

Version 3.7.2



PickOne

Fast, accurate, scalable software

3D / AI vision guidance software for e-commerce and logistics robots

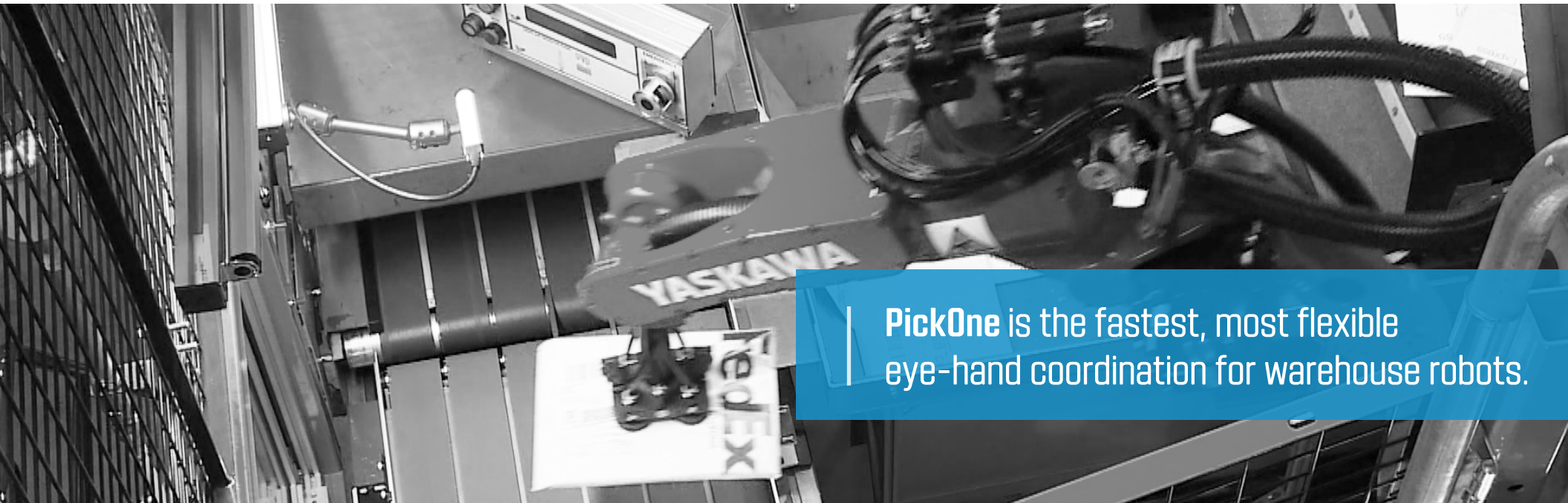


PickOne

Developed by Plus One Robotics alongside industry leaders, **PickOne** is the fastest 3D and AI-powered vision software in the market. **PickOne** delivers precise eye-hand coordination for logistics robots to perform a range of picking and placing tasks in e-commerce fulfillment and distribution centers.

Benefits

- Promote associates from mundane tasks to value-added work
- Reduce turnover by improving job satisfaction
- Reduce per unit handling cost
- Promote social distancing in the warehouse
- Reduce human touches
- Provide integrators superior control to optimize system performance



PickOne is the fastest, most flexible eye-hand coordination for warehouse robots.

PickOne

Software Application Modules



High Speed
Parcel Induction



Case Transfer
and Packing



Mixed
Depalletizing



Segmented
Tote Picking

How it works

Step 01

When items arrive in the picking area, the **PickOne Perception Kit** images the items.

Step 02

Using 2-D, 3-D, and AI algorithms, **PickOne** identifies each pickable item in the scene and assigns it an associated confidence score.

Step 03

Via the **PickOne API**, **PickOne** sends the robot controller an array of pick locations, poses, dimensions, and characteristic data for each pickable item.

If no items have high enough confidence scores, **PickOne** generates a **Yonder** request so that a remote **Crew Chief** can handle the exception in seconds.

When the **Crew Chief** selects the item to be picked, **Yonder** updates **PickOne**, and **PickOne** sends the data to the robot.

Step 04

In parallel, **Yonder** stores the **Crew Chief's** response, allowing the machine-learning algorithms to make the system smarter as it works. This ensures even higher performance over time.

Details

PickOne

Features

- **Item Localization** – Returns the location (X, Y, Z, R, P, Y) of each pickable item.
- **Item Measurement** – Returns the major and minor axis dimensions of each pickable item.
- **Flatness Measurement** - Returns the flatness of each pickable surface.
- **Item Classification** – Classifies items to enable dynamic adjustments to grip strategy, acceleration, deceleration, speed, and path.
- **PickOne Assistant** - Graphical user Interface for easy system setup, calibration, configuration, and error reporting.
- **PickOne API** – Fully documented API sends the robot controller an array of locations and data for each pickable item.
- **Yonder Enabled** – **Yonder** is Plus One Robotics' full-featured, exception handling suite (see **Yonder** brochure for details).
- **Motion Detection** – If items in the pick zone are still in motion, the system ensures a quality pick location by re-triggering the pick request until the items are in a stable pose.
- **Performance Tracking**- PickOne tracks successful picks, unsuccessful picks, and total cycles for visualization in **Yonder**.
- **User Defined Metric Tracking**- Users can define custom metrics to be tracked for visualization in **Yonder**.
- **PackML Tracking** - PackML is an industry standard for measuring OEE (Overall Equipment Effectiveness). **PickOne** tracks PackML states for visualization in **Yonder**.

Specifications

- **Typical Response Time from Pick Request to Response:** 250ms – 480ms
- **Supported Sensors:** Intel RealSense D415, Intel RealSense L515, Zivid One
- **Max Number of Sensors:** 2
- **Communications Methods:** SMS, Fanuc Enhanced Vision Interface
- **Supported Robot Controllers:** Fanuc*, Yaskawa*, ABB, Universal Robot, Kuka, Kawasaki, Denso, Festo, Rockwell Automation (Allen-Bradley)

*See PickOne software module brochures for enhanced capabilities

What's Included

PickOne (P/N 1002-001-0001-01)

- (1) USB license key per robot
- (1) Backup USB license key per robot
- (1) CompuLab Display Emulator
- (1) Splashtop: Linux Client (User Activation Required)



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