JAKA®

Just Always Keep Amazing

Global Leader in Flexible Intelligent Robotics

JAKA®

www.jakarobotics.com
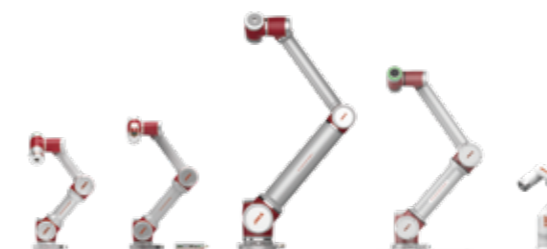
PRODUCT SELECTION GUIDE

JAKA Robotics Co., Ltd.

- JAKA China: Building 33-35, No. 610 Jianchuan Rd, Minhang District, Shanghai, China
- JAKA Germany: Siemensstr. 2-4, 90766 Fürth, Germany
- JAKA Japan: F Serebureito Aoi,1-6-14 Aoi, Higashi-ku,Nagoya-shi,Aichi-ken,Japan
- JAKA Malaysia: 5-G, Jalan Borealis 3, Bandar Cassia, 14110 Simpang Ampat, Penang，Malaysia
- marketing@jakarobotics.com

400-006-2665
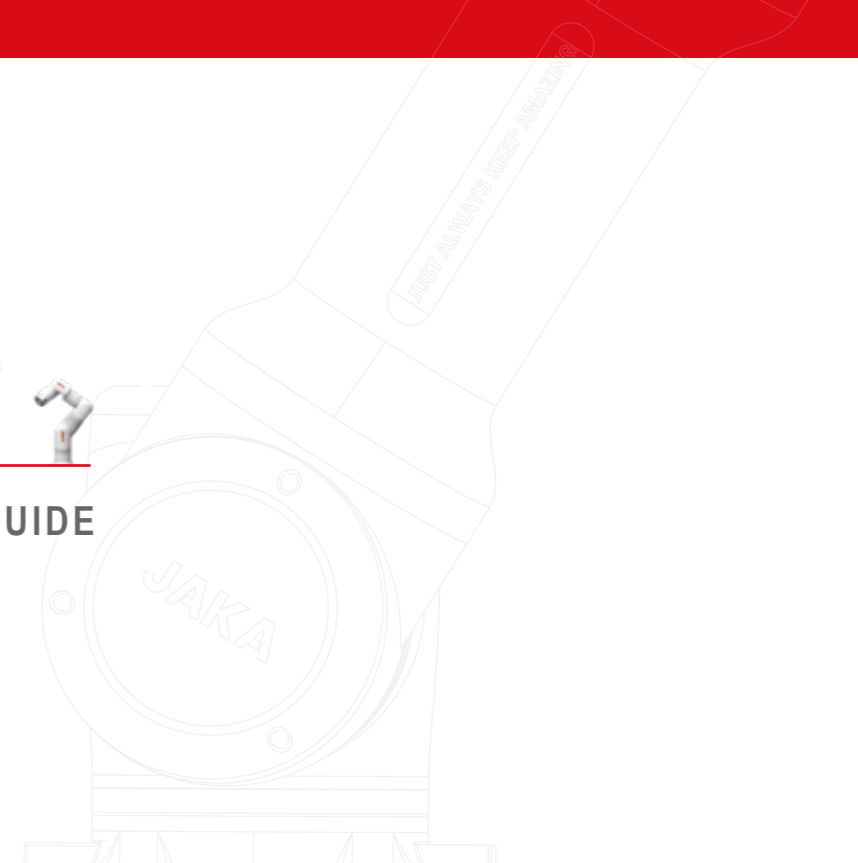
No Teaching Pendant

Programming JAKA collaborative robots is made easy with our JAKA APP, available for Android and Windows devices. Traditional teaching pendants are no longer necessary.

Graphic Programming

Our intuitive graphic programming software interface is designed for anyone to use, regardless of prior programming experience. Setting positions and tasks is a breeze with our user-friendly interface.

Wireless Connection

Say goodbye to messy wires! JAKA cobots can now communicate and receive task assignments via their own WiFi connection, leaving you with a clean and safe workspace.

Drag Teaching

With our drag teaching function, users can deploy a cobot in just a few minutes. Simply move the cobot to any desired position, and it will instantly memorize it.

Safe Human-robot Collaboration

JAKA cobots are designed to work safely alongside humans, without the need for a safety fence, thanks to their collision detection module. Even the slightest bump can be detected, allowing the cobot to react and avoid causing harm.

Plug-and-play

Install a JAKA cobot in just a few minutes, and mount it in any position or inclination. Our cobots are lightweight and are compatible with a wide range of grippers and end effectors. This makes them highly versatile and able to be deployed and re-deployed in any production environment.

JAKA

JAKA Zu Collaborative Robots
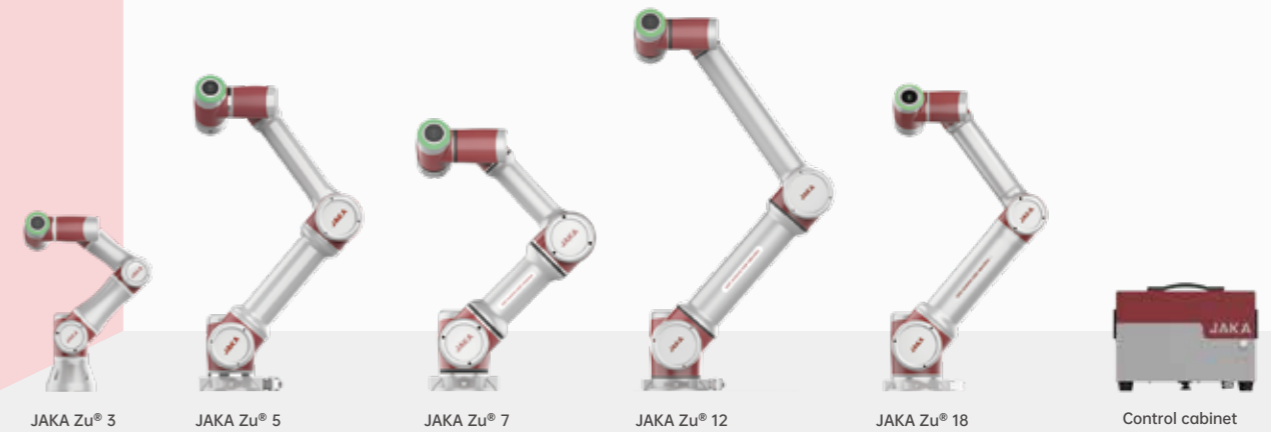
Easy to Install
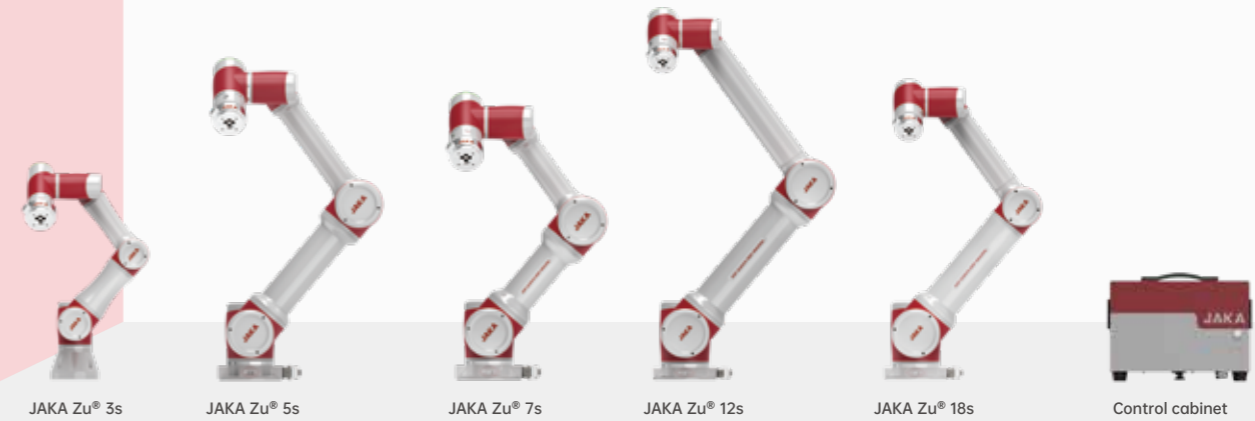Plug-and-play
Simple deployment
Small footprint

Easy to Use
In-built torque feedback module
Drag teaching
Graphic programming

Precise
Excellent repeatability
Great precision
MTBF 50,000 hours

JAKA Zu® 3   JAKA Zu® 5   JAKA Zu® 7   JAKA Zu® 12   JAKA Zu® 18   Control cabinet

	Parameter	JAKA Zu® 3		JAKA Zu® 5		JAKA Zu® 7		JAKA Zu® 12		JAKA Zu® 18	
Product features	Maximum payload	3kg		5kg		7kg		12kg		18kg	
	Weight	12kg		23kg		22kg		41kg		35kg	
	Working radius	626mm		954mm		819mm		1327mm		1073mm	
	Repeatability	±0.02mm		±0.02mm		±0.02mm		±0.03mm		±0.03mm	
	Number of axis	6		6		6		6		6	
	Programming	Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming	
	Teaching pendant	PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)	
Working range and speed	Robot joint	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed
	Joint 1	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	120°/s	±360°	120°/s
	Joint 2	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	120°/s	-85°,+265°	120°/s
	Joint 3	±175°	180°/s	±175°	180°/s	±175°	180°/s	±175°	120°/s	±175°	180°/s
	Joint 4	-85°,+265°	220°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s
	Joint 5	±360°	220°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s
	Joint 6	±360°	220°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s
	Maximum speed of the tool end	/	1.5m/s	/	3m/s	/	2.5m/s	/	3m/s	/	3.5m/s
Specifications	Power consumption	150W		350W		350W		500W		500W	
	IP protection	IP54		IP54		IP54		IP54		IP54	
	Tool I/O ports	2 Digital inputs		2 Digital inputs		2 Digital inputs		2 Digital inputs		2 Digital inputs	
		2 Digital outputs		2 Digital outputs		2 Digital outputs		2 Digital outputs		2 Digital outputs	
		1 Analog input		1 Analog input		1 Analog input		1 Analog input		1 Analog input	
	Base diameter	129mm		158mm		158mm		188mm		188mm	
Control cabinet	IP protection	IP44		IP44		IP44		IP44		IP44	
	I/O ports	16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs	
	Communication	TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP	
	Power	100-240VAC, 50-60Hz		100-240VAC, 50-60Hz		100-240VAC, 50-60Hz		100-240VAC, 50-60Hz		100-240VAC, 50-60Hz	
	Size	410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)	
	Weight	13.5kg		15.4kg		15.4kg		18kg		18kg	

JAKA Zu S Collaborative Robots

Interactive
Integrated force sensor
Integrated force control

Delicate
Simple force control configuration
Real-time force value display

Simple
Various force control modes
Option to install force sensor

Safe
Full-arm collision detection
Self-learning monitoring

JAKA Zu® 3s   JAKA Zu® 5s   JAKA Zu® 7s   JAKA Zu® 12s   JAKA Zu® 18s   Control cabinet

	Parameters	JAKA Zu® 3s		JAKA Zu® 5s		JAKA Zu® 7s		JAKA Zu® 12s		JAKA Zu® 18s	
Product features	Maximum payload	3kg		5kg		7kg		12kg		18kg	
	Weight	12kg		23kg		22kg		41kg		35kg	
	Working radius	626mm		954mm		819mm		1327mm		1073mm	
	Repeatability	±0.02mm		±0.02mm		±0.02mm		±0.03mm		±0.03mm	
	Number of axis	6		6		6		6		6	
	Programming	Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming	
	Teaching pendant	PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)	
Working range and speed	Robot joint	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed
	Joint 1	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	120°/s	±360°	120°/s
	Joint 2	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	120°/s	-85°,+265°	120°/s
	Joint 3	±175°	180°/s	±175°	180°/s	±175°	180°/s	±175°	120°/s	±175°	180°/s
	Joint 4	-85°,+265°	220°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s
	Joint 5	±360°	220°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s
	Joint 6	±360°	220°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s
	Maximum speed of the tool end	/	1.5m/s	/	3m/s	/	2.5m/s	/	3m/s	/	3.5m/s
Specifications	Power consumption	150W		350W		350W		500W		500W	
	IP protection	IP54		IP54		IP54		IP54		IP54	
	Tool I/O ports	2 digital input, 2 digital output, 1 analog output		2 digital input, 2 digital output, 1 analog output		2 digital input, 2 digital output, 1 analog output		2 digital input, 2 digital output, 1 analog output		2 digital input, 2 digital output, 1 analog output	
	Base diameter	129mm		158mm		158mm		188mm		188mm	
Force sensor parameters	End tool — Range (Fx/Fy)	100N/250N	200N/400N	100N/250N	200N/400N	100N/250N	200N/400N	250N	400N	250N	400N
	End tool — Interface type	Ethernet interface	Serial port	Ethernet interface	Serial port	Ethernet interface	Serial port	Ethernet interface	Serial port	Ethernet interface	Serial port
	End tool — IP protection	IP64		IP64		IP64		IP64		IP64	
	Base — Range (Fx/Fy)	500N		1600N		1600N		4000N		4000N	
	Base — Interface type	Ethernet interface		Ethernet interface		Ethernet interface		Ethernet interface		Ethernet interface	
	Base — Voltage	24V		24V		24V		24V		24V	
	Base — IP protection	IP64		IP64		IP64		IP64		IP64	
Control cabinet	IP protection	IP44		IP44		IP44		IP44		IP44	
	I/O ports	16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs	
	Communication	TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP	
	Power	100-240VAC, 50-60Hz		100-240VAC, 50-60Hz		100-240VAC, 50-60Hz		100-240VAC, 50-60Hz		100-240VAC, 50-60Hz	
	Size	410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)	
	Weight	13.5kg		15.4kg		15.4kg		18kg		18kg	

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JAKA All-in-one Collaborative Robots

Attentive
Equipped with vision system for environment perception

Integrated
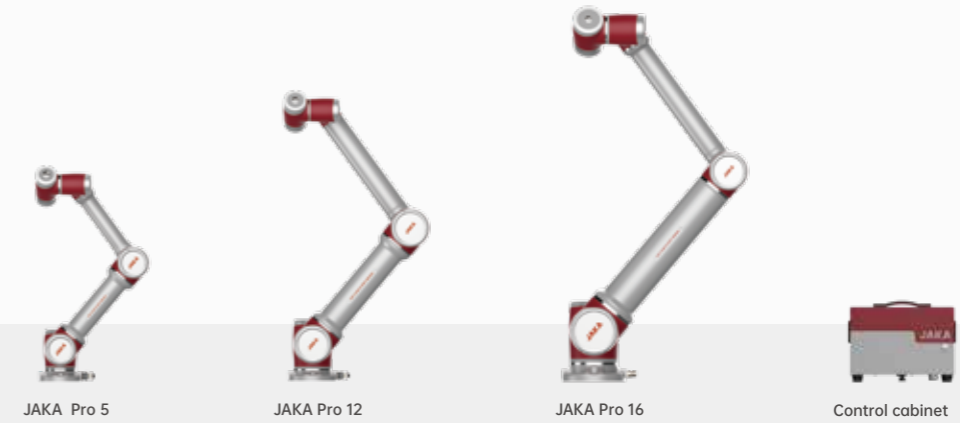Vision control and configuration interfaces are all software by JAKA

Compact
Includes the smallest control cabinet in the market

JAKA Ai 3   JAKA Ai 5   JAKA Ai 7   JAKA Ai 12   JAKA Ai 18

	Parameters	JAKA Ai 3		JAKA Ai 5		JAKA Ai 7		JAKA Ai 12		JAKA Ai 18	
Product features	Maximum payload	3kg		5kg		7kg		12kg		18kg	
	Weight	12kg		23kg		22kg		41kg		35kg	
	Working radius	626mm		954mm		819mm		1327mm		1073mm	
	Repeatability	±0.02mm		±0.02mm		±0.02mm		±0.03mm		±0.03mm	
	Number of axis	6		6		6		6		6	
	Programming	Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming	
	Teaching pendant	PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)		PC, mobile (PAD/mobile)	
Working range and speed	Robot joint	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed
	Joint 1	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	120°/s	±360°	120°/s
	Joint 2	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	120°/s	-85°,+265°	120°/s
	Joint 3	±175°	180°/s	±175°	180°/s	±175°	180°/s	±175°	120°/s	±175°	180°/s
	Joint 4	-85°,+265°	220°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s
	Joint 5	±360°	220°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s
	Joint 6	±360°	220°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s	±360°	180°/s
	Maximum speed of the tool end	/	1.5m/s	/	3m/s	/	2.5m/s	/	3m/s	/	3.5m/s
Specifications	Power consumption	150W		350W		350W		500W		500W	
	IP protection	IP54		IP54		IP54		IP54		IP54	
	Tool I/O ports	2 digital input, 2 digital output, 1 analog output		2 digital input, 2 digital output, 1 analog output		2 digital input, 2 digital output, 1 analog output		2 digital input, 2 digital output, 1 analog output		2 digital input, 2 digital output, 1 analog output	
	Base diameter	129mm		158mm		158mm		188mm		188mm	
JAKA Lens 2D parameters	Lens focal length	8mm	16mm	8mm	16mm	8mm	16mm	8mm	16mm	8mm	16mm
	Color mode	B&W/Color		B&W/Color		B&W/Color		B&W/Color		B&W/Color	
	Vision	>70mm*50mm	>35mm*25mm	>70mm*50mm	>35mm*25mm	>70mm*50mm	>35mm*25mm	>70mm*50mm	>35mm*25mm	>70mm*50mm	>35mm*25mm
	Precision	>0.08mm	>0.04mm	>0.08mm	>0.04mm	>0.08mm	>0.04mm	>0.08mm	>0.04mm	>0.08mm	>0.04mm
	Communications interface	Ethernet interface (TCP/IP protocol)		Ethernet interface (TCP/IP protocol)		Ethernet interface (TCP/IP protocol)		Ethernet interface (TCP/IP protocol)		Ethernet interface (TCP/IP protocol)	
	Resolution	2592×1944		2592×1944		2592×1944		2592×1944		2592×1944	
	Frame rate	24FPS		24FPS		24FPS		24FPS		24FPS	
MiniCab cabinet	Input power	DC30-60V						DC30-60V			
	Input current	≤40A						≤40A			
	Size	180×28×47 mm (L×W×H)						180×28×47 mm (L×W×H)			
	IP protection	IP20						IP20			
	I/O ports	7-way port; Input and output configurable						7-way port; Input and output configurable			
	Communication	TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP						TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP			
	Weight	About 1.7 kg (including accessories)						About 1.7 kg (including accessories)			

JAKA Pro Collaborative Robots

Resistant
IP68 degree of protection against dust, and water. The highest in the market

Reliable
Repeatability of ±0.02 mm Work without supervision 24/7

Versatile
Is able to perform in the most challenging environments

JAKA Pro 5   JAKA Pro 12   JAKA Pro 16   Control cabinet

	Parameters	JAKA Pro 5		JAKA Pro 12		JAKA Pro 16	
Product features	Maximum payload	5kg		12kg		16kg	
	Weight	23.5kg		41kg		74kg	
	Working radius	954mm		1327mm		1713mm	
	Repeatability	±0.02mm		±0.02mm		±0.03mm	
	Number of axis	6		6		6	
	Programming	Drag teaching and graphic programming		Drag teaching and graphic programming		Drag teaching and graphic programming	
	Teaching pendant	PC,Mobile device (PAD/mobile)		PC,Mobile device (PAD/mobile)		PC,Mobile device (PAD/mobile)	
Working range and speed	Robot joint	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed
	Joint 1	±360°	180°/s	±360°	120°/s	±360°	120°/s
	Joint 2	-85°,+265°	180°/s	-85°,+265°	120°/s	-85°,+265°	120°/s
	Joint 3	±175°	180°/s	±175°	120°/s	±175°	120°/s
	Joint 4	-85°,+265°	180°/s	-85°,+265°	180°/s	-85°,+265°	180°/s
	Joint 5	±360°	180°/s	±360°	180°/s	±360°	180°/s
	Joint 6	±360°	180°/s	±360°	180°/s	±360°	180°/s
	Maximum speed of the tool end	/	3m/s	/	3m/s	/	3.9m/s
Specifications	Power consumption	350W		500W		750W	
	IP protection	**IP68**		**IP68**		**IP68**	
	Tool I/O ports	2 Digital inputs		2 Digital inputs		2 Digital inputs	
		2 Digital outputs		2 Digital outputs		2 Digital outputs	
		1 Analog input		1 Analog input		1 Analog input	
	Base diameter	158mm		188mm		246mm	
Control cabinet	IP protection	IP44		IP44		IP44	
	I/O ports	16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs	
	Communication	TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP	
	Power	100-240VAC, 50-60Hz		100-240VAC, 50-60Hz		100-240VAC, 50-60Hz	
	Size	410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)		410×307×235 mm (W×H×D)	
	Weight	15.4kg		18kg		18kg	

JAKA Lens 2D

JAKA Lens 2D

Product description ⬊

The JAKA Lens 2D camera is equipped with a high-resolution industrial camera, a light source module, and an optional camera lens to provide our collaborative robots with machine vision capabilities. Despite its small and delicate appearance, this camera is highly effective. It can be installed either in a fixed position or at the end of the cobot.

Convenient
Compatible with any JAKA cobot

Customizable
Optional camera lens Various functions are available

Practical
The camera uses JAKA software, no need for additional licenses

Product Features ⬊

Integrated design

The 2D camera consists of three key components: a camera, a lens, and a light source. It is able to communicate with a JAKA robot control cabinet through the web, making it an easy-to-use and highly effective addition to our cobots.

Easy operation

Our control cabinet is embedded with intelligent vision algorithms. Additionally, it features flexible communication interfaces that are able to adapt to the robot body, ensuring that it is a highly versatile and adaptable tool.

Scenario-adaptable

Our 2D camera also supports third-party camera extensions and custom external light sources, making it highly versatile and adaptable to a wide range of application scenarios.

Technical aspects ⬊

| Parameters	Lens 2D CGC500-F08	Lens 2D CGC500-F16
Resolution	2592×1944	2592×1944
Max frame rate	24fps	24fps
Data interface	Gige	Gige
Color mode	Black and white / color	Black and white / color
Lens focal length	8mm	16mm
Object distance	>100mm	>100mm
Vision	>70×50mm	>35×25mm
Precision	>0.08mm	>0.04mm
Image processing	Soft-trigger image acquisition, single frame processing time within 1s	Soft-trigger image acquisition, single frame processing time within 1s

JAKA Lens VPS

Product description ⬊

JAKA Lens VPS 2.0 is a cutting-edge technology that utilizes a high-performance AI-SoC chip, along with high-speed and large-capacity memory and storage. It is equipped with a high-performance acceleration engine, which can perform target detection, object recognition, human pose point extraction, and behavior understanding. The VPS is designed to be installed at the top of the cobot's working area, allowing the camera to monitor the behavior of inspected objects (both people and objects) in real time, ensuring the safety of both people and equipment. The camera also features a Gigabit Ethernet port, which supports data extraction and video visualization.

High reliability
Isolate external factors The protection effect is stable and reliable

High performance
High speed combined with high storage capacity

Convenient
No complicated software installation required Simple to install

Product Features ⬊

Built-in neural network accelerator for AI recognition and analysis of video

Event recording function, which can record key video segments, eliminate redundant information, trace back, and analyze more conveniently

Plug and play, no need to install software, access settings via browser

It can perform AI detection functions such as helmet wearing, personnel target tracking, personnel labor intensity, and video scoring calculation
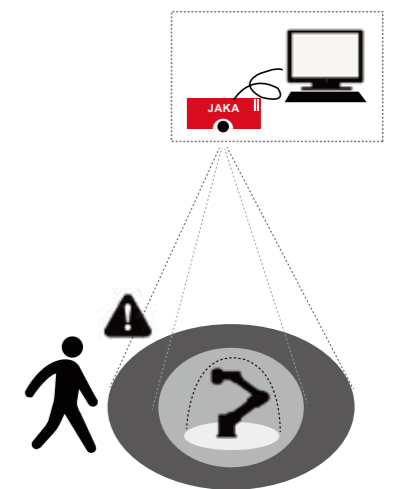
Visual protection system working diagram

Basic parameters ⬊

Hardware platform	CMOS camera, embedded system, DSP, AI engine, etc.
Dimensions	101.7×72×51.1mm
Installation method	Directly above, sideways (any angle)
Communication interface	Ethernet interface, RS485, PNP optocoupler isolation DI and DO

Visual parameters ⬊

Resolution	8.3 MP
Response time	200 ms
Installation height	2.5 mm (suggested)
Coverage surface	5 m x 2.6 m (adjustable)

JAKA MiniCobo

Product introduction

The JAKA MiniCobo is a small, rounded robot that is perfect for applications where appearance is important. Thanks to its built-in communication port, it doesn't require any external cables and can be easily connected to any tool that is compatible with JAKA. Additionally, JAKA's MiniCobo incorporates intelligent control algorithms, giving it a superior performance compared to its competitors. The MiniCobo operates quietly, making it an ideal solution for a range of industries including hospitality, education, retail, services, and entertainment, among others.

Ideal for B2C   Cost-effective   Lightweight

Weight | Payload | Working radius | Repeatability
9.4kg | 1.0kg | 580mm | ±0.1mm

Application cases

Parameter	MiniCobo
Payload	1kg
Weight (with cable)	9.4kg
Work radius	580mm
Repeatability	±0.1mm
Axis	6 axes
Programming	Graphical programming, free-drive
Teach pendant	MT (Pad/Mobile) App
Collaborative operation	Accordance with GB 11291.1-2011

Product features

Robot joint	Working range	Maximum speed
Joint1	±360°	180°/s
Joint2	±120°	180°/s
Joint3	±130°	180°/s
Joint4	±360°	180°/s
Joint5	±120°	180°/s
Joint6	±360°	180°/s
Maximum speed of the tool end	/	1.5m/s

Working range and speed

Specifications	
Rated power	150W
Temperature range	0-50℃
IP Protection	IP40
Installation	At any angle
Tool I/O	2 Digital inputs
	2 Digital outputs
	1 Analog input
Tool I/O power	24VDC
Tool I/O size	M8
Materials	Aluminum, PC
Base diameter	124mm
Cable length	6m

MiniCab cabinet	
Power input	20-60VDC
Current	0-11.67A
Size	180×128×47 mm (L×W×H)
IP Protection	IP20
I/O	7 Digital input: I/O configurable
I/O Power	24VDC
Installation	Panel/Guide Rail
Communication	TCP/IP, Modbus TCP, Modbus RTU，Profinet，Ethernet/IP
Weight	1.1kg
Material	Alumminum, Steel