

## 中国电子消费电子 China (Overseas) Technology Consumer Electronics

### CES 2025: 差强人意的 AI 应用之年, 各类 AI 软硬件产品加速落地 CES 2025 Takeaway

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#### 热点速评 Flash Analysis

(Please see APPENDIX 1 for English summary)

#### 事件

2025 年 1 月 7-10 日, 全球科技盛会 CES 2025 在美国拉斯维加斯盛大开幕, 我们全程深度参与第一线。根据 CTA 统计, CES 2025 吸引了来自全球 166 个国家和地区、4500+ 家企业参展, 其中 40% 以上来自美国以外的地区, 参会的人数达 14.1 万人, 相比于 CES 2024 的 161 个国家、4300+ 参展商和 13.9 万人的参会人数有少量增长, 但参会人数仍少于 2020 年的 17.1 万人。CES 2025 创新奖项的提交数量超 3400, 较 2024 年增长 13%, 其中人工智能类别提交数量的增长率达到 49.5%。与去年相比, 今年的 CES 展会呈现出以 AI 为核心的明显趋势。

#### 点评

**AI 应用之年, AI PC、智能家具和机器人潜力巨大, 但小型端侧 AI 产品成熟度不及预期。** AI PC 各大芯片硬件厂商联合软件公司提供软硬件一体化的解决方案和展示, 产品完成度显著好于去年。以高通为例发布了从云到端完整的产品体系以及开发工具链: 1) 推出全新 AI 芯片处理速度相较于上一代芯片提高了 60%, 该 AI 芯片可搭载到机器人, 其图像识别精度提高了 40%, 语音交互响应速度提升了 30%; 2) 推出边缘侧本地 AI 解决方案, 保障数据安全并助力企业降低 AI 部署成本; 3) 推出智能家居和生活行业的新框架, 涵盖生成式 AI 和物联网 (IoT) 解决方案, 其中智能冰箱的交互准确率和推理速度惊艳。但小型端侧产品由于其算力和体积限制, 如之前关注度爆火的 AI 眼镜、AI 耳机等端侧产品仅能提供如语音拍照等简单功能, 一旦调用大模型推理速度和体验大幅下降, 仍有待迭代。NVIDIA 大会发布合作的 14 家机器人企业中有 6 家是中国企业, 包括宇树科技、智元机器人、星动纪元、银河通用、傅利叶和小鹏, 中国机器人企业以高性价比机电硬件结合英伟达平台的智能化训练成为最具想象力的展品。

**中国产品同质化严重, 美国 AI 产品完成度较高。** 在 AI 硬件展品如 AI 眼镜、耳机和其他配件领域, 来自中国的展商产品在硬件上高度类似, 软件和 AI 适配能力是差异化重点。以语音应用为例, 本次体验最好的产品为 Sound Hound 的快餐驾车取餐的场景, 其产品反应迅速不需要等待, 且理解准确, 调整灵活, 反应速度好于 Intel 类似的产品。我们认为未来 AI 产品需要更加注重场景化的针对性多模态训练与微调, 来提高准确性; 同时加速推理速度来提高用户体验。相较之下, 单纯依赖开源套壳堆砌的 AI 产品缺乏深度和创新, 难以在竞争激烈的市场中存活。

**AI 基建进一步加速, NVIDIA 推动行业走向物理世界 AI。** NVIDIA 创始人黄仁勋 keynote 发布了针对大规模 AI 训练的 GB200 NVL2, 配备 72 个 Blackwell GPU, 性能高达 1.4 exaFLOPs, 和消费级 RTX50 系列显卡, 以及针对个人小型本地化训练搭载 GB10 的算力集群 Digits; 在软件上发布物理世界模型 Cosmos 2.0, 宣告英伟达未来将发展软件作为第二增长曲线; 以及展示了使用世界模型训练自动驾驶, 和搭配下一代车载 AI 处理器 Thor 进行自动驾驶应用。AMD 发布了 Razer 9 和 AI Max+ 等在 AI 推理上更有性价比的产品, 以及联合下游生态展示了大量 AI PC 作为生产力工具的实用案例。Intel 发布了基于 Arrow Lake 架构的酷睿 Ultra 200 系列芯片, 展示了大量 AI PC 的应用场景, 并宣布首款 Intel 18A 制程芯片 Panther Lake 处理器将于 2H25 发布。

**人工智能推动健康监测与辅助领域快速发展, 智能家居迈向新纪元。** 2024 年 27% 的 Z 世代和 33% 的千禧一代使用可穿戴健康追踪设备。对于人类即将进入的老龄化社会, AI+ 医疗产品如实时生命体征监控以及辅助听力等工具不仅在医院而且在非医院环境具有广阔的应用场景。

**新能源车对可持续发展至关重要, 自动驾驶公司普遍乐观, 太阳能车续航达电池车水平。** 无人驾驶公司普遍对于自动驾驶迅速发展抱乐观态度, Waymo 即将在迈阿密、亚特兰大和凤凰城开启运营, 预计仅 2024 年里程数据积累约等于 2024 年以前的全部数据量。马斯克通过视频接入, 对 Robotaxi 进展乐观, 可能提前至今年二季度完成产品开发。中国电动车厂商极氪、小鹏、长城等在智能化也迅速跟进, 小鹏汇天的飞机在场馆吸睛无数, 太阳能汽车公司 Aptera 完成首款产品路上展示, 续航里程达 400 英里 (643 公里)。

#### 风险

经济周期下行带来消费逆风, AI 产品商业化不及预期等。

**AI 应用之年，落地加速，AI PC、智能家具和机器人潜力巨大。**据 ABI Research 预测，在 2025 年，AI 相关 PC 的出货量将持续增长，到 2025 年下半年 Windows 12 发布后，AI PCs 将成为常态。虽然 ARM-based PCs 在 2025 年预计仅占总 PC 出货量的 13%，但 AI 能力将因处理器的改进和 Copilot 的集成而得到增强。众多厂商在 CES 2025 上展示了搭载先进 AI 技术的 PC 产品，**高通产品亮眼。**高通在此次 CES 2025 上推出的全新 AI 芯片，其 AI 处理速度相较于上一代芯片提高了 60%，能效比也提升了 50%，搭载该 AI 芯片的新款机器人，其图像识别精度提高了 40%，语音交互响应速度提升了 30%。

Fig. 1 高通推出全新 AI 芯片



资料来源：CES2025,HTI

**中国产品同质化严重，美国 AI 产品完成度较高。**中国产品普遍面临同质化问题，创新和差异化较少，而美国的 AI 产品则表现出更高的完成度和技术成熟度。例如高通在 IoT 和端侧智能的创新，以及 SoundHound 在语音领域对于多模态 AI 的结合，都表明未来 AI 产品需要更加注重场景化的针对性训练与微调，才能提升用户体验，特别是在个性化和精准性方面。相较之下，单纯依赖开源套壳堆砌的 AI 产品缺乏深度和创新，难以在竞争激烈的市场中存活。

**高通推出本地 AI 解决方案，助力企业降低 AI 部署成本。**在 CES 2025 上，高通发布了 AI On-Prem Appliance Solution 和 AI Inference Suite，分别为本地硬件设备和 AI 推理软件工具包。这些解决方案帮助企业在本地产生成式 AI 和计算机视觉工作负载，减少对云端依赖，显著降低运营成本和总拥有成本（TCO）。

Fig. 2 高通的本地 AI 部署解决方案



资料来源：CES2025,HTI

**主要特点包括:** 1) **边缘 AI 能力:** 支持从桌面到集群的扩展, 提供语音代理、自然语言处理 (NLP)、计算机视觉和多模态模型处理等功能。2) **隐私与控制:** 支持开源及专有 AI 模型, 确保数据隐私和定制化需求, 适合零售、制造、医疗等场景的自动化应用。3) **高效部署工具:** AI Inference Suite 提供丰富 API, 兼容 OpenAI 模型, 支持生成式 AI、聊天、图像生成等多种功能。目前霍尼韦尔、Aetina、IBM 等行业巨头已加入高通生态, 支持 AI 设备在工业、零售、汽车等领域的部署。高通通过这一解决方案推动 AI 从云端向本地转移, 为企业提供高效、经济的 AI 自动化工具。

**AI 基建进一步加速。** 1) NV AI 芯片性能提升速度已超越摩尔定律。最新数据中心超级芯片 GB200 NVL72 在 AI 推理任务上性能比上一代 H100 快 30-40 倍。黄仁勋强调, 通过在架构、芯片、系统、库和算法等层面同步创新, 英伟达实现了超越摩尔定律的进展。他预测, 随着芯片性能持续提高, 像 OpenAI 的 o3 模型等高计算需求的 AI 推理模型成本将逐步下降。同时, 英伟达还发布了 Project DIGITS 个人 AI 超级计算机, 售价 3000 美元, 具备千万亿次浮点 AI 计算性能, 可以处理多达 2000 亿个参数的 AI 模型, 对于小型企业和教育机构等来说, 是极具性价比的训练解决方案。发布的世界基础模型 Cosmos 可以将图像和文本转换为机器人的可操作任务, 无缝集成视觉和语言理解来执行复杂的动作, 在自动驾驶和机器人应用中表现出色。

Fig. 3 NVIDIA GB200 NVL72 机柜展示

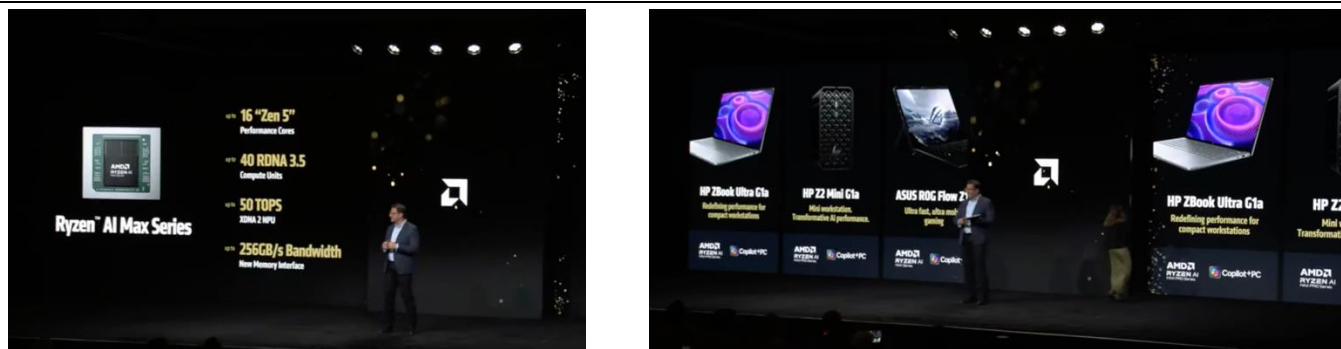


资料来源: CES2025, HTI

2) AMD 推出的 Ryzen AI MAX 系列处理器, 配备 XDNA2 NPU 单元, 拥有 50 TOPS AI 算力, 满足微软 Copilot+ PC 标准要求, 能为超极本、二合一设备和游戏笔记本提供行业领先的电池效率, 在 AI 辅助视频编辑和渲染工作流程中也能快速完成任务。其 NPU 单元在实时 AI 推理上具有优势, 可在不依赖云端的情况下在本地设备上快速进行 AI 推理, 对于需要在移动设备上进行实时 AI 处理的场景, 如笔记本电脑在离线状态下进行图像识别、语音助手等应用, 能提供较好的用户体验。



Fig. 4 AMD at CES 2025



资料来源：CES2025, HTI

3) Intel 发布的酷睿 Ultra 200H 系列处理器，最多有 6 个性能核、8 个能效核，整体 AI 算力达 99TOPS，虽然在算力数值上不如英伟达和 AMD 的部分高端产品，但英特尔的优势在于其广泛的市场覆盖和与各大厂商的合作，其 AI PC 移动处理器能更好地满足主流笔记本电脑的需求，在日常办公、娱乐等场景中的 AI 推理应用具有一定优势。

Fig. 5 英特尔在 CES 的展品



资料来源：CES2025, HTI

Fig. 6 LVCC 展台中的智能冰箱



资料来源: CES2025,HTI

**智能家居迈向新纪元，高通 IoT 技术变革。**在 2025 CES 展会上，高通展示了其智能家居和生活行业的新框架，涵盖生成式 AI 和物联网（IoT）解决方案。基于 QCS8550 处理器的智能冰箱、AI 媒体电视和家庭能源管理系统，高通智能家居提供从食物识别到能耗管理的多样化 AI 功能。未来，高通致力于通过无线连接、低功耗计算和本地 AI 技术，为智能家居提供全面支持。高通认为，2025 年将是智能家居迈向全新阶段的元年，设备将超越简单连接，实现独立的 AI 处理和高效服务。

**生成式 AI 为智能家居带来突破性可能。**从与用户互动如同家人和朋友的数字助理，到能根据库存推荐食谱并自动补货的智能冰箱，均体现了这一技术的深远影响。边缘 AI 则让设备本地处理成为可能，提供更快速、安全且个性化的体验。

**AI 家庭设备聊天机器人：**基于大语言模型，能与用户进行实时互动，应用于冰箱等设备中，例如根据现有食材推荐食谱、生成购物清单并自动下单，甚至提醒家人取货。

Fig. 7 智能冰箱中的聊天机器人



资料来源: CES2025,HTI

**交互式多媒体优化：**智能电视通过摄像头和麦克风，结合计算机视觉和语音识别技术，实现频道控制、情绪识别、个性化推荐、语言翻译等功能，同时应用于远程教育 and 医疗场景。

Fig. 8 更具“艺术性”的智能电视



资料来源：CES2025, HTI

**SoundHound AI 公司推出了首个车载语音商务平台。该平台允许驾驶员和乘客使用语音直接下单外卖，实现全程免提操作。**用户可以查找附近餐厅、下单、支付，并导航至取餐地点。SoundHound 计划在 2025 年与汽车制造商和餐厅合作伙伴共同推出这一语音商务生态系统。未来，该公司还计划将此功能扩展至其他设备，如智能电视，并增加银行交易、票务购买和预约等新功能。此次发布也得益于 SoundHound 近期对 Allset 的收购，加速了其语音商务生态系统的发展。

Fig. 9 SoundHound AI 与汽车结合



资料来源：SoundHound, HTI

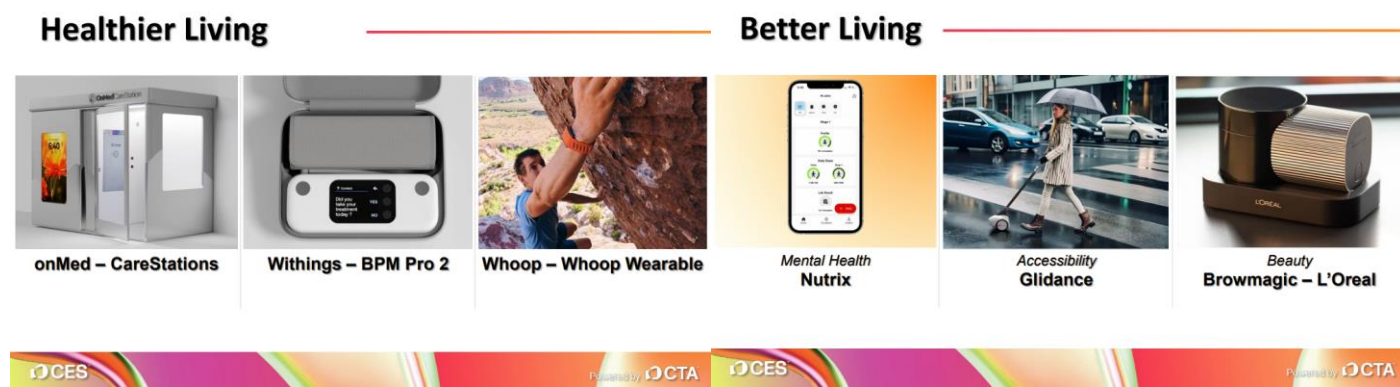
**人工智能推动健康监测与辅助领域快速发展。**根据 Vogue 调研，2024 年 27% 的 Z 世代和 33% 的千禧一代使用可穿戴健康追踪设备，预计 2024 年至 2026 年间智能可穿戴设备将实现两位数增长。在 CES 2025 展会上，多家企业展示了创新产品：

**WearM.AI Beyond 01:** 全球首款基于光学的可穿戴设备，重 22 克，可夹附在运动鞋上，在运动中捕获 8600 万个数据点，将专业实验室的指标普及到普通用户。  
**Braindeck Blink:** 将 AI 与高性能麦克风、扬声器和摄像头结合，可实时将异常语音和手语转换为可听语音，为言语障碍者提供帮助。  
**Circular Ring 2:** 具备心电图和心房颤



动检测功能，支持睡眠追踪，续航可达八天。**雅培 Lingo**：通过上臂生物传感器实时监测血糖，并通过 APP 提供个性化健康建议，帮助用户分析食物摄入、运动和压力对身体的影响。人工智能和可穿戴技术的结合，为个人健康管理提供了更便捷、精准的解决方案，并大幅提升用户体验。

Fig. 10 Healthier and Better Living with AI



资料来源：CES2025, HTI

**AI+内容创作前景广阔**：根据 Unity 的调查显示，62%的游戏工作室在项目开发过程中会利用人工智能的辅助，如在 2D 图像生成中，AI 可提升 60%-80%的效率，在视频制作中，AI 生成内容已经占据了 70%的比例。

Fig. 11 游戏渲染展示



资料来源：CES2025, HTI

**AI时代内容创作的盈利模式转变，重视共创与内容价值**。品牌和IP所有者不应过度依赖追踪消费者来实现盈利，以优质体验吸引用户反复消费，多次消费后带来的收益可能不亚于让用户锁定在订阅模式中。随着创作者数量未来大幅增加，内容创作应走向共创模式，品牌需通过投资新技术、好莱坞工作室等，制作符合品牌价值观且具有突破性的内容，如通过 Apex Content Ventures 投资模式，已创作超 200 小时、130 多集内容，在 22 个优质网络平台播出，并获得艾美奖。

Hollywood 在 CES 2025 展会上对未来两年的 AI+内容创作趋势进行了预测：**1) 技术拓展与新的粉丝经济模式**：自然语言处理技术将助力内容在全球范围内吸引更广泛的受众，实现内容的全球化传播。在现场表演方面，AI 技术将带来新的视觉体验，粉丝可参与共创视觉内容，解锁新的粉丝经济盈利模式。**2) IP 与游戏融合加深**：IP 将更深入地融入 3D 沉浸式游戏领域，围绕 IP 产生更多投资和盈利机会。

**新能源汽车发展赋能可持续发展。沃尔沃**：承诺到 2040 年实现净零排放，并展示了其最新的电动汽车，采用了先进的电池技术，具有更长的续航里程、更快的充电速度和更高的效率。**Oshkosh**：展示了电动消防车和垃圾车，这表明电动汽车的应用不仅局限于乘用车，在公共服务车辆领域也在积极推进。

Fig. 12 CES 展览太阳能汽车



资料来源：CES2025, HTI

**绿色能源技术持续创新。Aptera Motors**：其太阳能电动汽车技术，车身的引擎盖、车顶和后舱门均嵌入太阳能电池板，仅靠太阳能每天可行驶 40 英里。**零质量水公司**：水面板技术可利用阳光和空气制造水，这为解决水资源短缺问题提供了一种可持续的解决方案。**极氪**：800V 超快充技术显著缩短充电时间，计划构建全球超快充电桩网络。**Prologium**：推出第四代锂陶瓷电池系统，是世界上首个全无机电解质电池，能量密度比磷酸铁锂电池三年内分别高出 99%、111% 和 150%，4 分钟能充 60% 的电，6 分钟能充 80%，在零下 20°C 的低温环境下也可稳定续航，且安全性高，不易起火。

**宇树科技产品纷纷亮相 CES, 国产机器人千帆竞发**。在 CES 展览上，站在黄仁勋身后的 14 家机器人企业中有 6 家是中国企业，包括宇树科技、智元机器人、星动纪元、银河通用、傅利叶和小鹏。宇树科技重点展出了消费级四足机器人 Go2 和它的新型号 Go2-W 轮足版本，工业级轮足机器人 B2-W。另外，目前宇树的 G1 和 H1 人形机器人的累计销量已经达到几百台，其四足机器人的全球市场占比达到 60%-70%。



Fig. 13 宇树科技的机器人大家庭



资料来源: CES2025, HTI

银河通用机器人展出 Galbot 机器人，具身大模型突破瓶颈。Galbot G1 是银河通用推出的首款人形机器人，采用轮式+双臂设计，身高 1.73 米，臂展 1.9 米，具备 360° 移动能力。其独特的设计使其能够在不同工作场景中执行任务，包括抓取随机放置的透明、高光物体，以及开柜子、开抽屉、晾衣服等泛化操作技能，成功率超过 95%。此外，银河通用还发布了全球首个端到端具身抓取基础大模型 GraspVLA，突破了数据和泛化瓶颈，标志着具身大模型机器人进入新的发展阶段。

Fig. 14 Galbot 协助英伟达创始人黄仁勋发布新一代显卡 RTX 5090



资料来源: CES2025, HTI

**APPENDIX 1****Summary****Event:**

From January 7 to 10, 2025, the global tech event CES 2025 kicked off in Las Vegas, USA, where we participated in-depth on the front lines. According to CTA statistics, CES 2025 attracted exhibitors from 166 countries and regions, with over 4,500 companies participating, of which more than 40% came from outside the U.S. The event saw 141,000 attendees, a slight increase compared to CES 2024's 161 countries, over 4,300 exhibitors, and 139,000 attendees, but still fewer than the 171,000 attendees in 2020. The number of submissions for CES 2025 Innovation Awards exceeded 3,400, a 13% increase compared to 2024, with submissions in the AI category growing by 49.5%. Compared to last year, this year's CES displayed a clear trend focused on AI.

**Commentary:**

This is the year of AI applications, with immense potential in AI PCs, smart furniture, and robotics, though small-scale edge AI products are not as mature as expected. Major chip hardware manufacturers teamed up with software companies to offer integrated software and hardware solutions for AI PCs, showcasing significant improvements over last year. For example, Qualcomm launched a comprehensive product suite from cloud to edge, including a new AI chip with 60% faster processing speed compared to its predecessor. This AI chip, capable of being integrated into robots, achieved a 40% improvement in image recognition accuracy and a 30% improvement in voice interaction speed. Qualcomm also launched edge-side local AI solutions that ensure data security and help enterprises reduce AI deployment costs, as well as a new framework for smart home and life industries, featuring generative AI and IoT solutions, with impressive accuracy and inference speed of smart refrigerators. However, small-scale edge products, limited by processing power and size, such as AI glasses and AI headphones, only offer simple functions like voice control or photography. When invoking large model inference, the speed and experience significantly decline, indicating the need for iteration. Among the 14 robot companies NVIDIA collaborated with at the conference, 6 were Chinese, including Yushu Technology, ZhiYuan Robotics, Star Movement Era, Galaxy General, Fourier, and XPeng. Chinese robotics companies have become one of the most imaginative exhibits, offering high-cost-performance electromechanical hardware combined with NVIDIA's intelligent training platform.

Chinese products are highly homogenized, while U.S. AI products exhibit higher completion levels. In AI hardware displays, such as AI glasses, headphones, and other accessories, Chinese exhibitors' products are quite similar in hardware, with software and AI compatibility being the key differentiators. For example, in voice applications, the best-performing product was Sound Hound's quick-service drive-thru ordering system, which responded swiftly without any delay, with accurate understanding and flexible adjustments. Its response time outperformed Intel's similar product. We believe that future AI products need to focus more on scenario-based multimodal training and fine-tuning to enhance accuracy, while accelerating inference speed to improve user experience. In contrast, AI products that rely solely on open-source frameworks lack depth and innovation, making it difficult to survive in a competitive market.

AI infrastructure is accelerating, with NVIDIA driving the industry towards AI in the physical world. NVIDIA's founder, Jensen Huang, announced the GB200 NVL2 for large-scale AI training, featuring 72 Blackwell GPUs and a performance of 1.4 exaFLOPs, alongside consumer-level RTX50 series graphics cards and the Digits computation cluster with GB10 for small-scale localized training. NVIDIA also introduced Cosmos 2.0, a physical world model, declaring software as their second growth curve, and showcased the use of world models in training autonomous driving, coupled with the next-gen in-car AI processor, Thor, for autonomous driving applications. AMD released more cost-effective AI inference products, such as the Ryzen 9 and AI Max+, and demonstrated numerous practical use cases for AI PCs as productivity tools in collaboration with its downstream ecosystem. Intel unveiled the Core Ultra 200 series chips based on the Arrow Lake architecture, demonstrating a wide array of AI PC applications, and announced that the first Intel 18A process chip, Panther Lake processor, would be released in the second half of 2025.

AI is driving rapid developments in health monitoring and assistive technologies, with smart homes entering a new era. In 2024, 27% of Gen Z and 33% of millennials are using wearable health-tracking devices. With the aging society on the horizon, AI-powered medical products such as real-time vital sign monitoring and hearing aids have broad applications not only in hospitals but also in non-hospital environments.

New energy vehicles are crucial for sustainable development, and autonomous driving companies are generally optimistic. Solar-powered vehicles have reached battery vehicle-level endurance. Autonomous driving companies are optimistic about the rapid development of self-driving technologies. Waymo is about to start operations in Miami, Atlanta, and Phoenix, with estimated mileage accumulation in 2024 expected to match the total data collected before 2024. Musk, via video link, expressed optimism about Robotaxi's progress, which may complete product development as early as Q2 this year. Chinese EV manufacturers such as Zeekr, XPeng, and Great Wall are quickly catching up with intelligent features. XPeng's flying car in the exhibition hall attracted significant attention, while solar vehicle company Aptera showcased its first product, which can achieve a range of 400 miles (643 km).

**Risk:**

Economic downturns bring headwinds to consumer spending, and the commercialization of AI products is not meeting expectations.



## 附录 APPENDIX

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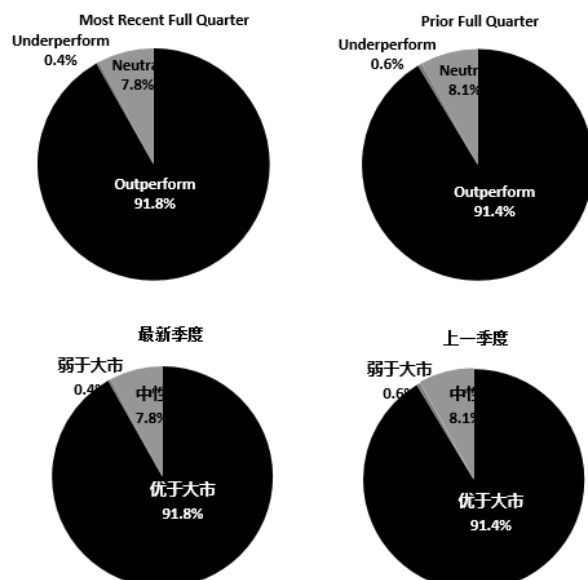
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### Ratings Distribution



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卖出，未来 12-18 个月内预期相对基准指数跌幅在 10%以上，基准定义如下

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