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MAKING THE CASE FOR AN AUTOMATED DIMENSIONING SOLUTION

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Making the Case for an Automated Dimensioning Solution

"E-commerce presents a fundamental shift in how consumers shop. Instead of pushing cases and pallets to physical stores, there has been an explosion of small parcels shipping to any location desired by the consumer. Companies have to add new capabilities to keep pace."

> – Praveen Issac, Senior Product Manager, Breakthrough Technologies, Honeywell



Pressured by the massive uptick in e-commerce orders and the implementation of dimensional weight pricing models by leading logistics providers, a growing number of shippers are realizing significant ROI from investments in automated dimensioning solutions.

Rising warehousing costs are forcing shippers to find new ways to maximize valuable real estate. At the same time, dimensional weight (DIM) pricing is pressuring the same companies to reduce box sizes and the cost to ship their orders. Felt both on the shipping and receiving sides of the business, these impacts necessitate a focused effort on maximizing space and gaining efficiencies without having to pay more for services or hire more labor.

DIM weight is calculated by determining the cubic size of a package and dividing it by a dimensional factor (dimensional factor is a number determined by major courier companies and could vary among couriers and over time). Shippers are then charged the greater of the DIM weight or the actual, scale-based weight. Prior to the switch to DIM weight pricing, carriers priced items based on actual weight.

"The change in pricing could dramatically affect either online shoppers or retailers or both," *The Wall Street Journal's* Laura Stevens recently reported. "Someone will have to swallow the estimated hundreds of millions of dollars in extra shipping costs."

Thankfully, as it's prone to do, technology quickly "caught up" with the DIM trend and laid the groundwork for some practical solutions to the problem. Centered on helping shippers attain high levels of efficiency while also cutting costs, cutting back on waste, and optimizing the amount of space in every package, dimensioning solutions now fill what was once a major gap in the supply chain.

In its recent "Dimensioning Solutions Market Report," VDC Research defines dimensioning solutions – also known as cubing solutions – as "data capture devices that utilize multiple technologies to enable data capture and cubing of objects and items." These technologies can be integrated through various stages in the logistics value chain and are available in a number of form factors with various underlying technologies.

"Since 2015, these solutions have seen a major emergence in U.S. distribution and logistics," according to VDC analysts. "They have become critical to operations across manufacturing, logistics, retail/e-commerce and wholesale/ distribution to support applications from inventory management to order management and shipping in hubs including distribution centers, manufacturing shop floors, fulfillment centers, retail back of stores, and offices."

The rapid uptick in e-commerce – and the millions more single-item/single-order boxes that are making their way around the globe – is also driving the need for advanced dimensioning solutions. "Instead of shipping pallets of product, e-commerce companies are sending out a lot more packages," says Praveen Issac, a Senior Product Manager at Honeywell. At the same time, DC space is at a premium, and as e-commerce has grown, throughput has increased, causing facility space to be cramped. "Recent reseller conversations have highlighted that rising costs associated with leasing and buying DC locations are a major driver for businesses to invest in dimensioning solutions in order to better utilize available space," the VDC research points out. This reality has hit home in both business-to-consumer (B2C) and businessto-business (B2B). "End-user expectations have posed a great challenge for shippers," says Issac, "who must be able to improve their speed and meet certain service-level requirements in order to compete effectively."



The Easy Path from Manual to Automated Dimensioning

It's time to put away the tape measures and turn to a compact, cost-effective dimensioning solution.

"Manual measurement is time-consuming and can create throughput bottlenecks at shipping stations, thus resulting in lost revenue and service delays."

> – Bruce Stubbs, Director of Supply Chain Marketing, Honeywell

Rapid e-commerce sales growth, rising DC rent/ lease costs and faster shipping expectations are all putting new pressures on today's retailers, manufacturers, and distributors. Automated dimensioning systems support quick and accurate capture of dimensions of each new SKU entering a DC – information that can be used to optimize SKU storage space and



multiple workflows within the DC (e.g., putaway, picking, pallet building, packing, and shipping).

One way to tackle these challenges is through better space utilization – a mission that can be achieved with a state-of-theart dimensioning solution. "Shippers have been using dimensioning for a long time in their operations, but once logistics providers began billing according to cubic volume, the case for automated dimensioning became much greater," says Bruce Stubbs, director of supply chain marketing at Honeywell Safety and Productivity Solutions.

The immediate need for such solutions is usually found in the packing area of a DC, where outbound containers must be of the right size to accommodate their contents. This step not only helps optimize space and cut down on shipping costs, but it also keeps the environmentally conscious end-user from having to ask the million-dollar question: Why did they use such a huge box for this little item?

An electronic measurement device that relies on 3D depth sensing technology to instantly measure an object's three dimensions, the Honeywell AutoCube™ 8200 solution solves a number of problems while ensuring that the right-sized product goes into the right-sized box... every time. A shipper that manages hundreds of individual boxes daily, for example, can use dimensioning to replace a manual measurement system (i.e., using tape measures) that's generally inaccurate and takes time to orchestrate as well as being prone to data input errors. "Manual measurement is time-consuming and can create throughput bottlenecks at shipping stations, thus resulting in lost revenue and service delays," says Stubbs. "In fact, dimension measurement errors will result in shipping chargebacks from courier companies due to use of dimensional weights to determine pricing."

The AutoCube 8200 system enables accurate package measurements, helps shippers avoid dimension errors and shipping chargebacks, and enables sub-second measurements that promote faster cycle times in the DC. The solution also enables capture and logging of images of each object measured along with timestamp information, and supports verification of customer claims regarding shipped packages. The AutoCube 8200 system has an accuracy of 5 mm (0.2 in), measures objects from a 10 cm (4 in) cube to a 90 cm (35 in) cube, features sub-second measurement time, supports automatic and user-initiated modes, and utilizes a very small table footprint. "It can be mounted at multiple heights and angles to support the shipper environment," says Stubbs, "and provides optimal ROI for shippers whose previous best alternative was a manual tape measure."

The AutoCube 8200 system is also affordable, flexible, and easy to install – a big improvement over past solutions that were both expensive and cumbersome. With its large-object size range, the AutoCube 8200 system allows shippers to measure packages and objects and optimize space – all while taking advantage of the solution's compact and flexible design.

AutoCube 8200 Automated Dimensioning System Features & Benefits



BlueStar Goes Automated Dimensioning, Gains Efficiencies

"It physically looks like a digital camera, but it's mounted above our existing scales. AutoCube then takes a threedimensional picture of the product through a series of cameras."

> – Mike Frederick, Vice President of Operations, BlueStar



A leading global distributor of solutions-based automatic identification and data capture (AIDC), mobility, point of sale, RFID, digital signage, and ID and security technology, Montreal-based BlueStar works exclusively with value-added resellers, providing them with complete solutions, business development, and marketing support.

As part of its day-to-day operations, BlueStar ships out a lot of small boxes to its geographically dispersed customer base. Before it started using the AutoCube 8200 system, the company captured its box dimensions manually, to the best of its ability.

According to Mike Frederick, vice president of operations at BlueStar, the company now uses the AutoCube 8200 system to capture dimensions prior to shipping, after which it then populates that data into the carrier software and ensures that dimensions are accurately captured. "It physically looks like a digital camera, but it's mounted above our existing scales," says Frederick. "AutoCube then takes a three-dimensional picture of the product through a series of cameras."

That picture comes in especially useful when BlueStar is shipping products via FedEx or UPS. "We know that we have the accurate package dimensions captured," he notes, "so that the accurate shipping weight can be billed."

The AutoCube system can either be a standalone product or it can be integrated into a third-party shipping platform. The typical end-user would be any shipper, but the solution is especially relevant for high-volume shippers like BlueStar. "Our shipping integrator sees a huge upside in the product to be spec'd out for new customers," says Frederick. "I think there's a lot of potential and a lot of upside to the AutoCube product." "The ROI can be 12 months or less on our solution, and can significantly shrink the number of chargebacks that a shipper has to deal with."

Praveen Issac,
Senior Product
Manager,
Breakthrough
Technologies,
Honeywell

Benefits of an Automated Dimensioning Solution

Benefits for logistics managers, CFOs, and CEOs all lead to improved space utilization and lower costs.

It's clear that all stakeholders benefit when shippers implement an automated dimensioning system:

Benefits for logistics managers

Charged with efficiently utilizing all of their DC space while also ensuring high levels of worker productivity, logistics managers gain significant ROI from investments in automated dimensioning solutions. "When you think about how quickly stock has to be moved around – particularly in hub or sortation areas, and during peak seasons – being able to maximize the use of that space is a major imperative for warehouse managers," says Justine Clark, a Honeywell industry marketing manager.

"These areas need to be kept clear and ready to use at a minute's notice – it's not a place where you want workers standing around trying to measure boxes with tape measures," says Clark. By using an automated dimensioning solution, she says, employees can "keep things moving and speeding along while also cutting down on the number of man-hours that it takes to determine packaging volume."

And because the AutoCube 8200 system costs much less than its market predecessors, the ROI appears much faster than expected. "When you look at reducing costs and improving operational processes with technology," says Clark, "it's hard to ignore the total cost of ownership (TCO) proposition that the AutoCube 8200 presents."

On the labor front, the solution helps to cut down on the amount of handling and "rehandling" of products while also creating a uniform process within the DC, where labor stands as the highest expense. Taking a shipment to a receiving location only to find out that the items don't fit in the assigned box or on the specific pallet requires both time and effort. Then, the replacement option must be measured again before shipping.

"This all adds up to wasted manpower for DCs," says Bruce Stubbs, director, supply chain marketing at Honeywell Safety and Productivity Solutions. "With the volume of orders, throughputs, and velocities that are coming through today's DCs, logistics managers simply can't afford a lot of 'extra' steps," he says. "They have to be able to do it right the first time."

Benefits for CFOs

Focused on cutting costs and growing revenues, today's CFOs have a lot on their plates. Most understand that DCs and fulfillment centers are not profit centers, and that these vital supply chain components are primarily a cost of doing business. A space where products are received, stored, and then shipped out to customers, today's DC is ripe for the kind of streamlining that automated dimensioning solutions can provide.

"To keep prices in line while also dealing with rising costs of their own, CFOs need to be able to control costs at every level, including the DC," says Stubbs. "Doing so can positively impact the organization's bottom line and profit and loss. Today, CFOs are looking at supply chains and asking: 'How and where can we reduce costs?'" For many shippers, he adds, the answer to that question lies in transportation, where costs are continually rising.

For example, consider shipping chargebacks, which aren't always easy or practical to manage, yet they can be included in shippers' servicelevel agreements (SLAs). Fees that a customer assesses a shipper for errors in not following that customer's business rules (i.e., not being "compliant"), these chargebacks can add up quickly when incorrect packaging is used for outbound freight. Dimensioning systems of the past – some of which cost upwards of \$10,000 – may not have offset those charges, but the more affordable AutoCube 8200 system presents a much faster, more predictable ROI.

"The ROI can be 12 months or less on our solution," adds Praveen Issac, a Honeywell Senior Product Manager, "and can significantly shrink the number of chargebacks that a shipper has to deal with."

Benefits for CEOs

As the highest-ranking executive in any organization, the CEO makes major corporate decisions, manages the firm's overall operations and resources, and serves as the main point of communication between the board of directors and corporate operations.

Juggling a lot of duties at once, the CEO may see freight/shipping costs rise, but may not necessarily understand exactly what's driving those increases. For this professional, an automated dimensioning solution helps to keep costs in line while freeing up cash to be used for more important business initiatives.

By enhancing business processes, cutting down on manual tasks, reducing shipping chargebacks (where possible), and optimizing storage space, the AutoCube 8200 system helps increase revenue capture while also improving labor utilization. This, in turn, translates into "improved customer service and better overall organizational health," says Clark, "both of which are of great interest to today's CEOs."

Issac adds that CEOs also gain from better space utilization and the improved throughput that comes from making better use of existing DC space – versus going out and renting/ leasing additional real estate. "When shippers can leverage an automated dimensioning solution to increase throughput without physically expanding," says Issac, "it allows them to effectively optimize workflows and storage space in the most efficient possible manner."



Demand Extends Well Beyond the Transportation and Logistics Center

In 2016, dimensioning solutions saw a major emergence in the U.S. distribution and logistics space. Major third-party logistics service providers (3PLs) like FedEx, UPS, and DHL last year began shifting to new dimensional weight-based pricing models focusing beyond weight on the cubic dimensions of products and parcels. However, demand extends well beyond these logistics regulatory catalysts as organizations are deploying these solutions across distribution centers, manufacturing shop floors, warehouses, retail stores and back of retail stores, and offices. The flexibility of solutions today has allowed companies in these verticals to deploy a variety of systems with different levels of automation.



What are the leading drivers for your investment in dimensioning solutions¹?

 Source: Dimensioning Solutions Market Report, VDC Research Group, Inc., December 28, 2016

Honeywell AutoCube 8200: Small Footprint, Big Results

While the case for using an automated dimensioning solution as a whole may be clear to the average shipper, the AutoCube 8200 system presents some unique value propositions that its competitors can't match.





Whether it's being used at a retail store of a courier company, a shipping station of a DC, a retail ship-from-store location, or an inbound station of a warehouse, the system provides an efficient way to achieve space optimization.

Using 3D depth sensing technology, the AutoCube 8200 system instantly and accurately measures the dimensions of an object in less than one second. By effectively eliminating certain manual steps within the distribution workflow, this automated dimensioning solution helps shippers optimize their operations, increase accuracy, save money, increase throughput, and reduce shipping chargebacks.



"Shippers that don't take this into consideration are leaving a lot of money on the table," explains Bruce Stubbs, director of supply chain marketing at Honeywell Safety and Productivity Solutions. "Any company that ships goods, and that isn't addressing this challenge, runs the risk of overly inflating its shipping costs. And when the costs of goods sold goes up, competitiveness goes down – and that translates into inflated costs of goods sold and eventually erodes profitability." While the case for using an automated dimensioning solution as a whole may be clear to the average shipper, the AutoCube 8200 system presents some unique value propositions that its competitors can't match.

For one, it has decades of Honeywell's technological expertise behind it. At the same time, it's easy to implement and integrate with existing systems. The solution also helps shippers improve their own profitability by automatically gathering dimensioning data at all workstations – data that can then be used to reduce outbound shipping costs across the board.

"The big e-commerce push is on with millions of smaller packages moving through the supply chain on a daily basis," says Stubbs. "With an automated dimensioning solution, shippers can effectively streamline the package-measuring process, drive costs out of it, and create a more simplified distribution environment."

For more information

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Honeywell Safety and Productivity Solutions

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