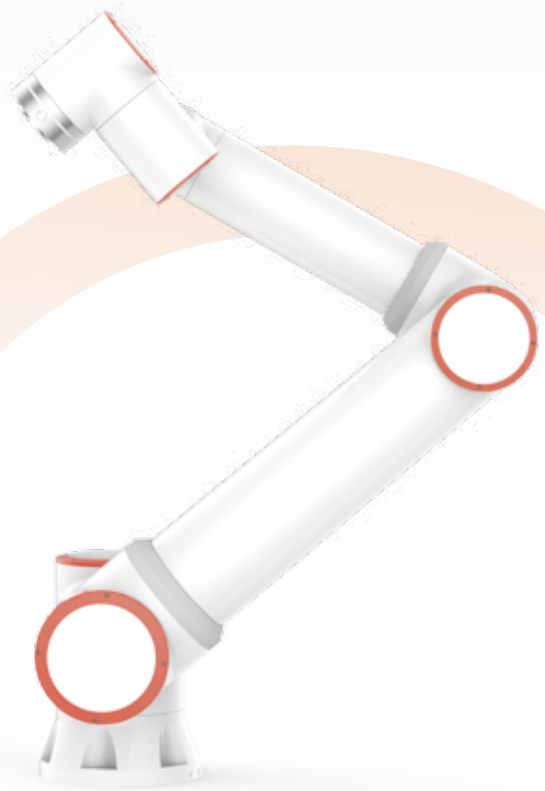
FAIRINO

FR30

New Generation Flexible Collaborative Robot

FR30 is a new generation of six-axis collaborative robot product developed by FAIRINO based on human-robot collaboration technology, specifically designed for heavy-duty operation scenarios, efficiently covering the requirements of palletizing, handling, and high-torque operations, and adapting to flexible heavy-duty task scenarios through the integration of human-robot collaborative safety and industrial-grade stability.



Rtd 30kg **Max 35kg**
Payload

1403mm
Reach

±0.1mm
Repeatability

Feature Advantages

Outstanding Performance

Adopting a leading bus architecture and full-closed-loop joint torque feedback, it features strong real-time performance and stable operation; supports graphical programming, intuitive teaching, and smooth dragging, simplifying the operation process and comprehensively enhancing work efficiency in scenarios such as palletizing and handling

Safe and reliable

All core components are self-developed and self-produced to ensure equipment stability; it has a 3D spherical working range, supports human-robot shared workspaces, and modularization design reduces maintenance costs

Flexible Deployment

No need for complex installation and debugging, can quickly adapt to different workstations; compatible with multiple end-effectors, flexibly handle diverse scenarios such as palletizing and handling, shortening project cycles

Open ecosystem

Supports mainstream industrial communication protocols and secondary development interfaces, providing flexible customization space for equipment manufacturers and integrators to easily adapt to personalized process requirements

Application Area

Suitable for scenarios such as logistics palletizing, heavy material handling, and high-torque assembly, it meets the heavy workpiece handling requirements in fields such as e-commerce warehousing, automobile manufacturing, and construction machinery.

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FR30 Technical Specification

Parameter Type	Parameter	
Payload	30kg(Max:35kg)	
Reach	1403mm	
Degrees of freedom	6 rotating joints	
HMI	10.1 inch teach pendant (Optional)or mobile terminal Web App	
Pose repeatability per ISO 9283	±0.1mm	
Axis movement	Working range	Maximum speed
Base	±175°	±120°/s
Shoulder	+85°/-265°	±120°/s
Elbow	±160°	±120°/s
Wrist 1	+85°/-265°	±180°/s
Wrist 2	±175°	±180°/s
Wrist 3	±175°	±180°/s
Typical TCP speed	2m/s	
IP lassification	IP54 (IP65 Optional)	
Noise	<70dB	

Parameter Type	Parameter
Robot mounting	Any orientation
I/O Ports	(DI) 2 (DO) 2
	(AI) 1 (AO) 1
Tool I/O power supply	24V/1.5A
Footprint	240mm
Weight	≈85kg
Operating temperature	0-45°C
Operating humidity	90%RH(non-condensing)
Materials	Aluminium 、 Steel
Black Optional	no
■ Typical power test payload settings, different loads are set according to robot models, payload configuration parameters are as follows :	
FR30 payload setting: 30kg, Z-axis: 200mm	
Select aging test program, connect robot's total power to power meter, set robot to automatic mode,set global speed to 100, click run, if there are no abnormalities after running two cycles, start continuous testing for 24 hours. After 24 hours, respectively, record the peak and average power of the power meter, and then statistically analyze each model :	
Typical average power	600W
Typical peak power	910W

FR30 Controller Specification



DC MINI Controller



AC MINI Controller 5kw

Features

IP classification	IP54	IP54
Operating temperature	0-45°C	0-45°C
Operating humidity	90%RH(non-condensing)	90%RH(non-condensing)
I/O Ports	(DI)16 (DO)16	(DI)16 (DO)16
	(AI)2 (AO)2	(AI)2 (AO)2
	High speed pulse input 2	High speed pulse input 2
I/O power supply	24V/1.5A	24V/1.5A
Standard communication	I/O 、TCP/IP、Modbus_TCP/RTU	TCP/IP、I/O 、Modbus_TCP/RTU
Optional communication	CC-Link IE Field Basic、Profinet、Ethernet/IP、EtherCAT	CC-Link IE Field Basic、Profinet、Ethernet/IP、EtherCAT
Communication Board Optional Configuration	MiniPCI Express - real-time Ethernet PC Board	MiniPCI Express - real-time Ethernet PC Board
Software development kit	C#/C++/Python/ROS/ROS2	C#/C++/Python/ROS/ROS2

Physical

L*W*H	245*180*44.5 mm (No protrusions)	245*180*89mm (No protrusions)
Weight	2.044 kg (Weight without wire)	3.6kg (Weight without wire)
Materials	Galvanized plate	Galvanized plate
Power supply	30-60VDC	100-240VAC/16A/Single-phase/50-60Hz
Output power	48VDC / 104Amax	48VDC / 104Amax