DOBOT

Product Specifications

Item	Specifications
Dimensions (L×W×H)	650 × 600 × 640 mm
Weight	50 Kg (robot not included)
Assembly Method	Detachable columns and desktop platform
Mobility	4 integrated omnidirectional wheels with locking mechanism

Configuration List

Product Name	Quantity	Description
* 6-Axis Collaborative Robot	1 pc	CR3A / CR5A
Gripper	1 set	Robot end-effector gripper kit
ES01 Electric Suction Cup	1 set	Robot end-effector electric suction kit
Single-Nozzle Suction Cup	1 set	Pneumatic end-effector for robot
Mobile Base	1 pc	Adjustable robot mounting base
Accessories	1 set	Includes: circular workpiece, rectangular workpiece, hexagonal workpiece, calibration pin, trajectory board, upper/lower tray, vision sorting tray
* Conveyor Belt Kit	1 set	Includes conveyor module / feeding module / encoder
* 2.5D End-Effector Vision VX500	1 set	2.5D vision kit
* 3D Vision System	1 set	3D vision camera kit
Note: Items marked with * are optional accessories and require separate purchase.		

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CRA Entry Level Education Package

The Ideal Cobot Platform for Beginners

CRA Entry Level Education Package

The CRA Entry Level Education Package is a comprehensive robotics learning platform designed for vocational training, university courses, and collaborative research labs. It enables educators and students to efficiently master robotics—from basic programming and robot control to computer vision—through a plug-and-play system. This all-in-one solution supports both teaching and hands-on experimentation, equipping students with essential technological skills.

Key Features

• Quick Application

The platform features a simple design and comes with comprehensive teaching resources, allowing users to get started quickly and efficiently.

• Rich Accessories

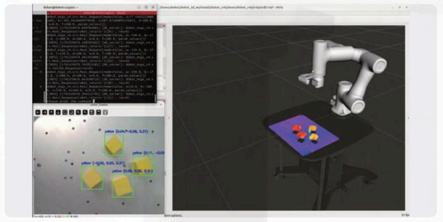
Includes a variety of components such as electric grippers, electric suction cups, single-mouth suction cups, trajectory boards, material boards, sorting boards, and more. Additional accessories like 2.5D end visual systems, 3D vision, teach pendants, and conveyors are available for expansion, enabling a broader range of applications.

• High Flexibility

Equipped with integrated omnidirectional wheels, the platform can be easily moved and securely locked. The detachable columns and desktop platform make it convenient for transport and quick setup.

• Vision Applications

The adapter flange supports the quick replacement and installation of the VX500 2.5D vision and 3D vision systems, catering to different visual system teaching needs, including object recognition and detection, as well as 3D unordered sorting tasks.



• Comprehensive Teaching Content

Covers essential topics such as basic robot programming, robot coordinate systems, visual recognition and applications (2.5D/3D), sensor applications, ROS simulation, and more, offering a complete learning path from beginner to advanced levels.

Application Scenarios

Vocational and Higher Education Schools

Used for teaching and experimentation in robotics technology courses, suitable for entry-level learning, helping students quickly master basic operation and control techniques.

Robot Laboratory Construction

Serves as a foundational solution for laboratory co-construction, providing an efficient and flexible teaching environment.

Educational and Training Institutions

Suitable for robotics programming and control skills training, helping students understand and practice robot applications.

Corporate Training

Provides employees with basic robot operation and programming training, enhancing their technical capabilities.

Research Institutions

Acts as a research platform for robots, supporting academic experiments, technical verification, and application development.

Teaching Content

• Basic Programming and Control Techniques

Learn graphical programming, script programming, and trajectory teaching, mastering fundamental robot control methods and developing programming and path planning skills.

• Robot Coordinate System Applications

Study body coordinate systems, tool coordinate systems, and user coordinate systems, mastering coordinate system setup and conversion for robot motion control.

• Gripper and Suction Cup Control

Learn the operation of grippers and suction cups, study workpiece loading, unloading, grabbing, and transporting applications, and apply sensors for precise control.

• Robot Secondary Development and Control

Learn how to perform secondary development on robots, mastering the skills for writing custom functional modules and expanding robot capabilities, including integration and control of sensors and actuators.

• IO Control and Applications

Understand IO control principles, mastering signal interaction and control between robots and external devices (e.g., sensors, actuators), and apply them to automation system development.

• *Conveyor and Sensor Applications

Learn conveyor motion control and sensor applications, studying how to use sensors in collaboration with robots to perform automatic detection, sorting, and transportation of items.

• *Vision Recognition and Control

2.5D Vision Learning: Understand 2.5D vision principles, learning how to use 2.5D vision for object recognition, unordered sorting, and object localization, improving recognition accuracy.

3D Vision Learning: Master 3D vision system applications, combining depth information for more complex object detection and gripping tasks, ideal for precise operations in 3D environments.

• *ROS Control and Simulation

Learn robot kinematics control and simulation in a ROS environment, mastering testing and optimization of robots in virtual environments.

Note: Features marked with * are optional.