



# TaiSol Electronics Co., Ltd.

(Stock Code : 3338)

## 2019 "5G Applications" Investor Conference

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# About TaiSol

TaiSol Electronics focused on thermal management solution, is an experienced PC component supplier. Recent years TaiSol launched industry transformation to 5G base station and 5G smartphone, which lead to whole new heat dissipation solutions accompany with dramatic demands. TaiSol successfully create 5G new applications and new market opportunities base on our previous outstanding technology in PC industry. Q3 FY2019 consolidated financial results showed sales revenue with NT\$32.72 billion with 32.2% growth , and EPS NT\$2.46.



# Safe Harbor Notice

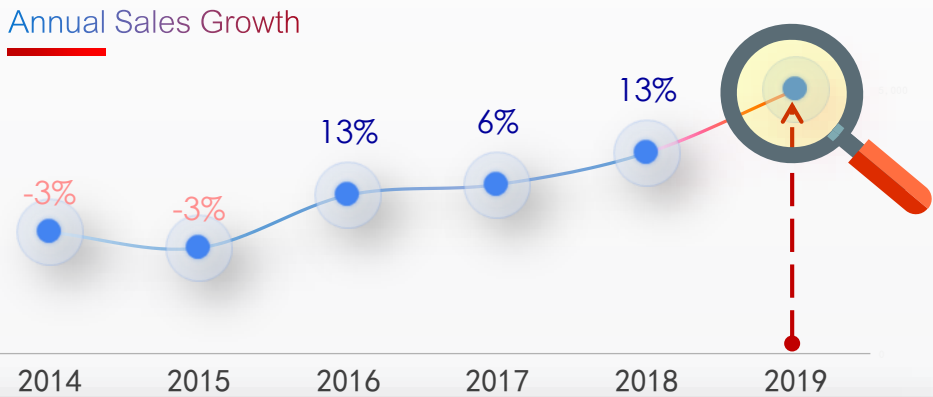
This Presentation contains forward-looking statements and is subject to risks and uncertainties. Actual results may differ materially from those contained in the forward-looking statements. The Projections should not be interpreted as legally binding commitments, but rather as flexible information subject to change occasionally.

# Q3 FY2019 Consolidated Financial Results

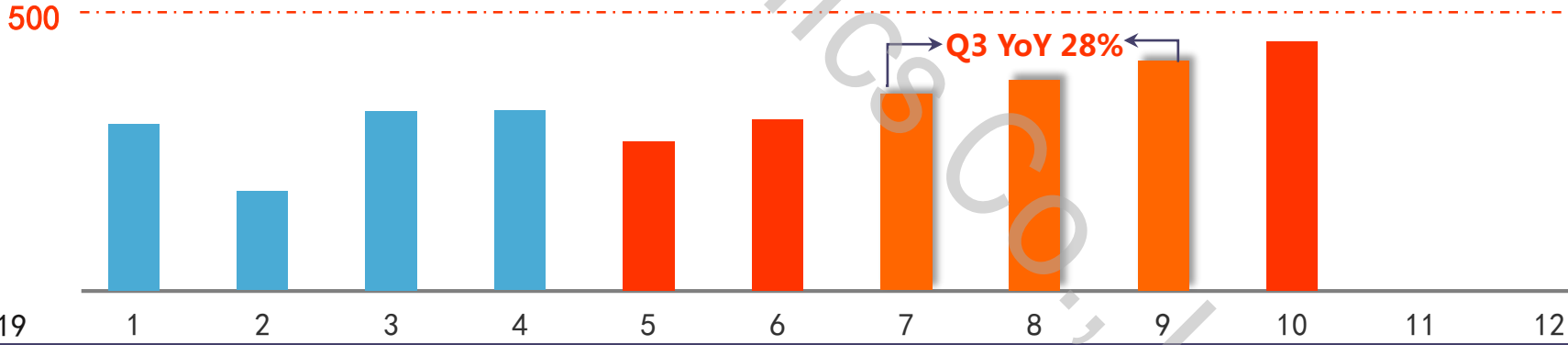
NT\$ THOUSAND	2019 Q3	2018 Q3	2019 Q1~Q3	2018 Q1~Q3	Q3 YOY	Q1~Q3 YOY
NET SALES	1,297,750	1,012,752	3,272,007	2,475,665	28%	32%
GROSS MARGIN	314,888	226,995	782,117	488,754	39%	60%
<b>GROSS MARGIN %</b>	<b>24.2%</b>	<b>22.4%</b>	<b>23.9%</b>	<b>19.7%</b>		
OPERATING MARGIN	134,158	69,009	304,685	67,940	94%	348%
<b>OPERATING MARGIN %</b>	<b>10.3%</b>	<b>6.8%</b>	<b>9.3%</b>	<b>2.7%</b>		
PRE-TAX INCOME	145,738	86,703	299,993	87,799	68%	242%
NET INCOME	99,817	77,135	213,172	77,366	29%	176%
<b>NET INCOME %</b>	<b>7.7%</b>	<b>7.6%</b>	<b>6.5%</b>	<b>3.1%</b>		
EPS	1.15	0.99	2.46	1.07		

# Annual Growth & 2019 Sales Performance

Focusing on 5G Industry Applications. Starting from 5G Deployment which involving into diversity appliances of smartphone, mobile device, AIoT end-device, data center & clouding computing, electronic system of EV, new energy and future transportation. Expecting to maintain high sales performance in 2019.

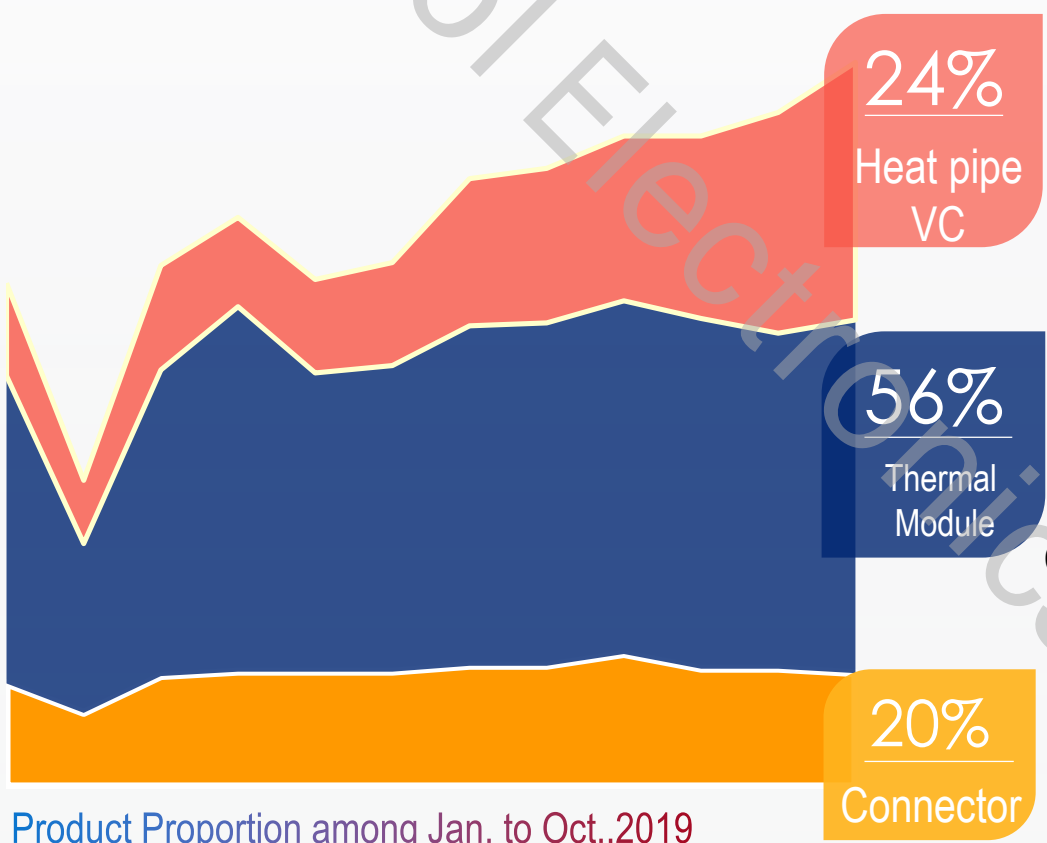


(NT\$ Million)



	1	2	3	4	5	6	7	8	9	10	11	12
Sales	348	207	375	376	311	358	410	432	455	462	---	---
Growth	31%	28%	26%	69%	18%	41%	39%	16%	31%	60%	---	---

# 2019 Jan~Oct Product Proportion & Growth



	2018	2019 1~10	Growth%
Smartphone	2%	10%	550% (Continuous Growth)

Conventional	16%	14%	24%
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	2018	2019 1~10	Growth%
Telecom	13%	19%	96% (Continuous Growth)

Conventional	48%	37%	4%
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	2018	2019 1~10	Growth%
Conventional	21%	20%	27%

2019 1-10 Sales Revenue **3,733,549,000**

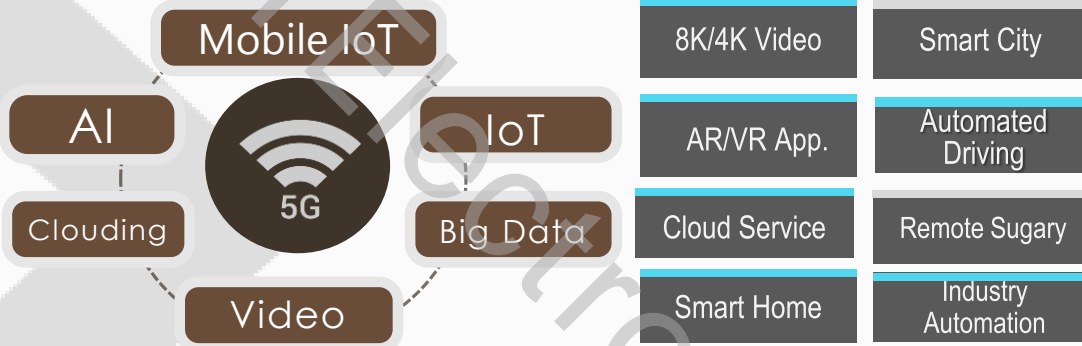
Growth **35%**



# 5G Innovations for New Business Opportunities

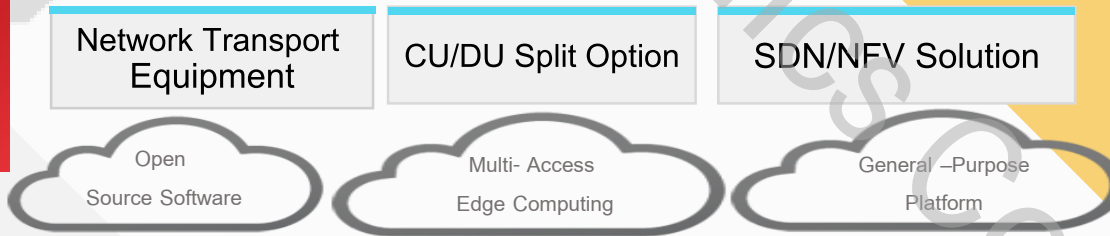
## AI Device & Application Acceleration

Enhanced mobile  
broadband  
(增強移動寬帶)  
**eMBB**



## Telecom **Networks** Reconstruction

Massive machine  
type  
communication  
(海量機器連接)  
**mMTC**



## Telecom **Infrastructure** Upgrade

Ultra-reliable &  
Low latency mobile  
communications  
(高可靠低時延連接)  
**URLLC**



**Tele-com  
Appliances**



**Customer  
Premise  
Equipment**



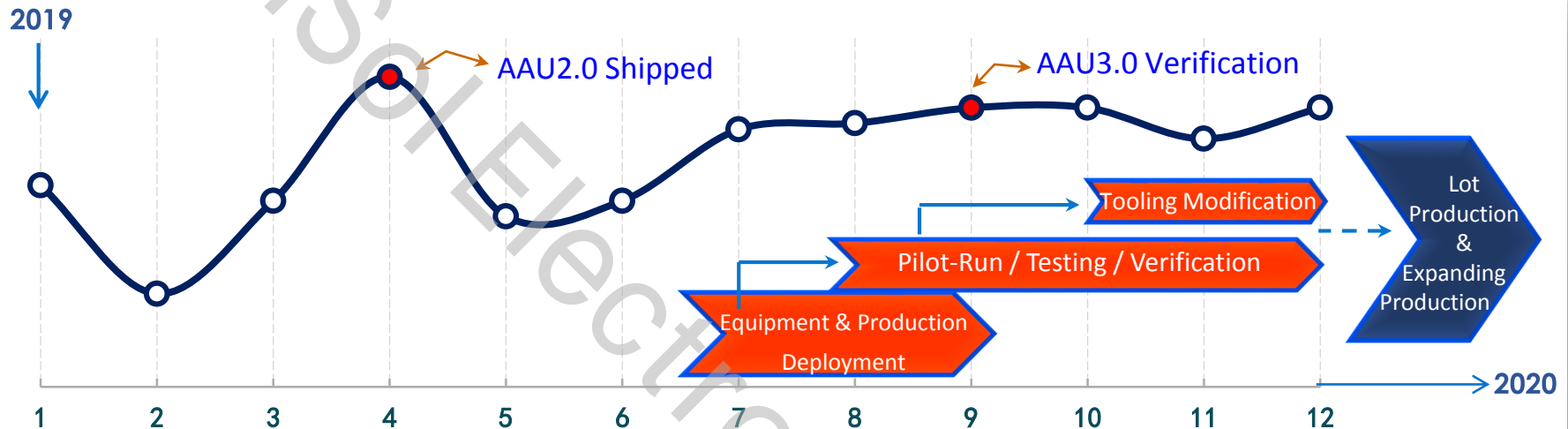
**Server & Storage**



**Tele-com  
Equipment**



**Collaborate on  
Chipset  
Development**



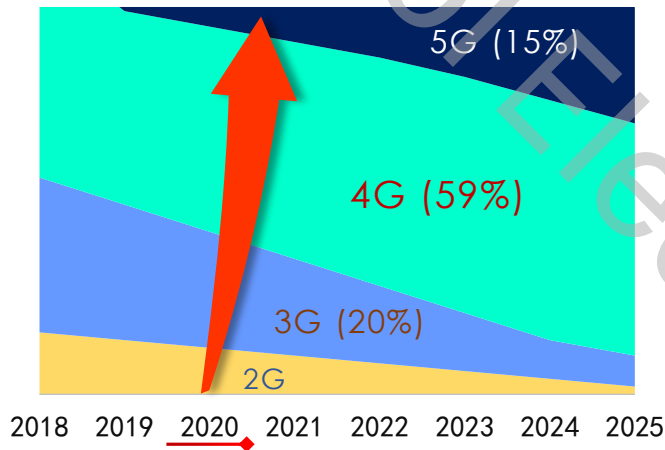
### Customer Demand & Growth

- Main Customer expected to ship **50,000~60,000** sets of AAU2.0 in 2019 (1base station assembled with 3 AAU)
- Technical details fixed among Jul. to Sep, and final specification fixed on Nov. TaiSol maintain first priority of customer's qualified suppliers. Tooling modification keep on going and expecting to perform pre-mass production on Q1,2020.
- China telecom supplier postponed AAU3.0 business until this December whose expectation of batch production in Q1,2020 and mass production in Q2. Main Customer total demands expanding to 5,000set/day.
- AAU2.0 = [Thermal Conductivity Components](#) + Enclosure to Heat Dissipation ; TaiSol is the main supplier of [Thermal Conductivity Components](#) . **ASP=US\$100** . AAU 3.0 contains multiple business models to expect a huge increasing of ASP.

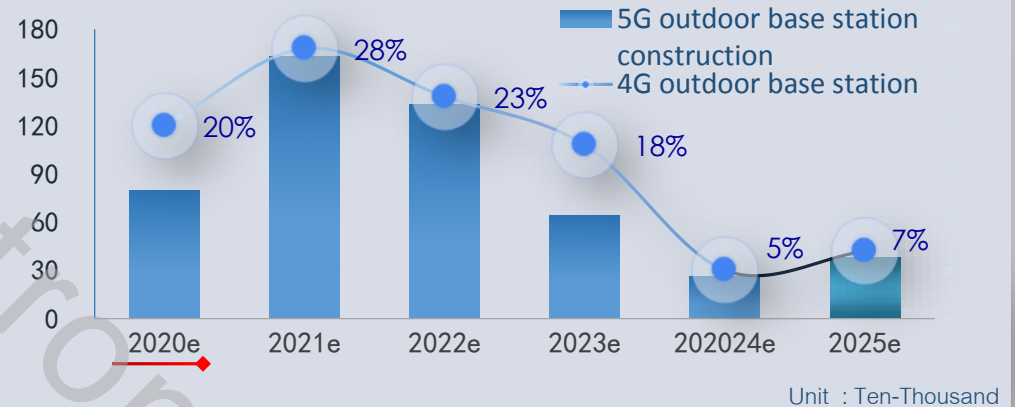


## 5G Telecom Market & Trends

— 2018~2025 Proportion of GSM User



— 2020~2025 China 5G outdoor base station construction

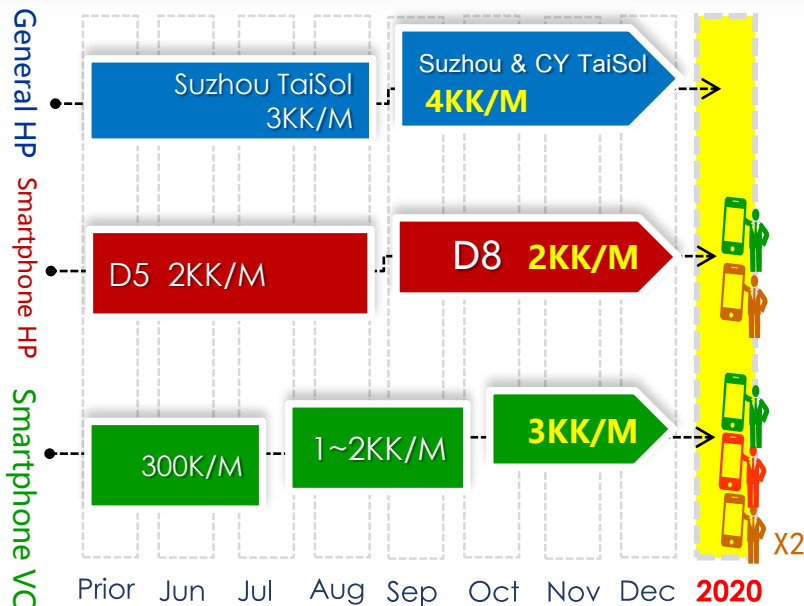
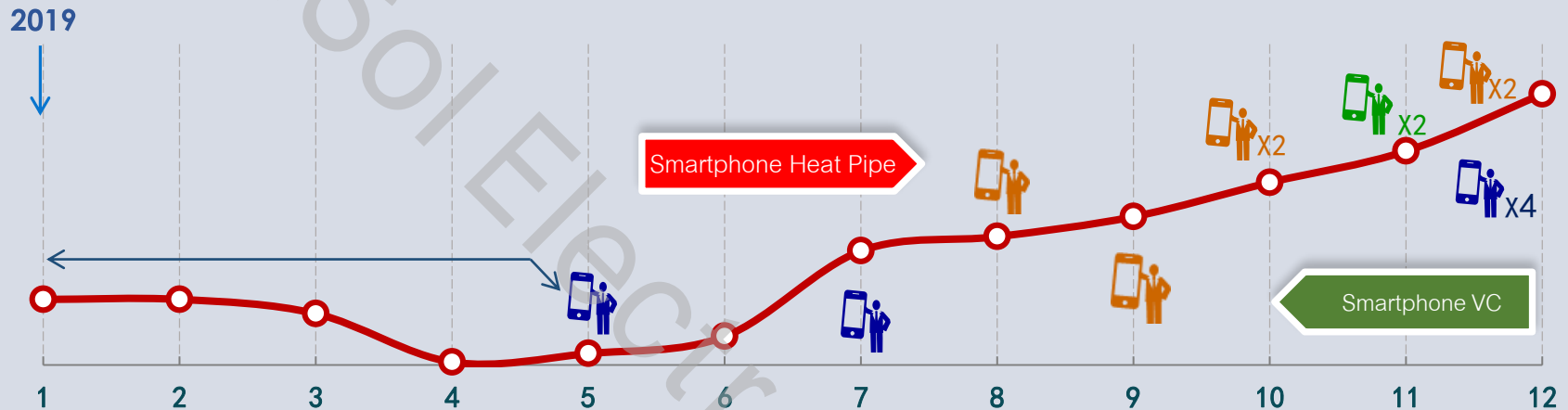


- China planned to built total 800 thousand units of macro base station in FY2020.
- Top Three China telecom companies built total 5,680 thousand units of 4G macro base station among 2012-2019. Those three companies shall built 5,470 thousand units of 5G macro base station among 2020 to 2025.

① China Unicom & China Telecom worked together with joint construction & sharing Protocol of 5G Network.

② China Mobile built own independent network for now.

China Telecom companies performed “Joint Construction and Sharing Protocol of 5G Network”. 4G/5G shall experience a long period of joint construction.



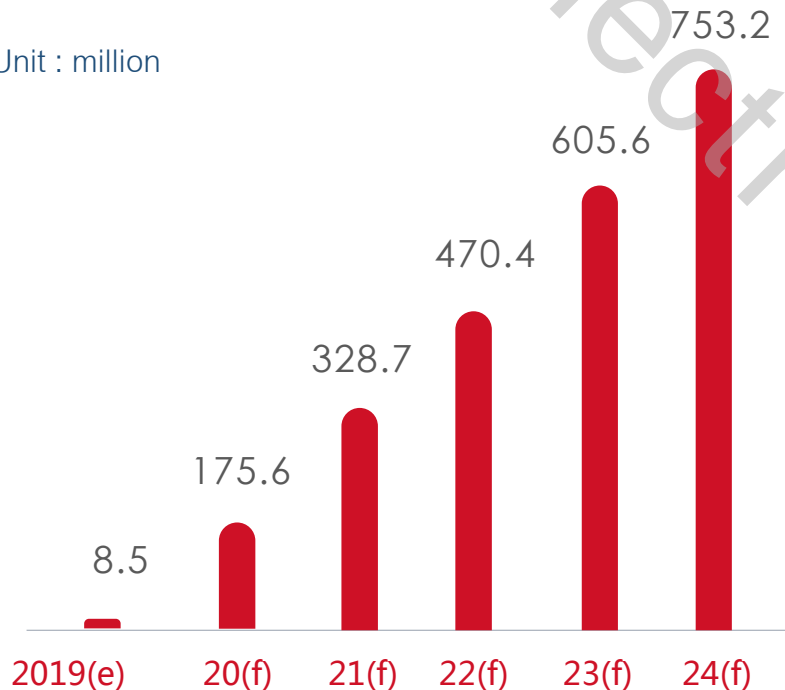
### Customer Demand & Growth

- Heat pipe applied on smartphone shipped in Q4,2018
- VC applied on smartphone shipped in Q3,2019
- Heat pipe and VC shipped at the same time for now. VC continuously expand capacity according to customer requirements. Sales performance increase per month since July.
- Expectation of VC shipment shall reach 3KK/M, heat pipe shipment maintain 2KK/M until the end of 2019. Open orders are already scheduled until Mar. 2020.

## 5G Smartphone Market & Trends

2019~2024 Global 5G Smartphone Shipments

Unit : million



- Main Smartphone companies including [Samsung](#) 、 [Huawei](#) 、 [Xiaomi](#) 、 [Vivo/Oppo](#) launched respective 5G smartphones which might increase the overall shipments of 5G smartphones.
- 5G smartphone expected to domain 13.2% of smartphone market. In 2020, which shall reach to 1.8 billion.
- Global shipments of 5G smartphone shall exceed 4G as the mainstream in 2023 .



Being the global top smartphone companies, Samsung and Huawei take Vapor Chamber design to solve heat dissipation for 5G smartphone which shall expand the demands of VC shipments.



Sales Strategy : [Vapor Chamber applied on high-end model](#) ,and [Heat pipe applied on middle & entry level model](#). TaiSol has completed customer relation and production capacity and expect to increase operation performance.

# Operation Outlook

## 2019 Q4

Completion of Capacity Expansion in  
Telecom & Mobile Application

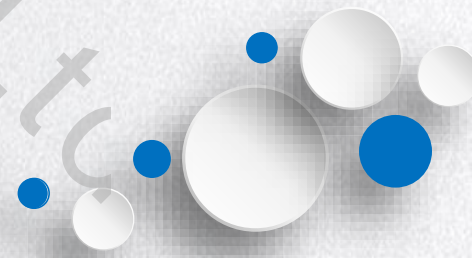
## 2020



**5G base station** : New product shipped, 4G demands maintain, 5G-AAU3.0 shipped on Q2, and expecting to continuous growth in operation performance



**Intelligent end-device** (smartphone, CPE) : Expending capacity for sustainable growth , and expecting to continuous growth in operation performance



-Thank you -



Q & A

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