

## IT Hardware

### Smartphone replacement cycle kicks off with Gen-AI functionality

#### Key message

1. Global smartphone shipments grew 2% YoY in 1Q24, the second consecutive quarter of modest growth after nine quarters of decline since 3Q21.
2. We now think global smartphone shipments growth will be lower than we expected given product transition in 2Q-3Q24F with limited new model spec upgrades and designs. We lower shipments growth to 1% this year.
3. Foldable smartphone sales growth more secure in 2024-25F (up over 40% annually); AI smartphone another catalyst for replacement demand in 2H24-2025F.

#### Event

Global smartphone demand has recovered slightly, with shipments rising 2% YoY in 4Q23-1Q24. However, we expect limited spec and feature upgrades in the near term and have thus lowered our 2024 global smartphone shipments growth estimate to 1% from previous 4%, at 1.2bn units.

#### Impact

**Stabilization in global smartphone demand in 1Q24.** 1Q24 global smartphone shipments were up 2.1% YoY but down 8.2% QoQ to 299.8mn units, according to Gartner, in line with market expectation. 1Q24 was the second consecutive quarter of a return to modest growth after nine quarters of decline since 3Q21. The China market (22% of 2023 global shipments) was flat YoY, though there was a shift in consumers increasingly opting for Android and China-made smartphones instead of Apple (US), as consumers prefer the value-added benefits of flagship Android models with Gen-AI capabilities and foldable design. Demand in the US was up moderately YoY, with consumers tending to buy higher-price models, boosting Samsung's (KR) market share in 1Q24. Among smartphone brands, Samsung, Huawei (CN), Xiaomi (CN), Lenovo (CN), and TECNO Mobile (CN) saw shipments grow YoY in 1Q24, with Huawei and Samsung also reporting QoQ growth on new model rollouts. Huawei saw the biggest shipments growth YoY in 1Q24 on low 1Q23 comparison base and the continued success of the Mate 60 series and the Nova series, which were released in early January. The Nova 12 is Huawei's first Gen-AI enabled offering. Samsung's smartphone shipments grew 11% QoQ and 2% YoY in 1Q24 with the launch of Galaxy S24 series. These models were well-received by consumers and achieved higher sales, owing to higher specifications and upgraded hardware and software. Xiaomi and TECNO are both focused on premium smartphones with innovative features at competitive prices. However, Apple, Oppo (CN), Vivo (CN) and Honor (CN) all saw 10-15% YoY shipments decline in 1Q24 due to a lack of innovation and spec improvement versus competitors.

**Foldable smartphone the key segment with substantial growth; AI smartphone to trigger replacement cycle.** Foldable smartphone is the key smartphone segment with robust demand growth in 2024-25F. We forecast global foldable smartphone shipments will grow 44% YoY to 29.2mn units this year, and 42% YoY to 41.5mn units in 2025F, driving global smartphone shipments recovery. The main players in foldable smartphone are Samsung and Chinese brands, and Huawei has aggressive model launches this year, with expected shipments up from 3.3mn units in 2023 to 6-6.5mn units. We estimate global foldable smartphone penetration will rise from 1.7% last year to 2.4% in 2024F and 3.4% in 2025F, remaining a niche segment. This will benefit foldable smartphone hinge demand, and we expect Fositek (6805 TT, NT\$727, OP) and Jarlytec (3548 TT, NT\$214.5, NR) to be key beneficiaries under the Huawei supply chain. We now expect global smartphone shipments growth to be lower than we previously expected given a product transition period in 2Q24-3Q24F with limited new spec upgrades and designs, and pending AI smartphone launches in late 2024-25F, all weighing on replacement demand. As AI smartphone aims to equip with hardware and software capabilities that enable seamless integration and efficient execution of Gen-AI-driven features and applications on a smartphone, we expect more AI models to roll out in 2H24-2025F to spur a replacement cycle. Samsung's S24 is one of the AI smartphone models with a voice translation feature, and several Chinese smartphone brands also come with large language models. The market also expects Apple to launch new smartphones with Gen-AI function in 2024-25F. However, we think overall iPhone shipments should be weaker than we previously expected and may suffer a YoY decline of around 5% in 2024F due to a weak iPhone 15 product cycle. Overall for the smartphone market, we revise down global shipments growth to 1% to 1.2bn units in 2024F, in-line with Mediatek's (2454 TT, NT\$1,005, N) recent guidance of around 1.2bn units (up by low single digits YoY).

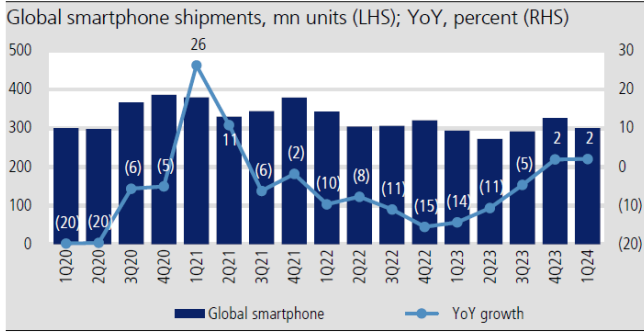
#### Stocks for Action

Despite a recovery of the global smartphone market, growth remains muted in 2024F and we expect foldable smartphone to be the market highlight, while AI smartphone will drive shipments growth in 2H24-2025F. Our top pick in the smartphone sector is Fositek, with a target price of NT\$1,085, on 28x 2025F EPS.

#### Risks

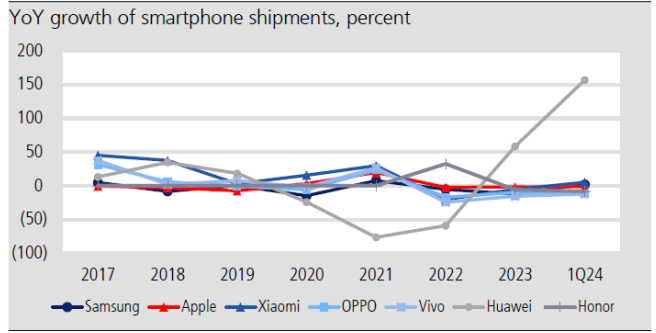
Weak demand; further ASP and margin contraction.

**Figure 1: 1Q24 global smartphone shipments grew 2% YoY**



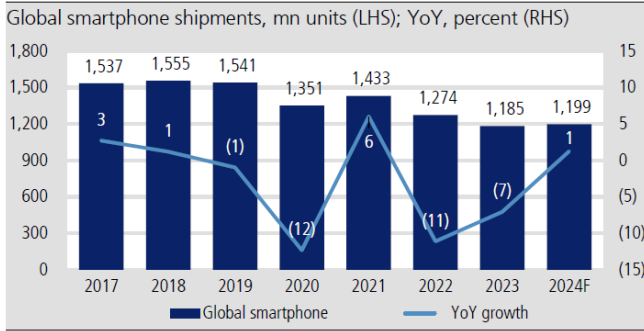
Source: Gartner, KGI Research estimates

**Figure 2: Huawei's smartphone shipments outgrew peers in 1Q24 on a low base**



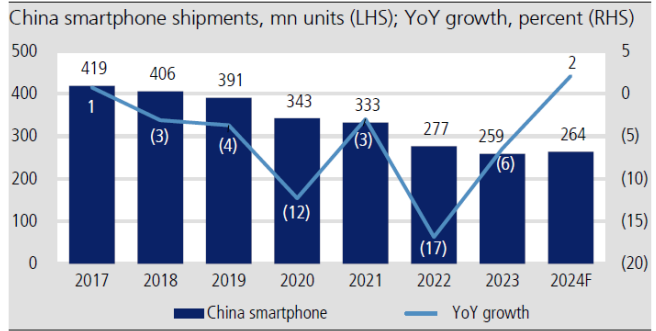
Source: Gartner, KGI Research

**Figure 3: Weak global smartphone demand in 2023, but will return to YoY growth in 2024F**



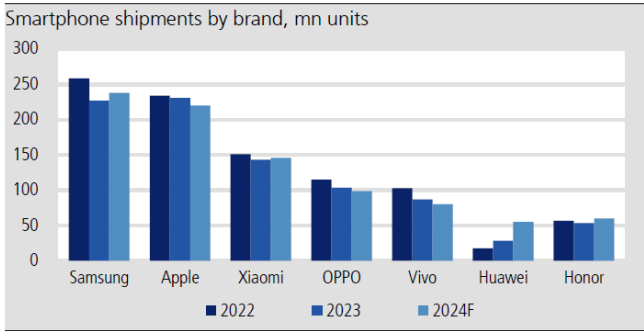
Source: Gartner, KGI Research estimates

**Figure 4: China smartphone demand to grow 2% YoY in 2024F**



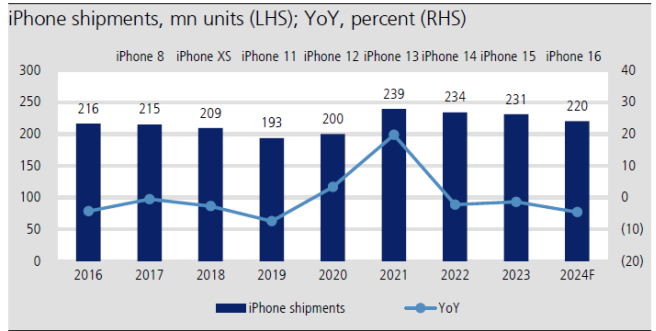
Source: Gartner, KGI Research estimates

**Figure 5: Samsung will regain market leader position in 2024F**



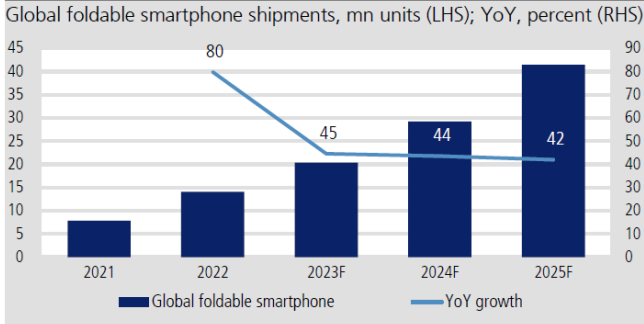
Source: Gartner, KGI Research estimates

**Figure 6: iPhone shipments could drop 5% this year**



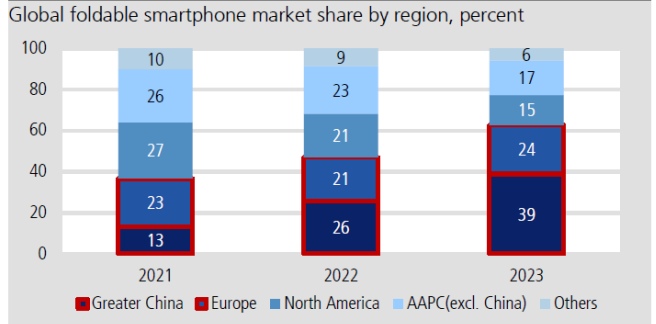
Source: Gartner, KGI Research estimates

**Figure 7: Global foldable smartphone shipments to grow rapidly in 2024F, outperforming the overall industry**

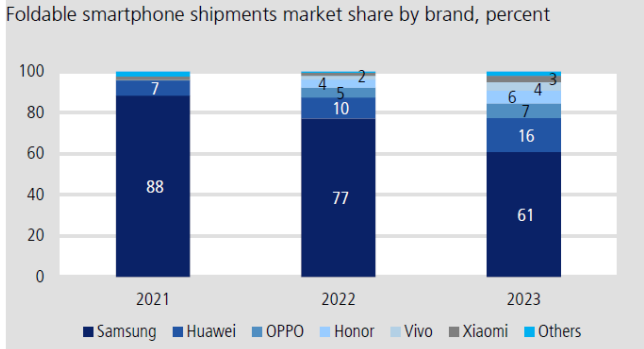


Source: Gartner, KGI Research estimates

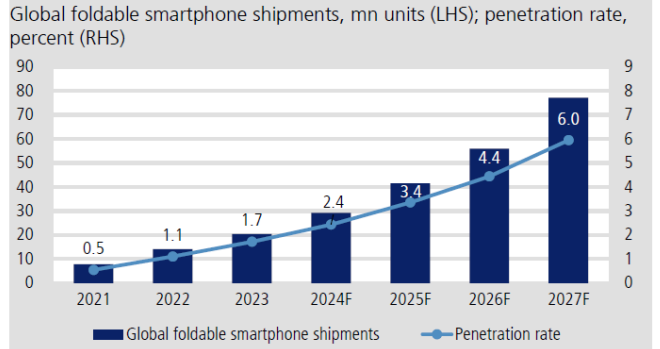
**Figure 8: China & Europe the main foldable smartphone markets**



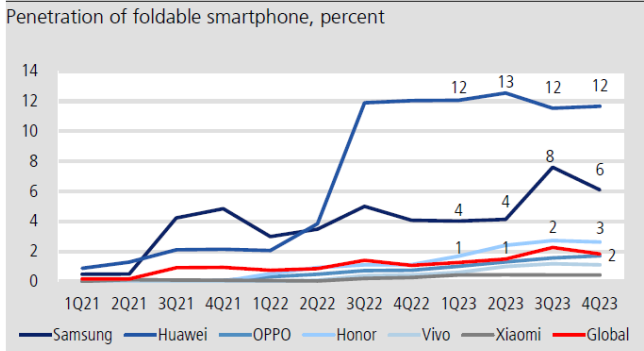
Source: Gartner, KGI Research

**Figure 9: Samsung foldable smartphones dominated in 2023**


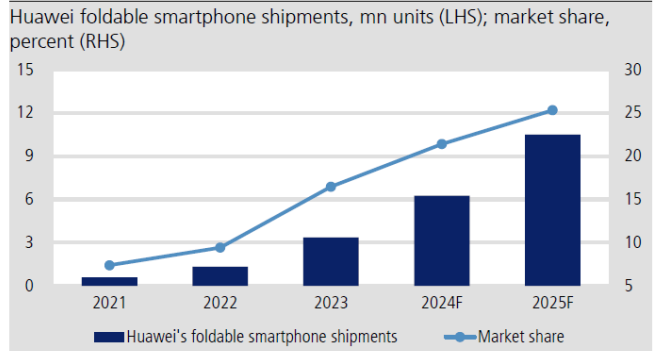
Source: Gartner, KGI Research estimates

**Figure 10: Foldable smartphone penetration is rising, to reach 6% in 2027F**


Source: Gartner, KGI Research estimates

**Figure 11: Huawei & Samsung have higher foldable smartphone penetration rate among peers**


Source: Gartner, KGI Research

**Figure 12: Huawei's foldable smartphone shipments to rise rapidly in 2024-25F, supporting market share growth**


Source: Gartner, KGI Research estimates

**Figure 13: Smartphone supply chain – Valuations**

Sector	Company	Ticker	Related business	Market cap. (US\$mn)	Share price (LCY)	Rating	Target Price (LCY)	EPS (LCY)			EPS YoY (%)			PE (x)			PB (x)			ROE (%)		Cash yield (%)		
								2023	2024F	2025F	2023	2024F	2025F	2023	2024F	2025F	2023	2024F	2025F	2023	2024F	2025F	2023	2024F
Smartphone	Hon Hai	2317 TT	ODM	65,955	155.0	Outperform	164.0	10.25	12.16	15.09	0.4	18.6	24.1	15.1	12.7	10.3	1.4	1.3	1.3	9.6	10.8	12.7	3.5	4.1
	Pegatron	4938 TT	ODM	7,932	97.0	Neutral	94.0	5.90	6.25	7.52	4.2	6.0	20.3	16.4	15.5	12.9	1.4	1.3	1.3	8.5	8.7	10.1	4.1	4.2
	Foxconn Tech*	2354 TT	Casing	2,666	61.4	Not rated	N.A.	3.01	5.41	5.71	(0.3)	79.7	5.5	20.4	11.3	10.8	0.8	0.5	0.5	4.1	7.0	7.1	2.4	3.5
	Merry Elec*	2439 TT	Acoustic	804	119.5	Not rated	N.A.	6.16	7.20	7.49	(9.5)	16.8	4.1	19.4	16.6	16.0	2.1	1.9	N.A.	10.6	11.6	12.3	3.9	4.3
	Fosteek	6805 TT	Hinge	1,530	727.0	Outperform	1,085.0	10.18	21.81	38.72	9.1	114.1	77.6	71.4	33.3	18.8	10.8	9.4	7.7	18.0	30.3	45.0	0.8	1.6
	Jarflytec*	3548 TT	Hinge	435	214.5	Not rated	N.A.	8.69	13.96	N.M.	10.3	60.6	N.A.	24.7	15.4	N.A.	2.6	N.A.	N.A.	10.9	16.3	N.M.	1.4	2.6
	Shin Zu Shing	3376 TT	Hinge	887	154.0	Neutral	190.0	4.30	6.71	8.25	(50.5)	55.9	23.0	35.8	23.0	18.7	1.8	1.8	1.7	5.1	7.8	9.3	2.1	3.3
	Largan Precision	3008 TT	Lens	8,951	2,185.0	Outperform	3,370.0	134.13	168.55	164.06	(20.9)	25.7	(2.7)	16.3	13.0	13.3	1.8	1.6	1.5	11.2	13.0	11.6	3.1	3.8
	Genius Elec*	3406 TT	Lens	1,469	424.5	Not rated	N.A.	27.25	31.37	32.45	(6.2)	15.1	3.4	15.6	13.5	13.1	2.3	2.0	1.8	15.0	15.5	15.4	2.8	2.8
	Auras	3324 TT	Thermal	2,242	826.0	Outperform	660.0	14.28	20.66	27.06	(2.7)	44.7	31.0	57.8	40.0	30.5	15.4	9.6	8.2	20.2	25.0	28.3	0.8	1.1
	Asia Vital	3017 TT	Thermal	7,553	642.0	Outperform	800.0	14.11	18.44	26.65	19.7	30.7	44.5	45.5	34.8	24.1	11.2	9.7	8.1	28.3	29.2	35.8	1.1	1.4
	Mediatek	2454 TT	IC design	49,345	1,005.0	Neutral	986.0	48.51	57.98	70.65	(35.0)	19.5	21.8	20.7	17.3	14.2	3.8	3.8	3.8	17.9	21.9	26.5	5.5	6.3
	Win Semi	3105 TT	PA	1,854	142.5	Outperform	185.0	(0.19)	6.24	8.51	N.M.	N.M.	36.3	N.M.	22.8	16.7	1.8	1.7	1.5	(0.2)	7.5	9.4	0.0	2.7
	Visual Photonics*	2455 TT	PA	812	143.0	Not rated	N.A.	2.43	4.47	5.59	(17.6)	84.1	25.0	58.8	32.0	25.6	8.6	7.3	6.5	14.6	24.3	26.9	1.5	2.2
	Advanced Wireless*	8086 TT	PA	784	130.0	Not rated	N.A.	0.42	4.40	5.18	500.0	947.9	17.7	309.5	29.5	25.1	3.4	3.2	3.1	1.1	9.9	9.7	0.3	2.5
	Compeq Mfg	2313 TT	PCB	2,839	77.6	Outperform	100.0	3.39	6.32	8.00	(49.6)	86.6	26.7	22.9	12.3	9.7	2.2	2.0	1.8	10.1	17.4	19.6	1.9	3.4
	Elite Material	2383 TT	CCL	4,182	397.0	Outperform	575.0	16.07	24.52	27.73	5.4	52.6	13.1	24.7	16.2	14.3	5.4	4.7	4.1	23.6	31.8	31.3	2.5	3.8
	Kinsus	3189 TT	Substrate	1,353	97.0	Neutral	96.0	0.10	5.22	9.57	(99.3)	4875.1	83.5	925.1	18.6	10.1	1.3	1.2	1.1	0.1	6.8	11.8	1.0	2.6
	Unimicron Tech	3037 TT	Substrate	8,543	182.5	Outperform	235.0	7.88	9.45	16.48	(60.7)	19.8	74.4	23.1	19.3	11.1	3.1	2.8	2.4	13.6	15.1	23.4	1.6	2.1
	Zhen Ding Tech	4958 TT	FPCB	3,314	114.0	Neutral	99.0	6.77	9.91	N.A.	(55.0)	46.5	N.A.	16.8	11.5	N.A.	1.1	1.0	N.A.	6.5	9.1	N.A.	3.0	4.4
	Flexium Intercon	6269 TT	FPCB	915	92.4	Neutral	82.0	6.94	8.23	N.A.	(35.9)	18.5	N.A.	13.3	11.2	N.A.	1.1	1.0	N.A.	8.7	9.6	N.A.	3.8	4.3

Source: KGI Research, Bloomberg

\*: Bloomberg consensus; Dell and Lenovo data based on calendar year.

Figure 14: Global smartphone shipments by brand

Vendor	Global smartphone shipments (mn units)																		
	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24F	2018	2019	2020	2021	2022	2023
Samsung	76.6	57.7	69.0	69.0	75.2	61.7	64.8	56.5	60.1	53.6	58.0	55.0	61.4	295.0	296.2	253.0	272.3	258.2	226.7
Apple	58.6	49.3	48.5	83.0	61.0	48.9	50.9	73.0	58.7	45.6	49.9	76.3	58.0	209.0	193.5	199.8	239.2	233.9	230.6
Xiaomi	48.9	51.1	44.5	44.8	40.5	37.8	39.3	33.3	30.4	32.5	40.0	40.1	32.0	122.4	126.0	145.8	189.3	151.0	143.0
OPPO	38.4	33.6	33.6	32.6	30.8	26.9	25.7	28.8	27.0	25.0	26.6	25.1	24.0	118.8	118.7	111.8	138.2	112.2	103.8
Vivo	38.7	32.2	36.0	29.1	25.0	25.8	24.4	24.7	22.8	21.4	21.1	21.8	20.0	102.0	109.6	107.4	136.0	99.9	87.1
Lenovo	10.8	12.2	13.1	15.0	11.7	11.6	10.7	10.3	10.6	10.1	11.7	13.3	12.0	39.2	39.3	33.9	51.1	44.3	45.7
Honor	6.7	7.7	14.2	14.3	14.4	14.5	13.5	14.4	12.5	12.3	13.8	14.8	11.5	N.A.	N.A.	N.A.	42.8	56.7	53.4
Tecno Telecom	7.5	7.2	7.7	8.7	8.6	8.3	8.8	9.4	8.7	9.1	9.2	9.9	9.2	19.4	21.3	21.3	31.2	35.1	37.0
TCL Communication	3.1	3.2	3.6	3.8	4.3	4.3	3.9	4.0	3.7	3.7	4.3	4.2	3.2	21.9	17.7	8.5	13.7	16.6	16.0
Huawei	19.5	11.8	6.3	5.7	5.1	3.7	4.5	4.6	4.3	6.1	7.3	10.5	11.0	202.9	240.6	182.6	43.3	17.8	28.2
Other	70.8	63.7	67.6	73.3	66.5	60.8	59.6	61.5	55.0	52.4	50.2	55.4	57.5	424.6	377.6	287.1	275.5	248.3	213.0
Top-10	308.8	266.1	276.5	305.8	276.5	243.5	246.8	258.9	238.8	219.6	241.9	271.2	242.3	1,130.6	1,163.0	1,064.2	1,157.2	1,025.7	971.5
Total	379.6	329.8	344.2	379.2	342.9	304.3	306.4	320.4	293.8	272.0	292.1	326.6	299.8	1,555.3	1,540.7	1,351.3	1,432.7	1,274.0	1,184.5
	YoY (%)																		
Samsung	38.5	5.5	(14.6)	11.0	(1.8)	6.8	(6.0)	(18.1)	(20.1)	(13.0)	(10.6)	(2.6)	2.2	(8.2)	0.4	(14.6)	7.6	(5.2)	(12.2)
Apple	43.1	28.3	19.4	3.8	4.3	(0.7)	5.1	(12.0)	(3.8)	(6.7)	(1.9)	4.6	(1.3)	(2.7)	(7.4)	3.3	19.7	(2.2)	(1.4)
Xiaomi	64.9	80.5	0.2	3.2	(17.2)	(25.9)	(11.5)	(25.7)	(24.9)	(14.0)	1.8	20.3	5.3	37.6	3.0	15.7	29.8	(20.2)	(5.3)
OPPO	60.3	42.4	12.6	(5.2)	(19.9)	(20.0)	(23.4)	(11.7)	(12.1)	(7.1)	3.3	(12.6)	(11.2)	6.0	(0.1)	(5.8)	23.7	(18.8)	(7.5)
Vivo	73.4	41.6	20.9	(10.6)	(35.6)	(19.8)	(32.2)	(15.1)	(8.8)	(17.2)	(13.7)	(11.5)	(12.2)	2.3	7.5	(2.0)	26.7	(26.6)	(12.8)
Lenovo	74.5	48.8	30.8	57.2	8.4	(5.3)	(18.4)	(30.9)	(9.8)	(12.5)	9.4	28.8	13.7	(17.1)	0.4	(13.7)	50.5	(13.3)	3.1
Honor	N.A.	N.A.	N.A.	N.A.	115.4	88.7	(4.4)	0.5	(12.7)	(14.9)	1.6	3.3	(8.2)	N.A.	N.A.	N.A.	N.A.	32.6	(5.8)
Tecno Telecom	51.8	54.0	42.0	41.3	14.2	14.3	14.5	7.7	1.9	10.2	4.1	5.1	5.7	33.7	10.1	(0.3)	46.7	12.5	5.3
TCL Communication	7.8	98.9	71.3	99.2	40.2	35.8	8.5	6.1	(14.7)	(13.0)	8.6	5.9	(13.7)	(4.7)	(19.0)	(52.1)	61.2	21.3	(3.8)
Huawei	(54.1)	(78.2)	(87.7)	(83.5)	(74.1)	(68.5)	(29.6)	(19.7)	(15.2)	63.0	63.5	131.4	156.8	34.8	18.6	(24.1)	(76.3)	(59.0)	58.4
Other	(1.6)	4.3	(6.4)	(10.4)	(6.1)	(4.6)	(11.9)	(16.1)	(17.3)	(13.8)	(15.8)	(9.8)	4.7	(30.9)	(11.1)	(24.0)	(4.1)	(9.8)	(14.2)
Top-10	35.0	12.5	(6.2)	0.5	(10.5)	(8.5)	(10.8)	(15.3)	(13.6)	(9.8)	(2.0)	4.7	1.5	22.7	2.9	(8.5)	8.7	(11.4)	(5.3)
Total	26.3	10.8	(6.2)	(1.8)	(9.7)	(7.7)	(11.0)	(15.5)	(14.3)	(10.6)	(4.7)	1.9	2.1	1.2	(0.9)	(12.3)	6.0	(11.1)	(7.0)
	QoQ (%)																		
Samsung	23.3	(24.6)	19.5	(0.1)	9.0	(18.0)	5.2	(12.9)	6.4	(10.7)	8.1	(5.2)	11.6						
Apple	(26.8)	(15.9)	(1.6)	71.2	(26.4)	(19.8)	4.1	43.4	(19.5)	(22.3)	9.5	52.8	(24.0)						
Xiaomi	12.7	4.4	(12.9)	0.7	(9.6)	(6.6)	4.0	(15.3)	(8.8)	7.0	23.1	0.0	(20.1)						
OPPO	11.7	(12.4)	(0.0)	(3.1)	(5.6)	(12.5)	(4.3)	11.8	(6.1)	(7.5)	6.5	(5.5)	(4.6)						
Vivo	19.0	(16.8)	11.7	(19.3)	(14.2)	3.6	(5.5)	1.1	(7.7)	(6.0)	(1.6)	3.6	(8.4)						
Lenovo	13.4	13.4	7.1	14.2	(21.8)	(1.0)	(7.6)	(3.4)	2.1	(3.9)	15.4	13.7	(9.8)						
Honor	N.A.	15.0	84.6	1.0	0.4	0.7	(6.4)	6.1	(12.7)	(1.8)	11.7	7.9	(22.5)						
Tecno Telecom	21.1	(3.4)	6.7	13.2	(2.2)	(3.2)	6.9	6.5	(7.5)	4.7	0.9	7.5	(6.9)						
TCL Communication	63.6	2.1	14.8	3.8	15.1	(1.0)	(8.2)	1.5	(7.4)	0.9	14.5	(1.0)	(24.6)						
Huawei	(43.1)	(39.4)	(46.4)	(10.5)	(10.9)	(26.3)	19.8	2.1	(5.9)	41.7	20.2	44.5	4.4						
Other	(13.5)	(10.0)	6.2	8.4	(9.4)	(8.5)	(2.0)	3.1	(10.6)	(4.6)	(4.2)	10.4	3.8						
Top-10	1.5	(13.8)	3.9	10.6	(9.6)	(11.9)	1.3	4.9	(7.8)	(8.0)	10.2	12.1	(10.6)						
Total	(1.7)	(13.1)	4.4	10.2	(9.6)	(11.3)	0.7	4.6	(8.3)	(7.4)	7.4	11.8	(8.2)						
	Global market share (%)																		
Samsung	20.2	17.5	20.0	18.2	21.9	20.3	21.2	17.6	20.5	19.7	19.9	16.8	20.5	19.0	19.2	18.7	19.0	20.3	19.1
Apple	15.4	14.9	14.1	21.9	17.8	16.1	16.6	22.8	20.0	16.8	17.1	23.4	19.3	13.4	12.6	14.8	16.7	18.4	19.5
Xiaomi	12.9	15.5	12.9	11.8	11.8	12.4	12.8	10.4	10.3	12.0	13.7	12.3	10.7	7.9	8.2	10.8	13.2	11.9	12.1
OPPO	10.1	10.2	9.8	8.6	9.0	8.8	8.4	9.0	9.2	9.2	9.1	7.7	8.0	7.6	7.7	8.3	9.6	8.8	8.8
Vivo	10.2	9.8	10.5	7.7	7.3	8.5	8.0	7.7	7.7	7.9	7.2	6.7	6.7	6.6	7.1	7.9	9.5	7.8	7.4
Lenovo	2.8	3.7	3.8	3.9	3.4	3.8	3.5	3.2	3.6	3.7	4.0	4.1	4.0	2.5	2.6	2.5	3.6	3.5	3.9
Honor	1.8	2.3	4.1	3.8	4.2	4.8	4.4	4.5	4.3	4.5	4.7	4.5	3.8	N.A.	N.A.	N.A.	3.0	4.5	4.5
Tecno Telecom	2.0	2.2	2.2	2.3	2.5	2.7	2.9	2.9	3.0	3.4	3.2	3.0	3.1	1.2	1.4	1.6	2.2	2.8	3.1
TCL Communication	0.8	1.0	1.1	1.0	1.3	1.4	1.3	1.3	1.3	1.4	1.5	1.3	1.1	1.4	1.2	0.6	1.0	1.3	1.3
Huawei	5.1	3.6	1.8	1.5	1.5	1.2	1.5	1.4	1.5	2.2	2.5	3.2	3.7	13.0	15.6	13.5	3.0	1.4	2.4
Other	18.7	19.3	19.7	19.3	19.4	20.0	19.5	19.2	18.7	19.3	17.2	17.0	19.2	27.3	24.5	21.2	19.2	19.5	18.0
Top-10	81.3	80.7	80.3	80.7	80.6	80.0	80.5	80.8	81.3	80.7	82.8	83.0	80.8	72.7	75.5	78.8	80.8	80.5	82.0
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	100.0	100.0	100.0	100.0

Source: Gartner, KGI Research

All the above named KGI analyst(s) is SFC licensed person accredited to KGI Asia Ltd to carry on the relevant regulated activities. Each of them and/or his/her associate(s) does not have any financial interest in the respectively covered stock, issuer and/or new listing applicant.

**Disclaimer**

All the information contained in this report is not intended for use by persons or entities located in or residing in jurisdictions which restrict the distribution of this information by KGI Asia Limited ("KGI") or an affiliate of KGI. Such information shall not constitute investment advice, or an offer to sell, or an invitation, solicitation or recommendation to subscribe for or invest in any securities or investment products or services nor a distribution of information for any such purpose in any jurisdiction. In particular, the information herein is not for distribution and does not constitute an offer to sell or the solicitation of any offer to buy any securities in the United States of America, or to or for the benefit of United States persons (being residents of the United States of America or partnerships or corporations organised under the laws of the United States of America or any state, territory or possession thereof). All the information contained in this report is for general information and reference purpose only without taking into account of any particular investor's objectives, financial situation or needs. Such information is not intended to provide professional advice and should not be relied upon in that regard.

Some of KGI equity research and earnings estimates are available electronically on www.kgi.com.hk. Please contact your KGI representative for information. The information and opinions in this report are those of KGI internal research activity. KGI does not make any representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information and opinions contained in this report. The information and opinions contained in this report are subject to change without any notice. No person accepts any liability whatsoever for any loss however arising from any use of this report or its contents. This report is not to be construed as an invitation or offer to buy or sell securities and/or to participate in any investment activity. This report is being supplied solely for informational purposes and may not be redistributed, reproduced or published (in whole or in part) by any means for any purpose without the prior written consent of KGI. Members of the KGI group and their affiliates may provide services to any companies and affiliates of such companies mentioned herein. Members of the KGI group, their affiliates and their directors, officers and employees may from time to time have a position in any securities mentioned herein.