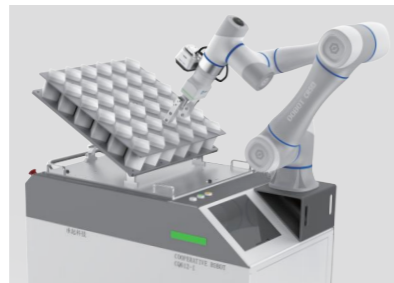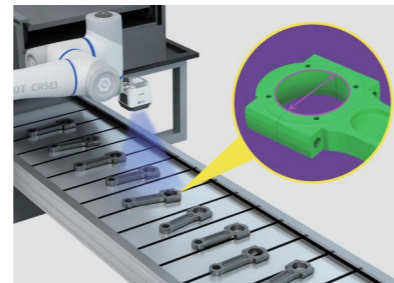## Wide Application

In application scenarios where AGV-robots need precise positioning (such as handling and loading/unloading), the VX500 smart camera enables faster, more accurate, and more flexible gripping and aligning.
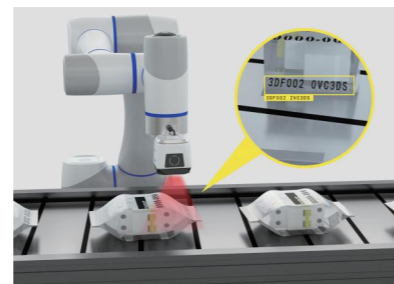

Semiconductor die bonder loading/unloading

CNC machine loading/unloading

Part diameter measurement

Logistics barcode recognition

Packaging character recognition

Specifications

Sensor Type	CMOS, global shutter
Pixel Size	3.2 μm × 3.2 μm
Sensor Size	1/1.7"
Resolution	5-megapixel
Pixel Format	Mono 8
Color	Black-and-white
Lens Connector	M12 - mount
Focal Length	12.4 mm
Light Source	14 white LEDs
Weight	500 g

* Note: Product specifications and technical data are subject to change without notice.

DOBOT

VX500 Smart Camera
Precise, Efficient & Plug-and-Play

VX500 Smart Camera

The VX500 Smart Camera features 5-megapixel camera, LED light source, and Dobot self-developed 2.5D algorithms. With integrated imaging and communication, it can accurately identify height and slope changes of the application scenario, with a spatial compensation accuracy up to ±0.26 mm. Moreover, a comprehensive error-proofing detection algorithm makes it ideal for various visual applications, such as visual positioning, measurement, detection, and recognition. With adaptation to Dobot collaborative robots, support for plug-and-play, and free of selection and assembly, external wiring, or software and hardware debugging, it helps users easily build various visual solutions.

Camera aviation connector

Network interface

Aviation connector

Display indicator

Camera button and indicator

Lens and light source

Powerful and Versatile

2.5D Positioning

The Dobot self-developed high-performance 2.5D algorithm allows for rapid positioning with an accuracy of ±0.26 mm, addressing the problem of inaccurate positioning caused by spatial height change (such as unevenness, slope, etc.) in AGV-robots' handling, loading/unloading, and other tasks.

2D Positioning

Quick match and location of workpieces are available to minimize the influence of workpiece translation, rotation, scaling, and environmental lighting changes, enabling real-time feedback of the workpiece position.
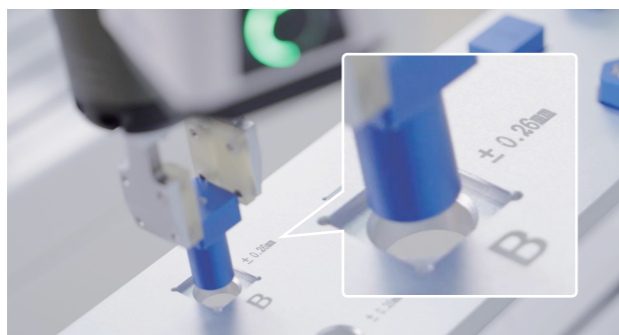
OCR

(Optical Character Recognition)

Deep learning-based OCR algorithms are equipped for accurate recognition of different characters.
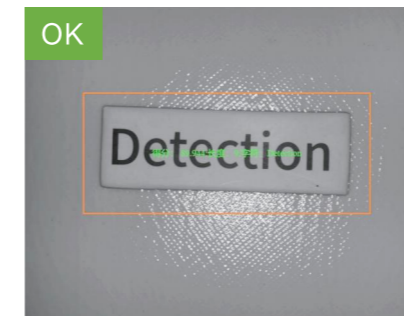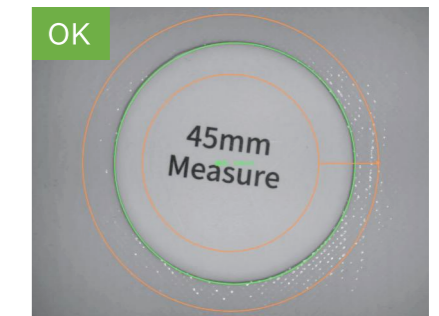
Code Recognition

Multiple barcodes can be identified even in complex scenes, such as complex backgrounds, low contrast, deformation, etc.

Measurement

The measurement of diameter, width, gray area, and other parameters is supported.

Quick & Easy Deployment

Plug-and-Play

The VX500 Smart Camera is well adapted to Dobot collaborative robots and DobotStudio Pro software, enabling interconnection between the robots and the camera without other communication modules or third-party software required.

Time- & Labor-Saving

Automatic calibration and other functions significantly simplify operations and enable quick debugging and deployment even for new users by following the guidance on the intuitive interface.
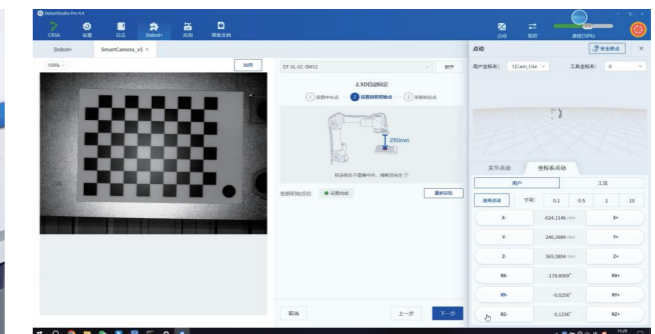
No Coding Required

Easy-to-use graphical programming provides users with freedom to combine multiple functions, thus achieving the dual control of the collaborative robot and the vision system.