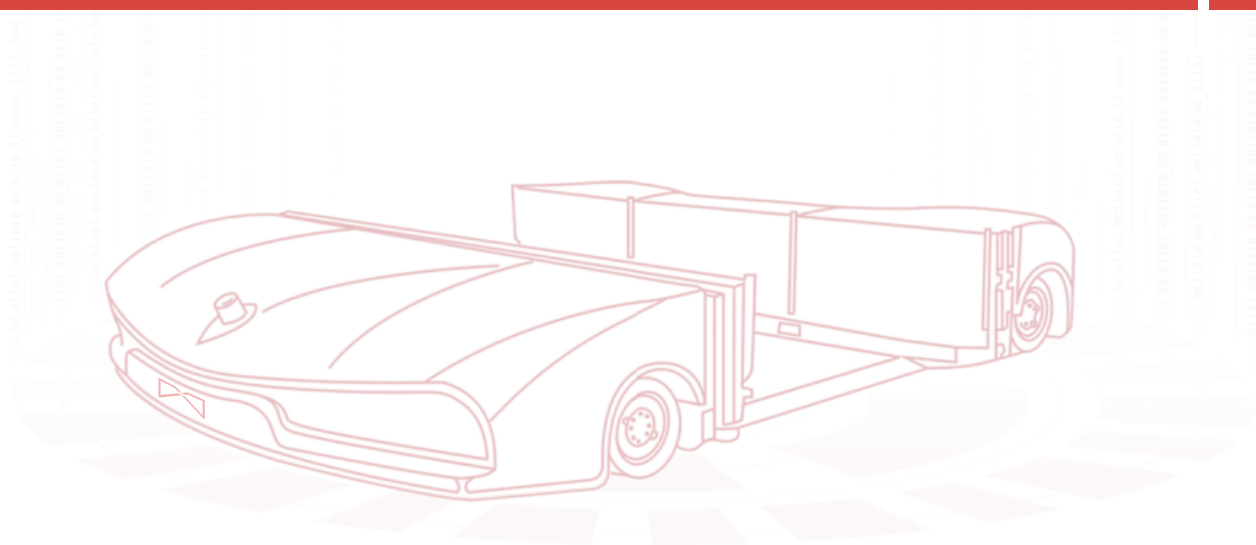


Shanxi Xinhua Logistics Automation System Project



Customer Profile

Shanxi Xinhua Bookstore Group Co., Ltd. ("the Group"), established in March 2002, is a wholly state-owned company approved by the Shanxi Provincial People's Government. It is a member of Shanxi Publishing Media Group and the only entity in Shanxi Province that has the qualification to issue the textbooks for primary and secondary schools. The Group has a registered capital of CNY 138 million and over 6,000 employees. It controls 9 directly affiliated subsidiaries (branches), 11 municipal subsidiaries, 18 county-level subsidiaries, and 81 county-level branches, with sales outlets in 117 cities and counties (districts) of Shanxi Province and 322 outlets of county-level and above.



Project Background

Shanxi Xinhua Bookstore Group Co., Ltd. would like to build an industry-leading intelligent warehousing and logistics system. After various investigations, the Group eventually chose the goods-to-person shuttle system provided by HWArobotics. The system was the first of its kind in China at that time and had a complex process algorithm.

After thorough investigation and analysis of the operation process characteristics, logistics requirements, and technical requests of Shanxi Xinhua Bookstore, HWArobotics provided an optimal solution which was composed of a multi-level AS/RS shuttle system, a picking station system, conveyors, a warehouse control system (WCS), and an order processing system (OPS).



Project Introduction

1. The project features a tote conveyor system, 6 sets of high-speed multi-level shuttle AS/RS system, 6 sets of high-speed picking station systems that suit the picking needs of diverse varieties and large number of orders, a warehouse equipment control system (WCS), and an order processing system (OPS).
2. High-speed multi-level shuttle AS/RS: 35,000 mm × 2,950 mm × 5,905 mm (length × width × height); capacity: 3,600 totes (600 mm × 400 mm × 280 mm) per set of equipment; inbound/outbound efficiency: 600 totes/hour/set.
3. High-speed picking station system that suits the picking needs of diverse varieties and large number of orders: 2,085 mm × 753 mm × 1,352 mm (length × width × height), with a theoretical picking efficiency of 300 times/person/hour.
4. Roller conveyor: $V = 0.6\text{m/s}$, actual conveying efficiency = 1,200 totes/hour.



Project Highlights

1. The successful implementation of Shanxi Xinhua Bookstore project marks a milestone as this project introduced the first goods-to-person system in China. This is also the first time HWArobotics applied the goods-to-person system to a project.
2. It broke through the traditional person-to-goods mode and introduced the first goods-to-person system into China.
3. This system worked perfectly for broken case picking. Its integrated business processes, such as new book arrival and distribution as well as e-commerce distribution, have greatly improved the efficiency of Xinhua Bookstore's warehousing and logistics system.

HWArobotics has developed a series of solutions for all aspects of warehousing and in-plant logistics based on its core robotic shuttle products and technologies, and has introduced an array of tailored solutions for storage, conveying, picking, buffering, sorting, and other processes. Thanks to a number of forward-looking independent innovative technologies, HWArobotics provides customers with superior products and services.



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