

# China Technology Sector

## Solid visibility on China 5G device demand

During China Mobile Global Partner Conference on 14-16 Nov, China Mobile (CM) announced its 5G device target in 2020: 1) 70mn 5G sub, 2) 100mn 5G smartphones, 3) 50mn smart home devices, and 4) 15mn 5G module. In addition, CM expected 5G phones to cost RMB2k/1.5k in 3Q/4Q20E, largely in-line, while CM's estimate of 150mn China 5G shipment is well above consensus of 100mn China 5G shipment and 150-200mn global 5G shipment. We believe CM's commitment is positive to end-device demand (smartphone, smart home, IoT) in 2020, and accelerated 5G upgrade will benefit selective components, such as Sunny Optical, Q-tech, BYDE, Tongda, FIT Hon Teng and Luxshare.

- **China Mobile 2020 5G target: 70mn 5G sub, 100mn 5G phones, 50mn smart home devices.** CM estimated 150mn 5G smartphone shipment in China in 2020E, well above 100mn for consensus estimates. It also implies significant upside to 150-200mn for consensus global 5G shipment in 2020E. We noted that recent company guidance is increasingly bullish, such as Mediatek's 140mn+ (100mn in China) and TSMC's 200mn units. Overall, we maintain our bullish view and estimate China 5G shipment of 153mn/296mn/386mn and global 5G shipment of 217mn/547mn/829mn in FY20/21/22E.
- **Xiaomi to sell RMB2k 5G phones in 1H20E; Apple/Huawei to ship 55-65mn in 2020.** We believe Xiaomi's pricing strategy will intensify OEM competition by lowering 5G phone price to RMB2k in 1H20E, which will boost China 5G phone adoption in 2020 (24%/35% for our FY19/20E estimate). Overall, given strong branding and advantage of self-developed SoC, we estimate Apple/Huawei will become the two largest 5G brands with 55-65mn each in 2020, while Xiaomi/Oppo/Vivo will ship 15-20mn each in 2020.
- **Accelerated 5G cycle to drive selective spec upgrade; Prefer Sunny/Q-tech/ BYDE/ Tongda/ FIT/ Luxshare.** Given BOM cost pressure from more expensive chipsets on 5G phones, we expect only selective components will benefit from spec/ASP upgrade. We maintain our positive view on 5G content growth names, such as Sunny/Q-tech for multi-cam/3D sensing, BYDE/Tongda for casing upgrade, and Luxshare for antenna/ wearables demand. Upcoming catalysts include 5G SoC in 1Q20E, CES in early Jan and MWC in Feb.

### Valuation Table

Name	Ticker	Rating	Mkt Cap (USD mn)	Price (LC)	TP (LC)	Up/Down -side	P/E (x) FY19E FY20E	P/B (x) FY19E FY20E	ROE FY19E
AAC Tech	2018 HK	Sell	8,221	51.20	29.6	-42%	28.4 21.6	2.8	9.9
Sunny Optical	2382 HK	Buy	17,305	123.4	140.0	13%	35.3 24.3	10.2	28.9
FIT Hon Teng	6088 HK	Buy	2,616	3.05	3.8	24%	10.1 8.9	1.2	12.1
Tongda	698 HK	Buy	497	0.58	0.9	57%	4.5 3.8	0.5	11.7
Q-tech	1478 HK	Buy	1,600	10.88	9.5	-13%	26.7 20.6	4.4	16.4
BYDE	285 HK	Buy	4,295	14.36	15.0	4%	19.5 15.2	1.7	8.8
Luxshare	002475 CH	Buy	26,172	34.76	32.1	-8%	37.4 27.2	7.1	18.9
Goertek	002241 CH	Hold	9,566	20.70	9.1	-56%	54.5 48.1	4.1	7.6

Source: Bloomberg, CMBIS estimates

### MARKET PERFORM (Maintain)

#### China Technology Sector

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## Focus Charts

Figure 1: China Mobile 5G target in 2020



Source: China Mobile, CMBIS estimates

Figure 2: China Mobile estimated shipment timeline



Source: China Mobile, CMBIS estimates

Figure 3: Major 5G chipset mass production timeline

	4Q19	1Q20	2Q20	3Q20	4Q20
High-End		SDM865+X55 Exynos 980		Kirin 900 5G SoC	
Mid-End	SDM7290 Exynos 980	MTK6885	Kirin 820	SDM600 5G SoC	
Low-End					SDM400 5G SoC MTK 5G SoC

Source: IHS, CMBIS estimates

Figure 4: 5G phone shipment forecast by brand

	2019E	2020E	2021E	2022E
Samsung	5.1	37	111	146
Apple	-	57	88	120
Huawei	1.9	63	133	196
Oppo	0.4	17	50	98
Vivo	0.4	18	46	85
Xiaomi	0.6	19	44	65
Others	0.5	6	75	118
<b>5G penetration</b>	<b>1%</b>	<b>16%</b>	<b>40%</b>	<b>61%</b>
<b>Global 5G shipment</b>	<b>9</b>	<b>217</b>	<b>547</b>	<b>829</b>
<b>China 5G shipment</b>	<b>2</b>	<b>153</b>	<b>296</b>	<b>386</b>

Source: CMBIS estimates

Figure 5: Supply chain mapping and sales mix exposure

Company	Ticker	Apple	Huawei	Samsung	Other CN brands	Others	Major handset products
AAC Tech	2018 HK	45%	15%	25%	10%	5%	Acoustics, haptics, casing, stepper motor
FIT Hon Teng	6088 HK	45%	3%			52%	Connector, wireless charging
Sunny Optical	2382 HK		30%	10%	45%	15%	Camera module, handset/auto lens
BYDE	285 HK	5%	30%	15%	35%	15%	Metal/glass casing, ODM/OEM
Tongda	698 HK	20%	5%	10%	35%	25%	Plastic casing, waterproof
Q-Tech	1478 HK		20%		70%	15%	Camera module/lens, fingerprint
TK Group	2283 HK	10%				90%	Plastic molding
Truly	732 HK			3%	62%	35%	CCM, fingerprint, display
Cowell	1445 HK	90%		5%		5%	Camera Module
Luxshare	002475 CN	60%	10%	3%		27%	Wireless, Airpod, acoustics/haptics
Goertek	002241 CN	35%	15%	10%	10%	30%	Acoustics, Airpod, AR/VR, Wearables
O-film	002456 CN	15%	20%	10%	45%	10%	CCM, fingerprint, touch panel
Lens Tech	300433 CN	50%	15%	10%	10%	15%	Glass casing

Source: Company data, CMBIS estimates

Figure 6: Peers Comparison

Company	Ticker	Rating	Mkt Cap (US\$ mn)	Price (LC)	TP (LC)	Up/Down -side	P/E (x)		P/B (x)		ROE (%)	
							FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
<b>Optics</b>												
Sunny Optical	2382 HK	Buy	17,306	123.40	140.0	13%	35.3	24.3	10.2	7.9	28.9	32.4
Q Tech	1478 HK	Buy	1,600	10.88	9.5	-13%	26.7	20.6	4.4	3.7	16.4	18.0
Truly	732 HK	NR	416	1.00	NA	NA	7.9	4.3	0.4	0.4	5.1	8.3
Cowell	1415 HK	NR	124	1.19	NA	NA	11.5	6.2	0.4	0.4	5.1	5.2
Largan	3008 TT	NR	19,819	4500.00	NA	NA	20.8	17.8	4.7	4.0	24.6	24.9
Genius	3406 TT	NR	1,395	421.00	NA	NA	20.6	13.2	4.6	3.6	25.2	30.7
Primax	4915 TT	NR	977	66.40	NA	NA	12.8	11.1	2.1	1.8	15.5	15.8
Lite-On	2301 TT	NR	3,882	49.95	NA	NA	13.2	12.3	1.6	1.5	12.0	12.0
O-Film	002456 CH	NR	5,037	13.00	NA	NA	48.8	22.3	3.5	3.1	9.0	13.9
Samsung Elec	009150 KS	NR	7,243	112500.00	NA	NA	14.3	16.7	1.6	1.5	11.6	9.6
Lg Innotek	011070 KS	NR	2,457	123500.00	NA	NA	15.2	10.8	1.2	1.1	8.6	11.2
Partron	091700 KS	NR	569	11750.00	NA	NA	8.9	8.8	1.7	1.5	22.5	18.9
Average							19.7	14.0	3.0	2.5	15.4	16.7
<b>Acoustics/Haptics</b>												
AAC Tech	2018 HK	Sell	8,222	51.20	29.6	-42%	28.4	21.6	2.8	2.6	9.9	12.0
Goertek	002241 CH	Hold	9,565	20.70	9.1	-56%	54.5	48.1	4.1	3.9	7.6	8.1
Shenzhen Sunwa	300136 CH	NR	5,518	39.95	NA	NA	35.1	26.7	8.1	6.2	24.3	24.5
Jinlong	300032 CH	NR	348	2.94	NA	NA	-	-	-	-	-	-
Merry	2439 TT	NR	994	144.00	NA	NA	11.2	10.2	2.4	2.5	25.5	26.0
Knowles	KN US	NR	2,020	22.07	NA	NA	19.7	17.1	1.6	1.6	8.8	9.1
Nidec	6594 JP	NR	43,671	15855.00	NA	NA	39.9	41.3	4.6	4.3	12.2	11.2
Alps Alpine	6770 JP	NR	4,915	2405.00	NA	NA	18.9	17.6	1.4	1.3	8.4	7.5
Average							29.7	26.1	3.6	3.2	13.8	14.1
<b>Connector</b>												
FIT Hon Teng	6088 HK	Buy	2,616	3.05	3.8	24%	10.1	8.9	1.2	1.1	12.1	12.2
Luxshare	002475 CH	Buy	26,171	34.76	32.1	-8%	37.4	27.2	7.1	5.7	18.9	20.8
TE	TEL US	NR	31,140	93.10	NA	NA	16.9	17.9	3.0	2.9	17.4	15.7
Amphenol	APH US	NR	30,316	102.25	NA	NA	27.9	25.8	7.5	6.7	27.5	26.8
Delphi	DLPH US	NR	1,009	11.72	NA	NA	5.0	5.2	2.8	2.2	55.9	46.2
Average							19.5	17.0	4.3	3.7	26.3	24.4
<b>Casing</b>												
BYDE	285 HK	Buy	4,295	14.36	15.0	4%	19.5	15.2	1.7	1.6	8.8	10.3
Tongda	698 HK	Buy	497	0.58	0.9	57%	4.5	3.8	0.5	0.5	11.7	12.8
TK Group	2283 HK	Buy	384	3.58	4.1	14%	7.8	6.5	2.3	2.3	29.7	35.7
Ju Teng	3336 HK	NR	285	1.89	NA	NA	10.2	7.8	0.4	0.4	2.5	4.1
Everwin	300115 CH	NR	2,160	16.48	NA	NA	39.8	30.5	3.2	2.9	8.2	9.9
Lens Tech	300433 CH	NR	8,235	13.55	NA	NA	33.7	24.4	2.9	2.6	9.6	12.2
Chaozhou Three	300408 CH	NR	4,415	17.40	NA	NA	27.8	21.7	3.9	3.4	13.5	15.4
Casetek	5264 TT	NR	695	50.30	NA	NA	-	17.8	0.7	0.6	(1.3)	2.9
Catcher	2474 TT	NR	7,011	277.50	NA	NA	15.8	10.9	1.3	1.3	8.8	12.1
Jabil	JBL US	NR	5,957	39.02	NA	NA	13.1	11.3	3.5	3.0	24.8	27.1
Average							19.1	15.0	2.1	1.9	11.6	14.3

Source: Bloomberg, CMBIS

**Figure 7: Peers Comparison**

		Market Cap	Price	P/E (x)		P/B (x)		ROE (%)	
Company	Ticker	(US\$ mn)	(LC)	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
Equipment									
ZTE	763 HK	17,476	21.65	17.7	15.4	2.6	2.3	15.8	15.7
FiberHome	600498 CH	4,367	26.16	32.6	26.1	2.8	2.6	8.9	10.2
Nokia	NOK US	19,460	3.45	15.8	13.2	1.3	1.1	7.4	-
Ericsson	ERIC US	30,427	9.13	29.9	16.8	3.5	3.1	6.0	18.4
		Average		24.0	17.9	2.5	2.3	9.6	14.7
Optical Fiber/Cable									
YOFC	6869 HK	2,409	12.74	11.7	8.7	1.0	0.9	8.4	9.5
Hengtong	600487 CH	4,330	15.39	14.0	12.0	2.1	1.9	15.4	17.3
FiberHome	600498 CH	4,367	26.16	32.6	26.1	2.8	2.6	8.9	10.2
		Average		19.4	15.6	2.0	1.8	10.9	12.3
OC									
Accelink	002281 CH	2,731	28.05	48.7	36.0	4.8	4.3	10.2	12.6
Innolight	300308 CH	4,263	41.20	47.1	30.7	4.4	3.9	10.5	13.8
O-Net	877 HK	430	4.12	14.3	11.9	1.3	1.2	8.7	10.4
FIT	6088 HK	2,616	3.05	9.6	9.0	1.2	1.1	12.3	12.7
		Average		29.9	21.9	2.9	2.6	10.4	12.4
Antenna/RF									
Comba	2342 HK	586	1.81	29.8	13.4	1.2	1.1	3.8	7.6
Tongyu	002792 CH	1,207	25.03	60.5	28.6	4.0	3.5	5.9	12.4
Mobi	947 HK	93	0.91	-	-	-	-	-	-
Sunway	300136 CH	5,519	39.95	35.1	26.7	8.1	6.2	24.3	24.5
Luxshare	002475 CH	26,172	34.76	37.4	27.2	7.1	5.7	18.9	20.8
		Average		40.7	24.0	5.1	4.1	13.2	16.3
PCB/CCL									
SCC	002916 CH	7,774	164.91	47.3	34.5	11.0	8.6	24.6	25.7
SY Tech	600183 CH	7,242	23.26	35.9	28.3	6.5	5.5	19.0	21.1
WUS	002463 CH	5,522	22.83	34.6	26.7	7.7	6.1	22.8	23.3
		Average		39.3	29.8	8.4	6.8	22.1	23.4
Infrastructure									
China Tower	788 HK	36,650	1.61	48.7	31.7	1.4	1.4	2.9	4.2
CCS	552 HK	4,610	5.09	10.4	9.2	0.9	0.9	9.3	9.9
		Average		29.5	20.5	1.2	1.1	6.1	7.1

Source: Bloomberg, CMBIS

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