



# Zebra Robotics Automation™

## Fast, Flexible Fulfillment

Optimize picking with Zebra fulfillment AMRs and Zebra Symmetry™ software

Warehouse operations are confronting an unwelcome wave of challenges. A powerful, adaptable fulfillment solution can be the edge you need to stay competitive—reducing cycle times, increasing throughput and multiplying productivity as much as three times. Cloud-based Symmetry software coordinates the activities of pickers and autonomous mobile robots (AMRs) to optimize fulfillment efficiency, productivity and safety while empowering skilled workers to focus their efforts and attention on high-cognitive activities.





## Zebra Symmetry™ Software

### Analytics Dashboards

Symmetry provides three analytics dashboards for users to monitor the status and progress of their fulfillment operations. The Overview Dashboard includes default metrics such as robot status and utilization. The Fulfillment Real-Time Dashboard updates every minute, allowing users to monitor daily performance metrics for activities in progress. And the Fulfillment Reporting Dashboard presents metrics over longer time spans to help identify trends in performance.

#### Analytics dashboard features include:

- Refresh to show the most current data
- Filter dashboard data by date
- Collapse the time range section to show more of the screen
- Download data as PDF or CSV
- Schedule reports to send via email
- View metric details by hovering over information icons

### Wave Management

Symmetry Wave Management dashboard allows users to minimize congestion in storage areas by controlling the timing of automated picking activities. Floor managers can initiate picking waves manually, hold them temporarily or adjust schedules on the fly in response to changing conditions on the floor.

#### Wave Management features include:

- Start robot picking for a wave
- Pause a wave already in progress
- View a list of upcoming waves
- Refresh the list (automatic every 30 seconds)
- View wave details, such as the type and active picking percentage
- Monitor the progress of a wave after picking has started
- Control which waves robots will start picking and when

### WorkFlows

WorkFlows is a powerful yet easy to use visual interface where you can build and schedule complex routines that tell your robots what to do and when to do it.

#### Create Custom Workflows Using Visual Blocks.

- Exception handling allows you to configure how a robot behaves when the current action is interrupted or has failed.
- WorkFlow Triggers allow you to easily integrate IoT and other external devices or systems into your workflows.

### Maps

Map annotations provide information about your facility. Robots use this information to navigate the environment and successfully execute workflows.

- Create keep-out Zones
- Designate Speed Limit Zones and Preferred Paths
- Add charge docks, robot, and cart positions

# Zebra Symmetry™ Performance Metrics

## Real-Time Metrics

- Total units picked
- Total lines picked
- Average unit pick time
- Out of stock events
- UPH leaderboard
- Average UPH for active pickers
- Average robot wait time
- Average tote load and unload times
- Average time per tour
- Unit pick leaderboard
- Total units picked by hour
- Today's robot activity
- Total active pickers

## Reporting Metrics

- Total units picked by day
- Out of stock events
- Tote full events
- Average unload time by day
- Average load time by day
- Average tour time by day

Discover how Zebra Robotics Automation can work for you—  
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