

UFACTORY Product list

Specification Comparison

Robot Arm Model					
	UFACTORY 850	xArm 6	xArm 5	xArm 7	UFACTORY Lite 6
Retail Price(Exw Shenzhen)	US\$8,999.00	US\$8,399.00	US\$5,299.00	US\$9,999.00	US\$2,999.00
Repeatability	±0.02mm	±0.1mm	±0.1mm	±0.1mm	±0.5mm
Payload Capacity	5kg (full reach)	5kg (half reach)	3kg	3.5kg	600g
Maximum Reach	850mm	700mm	700mm	700mm	440mm
Maximum Speed	1m/s	1m/s	1m/s	1m/s	0.5m/s
Degrees of Freedom	6 axis	6 axis	5 axis	7 axis	6 axis
Robot Arm Weight	20kg	12.2kg	11.2kg	13.7kg	8kg
AC Control box size	345*135*101mm	285*135*101mm	285*135*101mm	285*135*101mm	Built-in
AC Control box Weight	4.8kg	3.9kg	3.9kg	3.9kg	/
Support System	Windows, Linux, MacOS				
Communication	Ethernet Port, with Modbus TCP protocol				
Control Software	UFACTORY STUDIO (Installed in the Control box)				
GUI Programming	Blockly, Gcode (Embedded in the UFACTORY STUDIO)				
Code Programming	Python SDK, C++ SDK https://github.com/xArm-Developer				
Simulations	ROS、ROS2 https://github.com/xArm-Developer				

Support Accessories

	UFACTORY 850	xArm 6	xArm 5	xArm 7	UFACTORY Lite 6
xArm Gripper	√	√	√	√	×
xArm Bio Gripper	√	√	√	√	×
xArm Force Sensor	√	√	√	√	×
xArm Direct Drive Linear Motor	×	√	√	√	×
DC Control box	√	√	√	√	×
xArm Vacuum Gripper	√	√	√	√	×
Gripper Lite	×	×	×	×	√
Vacuum Gripper Lite	×	×	×	×	√

Accessories list

Product Name	Retail Price	Weight
xArm Gripper	US\$1,999.00	0.8kg
xArm Bio Gripper	US\$1,999.00	0.81kg
xArm Force Sensor	US\$3,000.00	1kg
xArm Direct Drive Linear Motor	US\$4,000.00	25kg
DC Control box	US\$499.00	2.6kg
xArm Vacuum Gripper	US\$519.00	0.61kg
Gripper Lite	US\$360.00	0.35kg
Vacuum Gripper Lite	US\$280.00	0.25kg

Product specifications

UFACTORY xArm



PERFORMANCE

*Ambient Temperature Range 0-50 °C
Power Consumption Typical 200 W, Max 500 W
Input Power Supply 24V DC, 20.8A

PHYSICAL

Footprint Ø 126 mm
Materials Aluminum, Carbon Fiber
Base Mounting Dimension M5*5

SPECIFICATION

	xArm 5	xArm 6	xArm 7
Payload(kg)	3kg	5kg	3.5kg
Reach (mm)	700mm	700mm	700mm
Degrees of Freedom	5	6	7
Repeatability (mm)	±0.1mm	±0.1mm	±0.1mm
Maximum Speed (m/s)	1m/s	1m/s	1m/s
Weight (kg) (robot arm only)	11.2kg	12.2kg	13.7kg

FEATURES

ISO Class Cleanroom 5
Robot Mounting Any

NOTES:

The working temperature of the robot is 0-50 °C. When the joints are continuously operated at high speeds, please lower the ambient temperature.

I/O PORTS

Control Box DI*16 DO*16 AI*2 AO*2
(Digital In) (Digital Out) (Analog In) (Analog Out)
End Effector DI*2 DO*2 AI*2 RS485*1

COMMUNICATION (ROBOTIC ARM)

Robot Base Communication Protocol self-defined
Robot Base Communication Mode RS-485
End Effector Communication Protocol Modbus RTU
End Effector Communication Mode RS-485

COMMUNICATION (CONTROL BOX)

Communication Protocol Modbus TCP
Communication Mode Ethernet

MOVEMENT

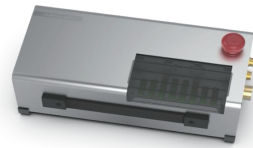
	Robot Arm	xArm 5	xArm 6	xArm 7
Maximum Speed		180°/s	180°/s	180°/s
Working Range	Joint 1	±360°	±360°	±360°
	Joint 2	-118°~120°	-118°~120°	-118°~120°
	Joint 3	-225°~11°	-225°~11°	±360°
	Joint 4	-97°~180°	±360°	-11°~225°
	Joint 5	±360°	-97°~180°	±360°
	Joint 6		±360°	-97°~180°
	Joint 7			±360°



06

07

xArm AC Control Box



SPECIFICATION

Input	100-240VAC 50/60Hz
Output	24VDC 20.8A
Weight	3.9kg
Dimension(L*W*H)	285*135*101mm
Control Box IO	CI*8+DI*8 CO*8+DO*8 2*AI (Digital Input) (Digital Output) (Analog Input) 2*AO (Analog Output)
Communication Mode	Ethernet, RS485 Master*1

08

xArm DC Control Box

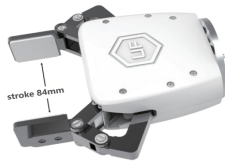


SPECIFICATION

Input	24-72V DC
Output	24VDC 672Wmax
Weight	2.6kg
Dimension(L*W*H)	262*160*76mm
Control Box IO	CI*8+DI*8 CO*8+DO*8 2*AI (Digital Input) (Digital Output) (Analog Input) 2*AO (Analog Output)
Communication Mode	Ethernet, RS485 Master*1

09

End Effector: Gripper

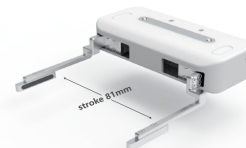


SPECIFICATION

Rated Supply Voltage	24V DC	Stroke	84mm
Weight	802g	Communication Mode	RS-485
Peak Current	1.5A	Communication Protocol	Modbus RTU
Maximum Gripping Force	30N	Feedback	Position
Working Range (with default fingers)	0-84mm	Finger Type	Switchable
Absolute Maximum Supply Voltage	28V DC		
Static Power Consumption (minimum power consumption)	1.5W		
Programmable Gripping Specification	Position, Speed		

10

End Effector: BIO Gripper



SPECIFICATION

Rated Supply Voltage	24V DC	Stroke	81mm
Weight	816g	Communication Mode	RS-485
Peak Current	1.5A	Communication Protocol	Modbus RTU
Maximum Gripping Force	20N	Feedback	Drop Detection Pick-up Detection
Working Range (with default fingers)	48-129mm	Finger Type	Switchable
State Indicator		Working Status, Power	
Absolute Maximum Supply Voltage	28V DC		
Static Power Consumption (minimum power consumption)	0.96W		
Programmable Gripping Specification	Speed Control		

11

End Effector: 6 Axis Force Torque Sensor



The 6-axis force torque sensor extends automation possibilities. The force resolution is up to 10g which enables xArm to carry out tasks that require the sensitivity and dexterity of the human hand.

SPECIFICATION

	Fx, Fy	Fz	Tx, Ty, Tz
Load capacity	150N	200N	4Nm
Resolution	100mN	150mN	5mNm
Hysteresis	2.5%FS	1%FS	1%FS
Crosstalk	3%FS	3%FS	3%FS
Overload capacity	Fx, Fy 150% Fz+ 150% Fz- 300%		Tx, Ty, Tz 150%
Dimension(L*W*H)	93.5*75*58.5mm	Weight	1kg

12

Direct-Drive Linear Motor



The direct-drive linear motor effectively expands the working range of xArm, and the all-in-one control box offers easier access to use.

SPECIFICATION

AC Control Box Pro		Direct-Drive Linear Motor	
Supply Voltage	100-240V AC 50/60Hz	Travel	700mm
Output	48V DC 10.4A	Motor Type	Direct Drive
Control Type	Position, Speed	Rated Torque	Maximum Load
Weight	4.5kg	Supply Voltage	200kg
Dimension(L*W*H)	262*185*176mm	Rated Current	63N
		Maximum Speed	Encoder
		Weight	Repeatability
			Mounting Angle
			Horizontal
			Dimension(L*W*H)
			1093*213*114mm

13

End Effector: Vacuum Gripper



BUILT-IN ELECTRIC VACUUM WITH PRESSURE FEEDBACK

Built-in electric vacuum saves on maintenance cost by eliminating external tanks, and pressure sensor offers a safety way that ensures movement is safe and precise

CONFIGURABLE SUCTION CUPS

Suction cups can be easily changed, fitting to your application needs

SPECIFICATION

Rated Supply Voltage	24V DC
Absolute Maximum Supply Voltage	28V DC
Vacuum	78%
Air flow (L/min)	>5.6L/min
Weight (g)	610g
Dimensions(L*W*H)	122.5*91.6*75mm
Payload (kg)	≤5kg
Noise Level(30cm away)	<60dB
Quiescent Current(mA)	30mA
Peak Current(mA)	400mA
Communication Mode	Digital IO
State Indicator	Power, Working Status
Feedback	Air Pressure (Low or Normal)

14

15

UFACTORY 850



PERFORMANCE	
*Ambient Temperature Range	0-50 °C
Power Consumption	Typical 240 W, Max 1000 W
Input Power Supply	48V DC, 20.8A
PHYSICAL	
Footprint	Ø 190 mm
Materials	Aluminum, Carbon Fiber
Base Mounting Dimension	M8*4
SPECIFICATION	
Payload(kg)	5kg
Reach (mm)	850mm
Degrees of Freedom	6
Repeatability (mm)	±0.02mm
Maximum Speed (m/s)	1m/s
Weight (kg) (robot arm only)	20kg
FEATURES	
ISO Class Cleanroom	5
Robot Mounting	Any
NOTES:	
The working temperature of the robot is 0-50 °C. When the joints are continuously operated at high speeds, please lower the ambient temperature.	

I/O PORTS			
Control Box	DI*16 (Digital In)	DO*16 (Digital Out)	AI*2 (Analog In)
End Effector	DI*2	DO*2	AI*2 RS485*1
COMMUNICATION (ROBOTIC ARM)			
Robot Base Communication Protocol	self-defined		
Robot Base Communication Mode	RS-485		
End Effector Communication Protocol	Modbus RTU		
End Effector Communication Mode	RS-485		
COMMUNICATION (CONTROL BOX)			
Communication Protocol	Modbus TCP		
Communication Mode	Ethernet		
MOVEMENT			
	Working Range	Maximum Speed	
Joint 1	±360°	180°/s	
Joint 2	-132° ~ 132°	180°/s	
Joint 3	-242° ~ 3.5°	180°/s	
Joint 4	±360°	180°/s	
Joint 5	-124° ~ 124°	180°/s	
Joint 6	±360°	180°/s	



UFACTORY 850 AC Control Box



SPECIFICATION				
Input	100-240VAC 50/60Hz			
Output	48VDC 1000Wmax			
Weight	4.8kg			
Dimension(L*W*H)	345*135*101mm			
Control Box IO	CI*8+DI*8 (Digital Input)	CO*8+DO*8 (Digital Output)	2*AI (Analog Input)	2*AO (Analog Output)
Communication Mode	Ethernet, RS485 Master*1			

UFACTORY 850 DC Control Box



SPECIFICATION				
Input	48-72VDC			
Output	48VDC 960Wmax			
Weight	2.8kg			
Dimension(L*W*H)	262*160*76mm			
Control Box IO	CI*8+DI*8 (Digital Input)	CO*8+DO*8 (Digital Output)	2*AI (Analog Input)	2*AO (Analog Output)
Communication Mode	Ethernet, RS485 Master*1			

UFACTORY Lite 6



PERFORMANCE	
*Ambient Temperature Range	0-50 °C
Power Consumption	Typical 150 W, Max 350 W
Input Power Supply	24V DC, 14.66A
Repeatability	±0.5mm
SPECIFICATION	
DoF	6
Payload	600g
Reach	440mm
COMMUNICATION	
Robot Communication Protocol	Modbus TCP
Communication Mode	Ethernet, RS485 Master*1, RS485 Slave*1
Developing Environment	Python/C++/ROS/ROS2
GUI	UFACTORY Studio

PHYSICAL	
EODT	ISO9409-1-50
Footprint	130*140 mm
Materials	Aluminum, Carbon Fiber
Base Mounting Dimension	M5*4 (114*114mm)
Robot Mounting	Any
Gearbox	Harmonic Drive
Motor Type	BLDC
Control Box	Build-in
Weight	8kg

I/O PORTS			
Control Box	DI*8	DO*8	AI*2
End Effector	DI*2	DO*2	AI*2 /RS485*1(alternative)
MOVEMENT			
Maximum Joint Speed	180°/s		
Maximum Tool Speed (Cartesian)	500mm/s		



Gripper Lite



SPECIFICATION	
Input Power Supply	24V DC
Stroke	16mm(Switchable fingers)
Gripping Force	5N
Weight	350g
Communication Mode	I/O
Feedback	NA

Vacuum Gripper Lite



SPECIFICATION	
Input Power Supply	24V DC
Vacuum Level	-40Kpa
Weight	250g
Communication Mode	I/O
Feedback	Pick-Up Detection (on/off)