



北京恒州博智国际信息咨询有限公司
QYResearch

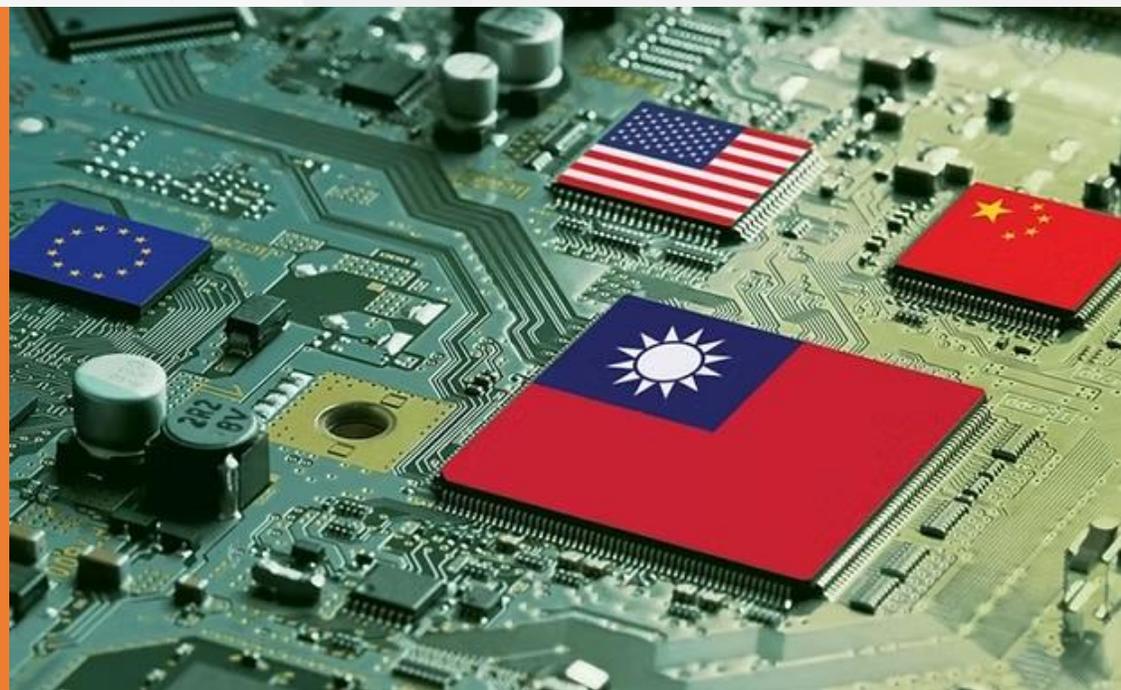
半导体系列报告

半导体芯片和器件篇

QYResearch电子与通信研究中心

咨询热线：4006068865

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公司简介

QYResearch（北京恒州博智国际信息咨询有限公司）成立于2007年，总部位于美国洛杉矶和中国北京。经过连续17年多的沉淀，QYResearch是全球知名的大型咨询公司、具备全球高科技产业深度分析能力，并提供企业顾问咨询服务的研究机构。业务遍及世界160多个国家，在全球30多个国家有固定营销合作伙伴，在美国、欧洲、日本、韩国、印度、等有分支机构，在国内主要城市北京、石家庄、太原、大同、重庆、成都、长沙、武汉、昆明、广州、日照等地设有办公室和专业研究团队。

行业涵盖各高科技行业产业链细分市场，如半导体、消费电子、光电显示、化工材料、可再生能源、汽车科技、5G通信、人工智能、机器人、机械制造、食品药品、医疗器械、农业、石油天然气等。分析师团队来自各产业领域的精英，拥有深厚造诣和丰富研究经验。

半导体行业横跨半导体设备/零部件、半导体材料、IC设计、制造、封测、存储器、分立器件、传感器、光电显示、工程服务等。为全球及中国半导体产业链客户提供深度的市场调研服务，助力相关企业更快速发展。



服务范围

研究
报告

提供全球/中国市场调研报告

定制
咨询

根据客户需求，提供定制调研报告

竞争
分析

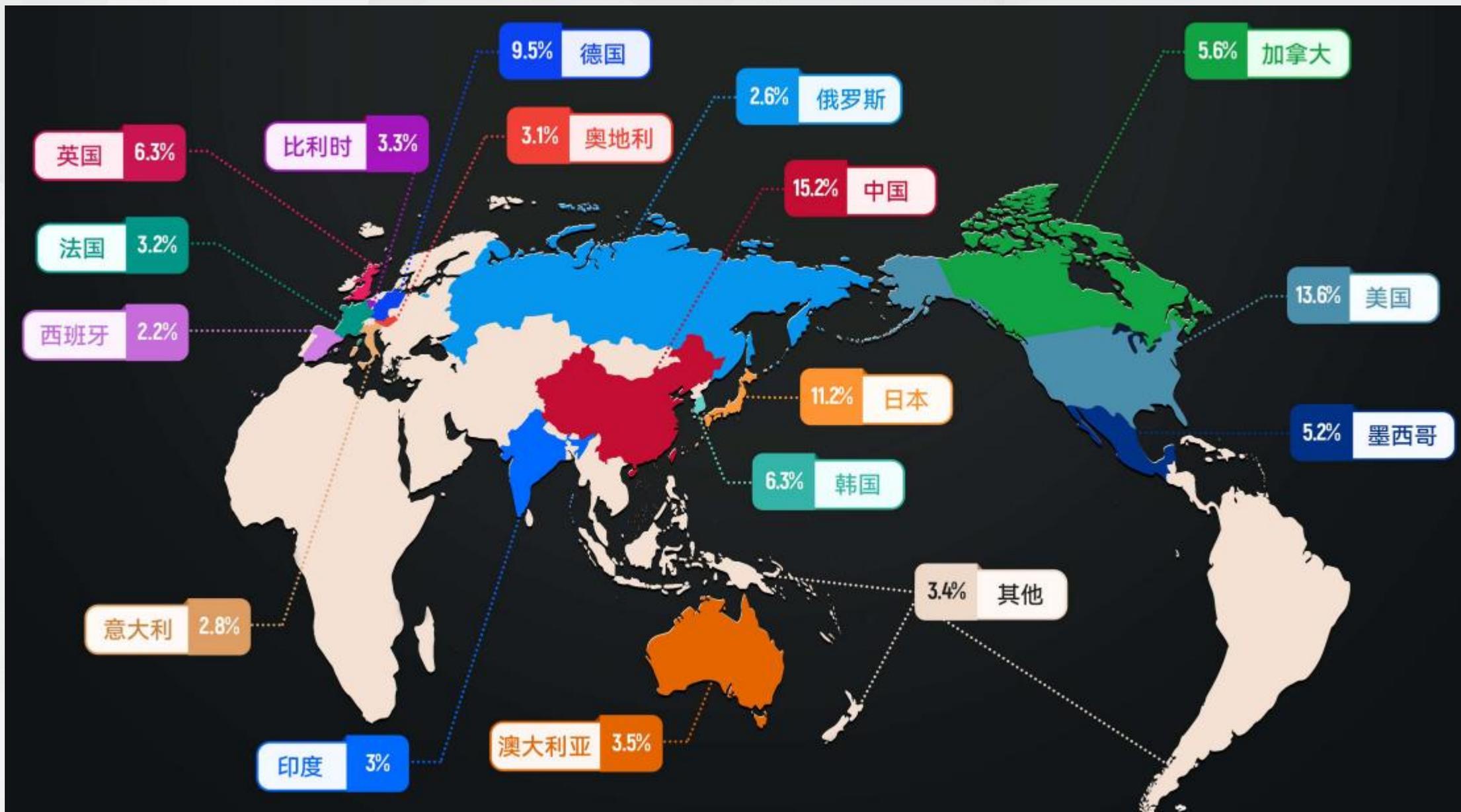
企业调研、份额、成本盈利、客户等

行业
分析

全球/地区规模、产销量、价格、进出口等



客户分布





合作客户 Our Clients

我们的理念

QYResearch珍视调研报告对于企业的重要价值，深耕细分行业调研领域18余年，持续积累、创新和完善研究方法，以专业求生存，以质量求发展，我们服务了全球超过68062家知名企业，并赢得了全球知名企业的信赖。

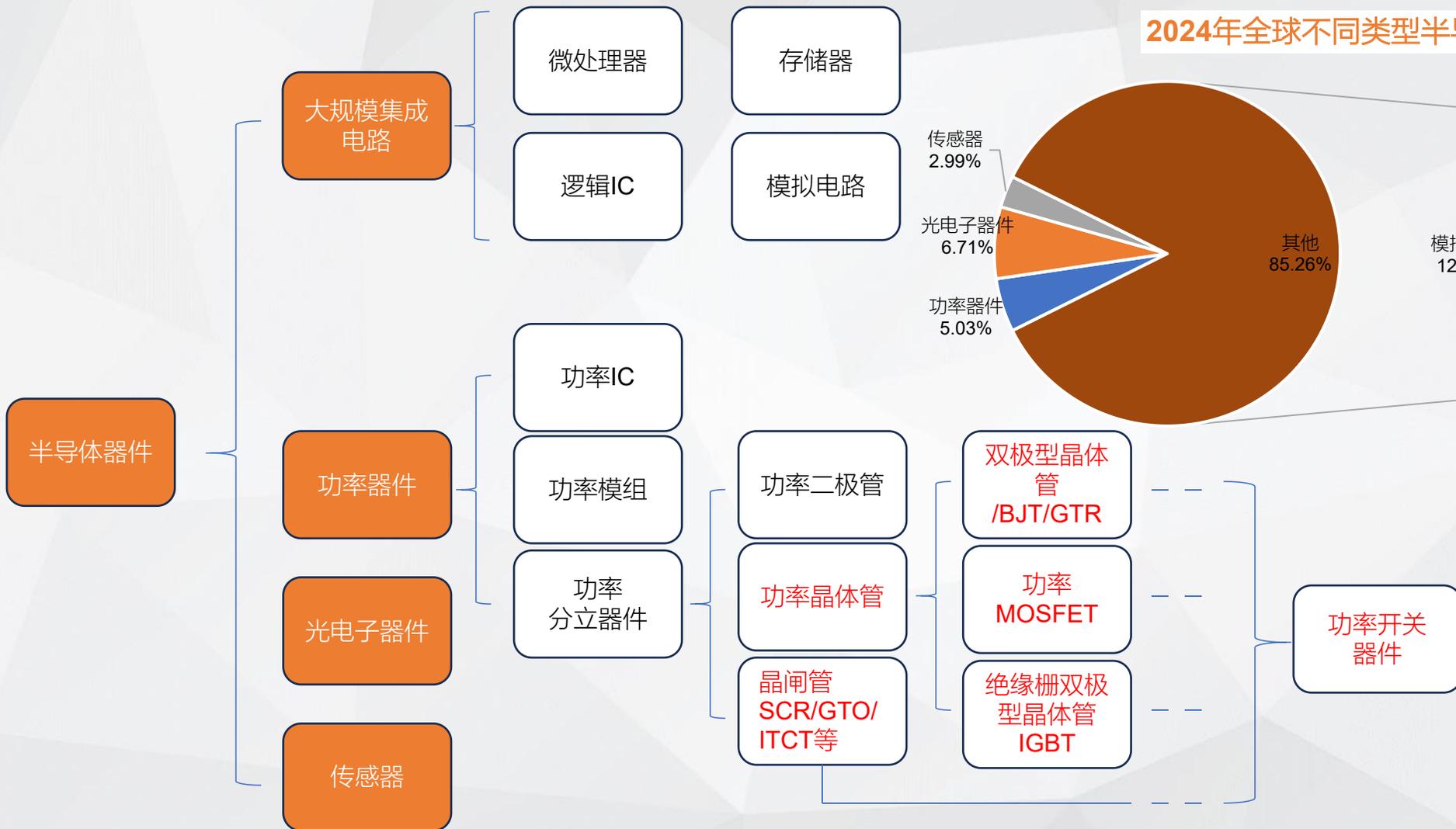
选择QYResearch，让我们与您紧密合作，共创辉煌、美好的未来！

全球客户数
突破**6.8万**

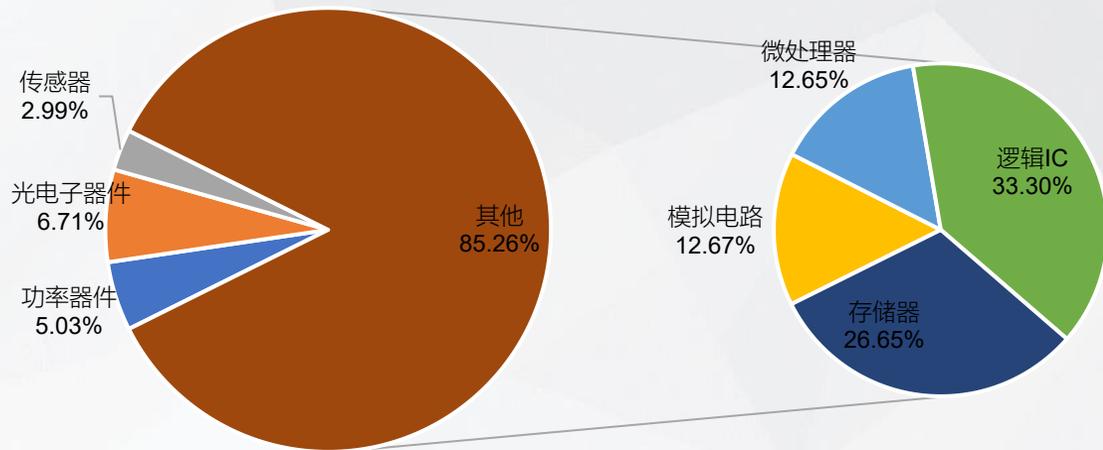




半导体器件分类



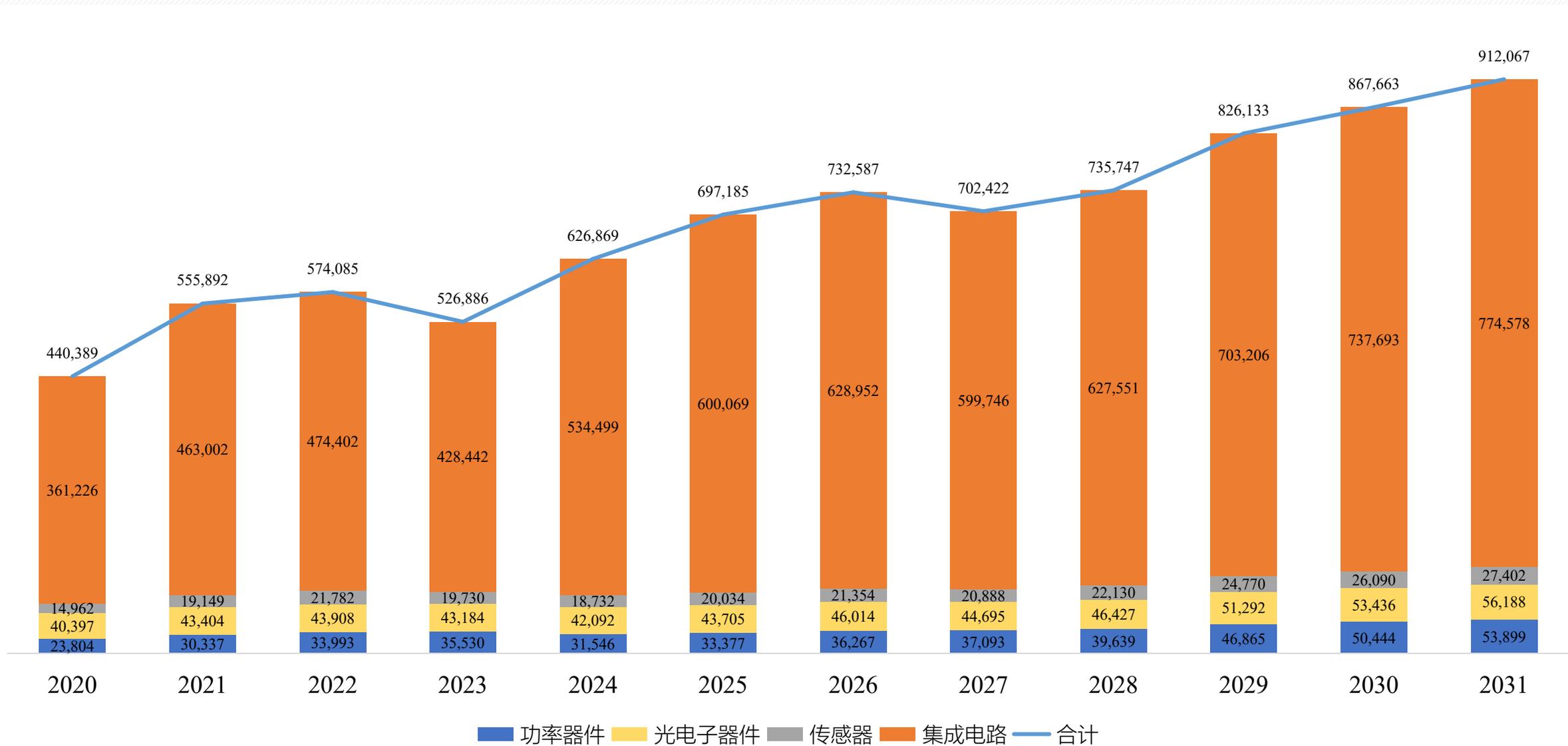
2024年全球不同类型半导体器件收入份额





半导体器件市场规模细分

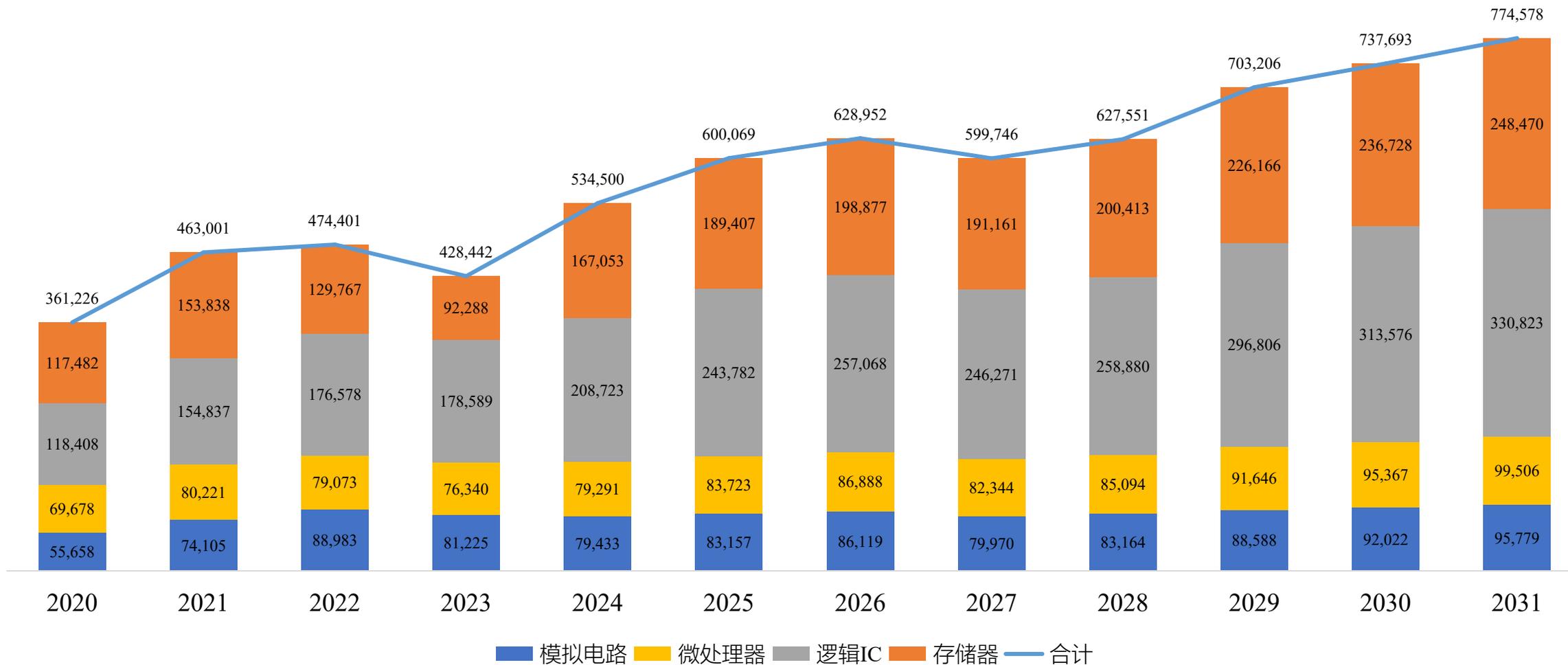
根据世界半导体贸易统计组织（WSTS）数据，半导体器件细分领域，集成电路占比最高。





半导体器件-集成电路

半导体器件中的集成电路细分主要有四大类：模拟电路、微处理器、逻辑IC和存储器。根据QYResearch调研，集成电路细分领域数据如下：

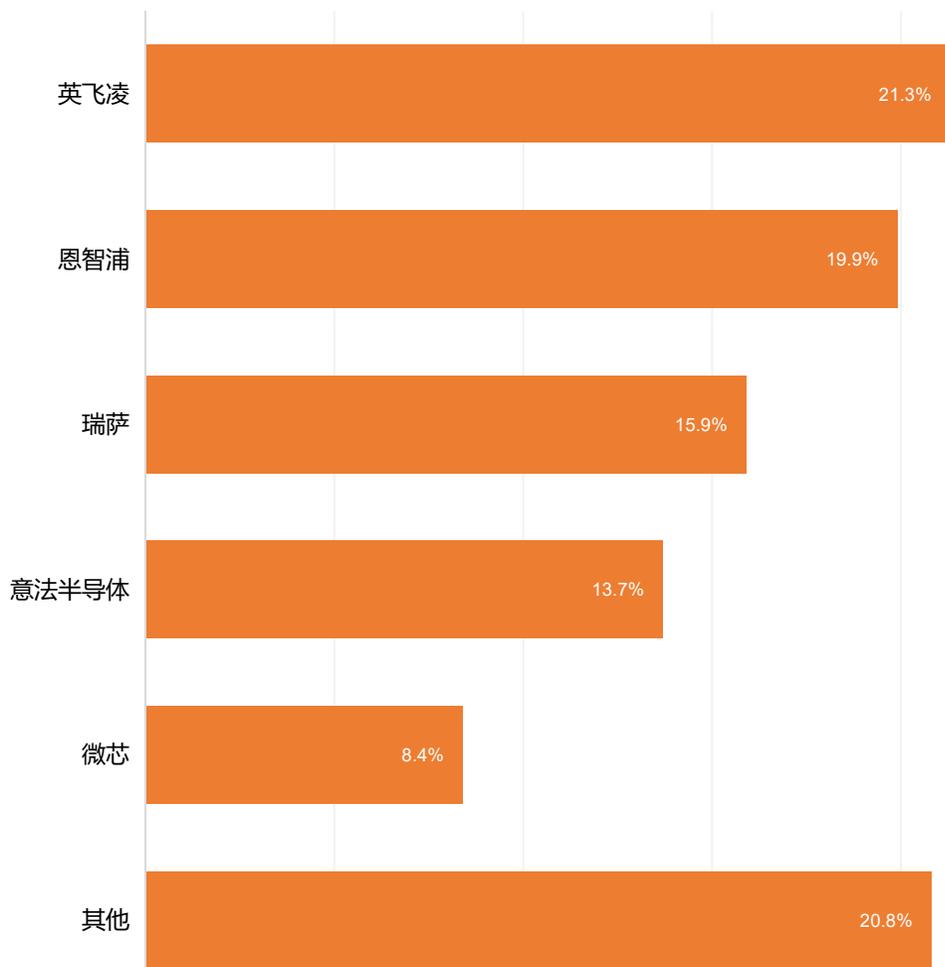




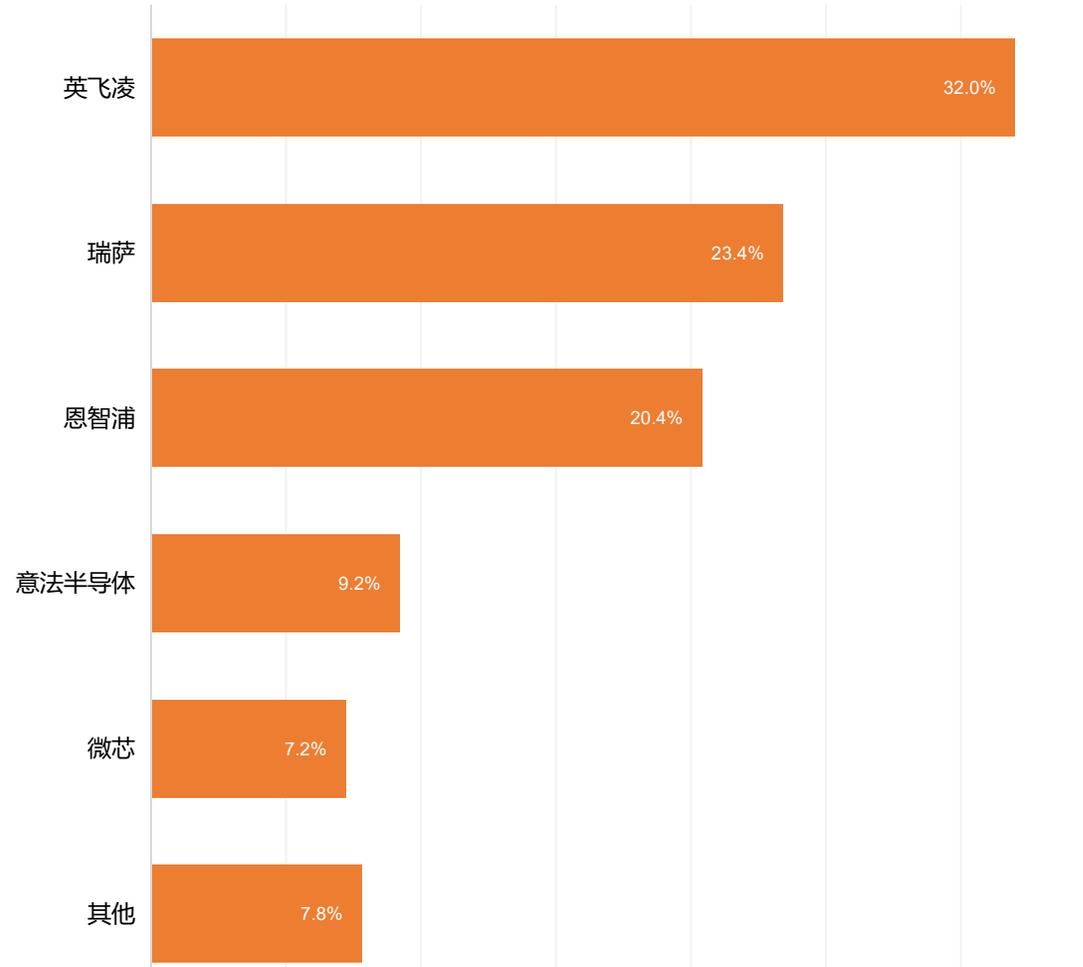
半导体器件案例1-微控制器

根据QYResearch数据，2024年全球微控制器市场规模为224亿美元；如今，汽车领域是全球MCU最大的应用市场，占比约为33%。汽车电动化迅猛发展的今天，车规级MCU的需求日益增长，为国内芯片厂商提供了难得的发展机遇。

2024年全球微控制器企业市场份额



2024年全球车规级微控制器企业市场份额

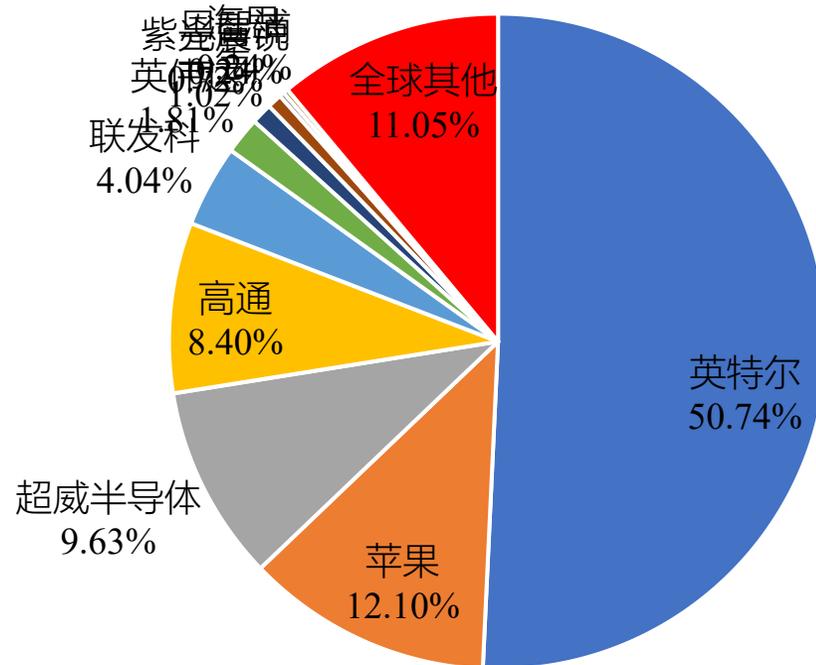




半导体器件案例2-微处理器

微处理器（CPU, Central Processing Unit）是计算机系统的核心部件，负责执行指令和处理数据，广泛应用于PC、服务器、移动设备等领域。根据QYResearch数据，2023年全球市场份额显示，英特尔以50.74%的绝对优势主导市场，其次是苹果（12.10%）和AMD（9.63%），而高通、联发科等主要在移动端（如智能手机）占据重要地位。该行业呈现“x86架构主导传统计算，ARM架构崛起于移动和新兴市场”的竞争格局。

2023年全球微处理器市场份额占比

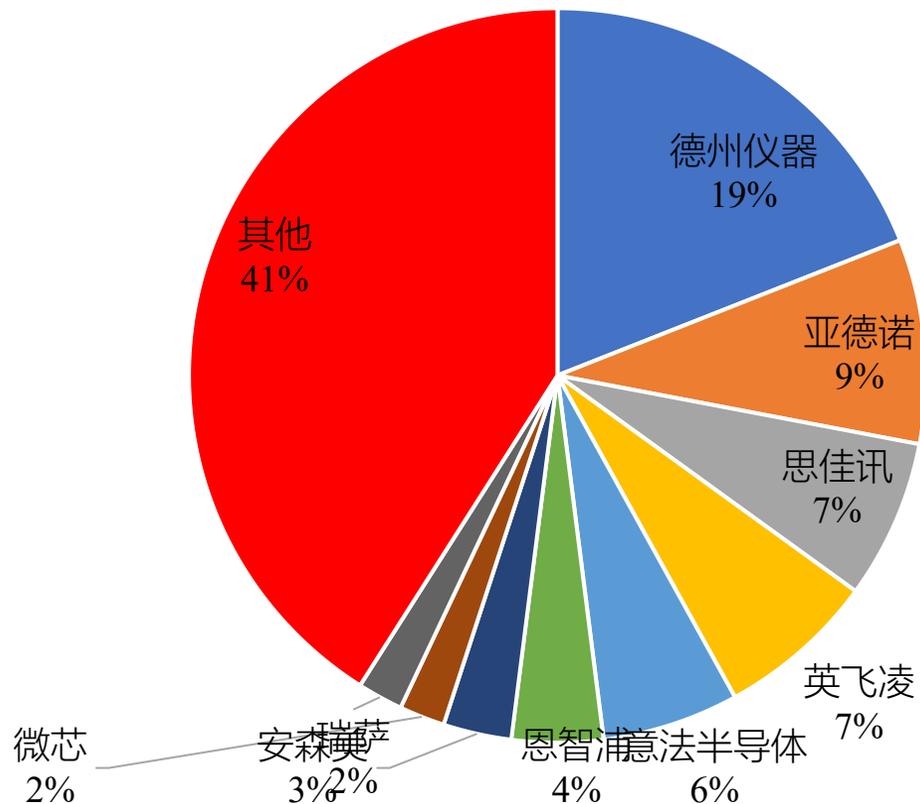




半导体器件案例3-模拟芯片

从市场竞争来看，由于我国模拟芯片发展比国外企业玩，加上在技术、品牌上的差距，所以全球模拟芯片市场份额主要被国外企业所占据。QYResearch数据显示，全球模拟芯片市场份额占比最高的是德州仪器，占比为19%；其次是为亚德诺，市场份额占比为9%；第三是思佳讯，市场份额占比为7%。

2023年全球模拟芯片市场份额占比

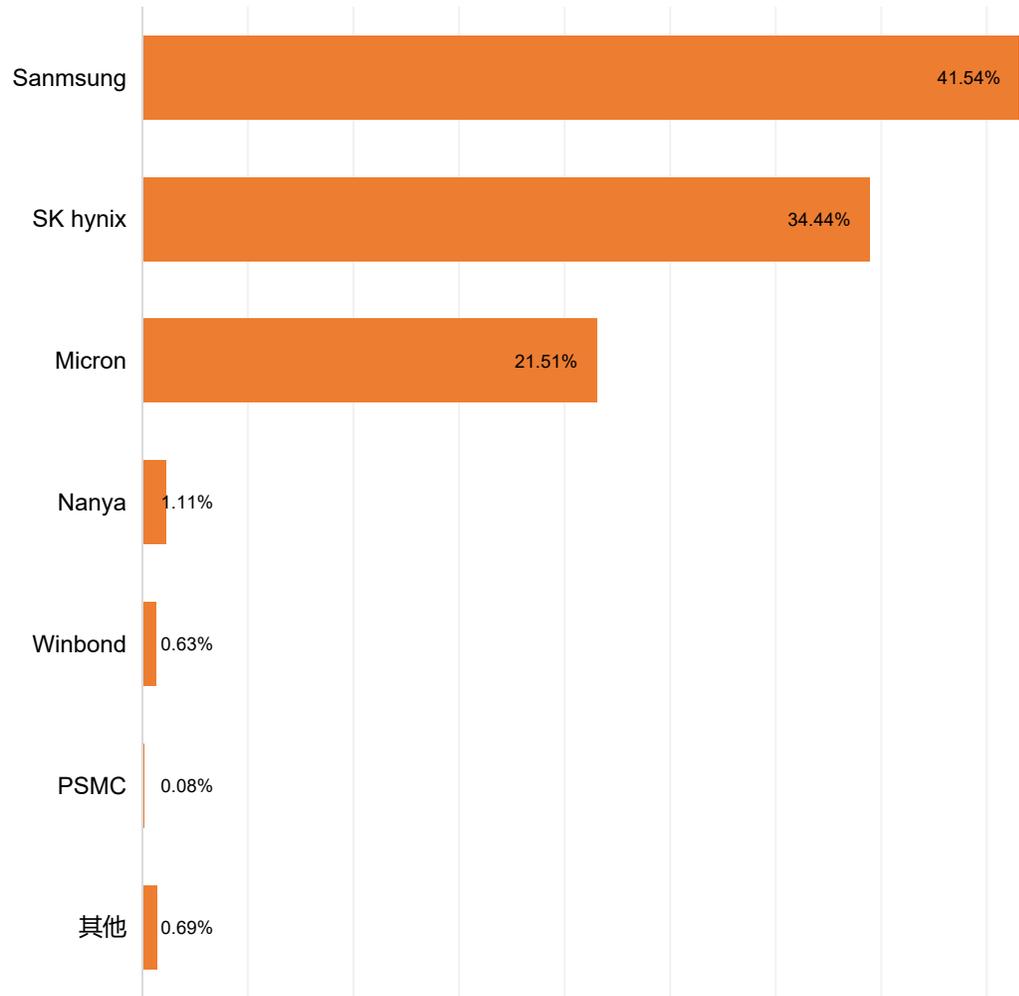




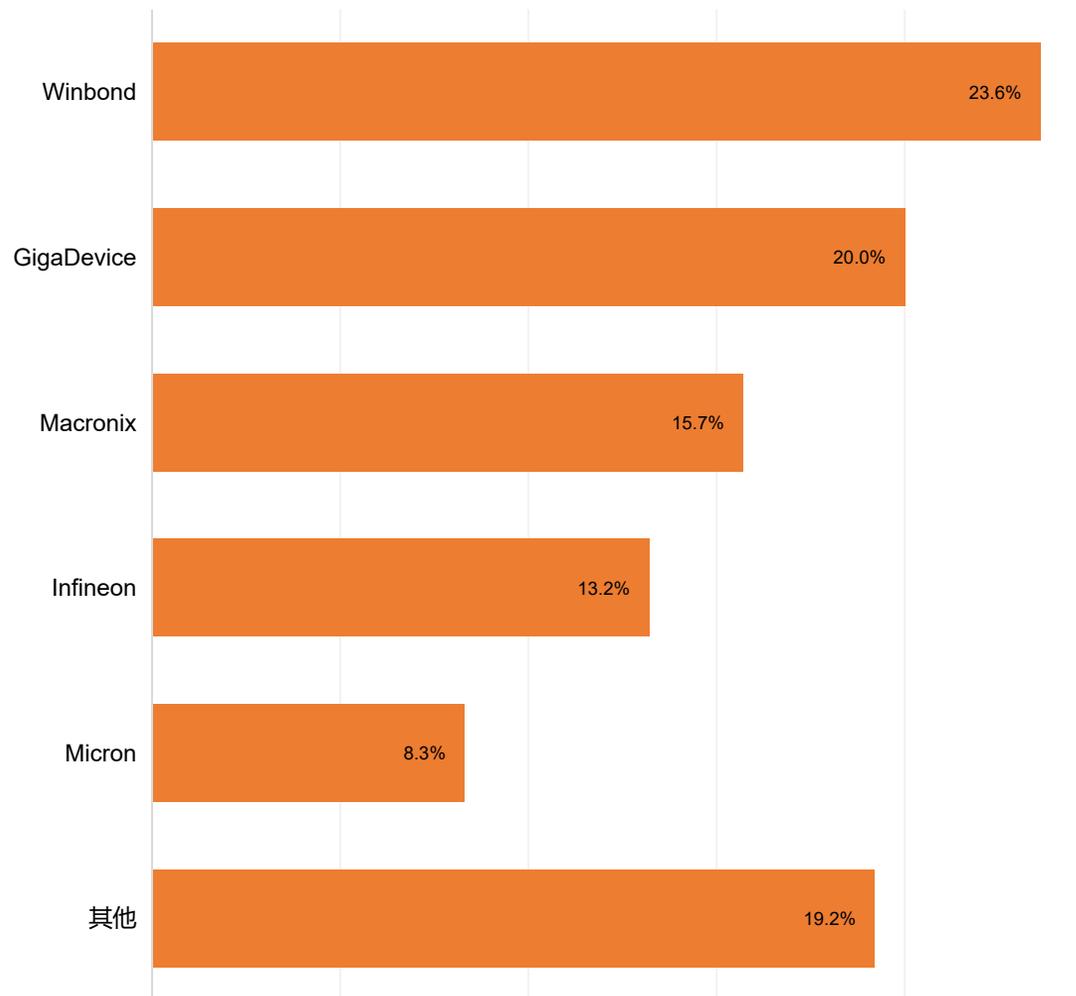
半导体器件案例4-存储芯片

根据QYResearch数据，2024年全球DRAM市场规模为958.63亿美元；2024年全球NOR Flash市场规模为31亿美元。

2024年全球DRAM企业市场份额



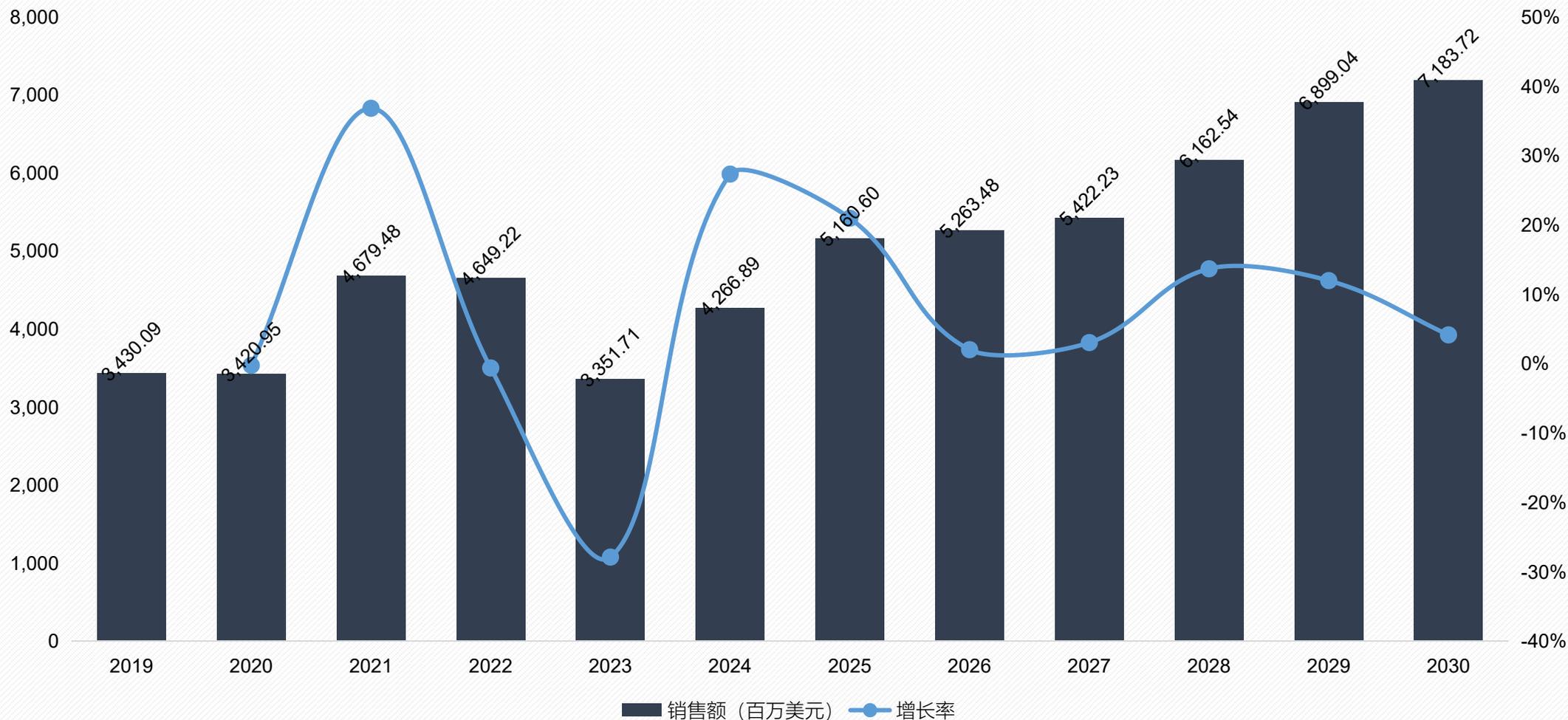
2024年全球NOR Flash企业市场份额





半导体器件案例5-汽车存储芯片

根据QYResearch数据，2024年全球汽车内存芯片市场规模为42.67亿美元，预计2030年将达到71.84亿美元。

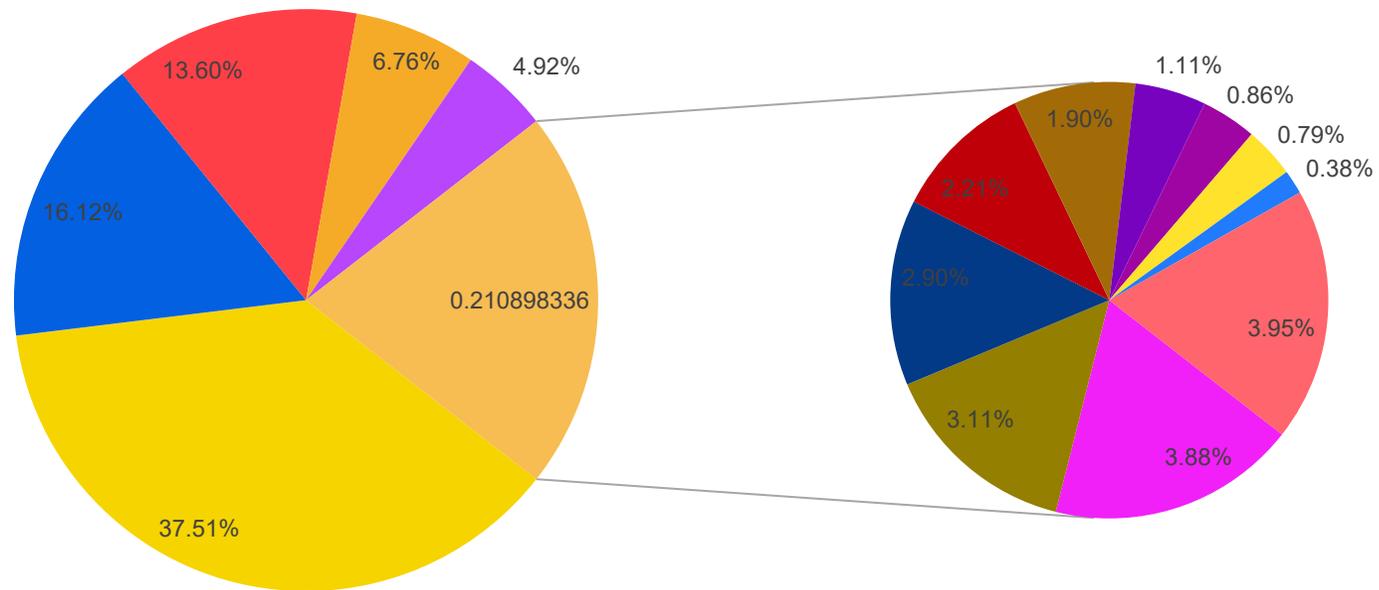




半导体器件案例5-汽车存储芯片

根据QYResearch数据，全球汽车内存芯片市场呈现高度集中化趋势，三星、SK海力士和美光等存储巨头占据主导地位，同时伴随ISSI (Integrated Silicon Solution Inc.)、KIOXIA等汽车半导体厂商的差异化竞争。

2024年全球汽车内存芯片市场份额占比



Micron Technology
KIOXIA
onsemi
Macronix

Samsung
STMicroelectronics
Nanya Technology
Giantec Semiconductor

SK Hynix Semiconductor
Cypress (Infineon)
Winbond
其他

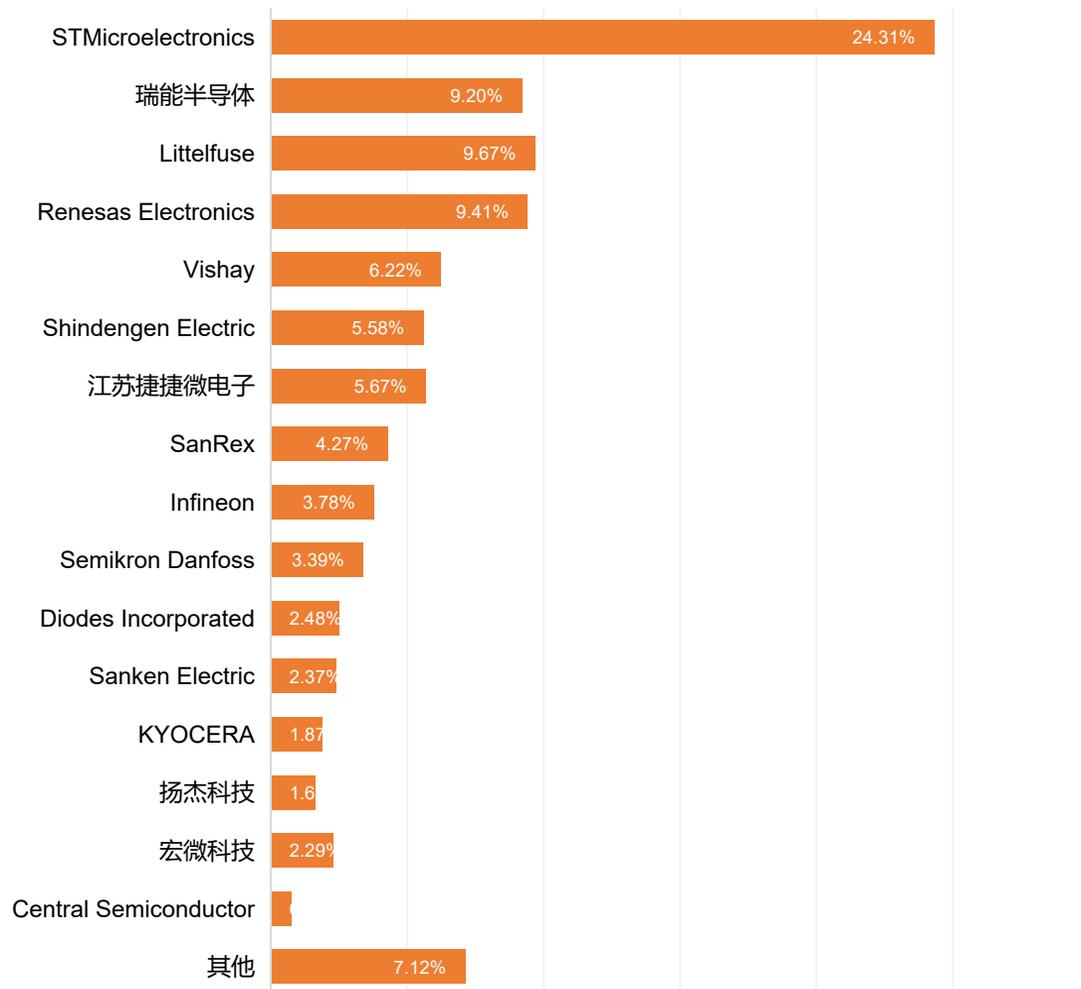
ISSI (Integrated Silicon Solution Inc.)
Western Digital
GigaDevice



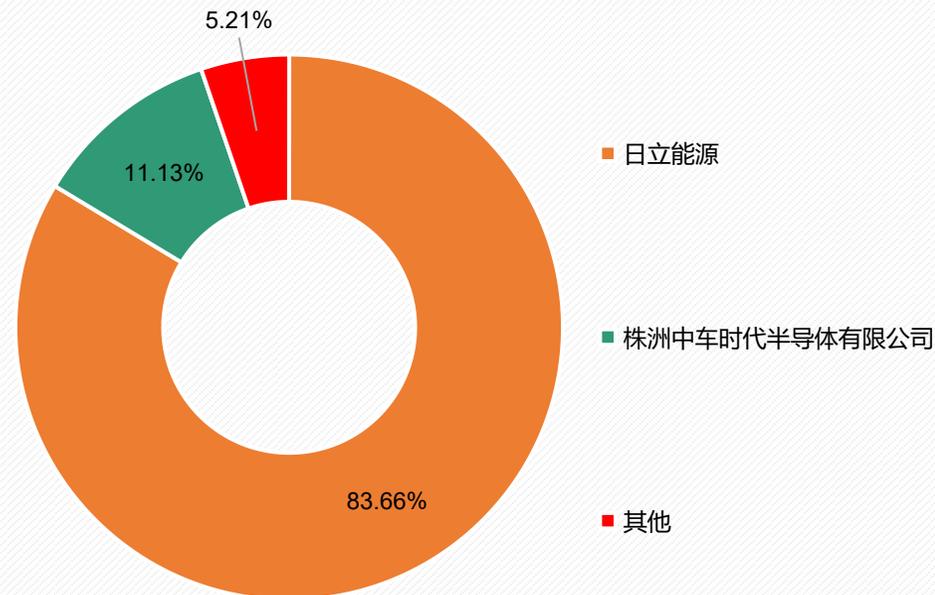
半导体器件案例6-晶闸管&IGCT

根据QYResearch数据，2023年全球Top5晶闸管企业合计占据58.81%的市场份额；IGCT市场则高度垄断，日立能源独占83.66%的全球份额，中车时代半导体作为中国代表跻身主要玩家，该市场技术壁垒极高且头部效应显著。

2023年全球晶闸管企业市场份额



2023年全球IGCT企业市场份额

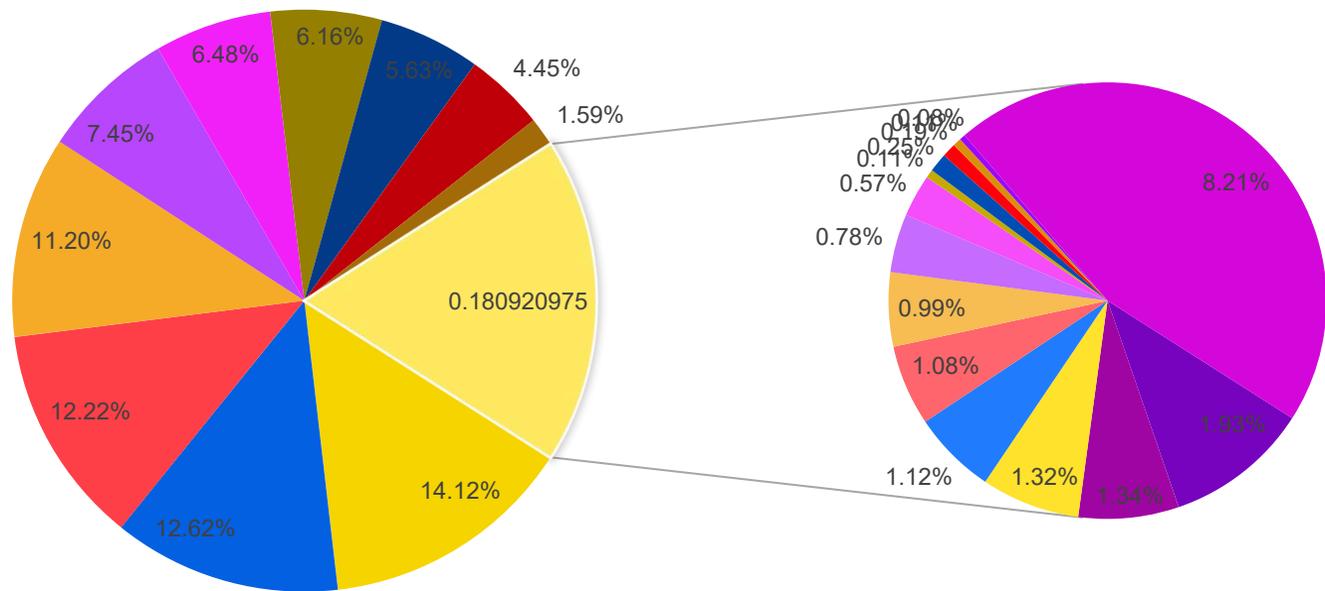




半导体器件案例7-光耦

根据QYResearch数据，全球光耦市场竞争激烈，主要参与者包括onsemi、Toshiba、Broadcom、光宝科技、亿光电子等。其中全球前五大企业占据了57.61%的收入市场份额。

2023年全球光耦市场份额占比



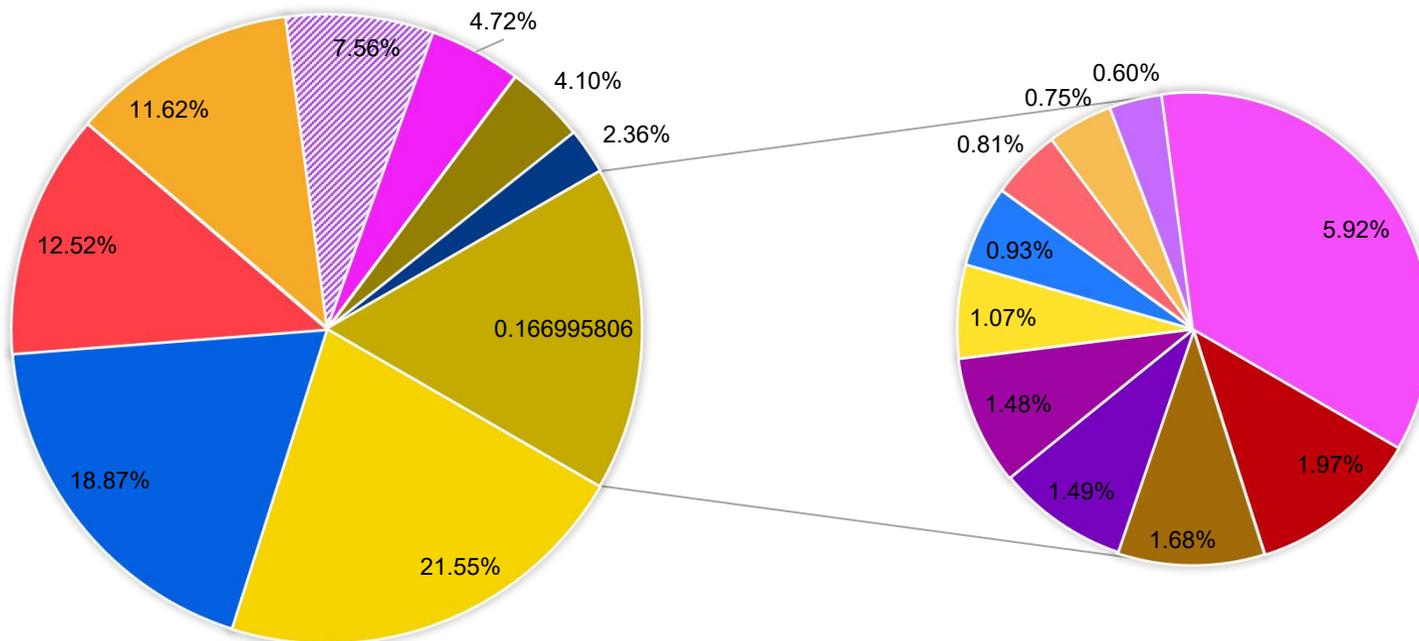
- onsemi
- Toshiba
- Broadcom
- 光宝科技
- 亿光电子
- Renesas
- Sharp
- Panasonic
- Vishay Intertechnology
- ISOCOM
- 厦门华联电子
- 群芯微电子
- IXYS Corporation
- 匡通电子
- 奥伦德科技
- 华润微
- 冠西电子
- 天电光电
- 银河世纪微电子
- 江苏泓冠光电科技
- 国星光电
- 晶台光电
- 瑞丰光电
- 其他



半导体器件案例8-霍尔效应传感器

根据QYResearch数据，霍尔效应传感器产业近年来展现出强劲的增长态势，已在全球范围内形成多元化的应用格局。2024年全球霍尔效应传感器市场规模达到23.34亿美元，预计将以5.08%的年复合增长率稳步攀升，到2031年将达到33.40亿美元。

2024年全球霍尔效应传感器市场份额占比



- Allegro MicroSystem
- Melexis
- Infineon
- TDK
- Asahi Kasei Microdevices
- ams OSRAM
- NXP
- Diodes
- Texas Instruments
- 纳芯微
- 灿瑞科技
- Honeywell
- 赛卓电子
- 意瑞半导体
- 兴感半导体
- 芯进电子
- 美新半导体
- 其他



QYResearch报告介绍

QYResearch提供半导体产业链各细分产品调研报告，包括常规报告和定制调研，涵盖半导体产业链及下游各个细分领域产品。

| 报告类型 | 介绍 |
|------|--|
| 常规报告 | 涉及到全球总体规模、增长空间、核心地区产销量规模、企业销量/收入价格份额/排名、产品趋势、技术趋势、应用趋势、SWOT分析、成本分析等。在全球和中国行业咨询/调研领域，占据重要地位，客户遍布全球。 |
| 定制调研 | 如供应链关系、客户信息、成本分析、可行性调研、IPO、专精特新等。 |

| 半导体板块 | 报告覆盖（如下我们代表性的调研领域） |
|-------------|---|
| 半导体材料 | 包括制造材料、封装材料等，半导体硅片、光刻胶、CMP抛光材料、溅射靶材、电子特气、高纯化学试剂、IC载板/ABF/MIS、引线框架、陶瓷基板/封装等。 |
| 设备及零部件 | 半导体新设备、翻新/二手设备、辅助设备、设备零部件/耗材等，零部件如金属件、陶瓷件、塑料件、泵阀、Robot、EFEM、ESC、MFC、射频电源、Chiller、UHP、AMHS等。 |
| 芯片/器件 | 如各类逻辑/模拟芯片、存储IC、传感器、分立器件/模块、硅基、二代/三代半导体、IGBT、MOSFET、SIC功率器件、光电器件、电源管理芯片、功率半导体、PCB等。 |
| 器件制造/封装/及其他 | 晶圆代工、特色工艺、氮化镓/碳化硅代工、逻辑、CIS、先进封装、先进/尖端制程、成熟制程、外延、Coating/Cleaning、洁净室/二次配工程。 |



QYResearch引用案例

中国企业招股书-1



深圳中科飞测科技股份有限公司

招股说明书

| 序号 | 设备类型 | 销售额 (亿美元) | 占全球总销售额比例 |
|----|-------------|-----------|-----------|
| 10 | 晶圆介质薄膜量测设备 | 2.3 | 3.0% |
| 11 | X 光量测设备 | 1.7 | 2.2% |
| 12 | 掩膜版关键尺寸量测设备 | 1.0 | 1.3% |
| 13 | 三维形貌量测设备 | 0.7 | 0.9% |
| 14 | 晶圆金属薄膜量测设备 | 0.4 | 0.5% |
| 15 | 其他 | 2.9 | 3.9% |
| 合计 | | 76.5 | 100.0% |

数据来源: VLSI Research、QY Research

https://pdf.dfcfw.com/pdf/H2_AN202305151586646384_1.pdf?1684177481000.pdf



根据 QY Research 数据, 半导体专用温控设备国内市场集中度较高, 年至 2022 年市占率前六厂商合计市占率水平维持在 90%左右, 其中公司一家国内厂商, 公司产品已经打破国外厂商垄断地位。

根据 QY Research 数据, 2018 年至 2022 年全球及中国半导体专用温控设备市场空间情况如下:

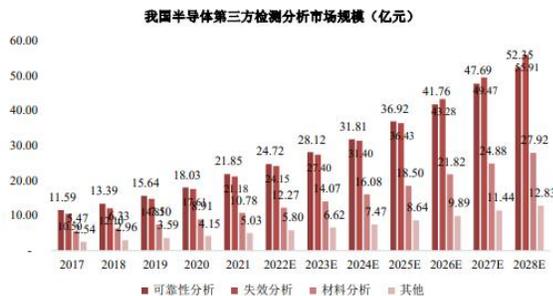


<https://www.baecld.com.cn/>



胜利纳米 (苏州) 股份有限公司

招股意向书



数据来源: QY Research

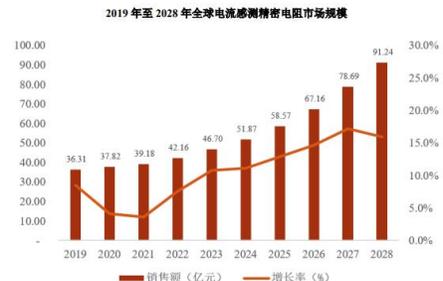


据 SEMI (国际半导体产业协会)、ICMtia (集成电路材料产业技术创新联盟) 统计数据 (将统计的美元数据乘以各年平均汇率折算) 显示, 最近几年, 全球半导体引线框架市场规模均在 210 亿元以上 (将统计的美元数据按照各年平均汇率折算), 2021 年全球半导体引线框架市场规模约 246.45 亿元。根据 QYResearch 统计数据, 2022 年全球引线框架市场规模约为 269 亿元, 2023 年全球半导体引线框架市场规模约为 279.20 亿元 (按增长率 3.8%测算), 预计 2029 年将达到 352 亿元, 2023-2029 期间年复合增长率 (CAGR) 为 3.8%。



铂威电子科技股份有限公司

招股说明书



数据来源: QY Research

苏州楷威特半导体股份有限公司

招股意向书

① 市场规模

A、PWM 控制 IC 的市场规模

根据 QYResearch 测算, 2022 年全球 PWM 控制 IC 的市场规模为 50.74 亿美元, 预计 2028 年将达到 67.70 亿美元, 年增长率为 4.92%。2022 年中国 PWM 控制 IC 的市场规模约为 19.75 亿美元, 预计 2028 年将达到 30.12 亿美元, 年化增长率达 7.28%; 其中中国高可靠领域 PWM 控制 IC 市场规模为 5.00 亿美元, 预计 2028 年将达到 7.61 亿美元, 年化增长率达 7.26%。



股票代码
301626

苏州天脉导热科技股份有限公司招股说明书

进入富士康、中磊电子、海康威视、启基科技、宁德时代等知名客户供应链, 抢占全球高端市场份额。

2021 年, 公司导热界面材料实现收入为 15,215.66 万元, 根据 QYResearch 及观研报告网的预测数据, 2021 年, 全球及中国导热界面材料市场规模分别约为 57.96 亿元和 13.50 亿元, 据此估算, 公司导热界面材料全球和国内市场份



QYResearch引用案例

中国企业招股书-2

苏州赛分科技股份有限公司 首次公开发行股票并在科创板上市招股说明书

根据 QYResearch 数据，在全球范围内，色谱柱市场主要受生物技术与制药工业的推动，该领域消费量占色谱柱整体市场份额的比例合计达到 54.21%。其次为食品安全与环境保护监测领域，分别占色谱柱整体市场份额的 16.80%与 15.14%。

全球色谱柱应用领域消费量市场份额占比情况



数据来源：QYResearch

热管理材料是帮助产品提高散热效果的功能性材料，用于提高热传导效率，使得热量均匀分散，是消费电子、汽车电子、通信设备等领域不可或缺的材料。随着下游行业的不断发展，全球热管理行业保持持续发展态势，根据 QY Research 统计数据显示，到 2020 年，全球热管理材料市场将达到 108.90 亿美元，预计到 2027 年全球热管理材料市场将达到 139.80 亿美元，年复合增长率达 3.63%。

1-1-103

广东思泉新材料股份有限公司 招股说明书（申报稿）

近年来，随着我国导热材料行业技术不断进步，在下游应用领域快速发展的推动下，中国导热材料市场规模不断扩大。根据新材料在线预测，2020 年，中国导热材料市场需求规模有望达到 155.3 亿元，预计 2021-2025 年复合增长率为 9.69%。

UGREEN 绿联

深圳市绿联科技股份有限公司 招股说明书

(3) 充电类——手机数据线

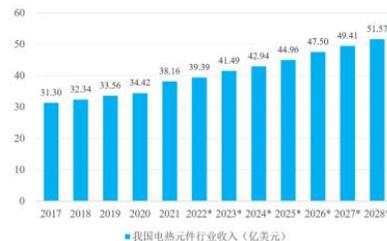
| 同行业公司 | 2021 年度手机数据线市场占有率情况 | |
|----------------|---------------------|-------|
| | 中国市场 | 全球市场 |
| Belkin | 1.12% | 0.41% |
| 安克 (Anker) | 0.15% | 0.60% |
| 公牛 (Bull) | 0.94% | 0.20% |
| 海能实业 (Ce-link) | 1.32% | 0.34% |
| 品胜 (Pisen) | 2.18% | 0.54% |
| 发行人 | 1.59% | 0.58% |

注：数据来源于 QYResearch

² 数据来源：QYRESEARCH,《Global Heating Element Market Research Report 2022》，图中带*号年份为预测数据，下文我国电热元件市场规模数据亦来源于此报告

1-1-96

杭州热威电热科技股份有限公司 招股意向书



深圳安培龙科技股份有限公司

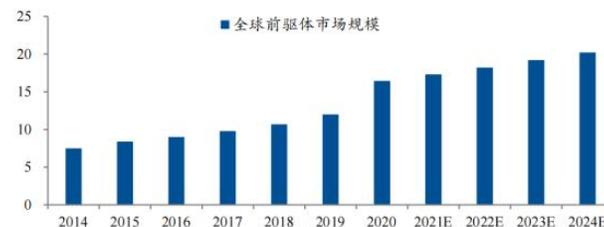
招股说明书

在过去几年，热敏电阻的应用范围不断扩大，全球市场规模保持稳定增长。根据 QYResearch 的统计，2018 年热敏电阻的全球销售额为 9.05 亿美元，同比增长约 6%，未来几年，仍将持续增长，预计 2025 年全球销售额为 10.40 亿美元。

从下游市场来看，消费类产品为热敏电阻的主要销售市场，占比为 53.23%，其次为工业设备，占比为 11.12%。从区域来看，亚太地区是最大的消费市场，就数量而言，占据了约 88% 的市场份额，预计 2018-2025 年的复合增长率为 6.12%，保持相对较快的增长速度。

GrandiT 中巨芯科技股份有限公司 GRANDIT CO., LTD.

全球前驱体市场规模（单位：亿美元）



资料来源：富士经济

中国市场是全球半导体前驱体的主要市场之一。根据 QYResearch 数据，2021 年中国半导体前驱体市场规模达到 5.9 亿美元，预计 2028 年将达到 11.56 亿美元，年复合增长率预计为 10%。



QYResearch引用案例

国外企业招股书-1



Prospectus

dated May 7, 2021

hGears' core sales region, Europe, is one of the fastest growing and largest regions for precision components with a market value of EUR 1.1 billion corresponding to a share of 27.3% of the total global precision components market in the financial year ended December 31, 2020 (source: Arizton 2020; IHS 2020; Markets and Markets 2020; QYResearch 2020). European sales volumes of electric and hybrid vehicles are expected to grow strongly at a compound annual growth rate ("CAGR") of ca. 43% p.a. between 2018 and 2025 (source: IHS 2021). E-axes of electric and hybrid vehicles include high precision components, thereby increasing demand. The market for e-bikes with mid-

<https://ir.hgears.com/wp-content/uploads/hGears-Securities-Prospectus-7-May-2021.pdf>



NEW KINPO GROUP

Cal-Comp Technology (Philippines), Inc.
(incorporated in the Republic of the Philippines)

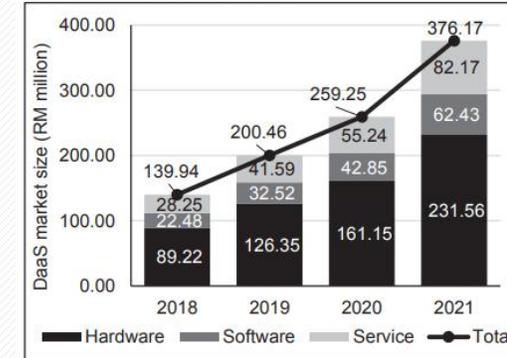
INDUSTRY

The information set out in this section "Industry" has been extracted from the Global Electronics Manufacturing Services (EMS) Market Size, Status and Forecast 2023 published by QY Research dated May 2018.

Electronics manufacturing services is a term used for companies that design, manufacture, test, distribute, and provide return/repair services for electronic components and assemblies for original equipment manufacturers. The concept is also referred to as electronics contract manufacturing ("ECM").



DaaS market size, 2018 – 2021



Sources: Malaysia DaaS Market Size by QY Research Inc, SMITH ZANDER analysis

<https://www.sns.com.my/wp-content/pdf/file/SNS-Prospectus.pdf>

PROSPECTUS



AIRTHINGS ASA

(A public limited liability company incorporated under the laws of Norway)

Listing of the Company's Shares on Oslo Børs

The Company's current operations are primarily focused in the North-American market has an important foothold in numerous European countries, including the Nordics, Germ and the UK. Essentially every building and household in North-America and Europe is total addressable market is considered large. Currently, Airthings considers the North-markets as its main markets, but the Company's strategic ambition is to also grow in ot

¹ European Commission CORDIS EU research results, International Energy Agency (IEA)

² QYResearch "Impact of COVID-19 Outbreak on Randon Gas Sensors Gas sensors, of global ma (2020), page 10 cont.



QYResearch引用案例

国外企业招股书-2

bioretec

Bioretec Ltd

Listing on Nasdaq First North Growth Market Finland
Share Issue of approximately EUR 25 million
Subscription Price of EUR 3.90 per Offer Share

¹³ Source: For spinal cage: Global Market Analysis and Forecast Model (COVID-19 market impact), Allied Market Research, QYR, for other products: GlobalDataReport 2020, Trauma Fixation (Orthopedic Devices).

https://danskebank.fi/PDF/IPO/Bioretec/Bioretec_Ltd-Offering_Circular.pdf

**FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

biote Corp.

(Exact name of Registrant as specified in its charter)

Beyond the breadth and depth of our commercial and operational platform, the Biote name has achieved strong brand recognition among practitioners and patients in the communities we serve, as illustrated by QY Research's market research publication entitled "South & North America Hormone Replacement Therapy Market Insights and Forecast to 2026." Practitioners undertaking the Biote Method can be confident that

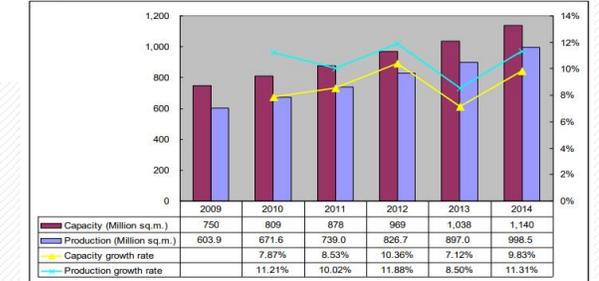
<https://ir.biote.com/static-files/c8484bc9-a3b6-4ffe-98f8-764a9b2972b2>



SHARDA CROP CHEM LIMITED

**RED HERRING PROSPECTUS
Dated August 27, 2014
Please read Section 32 of the Companies Act, 2013
Book Built Issue**

Figure 2009-2014 Global Major Manufactures Heavy Duty Conveyor Belts Capacity Production and Growth Rate



Source: QY Research Heavy Duty Conveyor Belts Industry Report

https://www.sebi.gov.in/sebi_data/attachdocs/1409562203410.pdf

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

CAMBIUM NETWORKS CORPORATION

(Exact name of Registrant as specified in its charter)

Market opportunity

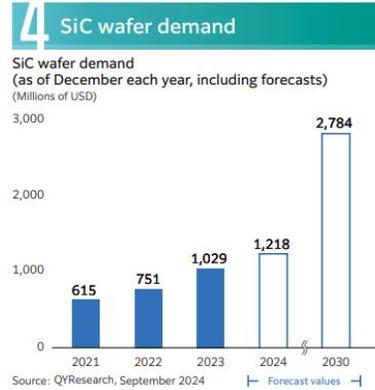
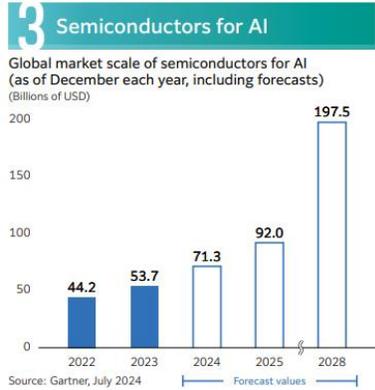
The majority of our revenues today come from PTP and PMP solutions. According to Sky Light Research, the PTP Mic expected to grow from \$3.1 billion in 2017 to \$4.2 billion through 2021. According to QYResearch, the PMP market is expected to grow from \$0.5 billion in 2017 to \$0.9 billion in 2025. We entered the Wi-Fi market in 2016 and it has become a meaningful part of our business.

<https://investors.cambiumnetworks.com/static-files/423c3b11-ce30-4c1a-a2d9-c56a588f005a>



QYResearch引用案例

国外企业引用情况，大量日本、韩国、欧美客户及机构，引用QYResearch报告数据



<https://www.ircms.jp/irexport/fujimiinc/file/a79408118033399.pdf>



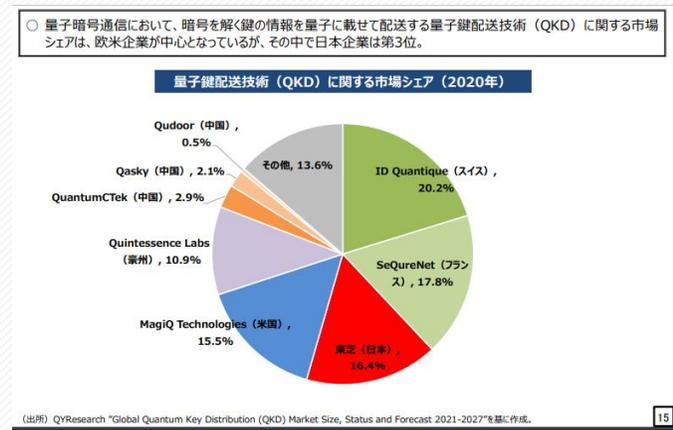
Taiwan to require the new cars to be equipped with TPMS. In the future, Japan, India, and other countries will also begin to regulate the installation of TPMS on new cars, which will drive market opportunities. According to QY Research, the global market for tire pressure monitor systems is expected to reach US\$3,630.65 million by 2024.

https://www.sysgration.com/uploads/financial_report/2022/2022_Annual_Report_EN.pdf



The diffusion of next-generation vehicles is a highly feasible event in both scenarios, with or without the introduction of policies, but in the 1.5°C scenario, the diffusion will be rapid due to policy support. The Company believes that it has the technological superiority and technological development capability to respond to this rapid spread, and that it can promptly respond to the rapid market expansion and grow the Company's business.

*1 Cellulose Nano Fiber
 *2 QY Research (Japan) "Supercapacitor Global Market Share and Ranking, Overall Sales and Demand Forecast 2024-2030" (report dated January 1, 2024)
 *3 Market Research Community (U.K.) "Reinforced Plastics Market Size, Trends, Analysis, and Outlook to 2030" (report dated September 30, 2023)
 *4 Research Conducted on the Cellulose Nanofiber Global Market (2023) / News and Topics / Yano Research Institute Ltd. (yanoresearch.com)



https://www.cas.go.jp/jp/seisaku/atarashii_sihonsyugi/kaigi/dai4/shiryou1r.pdf

https://www.nipponpapergroup.com/english/csr/npg_esgdb2024_e_ALL.pdf



QYResearch引用案例

国外企业引用情况



20+ Years in mobile location tech² ~10B Devices shipped with our location capabilities

1. QYResearch, Ranking of Global Top GNSS Chip Manufacturers by Revenue, Apr. '20
2. Internal data

https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/5g_positioning_for_the_connected_intelligent_edge.pdf



Thin Film Lithium Niobate

- TFLN is rapidly emerging as the **new darling child of the telecom and datacom industries**
- Modulators built using TFLN **consume very little power**, are capable of operating with extremely **high bandwidth**, and hold the promise of **miniaturization**
- TFLN is in **limited supply**, coming exclusively from China
- TFLN is already in **high demand**, a processed six-inch TFLN wafer can potentially yield over \$3 million in sellable inventory

TFLN Modulator Market¹

\$185M

Market Size in 2022

41%

CAGR 2023- 2029

\$2B

Market Size in 2029

¹ QY Research, Sept 2023

https://assets.ctfassets.net/i1dyhzybi8ad/5ZQB8nfOQW7FtofV8qVG/3621eb1874b82ecc4e2aa92d34bd6d4f/QCi_Investor_Presentation_November_2024.pdf



Large and Growing Global In-Circuit Tester Market

Estimated SAM ~\$200 million*

Flying probe and integrated circuit
Estimated mid-single digit CAGR

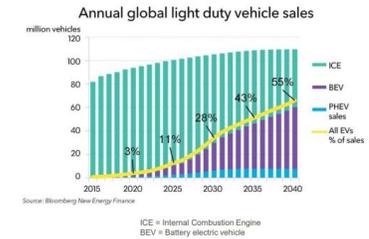
Positive Market Trends

Strong growth in automotive electronics, consumer electronics and medical equipment

Primary markets for in-circuit testers:
U.S., Japan and China

Significant growth potential in Europe due to the major automotive manufacturers in the region

Acculogic has a large growth opportunity in the EV battery testing market, which according to Bloomberg, is expected to grow 40x by 2030



*Market data based on Future Market Insights 2021 report, QY Research 2021 report and Company estimates

inTEST

<https://ir.intest.com/static-files/764f3f61-551b-4c10-bc3f-00560c8d0a69>



Total demand forecast



*Yamaha Motor estimates based on data/ materials from Fuji Keizai and QY Research

https://global.yamaha-motor.com/ir/library/report/pdf/2025/robot_en_01.pdf



QYResearch引用案例

国外企业引用情况



FY 2023 annual sales of world's MIM market:
About 4 billion dollars (about 590 billion yen)

CAGR (2018-2029): **10.7%**

Source : Secondary Sources, Expert Interviews and QYResearch, 2023

Growing demand for molded parts in the medical and defense industry that require high precision

<https://www.npr-riken.co.jp/en/ir/plan/pdf/plan.pdf>



Key Facts at a Glance

Park Systems achieved a compound average growth rate (CAGR) of 30% between 2015 and 2022, securing its position as the global leader in AFM, according to the Global Atomic-Force Microscopy, Market Report 2023 released by QYResearch*. The company currently has a sales network spanning over 30 countries with 500+ employees, with more than 37% of them engaged in R&D.

Revenue compounded growth
30%
FY2015 - FY2022

R&D investment
37%
Manpower of headcount

AFM market share*
#1
2022 Global AFM market leader

Market capitalization
>1.3 trillion
Currency in KRW (July 19, 2023)

Global network
63 sites
14 Direct offices

Recognition
Forbes Asia's 200
Named to Forbes Asia's 200 listing in 2020/2023



国内メーカーの課題

技術面

【分析】

- TEM 像のコントラストは独特のものであり、TEM 像を正確に解釈するにはそのコントラストの発生原理を理解することが重要
- 高エネルギーの電子線を使用するため、試料が破壊される場合がある。特に高分子分析では、一般的に、電子線の照射により、①材料内に生じた活性ラジカルによる結合の切断と再結合(非弾性散乱によるイオン化)、②材料内の原子との衝突により原子がはじき出されてしまうことによる損傷、③フォノンによる温度上昇、④欠陥の二次的拡散、が起こるとされ、試料自体の導電性や試料の厚みや染色の有無など、様々な試料作製条件なども考慮する必要がある

【前処理】

- 電子線を透過できるだけの超薄切片を作成することが極めて重要な要素だが、一部の試料において薄片化が困難な場合がある
- 試料加工および観察により、試料が変質・変形することがある

経済面

- 高コストであり、高い初期投資が市場の障壁となる
- 透過電子顕微鏡の原価は、輸入関税等の政府による輸出入規制によって上昇傾向

出典：QYResearch「透過型電子顕微鏡（TEM）の世界市場調査レポート:規模、現状、予測2023-2029」、公益社団法人高分子学会HP、他公開レポート情報

8

https://www.meti.go.jp/meti_lib/report/2023FY/000066.pdf

ANALYST NET Company Report

ANALYST NET

GCC Management™ Analysis Report: Tamagawa Holdings Co., Ltd.

JASDAQ (Standard) Securities Code: 6838

September 10, 2020

Creating shareholder value consistent with Sustainable Development Goals, in high-growing communication and energy infrastructure fields, by deploying technology and financial prowess

Related areas with high growth potential

| Segment | Details | Period and CAGR |
|--|--|--|
| Electronic and Communication Device Business | 5G capital spending Global 5G-related capex estimate: \$3.6 bln in 2020 to \$41.8 bln in 2026 (Source: https://edge-of-cloud.blogspot.com/2017/06/5g-and-ite-infrastructure-spending.html) Global 5G-related capex estimate: CAGR of 64.1% in 2017 - 2025 (Source: Infinium Global Research) | 2020 - 2026 50.5% (11.6 times) |
| | Small atomic clocks The world's market for small atomic clocks: \$9.402 mln in 2017 to \$23.402 mln in 2025 (Source: QY Research "Global Miniature Atomic Clock Market Insights, Forecast to 2025") | 2017 - 2025 64.1% (17.4 times) |
| | | 2017 - 2025 12.1% (2.5 times) |

https://www.tmex.co.jp/dcms_media/other/en_20200911.pdf



QYResearch引用案例

国外企业引用情况



P8

- ¹ Renewable electricity adoption ratio at all Epson Group sites. Excludes some sales sites and leased properties where the amount of electricity consumed cannot be determined.
- ² Ratio of sustainable resources (renewable resources + closed-loop materials + less depletable resources) to raw materials
- ³ Source: IDC's Worldwide Quarterly Hardcopy Peripherals Tracker 2024Q2 Share by Brand
- ⁴ Source: IDC's Worldwide Quarterly Hardcopy Peripherals Tracker 2024Q2 Share by Brand. Laser printers - up to 90 ppm monochrome laser printers. Color laser - up to 69 ppm
- ⁵ FY2023 unit volume share for projectors with 500 lumens or more, excluding screenless TV products. Source: Futuresource Consulting Ltd.
- ⁶ Market share based on unit sales of industrial SCARA robots, 2023. (Source: Fuji Keizai: "2024 Reality and Future Outlook of Worldwide Robot Market")
- ⁷ Source: QYRESEARCH "Global Timing Device Market Report" (2023)

https://corporate.epson/en/investors/publications/pdf/integrated-report/epson_ir2024_10_e.pdf



QY Research, 2021. Global trimethylgallium Beijing, China. QY Research press release: <https://www.qyresearch.com/index/detail/tmg-sales-market-report-2021>

As LED demand increased beginning in 2010, producers began expanding capacity for TMG, the metal-organic chemical used to fabricate the GaN epitaxial layer on LED epiwafers. When TMG and nitrogen gas are fed into the metal-organic chemical vapor deposition reactor and heated, a GaN layer is formed on the epiwafer. TMG's purity and quality determine an LED's brightness and reliability. There were five major TMG producers worldwide in 2021. Akzo Nobel N.V. (Netherlands) manufactured TMG in Texas; Albemarle Corp. (Baton Rouge, LA) manufactured TMG in the Republic of Korea; the Dow Chemical Co. (Midland, MI) manufactured TMG in Massachusetts and the Republic of Korea; Jiangsu Nata Optoelectronic Material Co., Ltd. (China) manufactured TMG in Jiangsu Province, China; and SAFC Hitech Inc. (a subsidiary of Sigma Aldrich Corp., St. Louis, MO) manufactured TMG in Taiwan and the United Kingdom (QY Research, 2021).

<https://pubs.usgs.gov/myb/vol1/2021/myb1-2021-gallium.pdf>



그림7 대추전자재료 영업이익 및 영업이익률 추이



자료: QYresearch Korea, 이베스트투자증권 리서치센터

<https://ssl.pstatic.net/imgstock/upload/research/company/1681948865871.pdf>



11%
SOM Market CAGR*

\$2.3B
SOM TAM by 2025*

*Source: QYResearch Global System on Module (SOM) Market Report, History and Forecast 2014-2025



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https://www.edge-ai-vision.com/wp-content/uploads/2021/05/ET082_Khona_Xilinx.pdf



感谢您的观看

THANKS

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