

速腾聚创 RoboSense (2498 HK)

2025 AI 机器人发布会：立足车载积累，开启机器人增长新未来

2025 AI Robotics Global Launch Event: Building on Automotive Expertise to Unlock a New Era of Robotics Growth

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热点速评 Flash Analysis

(Please see APPENDIX 1 for English summary)

事件

2025年1月3日，速腾聚创举办“Hello Robot”2025 AI 机器人发布会，发布了三款全新数字激光雷达（EM4、E1R 和 AIRY）以及多款机器人增量零部件，包括 Papert 2.0 灵巧手、Active Camera 融合感知器件、域控制器 DC-G1、LA-8000 高功率密度电机和力传感器 FS-3D。

点评

数字激光雷达赋能车载和机器人感知能力全面升级。本次发布会上，速腾聚创推出 EM4、E1R 和 AIRY 三款数字激光雷达，性能精度大幅提升，结构设计进一步优化：**1）EM4 是全球首款千线超长距激光雷达**，具备 600 米超长探测范围和 1080 线分辨率，满足高阶应用场景需求；**2）E1R 是全球首款固态数字激光雷达**，搭载 SPAD SoC 和 2D-VCSEL 芯片，尺寸小巧，视场角 130°×90°，适用于包括工业、商业和具身智能多种移动机器人应用场景；**3）AIRY 是针对机器人行业设计的 192 线小型数字激光雷达**，凭借 360°×90°的超广视场角和乒乓球大小的体积，为移动机器人提供高效全向感知。我们认为，速腾聚创的新一代产品不仅反映了公司在激光雷达领域身后的技术积累和开发能力，也将为车载智能驾驶与机器人感知系统注入了更强劲的技术活力。

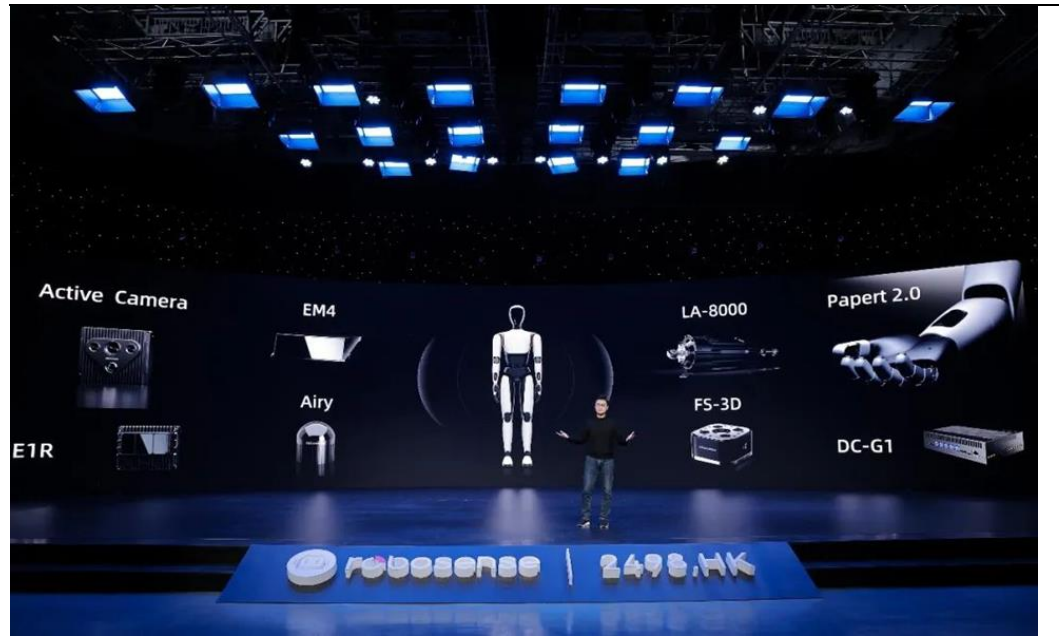
聚焦视觉、触觉和关节领域增量零部件，推动机器人多场景应用。速腾聚创根据自身技术优势和行业定位，在机器人视觉、触觉和关节领域推出多款增量零部件，有望大幅降低机器人开发门槛，为多样化场景的实际应用提供了可靠保障和新动能。其中，**1）融合感知器件 Active Camera**：实现硬件层面上摄像头和激光雷达信息的融合，体积小、简洁易用，可以提升机器人视觉的精度和通用性；**2）第二代灵巧手 Papert 2.0**：具备 20 个自由度，指尖、指腹和手掌配备 14 个力传感器，最大负载 5 公斤，能够灵活完成人手精细操作；**3）域控制器 DC-G1**：高集成化、小体积、大算力、低功耗，支持各类实时感知模型、多模态大模型、具身智能操作模型和运动控制算法等；**4）关节电机 LA-8000**：高功率密度直线电机，具备 13000N 峰值推力，可应用于人形机器人的腿部关节；**5）力传感器 FS-3D**：适用于足式机器人的末端运动控制。我们认为，速腾聚创机器人领域新产品的发布着速腾聚创从车载激光雷达向机器人领域的技术延伸和市场探索，其多元战略布局有望开启全新增长路径。

从车载激光雷达到机器人领域的战略延伸，开启多元化布局。速腾聚创凭借十年车载激光雷达的技术积累，成功将业务版图拓展至机器人领域。这一战略延伸覆盖了从高速场景到低速移动机器人，从单一传感器到多模态感知方案的技术布局。通过新产品与核心零部件的发布，速腾聚创进一步拓宽了激光雷达的适用边界，展示了其平台化开发能力。这一布局不仅提升了产品在多领域的适配性和市场覆盖率，也为智能机器人与无人系统的未来发展提供了有力支撑。速腾聚创的跨界探索反映了技术创新对市场需求的快速响应，同时也为机器人产业链的协同发展注入了新的活力。

风险

技术发展不及预期，商业化落地进度不及预期，竞争加剧风险，宏观经济下行。

图 1 速腾聚创新产品矩阵



资料来源：速腾聚创，海通国际

APPENDIX 1

Summary

Event

On January 3, 2025, RoboSense held the "Hello Robot" 2025 AI Robotics Launch Global Event, unveiling three new digital LiDAR models and multiple incremental components for robotics.

Notes

Digital LiDAR empowers comprehensive upgrades in automotive and robotic sensing capabilities. At the event, RoboSense introduced three digital LiDAR products: EM4, E1R, and AIRY, featuring significant improvements in performance precision and structural design: 1) **EM4**: The **world's first 1,000-line ultra-long-range LiDAR**, with a 600-meter detection range and 1080-line resolution, meeting high-level application requirements. 2) **E1R**: The world's first **solid-state digital LiDAR**, equipped with SPAD SoC and 2D-VCSEL chips. Compact in size with a field of view (FoV) of 130°×90°, it is suitable for applications in industrial, commercial, and embodied intelligence mobile robots. 3) **AIRY**: A 192-line compact digital LiDAR designed for robotics, featuring a 360°×90° ultra-wide FoV and a size comparable to a ping-pong ball, providing efficient omnidirectional perception for mobile robots. These next-generation products reflect RoboSense's deep technical expertise and development capabilities in LiDAR, injecting robust technological vitality into both automotive intelligent driving and robotic sensing systems.

Focusing on vision, tactile, and joint components to drive multi-scenario robotic applications. Leveraging its technical strengths and industry positioning, RoboSense has launched several incremental components in robotic vision, tactile sensing, and joint areas, significantly reducing the barriers to robot development and enabling diverse real-world applications: 1) **Active Camera**: A fusion sensing device that integrates camera and LiDAR information at the hardware level. Compact and user-friendly, it enhances the precision and versatility of robotic vision. 2) **Papert 2.0**: The second-generation dexterous hand with 20 degrees of freedom, featuring 14 force sensors on the fingertips, finger pads, and palm. It has a maximum load capacity of 5 kilograms and enables precise human-like operations. 3) **DC-G1 Domain Controller**: Highly integrated, compact, powerful, and energy-efficient, it supports real-time sensing models, multimodal large models, embodied intelligence operation models, and motion control algorithms. 4) **LA-8000 Joint Motor**: A high-power-density linear motor with 13,000N peak thrust, suitable for humanoid robot leg joints. 5) **FS-3D Force Tactile Sensor**: Designed for end-motion control in legged robots.

Strategic expansion from automotive LiDAR to robotics opens diversified opportunities. Building on a decade of expertise in automotive LiDAR, RoboSense has successfully expanded its business into the robotics domain. This strategic move encompasses a technological layout that spans from high-speed scenarios to low-speed mobile robots and from single sensors to multimodal perception solutions. Through the launch of new products and core components, RoboSense has further broadened the application boundaries of LiDAR, showcasing its platform development capabilities. This diversification not only enhances product adaptability across multiple domains and expands market coverage but also provides strong support for the future development of intelligent robots and unmanned systems. RoboSense's cross-industry exploration demonstrates rapid technological innovation in response to market demands and injects new vitality into the collaborative development of the robotics industry chain.

Risks

Slower-than-expected technological development, delays in commercial deployment, intensifying competition, and macroeconomic downturns.

附录 APPENDIX

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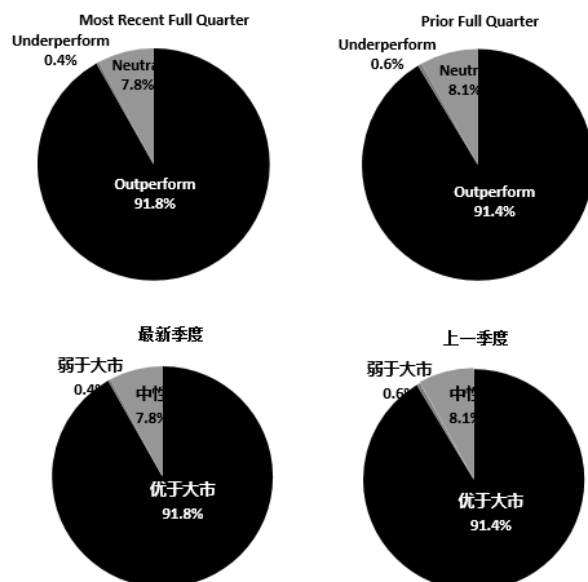
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1. 26 Mar 2024 OUTPERFORM at 39.15 target 46.19.

2. 18 Aug 2024 OUTPERFORM at 16.70 target 26.78.

3. 1 Dec 2024 OUTPERFORM at 18.76 target 23.46.