

AETECH's AI-Powered Waste Sorting Robot 'ATron' & Autonomous Robot Material Recovery Facility Aim to Boost Recycling

AETECH installed 13 ATron waste sorting robots in Korea and plans to widen its presence through participation in CES 2025, eyeing to enter Southeast Asia first

SEOUL, SOUTH KOREA, September 28, 2024 /EINPresswire.com/ -- [AETECH](#) (CEO Tae Hyung Park) participated in the 'Global Media Meetup' from July 24 to 26 at MIK Base Camp in Seoul. Co-hosted by [AVING News](#) and U.S.-based tech media [Geekspin](#), the event focuses on introducing Korean startups' products and technologies to the global market and providing early reports on CES 2025 Innovation Award applications to expand business opportunities.

AETECH, founded in May 2020, specializes in waste management, driven by its mission to create smart cities where robots sort waste. The company developed the AI-powered waste-sorting robot 'ATron,' which recognizes over 2.6 million learned images to identify waste specified by AI and directs robots to sort them. AETECH claims ATron is twice as efficient as manual sorting, leading to high satisfaction among its current customers.



Tae Hyung Park, CEO of AETECH, pitching at the 'Global Media Meetup' in MIK Base Camp on July 26th



Tae Hyung Park, CEO of AETECH, during an interview at the 'Global Media Meetup'

The company holds ten patents and has won several awards, including the Ministry of Science and ICT's 'Impact Tech Award,' solidifying its technological leadership.

Since its inception, AETECH has installed 13 AI waste-sorting robots in Korean recycling facilities. The first ATron was deployed at the Namdong-gu Recycling Center in Incheon in April 2022, and due to high satisfaction, two additional robots were sold. By March 2023, three ATron units were sold to Namyangju in Gyeonggi-do, two to Seongnam, three to Cheongdo in Gyeongsangbuk-do, one to Songpa-gu in Seoul, and one to Namwon in Jeollabuk-do.

ATron was introduced at the media meetup as an AI-powered optical waste-sorting robot. The robot, trained with over 2.6 million real waste sorting images, can achieve 99.3% accuracy and sort 96 pieces per minute. It identifies and sorts up to 43 types of waste across seven categories (PET, PE, PS, glass, cans, etc.) based on color and material. AETECH has developed the software and hardware for ATron, showcasing its technological prowess.

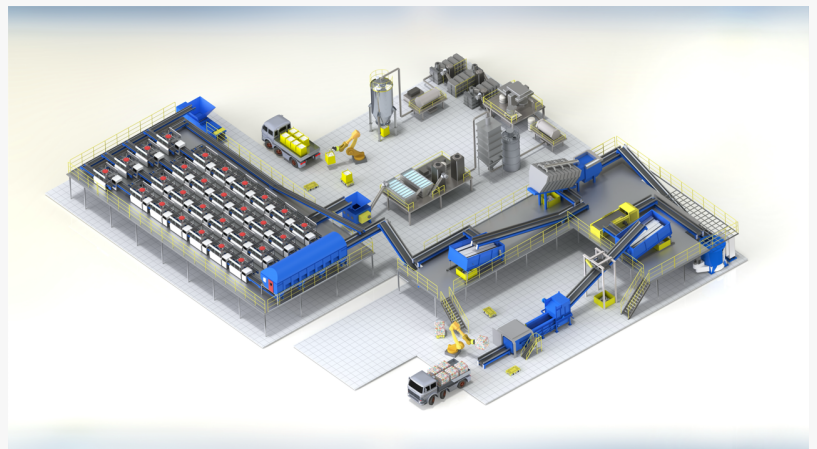
AETECH is also developing the autonomous Robot Material Recovery Facility (RMRF), a fully robotic recycling center. The facility will feature over 30 ATron robots and a circular conveyor belt as core equipment. This venture positions AETECH as a key player in the rapidly growing plastic recycling market and establishes the facility as a flagship for future developments.



Tae Hyung Park, CEO of AETECH, answering questions at the 'Global Media Meetup'



AETECH ATron



Autonomous Robot Material Recovery Facility (RMRF)

AETECH is constructing its RMRF in Gyeongseo-dong, Seo-gu, Incheon, with plans to open by 2025. The company expects the fully robotic facility to overcome labor shortages and boost sorting productivity. AETECH aims to raise the recycling rate of traditional sorting facilities from 40% to 70%.

At the Global Media Meetup, AETECH discussed the lifespan of their robots, estimating that they will be used for about seven years in harsh environments. The company also emphasized that regular maintenance, such as replacing motors and drivers, could extend the robots' lifespan.

When asked about sorting dirty waste, Park explained, "The sample waste shown in our demo videos is clean for easy understanding, but in reality, the waste is dirty, making precise sorting more difficult. We use RGB sensors and databases similar to camera technology, and as more data is accumulated, the AI's sorting efficiency and accuracy improve."

Park also highlighted the next-generation AI waste-sorting robot with a hyperspectral sensor. Unlike first-generation robots, which couldn't distinguish between materials of the same size and shape, the hyperspectral sensor can differentiate plastics like polyethylene and polypropylene and recognize various fabric materials. AETECH plans to introduce this advanced technology soon.

The company's dual ATron technology with hyperspectral sorting was unveiled at the 'Resource Recycling Industry Expo (ReTech)' in Kintex in August, garnering significant attention from visitors and industry stakeholders.

Beyond selling and installing robots in recycling centers, AETECH is working to enhance their versatility for use in various environments, such as streets and building sites. In the waste recycling industry, materials like PET, aluminum cans, and cardboard must be sorted at the initial recycling stage before being sent to specialized facilities for further processing.

AETECH is eyeing international expansion, with plans to export to markets like Singapore, Hong Kong, Taiwan, and Vietnam by 2025. These countries share similar waste management challenges to Korea due to their high population density and limited land. AETECH aims to provide waste management solutions that address resource circulation and environmental issues in these countries, positioning itself as a global leader.

AETECH is also working on a new version of ATron for residential use in collaboration with a major Korean construction company. The company is developing a home waste-sorting solution for a conditional technology development project. Additionally, AETECH plans to showcase its innovations at international events such as CES, Spain's Smart City Expo World Congress (SCEWC), and Germany's IFA, solidifying its global presence.

As part of its CES 2025 Innovation Award challenge, AETECH aims to demonstrate the potential of its innovative ideas and technology to buyers and venture capitalists. The company plans to

strengthen its global leadership and actively network with international attendees and potential clients at CES.

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