Full Pallet Inventory

Count and manage inventory assets with high speed and high precision, via automation and image recognition

Business Context

The strategic importance of the warehouse has only increased as e-commerce volumes have grown, along with consumer expectations for rapid delivery and flexible fulfillment. While the warehouse is often seen as the supply chain's "engine room," that engine is all too frequently disrupted by shortages of skilled labor and downtime. The result? Lost revenue, inaccurate inventory counts, missed performance targets and safety risks for overworked employees. Warehouses face other challenges as well when they're not managed optimally, including inventory shrinkage, spoilage, theft and vandalism. In today's environment of high warehouse pressures and scarce warehouse resources, logistics teams need a more effective means to accurately locate, identify, count and, where necessary, protect valuable inventory assets.

The Blue Yonder Solution

Blue Yonder has partnered with its sister company, Zetes, to offer a unique automated solution to the inventory management challenge. For customers using Blue Yonder warehouse management system (WMS), it's easy and seamless to integrate ZetesMedea Full Pallet Inventory — a solution powered by Zetes' patented ImageID machine vision technology. Mounted on a forklift, a Zetes ImageID station easily captures pallet and location data across the warehouse. As forklifts travel through each aisle, the ImageID station automatically recognizes barcodes from different racking levels and automatically counts inventory. Without devoting any manual labor to the task, warehouse managers can count inventory with incredible accuracy — while operational disruptions are minimized. Time, labor and other resources are maximized.

Key Benefits

- Faster, higher-frequency inventory audits and counting
- Reduced inventory management costs
- Real-time inventory data, leading to accuracy rates > 99.8%
- Minimized inventory shrinkage, stockouts and aisle closures
- Improved on-time fulfillment metrics
- Enhanced revenues due to fewer stockouts
- Improved labor availability
- Reduced health and safety risks during auditing

Capability Details

Automated, Touch-Free Inventory Management
As forklifts move through each aisle, Zetes' patented ImageID machine vision technology works silently and invisibly in the background — counting pallets in real time. Efficiency, accuracy and speed are all maximized, with no human touches and no task interruption. Scarce labor resources can be devoted to higher-value work, while the safety risks associated with manual audits are eliminated.

Flexible Technology to Fit Every Warehouse
The Zetes ImageID station can be anchored to forklift trucks with front or side access, including reach trucks or very narrow aisle (VNA) trucks. It's also compatible with different pallet location formats, including standard full pallets, half pallets, double pallets and stacked pallets. Pallet and location tags are decoded in motion at speeds up to 10 km/h (about 6 mph) with a single operator and forklift. Via a digital platform, data can easily be exchanged between ZetesMedea warehouse execution software and the Blue Yonder WMS.

Lower Levels of Shrinkage, Spoilage and Theft
Product spoilage, shrinkage, vandalism and theft are growing concerns across the supply chain, and they significantly erode profit margins. ZetesMedea Full Pallet Inventory provides real-time tracking and tracing capabilities that create a digital trail for all pallets. Documentation for shrinkage investigations and quality control efforts is generated automatically, in real time, with no human intervention.

Key Features

- ImageID mobile station with cameras housed in a robust, lightweight casing
- Electromagnetic anchoring of the reading station to the forklift
- Easy-to-follow calibration with variable aisle viewing distances
- Cushioning to minimize vibration
- Anti-collision system to detect obstacles, alerting the operator via both sound and light signals
- ZetesMedea PC controller and rugged ID station tablet for active monitoring
- LED lighting system
- Autonomous 12V power supply

Technology Solution Comparison (Based on 35,000 Bin Location Count)

Manual Counting

X 10

X 50

500 Hrs

Requires lots of manpower and closure of aisle while counting

Advanced Drone

5 Drones

X 10*

200 Hrs

Requires flight path creation, pilot and closure of asisel while counting
*Based on 5 Drone Pilots, 5 Counters

Zetes Pallet ID

X 1 Zetes Pallet ID

X 1

20 Hrs

Easy to implement, no opperational interuptions. Superior data capture and read capabilities

BlueYonder