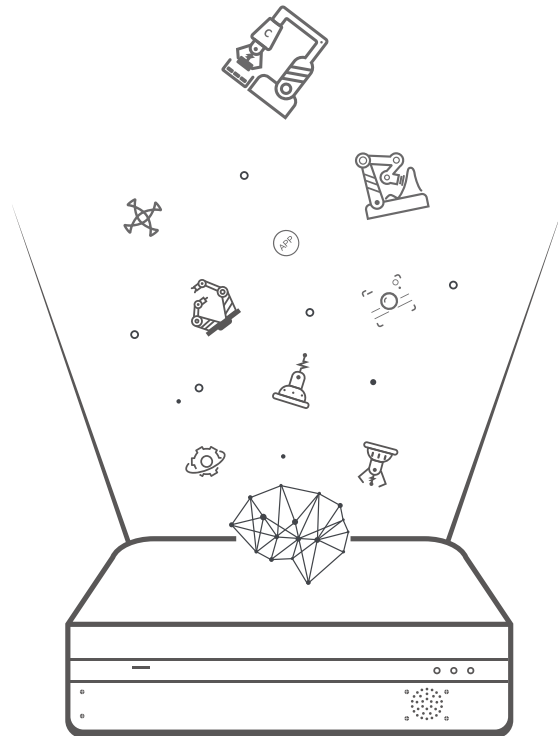


COBOTSYS

The “Brain” for Industrial Robot

The first operating system for industrial robot with intelligence and security.



► Platform Description

Industrial robots are widely adopted for their flexibility and programmability. With the scaling up of applications, more and more robots of different brands and configurations are used leads to the challenge of robotic programming for the specific application, which limits the usage and efficiency of industrial robots.

COBOTSYS is an intelligent operating system for industrial robots independently developed by Cobot Inc. with integrated technologies including robotic vision, force control, grasp planning, robotic learning.

By using the COBOTSYS, users can develop robotic applications with ease, expand the adoption of robots, increase the efficiency and lower the entry barrier.

► Platform Advantage



Independent and Secure

All core algorithms are independently developed using COBOTSAFE (i.e., object enhanced access control, encrypted data security, safety verification for network access) to ensure multi-level security of the whole system.



Cross-Scenario Tasks

Standardized design of robotic tasks enables shared and inherited public sub-modules across different tasks.



Simple Maintenance and Upgrade

Users can freely upgrade COBOTSYS through the cloud or offline toolkit, and enjoy the new features without secondary configuration.



Cross-Platform Robots

Users can easily connect to multiple brands of industrial robots, transferable tasks that ensures fast switch between different robots.

► Platform Infrastructure



► Core Technologies

COBOTLink

The uniform equipment management module for industrial applications can realize the interconnection and intercommunication between COBOTSYS and robots, industrial cameras, force sensors, smart end effectors and other devices.

- **Plug and Play:** COBOTLink automatically imports the device model and provides a user-friendly GUI.
- **Dynamic Management:** Automatic management of multiple devices, avoiding resource conflict.
- **Strong Extensibility:** Compatible with multiple hardware.

COBOTForce

- The professional force control algorithm library for industrial applications can realize functions such as gravity calibration, force level mixed control, contact protection, and process monitoring.
- **Intelligent Force Sensing:**The professional force control algorithm library for industrial applications can realize gravity calibration, force level mixing control, contact protection, process monitoring, and other functions.
- **Intelligent Force Sensing:**The professional force control algorithm library for industrial applications can realize gravity calibration, force level mixing control, contact protection, process monitoring, and other functions.
- **Monitoring and Protection:**Real-time monitoring of force data, dynamic analysis of process scenes, to provide a more reliable equipment working state analysis and abnormal handling mechanism.
- **Rapid Task Interaction:**The task generation of complex scenes can be realized quickly through the visualization of interaction design, the configuration of environment definition and modularization of the task model.

COBOTMotion

COBOTMotion is a general algorithm library for Industrial robots including kinematics, dynamics, and robotic learning is also the motor sense of the robot which optimized robotic motion planning.

- **Automatic Generation of Trajectory:**Robot uses offline planning, online learning, and collision detection to generate trajectory autonomously.
- **High-Speed Stability:**Dynamic algorithm module enables efficient prediction of the reachability and singularity of the robots, leading to the efficient and stable performance of the robots.
- **Real-Time Trajectory Adjustment:**Realtime and smart trajectory adjustment is achieved through realtime multi-modal feedbacks from sensors.

COBOTVision

Industrial grade vision library including vision calibration, image perception, etc.

- **Automatic Calibration:**Visualized calibration process and online self-adjustment. Supports camera calibration, stereo calibration, hand eye calibration, camera registration, etc.
- **High Applicability:**Applicable to structured and unstructured application scenario, including conveyor picking, stacking, unstacking, bin picking.
- **High Robustness:**When Robot conduct recognition and perception can resist overexposure, shadows, uneven lighting, etc.
- **Fast Adaptation:**Independently developed algorithms and machine learning enable fast adaptation to novel objects.

COBOTCloud

A data collection and processing module specifically designed for industrial robots and sensors. The main functionality is to improve product performance and optimize operation through data analysis technologies such as machine learning.

- **Intelligent Data Processing:** Adopt advanced data technology to ensure real-time data uploading and reliability.
- **Deep Data Analysis:** Discover potential values from data through data mining and statistical algorithms.
- **Optimizing Operation Model:** Provide data-driven SaaS services to enterprises.

COBOT+

The app development platform open to end users, including visualized programming interface and SDK for secondary development and customized app.

- **Simple and Easy to Use:** Various workflow template to help users develop apps quickly and easily.
- **Public and Open:** COBOT supports testing, optimization, and deployment for customer' s app which can share interests.

► Some Platform Users

User can make their robot system more intelligent quickly through COBOTSYS, and then meet different demand from real scene.



Robot teaching platform at a university



Mobile grasping platform at a university



Shoe gluing project at a factory



Bin picking at a logistic company



Teaching system for a medical robotic company



Precision bearing sorting at a factory

► COBOX



COBOX is the hardware for COBOTSYS. Users can plug in a variety of automation devices and using core technologies from COBOTSYS to make industrial robots complete complex tasks with intelligence, efficiency and stability, lowering the entry barrier of the industrial robots.



► Parameter Configuration

Product configuration	COBOX-G500
CPU	Intel CORE I5
Memory	DDR4 8GB
Discrete graphics	GTX1050Ti
Independent network card	4 gigabit network CARDS PCI-E X1
Operating system	COBOTSYS

◻ Contact Us ◻



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