

Capture accurate  
package dimensions  
as part of the  
normal workflow with  
mobile box dimensioning

Increase efficiencies and reduce costs while optimizing space with truly portable dimensioning technology that takes the measurements to where the box is

## Introduction

Having precise measurements of box dimensions are critical to managing warehouse space, pallet configurations, and truck loads, but too often workers must move the package to another part of the building to access a stand-alone measurement system or rely on the “old reliable” tape measure (or worse, their best guess) to take manual measurements. And those manual measurements are not always loaded into the warehouse management system (WMS), enterprise resource planning software (ERP), or transportation management system (TMS) or may be entered incorrectly so the data is flawed. All of these issues slow down the efficiency of workflow in facilities at a time when supply chain challenges could not be more critical.



Measuring package dimensions should be part of the normal processes that frontline workers conduct every day, but often the technology is too difficult to access and use, or just doesn't exist. The answer is to simplify the process of capturing box dimensions and delivering that data to the appropriate management system by empowering frontline workers with mobile devices to take those measurements where the box is — not some remote part of the warehouse.

xDIM™ powered by 4DMobile, a companion company of MobileDemand, is the first truly mobile 3D box dimensioning system. Using ruggedized mobile tablets equipped with Intel® RealSense™ 3D depth camera technology, frontline workers can capture the dimensions of boxes in an average of 1.5 seconds per box and automatically feed that information into the cloud dashboard and enterprise systems. It is truly a portable point-and-capture system.



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## With xDIM, companies can:



### Increase mobility and agility

Conveniently measure packages wherever they are — instead of moving bulky boxes to and from a stationary scanner — using a mobile tablet that moves with the worker throughout the day.



### Improve space and time efficiencies

Enhance warehouse slotting, speed re-racking, and improve Ti-Hi pallet configurations by having access to reliable measurement data. Manage outbound shipments without the space required for a large, dedicated dimensioning system.



### Increase revenue while reducing costs

Establish costs for services for hire on the basis of measurement, reduce shipping chargebacks, and lower volume dimension scanning investment costs.



### Seamlessly integrate with your existing systems

xDIM's application program interface (API) allows data to easily flow into your enterprise systems, results to be viewed in near real time from a cloud-based analytics dashboard, and easy collaboration with value chain partners.

xDIM, powered by 4DMobile, allows mobile workforces to speed through capturing package dimensions with the device they carry to perform their other work, eliminating the barriers to adoption and use. And it works with MobileDemand ruggedized tablets that are everyday technologies, reducing training and maximizing adoption.



3D box dimensioning improves efficiencies in many types of supply chain operations — from warehousing to order fulfillment to last mile delivery operations — and enables workers to optimally manage space in warehouses and delivery vehicles.

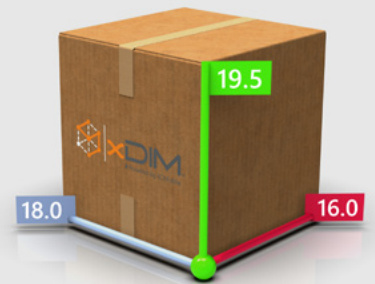
# Warehousing: accurate dimensioning optimizes warehouse operations and storage



Change is constant in a modern warehouse — and more important than ever with the current supply chain challenges. Adding new SKUs, changes in package dimensions and suppliers, variations in pallet configuration, and seasonal changes demand nimble operations that can adapt on the fly. To optimize warehouse storage space and slotting, the exact dimensions of each box, container, parcel, and pack entering the facility must be captured.

In addition to optimizing warehouse organization, accurate slotting of stock — ensuring the stock is in the optimal place based on velocity and that the slot is large enough to accommodate the stock — is important to the order selection process. Selectors pulling product for customer deliveries need accurate manifests in order to build manageable pallets that meet size constraints. If the dimensions of the items being pulled are inaccurate, pallets may end up too large or small, either of which results in operational inefficiency.

Keeping up in this dynamic environment requires solutions that are quick and easy to use and can take measurements right at the source. xDIM meets the challenges of warehouse operations by offering an intuitive interface and fast performance, allowing workers to quickly capture dimensions where the box is without interrupting their workflow.



## Legal for Trade applications

Legal for Trade requires a high degree of package data accuracy. xDIM is certified by the National Type Evaluation Program (NTEP) as sufficiently accurate for products sold by package size or dimensional weight, making it suitable for Legal for Trade applications, like selling, purchasing, exchange, custody transfer, or establishing the cost for services or hire on the basis of measurement. Dimensions generated with xDIM (in NTEP mode) can be used to drive shipping and invoicing processes that are based on package size or dimensional weight. Half-inch accuracy ensures packages are sized reliably.

# Shipment and fulfillment — accurate package dimensions avoid chargebacks

Shipping parcels is no longer a matter of putting a box on a scale and moving it to the outbound queue. Carriers' rates now calculate a dimensional (DIM) weight based on the size of the package, charging the greater of the DIM weight or actual weight. xDIM's accurate dimensions ensure that shipping charges are calculated correctly.



## Dimensioning improves shipping and fulfillment by:

- Accurately measuring dimensions of the goods being shipped to drive the correct shipping charge calculations.
- Measuring the resulting shipping box to ensure accurate dimension data for calculating shipping charges and reporting to carriers.

In addition, parcel carriers handle a large variety of packages for shippers, but they do establish limits on package size. Any package whose combined length and girth exceeds a specific threshold is subject to a substantial oversize parcel fee, which can cost over a thousand dollars per package. Since the calculation is

based on all three package dimensions, detecting oversize packages by eye is not reliable in most cases. Capturing the dimensions of these large parcels prior to shipment alerts the user to the oversize status so the package can be redirected to a freight company that handles larger shipments.

# Delivery and route management — optimize loads and routes by accurately capturing package dimensions



A dispatcher's dilemma is making sure all packages get delivered to multiple customers on a timely basis at the lowest cost possible. With an ever-changing manifest of packages, variables such as the number and size of delivery vehicles, availability of route drivers, customer delivery requirements, and more, achieving that efficiency is more difficult than ever.

A key input to the routing and loading process is dimensional data of the packages to be delivered, which helps ensure each vehicle is loaded optimally so that routes can be constructed that minimize miles driven and labor costs, and achieve maximum use of vehicle cubic capacity without overloading.

xDIM quickly and easily captures package dimensions to optimize the loading of delivery vehicles. And using its modern API, xDIM can automatically feed data into dispatching systems to create load sheets and routes.



## Mobile weights and measurements solution

Sometimes you need a weights and measurement solution as mobile as your frontline workers. The xDIM Scale Cart solution consists of a heavy-duty platform truck for easy transit and maneuverability, along with a postal and shipping scale for acquiring accurate weights. Also included in the solution is a MobileDemand xTablet equipped with 3D camera and MobileDemand's patented quick release snap mount system.



## How portable 3D dimensioning works

Portable 3D dimensioning starts with a rugged MobileDemand tablet — a common tool for warehouse and logistics frontline workers. The tablet is equipped with xDIM software and the ruggedized case is equipped with an Intel RealSense 3D depth camera.

The system is point-and-click easy and dimensions are typically captured in as little as 1.5 seconds. The data is automatically transferred to xDIM Insight, a cloud-based, user-friendly analytics dashboard that enables companies to have complete visibility to all measurements captured within the organization. That rich data can be accessed instantly via the API and loaded into management systems to provide a foundation for key business analytics and insights.

Portable 3D dimensioning makes capturing accurate box measurements part of standard work practices of frontline workers because it is quick and easy, so the work gets done.

## Truly mobile, truly portable, user friendly

xDIM makes it easy for frontline workers to capture package dimensions quickly as part of their normal workflow. It eliminates the need to transport cumbersome payloads to fixed locations and reduces human error by avoiding manual assessment of dimensions. Dimension data is captured wherever the package is, improving worker efficiency and ensuring accurate data is always available on each and every package, allowing accurate calculation of volume and dimensional weights, and optimizing space and load in warehouses, shipping containers, and delivery vehicles.

xDIM is the solution that gets used because it's easy and does not require any extraordinary tools to complete the work. In addition, enterprise data systems are supplied with reliable data from which to make sound management decisions.

**For more information on the xDIM 3D Mobile Box Dimensioning System, visit:**  
[www.ruggedtabletpc.com/xdim](http://www.ruggedtabletpc.com/xdim)

## About MobileDemand

MobileDemand designs and develops a broad range of innovative, rugged products and technologies that empower frontline workers to do their jobs efficiently where the work is. MobileDemand protects its customers investment in equipment and people by delivering mobile solutions tailored to meet the specific needs of every application, matching the product durability to the job so you never pay for more than you need. MobileDemand is dedicated to ensuring the solution is exactly right for its customers with expert consultants that help define your requirements and match them to the correct mobile computing solutions.

**For more information, visit**  
**[www.ruggedtabletpc.com](http://www.ruggedtabletpc.com).**

## About 4DMobile

Founded in 2016 by Matt Miller, 4DMobile is a companion company of MobileDemand with a mission to elevate workforce productivity and optimize space with innovative and convenient computer vision and mobile applications.

**Learn more at**  
**[www.4dmobilesoft.com](http://www.4dmobilesoft.com).**

