



# 丘鈦科技（集團）有限公司

## Q Technology (Group) Company Limited

Stock Code 股份代號：1478

# 2020 Annual Results Investor Presentation

26 March 2021

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**1. 2020 Annual Results Business Review**

**2. Market Trend Analysis**

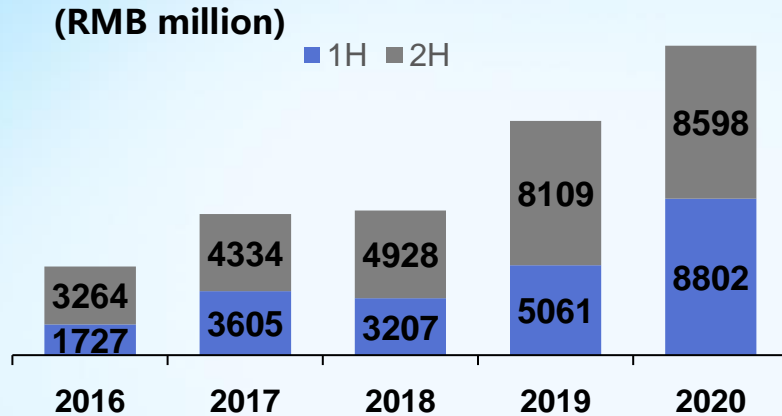
**3. Planning and Outlook of 2021**

# Financial Highlights

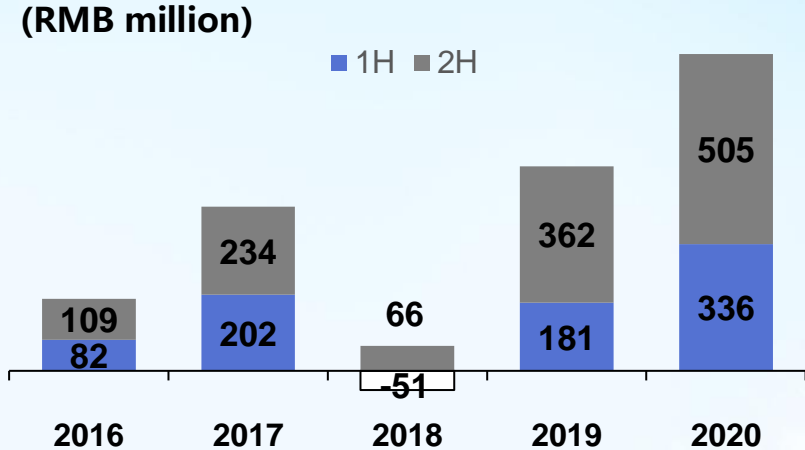
RMB '000	FY			2H	1H	HoH Change
	2020	2019	YoY Change	2020	2020	
CCM sales volume	<b>392.6KK</b>	406.0KK	-3.3%	212.4KK	180.2KK	+17.9%
FPM sales volume	<b>91.9KK</b>	102.0KK	-9.8%	52.0KK	39.9KK	+30.3%
Revenue	<b>17,400,369</b>	13,169,678	+32.1%	8,598,349	8,802,020	-2.3%
Gross profit	<b>1,770,585</b>	1,179,872	+50.1%	1,038,578	732,007	+41.9%
Gross profit margin	<b>10.2%</b>	9.0%	+1.2 pt	12.1%	8.3%	+3.8 pts
OPEX ratio	<b>4.4%</b>	4.1%	+0.3 pt	4.6%	4.2%	+0.4 pt
Net profit/loss	<b>840,108</b>	542,372	+54.9%	504,586	335,522	+50.4%
Net profit margin	<b>4.8%</b>	4.1%	+0.7 pt	5.9%	3.8%	+2.1 pts
Basic EPS	<b>71.9分</b>	47.6分	+51.1%	43.1 cents	28.8 cents	+49.7%
Operating cash flow	<b>3,603,951</b>	2,399,551	+50.2%	2,944,579	659,372	+346.6%
Return on equity (ROE)	<b>22.2%</b>	18.9%	+3.3 pts	N/A	N/A	N/A

# Highlight 1: Revenue and Net Profit Broke Record High Again

## Revenue in past 5 years



## Net profit in past 5 years

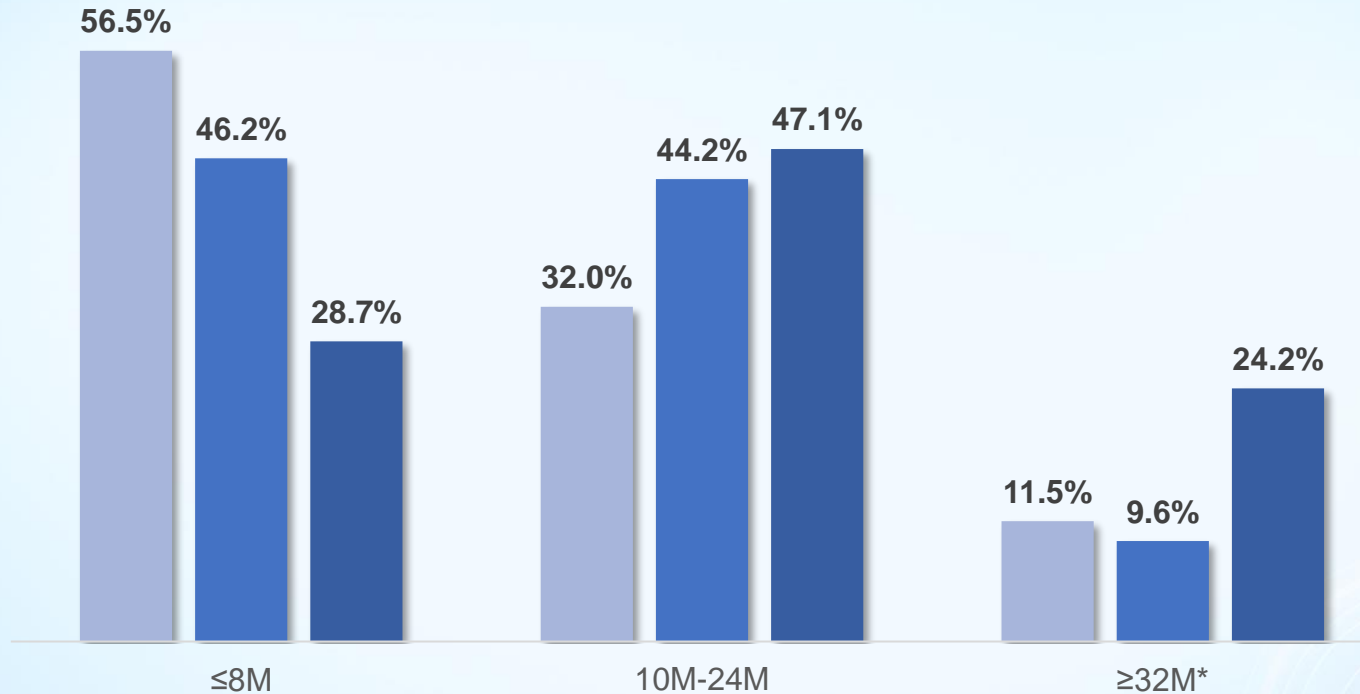


- For the Year, the revenue of the Group broke record high again, amounted to approx. RMB 17.4 billion, representing an increase of approx. 32.1% as compared with that of 2019. The steady growth in revenue was mainly attributable to the significant progress made in the implementation of the Group's product structure optimisation strategy over the years. During the Year, the proportion of the sales volume of camera module products with resolutions of 10 mega pixels and above to the sales volume of camera module products of the Group increased by approx. 17.5pts to approx. 71.3%, and the proportion of the sales volume of camera module products with resolutions of 32 mega pixels and above to the sales volume of camera module products increased by approx. 14.6pts to approx. 24.2%, driving the ASP of camera modules to increase by approx. 51.7% from approx. RMB25.52 for last year to approx. RMB 38.72
- Net Profit of the Group for the Year was approx. RMB 840 million, representing a growth of approx. 54.9% as compared with that of 2019, which hit another record high. The main reasons were that: (i) the Group recorded a steady growth in revenue for the year ended 31 December 2020; (ii) the gross profit margin of the camera module business increased steadily

# Highlight 2: Product Mix Improved Significantly

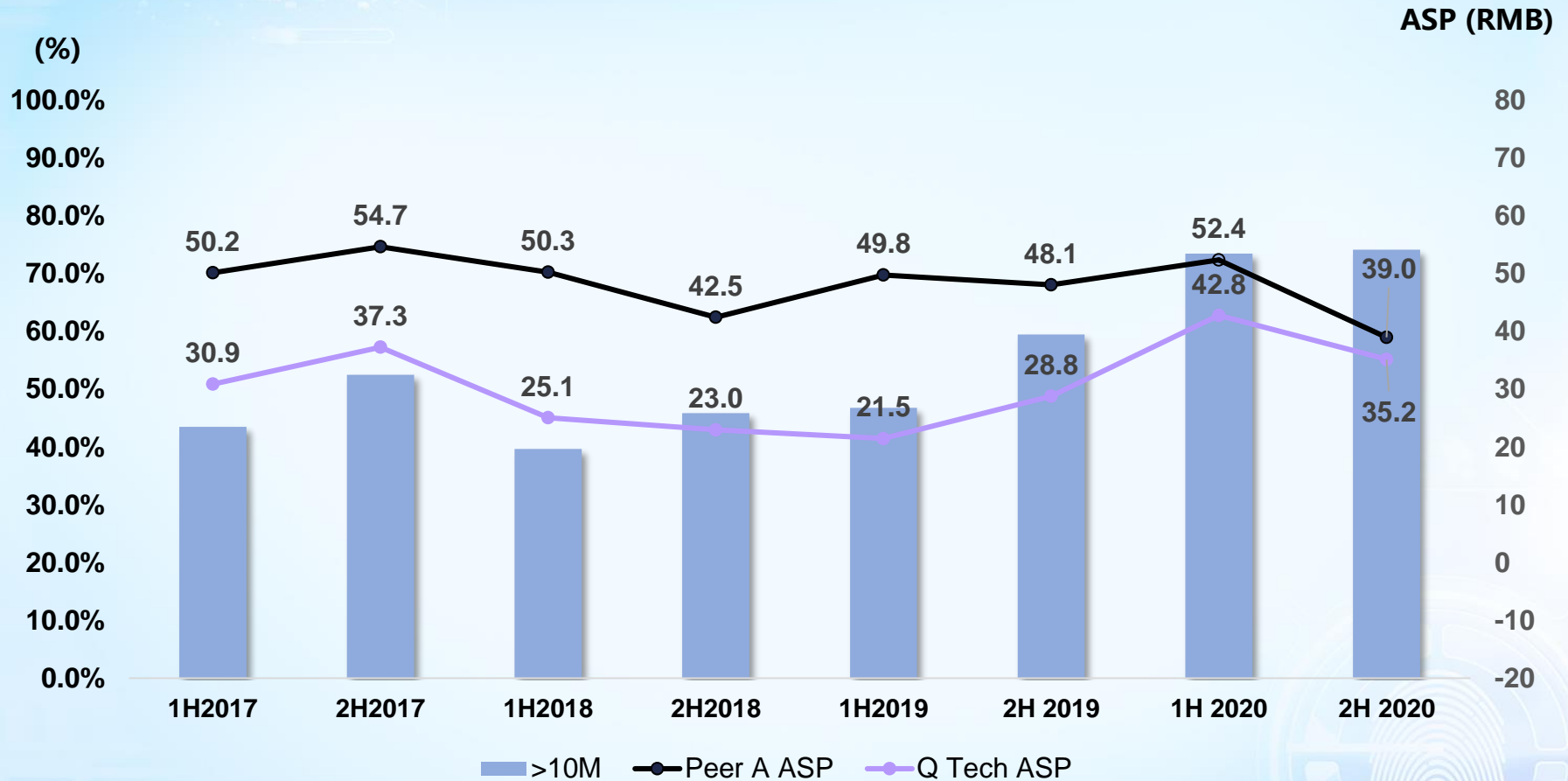
Product Mix of CCM

■ 2018 ■ 2019 ■ 2020



**\*Products include 32 million pixels and above's single-camera modules, dual/multi-camera modules, 3D modules, car camera modules, and other camera modules**

# Highlight 3: ASP of CCM Catching up Market Leader

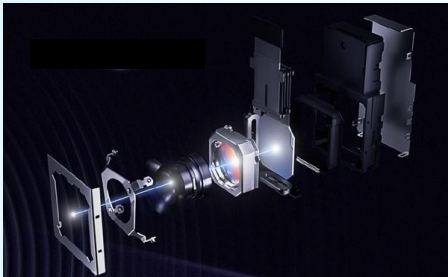


# Highlight 4: Optimized Smartphone Customer Mix, Significant Increase of Automobile and IoT Customers



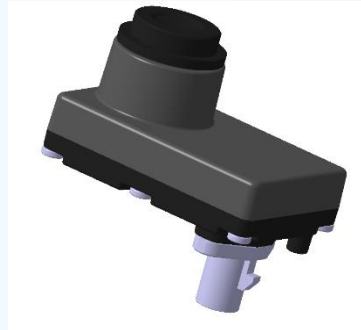
# Landmark Products Launched in 3 Major Areas

## Mobile: Micro Gimble Stabilizer



- Asymmetric 360-degree rotation
- Achieves 200% increase in stabilizing
- Focusing on improving video shooting stabilizing and low light shooting
- Involves 26 patents that have been applied for and under review

## Automobile: 1M ADAS Module



- 360-degree view imaging
- Blind spot detection
- Automatic brake warning
- Lane departure warning

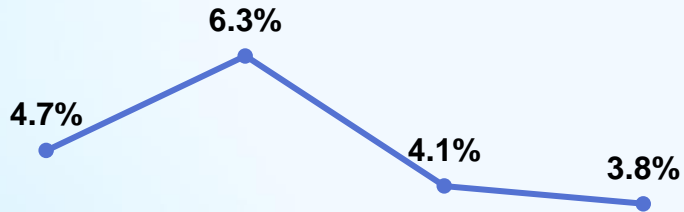
## Drone (IoT): Obstacle Avoidance Modules



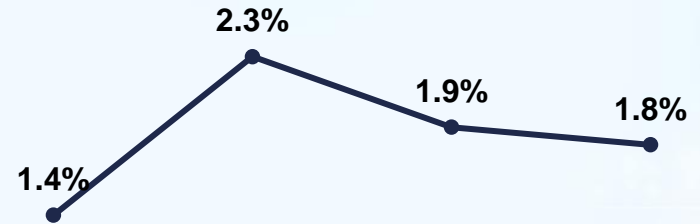
- Assembling 8 different resolution modules
- High-precision obstacle avoidance shooting

# Highlight 5: Automation Continues to Deepen with Labour and Depreciation Costs Continue to be Optimized

Labour Cost / Revenue



Depreciation Cost / Revenue



2017

2018

2019

2020

2017

2018

2019

2020

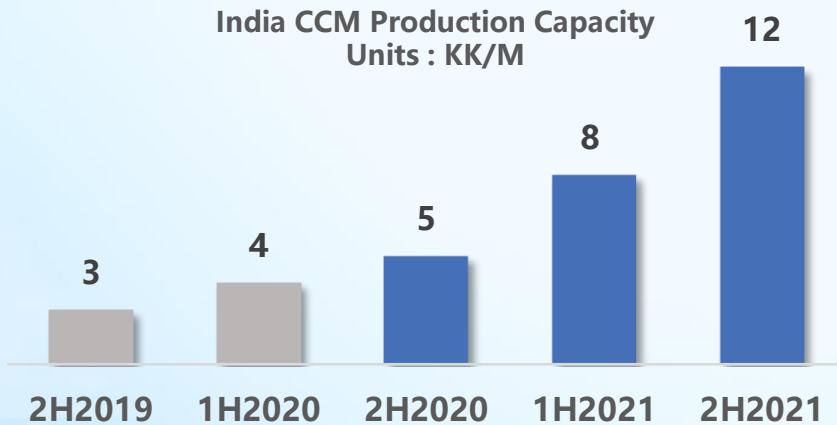
# Highlight 6 : India Production Capacity Grows Steadily

## □ Factory buildings

- **Company:** Kunshan Q Tech Microelectronics (India) PVT. Ltd
- **Staff Team :** 200+ Engineers
- **Factory Size:**
  - ① Phase 1: Construction area 5500m<sup>2</sup>, Land Plot:10500m<sup>2</sup>
  - ② Phase 2: Construction area 21800m<sup>2</sup>, Land Plot 40000m<sup>2</sup>

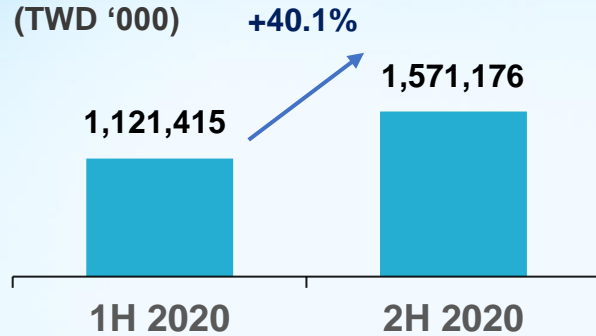


## □ Capacity planning

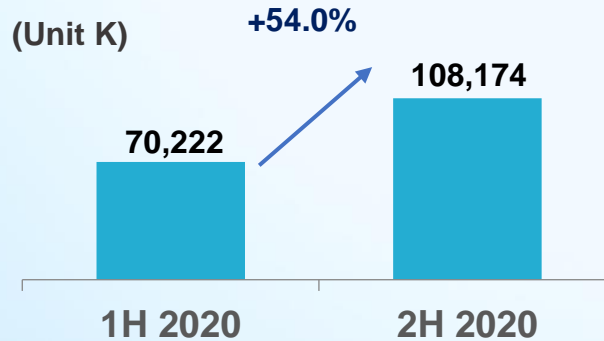


# Highlight 7: Newmax Results Improved HoH in 2H2020 Significantly

## Revenue

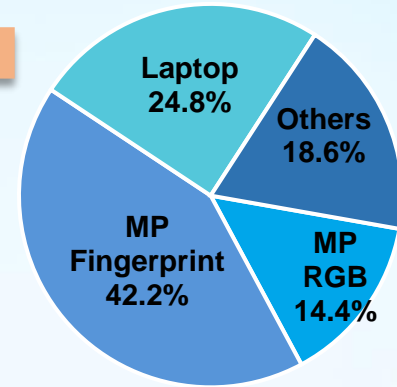


## Sales Volume

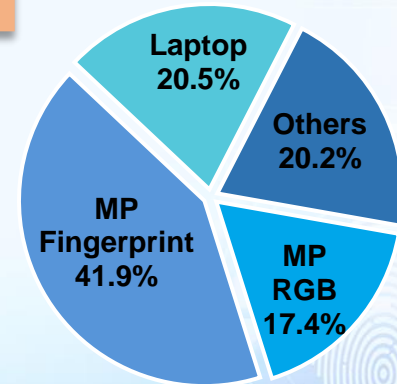


## Product Mix

### 1H 2020

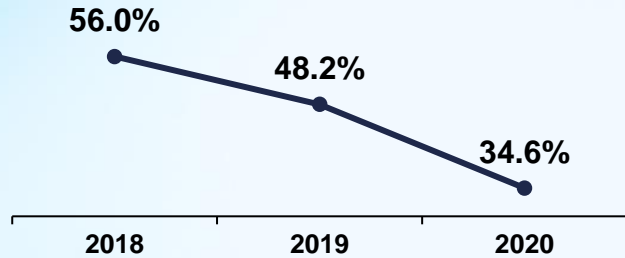


### 2H 2020

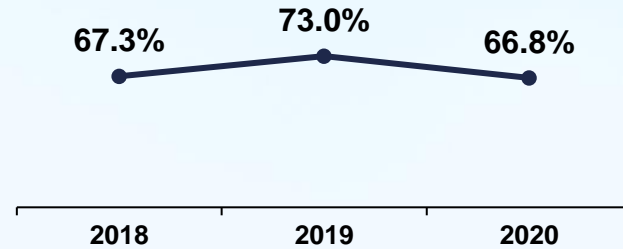


# Highlight 8 : Stringent Internal Control System to Tackle Risks

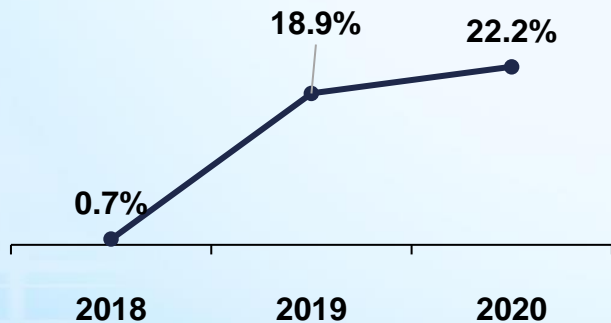
## Debt to Equity Ratio



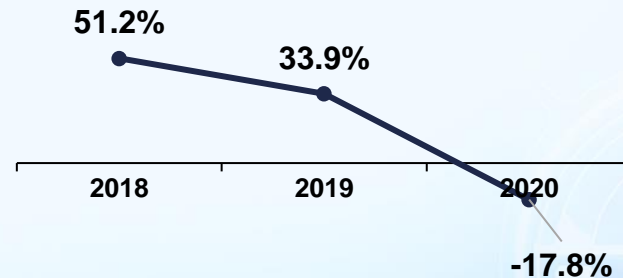
## Debt to Asset Ratio



## Return to Equity Ratio

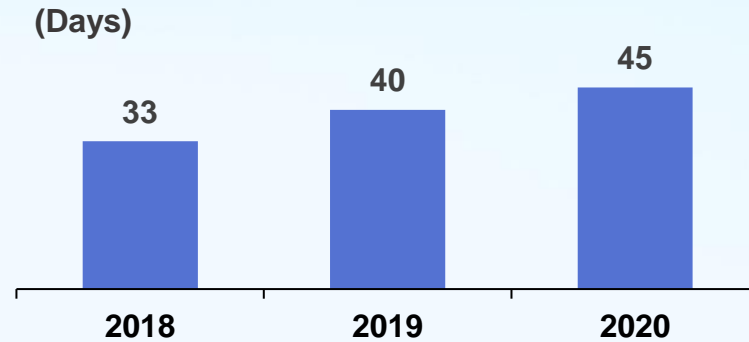


## Net Debt to Equity Ratio

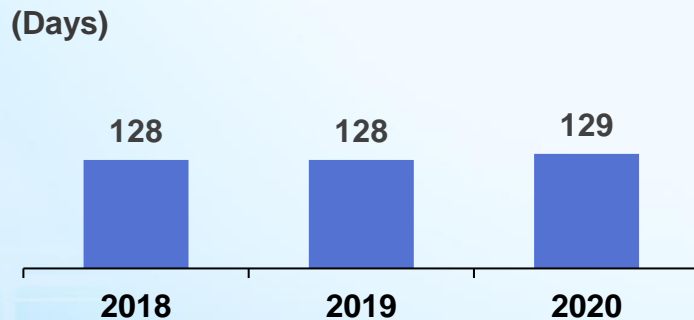


# Highlight 8 : Stringent Internal Control System to Tackle Risks (Cont'd )

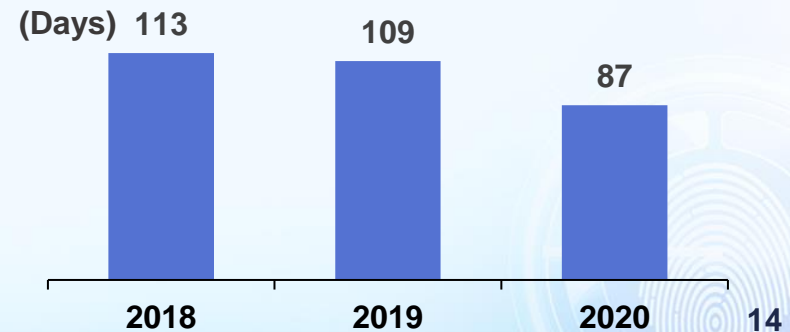
## Inventory Turnover Days



## Account Payable Turnover Days



## Account Receivable Turnover Days



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# Three Major Areas in Intelligent Visual Industry Development



## Mobile/Tablet

- SLR-like camera
- 3D
- Video



## Automobile

- Driving monitoring system
- Surround view system
- Driver assistance system
- Auto Pilot

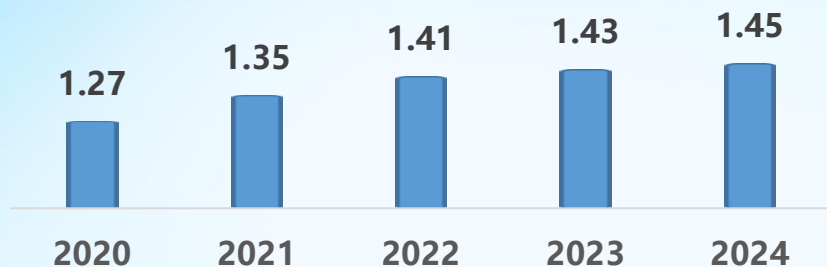


## IoT

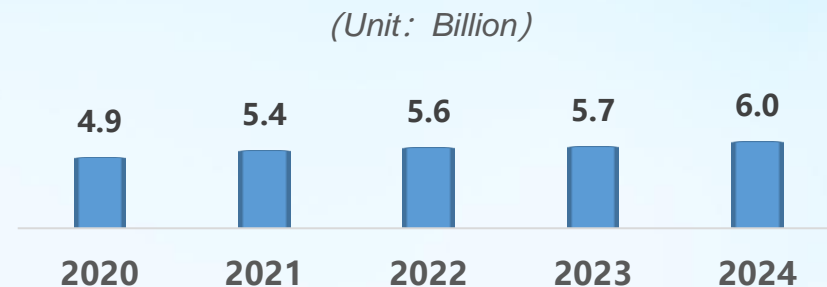
- Drone/Gimbal camera
- Smart home
- Wearables
- Robots
- Consumer electronics

# 1. Sales Volume of Smartphone CCM Could Rebound Strongly

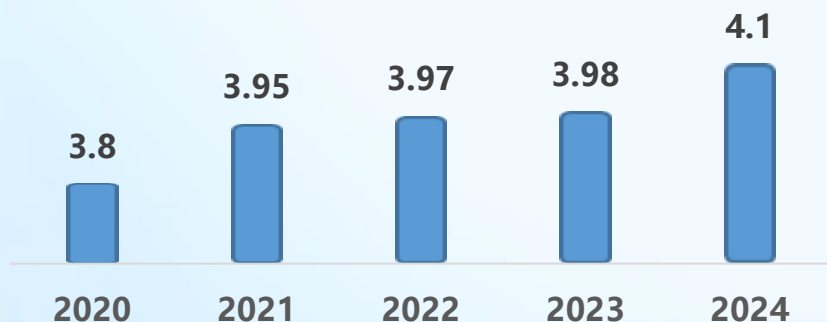
## Smartphone Sales Volume Forecast *(Unit: Billion)*



## Addressable Market of Smartphone CCM *(Unit: Billion)*



## CCM Per Smartphone *(Unit: pcs)*



- Economy reopening together with the wave of 5G phone replacement, the market is generally expecting a rebound in smartphone sales in 2021 and 2022, with an average annual growth rate of about 5-8% each.
- In order to meet the functions of multiple optical zoom, OIS, wide-angle and 3D shooting, the multi-camera solution will continue to drive the average number of CCM per phone to grow.

# Smartphone CCM Specs Upgrade Cycle Resumes

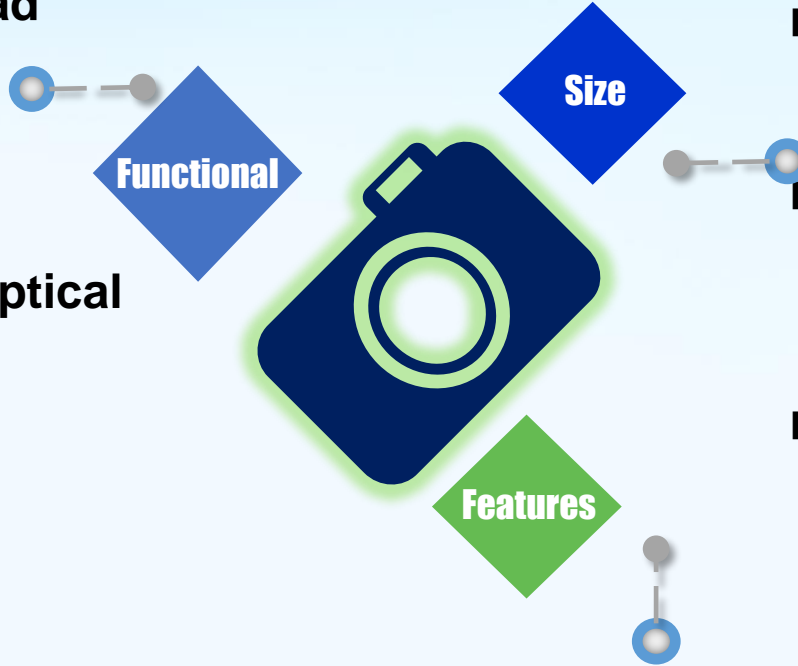
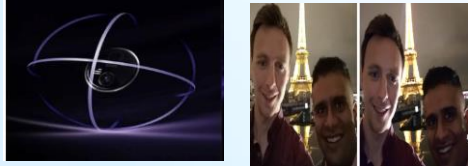
## ■ Multi-cam: Triple, Quad



## ■ Periscope : 5X,10X,Continuous optical zoom



## ■ Video: OIS



## ■ Under display



## ■ Small head size



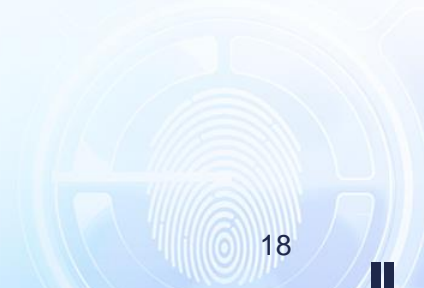
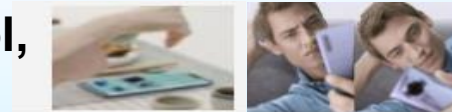
## ■ AF/OIS miniaturize



## ■ iToF/dToF (3D)



## ■ Gesture control, Differentiation



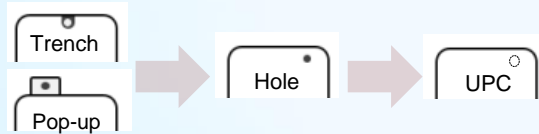
# Smartphone CCM Upgrade Keywords (Front Facing)

Front facing CCM keywords: module miniaturization, full screen, front 3D ToF/under-glass ToF, differentiation

High screen ratio/  
full screen

3D/AR

Differentiation



- Pixel size is getting smaller
- Chip size within 1/2.65"
- Small lens module will be the main trend
- Under-glass camera



- Pixel size is getting smaller
- Higher resolution for iToF
- Support Face ID, facial recognition payment, AR
- Gaming application

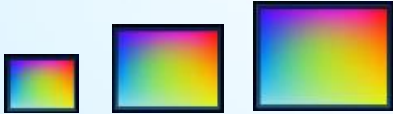


- Gesture recognition, ultra-low power awakening
- High frame rate video wide angle camera
- Wide angle camera
- Ultra-wide-angle camera made by new material

# Smartphone CCM Upgrade Keywords (Rear)

Rear CCM keywords: high resolution large chip/OIS module, micro gimble stabilizer (integration of motor and module), wide angle module (video), optical zoom, differentiation (3D, macro)

## High resolution/large chip/OIS



- Trend of increasing chip size remains unchanged
- Reduce pixel size and enhance resolution
- Increase pixel size to improve black state effect
- Design for high pushing power/OIS motor

## Wide angle module



- Mid-to-low-end models: standard configuration with large wide-angle model
- High-end model: video + wide-angle module
- Super stabilizing + large wide-angle module

## Optical zoom



- 2X/3X vertical optical zoom
- 5X/10X periscope continuous zoom
- Low cost periscope module design

## Differentiation



- iToF resolution enhancement
- dToF becomes mainstream of rear 3D module
- Macro and micro imaging applications

## 2. Intelligent Driving Promotes In-vehicle Cameras to enter High Growth Stage

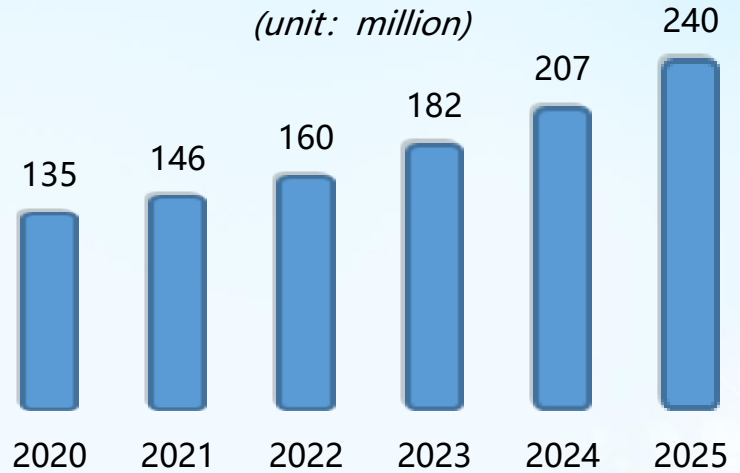
### Camera per vehicle forecast

(Unit: pcs)



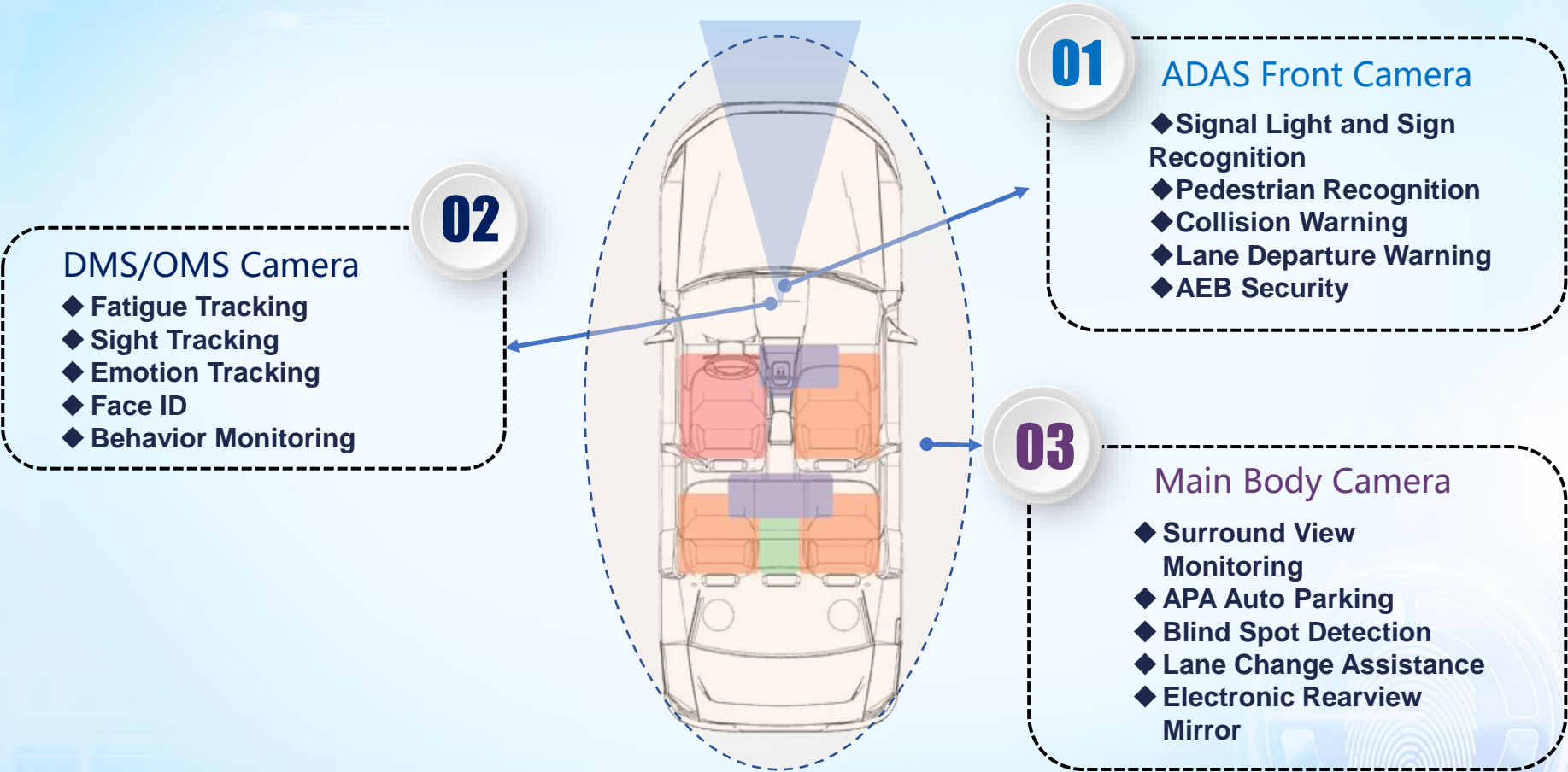
### Sales volume forecast of vehicle camera

(unit: million)

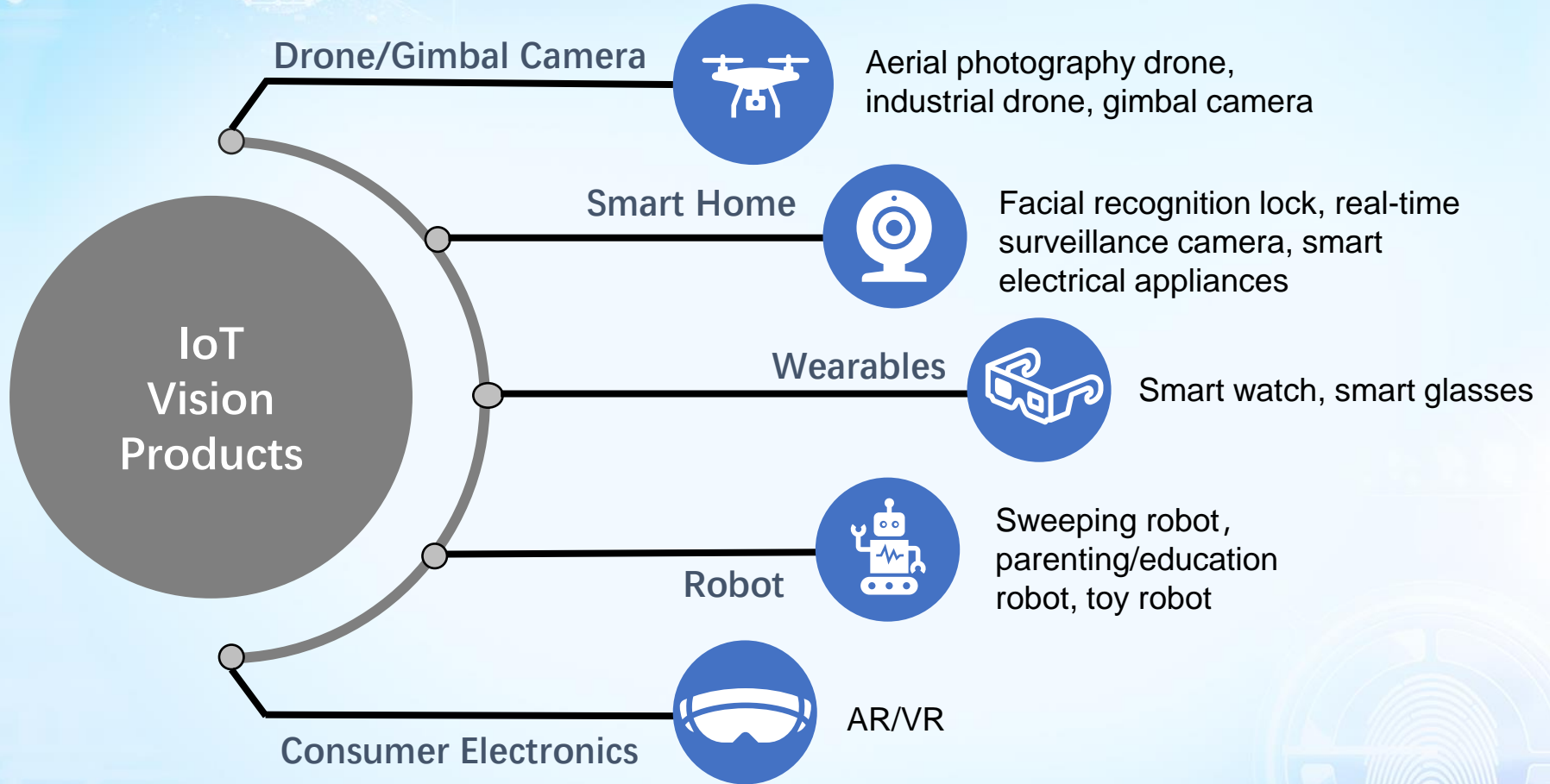


- **The latest release of smart car HD camera configuration (for reference): IM Auto :(15) NIO ET7: (11) Xpeng G3: (5)**
- A complete ADAS system needs to include 6 cameras (1 front view, 1 rear view, 4 surround view), and the average number of cameras in high-end smart cars can reach 8 pcs
- In 2025, the global average number of cameras per car will increase from 1.7 pcs in 2018 to 3 pcs, but there is still a gap between the number of cameras required for a complete ADAS system
- According to a third-party market report, the penetration rate of rear-view cameras (1) in China in 2020 is 50%, the penetration rate of front-view cameras (1) is 30%, and the penetration rate of side-view cameras (2) is only 20%. The penetration rate of the built-in camera (1) is only 6%, thus there is huge room for growth.

# 3. Three Major Trends of Vehicle CCM Pre-installed Market



### 3. IoT Vision Products is Burgeoning



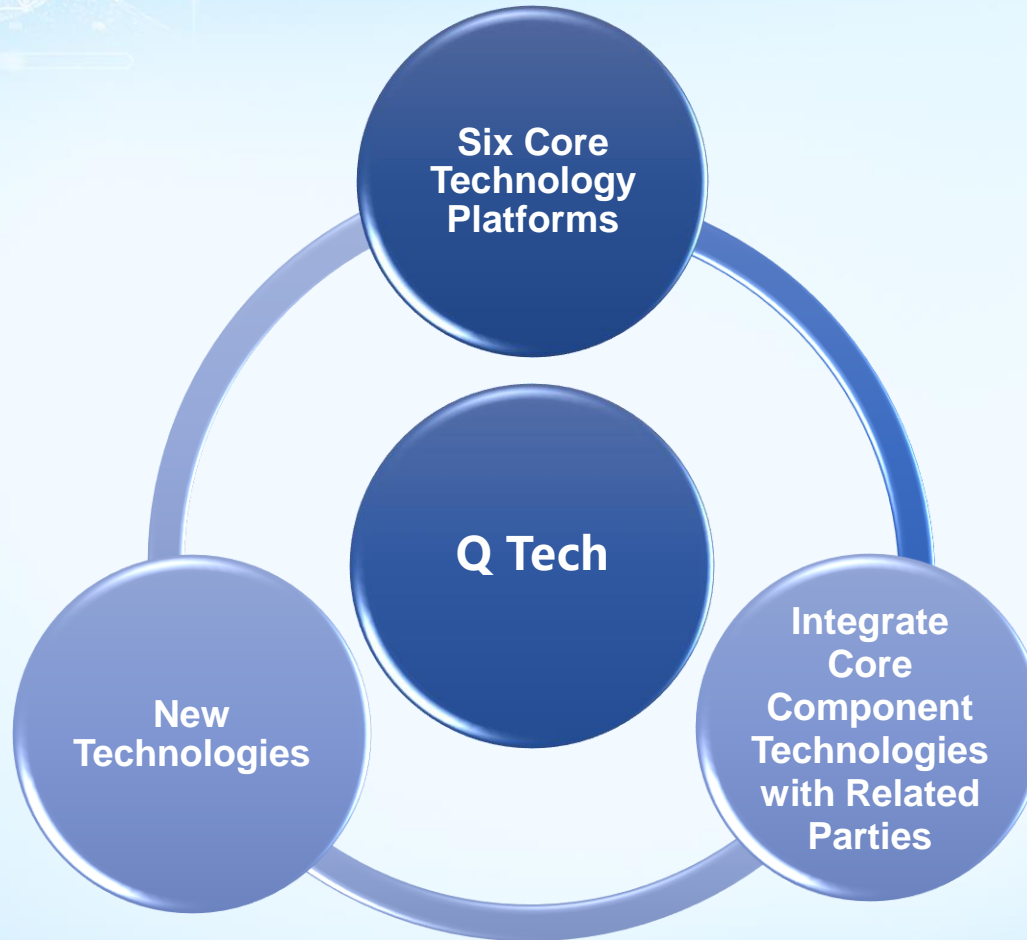
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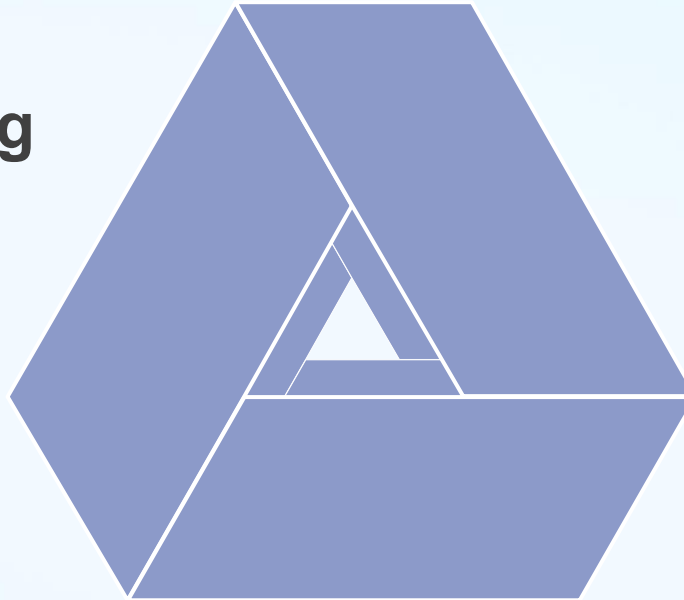
**➔ 3. Planning and Outlook of 2021**

# 1. Building up Industry Leading Technology Capability---R&D



## 2. Leading Production Scale---Industrial 4.0 Mass Production Infrastructure

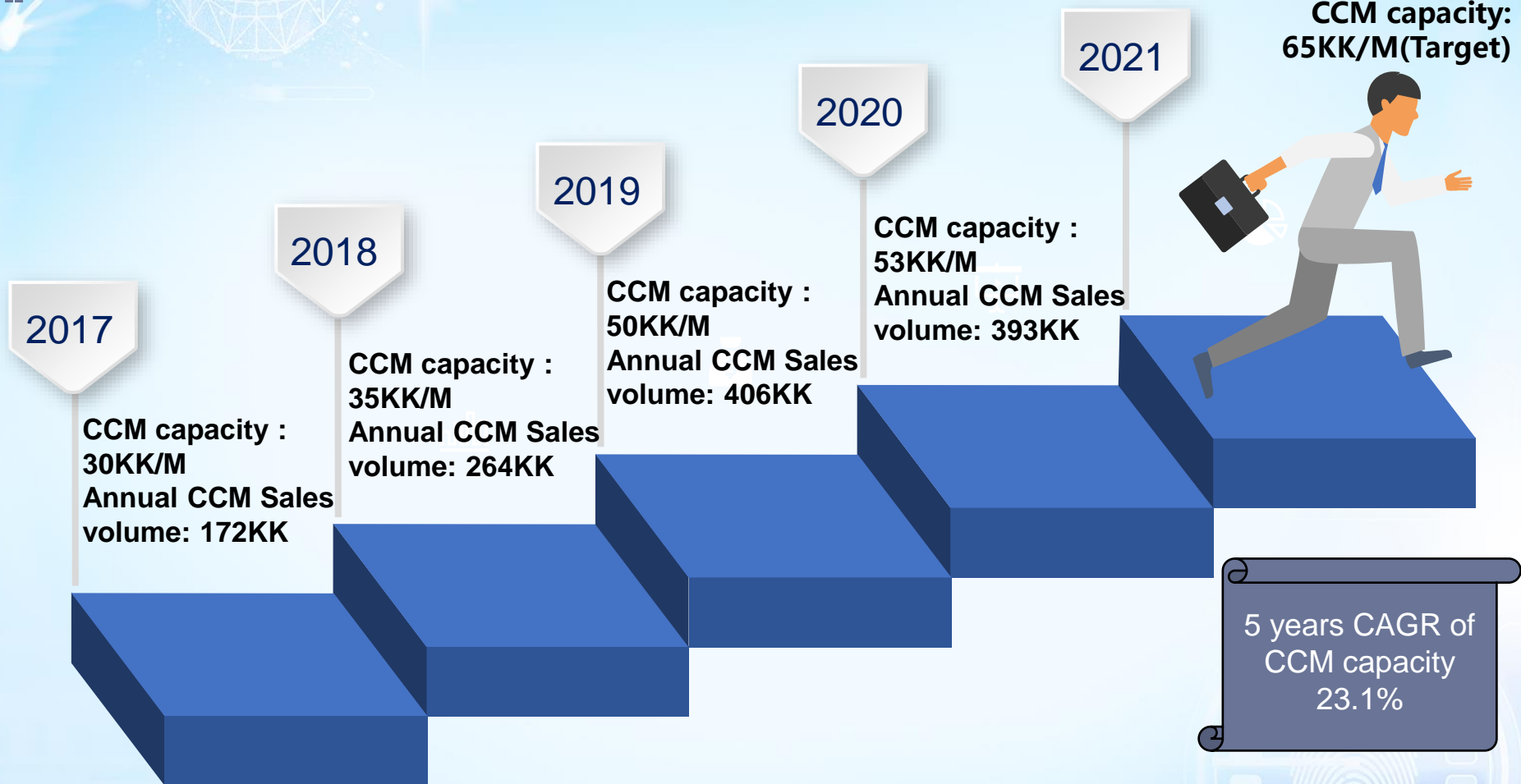
**Manufacturing  
Automation**



**Process  
Digitalization**

**Intelligent Control**

## 2. Leading Production Scale---Expanding Capacity Steadily



### 3. Industry Leading Product Technology Capability---Smartphone



### 3. Industry Leading Product Technology Capability---Automobile

#### Initial Stage

- Set up a dedicated department
- Production line completed
- Production capacity 0.5KK/year

2018

#### Skills Building

- High-end simulation laboratory
- With OMS, DMS, ADAS, AVM products R&D capability and deliver DMS and ADAS products in small batches to domestic commercial vehicle brand
- Production capacity 1KK/year

2019

#### Mass Production

- Obtained qualifications from over four car manufacturers
- Tier1 and Tier2 dual-line development model
- Mass production for passenger and commercial vehicle ADAS products and commercial vehicle DMS products
- Production capacity increased to 2KK/year

2020

#### Acceleration

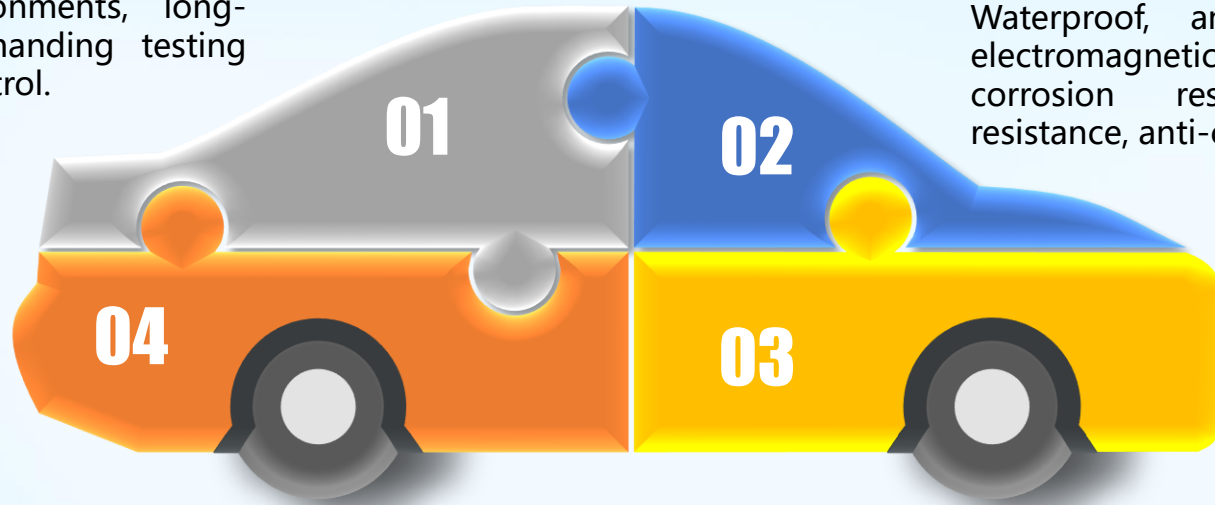
- Strive to obtain more Tier1 qualifications from domestic automakers and JV automakers, and obtain international Tier1 supporting qualifications
- New OMS, DMS, ADAS, AVM Projects
- Mass production of pre-installed DMS and OMS projects
- Expansion of passenger and commercial vehicle ADAS project

2021

### 3. Industry Leading Product Technology Capability---Automobile (Cont'd)

#### Reliability

Adapt to different scenarios in extreme environments, long-term use, demanding testing and quality control.



#### Anti-interference, Strong Protection

Waterproof, anti-static, anti-electromagnetic interference, corrosion resistance, heat resistance, anti-current impact

#### Image Quality

High HDR, high SNR, large pixel, low illumination, high color reproduction

#### Wide Application

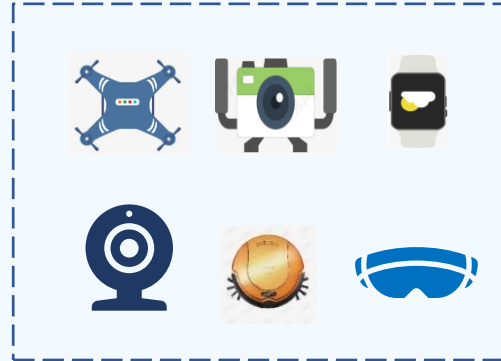
DMS、ADAS、AVM、RGB IR、Mirror、gesture control、face ID

### 3. Industry Leading Product Technology Capability---IoT

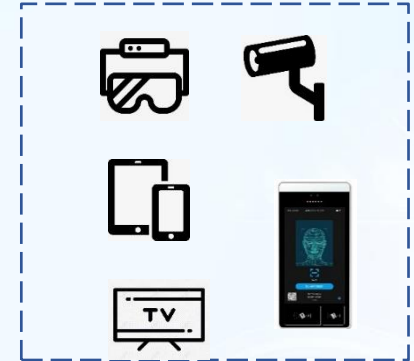
1 + 6 + X



**1: CCM focus**



**6: Target Six Applications**  
(Drone/Gimbal Camera/Smart Home/Wearables/Sweeping Robots/AR & VR)

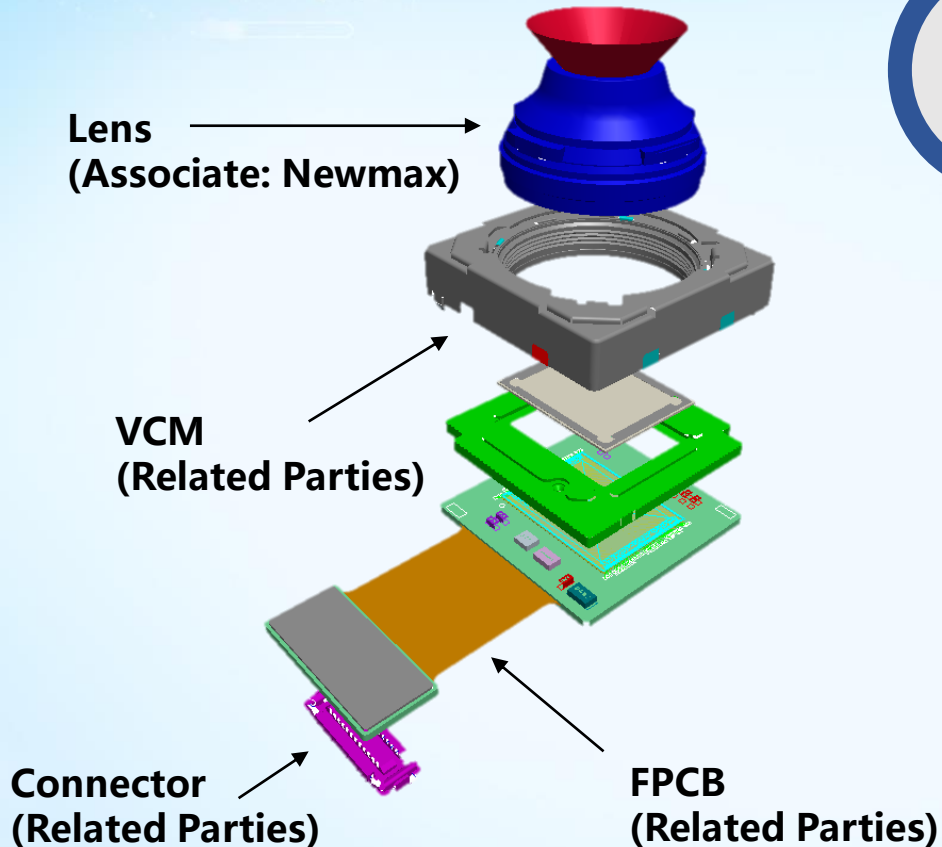


**X: Study and observe other application areas**

### 3. Industry Leading Product Technology Capability---IoT

	Facial-Recognition Payment		
	Drone		Robot
Technical Capabilities/ Qualified	✓	✓	✓
Products	<ul style="list-style-type: none"> <li>• 3D module</li> <li>• Periscope module</li> <li>• Obstacle avoidance module</li> </ul>	<ul style="list-style-type: none"> <li>• 3D structured light module</li> <li>• 3D ToF module</li> </ul>	<ul style="list-style-type: none"> <li>• Ultra wide-angle module</li> <li>• Obstacle avoidance module</li> </ul>
Mass Production	✓	Pre-research cooperation	✓
Major Customers	World's leading drone brand	World's leading internet company	World leading robot company

## 4. Promote Vertical Integration --- Turnkey Solution



2021



### Project Apollo

A project aiming to provide turnkey solutions to customers by integrating resources and technologies of associated company Newmax Technology and other related companies of the Group. It has been pre-researched and will enter mass-production stage of module solutions with specs including 13M/48M/64M. The idea is to provide customers with conventional products at the best price, minimize the time of customers' supply chain management and enhance customer experience

## 5. Spin-off to A Shares Listing to Build Dual Capital Platforms

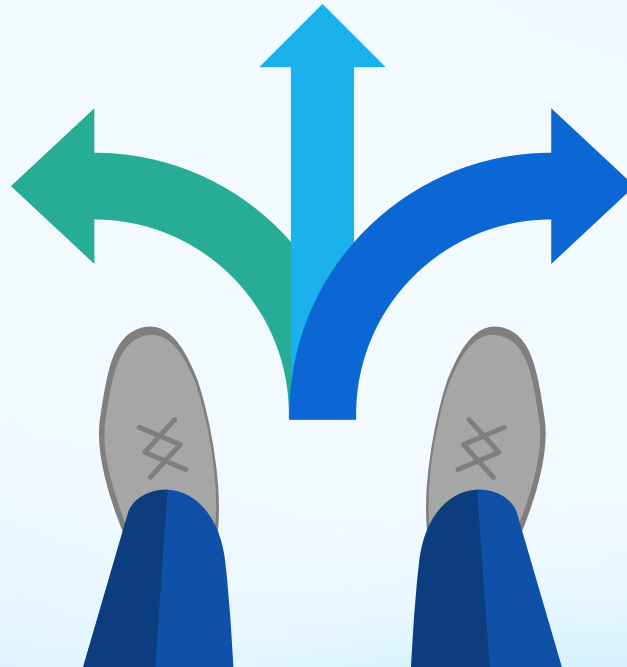
Long-term goals of restructuring:

1. Catching up industry-leader in handset CCM production scale
2. Accelerate the development of automobile and IoT CCM businesses
3. Vertical integration in core components industries



Kunshan QT China  
(Proposed A Shares  
Listing)

Mainland China  
capital market



Q Tech (1478.HK)  
(HKEX Listing)

International  
capital markets

# Operation Targets of 2021

## 2021 Targets



- Sales volume of CCM and FPM increase not less than 30% Y-o-Y
- Proportion of >32M CCM sales volume not less than 30% of total CCM sales volume
- Year-end production capacity of CCM reaching 65KK/M (2020:53KK)
- Year-end production capacity of FPM not less than 18KK/M (2020:14KK)