



# Cloud-Based Inventory Software

Transforms the Industrial  
Internet of Things

**BinMaster**  
Solutions for Industry



**Learn how the Cloud and IIoT  
make your plant more efficient**

Implement strategies that leverage the power of the latest level sensor technology and simple software to reduce material shortages and production stoppages.

# It's time to change the way you work

Monitoring inventory contained in bins, tanks, and silos can be a time consuming, unsafe, and tedious task. But knowing how much material is in each vessel is critical to operations. Plants processing solids, powders, and liquids stored in bins, tanks, silos, or IBCs are fraught with unwanted inventory discrepancies that create production headaches and negatively impact profitability.



## Don't live this scenario:

Grab your coat. Go outside. Climb every silo. Write down the measurements. Go back in the office. Open your spreadsheet. Enter today's readings (if you can read them).

Download the spreadsheet and email it to everyone who needs it. Two hours later, inventory is inaccurate. Freak out placing last-minute orders and running out of material.

## Instead imagine this scenario:

Grab your coffee. Sit down at your desk. Log in. View your silo inventory company wide. Address low level alerts. Your coworkers do the same. Rest easy knowing inventory is updating continuously and you're alerted when materials get low.

*Here comes the transformation . . .*



# How Cloud Computing Helps You

Combining cloud-based Software-as-a-Service and advanced level sensor technology makes inventory and supply chain management easier.



**Accessibility:** Information is portable and available anywhere there is internet access from a phone, tablet, or PC.

**Accurate Information:** Total transparency, fewer discrepancies, and more information leads to better decisions. Know what to buy and when to order it.

**Better Control:** Automation brings centralized digital control, minimal human intervention, faster and timelier outputs.

**Cost Containment:** Direct and indirect. Less overtime, automation of daily tasks, fewer inefficiencies, no emergency or late delivery charges.

**Historical Reporting:** Manage and segregate high-turn, long lead time, and materials with strict reporting requirements.

**Improved Monitoring:** Real-time reports of on-hand supply, forecast when you will run out, data is continuously updated effortlessly.

**Job Satisfaction:** Less mundane work, more time for planning and problem solving.

**Optimize Production Processes:** Streamline vital communication between people and devices and get everyone on the same page.

**Process Improvements:** Reduce material outages, production stoppages due to shortages, fewer batch processing errors leads to better quality.




**Security:** Data—both past and present—is stored securely and safely.

**Simplicity:** No servers, no IT department, programming updates done by host provider, no need-to-know programming to use software.

**Time Savings:** Less time on the phone, managing spreadsheets, fewer trips to the control room, less time doing routine or redundant tasks.

# Level Sensors Play a Leading Role

Cloud-based programs are compatible with a wide range of sensors and measurement technologies. Their versatility lends them to use with vessels of vastly different shapes and sizes, storing all types of powders, solids, or liquids.

-  **Better Accuracy:** Most level sensors are accurate within 0.2" of distance measured
-  **Improved Safety:** Automated measurements eliminate the need for climbing
-  **Time Saving:** More measurements done with less manpower, requiring fewer people



## Non-Contact Radar

80 GHz non-contact radar provides superior level measurement in extremely dusty powders and solids. Models designed for liquids perform in excessive steam, condensation, vapor, and surface foam.



## 3D Level Scanner

This non-contact technology measures and maps multiple points on the material surface and accounts for irregularities in calculating volume. A specialized software program provides 3D visualization and multiple vessel monitoring.



## SmartBob

Working like an automated tape measure, this sensor drops a weighted cable to a solid material surface at timed intervals. It can also measure the level of submersed solid material settled below a liquid surface.



## Laser

Measuring in a tight beam, lasers are suited for narrow vessels and lower or no-dust environments. Battery-powered models reduce wiring costs and allow for installation where power is limited or unavailable.



## Guided-Wave Radar

With models for measuring either solids or liquids, guided wave radar measures levels using a cable suspended into the vessel. It can be used for interface measurements detecting the level of separated layers.



# How the Cloud Benefits Industry

*Here are real-life examples of how the Cloud helps plants. Imagine how it can help you.*

**Feed:** By projecting consumption growers can better manage rations, eliminate feed outages, late delivery charges, and ensure there is less feed leftover at closeout to reduce vacuuming and disposal charges.

**Plastics:** Real-time monitoring of resins going into the production process, improved supply chain management using vendor managed inventory with resin suppliers, optimizing scheduling of deliveries.

**Cement:** Centralized monitoring of multiple batch plant locations, improved logistics and scheduling of drivers' routes, ensuring entire truckload with fit into silos, improved coordination with fly ash suppliers.

**Food Processing:** Managing inventory of raw ingredient, WIP, and finished product silos, leveraging buying power by ordering for multiple plants on a single contract, batch processing of foodstuffs.

**Fertilizer:** Tracking inventory of solid, powder, and liquids chemicals, using historical reporting to track inventory turns and carrying costs, preparing for seasonal production and distribution.

**Chemicals:** Tracking inventory of regulated chemicals, ensuring chemicals are used before shelf-life expires to reduce disposal costs, creating an automated audit trail of chemical usage.

**Wood Pulp Paper:** Pellet production facilities, hog fuel storage bins, emptying sawdust bins to prevent production stoppages, ensure pulp, water, and bleach level levels are adequate for paper production, managing mill-to-mill transfers.

**Agriculture:** Optimizing capacity of storage bins, preparing audits and USDA reporting, eliminating spreadsheets at grain elevators, valuing grains, oilseeds, and other commodities for export, railcar logistics.

**Propane:** Historical reporting to project impact of weather on consumption, supply planning for storage facilities, tracking stored propane at multiple depot locations, routing of commercial and residential deliveries.

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# TRANSFORM TANK & SILO INVENTORY



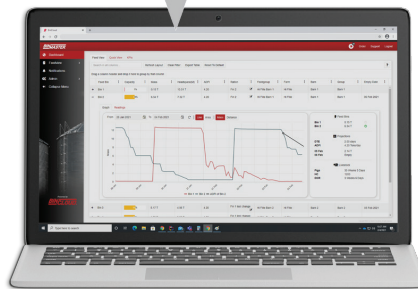
An integrated cloud foundation for monitoring inventory contained in bins, tanks, and silos



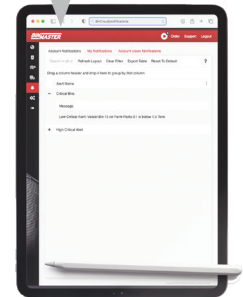
Data syncs between the internet and the Cloud



Quick views



Historical reports



Text & email alerts

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