



@Ufactory2013



@UFACTORY-UF



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UFACTORY XARM

Cost-effective Service Robot

About Us



History

UFACTORY specialized in developing and manufacturing consumer robotics systems. Founded by a group of geeks who have experience in artificial intelligence and the will to change the robot ecosystem, UFACTORY is devoted to popularizing the industrial technology and to provide the high cost-performance products and integrated solutions for the industry and consumers through long-term innovation and technological accumulation

So far, our products are sold in more than 80 countries and regions. Many mainstream media and agencies praised the uArm series highly. We are aiming to make people believe that humanity is going to benefit from robots in our daily life, and that they will become a necessary item for everybody in the future

UFACTORY **XARM**

KICKSTARTER

Funded \$870,000+

UFACTORY **UARM**

INDIEGOGO.

Funded \$1,000,000+

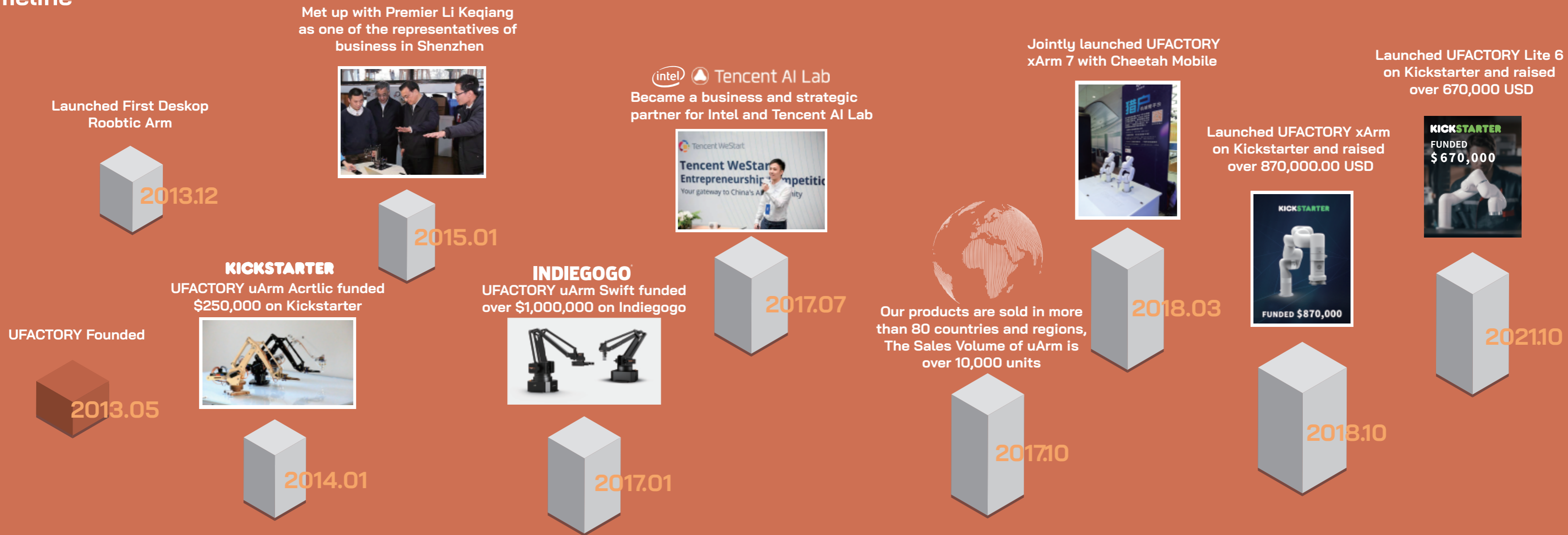
UFACTORY **LITE 6**

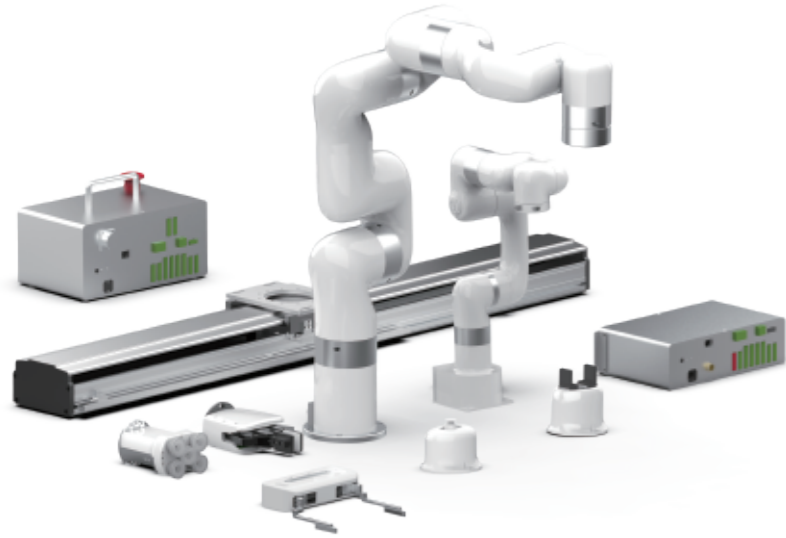
KICKSTARTER

Funded \$670,000+

Achievement

Timeline





TOP5 BEST HIGHLIGHTS

Easy to use

Due to the easy-to-use control software UFACTORY Studio the robot is easy to be taught by hand as well as programmed by dedicated graphical user interface. A specific task can be achieved in 10 minutes.

Portable and lightweight

Crafted from the carbon fiber, the robot weight is 50% off, which also means not only significant weight reduction for your entire system, but also easier deployment.

Cost-effective

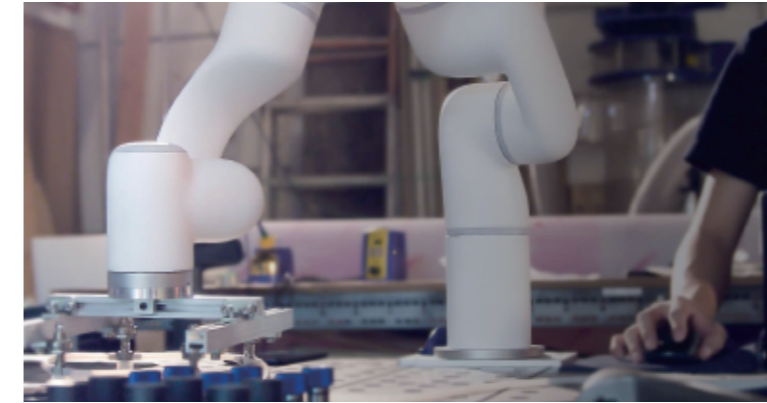
Compared to traditional industrial robotic arms, UFACTORY robots not only reduce 1/2 your operating costs but also keep your competitive edge and improve your return on investment with outstanding performance.

Multi-Accessories

Our robots work with a range of accessories to easily achieve the application you need. Furthermore, official accessories provide you a seamless integration.

Powerful Joints

The robot employs high-performance harmonic drive, plus brushless motor and multi-turn absolute encoder, which are the guarantee of stability and repeatability.



01

UFACTORY xArm

A multi-axis robot perfectly balances power and size

Ideal for:

- Machine Tending
- Bin Picking
- Mobile platform
- Lab Automation
- Robotic Research

02

UFACTORY Lite 6

Our smallest table-top 6 axis robot arm

Ideal for:

- Lab Automation
- Robotic Research
- Coffee Machine
- Touchscreen or Keyboard Testing

UFACTORY xArm



PERFORMANCE

*Ambient Temperature Range	0-50°C
Power Consumption	Typical 200 W, Max 400 W
Input Power Supply	24V DC, 16.5A

PHYSICAL

Footprint	Ø 126 mm
Materials	Aluminum, Carbon Fiber
Base Connector Type	M5*5

SPECIFICATION

	xArm 5 Lite	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 is continuously operated at high speeds, please lower the ambient temperature.

I/O PORTS

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

COMMUNICATION (ROBOTIC ARM)

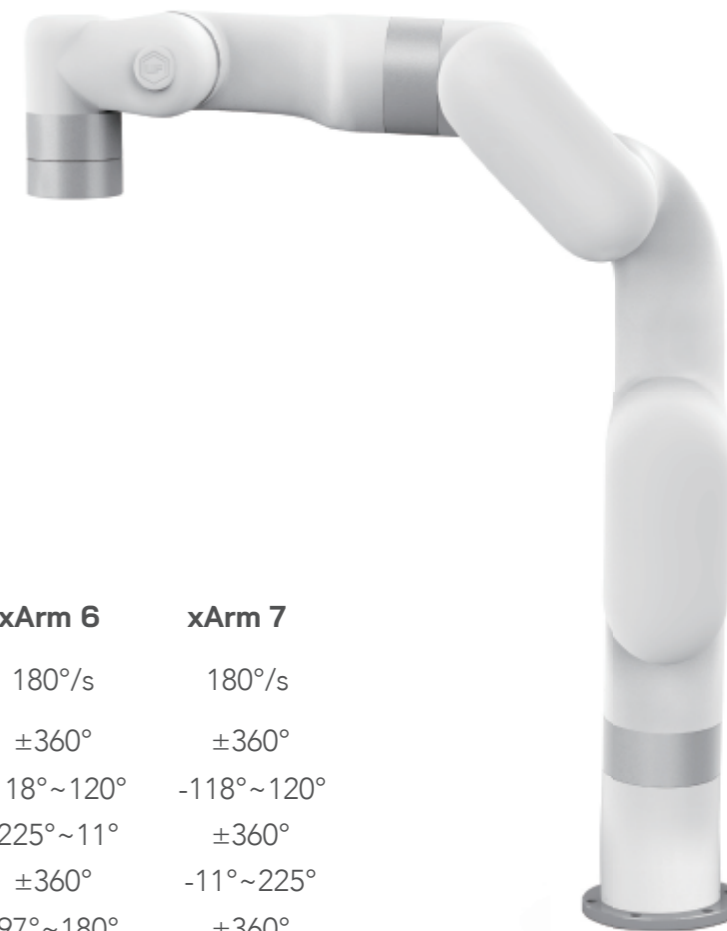
Robot Base Communication Protocol	self-defined
Robot Base Communication Mode	RS-485
End Effector Communication Protocol	Modbus RTU
End Effector Communication Mode	RS-485

COMMUNICATION (CONTROL BOX)

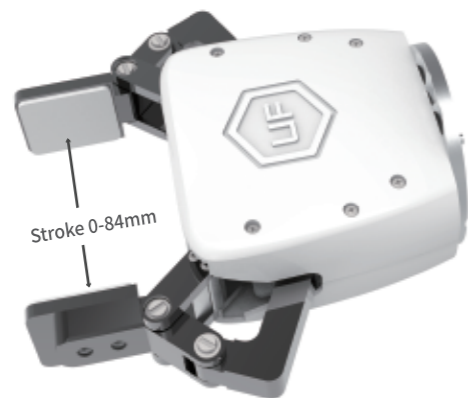
Communication Protocol	Modbus TCP
Communication Mode	Ethernet

MOVEMENT

	Robot Arm	xArm 5 Lite	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°

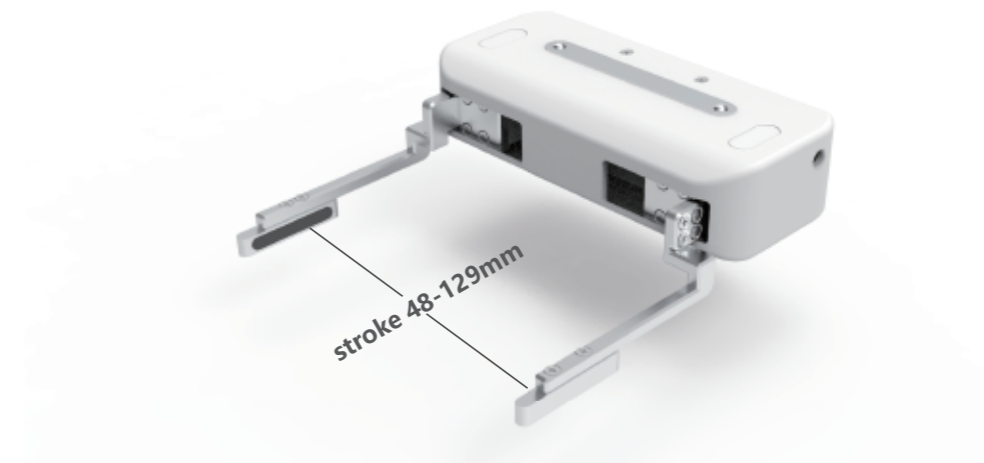


End Effector: Gripper



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

End Effector: BIO Gripper



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

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 2*AO (Digital In) (Digital Out) (Analog In) (Analog Out)
Communication Mode	Ethernet, RS485 Master*1, RS485 Slaver*1

DC Control Box



SPECIFICATION

Input	24VDC
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 2*AO (Digital In) (Digital Out) (Analog In) (Analog Out)
Communication Mode	Ethernet, RS485 Master*1, RS485 Slaver*1

End Effector: 6 Axis Force Sensor



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	Fz+	Fz-	Tx, Ty, Tz
	150%	150%	300%	150%

Linear Motor



SPECIFICATION

Control Box		Linear Motor	
Supply Voltage	100-240V AC 50/60Hz	Travel	700mm
Output	48V DC 20A	Motor Type	Direct Drive
Control Type	Position, Speed	Supply Voltage	48V DC
		Rated Current	3A
		Maximum Speed	1m/s
		Maximum Load	200kg
		Rated Torque	63N
		Encoder	Incremental
		Repeatability	±5um
		Mounting Angle	Horizontal

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)

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	±0.2mm

SPECIFICATION

DoF	6
Payload	1kg
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

EOAT	ISO9409-1-50
Footprint	130*140 mm
Materials	Aluminum, Carbon Fiber
Base Connector Type	M5*4 (114*114mm)
Robot Mounting	Any
Gearbox	Harmonic Drive
Motor Type	BLDC
Control Box	Build-in
Weight	7.2kg

I/O PORTS

Control Box	CI*8	CO*8	AI*2	AO*2
End Effector	TI*2	TO*2	AI*2 /RS485*1(alternative)	

MOVEMENT

Maximum Joint Speed	90°/s
Maximum Tool Speed (Cartesian)	500mm/s



Gripper Lite



SPECIFICATION

Input Power Supply	24V DC
Stroke	16mm(Switchable fingers)
Gripping Force	5Ne
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)