node)	2nm ( equivalent to TSMC's 3nm node)
CPU sockets	LGA 4189	LGA 4677	LGA 4677	LGA 7529	LGA 7529	LGA 7529	LGA 9324
CPU cores	26	60	64	288	128	288	TBA
DRAM	8-channel DDR4	8-channel DDR5	DDR5	DDR5	DDR5	DDR5	TBA
PCle	PCIe 4.0	PCIe 5.0	PCIe 5.0	PCIe 5.0	PCIe 5.0	TBA	TBA
CPU TDP	up to 270W	up to 350W	350-400W	up to 500W	up to 500W	TBA	TBA

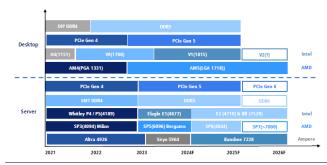
Source: Company data; KGI Research

Figure 32: CoWoS capacity expansion to support rising Al server demand



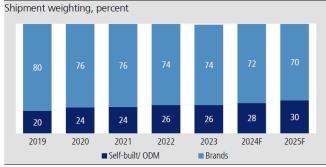
Source: KGI Research estimates

Figure 27: Eagle Stream and Birch Stream server platform will see socket, memory & PCIe upgrades



Source: Company data; KGI Research

Figure 29: Self-build/ ODM shipment weighting growing in recent years, to reach over 30% in 2025F



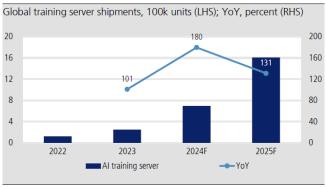
Source: Gartner, KGI Research estimates

Figure 31: AMD to see Genoa & Bergamo CPU penetration rise in 1H24; Turin CPU to launch in 3Q24

Platform	AMD Zen 3	AMD Zen 4	AMD Zen 4c	AMD Zen 4	AMD Zen 5	AMD Zen 6
Time of launch	1Q21	4Q22	1H23	3Q23	3Q24	2H25F
CPU	Milan	Genoa	Bergamo	Siena	Turin	Venice
Process	7nm+	5nm	5nm	5nm	3nm	3nm
CPU sockets	FC LGA 4094	FC LGA 6096	FC LGA 6096	FC LGA 4844	FC LGA 6096	TBA
CPU cores	64	96	128	64	256	TBA
DRAM	8-channel DDR4	12-channel DDR5	DDR5	DDR5	DDR5	TBA
PCle	PCIe 4.0	PCIe 5.0	PCIe 5.0	PCIe 5.0	PCIe 5.0	TBA
CPU TDP	225-280W	320-400W	320-400W	70-225W	155-500W	TBA

Source: Company data; KGI Research

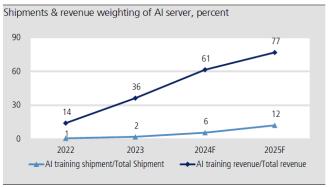
Figure 33: Training server shipments to grow at a 154% CAGR in 2023-25F  $\,$ 



Source: Gartner; KGI Research estimates

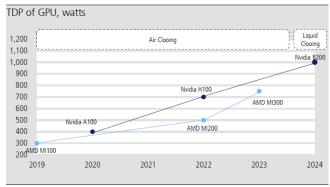


Figure 34: Al training server to account for over 70% of total server market value & 12% of total shipments in 2025F



Source: Gartner; KGI Research estimates

Figure 35: Higher TDP of GPUs to boost liquid cooling demand



Source: Company data; KGI Research



Figure 36: NB &	smartphone	& server supp	oly c	:hain – Va	luations

rigure	30. ND & SI	martpno	ne & server	supply	Chain -	– vaiuat	ions												
Sector	Company	Ticker	Related business	Market cap.	Share price	Rating	Target Price	EPS (	LCY)	EPS Yo	oY (%)	PE	(x)	PB	(x)	ROE	(%)	Cash yie	eld (%)
	**************************************			(US\$mn)	(LCY)		(LCY)	2024F	2025F	2024F	2025F	2024F	2025F	2024F	2025F	2024F	2025F	2023	2024F
	Inventec	2356 TT	ODM	4,904	44.9	Neutral	56.0	2.10	2.82	23.0	34.1	21.4	15.9	2.6	2.5	12.2	15.8	3.3	3.7
	Quanta Wistron Corp	2382 ∏ 3231 ∏	ODM ODM	29,634 9,172	252.0 104.0	Outperform Outperform	400.0 158.0	14.58 5.80	19.03 8.80	41.7 42.1	30.5 51.9	17.3 17.9	13.2 11.8	4.9 2.6	4.6 2.3	29.3 14.9	35.8 20.0	3.6 2.5	4.6 3.6
	Wiwynn Corp	6669 TT	ODM	12,306	2,175.0	Outperform	3,000.0	124.76	154.17	81.1	23.6	17.9	14.1	5.1	4.4	36.9	33.3	1.9	3.1
	Supermicro*	SMCLUS	Brand	21,244	36.3	Not rated	N.A.	2.37	2.96	96.4	24.5	15.3	12.3	3.9	3.0	38.3	32.3	0.0	0.0
	HPE*	HPE US	Brand	27,977	21.3	Not rated	N.A.	1.96	2.12	(8.7)	8.1	10.8	10.0	1.2	1.0	11.9	11.4	2.3	2.4
	Lotes	3533 TT	Connector/ socket	6,193	1,825.0	Outperform	2,150.0	78.36	103.00	54.7	31.4	23.3	17.7	6.3	5.4	29.2	32.9	1.4	2.2
	Alltop Tech	3526 TT	Connector	536	280.0	Outperform	350.0	16.44	20.35	40.7	23.8	17.0	13.8	6.4	6.4	37.7	47.1	4.1	5.8
	Argosy*	3217 TT	Connector	417	152.0	Not rated	N.A.	11.26	11.76	38.8	4.4	13.5	12.9	N.A.	N.A.	24.0	24.3	3.5	5.8
	Parade Tech	4966 TT	PCle	1,781	721.0	Neutral	810.0	32.55	N.A.	26.5	N.A.	22.1	17.8	2.7	2.5	12.6	N.A.	4.5	2.2
	Simplo Tech AES-KY	6121 ∏ 6781 ∏	Battery Battery	2,036 2,757	361.5 1,060.0	Outperform Outperform	460.0 925.0	28.38 24.20	30.70 31.70	(7.5) 5.0	8.2 31.0	12.7 43.8	11.8 33.4	1.9 6.5	1.8 5.9	15.0 15.4	15.6 18.5	6.0 1.1	5.6 1.1
Cloud	Accton Tech	2345 TT	Switch	12,897	755.0	Outperform	760.0	19.61	N.A.	22.7	N.A.	38.5	29.9	14.6	12.2	40.5	N.A.	1.3	1.7
	King Slide	2059 TT	Rail kit	4,555	1,570.0	Outperform	1,800.0	57.95	69.25	104.2	19.5	27.1	22.7	7.6	6.4	30.7	30.8	0.9	1.9
	Allied Circuit*	8155 TT	PCB	189	122.0	Not rated	N.A.	N.M.	N.M.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.M.	N.M.	3.0	N.A.
	Gold Circuit	2368 TT	PCB	3,324	222.0	Outperform	265.0	12.03	16.58	66.0	37.7	18.4	13.4	6.3	5.2	34.7	42.7	1.6	2.7
	Chenbro Micom	8210 TT	Casing	956	259.5	Outperform	345.0	16.33	19.18	80.8	17.5	15.9	13.5	4.8	4.1	32.8	32.9	1.9	3.3
	Delta Elec	2308 TT	Power	31,988	404.5	Outperform	512.0	15.56	18.97	21.0	22.0	26.0	21.3	4.5	4.0	18.8	20.1	1.6	1.9
	Lite-On Tech	2301 TT	Power	7,753	108.5	Outperform	120.0	5.53	6.64	(13.1)	20.1	19.6	16.3	2.8	2.6	14.6	16.4	4.1	3.7
	Sunonwealth	2421 TT	Thermal	779	93.6 587.0	Outperform	130.0 800.0	5.83	7.23	12.9	24.1	16.1	12.9	3.3	3.1	21.4	24.8	3.7	4.4
	Auras AVC	3324 TT 3017 TT	Thermal Thermal	1,636 6,348	538.0	Outperform Outperform	730.0	20.17	38.25 33.17	41.2 50.5	89.6 56.3	29.1 25.3	15.3 16.2	6.8 7.9	5.5 6.3	25.1 33.9	40.2 43.7	1.1 1.3	1.6 2.0
	Jentech*	3653 TT	Thermal	5,287	1,215.0	Not rated	7.50.0 N.A.	24.72	32.80	49.0	32.7	49.2	37.0	7.9 N.A.	N.A.	N.M.	43.7 N.M.	0.8	N.A.
	Nidec CCI*	6230 TT	Thermal	440	167.5	Not rated	N.A.	N.M.	N.M.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.M.	N.M.	0.6	N.A.
	Asustek	2357 TT	Brand	15,128	669.0	Outperform	810.0	47.81	45.02	122.9	(5.8)	14.0	14.9	2.0	1.9	14.5	13.1	2.5	5.4
	Acer*	2353 TT	Brand	3,540	38.2	Not rated	N.A.	1.81	2.28	10.1	26.3	21.1	16.7	1.6	1.6	7.7	9.3	4.2	4.1
	MSI	2377 ∏	Brand	4,913	191.0	Outperform	210.0	10.02	14.03	12.4	40.0	19.1	13.6	3.0	2.8	16.4	21.2	2.8	3.2
	Gigabyte	2376 TT	Brand	5,190	254.5		320.0	14.85	17.78	99.0	19.7	17.1	14.3	3.5	3.4	22.5	24.3	2.6	5.1
	Asrock	3515 TT	Brand	860	228.5		300.0	11.38	15.00	51.0	31.7	20.1	15.2	3.4	3.3	16.9	21.9	3.0	4.5
	Dell* HP*	Dell US	Brand	74,508	106.4	1	N.A.	7.83	9.33	9.8	19.1	13.6	11.4	(57.2)	72.2	13.5	347.1	1.4 3.3	1.6
	Lenovo*	HPQ US 992 HK	Brand Brand	30,263 19,399	32.3 12.2	Not rated Not rated	N.A. N.A.	3.39 0.10	3.58 0.13	2.9 18.9	5.8 29.0	9.5 121.8	9.0 94.4	(19.7) 23.3	(17.9) 20.0	(242.5) 20.5	(256.2) 22.6	0.4	3.4 0.4
	Inventec	2356 TT	ODM	4,904	44.9	1	56.0	2.10	2.82	23.0	34.1	21.4	15.9	2.6	2.5	12.2	15.8	3.3	3.7
	Quanta	2382 TT	ODM	29,634	252.0	Outperform	400.0	14.58	19.03	41.7	30.5	17.3	13.2	4.9	4.6	29.3	35.8	3.6	4.6
	Wistron Corp	3231 TT	ODM	9,172	104.0		158.0	5.80	8.80	42.1	51.9	17.9	11.8	2.6	2.3	14.9	20.0	2.5	3.6
	Hon Hai	2317 TT	ODM	73,583	174.0	Restricted	N.A.	11.50	14.48	12.2	25.9	15.1	12.0	1.5	1.4	10.4	12.4	3.1	3.5
	Pegatron	4938 TT	ODM	7,832	96.6	Neutral	105.0	7.00	7.05	18.7	0.7	13.8	13.7	1.3	1.3	9.7	9.5	4.1	4.7
	Compal*	2324 TT	ODM	5,092	38.0	Not rated	N.A.	2.52	2.84	43.1	12.8	15.1	13.4	1.3	1.2	8.7	9.3	3.2	4.1
	Chicony Elec	2385 TT	Keyboard	3,610	156.0	Outperform	198.0	12.03	13.22	16.3	9.8	13.0	11.8	2.7	2.6	21.5	22.0	5.0	5.5
NB	Primax Simplo Tech	4915 ∏ 6121 ∏	Keyboard Battery	1,202 2,036	84.8 361.5	1	89.0 460.0	5.81 28.38	6.33 30.70	5.7 (7.5)	8.9 8.2	14.6 12.7	13.4 11.8	2.2 1.9	2.1 1.8	15.2 15.0	15.9 15.6	4.7 6.0	5.0 5.6
ND	SZS	3376 TT	Hinge	1,442	242.0	Neutral	190.0	7.23	8.25	68.1	14.1	33.5	29.3	2.9	2.8	8.7	9.7	1.7	2.2
	Sunonwealth	2421 TT	Thermal	779	93.6	Outperform	130.0	5.83	7.23	12.9	24.1	16.1	12.9	3.3	3.1	21.4	24.8	3.7	4.4
	Auras	3324 TT	Thermal	1,636	587.0	Outperform	800.0	20.17	38.25	41.2	89.6	29.1	15.3	6.8	5.5	25.1	40.2	1.1	1.6
	Lotes	3533 TT	Connector/ socket	6,193	1,825.0	Outperform	2,150.0	78.36	103.00	54.7	31.4	23.3	17.7	6.3	5.4	29.2	32.9	1.4	2.2
	Alltop Tech	3526 TT	Connector	536	280.0	Outperform	350.0	16.44	20.35	40.7	23.8	17.0	13.8	6.4	6.4	37.7	47.1	4.1	5.8
	Argosy *	3217 TT	Connector	417	152.0	1	N.A.	11.26	11.76	38.8	4.4	13.5	12.9	N.A.	N.A.	24.0	24.3	3.5	5.8
	Allied Circuit*	8155 TT	PCB	189	122.0	Not rated	N.A.	N.M.	N.M.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.M.	N.M.	3.0	N.A.
	Gold Circuit	2368 ∏ 2313 ∏	PCB PCB	3,324 2,485	222.0 68.5		265.0 86.0	12.03 4.92	16.58 6.13	66.0 40.7	37.7 24.6	18.4 13.9	13.4 11.2	6.3 1.9	5.2 1.8	34.7 14.3	42.7 16.4	1.6 2.2	2.7 2.9
	Compeq Mfg Elite Material	2313 TT	CCL	6,432	612.0	Outperform Outperform	640.0	28.53	35.52	74.5	24.0	21.5	17.2	6.9	6.0	34.4	37.4	1.6	2.9
	Kinsus	3189 TT	Substrate	1,330	95.7	Neutral	95.0	1.51	6.32	1339.1	318.0	63.3	15.1	1.7	35.5	2.4	21.2	1.0	1.0
	Unimicron Tech	3037 TT	Substrate	5,753	123.5	1	205.0	4.32	12.78	(45.2)	195.8	28.6	9.7	2.0	1.8	7.1	19.3	2.4	1.4
	Zhen Ding Tech	4958 TT	FPCB	3,480	119.5	Neutral	137.0	9.53	10.53	45.5	10.5	12.5	11.3	1.1	1.1	9.2	9.7	2.8	3.5
	Flexium Intercon	6269 TT	FPCB	692	70.5	1	82.0	8.23	N.A.	18.5	N.A.	8.6	N.A.	0.8	N.A.	9.6	N.A.	5.0	5.7
	Catcher Tech	2474 TT	Casing	4,091	197.5	1	230.0	19.71	15.31	47.9	(22.3)	10.0	12.9	0.9	0.9	8.7	7.0	5.1	5.1
	Foxconn Tech*	2354 TT 2317 TT	Casing	3,152	73.2	Not rated	N.A. N.A.	2.89 11.50	4.10 14.48	(4.0) 12.2	41.9	25.3 15.1	17.9 12.0	0.7 1.5	0.6 1.4	3.8 10.4	5.3 12.4	2.0 3.1	2.0 3.5
	Hon Hai Pegatron	4938 TT	ODM ODM	73,583 7,832	174.0 96.6	Restricted Neutral	105.0	7.00	7.05	18.7	25.9 0.7	13.8	13.7	1.3	1.4	9.7	9.5	4.1	3.5 4.7
	Apple*	AAPL US	Brand	3,419,474	227.6	Not rated	N.A.	6.70	7.34	8.8	9.5	34.0	31.0	54.9	49.1	156.0	174.4	1.7	1.7
	Tecno*	688036 CH	Brand	16,713	107.1	Not rated	N.A.	4.74	5.65	(3.6)	19.3	22.6	18.9	5.7	4.7	32.7	25.9	4.0	2.3
	Xiaomi*	1810 HK	Brand	141,685	44.0		N.A.	0.97	1.13	38.3	16.4	45.4	39.0	5.9	5.2	12.1	13.7	0.0	0.0
	Foxconn Tech*	2354 TT	Casing	3,152	73.2	Not rated	N.A.	2.89	4.10	(4.0)	41.9	25.3	17.9	0.7	0.6	3.8	5.3	2.0	2.0
	Merry Elec*	2439 TT	Acoustic	853	110.5	Not rated	N.A.	8.17	8.88	33.2	8.7	13.5	12.4	1.7	1.6	14.1	14.0	4.2	5.9
	Fositek	6805 TT	Hinge	1,517	727.0	Outperform	890.0	17.27	31.72	69.5	83.7	42.1	22.9	9.7	8.1	24.3	38.6	8.0	1.3
	Shin Zu Shing	3376 TT	Hinge	1,442	242.0	Restricted	190.0	7.23	8.25	68.1	14.1	33.5	29.3	2.9	2.8	8.7	9.7	1.7	2.2
	Jarllytec*	3548 TT	Hinge	341	169.5	Not rated	N.A.	8.33	9.88	(4.1)	18.6	20.3	17.2	2.0	1.9	N.M.	N.M.	1.8	2.1
	Largan Precision	3008 TT	Lens	11,032	2,715.0	Outperform	3,300.0	194.17	183.57	44.8	(5.5)	14.0	14.8	2.0	1.8	14.9	12.8	2.5	3.6
Smartpho	ne Genius Elec* Auras	3406 TT 3324 TT	Lens Thermal	1,668 1,636	486.0 587.0	Not rated Outperform	N.A. 800.0	40.19 20.17	37.45 38.25	47.5 41.2	(6.8) 89.6	12.1 29.1	13.0 15.3	2.3 6.8	2.0 5.5	19.8 25.1	16.5 40.2	2.5 1.1	3.3 1.6
	Auras Asia Vital	3017 TT	Thermal	6,348	538.0	Outperform	730.0	21.23	33.17	50.5	56.3	25.3	16.2	7.9	6.3	33.9	43.7	1.1	2.0
	Mediatek	2454 TT	IC design	72,168	1,480.0		1,700.0	66.92	71.58	38.0	7.0	22.1	20.7	5.9	5.6	27.7	27.6	3.7	4.7
	Win Semi	3105 TT	PA	1,316	102.0	Outperform	158.0	2.62	4.44	N.M.	69.5	39.0	23.0	1.2	1.2	3.2	5.1	0.0	1.5
	VPEC	2455 TT	PA	909	161.5	Outperform	202.0	3.72	5.29	52.8	42.1	43.4	30.5	8.9	8.0	21.4	27.6	1.4	2.0
	ASWC	8086 TT	PA	541	90.5		115.0	2.67	3.30	535.2	23.4	33.8	27.4	2.3	2.3	6.9	8.4	1.1	2.1
	Compeq	2313 TT	PCB	2,485	68.5	Outperform	86.0	4.92	6.13	40.7	24.6	13.9	11.2	1.9	1.8	14.3	16.4	2.2	2.9
	EMC	2383 TT	CCL	6,432	612.0	1 1	640.0	28.53	35.52	74.5	24.5	21.5	17.2	6.9	6.0	34.4	37.4	1.6	2.8
	Kinsus	3189 TT	Substrate	1,330	95.7	Neutral	95.0	1.51	6.32	1339.1	318.0	63.3	15.1	1.7	35.5	2.4	21.2	1.0	1.0
	Unimicron	3037 TT	Substrate	5,753	123.5	Outperform	205.0	4.32	12.78	(45.2)	195.8	28.6	9.7	2.0	1.8	7.1	19.3	2.4	1.4
	ZDT Flexium Intercon	4958 ∏ 6269 ∏	FPCB FPCB	3,480 692	119.5	Neutral Neutral	137.0 82.0	9.53 8.23	10.53 N.A.	45.5 18.5	10.5 N.A.	12.5 8.6	11.3 N.A.	1.1 0.8	1.1 N.A.	9.2 9.6	9.7 N.A.	2.8 5.0	3.5 5.7
		mbora	FLCD	092	/0.5	preduidi	ŏZ.Ü	0.23	N.A.	10.0	N.A.	0.0	N.A.	U.8	N.A.	9.0	N.A.	ال.ل	5.7

9 11 February 2025

Source: KGI Research, Bloomberg
\*: Bloomberg consensus; Dell and Lenovo data based on calendar year.



Figure 37: Gio	bal PC snipments by brand

Note   1022   2023   3024   3024   3024   3024   3024   3024   3024   3024   3024   3024   3025	Vandan							PC (ir	ıcl. Chro	mebook	shipme	nts (mn	units)						
He Inco	Vendor	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	4Q24F	2019	2020	2021	2022	2023	2024F
Dell   Alga	Lenovo	18.4	18.1	16.9	15.7	13.0	14.3	16.2	16.3	13.9	15.0	16.6	17.0	65.6	75.1	83.4	69.0	59.8	62.5
Apple 73 53 83 83 59 52 48 555 60 555 50 50 68 63 183 20 26 26 26 25 215 225 Asus 56 47 3 55 49 38 39 51 49 44 40 38 41 51 48 152 17.9 21.6 207 17.2 17.2 17.4 17.6 17.6 17.6 17.5 17.6 17.2 17.4 17.5 17.6 17.5 17.6 17.5 17.5 17.6 17.5 17.5 17.6 17.5 17.6 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5	HP Inc.	15.9	13.6	12.7	13.2	11.9	13.5	13.5	14.0	12.1	13.7	13.6	13.7	62.8	68.2	74.2	55.4	52.9	53.0
Ace Group   S.5   S.7   S.5   S.8   S.8   S.9   S.1   S.8   S.9   S.1   S.8   S.9   S.1   S.8   S.8   S.9   S.1   S.8	Dell	13.8	13.3	12.0	10.9	9.5	10.4	10.3	10.0	9.4	10.1	9.9	10.0	46.7	50.7	59.6	50.0	40.2	39.4
Ace Group	Apple	7.3	5.3	8.3	5.9	5.2	4.8	5.5	6.0	5.5	5.0	5.6	6.3	18.3	22.0	26.9	26.8	21.5	22.5
Total	Asus	5.6	4.7	5.5	4.9	3.8	3.9	5.1	4.3	3.4	4.1	5.1	4.8	15.2	17.9	21.6	20.7	17.2	17.4
Other (bits)         12.3         11.5         10.7         9.1         8.3         8.7         8.8         9.0         8.2         8.3         8.5         8.6         51.4         51.8         51.7         42.6         34.8         33.6           Total         78.8         71.5         70.6         63.3         55.3         59.6         63.8         63.5         56.3         60.7         64.0         64.4         278.5         308.2         341.7         282.2         242.3         242.4         24.2         24.3         24.2         24.2         24.3         24.2         24.2         24.2         24.2         24.2         9.5         14.5         11.1         17.3         (13.4         4.8         17.7         0.2         (17)         3.5         8.8         17.4         (16.0         20.0         4.4         4.2         9.4         9.5         14.5         11.1         17.3         11.4         4.2         9.4         8.0         17.3         11.4         4.8         9.0         17.3         18.2         4.8         18.0         17.3         18.1         4.7         4.8         6.0         17.4         4.0         2.0         1.0         1.0         1.0	Acer Group	5.5	5.1	4.5	3.6	3.5	4.0	4.4	4.0	3.8	4.4	4.6	4.1	18.4	22.5	24.3	18.7	15.9	16.9
Total   78.8   71.5   70.6   63.3   55.3   59.6   63.8   63.5   56.3   63.7   64.0   64.0   64.0   278.5   308.2   341.7   284.2   242.3   245.4	Top-6	66.5	60.0	59.9	54.2	47.1	50.9	55.0	54.6	48.1	52.4	55.4	55.8	227.1	256.4	290.0	240.6	207.5	211.7
Lenoxo	Other	12.3	11.5	10.7	9.1	8.3	8.7	8.8	9.0	8.2	8.3	8.5	8.6	51.4	51.8	51.7	43.6	34.8	33.6
Lenowo   (12.0) (11.5) (16.5) (28.4) (29.2) (20.7) (4.2) 3.6   7.1   4.4   2.9   4.2   9.5   14.5   11.1   (17.3) (13.4) 4.5   HP lmc. (17.8) (27.1) (27.9) (29.1) (24.7) (0.8) 6.4   5.6   0.9   1.7   0.2   (17.)   3.5   8.5   8.8   (25.4)   (4.4)   0.2   0	Total	78.8	71.5	70.6	63.3	55.3	59.6	63.8	63.5			64.0	64.4	278.5	308.2	341.7	284.2	242.3	245.4
HP Inc.   Column   HP Inc.   C																			
Dell 6.1 (5.2) (21.1) (37.0) (30.9) (21.8) (14.2) (8.3) (1.3) (2.4) (3.9) (0.1) 5.4 (8.6) (17.4) (16.0) (19.5) (2.0) Apple 13.6 (8.8) 20.4 (24.1) (28.4) (9.1) (33.9) 1.3 5.8 4.2 (2.6 4.6 (1.0) 20.0 22.4 (0.4) (19.7) 4.3 Asus 20.3 (4.4) (8.2) (20.0) (31.7) (17.4) (6.8) (10.9) (10.8) 6.5 (0.7) 9.8 (4.5) (1.0) 20.0 22.4 (0.4) (19.7) 4.3 Acer Group (5.5) (18.7) (25.6) (41.2) (36.3) (21.7) (2.4) 11.1 7.3 11.2 4.4 3.6 (7.0) 22.1 8.0 (22.9) (15.1) (6.5) 17.0 (2.6) (1.6)	Lenovo								3.6	7.1									
Apple         13.6         (8.8)         20.4         (24.1)         (28.4)         (9.1)         (33.9)         1.3         5.8         4.2         2.6         4.6         (1.0)         20.0         22.4         (0.4)         (19.7)         4.3           Asus         20.3         (4.4)         (8.2)         (20.0)         (31.7)         (17.4)         (6.8)         (10.9)         (10.8)         6.5         (0.7)         9.8         (4.5)         17.3         21.1         (4.5)         (16.9)         (15.0)         (5.5)         (18.7)         (25.6)         (41.2)         (3.3)         (21.7)         (2.4)         11.1         7.3         11.2         4.4         3.6         (7.0)         22.1         8.0         (22.9)         (15.3)         (6.5)         (6.5)         (6.7)         (13.3)         (14.1)         (32.1)         (32.6)         (24.2)         (17.5)         (15.1)         (4.3)         (3.4)         (4.6)         (7.5)         0.8         (0.2)         (15.7)         (13.3)         (14.0)         (32.2)         (15.7)         (22.2)         (3.4)           Total         (16.2)         (1.6)         (6.6)         (6.9)         (17.2)         10.2         12.9         0.6																			
Asus		6.1		(21.1)							(2.4)	(3.9)			8.6	17.4	(16.0)		
Acer Group   C5.5   (18.7)   (25.6)   (41.2)   (36.3)   (21.7)   (2.4)   11.1   7.3   11.2   4.4   3.6   (7.0)   22.1   8.0   (22.9)   (15.1)   6.5     Top-6   (5.2)   (14.3)   (16.8)   (30.4)   (29.2)   (15.3)   (8.1)   0.7   2.2   3.0   0.7   2.3   3.6   12.9   13.1   (17.0)   (13.8)   2.0     Other   (8.4)   (7.3)   (14.1)   (32.1)   (32.6)   (24.2)   (17.5)   (1.5)   (1.5)   (1.1)   (4.3)   (3.4)   (4.6)   (7.5)   0.8   (0.2)   (15.7)   (20.2)   (3.4)     Total   (5.7)   (13.3)   (16.4)   (30.6)   (29.7)   (16.7)   (9.6)   0.3   1.7   1.9   0.2   1.4   1.4   10.7   10.9   (16.8)   (14.7)   1.3     Lenovo   (16.2)   (1.6)   (6.6)   (6.9)   (17.2)   10.2   12.9   0.6   (14.4)   7.3   11.3   1.9     HPl Inc.   (14.9)   (14.5)   (6.3)   4.0   (9.6)   12.7   0.5   3.2   (13.7)   13.6   (1.0)   1.2     Dell   (20.1)   (3.7)   (9.6)   (9.5)   (12.3)   8.9   (0.7)   (3.3)   (5.6)   7.7   (2.2)   0.5     Apple   (6.2)   (27.5)   55.7   (28.3)   (11.5)   (8.0)   13.3   9.9   (7.6)   (9.4)   11.5   12.0     Acer Group   (9.4)   (7.9)   (11.8)   (20.1)   (18.8)   13.2   10.0   (19.8)   (11.8)   8.8   5.8   0.7     Other   (8.8)   (6.5)   (6.7)   (14.7)   (9.4)   5.1   1.7   1.8   (9.0)   1.7   2.6   0.5     Total   (13.7)   (9.2)   (13.3)   (10.3)   (12.6)   7.6   21.2   22.0   (15.1)   2.0     Apple   (32.3)   25.3   23.9   24.8   23.5   24.1   25.3   25.6   24.7   24.6   26.0   25.3   23.6   24.4   24.4   24.3   24.7   25.5     HP Inc.   (20.1)   19.0   18.0   20.9   21.6   22.6   21.2   22.0   21.4   22.6   21.2   21.3   22.6   22.1   21.7   19.5   21.8   21.6     Dell   (17.5)   18.6   17.0   17.2   17.2   17.5   16.2   15.7   16.7   16.7   15.5   15.5   16.8   16.5   7.7   7.9   94   8.9   6.9     Apple   (9.3)   7.4   11.7   9.9   8.1   8.6   8.0   6.8   6.0   6.8   8.3   8.8   9.8   6.6   7.1   7.9   94   8.9   6.9     Asus   7.1   6.6   7.8   7.7   6.9   6.5   8.0   6.8   6.0   6.8   8.0   7.4   5.5   5.5   8.6   6.7   7.1   7.1   7.1   7.1   7.1   7.1   7.1   7.1   7.1   7.1   7.1   7.1   7.1   7.1   7.1	Apple							, ,									, ,		
Top-6 (5.2) (14.3) (16.8) (30.4) (29.2) (15.3) (8.1) 0.7 (2.2) 3.0 (0.7) (2.3) 3.6 (12.9) 13.1 (17.0) (13.8) 2.0 (10.4) (8.4) (7.3) (14.1) (32.1) (32.6) (24.2) (17.5) (1.5) (1.1) (4.3) (3.4) (4.6) (7.5) 0.8 (0.2) (15.7) (20.2) (3.4) (10.4) (15.7) (10.4) (10.7) (10.9) (16.8) (14.7) (13.8) (10.4) (10.7) (10.9) (16.8) (14.7) (13.8) (10.4) (10.7) (10.9) (16.8) (14.7) (13.8) (10.4) (10.7) (10.9) (16.8) (14.7) (13.8) (10.4) (10.7) (10.9) (16.8) (14.7) (13.8) (14.7)	Asus								(10.9)	(10.8)		(0.7)							
Other         (8.4)         (7.3)         (14.1)         (32.1)         (32.6)         (24.2)         (17.5)         (1.5)         (1.1)         (4.3)         (3.4)         (4.6)         (7.5)         0.8         (0.2)         (15.7)         (20.2)         (3.4)           Total         (5.7)         (13.3)         (16.4)         (30.6)         (29.7)         (16.7)         (9.6)         0.3         1.7         1.9         0.2         1.4         1.4         1.0         10.9         (16.8)         (14.7)         1.3           Lenowo         (16.2)         (1.6)         (6.6)         (6.9)         (17.2)         10.2         12.2         0.6         (14.4)         7.3         11.3         1.9           HP Inc.         (14.9)         (14.5)         (6.3)         4.0         (9.6)         12.7         0.5         3.2         (13.7)         13.6         (1.0)         1.2           Dell         (20.1)         (3.7)         (9.6)         (9.5)         (12.3)         8.9         (0.7)         (3.3)         (5.6)         7.7         (2.2)         0.5           Apple         (6.2)         (27.5)         (11.8)         (20.1)         (11.5)         32.6         (15.6)	Acer Group	(5.5)	(18.7)	(25.6)	(41.2)	(36.3)			11.1	7.3	11.2	4.4	3.6	(7.0)	22.1	8.0	(22.9)	(15.1)	6.5
Total   (5.7) (13.3) (16.4) (30.6) (29.7) (16.7) (9.6) (0.3   1.7   1.9   0.2   1.4   1.4   10.7   10.9   (16.8) (14.7)   1.3	Тор-б	(5.2)	(14.3)	(16.8)	(30.4)	(29.2)	(15.3)	(8.1)	0.7		3.0	0.7	2.3	3.6	12.9	13.1	(17.0)	(13.8)	2.0
Lenowo (16.2) (1.6) (6.6) (6.9) (17.2) 10.2 12.9 0.6 (14.4) 7.3 11.3 1.9   HP Inc. (14.9) (14.5) (6.3) 4.0 (9.6) 12.7 0.5 3.2 (13.7) 13.6 (1.0) 1.2   Dell (20.1) (3.7) (9.6) (9.5) (12.3) 8.9 (0.7) (3.3) (5.6) 7.7 (2.2) 0.5   Apple (6.2) (27.5) 55.7 (28.3) (11.5) (8.0) 13.3 9.9 (7.6) (9.4) 11.5 12.0   Asus (8.1) (16.0) 17.5 (11.7) (21.5) 1.5 32.6 (15.6) (21.4) 21.2 23.6 (6.7)   Acer Group (9.4) (7.9) (11.8) (20.1) (1.8) 13.2 10.0 (9.1) (5.2) 17.3 3.3 (9.8)   Top-6 (14.6) (9.7) (0.2) (9.5) (13.1) 8.1 8.1 8.1 (0.8) (11.8) 8.8 5.8 0.7   Other (8.8) (6.5) (6.7) (14.7) (9.4) 5.1 1.7 1.8 (9.0) 1.7 2.6 0.5   Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7    Lenovo 23.3 25.3 23.9 24.8 23.5 24.1 25.3 25.6 24.7 24.6 26.0 26.3 23.6 24.4 24.4 24.3 24.7 25.5   HP Inc. 20.1 19.0 18.0 20.9 21.6 22.6 21.2 22.0 21.4 22.6 21.2 21.3 22.6 22.1 21.7 19.5 21.8 21.6   Apple 9.3 7.4 11.7 9.4 9.5 8.1 8.6 9.4 9.8 8.3 8.8 9.8 6.6 7.1 7.7 9.9 4 8.9 9.2   Asus 7.1 6.6 7.8 7.7 6.9 6.5 8.0 6.8 6.0 6.8 8.0 7.4 5.5 15.5 16.8 16.5 17.4 17.6 16.6 16.1   Apple 9.3 7.4 11.7 9.4 9.5 8.1 8.6 9.4 9.8 8.3 8.8 9.8 6.6 7.1 7.7 7.9 9.4 8.9 9.2   Asus 7.1 6.6 7.8 7.7 6.9 6.5 8.0 6.8 6.0 6.8 8.0 7.4 5.5 5.8 6.3 7.3 7.1 7.1 7.1   Acer Group 7.0 7.1 6.4 5.7 6.4 6.7 6.9 6.3 6.7 7.3 7.2 6.4 6.6 7.3 7.1 7.9 9.4 8.9 9.2   Asus 7.1 6.6 7.8 7.7 6.9 6.5 8.0 6.8 6.0 6.8 8.0 7.4 5.5 5.8 6.3 7.3 7.1 7.1 7.1   Acer Group 7.0 7.1 6.4 5.7 6.4 6.7 6.9 6.3 6.7 7.3 7.2 6.4 6.6 6.7 3.3 7.1 6.6 6.6 6.6 6.9   Other 15.6 16.0 15.2 14.4 14.9 14.6 13.8 14.1 14.5 13.7 13.3 13.3 18.4 16.8 15.1 15.3 14.4 13.7   Total 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	Other	(8.4)	(7.3)	(14.1)	(32.1)	(32.6)	(24.2)	(17.5)	(1.5)	(1.1)	(4.3)	(3.4)	(4.6)	(7.5)	0.8	(0.2)	(15.7)	(20.2)	(3.4)
Lenovo   (16.2)   (1.6)   (6.6)   (6.9)   (17.2)   10.2   12.9   0.6   (14.4)   7.3   11.3   1.9	Total	(5.7)	(13.3)	(16.4)	(30.6)	(29.7)	(16.7)	(9.6)	0.3			0.2	1.4	1.4	10.7	10.9	(16.8)	(14.7)	1.3
HP Inc. (14.9) (14.5) (6.3) 4.0 (9.6) 12.7 0.5 3.2 (13.7) 13.6 (1.0) 1.2																			
Dell   C20.1   C3.7   C3.7   C3.8   C4.8					(6.9)														
Apple (6.2) (27.5) 55.7 (28.3) (11.5) (8.0) 13.3 9.9 (7.6) (9.4) 11.5 12.0 Asus (8.1) (16.0) 17.5 (11.7) (21.5) 1.5 32.6 (15.6) (21.4) 21.2 23.6 (6.7) Acer Group (9.4) (7.9) (11.8) (20.1) (1.8) 13.2 10.0 (9.1) (5.2) 17.3 3.3 (9.8) Top-6 (14.6) (9.7) (0.2) (9.5) (13.1) 8.1 8.1 (0.8) (11.8) 8.8 5.8 0.7 Other (8.8) (6.5) (6.7) (14.7) (9.4) 5.1 1.7 1.8 (9.0) 1.7 2.6 0.5 Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 Society (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 Society (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 Society (1.3) (10.3) (10.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 Society (1.3) (10.3) (10.3) (10.3) (10.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 Society (1.3) (10.3) (10.3) (10.3) (10.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 Society (1.3) (10.3) (10.3) (10.3) (10.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 Society (1.3) (10.3) (10.3) (10.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 Society (1.4) (1.4) 7.8 5.4 0.7 Society (1.4) 7.8 5.4 0.7 Society (1.4) 7.8 Society (1.4) 7.1 Society (1.4) 7.1 Society (1.4) 7.8 Society (1.4) 7.8 Society (1.4)		(14.9)				(9.6)													
Asus (8.1) (16.0) 17.5 (11.7) (21.5) 1.5 32.6 (15.6) (21.4) 21.2 23.6 (6.7)  Acer Group (9.4) (7.9) (11.8) (20.1) (1.8) 13.2 10.0 (9.1) (5.2) 17.3 3.3 (9.8)  Top-6 (14.6) (9.7) (0.2) (9.5) (13.1) 8.1 8.1 (0.8) (11.8) 8.8 5.8 0.7  Other (8.8) (6.5) (6.7) (14.7) (9.4) 5.1 1.7 1.8 (9.0) 1.7 2.6 0.5  Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7  Under Total (13.7) (13.7) (13.8)	Dell	(20.1)			(9.5)	(12.3)	8.9			(5.6)	7.7	(2.2)	0.5						
Acer Group (9.4) (7.9) (11.8) (20.1) (1.8) 13.2 10.0 (9.1) (5.2) 17.3 3.3 (9.8) (19.8) (19.6) (14.6) (9.7) (0.2) (9.5) (13.1) 8.1 8.1 (0.8) (11.8) 8.8 5.8 0.7 (14.6) (9.7) (14.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7 (14.7) (1	Apple	(6.2)	(27.5)	55.7	(28.3)	(11.5)	(8.0)	13.3	9.9	(7.6)	(9.4)	11.5							
Top-6 (14.6) (9.7) (0.2) (9.5) (13.1) 8.1 8.1 (0.8) (11.8) 8.8 5.8 0.7 (18.8) (6.5) (6.7) (14.7) (9.4) 5.1 1.7 1.8 (9.0) 1.7 2.6 0.5 (19.8) (1	Asus																		
Other         (8.8)         (6.5)         (6.7)         (14.7)         (9.4)         5.1         1.7         1.8         (9.0)         1.7         2.6         0.5           Total         (13.7)         (9.2)         (1.3)         (10.3)         (12.6)         7.6         7.2         (0.5)         (11.4)         7.8         5.4         0.7           Global market share (w)           Lenowo         23.3         25.3         23.9         24.8         23.5         24.1         25.3         25.6         24.7         24.6         26.0         26.3         23.6         24.4         24.3         24.7         25.5           HP Inc.         20.1         19.0         18.0         20.9         21.6         22.6         21.2         22.0         21.4         22.6         22.1         21.3         22.6         22.1         21.7         19.5         21.8         21.6           Dell         17.5         18.6         17.0         17.2         17.2         17.5         16.2         15.7         16.7         16.7         15.5         15.5         16.8         16.5         17.4         17.6         16.6         16.1           Asus         7.1	Acer Group																		
Total (13.7) (9.2) (1.3) (10.3) (12.6) 7.6 7.2 (0.5) (11.4) 7.8 5.4 0.7    Lenovo   23.3   25.3   23.9   24.8   23.5   24.1   25.3   25.6   24.7   24.6   26.0   26.3   23.6   24.4   24.4   24.3   24.7   25.5     HP Inc.   20.1   19.0   18.0   20.9   21.6   22.6   21.2   22.0   21.4   22.6   21.2   21.3   22.6   22.1   21.7   19.5   21.8   21.6     Dell   17.5   18.6   17.0   17.2   17.2   17.5   16.2   15.7   16.7   16.7   15.5   15.5   16.8   16.5   17.4   17.6   16.6   16.1     Apple   9.3   7.4   11.7   9.4   9.5   8.1   8.6   9.4   9.8   8.3   8.8   9.8   6.6   7.1   7.9   9.4   8.9   9.2     Asus   7.1   6.6   7.8   7.7   6.9   6.5   8.0   6.8   6.0   6.8   8.0   7.4   5.5   5.8   6.3   7.3   7.1   7.1     Acer Group   7.0   7.1   6.4   5.7   6.4   6.7   6.9   6.3   6.7   7.3   7.2   6.4   6.6   7.3   7.1   6.6   6.6   6.9     Top-6   84.4   84.0   84.8   85.6   85.1   85.4   86.2   85.9   85.5   86.3   86.7   86.7   81.6   83.2   84.9   84.7   85.6   86.3     Other   15.6   16.0   15.2   14.4   14.9   14.6   13.8   14.1   14.5   13.7   13.3   13.3   18.4   16.8   15.1   15.3   14.4   13.7     Total   100.0   10	•																		
Lenovo   23.3   25.3   23.9   24.8   23.5   24.1   25.3   25.6   24.7   24.6   26.0   26.3   23.6   24.4   24.4   24.3   24.7   25.5	Other						5.1												
Lenovo         23.3         25.3         23.9         24.8         23.5         24.1         25.3         25.6         24.7         24.6         26.0         26.3         23.6         24.4         24.4         24.4         24.3         24.7         25.5           HP Inc.         20.1         19.0         18.0         20.9         21.6         22.6         21.2         22.0         21.4         22.6         21.2         21.3         22.6         22.1         21.7         19.5         21.8         21.6           Dell         17.5         18.6         17.0         17.2         17.2         17.5         16.2         15.7         16.7         15.5         15.5         16.8         16.5         17.4         17.6         16.6         16.1           Apple         9.3         7.4         11.7         9.4         9.5         8.1         8.6         9.4         9.8         8.3         8.8         9.8         6.6         7.1         7.9         9.4         8.9         9.2           Asus         7.1         6.6         7.8         7.7         6.9         6.5         8.0         6.8         6.0         6.8         8.0         7.4         5.5	Total	(13.7)	(9.2)	(1.3)	(10.3)	(12.6)	7.6	7.2					0.7						
HP Inc.         20.1         19.0         18.0         20.9         21.6         22.6         21.2         22.0         21.4         22.6         21.2         21.3         22.6         22.1         21.7         19.5         21.8         21.6           Dell         17.5         18.6         17.0         17.2         17.2         17.5         16.7         16.7         16.5         15.5         15.5         16.8         16.5         17.4         17.6         16.6         16.1           Apple         9.3         7.4         11.7         9.4         9.5         8.1         8.6         9.4         9.8         8.3         8.8         9.8         6.6         7.1         7.9         9.4         8.9         9.2           Asus         7.1         6.6         7.8         7.7         6.9         6.5         8.0         6.8         6.0         6.8         8.0         7.4         5.5         5.8         6.3         7.3         7.1         7.1         6.6         6.9         6.9         6.3         6.7         7.3         7.2         6.4         6.6         7.3         7.1         6.6         6.6         6.9           Top-6         84.4												<u> </u>							
Dell         17.5         18.6         17.0         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         17.2         18.6         15.7         16.7         16.7         16.7         15.5         15.5         15.5         16.8         16.5         17.4         17.6         16.6         16.6         16.1         17.2         18.6         19.4         9.8         8.3         8.8         9.8         6.6         7.1         7.9         9.4         8.9         9.2           Asus         7.1         6.6         7.8         7.7         6.9         6.5         8.0         6.8         6.0         6.8         8.0         7.4         5.5         5.8         6.3         7.3         7.1         7.1           Acer Group         7.0         7.1         6.4         5.7         6.4         6.7         6.9         6.3         6.7         7.3         7.2         6.4         6.6         7.3         7.1         6.6         6.9           Top-6         84.4         84.0         85.6         85		l .																	
Apple         9.3         7.4         11.7         9.4         9.5         8.1         8.6         9.4         9.8         8.3         8.8         9.8         6.6         7.1         7.9         9.4         8.9         9.2           Asus         7.1         6.6         7.8         7.7         6.9         6.5         8.0         6.8         6.0         6.8         8.0         7.4         5.5         5.8         6.3         7.3         7.1         7.1           Acer Group         7.0         7.1         6.4         5.7         6.4         6.7         6.9         6.3         6.7         7.3         7.2         6.4         6.6         7.3         7.1         6.6         6.6         6.9           Top-6         84.4         84.0         84.8         85.6         85.1         85.1         85.2         85.9         85.5         86.3         86.7         86.7         81.6         83.2         84.9         84.7         85.6         86.3           Other         15.6         16.0         15.2         14.4         14.9         14.6         13.8         14.1         14.5         13.7         13.3         13.3         18.4         16.8																			
Asus 7.1 6.6 7.8 7.7 6.9 6.5 8.0 6.8 6.0 6.8 8.0 7.4 5.5 5.8 6.3 7.3 7.1 7.1 Acer Group 7.0 7.1 6.4 5.7 6.4 6.7 6.9 6.3 6.7 7.3 7.2 6.4 6.6 7.3 7.1 6.6 6.6 6.9 Top-6 84.4 84.0 84.8 85.6 85.1 85.4 86.2 85.9 85.5 86.3 86.7 86.7 86.7 81.6 83.2 84.9 84.7 85.6 86.3 0ther 15.6 16.0 15.2 14.4 14.9 14.6 13.8 14.1 14.5 13.7 13.3 13.3 18.4 16.8 15.1 15.3 14.4 13.7 Total 100.0																			
Acer Group         7.0         7.1         6.4         5.7         6.4         6.7         6.9         6.3         6.7         7.3         7.2         6.4         6.6         7.3         7.1         6.6         6.6         6.9           Top-6         84.4         84.0         84.8         85.6         85.1         85.2         85.9         85.5         86.3         86.7         86.7         81.6         83.2         84.9         84.7         85.6         86.3           Other         15.6         16.0         15.2         14.4         14.9         14.6         13.8         14.1         14.5         13.7         13.3         13.3         18.4         16.8         15.1         15.3         14.4         13.7           Total         100.0 <td></td> <td>l .</td> <td></td>		l .																	
Top-6         84.4         84.0         84.8         85.6         85.1         85.4         86.2         85.9         85.5         86.3         86.7         86.7         81.6         83.2         84.9         84.7         85.6         86.3           Other         15.6         16.0         15.2         14.4         14.9         14.6         13.8         14.1         14.5         13.7         13.3         13.3         18.4         16.8         15.1         15.3         14.4         13.7           Total         100.0         <																			
Other         15.6         16.0         15.2         14.4         14.9         14.6         13.8         14.1         14.5         13.7         13.3         13.3         18.4         16.8         15.1         15.3         14.4         13.7           Total         100.0 <t< td=""><td>Acer Group</td><td>7.0</td><td></td><td></td><td></td><td></td><td>6.7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Acer Group	7.0					6.7												
Total 100.0		84.4			85.6		85.4		85.9	85.5		86.7	86.7	81.6			84.7		86.3
										14.5									
			100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Gartner, KGI Research



Figure 38: Global	smartphone	shipments b	v brand

Vendor		Global smartphone shipments (mn units)																
venuoi	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	4Q24F	2019	2020	2021	2022	2023	2024F
Samsung	75.2	61.7	64.8	56.5	60.1	53.6	58.0	55.0	59.4	53.6	57.5	53.5	296.2	253.0	272.3	258.2	226.7	224.1
Apple	61.0	48.9	50.9	73.0	58.7	45.6	49.9	76.3	52.2	45.7	51.3	77.0	193.5	199.8	239.2	233.9	230.6	226.1
Xiaomi	40.5	37.8	39.3	33.3	30.4	32.5	40.0	40.1	40.6	41.0	42.1	42.0	126.0	145.8	189.3	151.0	143.0	165.6
OPPO	30.8	26.9	25.7	28.8	27.0	25.0	26.6	25.1	24.5	23.2	27.8	27.5	118.7	111.8	138.2	112.2	103.8	103.0
Vivo	25.0	25.8	24.4	24.7	22.8	21.4	21.1	21.8	23.2	24.5	24.9	25.0	109.6	107.4	136.0	99.9	87.1	97.6
Lenovo	11.7	11.6	10.7	10.3	10.6	10.1	11.7	13.3	12.7	12.8	14.2	15.5	39.3	33.9	51.1	44.3	45.7	55.1
Honor	14.4	14.5	13.5	14.4	12.5	12.3	13.8	14.8	13.5	13.7	14.0	15.5	N.A.	N.A.	42.8	56.7	53.4	56.7
Tecno Telecom	8.6	8.3	8.8	9.4	8.7	9.1	9.2	9.9	9.7	9.8	10.0	9.4	21.3	21.3	31.2	35.1	37.0	38.9
TCL Communication	4.3	4.3	3.9	4.0	3.7	3.7	4.3	4.2	4.0	3.6	3.7	3.7	17.7	8.5	13.7	16.6	16.0	14.9
Huawei	5.1	3.7	4.5	4.6	4.3	6.1	7.3	10.5	11.6	11.1	9.5	12.0	240.6	182.6	43.3	17.8	28.2	44.2
Other	66.5 276.5	60.8 243.5	59.6	61.5 258.9	55.0 238.8	52.4 219.6	50.2 241.9	55.4 271.2	52.9 251.4	49.3 238.8	47.9	54.2 281.1	377.6	287.1 1.064.2	275.5	248.3 1.025.7	213.0 971.5	204.2
Top-10	342.9	304.3	246.8	320.4	293.8	272.0			304.3	288.0	255.0		1,163.0 1,540.7		1,157.2		1,184.5	1,026.2
Total	342.9	304.3	306.4	320.4	293.8	272.0	292.1	326.6		oY (%)	302.8	335.3	1,340.7	1,351.3	1,432.7	1,274.0	1,184.3	1,230.4
Samsung	(1.8)	6.8	(6.0)	(18.1)	(20.1)	(13.0)	(10.6)	(2.6)	(1.2)	0.0	(0.8)	(2.7)	0.4	(14.6)	7.6	(5.2)	(12.2)	(1.2)
Apple	4.3	(0.7)	5.1	(12.0)	(3.8)	(6.7)	(1.9)	4.6	(11.2)	0.0	2.7	0.9	(7.4)	3.3	19.7	(2.2)	(1.4)	(2.0)
Xiaomi	(17.2)	(25.9)	(11.5)	(25.7)	(24.9)	(14.0)	1.8	20.3	33.5	25.9	5.0	4.8	3.0	15.7	29.8	(20.2)	(5.3)	15.8
OPPO	(19.9)	(20.0)	(23.4)	(11.7)	(12.1)	(7.1)	3.3	(12.6)	(9.3)	(7.2)	4.4	9.4	(0.1)	(5.8)	23.7	(18.8)	(7.5)	(0.8)
Vivo	(35.6)	(19.8)	(32.2)	(15.1)	(8.8)	(17.2)	(13.7)	(11.5)	2.0	14.2	18.4	14.5	7.5	(2.0)	26.7	(26.6)	(12.8)	12.1
Lenovo	8.4	(5.3)	(18.4)	(30.9)	(9.8)	(12.5)	9.4	28.8	20.3	25.8	20.9	16.5	0.4	(13.7)	50.5	(13.3)	3.1	20.6
Honor	115.4	88.7	(4.4)	0.5	(12.7)	(14.9)	1.6	3.3	7.8	11.0	2.0	4.5	N.A.	N.A.	N.A.	32.6	(5.8)	6.1
Tecno Telecom	14.2	14.3	14.5	7.7	1.9	10.2	4.1	5.1	11.8	7.3	8.6	(5.1)	10.1	(0.3)	46.7	12.5	5.3	5.4
TCL Communication	40.2	35.8	8.5	6.1	(14.7)	(13.0)	8.6	5.9	6.9	(5.0)	(14.6)	(12.8)	(19.0)	(52.1)	61.2	21.3	(3.8)	(6.9)
Huawei	(74.1)	(68.5)	(29.6)	(19.7)	(15.2)	63.0	63.5	131.4	170.4	82.7	30.7	13.9	18.6	(24.1)	(76.3)	(59.0)	58.4	56.8
Other	(6.1)	(4.6)	(11.9)	(16.1)	(17.3)	(13.8)	(15.8)	(9.8)	(3.8)	(6.0)	(4.6)	(2.2)	(11.1)	(24.0)	(4.1)	(9.8)	(14.2)	(4.1)
Top-10	(10.5)	(8.5)	(10.8)	(15.3)	(13.6)	(9.8)	(2.0)	4.7	5.3	8.7	5.4	3.7	2.9	(8.5)	8.7	(11.4)	(5.3)	5.6
Total	(9.7)	(7.7)	(11.0)	(15.5)	(14.3)	(10.6)	(4.7)	1.9	3.6	5.9	3.7	2.7	(0.9)	(12.3)	6.0	(11.1)	(7.0)	3.9
		(40.0)		(40.0)		(40.7)		(F. 0)		oQ (%)	7.0	(7.0)						
Samsung	9.0	(18.0)	5.2	(12.9)	6.4	(10.7)	8.1	(5.2)	8.0	(9.7)	7.3	(7.0)						
Apple	(26.4)	(19.8)	4.1	43.4	(19.5)	(22.3)	9.5	52.8	(31.6)	(12.5)	12.3	50.1						
Xiaomi OPPO	(9.6)	(6.6)	4.0	(15.3)	(8.8)	7.0	23.1	0.0	1.3	0.9	2.7	(0.1)						
Vivo	(5.6) (14.2)	(12.5) 3.6	(4.3) (5.5)	11.8 1.1	(6.1) (7.7)	(7.5) (6.0)	6.5 (1.6)	(5.5) 3.6	(2.5) 6.4	(5.4) 5.3	19.8 2.0	(1.0) 0.2						
Lenovo	(21.8)	(1.0)	(7.6)	(3.4)	2.1	(3.9)	15.4	13.7	(4.6)	0.4	10.9	9.5						
Honor	0.4	0.7	(6.4)	6.1	(12.7)	(1.8)	11.7	7.9	(8.9)	1.2	2.7	10.5						
Tecno Telecom	(2.2)	(3.2)	6.9	6.5	(7.5)	4.7	0.9	7.5	(1.6)	0.5	2.1	(6.0)						
TCL Communication	15.1	(1.0)	(8.2)	1.5	(7.4)	0.9	14.5	(1.0)	(6.6)	(10.3)	3.0	1.1						
Huawei	(10.9)	(26.3)	19.8	2.1	(5.9)	41.7	20.2	44.5	9.9	(4.3)	(14.1)	25.9						
Other	(9.4)	(8.5)	(2.0)	3.1	(10.6)	(4.6)	(4.2)	10.4	(4.6)	(6.8)	(2.8)	13.2						
Top-10	(9.6)	(11.9)	1.3	4.9	(7.8)	(8.0)	10.2	12.1	(7.3)	(5.0)	6.8	10.2						
Total	(9.6)	(11.3)	0.7	4.6	(8.3)	(7.4)	7.4	11.8	(6.8)	(5.3)	5.1	10.7						
									Global ma	rket sha	re (%)							
Samsung	21.9	20.3	21.2	17.6	20.5	19.7	19.9	16.8	19.5	18.6	19.0	16.0	19.2	18.7	19.0	20.3	19.1	18.2
Apple	17.8	16.1	16.6	22.8	20.0	16.8	17.1	23.4	17.1	15.9	16.9	23.0	12.6	14.8	16.7	18.4	19.5	18.4
Xiaomi	11.8	12.4	12.8	10.4	10.3	12.0	13.7	12.3	13.3	14.2	13.9	12.5	8.2	10.8	13.2	11.9	12.1	13.5
OPPO	9.0	8.8	8.4	9.0	9.2	9.2	9.1	7.7	8.1	8.0	9.2	8.2	7.7	8.3	9.6	8.8	8.8	8.4
Vivo	7.3	8.5	8.0	7.7	7.7	7.9	7.2	6.7	7.6	8.5	8.2	7.5	7.1	7.9	9.5	7.8	7.4	7.9
Lenovo	3.4	3.8	3.5	3.2	3.6	3.7	4.0	4.1	4.2	4.4	4.7	4.6	2.6	2.5	3.6	3.5	3.9	4.5
Honor	4.2	4.8	4.4	4.5	4.3	4.5	4.7	4.5	4.4	4.7	4.6	4.6	N.A.	N.A.	3.0	4.5	4.5	4.6
Tecno Telecom	2.5	2.7	2.9	2.9	3.0	3.4	3.2	3.0	3.2	3.4	3.3	2.8	1.4	1.6	2.2	2.8	3.1	3.2
TCL Communication	1.3 1.5	1.4	1.3	1.3	1.3	1.4	1.5	1.3	1.3	1.2	1.2	1.1	1.2	0.6	1.0	1.3	1.3	1.2
Huawei Other	1.5	1.2 20.0	1.5 19.5	1.4	1.5	2.2 19.3	2.5 17.2	3.2	3.8 17.4	3.8 17.1	3.1 15.8	3.6	15.6	13.5	3.0 19.2	1.4 19.5	2.4	3.6
omer	19.4	20.0	19.5	19.2	18.7	19.3	17.2	17.0	17.4		15.6	16.2	24.5	21.2		19.5	18.0	16.6
	80.6	8U U	80 E	8U 8	21.2	20 7	22.2	83 U	82.6	82.0	2/12	83.8	75 E	70 0	8U 0	8U E	22 A	83 /
Top-10 Total	80.6 100.0	80.0 100.0	80.5 100.0	80.8 100.0	81.3 100.0	80.7 100.0	82.8 100.0	83.0 100.0	82.6 100.0	82.9 100.0	84.2 100.0	83.8 100.0	75.5 100.0	78.8 100.0	80.8 100.0	80.5 100.0	82.0 100.0	83.4 100.0

Source: Gartner, KGI Research



Figure 39: Global server shipments by brand

Vendor								Serve	r shipme	nts ('000	units)						
vendor	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	2019	2020	2021	2022	2023	1-3Q24
Dell EMC	542	496	526	484	366	362	343	366	332	365	363	2,050	1,950	2,064	2,048	1,437	1,060
HPE	300	269	345	380	252	238	209	212	231	235	216	1,546	1,392	1,319	1,294	911	682
Inspur Electronics	343	340	348	337	212	285	333	275	319	329	354	1,131	1,230	1,323	1,368	1,105	1,002
Lenovo	126	197	236	216	187	171	184	186	200	212	208	755	702	773	775	728	619
Supermicro	171	208	227	217	151	120	116	161	147	127	147	N.A.	496	614	823	548	421
xFusion Digital Technologies	120	136	139	144	90	114	105	135	120	142	144	N.A.	N.A.	154	539	444	407
H3C	88	109	92	132	73	90	79	96	99	113	79	254	345	458	422	339	290
PowerLeader	61	60	62	75	47	54	57	65	46	60	63	109	119	150	258	222	169
Sugon	28	36	50	46	29	52	50	55	31	42	49	347	209	213	160	186	123
Others	1,528	1,536	1,354	1,722	1,228	1,240	1,276	1,388	1,228	1,241	1,249	6,344	6,228	5,850	6,140	5,132	3,718
Total	3,307	3,387	3,379	3,754	2,679	2,828	2,830	3,017	2,820	2,947	2,948	12,537	12,672	12,918	13,827	11,353	8,715
	YoY (%)																
Dell EMC	11.0	(6.3)	5.6	(11.7)	(32.6)	(26.9)	(34.8)	(24.2)	(9.3)	0.9	5.8	(9.6)	(4.9)	5.8	(0.8)	(29.8)	(1.0)
HPE	(7.1)	(20.6)	9.0	11.2	(16.0)	(11.6)	(39.3)	(44.2)	(8.3)	(1.1)	3.3	(8.6)	(10.0)	(5.2)	(2.0)	(29.6)	(2.4)
Inspur Electronics	48.8	(2.3)	(2.3)	(13.2)	(38.2)	(16.2)	(4.2)	(18.5)	50.4	15.6	6.1	6.6	8.8	7.5	3.4	(19.2)	20.7
Lenovo	(25.4)	(2.4)	9.1	16.2	48.8	(13.2)	(22.1)	(13.8)	6.7	23.9	13.1	(1.3)	(7.1)	10.1	0.3	(6.0)	14.3
Supermicro	28.8	32.2	49.0	26.6	(12.1)	(42.3)	(48.7)	(25.7)	(2.5)	6.0	26.0	N.A.	N.A.	23.8	34.1	(33.4)	8.7
xFusion Digital Technologies	N.A.	N.A.	N.A.	(6.3)	(25.0)	(15.8)	(24.9)	(6.4)	33.8	24.3	37.8	N.A.	N.A.	N.A.	250.5	(17.7)	31.6
H3C	2.4	0.4	(28.3)	(1.3)	(16.8)	(17.3)	(14.2)	(27.4)	34.4	25.0	(0.3)	43.1	35.7	32.6	(7.8)	(19.7)	19.6
PowerLeader	206.8	171.3	126.1	(7.2)	(22.6)	(10.6)	(8.2)	(13.3)	(1.6)	11.5	10.7	26.4	9.6	25.9	71.4	(13.6)	7.3
Sugon	(5.0)	6.0	3.9	(54.7)	4.8	43.2	(0.9)	20.3	5.9	(18.4)	(1.2)	4.3	(39.8)	1.9	(24.8)	16.1	(6.4)
Others	21.3	2.1	(3.1)	2.0	(19.6)	(19.3)	(5.8)	(19.4)	(0.0)	0.1	(2.1)	(3.5)	(1.8)	(6.1)	5.0	(16.4)	(0.7)
Total	20.7	4.4	7.6	(1.1)	(19.0)	(16.5)	(16.3)	(19.6)	5.3	4.2	4.2	(3.2)	1.1	1.9	7.0	(17.9)	4.5
									QoQ	(%)							
Dell EMC	(1.0)	(8.6)	6.2	(8.1)	(24.4)	(1.0)	(5.2)	6.8	(9.5)	10.2	(0.5)						
HPE	(12.4)	(10.2)	28.1	10.4	(33.9)	(5.4)	(12.1)	1.4	8.8	2.0	(8.1)						
Inspur Electronics	(11.6)	(0.9)	2.3	(3.2)	(37.1)	34.4	17.0	(17.5)	16.1	3.3	7.3						
Lenovo	(32.3)	56.3	20.0	(8.4)	(13.4)	(8.7)	7.6	1.4	7.2	6.0	(1.9)						
Supermicro	0.1	21.5	9.0	(4.6)	(30.5)	(20.3)	(3.0)	38.3	(8.9)	(13.3)	15.3						
xFusion Digital Technologies	(22.0)	13.1	2.8	3.3	(37.6)	26.9	(8.3)	28.7	(10.7)	17.9	1.7						
H3C	(34.1)	23.5	(15.2)	43.1	(44.5)	22.9	(12.1)	21.1	2.8	14.2	(29.9)						
Cisco	(22.4)	21.3	(17.0)	(22.7)	11.1	(15.0)	21.0	4.2	(14.0)	(11.0)	3.1						
PowerLeader	(25.4)	(1.2)	3.2	21.8	(37.8)	14.3	6.0	15.0	(29.3)	29.4	5.2						
ZTE	N.A.	N.A.	N.A.	N.A.	N.A.	130.4	(23.8)	(1.2)	(10.5)	16.6	(4.6)						
Sugon	(72.1)	28.6	38.1	(8.4)	(35.6)	75.9	(4.4)	11.1	(43.3)	35.5	15.7						
Fujitsu	(9.3)	(17.1)	43.1	12.3	(3.7)	(28.1)	1.7	(8.3)	6.1	3.2	(4.5)						
Huawei	(62.9)	23.6	30.2	56.9	(5.0)	15.9	12.4	32.3	(12.1)	10.3	10.2						
Others	(9.5)	0.6	(11.9)	27.2	(28.7)	1.0	2.8	8.8	(11.6)	1.1	0.6						
Others	(8.4)	0.2	(12.9)	28.9	(30.3)	2.2	2.2	8.9	(11.8)	1.2	0.4						
Total	(12.8)	2.4	(0.2)	11.1	(28.6)	5.6	0.1	6.6	(6.5)	4.5	0.0						
	(1213)		()		(2010)				bal mark								
Dell EMC	16.4	14.6	15.6	12.9	13.6	12.8	12.1	12.1	11.8	12.4	12.3	16.4	15.4	16.0	14.8	12.7	12.2
HPE	9.1	7.9	10.2	10.1	9.4	8.4	7.4	7.0	8.2	8.0	7.3	12.3	11.0	10.2	9.4	8.0	7.8
Inspur Electronics	10.4	10.0	10.3	9.0	7.9	10.1	11.8	9.1	11.3	11.2	12.0	9.0	9.7	10.2	9.9	9.7	11.5
Lenovo	3.8	5.8	7.0	5.8	7.0	6.0	6.5	6.2	7.1	7.2	7.1	6.0	5.5	6.0	5.6	6.4	7.1
Supermicro	5.2	6.1	6.7	5.8	5.6	4.2	4.1	5.3	5.2	4.3	5.0	N.A.	3.9	4.8	6.0	4.8	4.8
xFusion Digital Technologies	3.6	4.0	4.1	3.8	3.4	4.0	3.7	4.5	4.3	4.8	4.9	N.A.	N.A.	1.2	3.9	3.9	4.7
H3C	2.7	3.2	2.7	3.5	2.7	3.2	2.8	3.2	3.5	3.8	2.7	2.0	2.7	3.5	3.1	3.0	3.3
PowerLeader	1.8	1.8	1.8	2.0	1.7	1.9	2.0	2.2	1.6	2.0	2.7	0.9	0.9	1.2	1.9	2.0	1.9
	0.9	1.0	1.6	1.2	1.7	1.8	1.8	1.8	1.0	1.4	1.7	2.8	1.7	1.6	1.9	1.6	1.4
Sugon	46.2	45.4	40.1	45.9	45.8	43.9	45.1	46.0	43.5	42.1	42.4	50.6	49.1	45.3	44.4		
Others Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	45.2 100.0	42.7 100.0
Source: Gartner, KGI Research	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Gartner, KGI Research

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