



**FastFetch** increases customer satisfaction and efficiency by innovatively combining voice, Bluetooth barcode scanning and light-directed picking to provide **FAST, ACCURATE, BATCH PICKING** in distribution and manufacturing environments.

Requiring **only a PDA** to control lighted displays on picking bays and putting carts, FastFetch enables cluster picking, reverse logistics and sequenced picking using low-cost wireless infrared communications for **light-directed picking** from storage bays and **light-directed putting** to cart locations. **Voice direction** and wireless Bluetooth **barcode scanning** confirmation is used for locations without lighted displays.

## How does it work?

- Step 1:** Order information is downloaded from a host computer, order management system or warehouse management system (WMS) into the FastFetch Optimizer PC.
- Step 2:** FastFetch clusters the orders by location and uses the WMS' traversal sequence to route the picker using the shortest path to the storage bays holding required products.
- Step 3:** FastFetch downloads the next highest priority batch of orders to start picking.
- Step 4:** The PDA directs the picker to the storage bay locations using visual and voice commands.
- Step 5:** Using infrared communication between the PDA and controllers on the storage bays, the system alerts each picker to **"STOP!"** when the target picking bay is reached.
- Step 6:** LEDs are flashed and numeric displays on the storage bay (light modules) are illuminated, telling the picker the quantity of each item to pick. If a bay location is not equipped with a light module, voice commands direct the picker to the location and prompts him concerning how many items to pick.
- Step 7:** The picker confirms the right items have been picked by placing a hand in front of a flashing LEDs in the light module to trigger a proximity switch activates that in turn emits an audible "beep" and the flashing LED is turned off.  
For bay locations not equipped with light modules, the picker uses a Bluetooth scanner to scan the product or location barcode. After verifying that the correct barcode was scanned, the PDA verbally prompts the picker with the quantity to pick. After the items have been picked, one or more LEDs and numeric displays on cart light modules are flashed and illuminated, depicting the cart locations where the picked items are to be placed. Short picks and hold picks are recorded using the PDA keypad and display.
- Step 8:** The picker repeats this process until all items at the bay are picked.
- Step 9:** When all picking for the bay is completed, FastFetch tells the pickers to **"MOVE ON!"** and speaks the location of the next bay.
- Step 10:** Picking results are continually transmitted back to the host computer or uploaded to the host computer after all orders are filled.

## System Features and Benefits

- **Fast:** The elimination of paper pick slips, RF generated displays and speaking check digits (voice) transforms spent reading and searching into hours of increased productivity.
- **Accurate:** Directed picking minimizes errors and helps you deliver the “perfect order” on virtually 100% of your orders. Increased accuracy improves customer satisfaction and eliminates the need for audits after picking. Charge backs from customers due to picking errors will become an historical artifact.
- **Batch Order Processing for Picking and Putting:** A batch with as many as 255 orders on a (huge) cart can be picked on one trip through the warehouse.
- **Distributed Operation:** Unlike conventional pick-to-light (PTL) systems, an expensive control computer is not required to control a network of storage bay lights.
- **Light-directed Picking and Barcode Scanning:** Pick tickets may contain items to be picked from both locations with and without light modules. Numeric displays on light modules tell the pickers what quantities to pick from lighted locations with high-velocity SKUs while voice commands tell them to locate and scan low-velocity SKUs in non-lighted locations.
- **Optimal Warehouse Traversal:** If traversal sequence is available in your WMS, the PDA will direct the picker to proceed to the shortest path for picking. If traversal sequence information is unavailable it can be easily determined and gathered using FastFetch light modules and scanning at system installation time
- **Cluster Picking/Putting:** After analysis of orders by the Optimizer PC, the PDA will direct pickers to retrieve the same SKU for multiple orders or multiple SKUs for a single order, thus reducing walking time between carts and bays. The FastFetch Optimizer PC batches orders in a way that minimizes walking distance (and thus time) to fill all orders in all batches.
- **Reverse Logistics:** Handling returns and inventory replenishment is fast, accurate and easy. Light-directed putting lets pickers take SKUs from multiple cases on a cart and put them into (lighted or non-lighted) locations on storage bays.
- **Sequencing:** Increase manufacturing efficiency by picking raw material SKUs from storage bays and placing them onto carts in the sequence in which products requiring those SKUs will be processed through your manufacturing assembly line.
- **Simple Interface to WMS:** FastFetch interfaces with virtually any legacy or commercially available Warehouse Management System, Order Management System or ERP. Only a simple comma separated variable (CSV) file is needed to import the order data (e.g., order number, SKU, location, quantity, etc.) into the FastFetch Optimizer PC from a file on a host computer. This data is then downloaded by FastFetch into PDAs to initiate picking. After picking is completed, another CSV file containing the picking results is uploaded to a directory on the server or host computer for subsequent processing. Other available interfacing methods include database stored procedures, data queues and IP messaging. If real-time data updates are required, the results file can be sent to the host computer concurrent with picking.
- **Simple Installation:** Durable wiring raceways are attached to the front of picking racks with self-tapping screws. Controllers and light modules are daisy chained inside the raceways using inexpensive CAT5-type cable with RJ45 modular connectors. Translucent red, acrylic covers and end caps snap onto the ends of the raceway to protect the electrical components from dust and physical damage. The durable, acrylic covers require no cutting since no buttons protrude through the cover. FastFetch configuration software makes setup fast and accurate.
- **Minimal Training:** The system is easy to operate, requiring only about ten minutes of training for new pickers. The PDAs use prerecorded speech to speak voice commands in the preferred language of each picker when the picker logs into the system.
- **Reliable Hardware:** The PDAs are durable industrial-strength units that are designed to be used in harsh environments. The controllers and light modules contain no moving parts, and the custom-designed light sensitive, proximity switches are completely contained inside the raceway, ensuring years of reliable use. Each controller continually monitors the status of the light modules connected to it and reports problems to the PDAs so alternative actions (such as bar code scanning) can automatically and quickly be directed.

- **Reconfigurable:** Controllers and light modules can be slid right or left inside the wiring raceways as product locations are changed. Existing light modules can be removed and new light modules easily added by daisy chaining them to existing modules using RJ45 modular clips.
- **Scalable:** More storage bay lights and carts can be added as your business grows. As many as 65,534 light controllers, each with 255 light modules, can be installed. And since the PDAs are the only computers in active use, performance is not degraded as more carts or bays with light modules are added.
- **Fault Tolerant:** FastFetch is “tolerant” of hardware faults and can continue to operate in warehouse Wi-Fi (RF) dead spots since the PDA holds all required picking data. If power to light modules temporarily fails, the PDAs will visually display the picking locations and verbally prompt pickers concerning where and how many items to pick and automatically convert to using bar code scanning. All problems in FastFetch hardware are reported to the PDA at picking time and sent to the centralized SQL server to alert maintenance personnel to take corrective action.
- **Cost Effective:** FastFetch uses reliable, inexpensive infrared (IR) technology, making it an extremely affordable alternative to traditional picking technologies. The total system cost is often less than 50% of other order fulfillment technologies, and the ROI payback period is typically 6 – 18 months.
- **Flexible:** The system can support many other picking methods such as **store distribution** and **dynamic slotting**. The FastFetch hardware and support software is available for integration into legacy systems.
- **Dynamic Zone Picking:** FastFetch uses a clever method of cart passing that keeps your workload perfectly balanced so that no picker ever waits to receive a cart from the prior picker.
- **Web Reporting:** Using the internet, authorized users can view management performance reporting information by warehouse, zone, picker, pick ticket, shorts, etc (and all filtered by date range) in both tabular and graphical representations. Management can drill down on high level information to see the details underlying the information.
- **Multiple Languages:** FastFetch uses prerecorded speech for spoken command to pickers, and based upon the login ID of the picker, selects the picker’s preferred language. If a client wants FastFetch to speak a language the system doesn’t currently support, the client can record the voice of a picker speaking a predefined vocabulary using software provided by FastFetch and include that new vocabulary in the system.