DRIVETECH, Revolutionizing the Paradigm of Industrial Logistics

About the Company

DRIVETECH Co., Ltd. is a provider of next-generation transportation robot solutions built by integrating smart logistics and autonomous driving technology. The company is developing EV-based autonomous transport robots (FAEV series) to make logistics and manufacturing sites autonomous and smart, and has independently developed a remotely controlled platform linked to a control system. DRIVETECH has track records of having operated its solutions at Korea's major production facilities and provides customized consulting based on its technical expertise to deliver automated logistics systems optimized for each customer's environment.

Background

Traditionally, transporting heavy goods and moving goods internally have been labor-intensive manual work, resulting in issues such as high labor costs, safety risks, and low efficiency. DRIVETECH has developed a 1-ton autonomous logistics platform to address these challenges. By integrating obstacle avoidance, high-precision sensor-based autonomous driving, and remote monitoring technology even in complex industrial environments, the company is introducing a new concept of a smart transportation system that collaborates with people and safely performs tasks in their place.

About the Product

DRIVETECH's flagship product, the FAEV Series, provides autonomous logistics solutions optimized for a wide range of industrial environments. In particular, its EV-based 1-ton autonomous transport robot is capable of stably transporting goods in both indoor and outdoor environments. It features the following characteristics:

EV-Based Autonomous Driving Platform: The FAEV series integrates EV technology with autonomous driving technology to support stable transportation in both indoor and outdoor environments. Based on a modular platform structure (DrivePlatform™), it allows for various payload configurations, such as pallet transport, cargo, and towing, enabling customized solutions tailored to customer needs.

High-load transportation: With a maximum cargo loading capacity of one ton and a towing capacity of over five tons, the FAEV-100-U (pallet-type), FAEV-100-C (cargo-type), and FAEV-200-R (robot arm-type) models provide optimal product solutions for logistics transportation in various industrial sites to meet customer needs.
Long operating time: Three to four hours of charging allows for up to eight hours of operation, and solutions with extended operating time are also available to efficiently manage logistics.

Precise driving control: Powered by LiDAR, ultrasonic sensors, IMU, and GPS, DRIVETECH's sophisticated sensor system supports precise driving along the optimal route with a maximum range of over 28 km based on its optimal navigation algorithm.

Smart interface and real-time monitoring: The FAEV series is optimized for factory automation and smart logistics and ensures scalability by supporting remote emergency control, fleet transport modes, worker trailing driving, interface with automatic doors, and various communication network interface control. In addition, through interface with DriveControl™, the FAEV series provides location information, operation analysis, event notification, and multi-robot control functions, enabling efficient operation and stable control even in medium- to large-scale manufacturing environments while collecting real-time driving environment data to generate predictive models. Thus, the FAEV enables efficient operations, manages faults, safe routes, and operational costs, and saves energy costs.

Diverse industrial applications: The FAEV series can be applied to high-value-added industries such as smart factories, cold chains, and hazardous material transportation, and can be used in various industrial sites such as construction sites, ports, airports, heavy industries, cold storage facilities, and farm complexes.

Customized solutions: The FAEV series can be customized (i.e., API interface, security certification features, precise stopping capabilities) to meet specific customer requirements and provide optimal services tailored to customer needs.

DRIVETECH's FAEV series provides autonomous logistics solutions optimized for various industrial environments, contributing to reducing industrial accidents and carbon emissions, thereby supporting ESG management and introducing a new paradigm in logistics automation and smart logistics.

Competitive Edge and Business Strategy

DRIVETECH's competitiveness in the industrial autonomous logistics solutions market is unrivalled as it holds proprietary technology and provides solutions tailored to each customer.

1. Platform manufacturing capabilities based on proprietary technology

DRIVETECH develops EV-based autonomous driving platforms in-house to provide logistics robots optimized for various industrial environments and offer customized solutions tailored to diverse customer requirements.

2. Comprehensive service throughout the entire implementation process

DRIVETECH handles the entire process from on-site consulting to installation and maintenance, providing customers with consistent quality services that maximize operational efficiency and ensure reliability.

3. DriveMatch™ - a customized proposal system

DRIVETECH's DriveMatch™ proposes solutions optimized for customer needs by precisely analyzing work environment. The system quantifies the feasibility of implementation and ROI, and provides ongoing support through a monitoring system that continuously tracks and analyzes performance after implementation.

4. Flexible revenue model

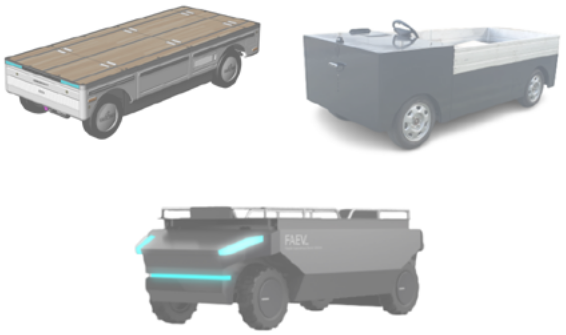
In addition to supplying finished cars, DRIVETECH offers a monthly subscription platform (including robots, monitoring systems, and maintenance) to reduce initial implementation costs. The company adopts a specialized B2B model that is flexibly customized for each customer. The subscription model contributes to reducing initial investment costs and improving operational efficiency for customers.

DRIVETECH is achieving sustained growth in the industrial autonomous logistics solutions market based on these competitive strengths and revenue models. The company will continue to strengthen its global market position by pursuing customer-oriented innovation.

Future Plans

In 2025, DRIVETECH plans to collaborate with organizations such as KOTRA, KITA, JETRO, and KIAT to participate in major events at home and abroad including CES, the Seoul Mobility Show, the ICT EXPO in Japan, the IITP Technology Commercialization Festival, and overseas market expansion missions and promote its technology and brand in the global market by producing the FAEV series and stably operating the in-house demonstration center.

<Product Commercialization Plan>
- Construction site model: Completed the first phase of demonstration for supplying autonomous transport robots used for moving construction materials at construction sites. Currently in the process of negotiating supply contracts for on-site operations.
- Smart farm model for transporting agricultural products: Currently demonstrating autonomous transportation of harvested products from smart farms to on-site purchasing locations.
- Model for battery manufacturers: Negotiating contracts with battery manufacturers for the automated transportation of raw materials and manufactured products in manufacturing facilities.
- Model for auto parts and materials manufacturers: Conducting pilot tests for the transportation of raw materials and logistics between processes for makers of heavy materials and parts.
- Entry into the Japanese market: Establishing a foundation for entering the local market (technical cooperation with Japan Robot University, participation in a DX PoC project in underdeveloped regions, joint marketing with existing partners, and plans to establish a local joint venture).
- Entry into the North American market: Collaborating



with partners in Canada (a local agent in Vancouver, and the Waterloo Robohub at the University of Waterloo, Toronto) for joint product development, finding local customers, and pursuing PoC projects.
- Entry into the Southeast Asian market: Expanding strategic partnerships centered on logistics hubs through collaboration with existing customers and partners (local agents, university networks, and partner companies with overseas offices)
- Ongoing product development with the Korea Institute of Machinery & Materials, the Korea Institute of Robot & Convergence, the Korea Institute for Robot Industry Advancement, smart farm project groups, agricultural companies, and logistics companies to build specialized small logistics robot product lines targeting high value-added industries.

"DRIVETECH aims to create a logistics environment where people and robots work hand in hand by growing into an industrial autonomous mobility platform company that provides customers with extremely high future value in terms of technology verification, revenue models, and scalability."

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** The opinions expressed in this article are the author's own and do not reflect the views of KOTRA.*