



QTECH

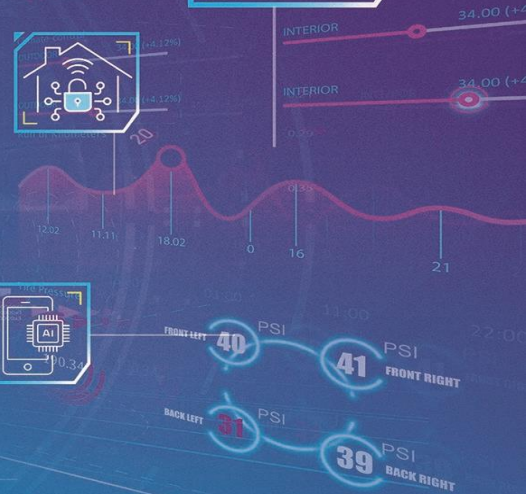
丘鈦科技(集團)有限公司

Q Technology (Group) Company Limited

Stock Code 股份代號 : 1478

2024 Annual Results Investor Presentation

17 March 2025



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01 2024 Annual Results Business Review

02 Smartphone/Automotive/IoT
Business Segments Outlook

03 Strategy and Business Goals for 2025



Financial Summary

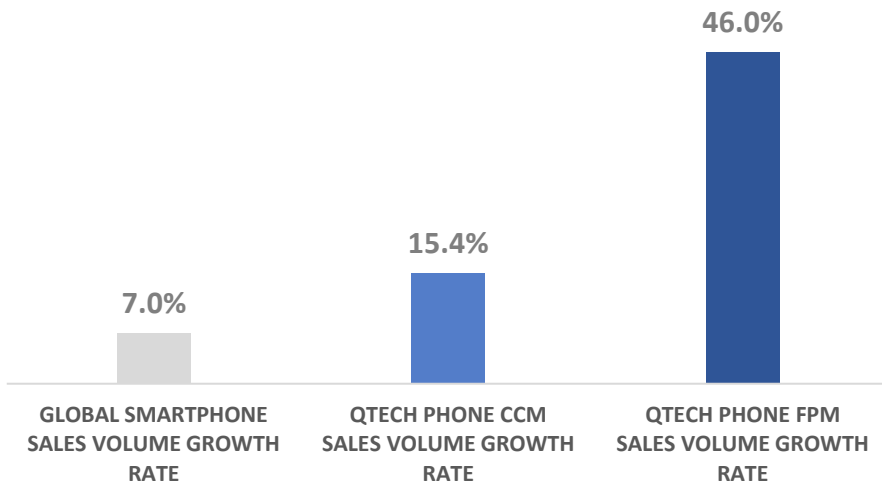
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RMB K/Units K	FY		Change (YoY)	2H	1H	Change (HoH)
	2024	2023		2024	2024	
Phone CCM Sales Volume	422,161	365,953	15.4%	206,242	215,920	-4.5%
Other Fields CCM Sales Volume	12,127	7,635	58.8%	6,663	5,464	21.9%
FPM Sales Volume	160,986	110,238	46.0%	101,902	59,084	72.5%
Revenue	16,151,336	12,530,799	28.9%	8,476,194	7,675,142	10.4%
Gross Profit Margin	6.1%	4.1%	+2.0pts	6.9%	5.2%	+1.7pts
OPEX ratio	4.4%	4.8%	-0.4pts	3.9%	4.9%	-1.0pts
Operational Profit	648,854	289,038	124.5%	428,161	220,693	94.0%
Net Profit	279,068	83,531	234.1%	163,836	115,232	42.2%
Net Profit Margin	1.7%	0.7%	+1.0pts	1.9%	1.5%	+0.4pts
Basic EPS (RMB cents)	23.6	6.9	241.3%	13.9	9.7	42.2%
Dividend (RMB cents)	9.3	----	N/A	----	----	N/A
Operating Cash Flow	965,443	(378,783)	N/A	274,175	691,268	-60.3%
Adjusted Net Debt to Equity Ratio	1.1%	24.8%	-23.7pts	1.1%	19.5%	-18.4pts

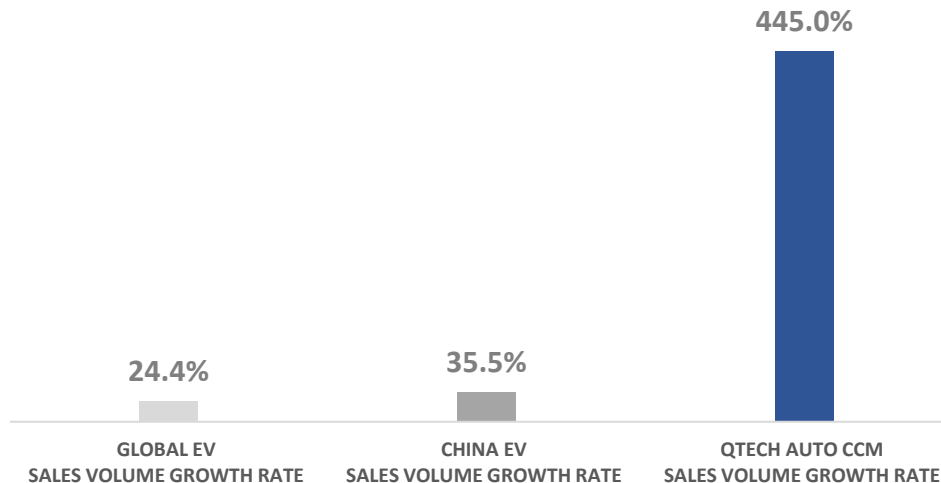


Highlight 1: Market Share and Sales Volume Increase Drive Steady Revenue Growth

Phone CCM/FPM sales volume growth rate



Automotive CCM sales volume growth rate



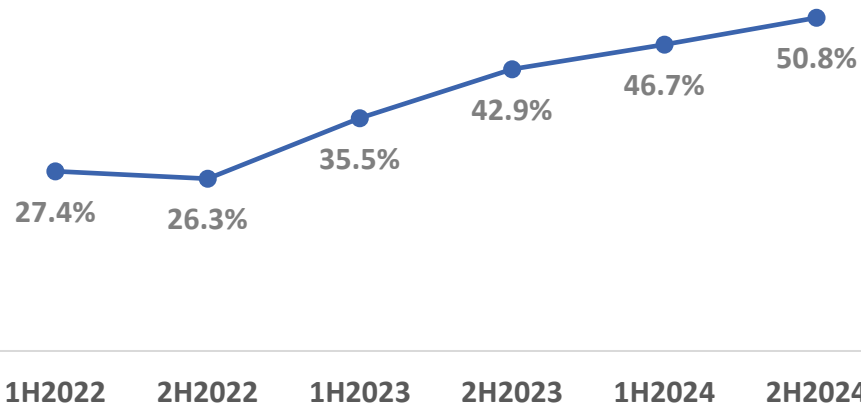
- 1) During the Year, the sales volume of the Group's smartphone CCM increased by approx. 15.4% YoY, and the sales volume of FPM increased by approx. 46.0% YoY, both outperforming the global smartphone sales volume growth rate of 7.0% YoY. The sales volume of CCM applied to vehicles saw a significant YoY increase of approx. 445.0%, surpassing the global Electrical vehicle (EV) sales volume growth rate of 24.4% YoY and the China EV sales volume growth rate of 35.5% YoY. This indicates that the market share of the Group's corresponding products has increased significantly.
- 2) During the Year, the Group's revenue reached approx. RMB 16.15 billion, representing a YoY increase of approx. 28.9%. Revenue in the second half of the Year was approx. RMB 8.48 billion, representing a HoH increase of approx. 10.4% compared to RMB 7.68 billion in the first half of the year.

*Industry data is from market independent research reports and is for reference only

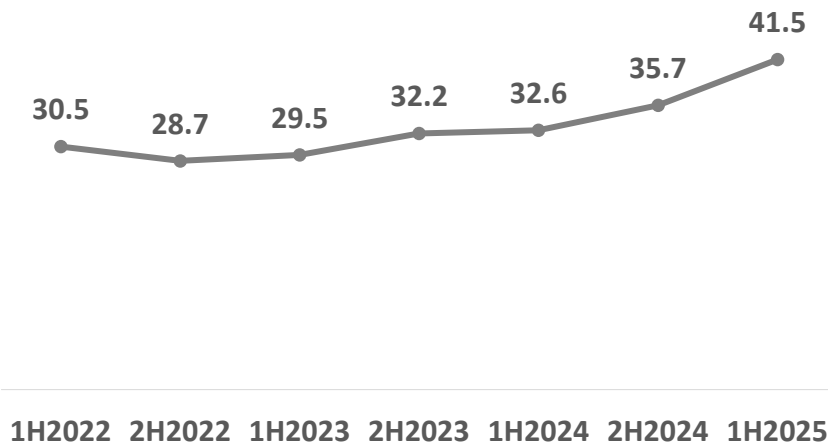


Highlight 2: Product Mix of Phone CCM Optimized Significantly

Proportion of 32M and above Phone CCM



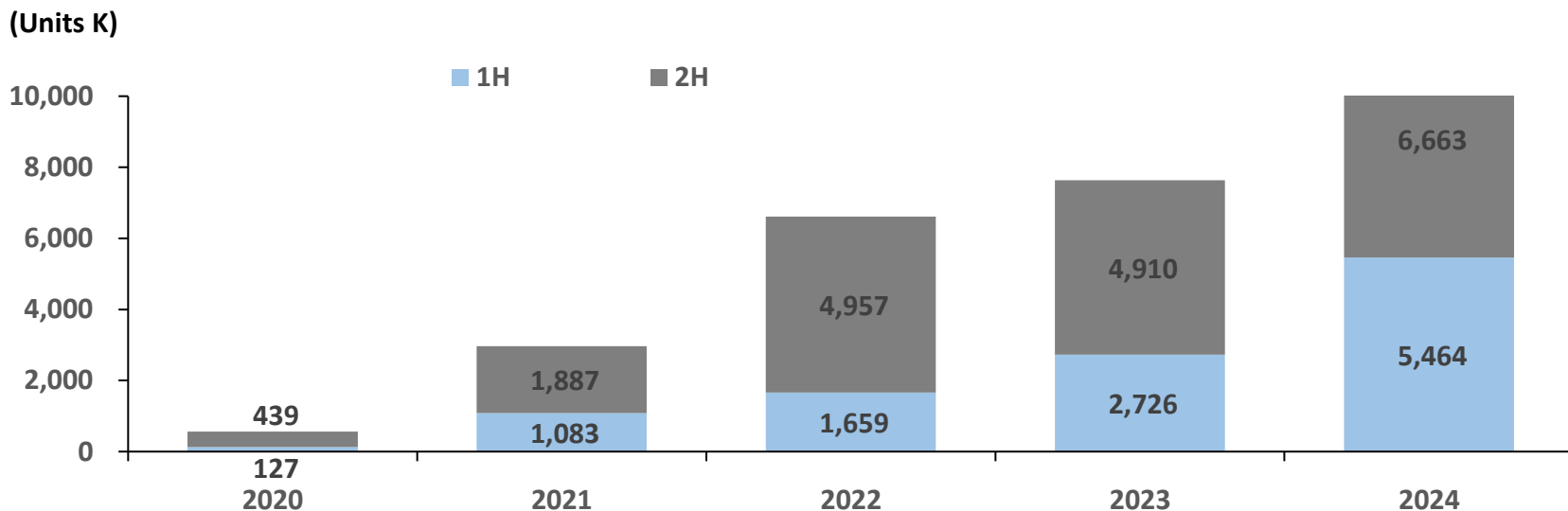
ASP of CCM (RMB)



- During this Year, the Group continued to adhere to its product strategy focused on mid-to-high-end CCM. Smartphone CCM with 32-megapixel resolution and above accounted for approx. 50.1% of total smartphone CCM, an increase of about 9.7pts compared to the previous year. Among those, OIS CCM and periscope CCM accounted for approx. 12.9% and 1.8%, respectively (sales volumes of approx. 54.4 million units and 7.8 million units), representing an increases of 0.9pts and 1.6pts YoY. Notably, periscope CCM accounted for approx. 3.2% of the sales volume of CCM in the second half of the Year (sales volume of 6.5 million units), up from 0.7% in the first half, an increase of 2.5pts HoH, representing a sales volume growth of nearly four-fold.
- The optimization of the product mix drove the ASP of CCM to approx. RMB 34.1 during the Year, representing a YoY increase of 10.3%. In the second half of the Year, the ASP reached approx. RMB 35.7, a HoH increase of 9.6%. Specifically, the ASP of smartphone CCM for the Year reached approx. RMB 30.7, a YoY increase of 5.4%. In the second half of the year, it reached approx. RMB 31.2, a HoH increase of 3.3%.



Highlight 3: Sales Volume of CCM Applied in Non-handset Increased Significantly QTECH

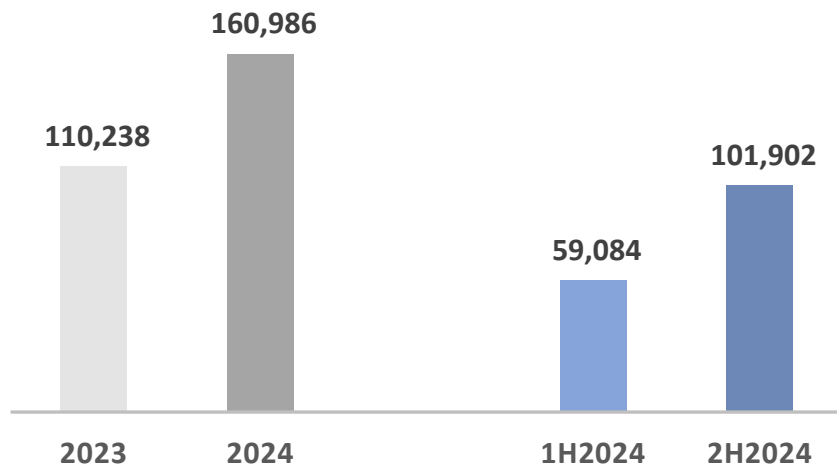


- The sales volume of CCM applied in non-handset such as Automotive and IoT has increased by approx. 58.8% YoY, of which the sales volume in 2H2024 increased by about 21.9% HoH compared to 1H2024. It accounts for about 2.8% of the total CCM sales volume, up by 1 pts from the previous year.
- As of the end of this Year, the Group has established cooperative relationships with 7 leading global intelligent driving solution providers (Tier-1) and obtained supplier qualification certificates from 34 leading global car brands and/or new energy vehicle brands, and has gradually begun business cooperation.
- By the end of this Year, the Group has become the core supplier of CCM for the global leading brand of consumer drone and portable smart imaging device, established cooperative relationships with leading global VR headset brands, and formed cooperative partnerships with several most high-caliber domestic embodied robot companies in the fields of LiDAR and depth cameras.

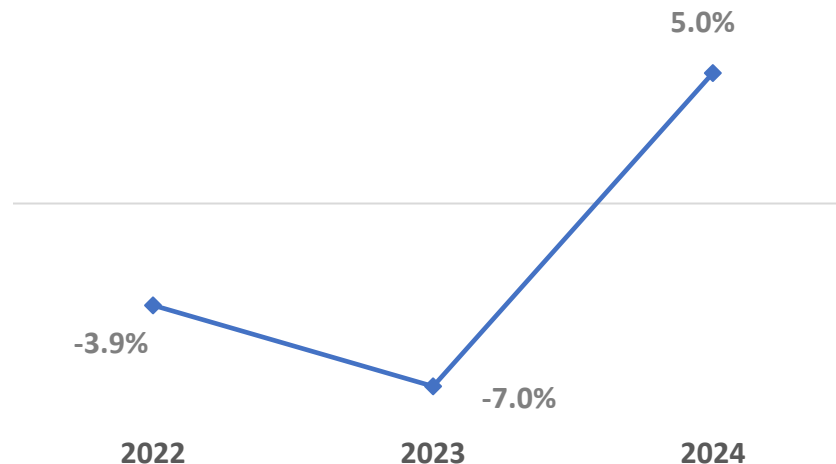


Highlight 4: Improved Sales Volume and Product mix in FPM Segment GPM back on growth track

FPM Sales Volumes (Units K)



FPM Gross Profit Margin

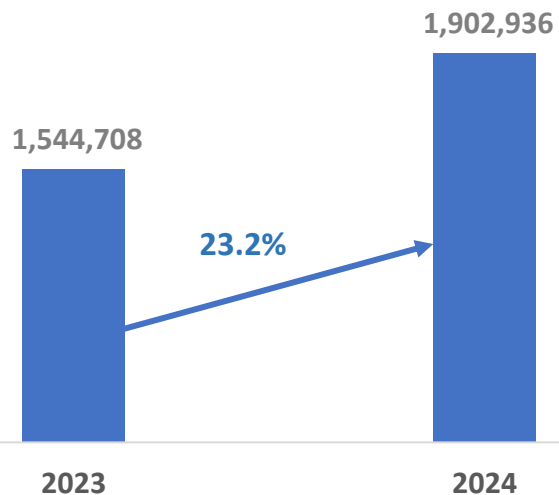


- During the Year, the sales volume of the Group's FPM increased by 46.0%, with the product mix improved significantly:
 - Capacitive-type FPM accounts for 33.9% of total FPM sales volume, with a sales volume increase by 44.7% YoY.
 - Optical-type FPM accounts for 60.9% of total FPM sales volume, with a sales volume increase by 35.0% YoY.
 - Ultrasonic-type FPM accounts for 5.3%, with the sales volume in 2H2024 reached approx. 8.1 million units, a 19.6x increase compared to 1H2024.
- The improvement in the product mix drove the ASP of FPM to increase by approx. 3.3% compared to the previous year, reversing the downward price trend (the ASP in 2023 had decreased by 25.7% YoY). In the second half of the Year, the ASP reached approx. RMB 7.7, representing a HoH increase of 15.1%.
- Improvements in both sales volume and product mix drove the GPM of FPM to turn positive, reaching approx. 5.0%.

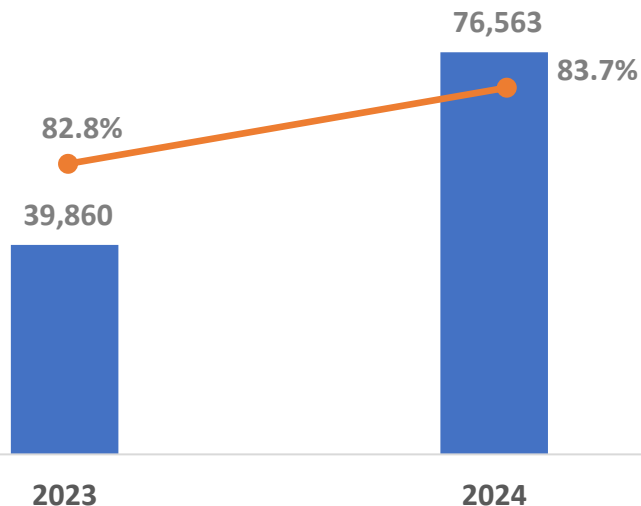


Highlight 5: Other businesses are improving

Newmax's revenue increased steadily (TWD K)

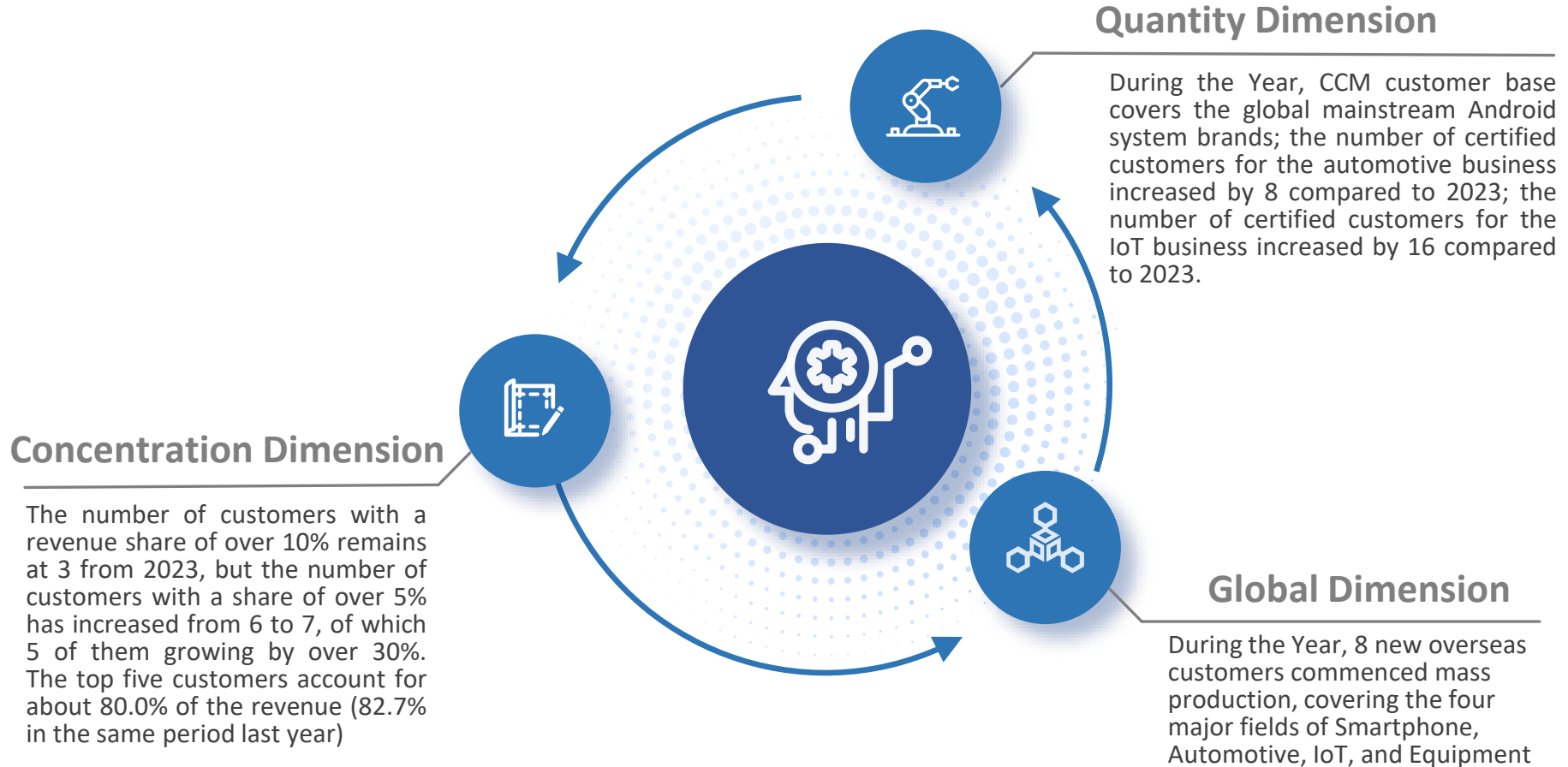


Smart Equipment Business increased significantly (RMB K)



- Associate Company's Lens Business: During the Year, benefiting from the recovery of the smartphone market and improvements in the product mix, the revenue of the Group's associate company, Newmax Technology, increased by 23.2% YoY. The GPM improved from 2.0% in the previous year to approx. 4.5% during the Period.
- Smart Equipment Business: During the Year, revenue from AOI equipment and fully automated production line equipment, based on optics and algorithms as the foundation, reached approx. RMB 76.6 million, representing a significant YoY increase of about 92.1%. The proportion of external revenue rose from approx. 82.8% to 83.7%, indicating continuous improvements in the competitiveness and sales channels of the smart equipment business.

 **Highlight 6: Customer mix further improved,
with growth flourishing both domestically and internationally**





Highlight 7: Vertical Integration Layout has been Further Deepened, Industry-leading System Product Capabilities

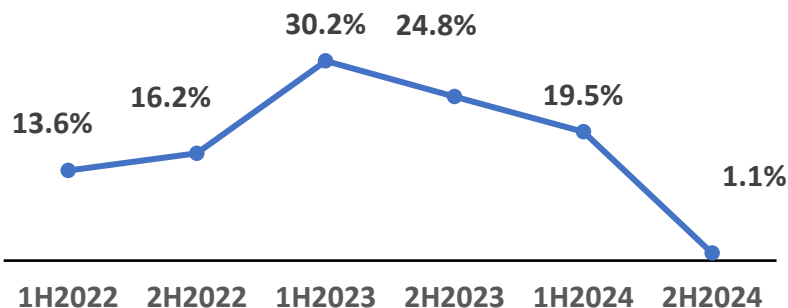


Mark* as a connected company

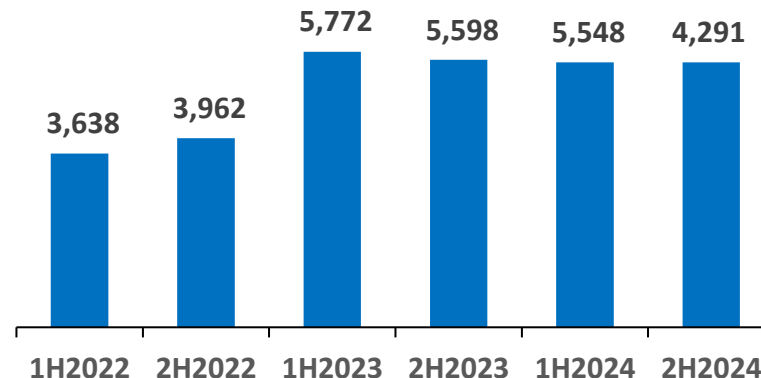


Highlight 8: Financially Robust, with Improving Sustainable Development Capabilities

Adjusted Net Debt to Equity Ratio



Cash Assets (RMB M)



➤ The Company's adjusted net debt to equity ratio improved YoY and HoH, mainly due to a significant decrease in the balance of bank borrowings at the end of 2024 compared to the end of 2023. At the end 2024, the Group's bank borrowings amounted to approximately RMB2.43 billion, representing a decrease of approximately 44.3% from the end of 2023, while the aggregate amount of the Group's total cash assets (including cash and cash equivalents, bank term deposits with original maturities of more than three months, pledged bank deposits, financial assets at fair value through profit or loss and financial assets measured at amortized cost, etc.) amounted to approximately RMB4.29 billion and net cash amounted to approximately RMB1.86 billion, an increase of approximately RMB630 million from the end of 2023. In addition, the Company's quick ratio, debt-to-asset ratio and other financial indicators continued to improve, and the Group maintained a solid financial position, laying a solid financial foundation for sustainable development.

01

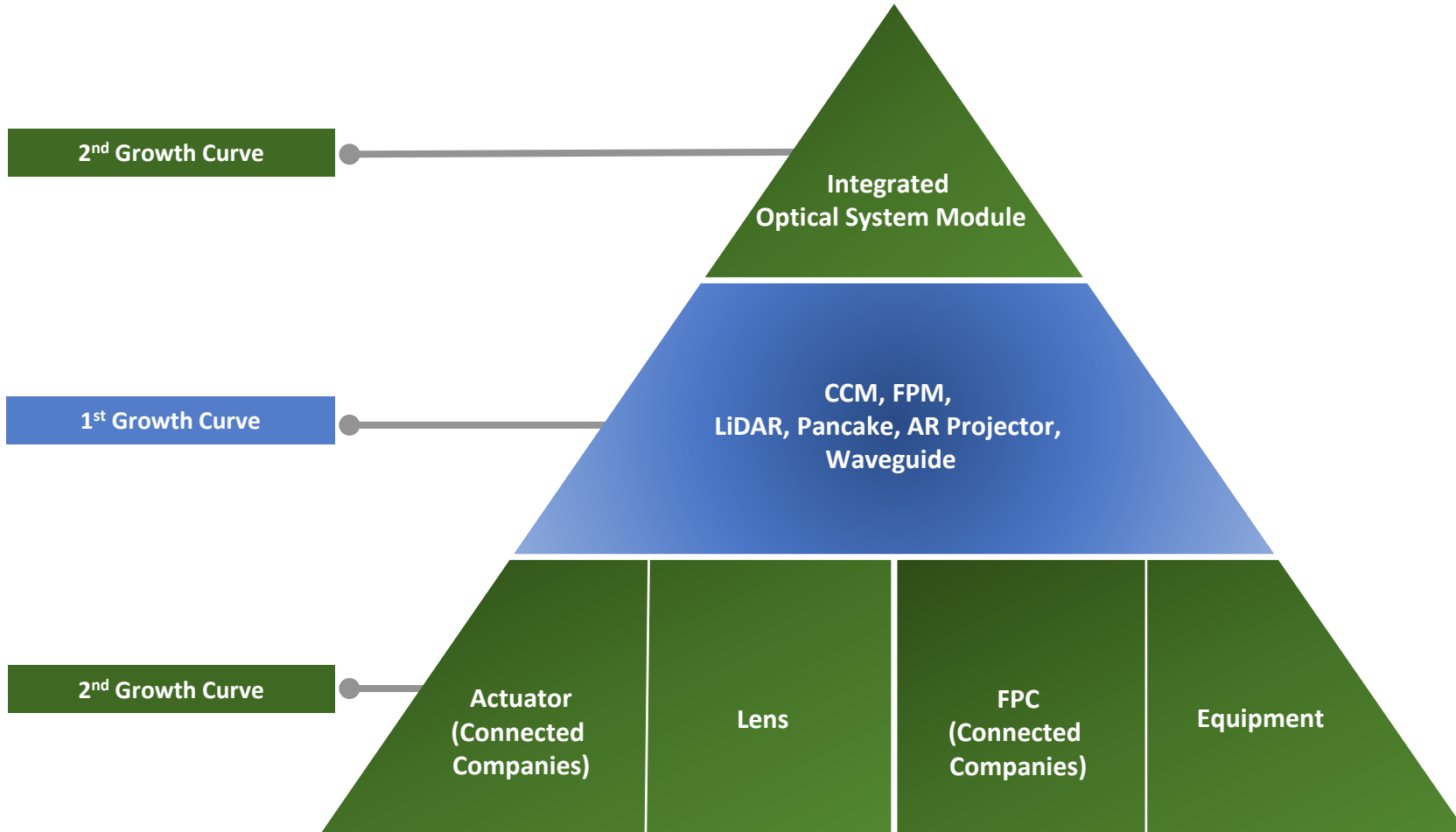
2024 Annual Results Business Review

02

**Smartphone/Automotive/IoT
Business Segments Outlook**

03

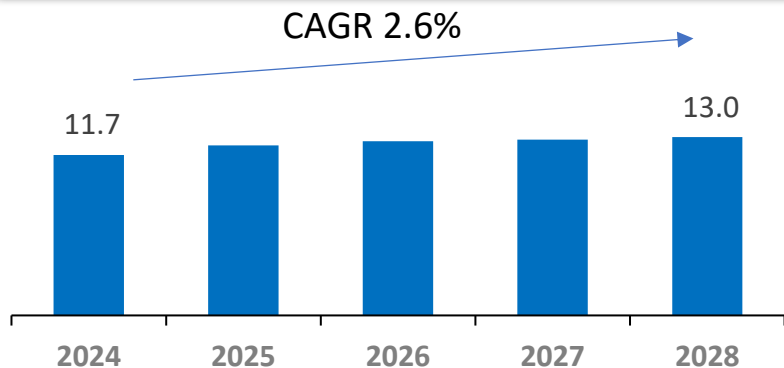
Strategy and Business Goals for 2025



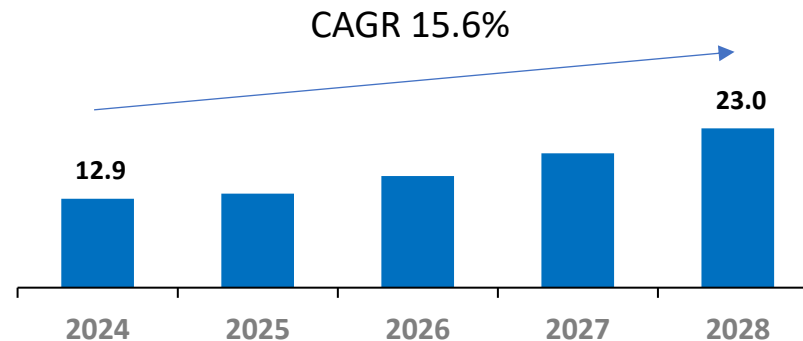


Smart Optical Systems are Thriving in Four Key Areas

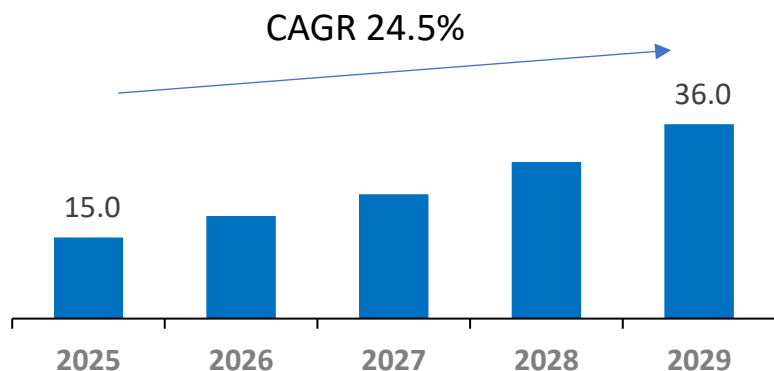
Forecast of smartphone sales volume (units 100M)



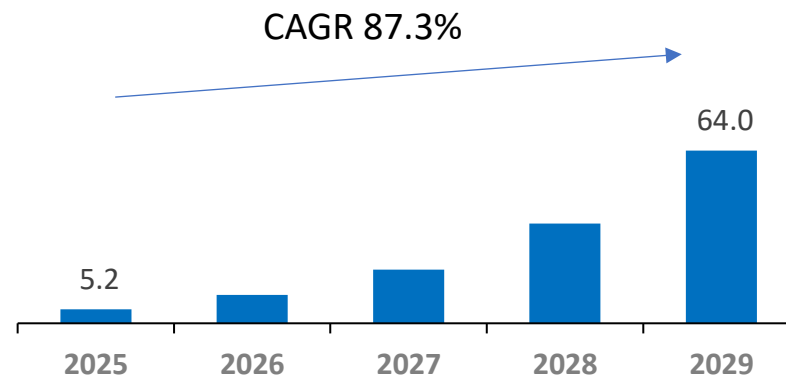
Forecast of EV (including PHEV) sales volume in China (units M)



Forecast of global consumer drones sales volume (units M)



Forecast of global embodied robot sales volume (units M)

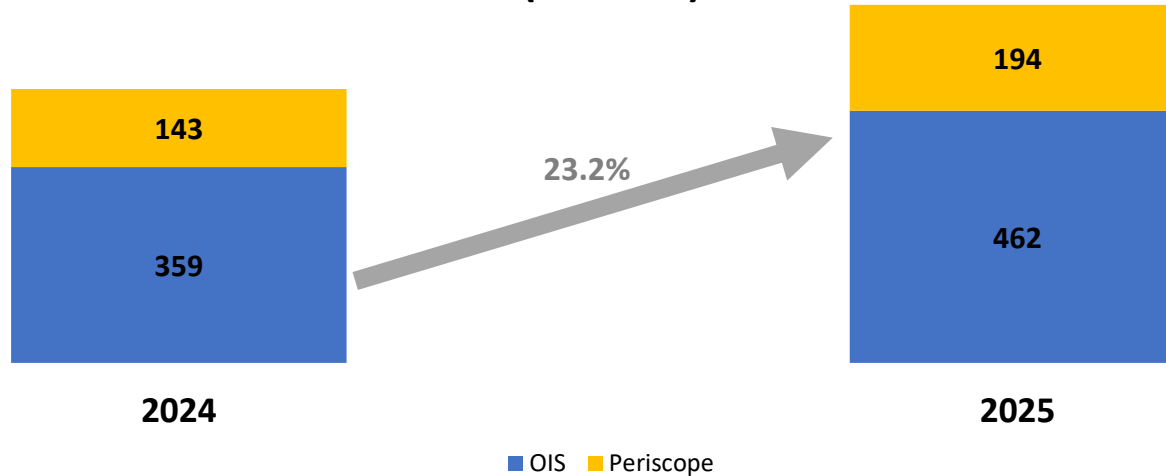


Intelligent optics is the core information interacting interface of the above-mentioned terminals

*Data is from market independent research reports and is for reference only



2024-2025 Year High-End Product Demand for Android Terminals (units M)



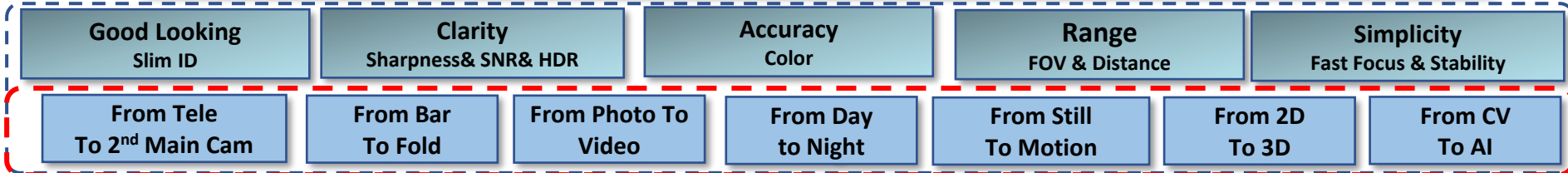
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- OIS modules have become the standard visual configuration for mid-to-high-end smartphones, drones, and other smart devices to meet the demands of capturing images in more complex environment.
- Periscope modules have become the standard visual configuration for high-end and flagship smartphones, drones, and other smart devices to meet the needs of capturing wider and more distant scenes.



Capture The Beauty of Life

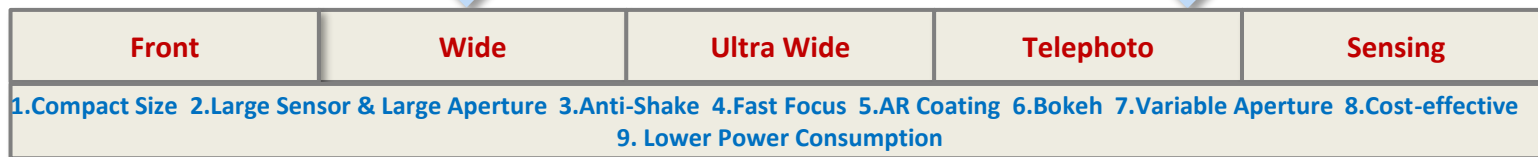
End User



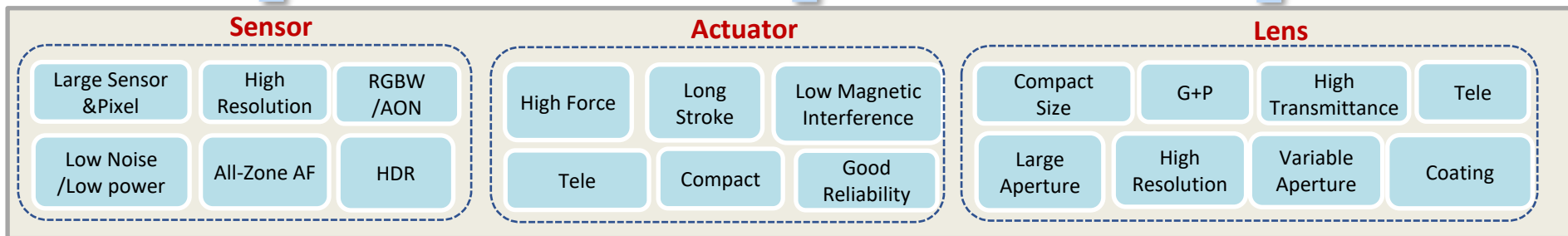
Phone



Module



Component





The Smartphone Imaging Trend: Benchmark DSLR, Surpass Human Vision, Gradually Becoming Mainstream in Smartphone

	0.6X	1X	2X	2.7X~3.5X	4X	6X	8X and above
Eq. EFL	13~14mm	23~24mm	50mm	65~85mm	96~100mm	135mm	200mm
Scenarios	 Natural Scenery 、 Starry Sky	 Natural Scenery 、 Buildings	 50mm Telephoto	 85mm Telephoto	 Entry-Level Telephoto	 Medium Telephoto	 Super Telephoto
Frequency	Medium-High	High	High	High	Medium-High	Medium-High	Low

Through Integrating Wide, Ultra-Wide (UW), and Tele Cameras to achieve the DSLR Scenarios



Wide

25mm

Ultra

Wide

16mm

Tele

50mm~85mm~
200mm

Large Sensor Size: 1/1.56->1/1.3->1inch

Large Aperture: G+P Lens , Variable Aperture

Anti-Shake: Sensor Shift、 Large Angle 1.5°/3°OIS

Focus: Suspension Wire、 Ball、 Shaft、 Piezo Actuator

Anti-glare & Apochromatic : Coating process, Fluorite-like material

Large Sensor Size: 1/2.8"->1/2"->1/1.56"->1/1.3"

Large FOV: Freeform

Large Sensor Size: 1/3"->1/2"->1/1.56"->1/1.4"->1/1.3"

EFL: 2x->3.5x->6x->8x->10x->Continuous Zoom

Anti-Shake : Lens Shift->Sensor Shift

Focus: Macro Function





Automotive: Q Tech Vehicle Optical System Capabilities

Technical

Leading deployment drives COB automotive CCM shipments to take the lead

Determined to become the leader in COB automotive modules

Product

The product line covers the full range of automotive CCM and achieves large-scale shipments, with sales volume in 2024 expected to grow 4.5 times year-on-year

The layout of LiDAR and other products has been completed, and it will be delivered in batches gradually



Consumer

Focus on Tier-1 Customers

Domestic Tier-1 H customer's first supplier of in-vehicle CCM

Mass production for international Tier-1 B customer

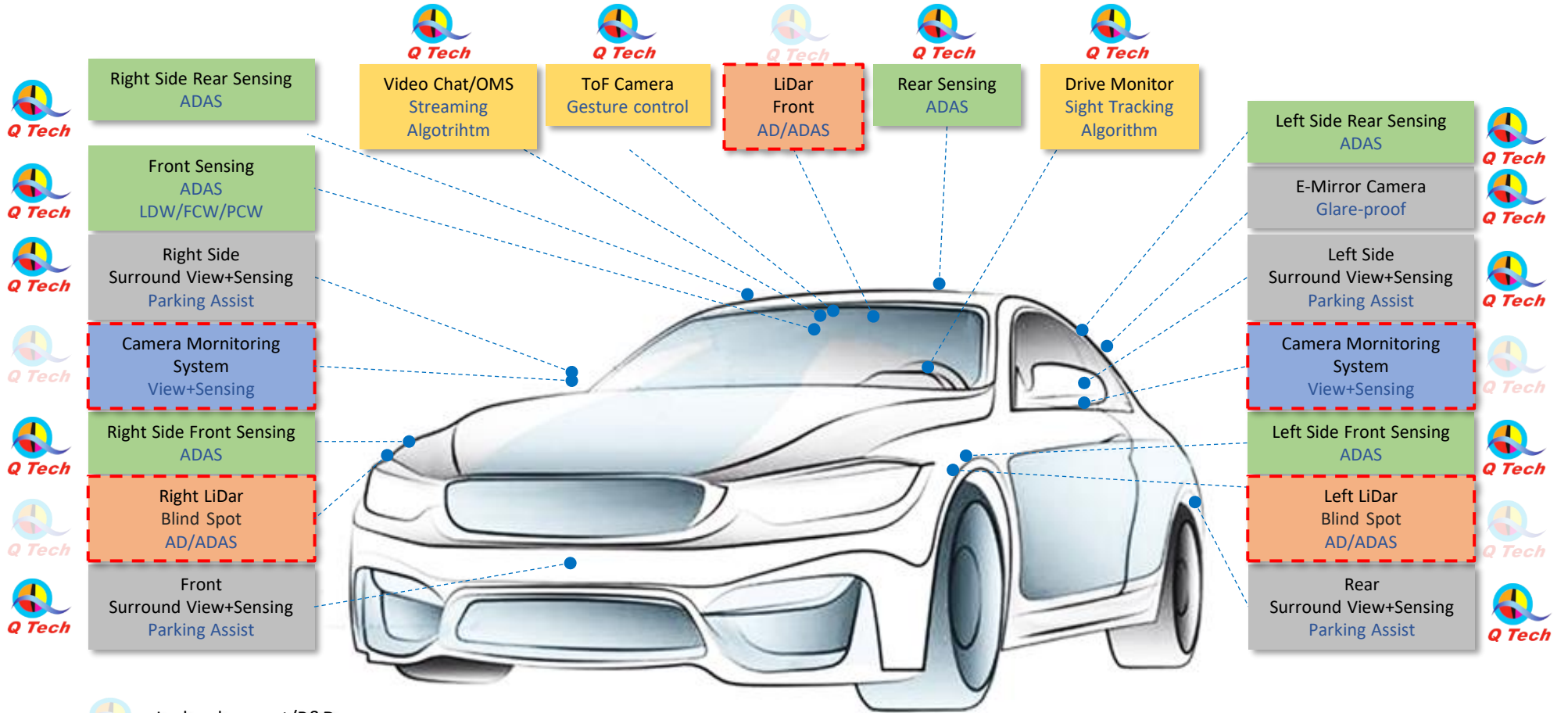
Manufacturing

Construction of Five-Star Factory and Benchmark Production Line

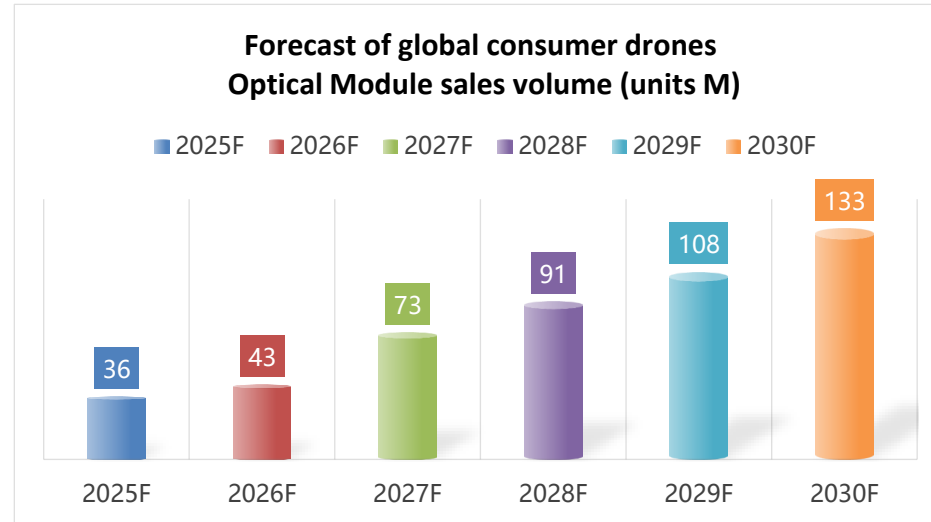
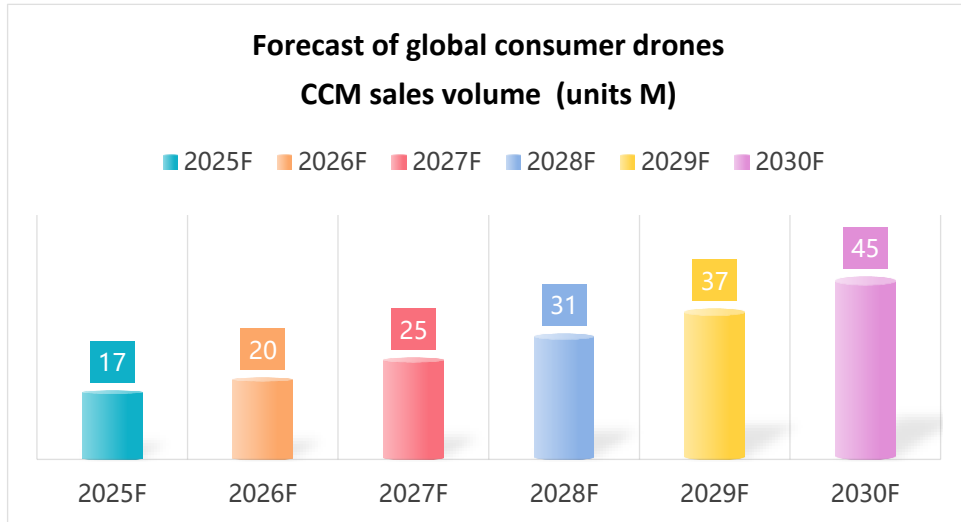
Industry-leading factory management and delivery capabilities



Automotive: Q Tech Products Planning



- Automotive cameras (ADAS, surround view, side view, rear view, DMS, OMS, TOF, etc.) are in mass production.
- LiDAR will be shipped in the second half of the Year, and the electronic rearview mirror is in development.



1-3pcs: Camera Module (Shooting Function):

The flagship drone has about 3 camera modules, 2 in the mid-range, and 1 in the entry-level

3-9 pcs: Optical Module (Machine Vision):

The flagship drone has about 9 optical modules, 5 in the mid-range, and 3 in the entry-level

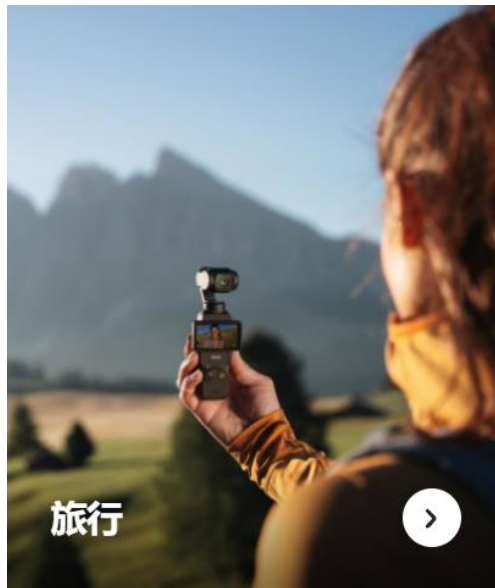
1pcs: LiDAR (Navigation):

Provide functions such as perception and obstacle avoidance for drones

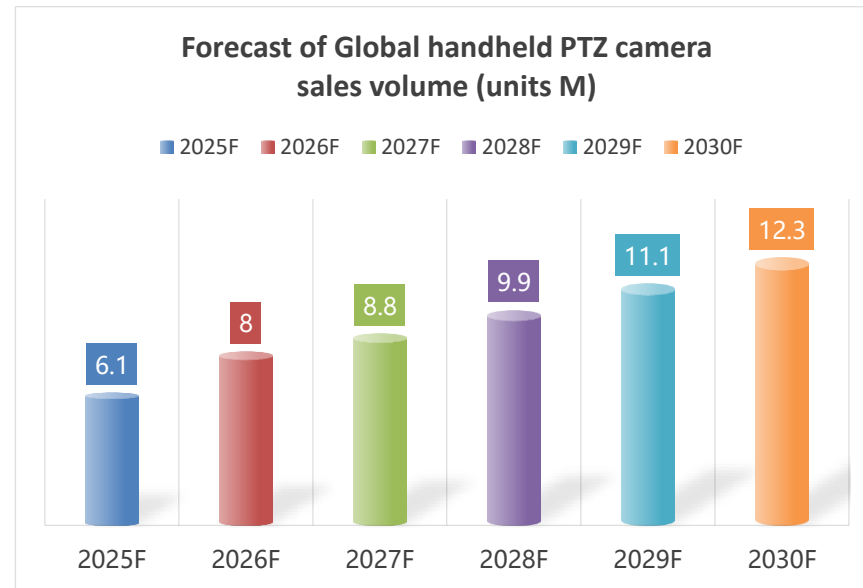




Application scenarios



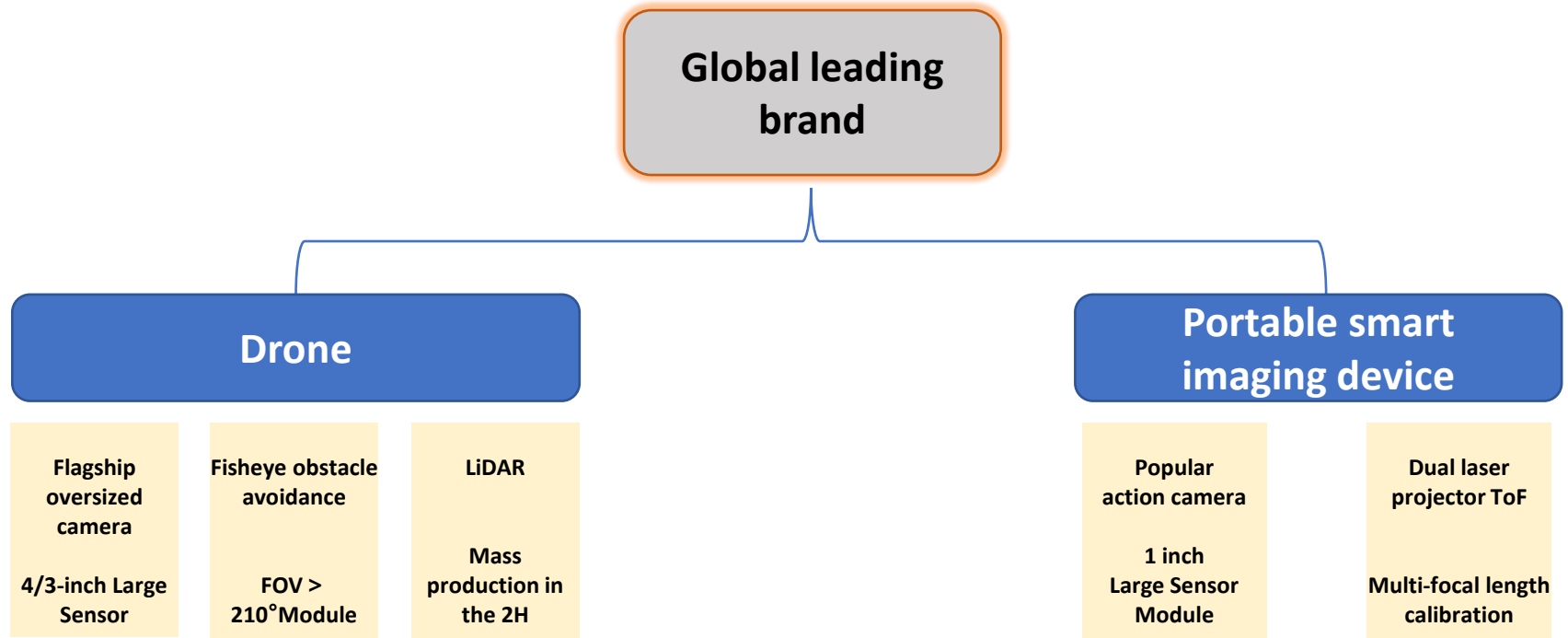
Forecast



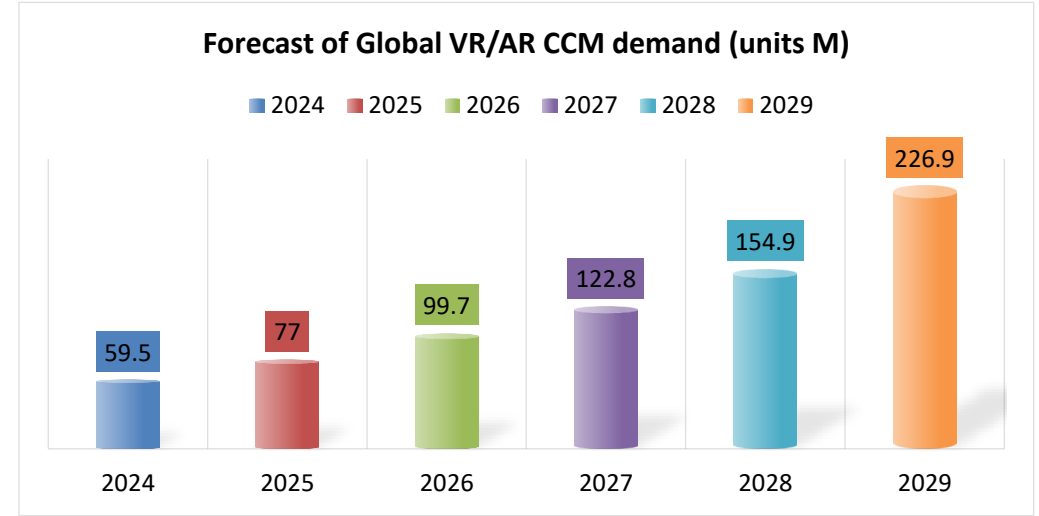
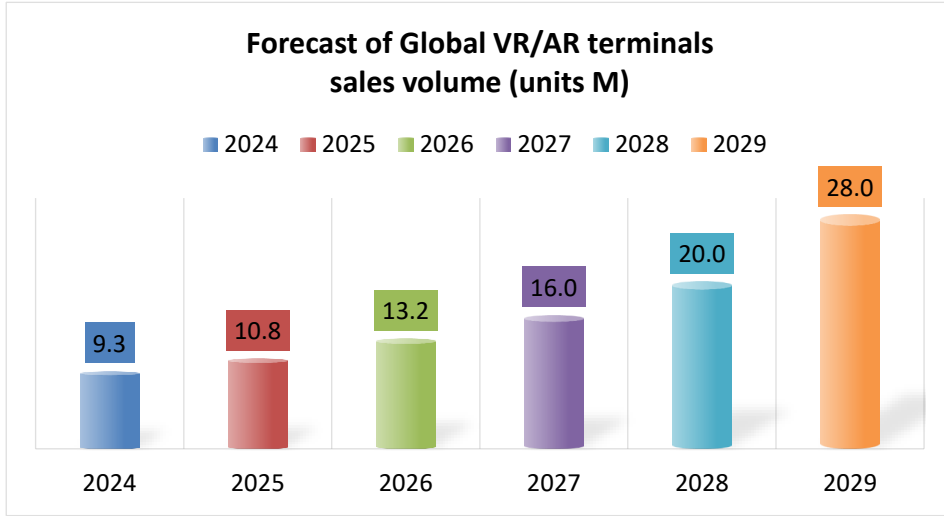
- **Application scenarios:** Used for all kinds of high-quality photo and video shooting, such as food/live broadcast/travel/etc.
- **Function:** Video shooting such as night view, slow motion, time-lapse panoramic view, etc., can be made into a film with one click
- **Camera:** Change from single camera to dual cameras or even triple cameras to improve the tele-shooting effect



IoT: Become the core CCM supplier for globally leading drone and handheld imaging equipment brand



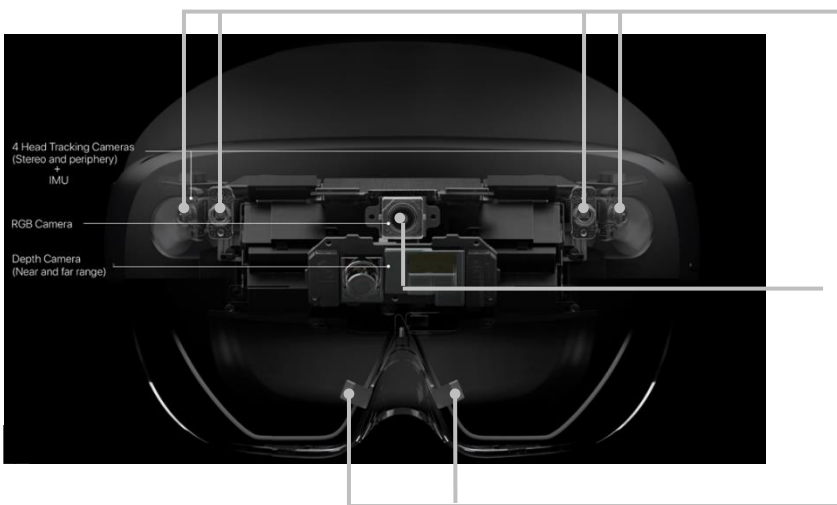
Q Tech has deeply collaborated with the global leading brand for a full range of products, and has become the customer's major supplier of optical modules



Integrated FG: VR has a CAGR of 15%, and AR has a CAGR of 65%, which is significantly faster than VR

Camera: VR single device 5-10 units, including 6DOF, RGB and dToF modules, AR single device equipped 1-3 units RGB and 6DOF modules

Display optical module: VR-Pancake optical module, AR-color light engine



- **Head/Hand Tracking**
IR camera X 4

Head recognition
Gesture recognition
Posture recognition
(Recognition of posture changes for system operation)

- **Video See Through**
RGB(VST)

Perspective module
(Realize the integration of virtual and reality, and provide an immersive, near-real interactive experience)

- **Eye tracking**
IR camera X 2 + IR LEDs

Eye-tracking
(Users can operate the interface through the eyeball without touching the screen)

- **Others**

Depth camera
(Gain depth information in the environment to create more realistic 3D scenes)



- **Pancake Lens Module**





6 DOF Camera

- Head tracking
- Hand tracking
- Gesture recognition

AR Projector + Optical waveguides

(Project virtual images accurately onto a user's retina)

RGB Camera

- Image shooting

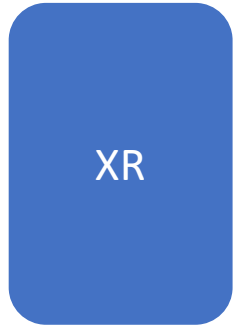
HMD

- Image display
- Virtual-real interaction



Other Cameras

- Eye-tracking : Eye tracking
- Depth(TOF): Depth acquisition, Spatial modeling



VR: (i) Successfully developed **VR-Pancake light engine**, exclusively supplied to customers, and jointly created thin and light helmet products. (ii) **The dToF module** was adopted by international customers as a platform product developed earlier

AR: Jointly developed **AR color light engine** with head display manufacturers to shorten the development cycle of AR terminal manufacturers

AI Smart Glasses: Create the **world's smallest VST module (13% smaller than the industry standard)**, promoting AI glasses to be more aesthetically pleasing and lightweight

Qualified as the supplier for multiple international leading manufacturers and involved in the design of their VR/AR/AI glasses



IoT: Visual Perception of Embodied Robot Brings New Optical Product Requirements

The role of vision sensors

Environmental awareness

Perceive surrounding obstacles and path information, and plan a safe and efficient walking route

Target Identification

Through depth cameras and high-resolution optical cameras, robots can accurately identify different objects and targets, which has a wide range of applications in industrial production, logistics and distribution

Self-navigating

Perceive surrounding obstacles and path information, planning safe and efficient walking routes

Environmental Modeling

The data fusion of LiDAR and depth camera can build a detailed 3D environment map for the robot, so that the robot has a comprehensive understanding of the environment.

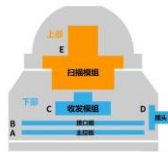
3D LiDAR

*1



Depth camera

*1



LiDAR



(ISP+RGB Module+IR Tx+2IR Rx+USB)



General Embodied AI H1 28



Head

Function: Environment recognition
Product: Panoramic fisheye module, LiDAR

Face

Function: Obstacle avoidance, SLAM
Product: Binocular/global exposure

Chest

Function: object/person/attitude recognition, human-computer interaction, measurement and detection
Product: RGBD (structured light/ToF)

Hand

Function: Object recognition and grasping
Product: RGBD, Rolling shutter

01

2024 Annual Results Business Review

02

**Smartphone/Automotive/IoT
Business Segments Outlook**

03

Strategy and Business Goals for 2025



Illuminate Things

Mission of Q Tech

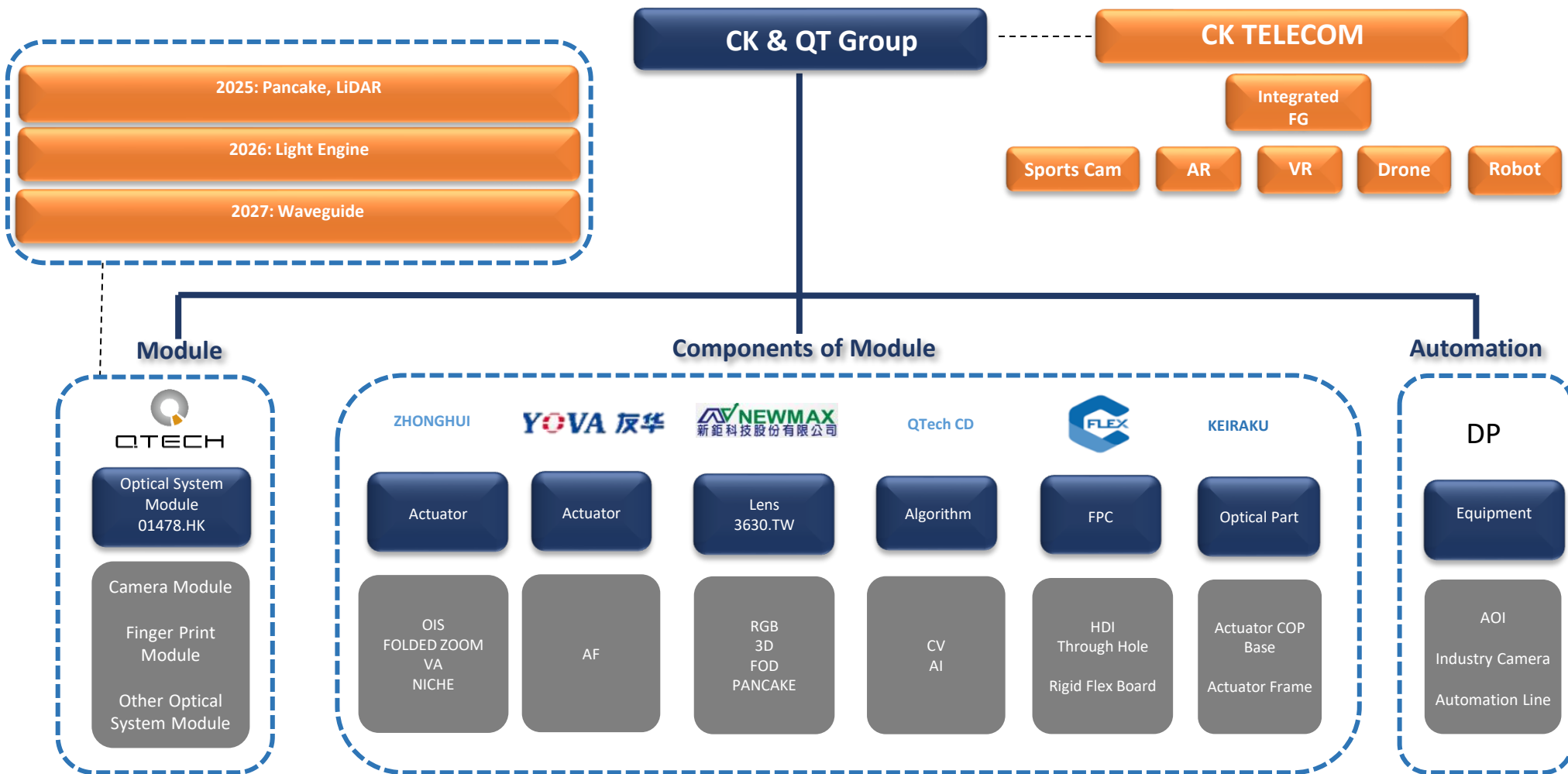
AI is one of the main themes of the times

Intelligent Vision Industry



Vision is the most important interface
for information acquisition

Human vision + Machine vision
Optics + Mathematics



*CK Telecom is a private company controlled by the company's actual controller, operating independently. This illustration aims to showcase the potential and direction of vertical and product integration.



Development of Leading Technology Camera Module

Actuator R&D

Lens R&D

Algorithm

Automation

Driver IC

Module Process

Yova / Zhonghui/ KEIRAKU

- ❑ Close Loop OIS、 Open Loop OIS
- ❑ Folded Actuator, Piezo, Sensor Shift, Sensor AF
- ❑ Close loop, Open Loop, BI AF Actuator
- ❑ COP: Chip On Plastic, 2D COP, 3D COP, LSR Liquid Silicone Rubber

NEWMAX

- ❑ 1G+6P、 1P+6P
- ❑ 5P/6P/7P RGB
- ❑ Folded Zoom、 Tele、
- ❑ 3D Lens
- ❑ Pancake Lens
- ❑ D-CUT、 Low Reflection Coating

QTech

- ❑ Computer Vision
 - ✓ Computational Optics
 - ✓ Enhancement, Restoration
 - ✓ Calibration, Fusion
 - ✓ Detection, Tracking
 - ✓ Classification, Recognition
- ❑ Actuator Driver Control
 - ✓ Hall Data Calibration
 - ✓ Gyro Data Calibration
 - ✓ Actuator Control

DP

- ❑ AOI
- ❑ AA
- ❑ Automation Line
- ❑ Industry Camera
- ❑ Machine Vision
 - ✓ Guidance, Gauging
 - ✓ Identification, Inspect

QTech

- ❑ Embedded development capabilities
- ❑ Control algorithm capabilities
- ❑ Super Stabilization
- ❑ PID Calibration by PCS
- ❑ High-precision
- ❑ Stabilization Control
- ❑ Low-cost OIS Solution

QTech

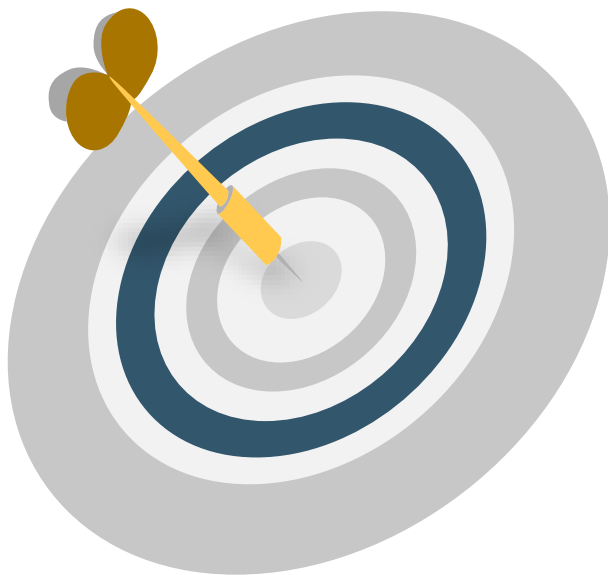
- ❑ MOC Process
- ❑ MLAA Process
- ❑ Large Sensor Warpage Control Process
- ❑ Sensor Shift Assembly Process
- ❑ ACF Process
- ❑ Hot Bar Process
- ❑ Actuator & Optics Unibody Assembly and Test Process

Value Proposition
Leading Technology + Leading Quality + Cost Advantage

Leading Product Technology

Leading Manufacturing Technology





- (i) the sales volume of camera modules for mobile phones with resolutions of 32M and above accounting for no less than **55%** of the sales volume of CCM for mobile phones, among which the sales volume of periscope CCM increased by more than **100%** YoY
- (ii) a YoY increase of not less than **40%** in the sales volume of CCM applied to the non-handset fields such as automotive and IoT
- (iii) a YoY increase of not less than **20%** in the sales volume of FPM



THANKS

感谢您的倾听