



SMART ZONE ROUTING SYSTEM OPTIMIZES ORDER FULFILLMENT

With an annual turnover of \$2 billion plus, D&H Distributing is one of the USA's leading technology specialists, distributing an extensive range of IT, electronics, entertainment and gaming products.

D&H has grown with technology it sells, distributing the first color TV, the first home PC and the first gaming system in the USA. D&H's broad reach and breadth of products enable it to service businesses of all sizes from small independent retailers, dealers, integrators and installers to big box chains. D&H also provides fulfillment for e-commerce retailers.

Keeping Distribution a Step Ahead of Demand

"Our business has been growing double digits year over year for the past decade," said D&H Director of Logistics Dennis Pardon.

"Every couple of years we found ourselves outgrowing our facilities. We needed to be making an investment that was a lot more forward looking, and that's when we decided to build a big box DC and put in the type of automation that would support growth for the next 10-15 years."

The new DC's 476,000 sq ft floorplan includes smart zone-routing conveyors for streamlined picking, and allows for expansion of up to 250,000 sq ft.

Smart Pick Zone-Routing Improves Efficiency

With 90% of what D&H ships comprising orders for split-case items, efficient piece picking is essential. Its WMS batches orders with others for the same or similar products to improve pick rate efficiencies.



Above: D&H Director of Logistics Dennis Pardon with Tim Fleenor, DC Manager.

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Dennis Pardon, Director of Logistics, D&H Distributing

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SPLIT AND FULL CASE PICKING INTEGRATED SORTING AND ZONE ROUTING

Orders are picked in one of two Pick Modules, with RF scanning used to ensure accuracy. Barcode-labeled cartons are automatically routed through the integrated conveyor system and diverted only into zones where picks are required.

When picking in a zone is complete, the carton is pushed back onto the conveyor, which transports it to the next zone where a pick is required, or direct to dispatch if the order has been completed.

Pick accuracy is further enhanced with the zone-routing system re-routing a carton back into a zone if it detects that a pick has been missed.

The system also has the ability to do on-the-fly processing – if an order has a short pick, it gets automatically processed to an exception location for checking.

Integrated Conveying with Real-Time Systems Monitoring and Control

Dematic SortDirector® integrates with the WMS and coordinates all product movement inside the DC. It provides real-time control and, via the DC's WCS, state-of-the-art graphic system monitoring for all operations.

A Dematic sliding shoe sorter diverts orders to fill-and-tape and QA stations. A second sorter diverts completed orders to 22 shipping lanes at rates of up to 150 per minute.

Intelligent Conveyor Control System Reduces Energy Consumption and Delivers Rapid ROI

“Our company is big on green,” explained Mr Pardon, “and we implemented a lot of green initiatives in the DC.”

A successful example is SortDirector's energy management module. The conveyors monitor how long it has been since they last saw a carton. If a section hasn't seen one for a specified period, the conveyor shuts itself down. When it senses a carton approaching, it will turn itself on, as will subsequent conveyors.

“The payback is enormous. Less than a year,” said Mr Pardon. “Less energy consumption than traditional conveyors. It is a very cool system.”



The order fulfillment system processes 6500 orders per day with a peak capacity of 20,000 orders per day.