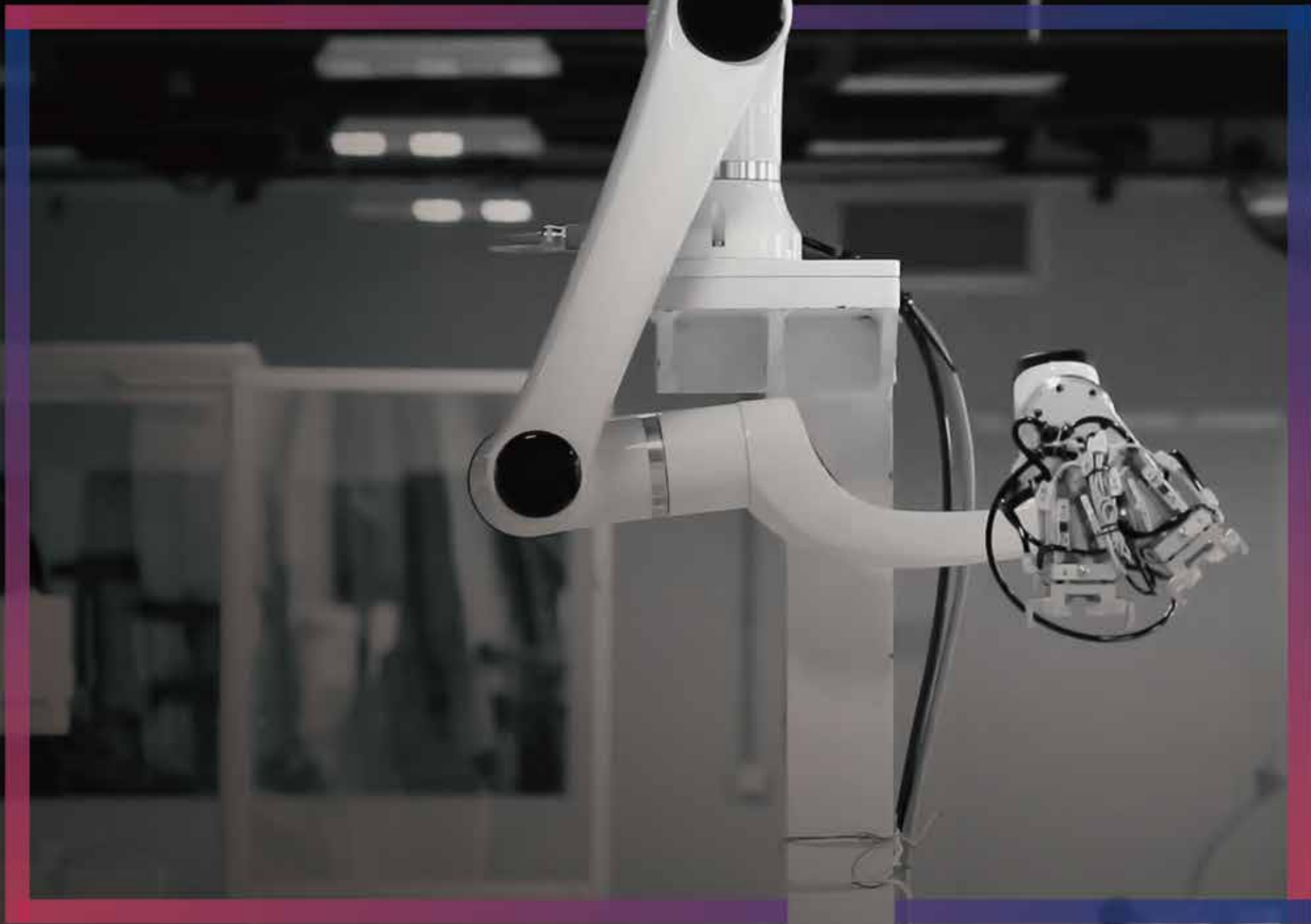




# Elfin Series Collaborative Robot

---





# About Han's Robot

\*Wholly-owned subsidiary invested by Han's Laser Technology Group (stock name: Han's Laser, stock code: 002008);

\*Established on the basis of robot division from Han's Motor, Han's Robot has more than ten years of experience in motors, servo drives and motion control;

\*Focus on the development, promotion and application of intelligent robots in industrial, medical, logistics, service and other fields.



Search for more information





## Elfin10

Maximum payload 10kg  
Work radius 1000mm



## Elfin5

Maximum payload 5kg  
Work radius 800mm



## Elfin3

Maximum payload 3kg  
Work radius 590mm

# Technical information



Robot Arm	Elfin 3	Elfin 5	Elfin 10
Height	967.5 mm	1205.0 mm	1456.0 mm
Max Profile Width	219 mm	255 mm	302 mm
Footprint	Φ 156 mm	Φ 156 mm	Φ 200 mm
Weight	17 kg	23 kg	40 kg
Payload	3 kg	5 kg	10 kg
Degrees of Freedom	6	6	6
Hans Robot Dual Axis Module	MD 14 & 17 & 20	MD 14 & 20 & 25	MD 17 & 25 & 32
Power Consumption	100 W	180 W	350 W

Working Temperature	0 – 50°C		
Working Humidity	10 – 80%		
Joint Range	+ / – 360°		
Joint Speed	135° / s	135° / s	90° / s
Repeatability	± 0.05 mm	± 0.05 mm	± 0.05 mm
Reach	590 mm	800 mm	1000 mm
I/O Port	Digital Input : 4 Digital Output : 4 Analog Input : 2		
I/O Power Supply	DC 24 V / 2 A		
Tool Speed	1 m / s		
Communication	EtherCAT		
Programming	Zero-force Guide / Teach Pendant Interface / API / Python		
ROS Support	Open Source		
IP Class	54		
Main Material	Aluminum Alloy		
Certification	ISO10218 – 1 / IEC60204 –1 / EN61000–6 / ISO15066		
Mounting	Any ( Ceiling / Floor / Desk / Wall / Slope )		



## Control Box

Dimensions ( H * W * D )	536 * 445.2 * 318.8 mm
Leg Height	176 mm ( included )
Weight	18.5 kg
Cable Diameter	10 mm
Cable Length	5 m
Power Input	AC 200 – 240V / 50 – 60 Hz
Power Output	DC 48 V
Working Temperature	0 – 50°C
Working Humidity	30 – 70%

## I/O Port

Digital Input : 16  
Digital Output : 16  
Analog Input : 2  
Analog Output : 2

## IP Class

20



## Teach Pedant

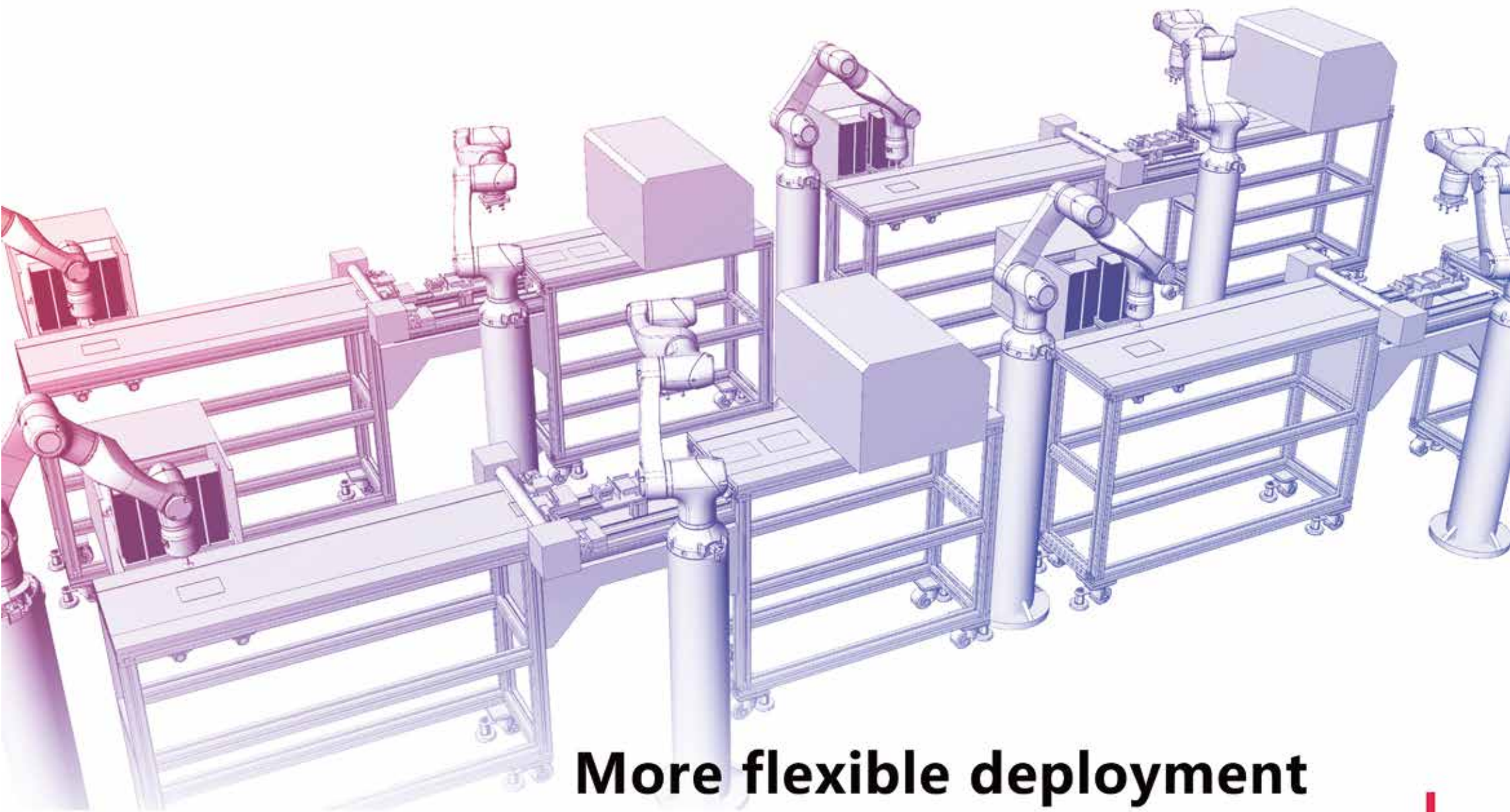
Dimensions ( H * W * D )	210 * 320 * ( 45+22 ) mm
Weight	2 kg ( with cable )
Cable Diameter	10 mm
Cable Length	5 m
Screen Size	10.1"
Resolution	600 * 800
E-stop Button	1
IP Class	54



## Safer work

---

With Elfin robots, there is no need to pay extra for safe operation the same as traditional industrial robots. The robots have high collaborative performance and can perform a protective stop immediately when they encounter resistance, ensuring the safety among co-worker, workpieces, and production equipment.



## More flexible deployment

Elfin robots can be mounted at any angle and installed anywhere to minimize the impact on the production lines. Redeployment requires very short time and is very suitable for small batches, customized and short-cycle production, which is the best choice for automation transformation.

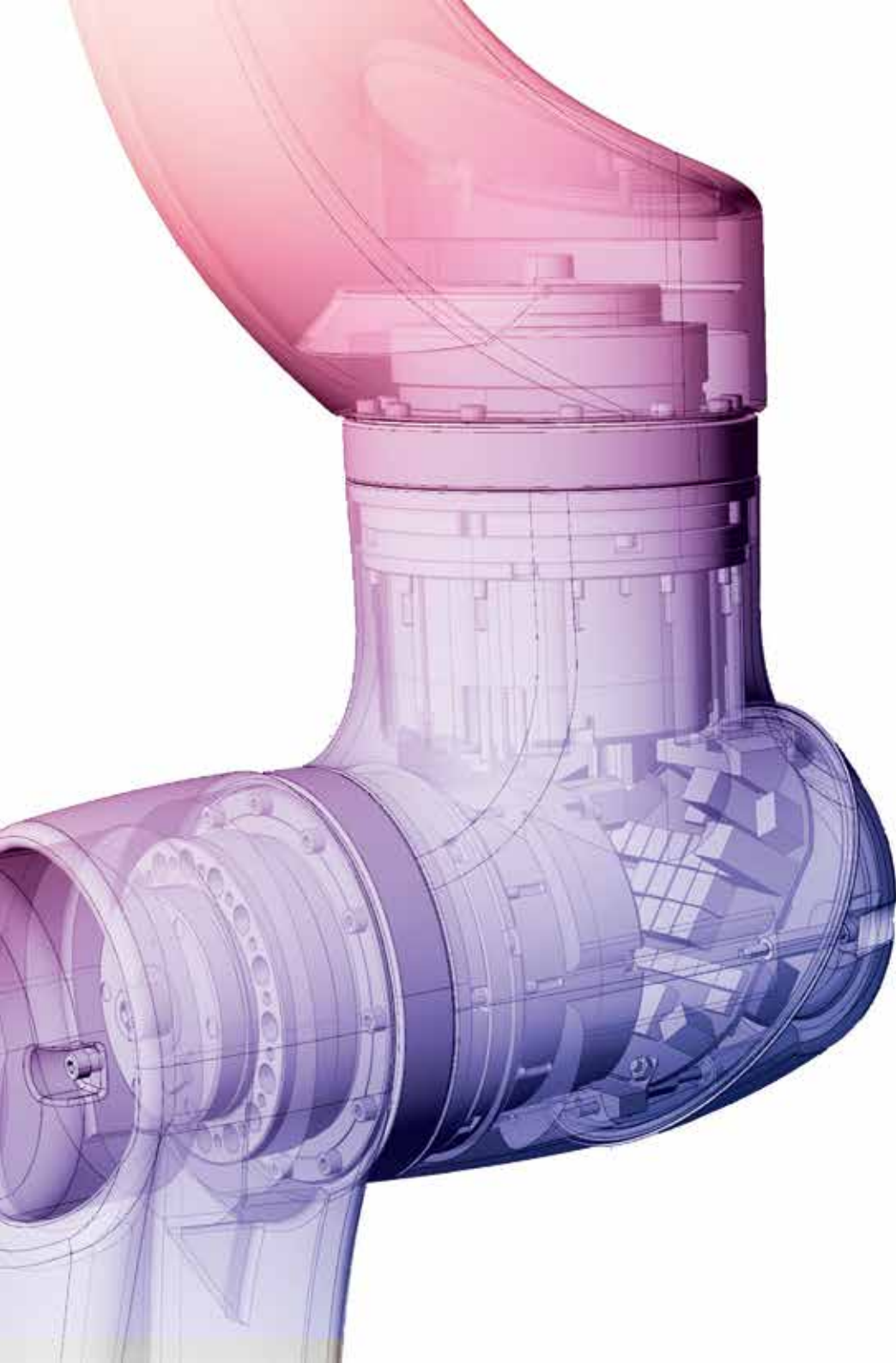


# Easier operation

Elfin robots can be easily taught by moving the end of the arm to the desired position or desired trajectory, which greatly saves the programming time. 10 minutes is absolutely enough for building one simple pick and place program.







## Highly integrated joint modules

---

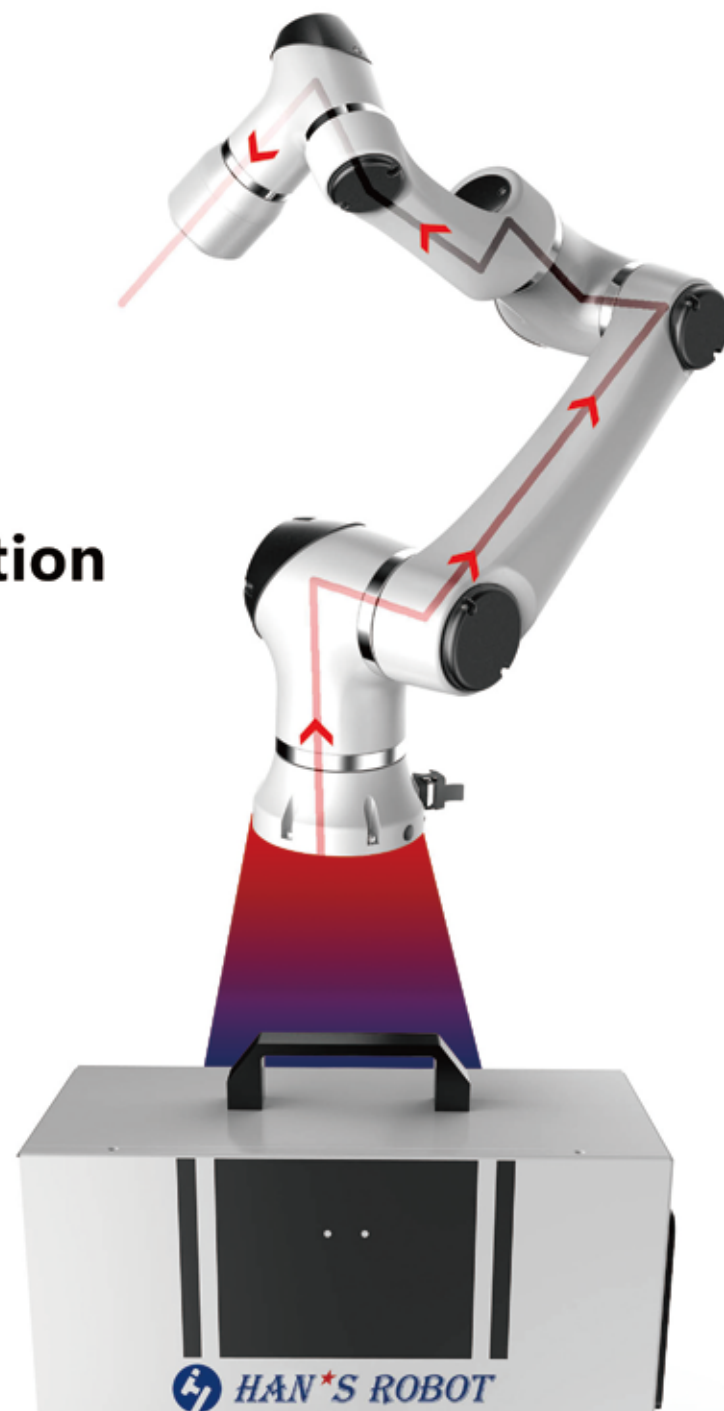
The joint module is highly integrated with one drive controlling two motive joints.

High torque and low cogging motors provide the best performance and stability.

## Fast, stable EtherCAT bus communication

The controller and robot joint adopt industrial EtherCAT communication, which enables the system to have excellent control performance and strong anti-interference ability.

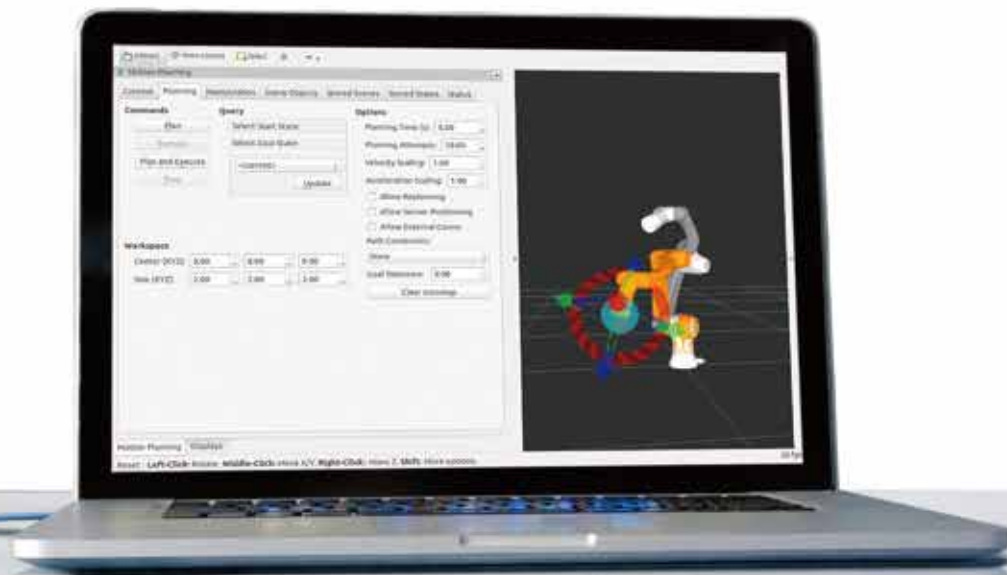
**EtherCAT<sup>®</sup>** 





## ROS Support

Open source ROS interface allows users to control robot joints in real-time via EtherCAT under ROS. With the ROS platform, the robot's scalability is greatly improved, and it is not necessary to rely on the control box to control the robot.





# Industry applications

Make the production line uninterrupted;  
Increase productivity;  
Employees do not need to do repetitive work and avoid fatigue and production accidents;  
High accuracy and consistency;  
Reduce error.



Gluing



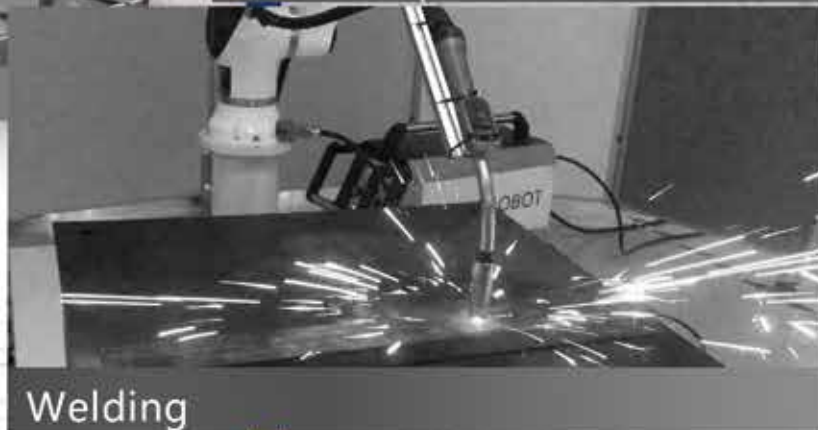
Machine tending



Pick and place



Quality inspection



Welding



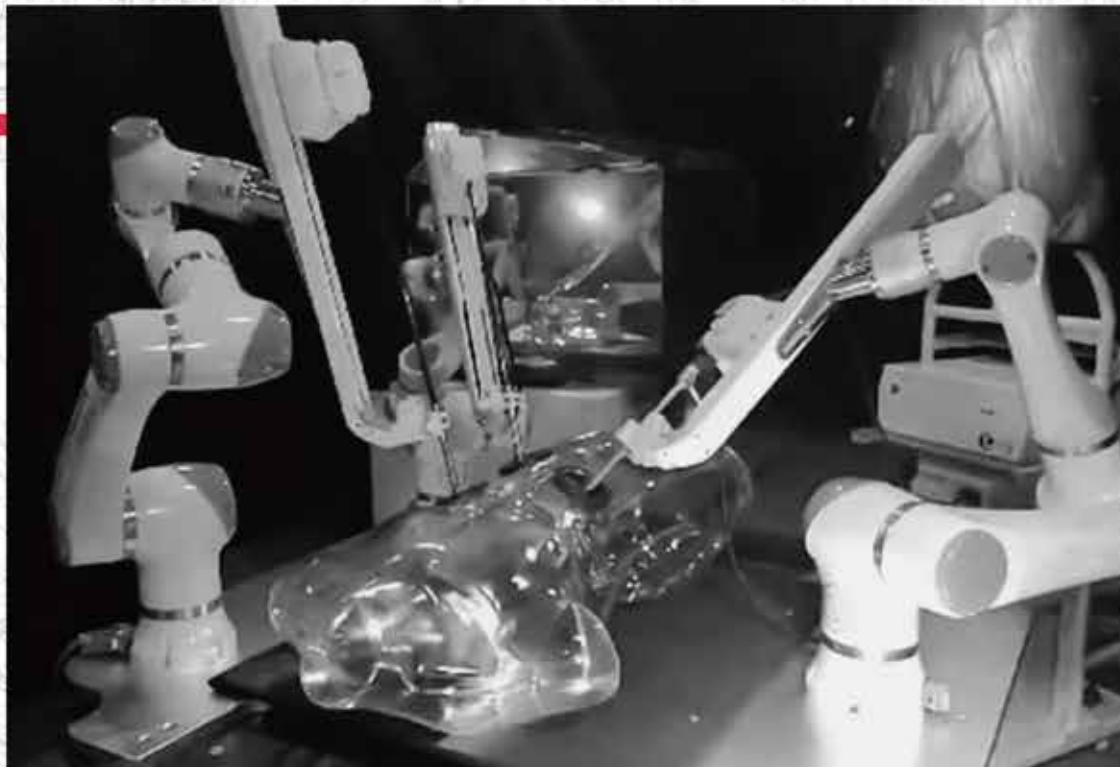
Spraying



# Medical industry applications

## Surgical Robot

A single controller controls multiple Elfin robots. High accuracy and stability can meet the demands of medical surgery applications.



## Remote Diagnostic Ultrasound System

Based on EtherCAT communication, excellent control performance and higher communication rate make the precise remote control possible.



## More applications



### Service Industry

The features of security, ease of use, and intelligence enable Elfin to realize its application in the service industry and provide more possibilities for future service.


### Education

Supports ROS and provides numerous functional interfaces; Supports two programming languages, C++ and Python, which facilitate secondary development and contribute to robot research and teaching.

### Research

Relieves researchers from repetitive work and improves the objectivity of analysis and testing process.





## Customer Service

Hardware maintenance support  
Software upgrade  
Data service  
Equipment debugging training  
Equipment maintenance  
Technical Support



Shenzhen Han's Robot Co.,Ltd.

[www.hansrobot.com](http://www.hansrobot.com)

[hansrobot@hanslaser.com](mailto:hansrobot@hanslaser.com)

+86 755 23048732

5F, Building B, Han's Innovation Mansion, No.9018, Beihuan Avenue,  
High-Tech Park, Nanshan District, Shenzhen, China



**CANONICAL  
ROBOTS**

[WWW.CANONICALROBOTS.COM](http://WWW.CANONICALROBOTS.COM)