OPTIMIZING PERFORMANCE
IN INDUSTRIAL ENVIRONMENTS

Durable, effective scanning solutions for warehouses, distribution centers, manufacturing plants, transport and logistics hubs

Honeywell

STAY AHEAD
OF THE CURVE

As the logistics industry evolves faster than ever, organizations must stay up to date with the most recent technology trends.

Embracing these innovations is essential for maintaining a competitive edge. Gartner's[1] supply chain technology trends were driven by two broad themes: the need for supply chain leaders to leverage emerging technologies to control and protect their businesses, and new opportunities for competitive differentiation through the complementary integration of humans and machines.

Within industrial environments such as warehouses, distribution centers, manufacturing plants, transport and logistics hubs, productivity tools must be durable enough to survive the operating conditions and capable enough to capture and transmit barcode data quickly.

In the following pages, we explore five common challenges currently facing these verticals. We also share insights on how to navigate these pressures and build a more agile business that can adapt to a rapidly evolving marketplace.
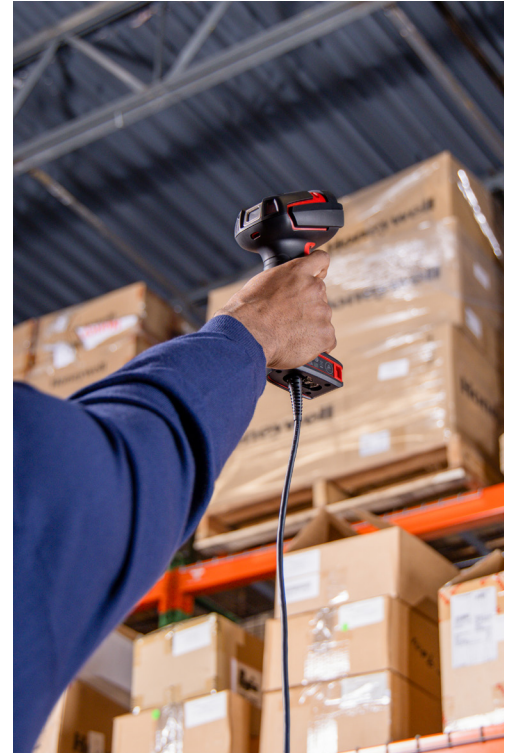
1. Top Trends in Supply Chain
   Technology for 2024, Gartner

1 SCANNING RELIABILITY AND PERFORMANCE

2 DEVICE DURABILITY AND MAINTENANCE

3 OPERATIONAL EFFICIENCY AND ACCURACY

4 WORKFORCE CHALLENGES

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SCANNING
RELIABILITY AND
PERFORMANCE

In fast-paced industrial environments – like warehouses, distribution centers and manufacturing - workers must scan barcodes quickly and accurately. Issues such as low-quality or damaged labels, poor lighting conditions, and limited scan ranges can lead to reduced productivity and efficiency. Additionally, scanning multiple barcodes at once or capturing high-density data can slow down workflows, especially when using outdated or unreliable devices. These inefficiencies not only compromise order accuracy and processing speeds but also place additional strain on workers, leading to fatigue and errors in time-sensitive tasks.

How Honeywell can improve productivity and accuracy:

OPTIMIZED SCANNING

Honeywell's Granit™ Ultra series is designed to deliver superior scanning performance in the most challenging industrial environments. Equipped with next-generation imaging technology, it achieves outstanding read rates, even on damaged, low-contrast, or poorly printed barcodes.

Its advanced optics and high motion tolerance enable rapid and accurate scans, minimizing downtime and keeping workflows running smoothly. With an extended scanning range, workers can quickly capture barcodes from both close-up and long distances, reducing interruptions and maximizing efficiency across operations.

SEAMLESS INTEGRATION

The Granit™ Ultra series is built to streamline operations, boosting productivity and efficiency across industrial workflows. Its superior scanning speed and accuracy eliminate bottlenecks, while the ability to scan barcodes from varying distances minimizes the need for repositioning, saving valuable time.

Seamless enterprise system integration ensures a hassle-free deployment, and its ergonomic design reduces operator fatigue during long shifts. Whether used in warehouses, production lines, or loading docks, Granit™ Ultra empowers businesses to optimize throughput, reduce errors, and achieve peak operational performance.

ACCURATE PERFORMANCE

Built to endure the harshest conditions, the Granit™ Ultra series ensures consistent, reliable scanning performance in demanding industrial environments. With advanced imaging technology, it guarantees dependable barcode capture in any situation.

By reducing scanning errors and hardware failures, Granit™ Ultra enhances operational continuity and minimizes costly disruptions.

DEVICE DURABILITY
AND MAINTENANCE

Additionally, beyond scanning performance, ensuring device durability and reliability are major concerns in physically demanding industrial settings. Workers frequently handle scanners in harsh conditions, where drops, impacts, extreme temperatures, and dust exposure can cause equipment failures and costly downtime.

Broken or malfunctioning devices can disrupt operations, forcing workers to switch to manual processes, which further reduces efficiency. Combined with labor shortages and high employee turnover, these scanning challenges create significant operational pressures, making it essential for businesses to invest in advanced, durable scanning solutions that enhance speed, accuracy, and ease of use in demanding environments.

Discover how to deliver long-term value and efficiency

The Granit™ Ultra series is built for durability, ensuring reliable performance in the toughest industrial environments. Engineered with a rugged housing, it withstands repeated drops from significant heights, extreme temperatures, and exposure to dust and moisture, making it ideal for warehouses, distribution centers, and manufacturing plants.

The device is IP-rated (IP65/68) for superior protection, preventing damage from harsh conditions that typically wear down standard scanners. Additionally, its reinforced components and impact-resistant design minimize the risk of breakage, ensuring long-term functionality even in high-demand workflows.

Beyond its durable construction, Honeywell supports Granit™ Ultra users with comprehensive maintenance solutions that help extend device lifespan and reduce operational disruptions. Service offerings, including advanced diagnostics and repair programs ensure quick resolutions to technical issues, minimizing downtime. This proactive support, combined with the scanner's robust design, translates to a lower total cost of ownership by reducing replacement costs, maintenance expenses, and productivity losses caused by equipment failures.

Key features that make the Granit™ Ultra scanner durable and hardwearing:

- **Rugged Housing:**
  Designed to withstand harsh industrial environments, including drops, impacts, and heavy use.

- **High Drop & Tumble Resistance:**
  Survives repeated drops from significant heights onto concrete and endures rigorous tumble testing.

- **IP-Rated Protection:**
  Sealed against dust, dirt, and moisture for reliable performance in extreme conditions.

- **Wide Operating Temperature Range:**
  Functions in both freezing cold and high-heat environments without compromising performance.

- **Impact-Resistant Components:**
  Reinforced internal and external elements reduce wear and tear over time.

- **Ultra-Rugged Scan Window:**
  Deeply recessed to prevent impact, made from hardened glass to prevent scratches and protect scanner optics.

- **Sealed Trigger & Connectors:**
  Prevents dirt and debris from causing malfunctions, increasing longevity.

- **Industrial-Grade Cable & Connector Options:**
  Enhanced durability for long-lasting connectivity in rugged settings.

OPERATIONAL EFFICIENCY AND ACCURACY

The first ingredient for the highest levels of operational efficiency and accuracy lies within the scanning process itself: the ability to read poor-quality barcodes, operate across a wide range of distances, and scan multiple barcodes at once are essential to the employee's moment-to-moment workflow.

Beyond barcode readability, scanning devices must also integrate seamlessly into wider existing workflows without causing bottlenecks. Workers often handle large volumes of inventory under tight deadlines. Any scanning delays can create operational slowdowns and increase labor costs. The ergonomics and ease of use of a device also play a crucial role—bulky or complex scanners can lead to worker fatigue and inefficiencies over time. In environments where speed and accuracy are critical, businesses need scanning solutions that offer fast, precise, and reliable performance to maintain operational flow and meet customer expectations.

2. Honeywell standard benchmarking testing conducted on Granit™ Ultra SR and XR models vs. Granit™ XP on six collections of reference barcodes.

How to achieve on-site efficiencies

The Granit™ Ultra is designed to tackle the operational efficiency and accuracy challenges faced in industrial environments by delivering superior scanning performance. Granit™ Ultra integrates high speed processing, AI algorithms, and decoding enhancements to result in an average 45% scanning speed increase over the Granit™ XP[2], enabling improved productivity. Additionally, Granit™ Ultra supports multi-code scanning, allowing users to capture multiple barcodes in a single trigger pull, streamlining order processing and improving overall productivity.

Beyond speed and accuracy, Granit™ Ultra is built for seamless integration into demanding workflows. Its ergonomic, user-friendly design reduces strain and fatigue, enabling workers to operate efficiently over extended shifts. The scanner's motion tolerance and rapid scan response ensure uninterrupted performance, even in fast-paced environments. By minimizing scanning delays, reducing errors, and enhancing user comfort, Granit™ Ultra helps businesses maintain operational flow, meet customer demands, and optimize overall supply chain efficiency.
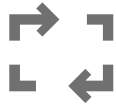
WORKFLOW CHALLENGES

Distribution centers, warehouses, and logistics hubs are currently facing several critical workforce challenges that impact productivity and efficiency:

LABOR SHORTAGES & UNDERSTAFFING

A shrinking labor pool, high turnover rates, and difficulty attracting skilled workers make it harder to maintain fully staffed operations.

HIGH EMPLOYEE TURNOVER

Physically demanding work, long hours, and attractive opportunities in other sectors lead to frequent workforce churn, increasing recruitment and training costs.

AGING WORKFORCE & SKILLS GAPS

Many experienced workers are retiring, while younger employees may lack the specialized skills needed to operate complex logistics technology and equipment.

WORKER FATIGUE & SAFETY RISKS

Repetitive tasks, heavy lifting, and fast-paced environments contribute to fatigue, injuries, and reduced efficiency.

RISING WAGE PRESSURES

Competitive wages and benefits are necessary to attract and retain workers, increasing operational costs for businesses.

NEED FOR GREATER AUTOMATION & TRAINING

As companies adopt automation to fill workforce gaps, employees require upskilling to effectively operate and maintain new technologies.

These challenges make it crucial for organizations to invest in workforce-friendly technologies, streamlined processes, and automation solutions to maintain efficiency and competitiveness.

Transforming operations for maximum productivity

The Granit™ Ultra is designed to support a more productive work environment. With high-speed processing, AI algorithms, and decoding enhancements it significantly reduces the need for manual data entry and repeated scans, reducing the effort workers need to invest in processing shipments and inventory. Its expanded range scanning helps eliminate unnecessary movement, enabling employees to capture barcodes from both short and long distances without repositioning themselves or heavy items, reducing fatigue and improving workflow efficiency.

Additionally, Granit™ Ultra's rugged and ergonomic design reduces the risk of frustrating device failures that slow down the working day. Its intuitive interface and motion-tolerant scanning make it easy for new and temporary workers to adopt, addressing high turnover and skills gaps with minimal training. The device's durability and long battery life decrease downtime and maintenance costs, allowing businesses to optimize labor resources while maintaining high productivity levels. By streamlining operations and reducing physical strain, Granit™ Ultra helps businesses combat labor shortages and workforce challenges more effectively.

MEETING
CUSTOMER DEMANDS

Warehouses, distribution centers, and transport hubs face several challenges in meeting changing customer demands, particularly as e-commerce growth and supply chain complexities continue to evolve. These challenges include:

RISING ORDER VOLUMES & QUICK FULFILLMENT

The surge in online shopping and just-in-time inventory models requires warehouses to process higher order volumes at unprecedented speeds, putting pressure on operations.

INCREASED COMPLEXITY IN ORDER FULFILLMENT

Customers expect personalized, multi-item, and multi-location shipments, requiring warehouses to handle more intricate picking, packing, and shipping processes.

TIGHT LEAD TIMES & SAME-DAY DELIVERY PRESSURES

Retailers and logistics providers must meet next-day or even same-day delivery expectations, requiring highly efficient workflows and minimal delays.

INVENTORY MANAGEMENT CHALLENGES

Accurate stock tracking and real-time visibility are essential to prevent stockouts, overstocking, and mis-picks, which can disrupt order fulfillment.

LABOR CONSTRAINTS & WORKFORCE SHORTAGES

Staffing shortages make it harder to keep up with increasing demand, while high turnover rates add additional training and onboarding burdens.

TECHNOLOGY & AUTOMATION INTEGRATION

Many businesses struggle to implement or optimize automation solutions that can improve order accuracy and processing speeds while reducing manual labor dependency.

To keep pace with evolving customer expectations, warehouses must invest in technology-driven solutions that improve efficiency, enhance accuracy, and support seamless order fulfillment under tight operational constraints.

How businesses can meet changing customer demands

The Granit™ Ultra helps businesses meet changing customer demands by improving speed, accuracy, and efficiency in order fulfillment. Ultra-fast scanning reduces errors and delays, allowing workers to process increasing order volumes with greater precision. Expanded range capabilities speed up workflows with seamless scanning from near and far.

Rapid and reliable barcode capture enhances inventory accuracy, reducing mis-picks and fulfillment errors that can lead to customer dissatisfaction. Beyond performance, Granit™ Ultra's ultra-rugged design helps minimize downtime caused by device failures, ensuring continuous operation in high-demand environments. Its intuitive interface and ergonomic build make it easy for seasonal workers to adopt, and its long battery life and durable construction optimize productivity to help businesses keep up with tight lead times and complex fulfillment needs. By streamlining operations, Granit™ Ultra empowers businesses to meet evolving customer expectations with greater speed, accuracy, and reliability.

THE GRANIT™ ULTRA
PRODUCT ECOSYSTEM

Designed to provide a comprehensive, adaptable scanning solution for industrial environments, the Granit™ Ultra product ecosystem includes a range of corded and cordless scanners each optimized for different scanning distances and barcode types. The ecosystem also features vehicle mount accessories, ensuring seamless integration into forklifts and other mobile workstations, along with high-durability cables and connectors to enhance reliability in rugged conditions.

To support easy deployment, Honeywell offers software tools like EZConfig and SMU (Smart Management Utility), enabling streamlined device configuration. Additionally, the new Charge & Communication Base (CCB) has been redesigned for enhanced durability and easier docking, with improved IP-rated sealing to protect against dust and moisture. These elements work together to maximize scanning performance, minimize downtime, and ensure long-term operational efficiency in warehouses, distribution centers, and logistics hubs.

FIND YOUR PERFECT FIT:
GRANIT ULTRA™ SERIES

Looking to improve operational efficiency, accuracy and optimize performance,
but unsure which device is the best fit for your industrial environment?
Compare Honeywell's Granit™ Ultra handheld scanner range below.

GRANIT™ ULTRA SR (STANDARD RANGE)

- **Best for:** Close-range barcode scanning in high-volume environments.
- **Scanning capabilities:** Reads 1D and 2D barcodes from contact up to arm's length
- **Use Case:** Ideal for fast-paced warehouse picking, packing, and shipping applications.
- **Key Features:**
  - Fast, high-precision scanning of common barcode types.
  - Green LED aimer for accurate targeting.
  - Optimized for efficiency in handheld scanning workflows.

GRANIT™ ULTRA XR (EXPANDED RANGE)

- **Best for:** Versatile scanning needs, from near contact to mid-range distances.
- **Scanning capabilities:** Covers both close-range and expanded barcode reading, offering a flexible depth of field.
- **Use Case:** Ideal for fast-paced warehouse picking, packing, and shipping applications.
- **Key Features:**
  - Combines close-range and expanded-distance scanning for improved workflow efficiency.
  - Enhanced depth of field for rapid barcode capture.
  - Designed for operations that require adaptability across different scanning distances.

GRANIT™ ULTRA XLR (EXTREME LONG RANGE)

- **Best for:** Long-range scanning, including top-rack and warehouse floor-to-ceiling applications.
- **Scanning capabilities:** Reads barcodes from close-up to extreme distances, covering the widest range.
- **Use Case:** Ideal for scanning from forklifts, high shelves, and across large distribution centers.
- **Key Features:**
  - Reduce scanning time by 60%*
  - Easily capture top rack barcodes, even in difficult lighting conditions
  - Accurate reading of product and rack labels, including low-quality codes, across an extended range

*Based on HON standard test method, Granit Ultra XLR takes 40% as long as Granit XP XLR to read a range of codes

Ready to enhance your operational performance in industrial environments?

Get in touch with our experts for a demo today.

For more information

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