HONEYWELL INTELLIGRATED SOFTWARE-FIRST APPROACH TO WAREHOUSE AUTOMATION

Empowering Efficiency: Honeywell Intelligrated's Software-First Strategy for Seamless Warehouse Automation



Overview: Honeywell Intelligrated is a leading provider of warehouse automation solutions, specializing in designing, manufacturing, integrating, and supporting systems that enhance efficiency and productivity in distribution centers and warehouses. Their offerings cater to various industries, including retail, e-commerce, logistics, and manufacturing.

KEY OFFERINGS

1. **Momentum™ Software Suite:** A cloud-native platform that orchestrates automation systems, including:
   - **Warehouse Execution Software (WES):** Manages and optimizes warehouse operations.
   - **Momentum Machine Control (MC4):** Provides modular and connected solutions for conveyor and sortation control.
   - **Momentum Labor:** Enhances workforce productivity and decision-making.
   - **Momentum eSim:** Enables simulation and predictive analysis for warehouse operations.

2. **Automated Material Handling Systems:**
   - **Conveyor Systems:** High-throughput conveyors designed for reliability and minimal maintenance.
   - **Sortation Systems:** Advanced systems like IntelliSort® for accurate, high-speed sorting of various product types.
   - **Automated Storage and Retrieval Systems (AS/RS):** Flexible, scalable shuttle systems to improve throughput and maximize warehouse capacity.

3. **Robotics and Automation:**
   - Integration of robotics solutions, including mobile robots for tasks like pallet transport, enhancing operational efficiency.

4. **Lifecycle Support Services:**
   - **Comprehensive Services:** Honeywell Intelligrated offers 24/7 technical support, engineering services, training, and spare parts to ensure optimal system performance.
   - **Proactive Maintenance:** Regular maintenance and health checks to prevent downtime and extend the lifespan of equipment.
   - **Upgrades and Retrofits:** Keeping systems up-to-date with the latest technology and enhancements.
   - **Remote Monitoring and Diagnostics:** Using advanced analytics to monitor system performance and diagnose issues before they impact operations.

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Software-First Brand Positioning:

Honeywell Intelligrated is shifting towards a software-first strategy, emphasizing the importance of software in driving value and efficiency in warehouse automation. This approach involves:

- **Pre-Building Value:** Creating value in their platforms by pre-building capabilities that customers are willing to pay for, such as integration capabilities, configurability, user experience (UX), and orchestration & execution.
- **Integration and Modular Software Architecture:** High-value warehouse automation software must integrate seamlessly with automation solutions and other software platforms. Adopting a micro-service-based architecture allows for independent development of modules, making the software stack more adaptable and easier to update.
- **Cloud Migration:** Migrating higher-value software solutions to the cloud while keeping control-based software on-premises. This hybrid approach leverages cloud computing for high-computing processes and maintains ultra-low latency operations on-premises.

Systems Integration and Solutions Consulting Expertise:

Honeywell Intelligrated excels in providing end-to-end integrated solutions that combine hardware and software for seamless operations. Their expertise includes:

- **Systems Integration:** Designing and implementing integrated systems that optimize warehouse operations and improve efficiency.
- **Solutions Consulting:** Offering consulting services to help clients identify the best automation solutions for their specific needs.
- **Customized Solutions:** Tailoring solutions to meet the unique requirements of each client, ensuring maximum efficiency and productivity.
- **Project Management:** Managing projects from conception to completion, ensuring timely delivery and successful implementation.

Key Trends from Interact Analysis:

Market Decline and Recovery: Warehouse automation order intake is expected to decline by 3% in 2024 and continue to decline until 2025 due to challenging macro-economic conditions and an over-supply of warehouses built during the pandemic. However, order intake is expected to grow by 11% between 2024 and 2026, with a more significant growth rate of 28% anticipated between 2027 and 2030.

Technology Trends: Mobile automation accounted for 11% of total warehouse automation investments in 2024, expected to increase to 33% by 2030. Storage/buffering and transportation functions are projected to have the highest penetration of mobile automation by 2030.

CONCLUSION

Honeywell Intelligrated's software-first approach positions them as a leader in the warehouse automation industry, offering integrated solutions that combine hardware and software for seamless operations. By focusing on pre-building value, integrating modular software architecture, and leveraging cloud migration, Honeywell Intelligrated is well-equipped to meet the evolving demands of the industry and drive sustainable growth.

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