

PRODUCT SELECTION GUIDE

Global Leader in Flexible Intelligent Robotics

JAKA

www.jakarobotics.com | 🔍

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Product Matrix





Ease of Use



Safe



Reliability



Compatibility

Flexible and Smart

Fulfills the requirements of all types of industrial solutions



JAKA Lens 2D



JAKA Lens VPS



JAKA Zu Series



JAKA MAX



JAKA S Series



JAKA All-in-one Series



JAKA Pro Series



JAKA Mini Series

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.

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.

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.

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.

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.

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 Zu Series Cobots




### Easy to Install

Plug-and-play  
Simple deployment  
Small footprint



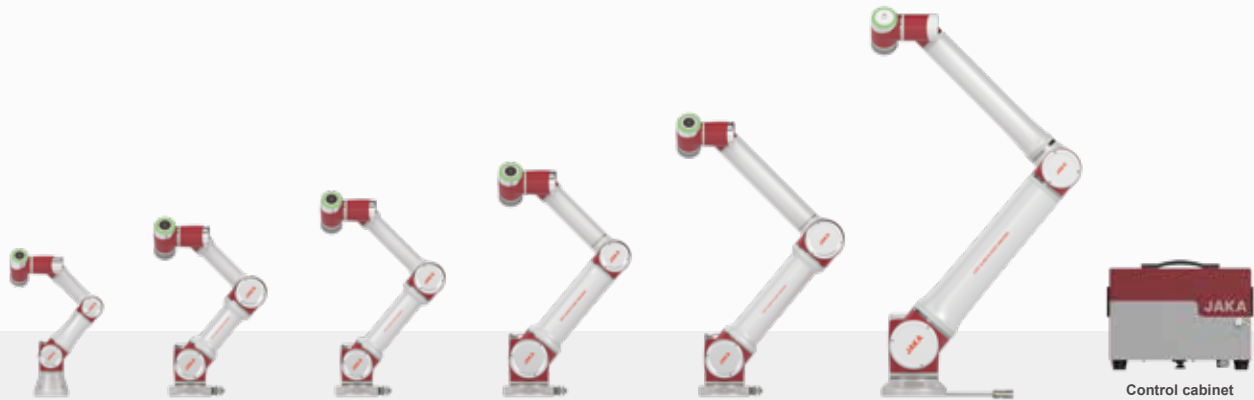
### Easy to Use

In-built torque feedback module  
Drag teaching  
Graphic programming



### Precise

Excellent repeatability  
Great precision  
MTBF 80,000 hours



Basic Parameter	Parameter	JAKA Zu 3		JAKA Zu 5		JAKA Zu 7		JAKA Zu 12		JAKA Zu 18		JAKA Zu 20	
	Payload	3 kg (6.6 lb)		5 kg (11 lb)		7 kg (15.4 lb)		12 kg (26.4 lb)		18 kg (39.6 lb)		20 kg (44.1 lb)	
	Weight (including cables)	12 kg (26.46 lb)		23 kg (50.71 lb)		22 kg (48.50 lb)		41 kg (90.39 lb)		35 kg (77.16 lb)		68 kg (149.9 lb)	
	Reach	626 mm (24.64 in)		954 mm (37.5 in)		819 mm (32.2 in)		1327 mm (52.2 in)		1073 mm (42.24 in)		1780 mm (70.1 in)	
	Repeatability	±0.02 mm (±0.00079 in)		±0.02 mm (±0.00079 in)		±0.02 mm (±0.00079 in)		±0.03 mm (±0.00118 in)		±0.03 mm (±0.00118 in)		±0.05 mm (±0.00120 in)	
	Degree of freedom	6		6		6		6		6		6	
	Programming	Graphical programming, and freedrive programming		Graphical programming, and freedrive programming		Graphical programming, and freedrive programming		Graphical programming, and freedrive programming		Graphical programming, and freedrive programming		Graphical programming, and freedrive programming	
	Demonstrator type	Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)	
Movement	Joint	Range of action		Joint speed		Range of action		Joint speed		Range of action		Joint speed	
	Joint 1	±360°		180°/s		±360°		180°/s		±360°		120°/s	
	Joint 2	-85°~+265°		180°/s		-85°~+265°		180°/s		-85°~+265°		120°/s	
	Joint 3	±175°		180°/s		±175°		180°/s		±175°		180°/s	
	Joint 4	-85°~+265°		220°/s		-85°~+265°		180°/s		-85°~+265°		180°/s	
	Joint 5	±360°		220°/s		±360°		180°/s		±360°		180°/s	
	Joint 6	±360°		220°/s		±360°		180°/s		±360°		180°/s	
	Typical TCP speed	/		1 m/s (3.281ft/s)		/		1 m/s (3.281ft/s)		/		1 m/s (3.281ft/s)	
Specifications	Typical consumption	150W		350W		350W		500W		500W		750W	
	IP classification	IP54		IP54		IP54		IP54		IP54		IP65	
	Tool I/O ports	2 digital inputs		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		2 digital outputs	
		2 analog inputs		2 analog inputs		2 analog inputs		2 analog inputs		2 analog inputs		2 analog inputs	
	Footprint	129 mm (5.079 in)		158 mm (6.220 in)		158 mm (6.220 in)		188 mm (7.402 in)		188 mm (7.402 in)		246 mm (9.685 in)	
Control cabinet	IP classification	IP44		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		16 digital inputs, 16 digital outputs, 2 analog inputs or outputs	
	Communication mode	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		TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP	
	Power supply	100-240VAC, 50-60Hz		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)		410×307×235 (mm) (W×H×D)	
	Weight	13.5 kg (29.762 lb)		15.4 kg (33.95 lb)		15.4 kg (33.95 lb)		18 kg (39.68 lb)		18 kg (39.68 lb)		18 kg (39.68 lb)	



# JAKA S Series Cobots

**Safety Protection**  
IP65 rating

**Tool-Drive**  
Integrated force control

**Quick Application**  
JKS Hub quick app platform



Stay tuned for more new products

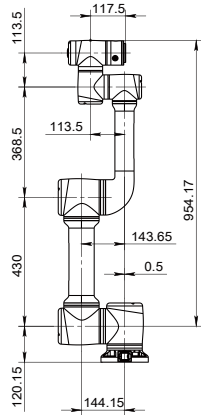


Basic Parameter	Parameter	JAKA S 5		JAKA S 12	
	Payload	5 kg (11 lb)		12 kg (26.5 lb)	
	Reach	954 mm (37.6 in)		1327 mm (52.4 in)	
	Degrees of freedom	6		6	
	Typical consumption	350w		500w	
	Temperature	-10~50°C(14~122°F)			
Performance	Force/torque sensor	Force, x-y-z	Torque, x-y-z	Force, x-y-z	Torque, x-y-z
	Range	200N	24Nm	400N	48Nm
	Max affordable force	3000N	300Nm	3000N	300Nm
	Overall accuracy	1% F.S.	1% F.S.	1% F.S.	1% F.S.
	Distinguishability	0.1N	0.1Nm	0.1N	0.1Nm
Movement	Typical TCP speed	1 m/s (3.281ft/s)	/	1 m/s (3.281ft/s)	/
	Repeatability	±0.02 mm (±0.00079 in)	/	±0.03 mm (±0.00118 in)	/
	Joint	Range of action	Joint speed	Range of action	Joint speed
	Joint 1	±360°	180°/s	±360°	120°/s
	Joint 2	-85°~ +265°	180°/s	-85°~ +265°	120°/s
	Joint 3	±175°	180°/s	±175°	120°/s
	Joint 4	-85°~+265°	180°/s	-85°~+265°	180°/s
	Joint 5	±360°	180°/s	±360°	180°/s
	Joint 6	±360°	180°/s	±360°	180°/s
Physical	IP classification	IP 65		IP 65	
	Robot mounting	Any orientation		Any orientation	
	Footprint	158 mm (6.220 in)		188 mm (7.402 in)	
	Materials	Aluminium, PC		Aluminium, PC	
	Robot connection cable length	6 m (236 in)		6 m (236 in)	
	Weight	23 kg (50.7lb)		41 kg (90.4lb)	
	Humidity	10~90% RH			

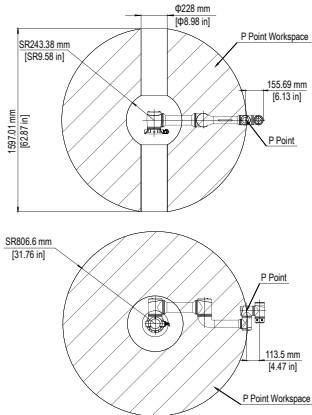
i: Overall accuracy: It represents the median typical value of the system error, including the measurement error of the sensor and the absolute positioning error of the robot, reflecting the overall accuracy of the robot system in measuring external forces applied to the robot's end under real operating conditions.

ii:1% F.S.: 1% of the full scale.

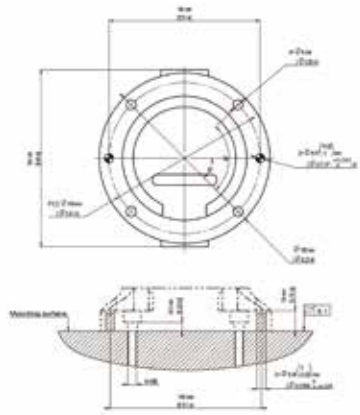
## JAKA S 5 Drawings



JAKA S 5 Dimension

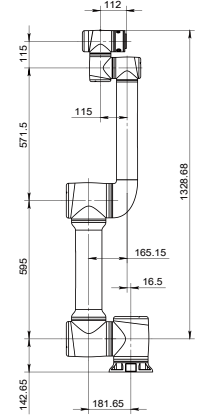


JAKA S 5 Workspace: elevation view (top) and top view (bottom)

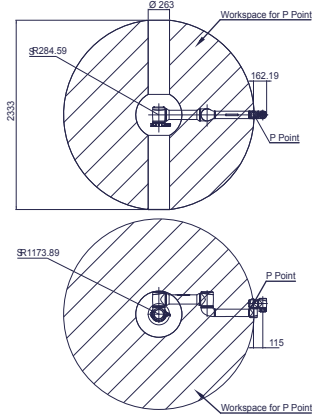


JAKA S 5 Base

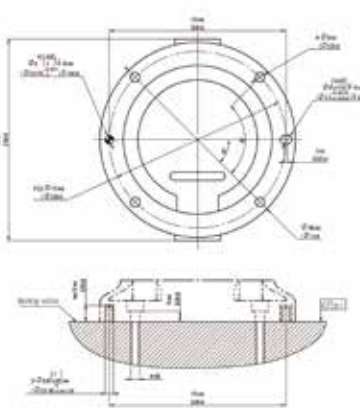
## JAKA S 12 Drawings



JAKA S 12 Dimension



JAKA S 12 Workspace: elevation view (top) and top view (bottom)



JAKA S 12 Base

# JAKA All-in-one Series Cobots

**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



Basic Parameter	Parameters	JAKA Ai 3		JAKA Ai 5		JAKA Ai 7		JAKA Ai 12		JAKA Ai 18			
	Payload	3 kg (6.6 lb)		5 kg (11 lb)		7 kg (15.4 lb)		12 kg (26.4 lb)		18 kg (39.6 lb)			
	Weight (including cables)	12 kg (26.46 lb)		23 kg (50.71 lb)		22 kg (48.50 lb)		41 kg (90.39 lb)		35 kg (77.16 lb)			
	Reach	626 mm (24.64 in)		954 mm (37.5 in)		819 mm (32.2 in)		1327 mm (52.2 in)		1073 mm (42.24 in)			
	Repeatability	±0.02 mm (±0.00079 in)		±0.02 mm (±0.00079 in)		±0.02 mm (±0.00079 in)		±0.03 mm (±0.00118 in)		±0.03 mm (±0.00118 in)			
	Degree of freedom	6		6		6		6		6			
	Programming	Graphical programming, and freedrive programming		Graphical programming, and freedrive programming		Graphical programming, and freedrive programming		Graphical programming, and freedrive programming		Graphical programming, and freedrive programming			
	Demonstrator type	Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)			
Movement	Joint	Range of action		Joint speed		Range of action		Joint speed		Range of action		Joint speed	
	Joint 1	±360°		180°/s		±360°		180°/s		±360°		120°/s	
	Joint 2	-85°, +265°		180°/s		-85°, +265°		180°/s		-85°, +265°		120°/s	
	Joint 3	±175°		180°/s		±175°		180°/s		±175°		120°/s	
	Joint 4	-85°, +265°		220°/s		-85°, +265°		180°/s		-85°, +265°		180°/s	
	Joint 5	±360°		220°/s		±360°		180°/s		±360°		180°/s	
	Joint 6	±360°		220°/s		±360°		180°/s		±360°		180°/s	
	Typical TCP speed	/      1 m/s (3.281ft/s)		/      1 m/s (3.281ft/s)		/      1 m/s (3.281ft/s)		/      1 m/s (3.281ft/s)		/      1 m/s (3.281ft/s)		/      1 m/s (3.281ft/s)	
Specifications	Typical consumption	150W		350W		350W		500W		500W			
	IP classification	IP54		IP54		IP54		IP54		IP54			
	Tool I/O ports	2 digital input, 2 digital output, 2 analog output		2 digital input, 2 digital output, 2 analog output		2 digital input, 2 digital output, 2 analog output		2 digital input, 2 digital output, 2 analog output		2 digital input, 2 digital output, 2 analog output			
	Footprint	129 mm (5.079 in)		158 mm (6.220 in)		158 mm (6.220 in)		188 mm (7.402 in)		188 mm (7.402 in)			
	JAKA Lens 2D parameters	Lens focal length	8 mm	16 mm	8 mm	16 mm	8 mm	16 mm	8 mm	16 mm	8 mm	16 mm	
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		>0.08 mm	>0.04 mm	>0.08 mm	>0.04 mm	>0.08 mm	>0.04 mm	>0.08 mm	>0.04 mm	>0.08 mm	>0.04 mm		
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 classification	IP20				IP20							
	I/O ports	7-way port; Input and output configurable				7-way port; Input and output configurable							
	Communication mode	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 Series Cobots

**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



Basic Parameter	Parameters	JAKA Pro 5		JAKA Pro 12		JAKA Pro 16	
	Payload	5 kg (11 lb)		12 kg (26.4 lb)		16 kg (35.27 lb)	
	Weight (including cables)	23 kg (50.71 lb)		41 kg (90.39 lb)		79.7 kg (175.71lb)	
	Reach	954 mm (37.5 in)		1327 mm (52.2 in)		1713 mm (67.44 lb)	
	Repeatability	±0.02 mm (±0.00079 in)		±0.03 mm (±0.00118 in)		±0.03 mm (±0.00118 in)	
	Degree of freedom	6		6		6	
	Programming	Graphical programming, and freedrive programming		Graphical programming, and freedrive programming		Graphical programming, and freedrive programming	
	Demonstrator type	Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)		Mobile terminal (computer/pad/mobile phone)	
Movement	Joint	Range of action		Range of action		Range of action	
	Joint 1	±360°		±360°		±360°	
	Joint 2	-85°~+265°		-85°~+265°		-85°~+265°	
	Joint 3	±175°		±175°		±175°	
	Joint 4	-85°~+265°		-85°~+265°		-85°~+265°	
	Joint 5	±360°		±360°		±360°	
	Joint 6	±360°		±360°		±360°	
	Typical TCP speed	/		/		/	
Specifications	Typical consumption	350W		500W		750W	
	IP classification	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	
		2 Analog input		2 Analog input		2 Analog input	
	Footprint	158 mm (6.220 in)		188 mm (7.402 in)		246 mm (9.685 in)	
Control cabinet	IP classification	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 mode	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 supply	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	15.4 kg (33.95 lb)		18 kg (39.68 lb)		18 kg (39.68 lb)	

# 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 HR-CGC500-F08	Lens 2D HR-CGC500-F16
Resolution	2592×1944	2592×1944
Max frame rate	24 fps	24 fps
Data interface	Gige	Gige
Color mode	Black and white / color	Black and white / color
Lens focal length	8 mm	16 mm
Object distance	100 mm-1000 mm	100 mm-1000 mm
Vision	>70×50 mm	>35×25 mm
Pixel accuracy	>0.08mm	>0.04 mm
System accuracy	≥ ±0.2 mm	≥ ±0.2 mm
Image processing	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

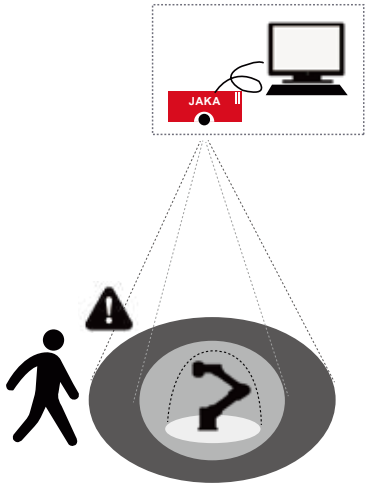
**Convenient**

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	81×50×64mm
Installation method	Directly above, sideways (suggested install at 45°)
Communication interface	Ethernet interface, RS485, PNP optocoupler isolation DI and DO

### Visual parameters


Resolution	8.3 MP
Response time	≤100 ms
Installation height	≥3m (suggested)
Coverage surface	4 m x 2.1 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.




Cost-effective



Lightweight



Intelligent interconnection

				
Weigh	Payload	Reach	Repeatability	
JAKA MiniCobo	9.4 kg	1 kg	580 mm	±0.1 mm
JAKA Mini 2	9.9 kg	2 kg	580 mm	±0.1 mm




JAKA MiniCobo





JAKA Mini 2


## Application cases














Product features	Parameter	JAKA MiniCobo	JAKA Mini 2
	Payload	1 kg (2.21 lb)	2 kg (4.41 lb)
	Weight (including cables)	9.4 kg (20.73 lb)	9.9 kg (21.83 lb)
	Reach	580 mm (22.83 in)	580 mm (22.83 in)
	Repeatability	±0.1 mm (±0.003937 in)	±0.1 mm (±0.003937 in)
	Degree of freedom	6	
	Programming	Graphical programming, free-drive	
	Demonstrator type	Mobile terminal (computer/pad/mobile phone)	
	Collaborative operation	Collaborative operation as ISO 10218-1: 2011	
Working range and speed	Joint	Range of action	
	Joint 1	±360°	
	Joint 2	±125°	
	Joint 3	±130°	
	Joint 4	±360°	
	Joint 5	±120°	
	Joint 6	±360°	
	Typical TCP speed	1 m/s (3.28 ft/s)	
Specifications	Typical consumption	150W	180W
	Rated voltage	24VDC	48VDC
	Temperature range	0-50°C	0-50°C
	IP classification	IP40	IP40
	Installation	At any angle	
	Tool I/O	2 Digital inputs	
		2 Digital outputs	
		2 Analog input	
	Tool I/O power	24VDC	
	Tool I/O size	M8	
	Materials	Aluminum, PC	
	Footprint	124 mm (4.88 in)	
	Robot connection cable length	6 m (236 in)	
MiniCab cabinet	Power input	20-60VDC	
	Current	≤40A	
	Size	180×128×47 mm (L×W×H)	
	IP classification	IP20	
	I/O	7 Digital input: I/O configurable	
	I/O Power	24VDC	
	Installation	Panel/Guide Rail	
	Communication mode	TCP/IP, Modbus TCP, Modbus RTU, Profinet, Ethernet/IP	
	Weight	1.1 kg (2.43 lb)	
	Material	Alumminum, Steel	

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