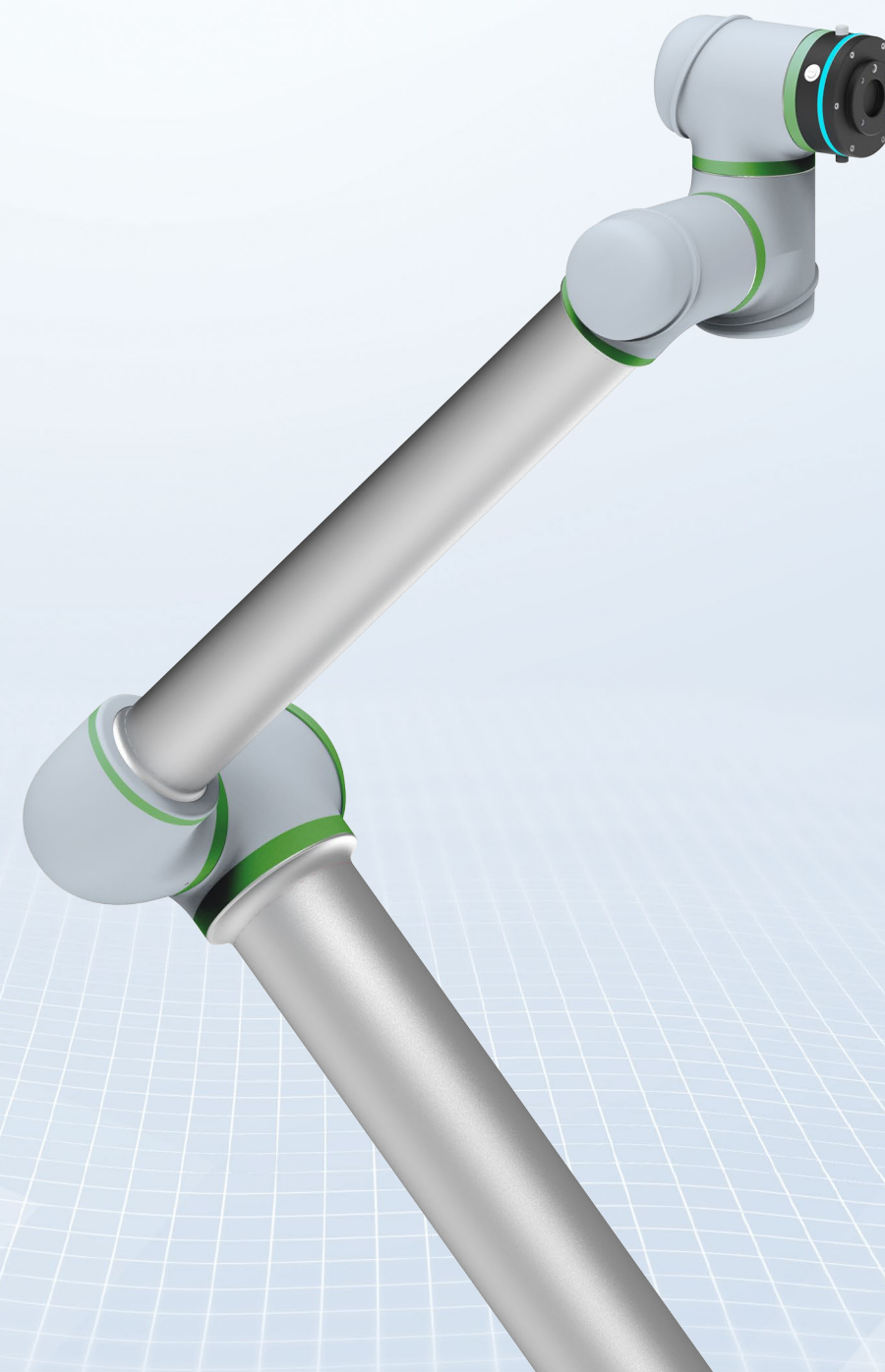# AUCTECH

Collaborative Robots

X Series

AUCTECH Makes Human Life
and Manufacturing More Convenient

AUCTECH Robotics

Tel: +086 020 8489 8493
Web: www.auctech.com.cn
Guangzhou Auctech Automation Technology Limited

AUCTECH 2024-V5.0

About AUCTECH

As the world's leading expert in next-generation intelligent robots and motion control, AUCTECH has been focusing on the R&D and innovation of flexible collaborative robots, industrial robots, motion control and intelligent manufacturing technologies.

Being committed to the field of intelligent manufacturing for a long time and help our customers to continuously improve the level of manufacturing automation, AUCTECH has taken technology research and development as its core, taking the lead in obtaining a number of self-developed patented technologies, and creating many industry firsts along the way: the first 7-Axis collaborative robot in China, the first dual-arm collaborative robot in China, the first 25kg large-load collaborative robot in China, the first 2m-long-arm-spread collaborative robot in China, and the first mobile collaborative robot in China. Driven by AUCTECH, China's collaborative robot industry is rapidly emerging.

Up to now, AUCTECH collaborative robots have been widely used in auto parts, 3C electronics, hardware tooling, automatic sewing, medical treatment, packaging and printing, metal processing, woodworking, energy, semiconductor, education and scientific research and other industries, the products are exported to Southeast Asia, North America, Europe and dozens of other countries and regions, the brand influence is renowned all over the world.

Intelligent collaboration for a better world. AUCTECH will continue to maintain its strength in research and innovation, with the power of wisdom, to promote the collaborative robotics industry, and more customers to go hand in hand to create a better future!
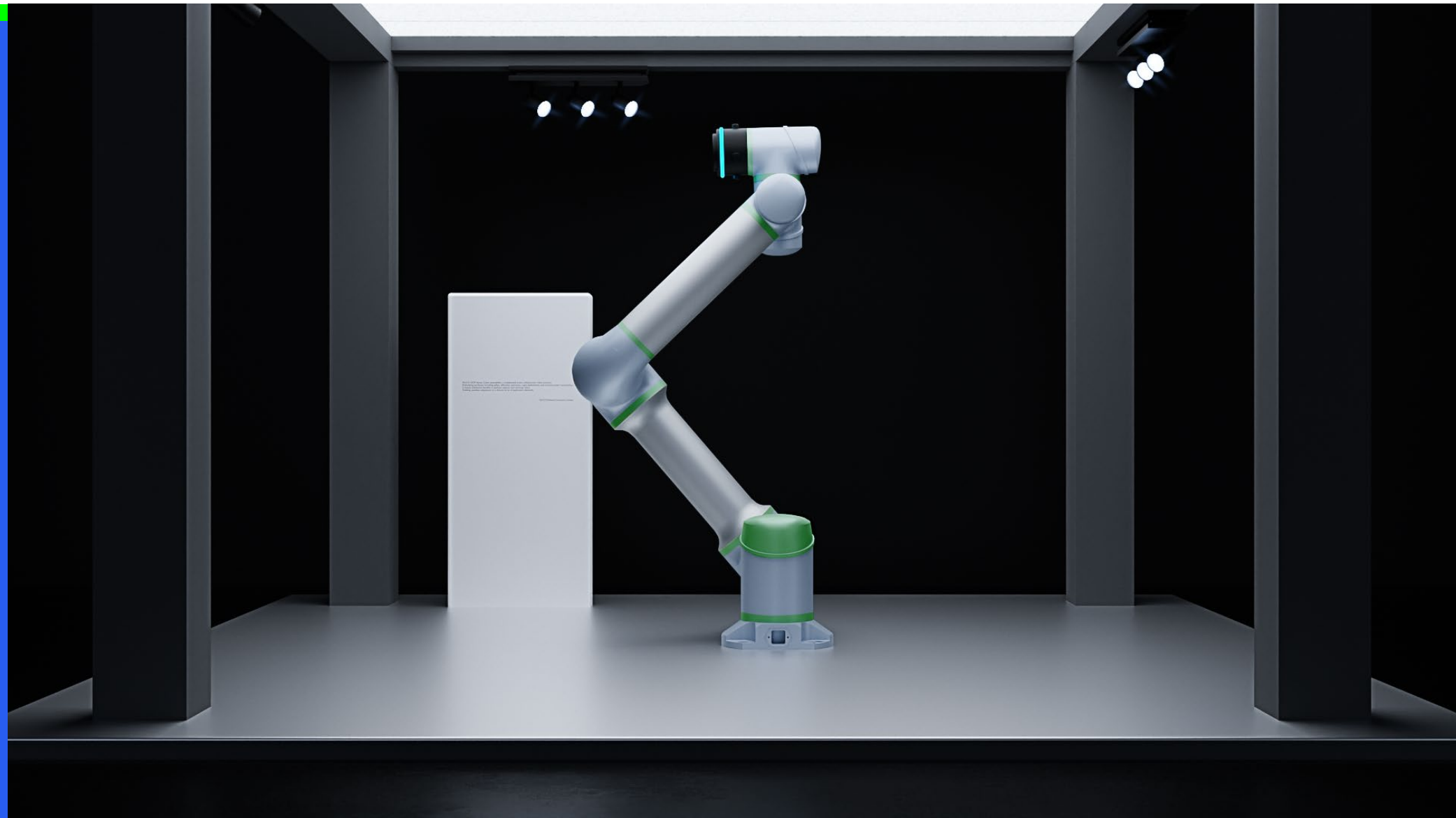
Brand Vision

- To Become A One-stop Supplier of Robotics and Motion Control for Global Market .
- To Improve The Automation Level of Industrial Manufacturing Continuously.
- To Make Human Life More Convenient.

AUCTECH Cobot

1   Standard 6-Axis Cobot
9   Explosion-proof Cobot (6-Axis)
19   7-Axis Cobot
23   Dual-arm Cobot

AUCTECH Mobile Cobot

13   AUCTECH Mobile Cobot
17   AUCTECH Delivery System

AUCTECH Mind

27   AUCTECH Mind

Standard 6-Axis Cobot

Safe

With 16 TUV certified safety functions such as collision detection, force and power monitoring, which enables human robot collaboration.

Smart

- Multiple scenario software packages added (welding, palletizing, etc.)
- A variety of external interface support (DI, DO, AI/O, etc.)
- Support cloud robot data monitoring, remote OTA upgrade.
- Supports one-click deployment of multiple devices and remote backup of data.

Wide Application

Premium: 30% Faster Trajectory

- 2D/3D vision deep compatibility.
- Torque control sensor and other ecological support perfect, support multi-application development.
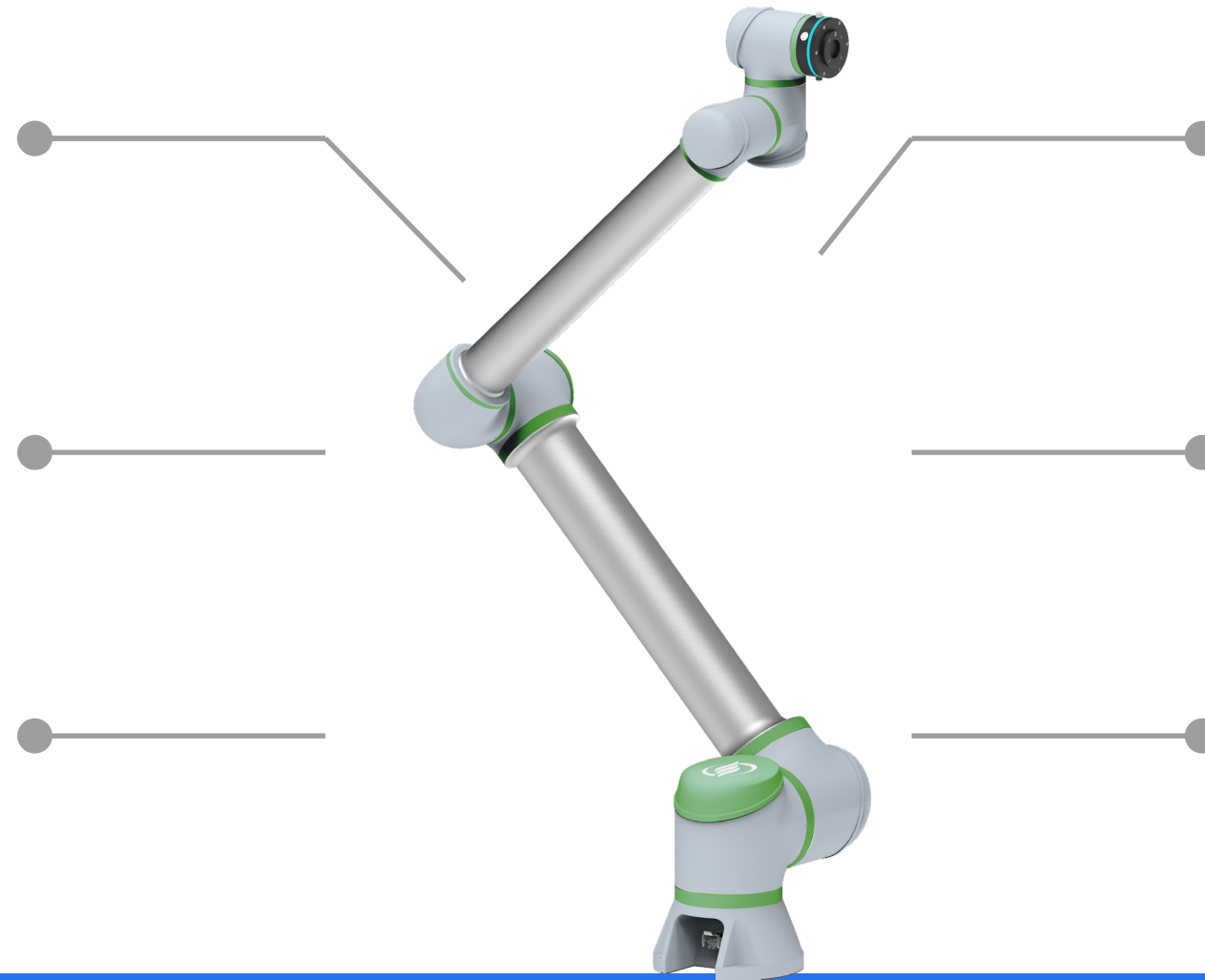
Easy Programming

Easy programming with traction teach programming, less limitation to robot user.

Light and High Rigidity

- High-load robots with load to weight ratios up to 1:2.44.
- Adoption of a new generation of robot control cabinets 50%.
- Reduction in size and 30% in weight.

Energy Saving Device

- Power consumption as low as 200W.
- No need to replace lubricating oil.

Product Introduction

There are ten types of 6-axis cobot: X30-1100, X25-1800, X20-1400, X16-2000, X16-960, X12-1300, X10-1300, X7-910, X5-910, X3-618. With significant advantages of higher payload and working range, and features of cobot such as collaborative safety, easy-to-use and energy-saving, these robots can adapt to more application needs.

Industry

| Petrochemical Industry | Automobile Industry | 3C Industry | Electric Industry | Medical Industry | Pan Industry | Consumer Goods Industry | Painting Industry | Education Industry |

Standard 6-Axis Cobot

	X30-1100	X25-1800	X20-1400	X16-2000	X16-960	X12-1300	X10-1300	X7-910	X5-910	X3-618
Max Payload	30kg	25kg	20kg	16kg	16kg	12kg	10kg	7kg	5kg	3kg
Degree of Freedom	6	6	6	6	6	6	6	6	6	6
Max TCP Speed	2.0m/s	2.5m/s	2.2m/s	4.0m/s	3.0m/s	3.8m/s	3.8m/s	3.6m/s	3.6m/s	1.0m/s
Max Straight-line Speed	1.0m/s	1.5m/s	1.0m/s	1.8m/s	1.5m/s	1.5m/s	1.5m/s	1.5m/s	1.5m/s	0.8m/s
Reach	1100mm	1800mm	1400mm	2000mm	960mm	1300mm	1300mm	917mm	917mm	618mm
Repeatability	±0.05mm	±0.05mm	±0.05mm	±0.03mm	±0.03mm	±0.03mm	±0.03mm	±0.02mm	±0.02mm	±0.02mm

Joint	range of motion	Max Speed				Max Speed					
J6	±360°	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s
J5	±360°	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s
J4	±360°	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s	225°/s
J3	±360°	180°/s	150°/s	180°/s	180°/s	225°/s	225°/s	225°/s	200°/s	225°/s	225°/s
J2	±360°	120°/s	100°/s	120°/s	120°/s	180°/s	180°/s	180°/s	200°/s	225°/s	225°/s
J1	±360°	120°/s	120°/s	120°/s	120°/s	180°/s	180°/s	180°/s	200°/s	225°/s	225°/s

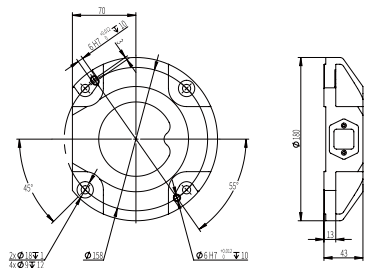|	X30-1100	X25-1800	X20-1400	X16-2000	X16-960	X12-1300	X10-1300	X7-910	X5-910	X3-618
Tool Interface	GB/T 14468.1-50-4-M6(eqv ISO 9409-1)				GB/T 14468.1-50-4-M6(eqv ISO 9409-1)					
End Joint I/O	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A	2 Dig I/O, 24V, 0.6A
Power Supply	220-240VAC 47-63Hz 10A/100-200VAC 47-63Hz 16A				100-240VAC 47-63Hz 10A					
Power Consumption	Typical Power Consumption 600W	Typical Power Consumption 600W	Typical Power Consumption 600W	Typical Power Consumption 400W	Typical Power Consumption 400W	Typical Power Consumption 400W	Typical Power Consumption 400W	Typical Power Consumption 200W	Typical Power Consumption 200W	Typical Power Consumption 200W
Installation	Land Type	Installed in Any Direction			Installed in Any Direction					
IP Class	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
Ambient Temperature Range	-10℃~50℃	-10℃~50℃	-10℃~50℃	-10℃~50℃	-10℃~45℃	-10℃~45℃	-10℃~45℃	-10℃~45℃	-10℃~45℃	-10℃~45℃
Storage Temperature Range	-40℃~55℃	-40℃~55℃	-40℃~55℃	-40℃~55℃	-40℃~55℃	-40℃~55℃	-40℃~55℃	-40℃~55℃	-40℃~55℃	-40℃~55℃
Robot Dimensions	1395x420x290mm	2300x440x252mm	1695x388x205mm	2300x388x205mm	1180x388x205mm	1512x388x205mm	1512x388x205mm	1100x330x200mm	1100x330x200mm	769x315x150mm
Robot Package Size	1060x540x840mm	1300x520x660mm	1060x500x740mm	1500x550x690kg	1060x500x600mm	1060x500x620mm	1060x500x620mm	700x370x440mm	700x370x440mm	540x340x440mm
Net/Gross Weight	64kg/82kg	61.6kg/80kg	66kg/86kg	60kg/84kg	37kg/53kg	37.8kg/52kg	37.8kg/52kg	22kg/26kg	22kg/26kg	13kg/17kg

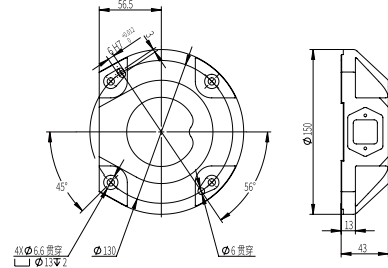# Standard 6-Axis Cobot

Base Flange ▶▶▶
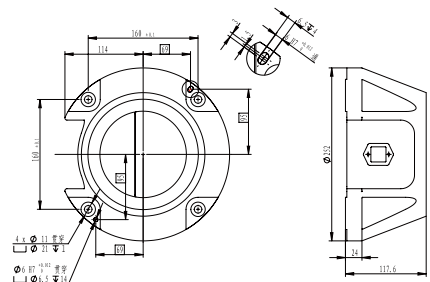
X25-1800/X30-1100
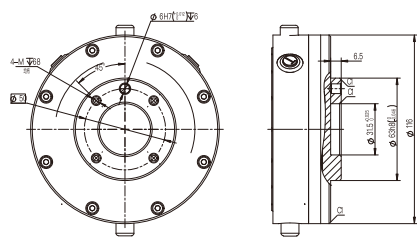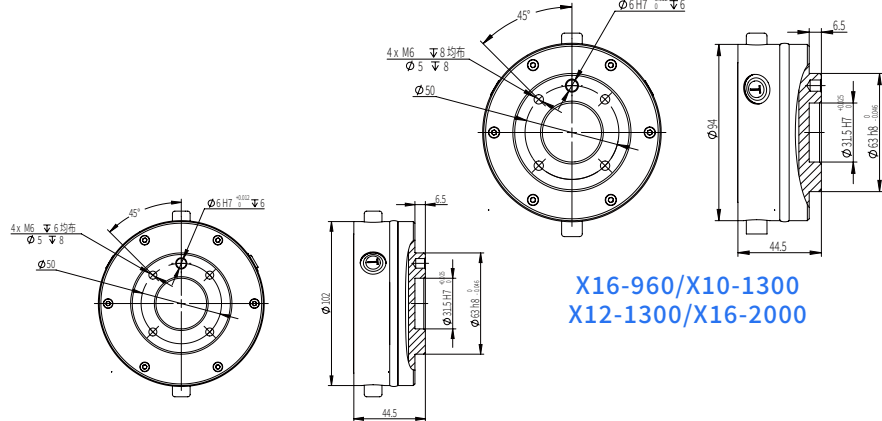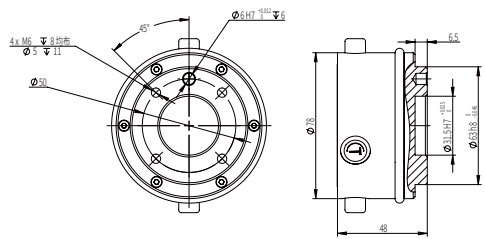X20-1400/X16-2000
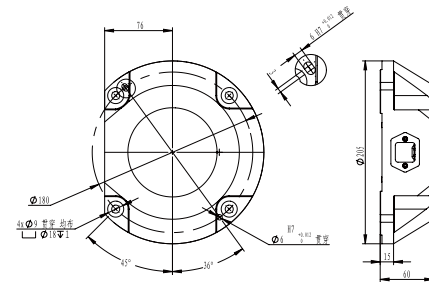
X16-960/X10-1300
X12-1300

X5-910/X7-910

X3-618
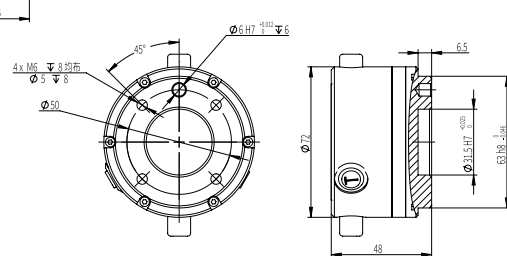
Tool Flange ▶▶▶

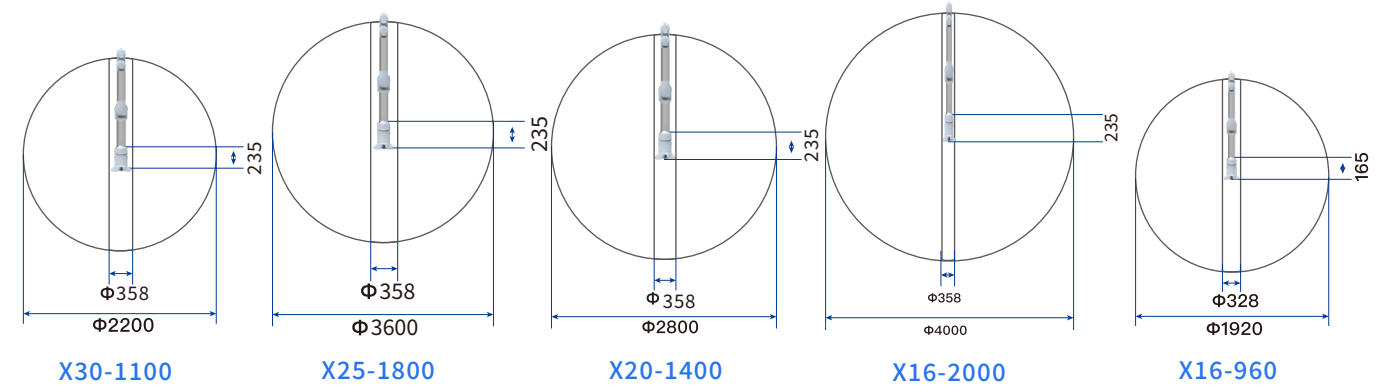X30-1100/X20-1400
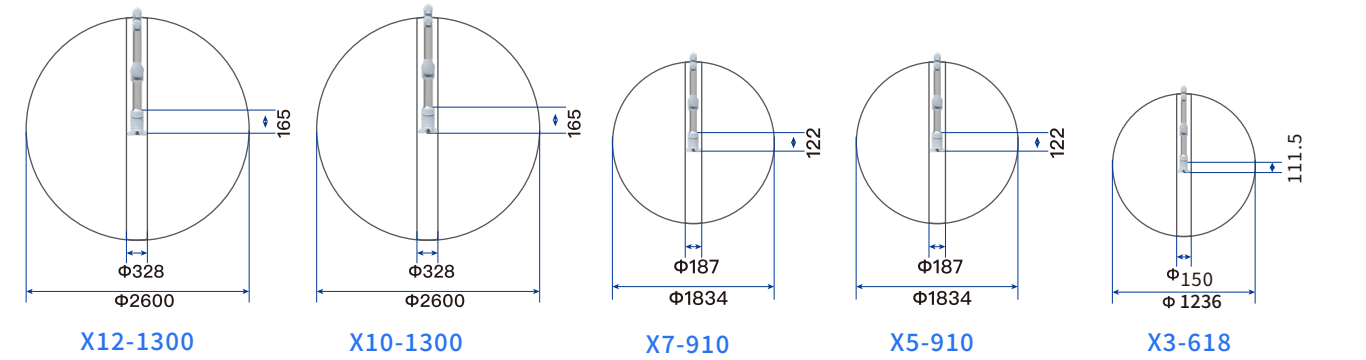
X16-960/X10-1300
X12-1300/X16-2000

X25-1800

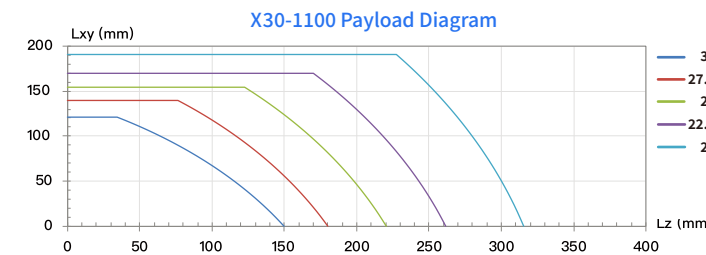X5-910/X7-910

X3-618

Work Space ▶▶▶

Φ358	Φ358	Φ358	Φ358	Φ328
Φ2200	Φ3600	Φ2800	Φ4000	Φ1920
X30-1100	X25-1800	X20-1400	X16-2000	X16-960
Φ328	Φ328	Φ187	Φ187	Φ150
Φ2600	Φ2600	Φ1834	Φ1834	Φ1236
X12-1300	X10-1300	X7-910	X5-910	X3-618

Payload Diagram ▶▶▶

X30-1100 Payload Diagram
- 30Kg
- 27.5Kg
- 25Kg
- 22.5Kg
- 20Kg
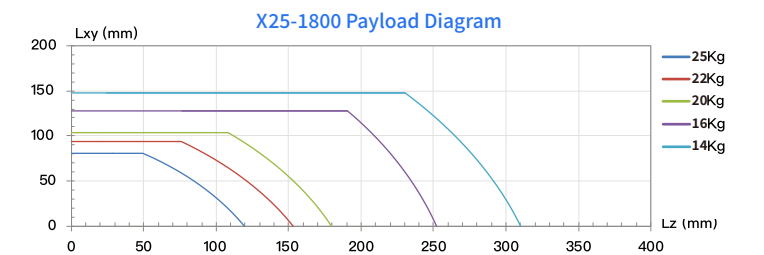
X25-1800 Payload Diagram
- 25Kg
- 22Kg
- 20Kg
- 16Kg
- 14Kg
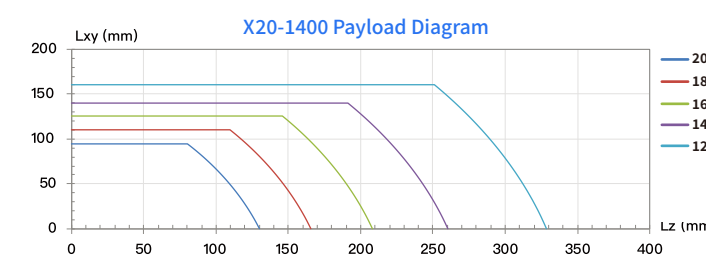
X20-1400 Payload Diagram
- 20Kg
- 18Kg
- 16Kg
- 14Kg
- 12Kg
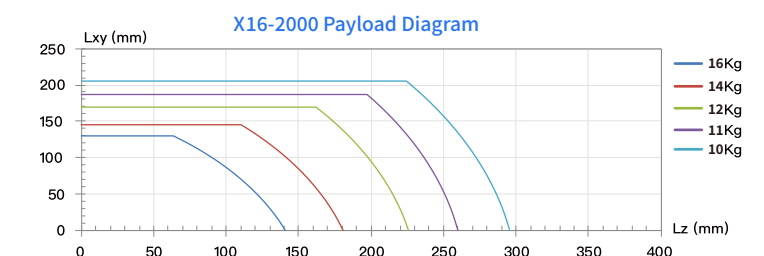
X16-2000 Payload Diagram
- 16Kg
- 14Kg
- 12Kg
- 11Kg
- 10Kg

Standard 6-Axis Cobot

Payload Diagram ▶▶▶

X16-960 Payload Diagram
Lxy (mm) vs Lz (mm)
- 16Kg
- 14Kg
- 12Kg
- 10Kg
- 8Kg

X12-1300 Payload Diagram
Lxy (mm) vs Lz (mm)
- 12Kg
- 11Kg
- 10Kg
- 9Kg
- 8Kg

X10-1300 Payload Diagram
Lxy (mm) vs Lz (mm)
- 10Kg
- 9Kg
- 8Kg
- 7Kg
- 6Kg

X7 -910 Payload Diagram
Lxy (mm) vs Lz (mm)
- 7Kg
- 6Kg
- 5Kg
- 4Kg

X5-910 Payload Diagram
Lxy (mm) vs Lz (mm)
- 5.0Kg
- 4.0Kg
- 3.0Kg
- 2.5Kg

X3-618 Payload Diagram
Lxy (mm) vs Lz (mm)
- 3.0Kg
- 2.5Kg
- 2.0Kg
- 1.5Kg
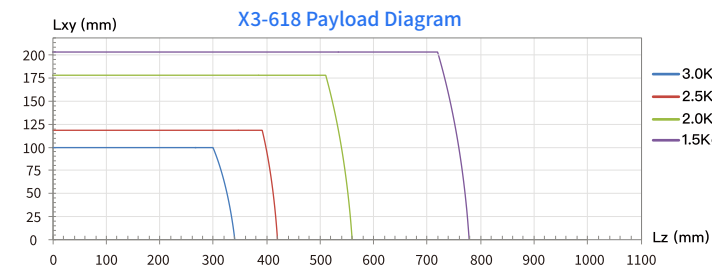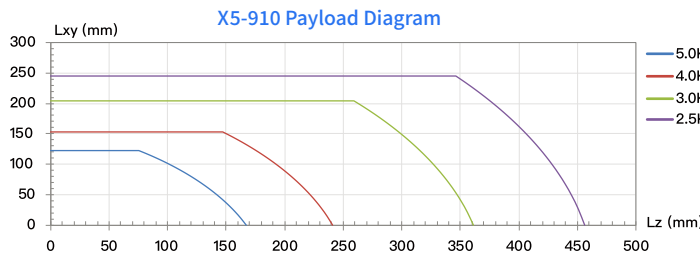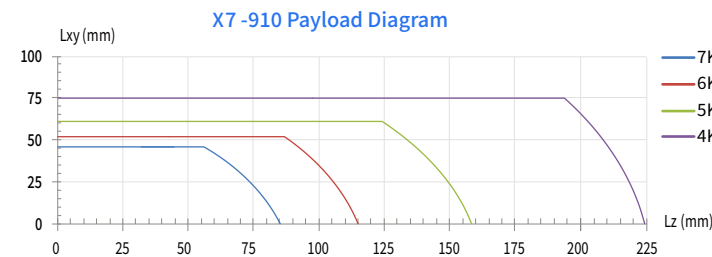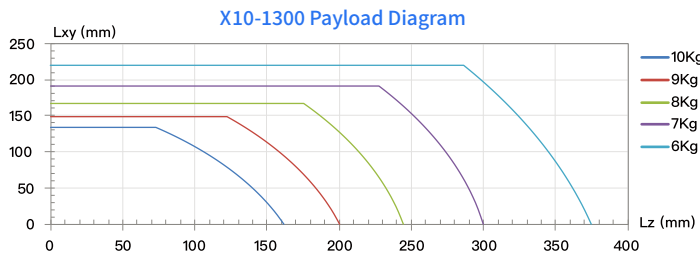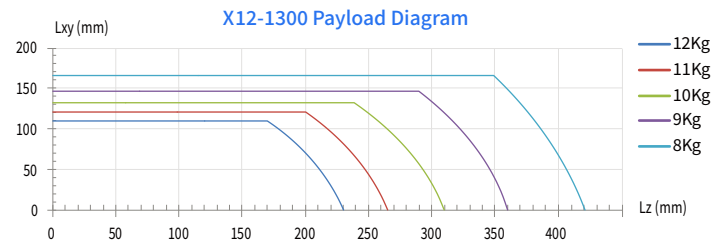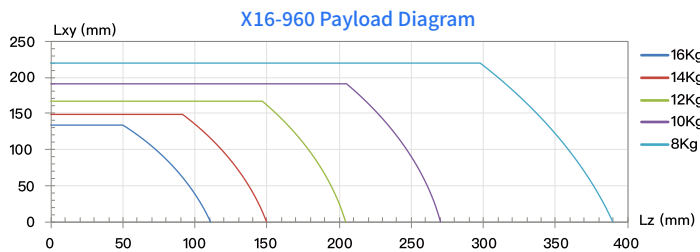
Control Box ▶▶▶

Control Box & Teach Pendant

The controller is used to control the robot's operations such as loading and unloading, grasping, polishing, handling, welding, gluing and oiling, as well as realizing the input and output control. The latest AUCTECH controller has tiny volume while taking into account the safety and flexibility, and has better performance in the field of human cooperation. It can be fully compatible with multiple series of robots, and also can be independently applied to automatic control systems.

410mm   306mm   292mm

1. System Switch
2. AC Input
3. Robot Arm Interface
4. Teach Pendant Shielding Interface
5. Teach Pendant Interface
6. ANT Interface (Optional WIFI)

1. LAN1+USB 3.0
2. LAN2+USB 2.0
3. COM1
4. EtherCAT2
5. EIO 2AI 2AO 485 INC CAN
6. CIO
7. DIO
8. SIO
9. IO POWER
10. VGA&COM3/4

User Interface ▶▶▶

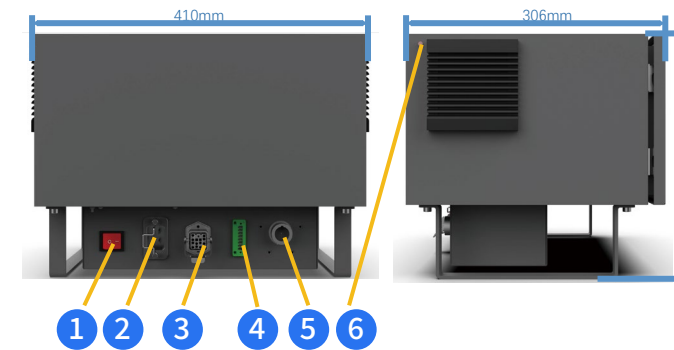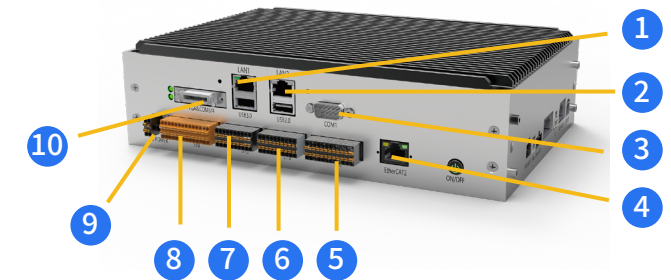| DI		
User DI	16 Channels (8 Channels can be equipped with functional DI)	
Input Effective Level	PNP, L: -3V-5V, H: 11V-30VDC, 2-15mA	
Switching Time	TON: 50ms TOFF: 50ms	

DO		
User DO	16 Channels (8 Channels can be equipped with functional DO)	
VOUT	PNP, 22-28V, Max: 0.5A	
LOUT	PNP, <2A (When exceeding 2A, the user needs to expand the power supply)	
Switching Time	TON: 50ms TOFF: 50ms	

AI/O		
Analog Signal Output 2 Channels + Analog Signal Input 2 Channels - (Electrical isolation)		
Signal Current	4-20mA Accuracy ± 1%	
Input Impedance	160Ω	
Signal Voltage	0-10V Accuracy ± 1% (Factory Default)	
Input Impedance	15kΩ	

SDI		
Emergency Signal Input	1 Channels (Passive signal, dry contact input)	
Protective Stop Input	1 Channels (Passive signal, dry contact input)	
Configurable Secure Input	2 Channels (Passive signal, dry contact input)	

SDO		
Configurable Secure Output	2 Channels (PNP Active Signal)	
Emergency Stop Feedback Output	1 Channels (PNP Active Signal)	
VOUT	23.52V-25.2VDC (Max 0.5A SCP)	

Communication/COM

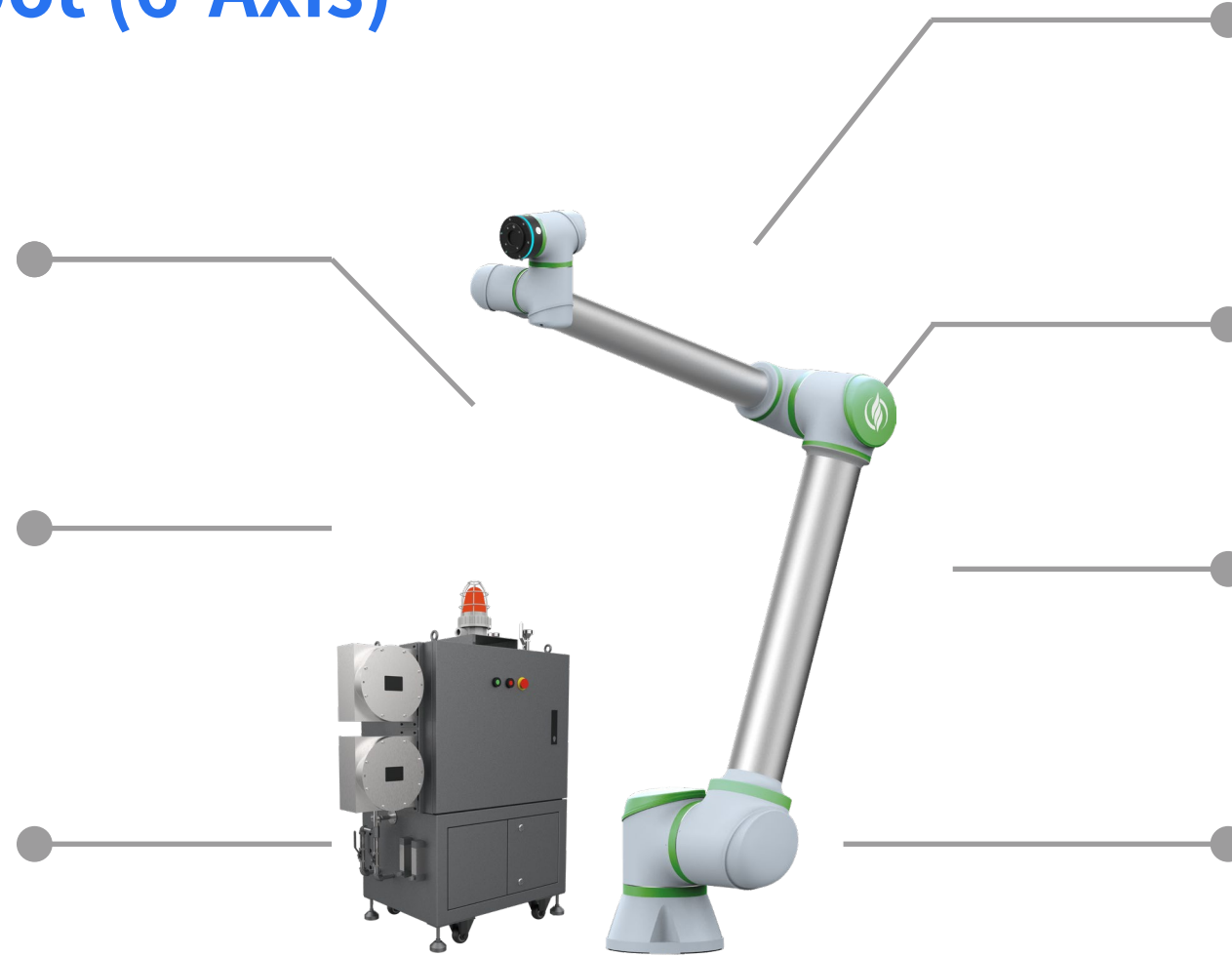| CAN	1 Channels, bps configurable10k, 20k, 50k, 100k, 125k, 250k, 500k, 1000k bps
RS485	1 Channels, bps configurable 4800, 9600, 19200, 38400, 115200 bps
LAN	2-way (1-way gigabit, 1-way 100Mbit) Support MODBUS TCP, PROFINET, TCP IP
EtherCAT	1 Channels, EtherCAT COM
INC Encoder Signal A+, A-; B+, B-;Z+,Z-	Working voltage: 24VDC Frequency: <200KHz Input: square wave signal

Explosion-proof Cobot (6-Axis)

Smart

Can configured various intelligent sensing devices to conduct real-time collection and intelligent analysis of on-site environmental data, improve the digital operation and maintenance ability comprehensively of enterprises.

Explosion Proof

Explosion Proof: Ex db eb pxb IIC T4 Gb/Ex pxb tb IIC T130°C Db.

Wide Application

More payload and working range options for larger scale of applications.

Multiple Explosion-proof Design

Multiple explosion-proof design, it can work normally at an ambient temperature of 50°C.

Easy Programming

With traction teach programming, less limitation to robot user.

Replace High-risk Operator

Replace the front-line high-risk operators in all kinds of flammable, explosive, toxic, harmful, high-temperature and high-pressure oil, natural gas and chemical environments, and carry out work all day long.

Light and High Rigidity

Lightweight space-saving: Can be quickly deployed and redeployed to adapt to production line changes.

Product Introduction

This series includes four explosion-proof collaborative robot products: X25-1800 ATEX, X20-1400 ATEX, X16-2000 ATEX, X10-1300 ATEX. As a protective wall for front-line high-risk personnel, it can replace front-line high-risk operators to work in various flammable, explosive, toxic, harmful, high-temperature and high-pressure oil, natural gas and chemical environments.The significant advantages of load handling and working radius makes it suitable for a wider range of application requirements. These models are also equipped characteristics such as safety, easy operation, quick deployment, and low power consumption.

Industry

Petrochemical Industry

Automobile Industry

3C Industry

Electric Industry

Medical Industry

Pan Industry

Consumer Goods Industry

Painting Industry

Education Industry

Explosion-proof Cobot (6-Axis)

Control Box ▶▶▶

Weight	160kg
Size	1370*975*520mm
Power Supply	200-240VAC, 47-63HZ, 8A/100-200VAC, 47-63HZ, 16A
Rated Power	600W
Cable Length	5m (For other specifications, please consult your dealer)
Communication Mode	TCP/IP, Modbus/TCP, CAN, RS485, Profinet
Communication I/O	8DI, 8DO(PNP, 24V/MAX500mA)
Expand I/O	16DI, 16DO(PNP, 24V/MAX500mA)/4AI(Voltage), 4AI(Current)
IP Class	IP65
Operation Temperature	-10℃-50℃
Storage Temperature	-40℃-55℃
Humidity	20%-90%RH
Explosion Proof	Ex db eb pxb IICT4Gb/Ex pxb tb IIIC T130℃ Db
Type of Gas Source	Clean Air
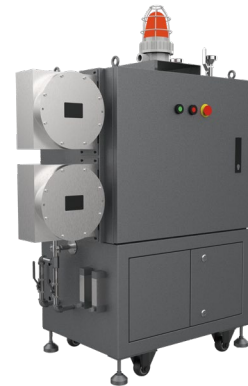
Control Box

Teach Pendant ▶▶▶

Size	248x172x22mm
OS	Android 10.0
Resolving Power	1280*800
VGA Size	10.1 16:10
IP Class	IP68
Weight	1095g
Power	AC100V~240V, 50Hz/60Hz, Output DC 5V/3A
DC Ports	DC 5V-3A ∮3.5mm

Technical Parameters ▶▶▶
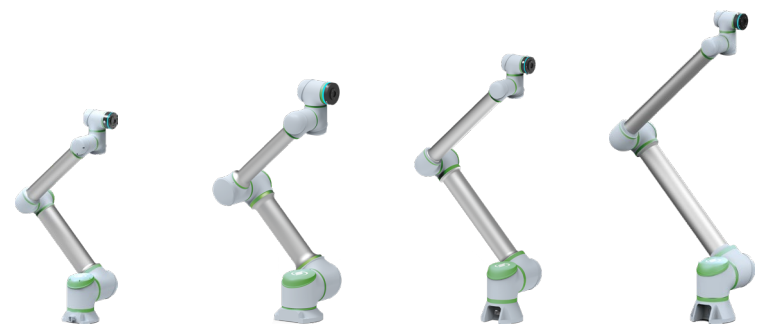
X10-1300 ATEX X20-1400 ATEX X25-1800 ATEX X16-2000 ATEX

Please refer to the standard 6-axis cobot form for specific model and technical parameters details

IP Class	Explosion Proof Level	Type of Gas Source
IP 65	Ex db eb pxb IICT4Gb/ Ex pxb tb IIIC T130℃ Db	Clean Air

Diagram of the Base ▶▶▶
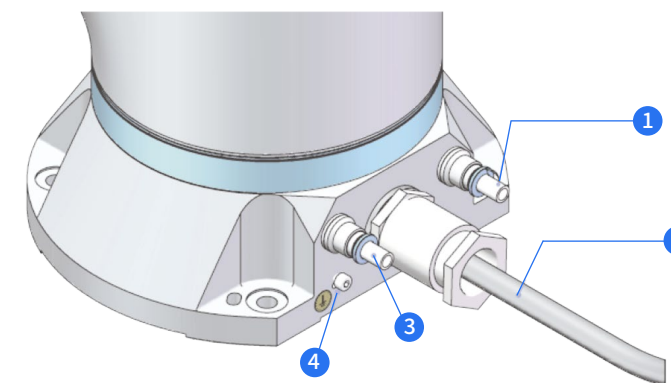
1 Mechanical Arm Air Inlet
2 Cable Flame Retardant Grade VW-1
3 Pressure Detection Port (Connected to Pressure Transmitter)
4 Grounding Wire (Effective Cross-sectional Area Shall not be less than 4mm^2)

Diagram of the Tool ▶▶▶

1 Air Outlet Silencing Device
2 Tool Flange Body
3 Sealed Light Strip
4 Tool Flange Cover
5 Teach Button

AUCTECH Mobile Cobot

Customized Wheel Train

The customized wheel train for AUCTECH mobile cobot comes more stable and reliable.

360° Security Protection

Real-time 360° security protection achieves man-machine security cooperation.

Complete Ecological Technical Support

Efficient docking of various tools and more convenient for grasping.

B-Series

T-Series

L-Series

Integrated Teach Screen
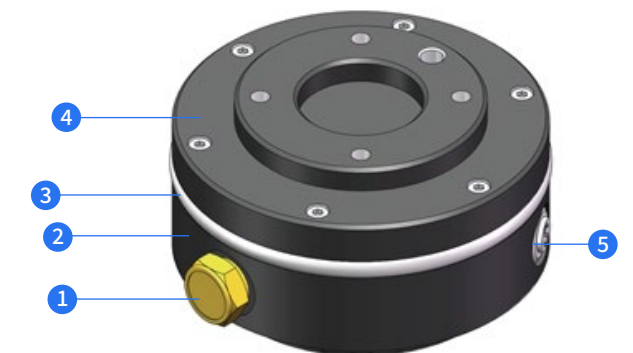
Realize visual linkage debugging of mobile platform and collaboration arm on one screen, fast deployment.

Charging Variety

Contact/wireless/automatic charging mode, meeting the requirements of short-time, real-time and 7 * 24 all-day operation.

Integrated & Open Controller

Open programming environment+ multiple communication and data interfaces+independent detection can meet more customization requirements.

Product Introduction

AUCTECH ARV(AGV+ROBOT) is integrated with independently developed mobile platforms and Cobot, with independently developed vision and fixture and other execution units to realize functional applications such as material handling, assembly, detection and precision processing. AUCTECH ARV(AGV+ROBOT) has comprehensive security protection, multiple interaction and communication modes and can well interface with customer systems. It can also provide customized solutions, customized scheduling system, on-site guidance and perfect after-sales service to ensure customer experience. As a standardized product, AUCTECH ARV(AGV+ROBOT) offers consistency, reliability and stability not found in non-standard equipment.

Industry

| Petrochemical Industry | Automobile Industry | 3C Industry | Electric Industry | Medical Industry | Pan Industry | Consumer Goods Industry | Painting Industry | Education Industry |

AUCTECH
Mobile Cobot

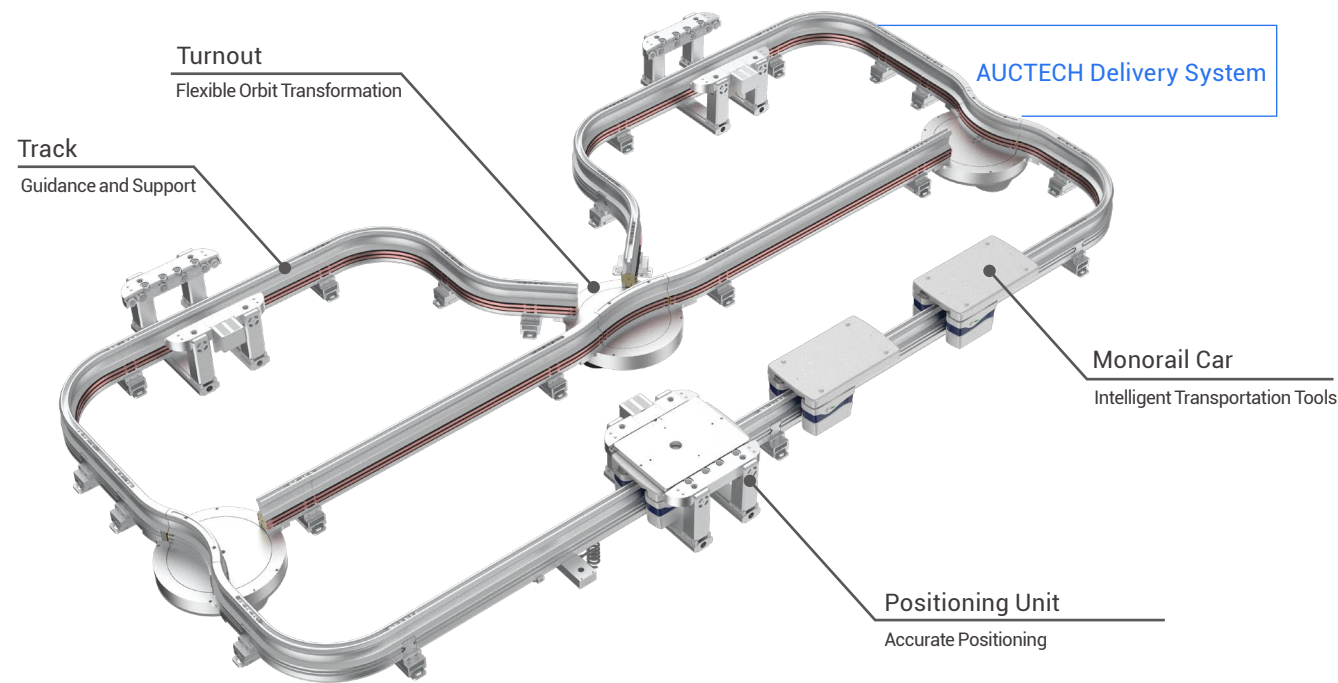|		AM-X2-B	AM-X3-B	AM-X4-B	AM-X6-B	AM-X2-T	AM-X2-L
Dimensions (L*W*H, excluding cooperation arm and side obstacle avoidance laser)		1250mm×600mm×700mm	950mm×600mm×700mm	800mm×600mm×700mm	1250mm×700mm×800mm	1250mm×600mm×1070mm	1250mm×600mm×700mm
Comprehensive Accuracy		±0.3mm		±0.3mm			
Total Weight		About 320/330/361/350/360KG (Equipped with collaborative arm X5/10/16/20/30)	About 270/280/300/KG (Equipped with collaborative arm X5/10/16/20)	About 247/260KG (Equipped with collaborative arm X5/10)	About 392/405/436/435KG (Equipped with collaborative arm X5/10/20/30)	About 330/361/350/360KG (Equipped with collaborative arm X10/16/20/30)	About 320/330/361/350/360KG (Equipped with collaborative arm X5/10/16/20/30)
Navigation Mode		SLAM & QR CODE		SLAM & QR CODE			
Cobot Payload		5kg/10kg/16kg/20kg/30kg (Equipped with collaborative arm X5/10/16/20/30)	5kg/10kg/16kg/20kg (Equipped with collaborative arm X5/10/16/20)	5kg/10kg (Equipped with collaborative arm X5/10)	5kg/10kg/20kg/30kg (Equipped with collaborative arm X5/10/20/30)	10kg/16kg/20kg/30kg (Equipped with collaborative arm X10/16/20/30)	5kg/10kg/16kg/20kg/30kg (Equipped with collaborative arm X5/10/16/20/30)
Platform Load		670kg Max	350kg Max	120kg Max	470kg Max	100kg Max	670kg Max
Mobile Capability	Driving Form	Two-wheel Differential	Two-wheel Differential	Two-wheel Differential	Mecanum Wheel	Two-wheel Differential	Two-wheel Differential
	Turning Radius	500mm Min	500mm Min	500mm Min	/	500mm Min	500mm Min
	Crab Speed (Any Angle)	/	/	/	≤0.5m/s	/	/
	Width of Walking Passage	900mm Min	900mm Min	900mm Min	1000mm Min	900mm Min	900mm Min
	Movement Speed	≤1m/s	≤1m/s	≤0.8m/s	≤0.8m/s	≤1m/s	≤1m/s
	Turning Speed	≤0.5m/s	≤0.5m/s	≤0.5m/s	≤0.5m/s	≤0.5m/s	≤0.5m/s
	Obstacle Clearance Height	10mm	10mm	10mm	10mm	10mm	10mm
	Trench Width	30mm	25mm	30mm	80mm	30mm	30mm
	Ground Clearance	30mm	30mm	30mm	45mm	30mm	30mm
	Gradeability	<5°	<5°	<5°	<5°	<5°	<5°
Parking Accuracy		±5mm position accuracy, ±1° angle accuracy		±5mm position accuracy, ±1° angle accuracy			
Battery Performance	Battery	DC51.2V Lithium iron phosphate LFP / DC51.2V Lithium iron phosphate LFP (Option)	DC51.2V Lithium iron phosphate LFP / DC51.2V Lithium iron phosphate LFP (Option)	DC51.2V Lithium iron phosphate LFP / DC51.2V Lithium iron phosphate LFP (Option)	DC51.2V Lithium iron phosphate LFP / DC51.2V Lithium iron phosphate LFP (Option)	DC51.2V Lithium iron phosphate LFP / DC51.2V Lithium iron phosphate LFP (Option)	DC51.2V Lithium iron phosphate LFP
	Capacity	52Ah / 80Ah	42Ah / 80Ah	28Ah / 42Ah/80Ah	42Ah / 80Ah	52Ah / 80Ah	52Ah
	Running Time	About 5.5 hours / About 8 hours	About 5.5 hours / About 8 hours	About 5.5 hours / About 8 hours	About 5.5 hours / About 8 hours	About 5.5 hours / About 8 hours	About 5.5 hours
	Charging Time	≤1.8h / ≤2h	≤1.5h / ≤2h	≤1.5h / ≤2h	≤1.5h / ≤2h	≤1.8h / ≤2h	≤1.8h
Charging Mode		Contact Charging / Wireless Charging / Converter (Both Manual and Automatic Support)		Contact Charging / Wireless Charging / Converter (Both Manual and Automatic Support)			Contact Charging (A/M)
Safety Device		Collision Detection/Safety Contact/Obstacle Avoidance Laser/Emergency Stop, etc.		Collision Detection/Safety Contact/Obstacle Avoidance Laser/Emergency Stop, etc.			
Interface	Hardware Support	Hardware Support CAN bus, RS-485, RS-232, RJ45, USB		Hardware Support CAN bus, RS-485, RS-232, RJ45, USB			
	Communication Protocol	Communication Protocol Support CANOPEN, Modbus, etc.		Communication Protocol Support CANOPEN, Modbus, etc.			
Button		Start Button/Pause Button/Reset Button/Teach Button		Start Button/Pause Button/Reset Button/Teach Button			
Use Environment	Ambient Temperature	Ambient Temperature: -10℃~45℃		Ambient Temperature: -10℃~45℃			
	Ambient Humidity	Ambient Humidity: 5%~95 % (No Condensation)		Ambient Humidity: 5%~95 % (No Condensation)			
	Runtime Environment	Indoor Use Only		Indoor Use Only			
	Cleanliness	None/ Class6(Class 1000) / Class5 (Class 100)		None/ Class 6 (Class 1000) / Class 5 (Class 100)			

（1）The comprehensive accuracy depends on the accuracy of the end positioning device, the parking accuracy of the mobile platform, and the accuracy of the collaborative arm end.
（2）The operating time depends on requirements such as operating conditions and rhythm.
（3）Models X25-1800 and X16-2000 are not recommended because of their long arm span which may cause overturning risk when used with AGV. please consult the manufacturer if necessary.

AUCTECH Delivery System

Turnout
Flexible Orbit Transformation

AUCTECH Delivery System

Track
Guidance and Support

Monorail Car
Intelligent Transportation Tools

Positioning Unit
Accurate Positioning

AUCTECH Delivery System can organically connect production equipment and process flow. The system plans the path of the trolley based on the starting point and destination of material transportation, achieving fully automatic material transportation and meeting the requirements of flexible production systems for material transportation. It has the characteristics of energy-saving, clean, efficient, and flexible. The installation method of the multi transmission system is very flexible, which can be lifted or installed on the ground, and has unique advantages in situations where the production area is very tight.

Main Modules ▶▶▶

Track and Accessories

• Guidance and Support   • Full Track Power Supply   • Sensor Installation   • Multiple Specifications   • Flexible Combination

AUCTECH Delivery System track system provides path guidance for the trolley during operation. The power supply system is laid along the track to provide power for the entire track. The track system of AUCTECH Delivery System has various specifications of length and bending radius, which can be flexibly combined and configured according to needs.

Track Connection and Power Supply Module

• Track Connection   • Power Connection   • Force Fulcrum   • Track Installation Adjustment

The track connection and power supply module of AUCTECH Delivery System is an indispensable organic component of the track system, which can connect different tracks, guide the power supply to connect to the tracks and support the system's force.
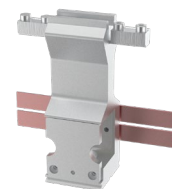
Monorail Car

• Motor Drive   • Wireless Communication   • Anti-collision   • Anti-blocking Rotation   • Running Status Display

The monorail car is the core component of AUCTECH Delivery System and is an intelligent material transportation vehicle operating in orbit. The car receives power from the track and is driven by the onboard power system. It has the characteristics of anti-collision, anti-blocking rotation, and display of operating status.

Positioning Unit

• Motor Drive   • Path Switch   • Anti-blocking Rotation   • Locking in Place   • Programmable Controller   • Power-on Reset Self Check   • Combined Application

Turnouts are key modules that control the operation of small cars along different paths through AUCTECH Delivery System. By setting the turnout reasonably, the main and branch roads of the track system can be formed, as well as the function of dividing the track main road into different branches and merging them into the main road.
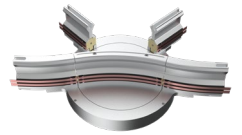
Track and Accessories

• Cylinder Drive   • Accurate Positioning   • Horizontally Adjustable   • Operating Load Support

The positioning unit is a unit that interacts between AUCTECH Delivery System and production process equipment and stations, and is also a station for precise positioning of on-board materials.

Communication Module

• Optoelectronic Communication   • Status Display   • Flexible Layout   • Programmable Controller   • Trolley Start Control   • I/O & RS232

The communication module is the core module for communication between the car and the upper control system. The control system can wirelessly communicate with the car through the communication module, query the car's information, and control its operation.

Technical Parameters ▶▶▶

Track Straight Section and Accessories

Spec.	Value
Weight (kg)	5.6
Material	Aluminum Alloy
Surface	Anodization
Accessories1	Ni-Cu
Accessories2	Plastics

Track Bends and Accessories

Spec.	Value			
Size	90°R220	45°R220	90°R520	45°R520
Weight (kg)	3.7	2.2	7.8	4.3
Material	Aluminum Alloy			
Surface	Anodization			
Accessories1	Ni-Cu			
Accessories2	Plastics			

Track connection and power supply module and accessories

Spec.	Value
Weight (kg)	0.5
Material	Aluminum Alloy
Accessories1	Cu
Accessories2	Plastics
Accessories3	Steel

Track and Accessories

Spec.	Value
Size (mm)	325 X 410 X 170
Weight (kg)	7.8
Positioning Accuracy (mm)	±0.1
Operating Pressure (bar)	4-6
KPa (bar)	5
Gas Circuit Connection	ø4mm

Monorail Car

Spec.	Value
Size (mm)	350 X 203 X 150
Weight (kg)	≤4.5
Max Operating Speed (m/min)	36 or 60 (Optional)
Deceleration Running Speed (m/min)	20 (Adjustable)
Max Weight (kg)	11 (Excluding Dead Weight)
Parking Accuracy (mm)	±1
TRNF	Rolling Contact
Running Direction	Forward and Reverse
Supply Voltage (VDC)	24

Turnout

Spec.	Value
Material	Aluminum Alloy
Rotation Angle (Main Road/Guide)	60，150，210
Rotation Angle (Diversion/Convergence)	120，240
Joint	1xRS232, 3xDI, 4xDO
Load (kg)	34 (Incldunig Dead-Weight)
Supply Voltage (VDC)	24
Weight (kg)	14
Rotation Time	150°=1.4s, 60°=0.65s, 210°=1.9s
Rotation Time	120°=1.3s, 240°=2.3s

Communication Module

Spec.	Value
Size (mm)	130x56x30
Weight (kg)	0.5
Supply Voltage (VDC)	24
DI	3
DO	3
RS232	1

7-Axis Cobot

Product Features ▶▶▶

X3-600 7A   X5-800 7A

More Flexible
With 7 degrees of freedom, the robot can work well in compact space.

Safe
Collision detection function enables human robot collaboration.

Easy Programming
with traction teach programming, less limitation to robot user.

More Accurate
Repeatability up to ±0.02mm.

Economic Efficient
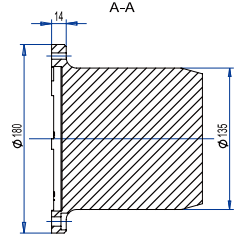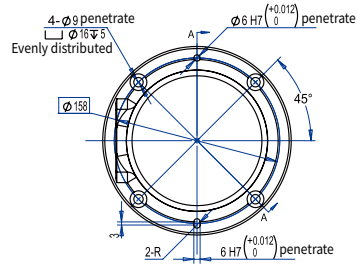Power consumption 250W.

7-Axis Cobot has various functions such as rapid deployment, traction teaching and collision detection. It is particularly suitable for flexible production lines with compact layout and high precision to conduct precision assembly, product packaging, polishing, testing, machine loading and unloading and other industrial operations. 7-Axis Cobot, with its high flexibility, precision, and safety, will open up a brand new way of industrial production and lead the new era of human-machine collaboration.

Technical Parameters ▶▶▶

	X3-600 7A		X5-800 7A	
Max Payload	3kg		5kg (5.5kg*1)	
Degree of Freedom	7		7	
Max TCP Speed	2.5m/s		2.0m/s	
Max Straight-line Speed	1.0m/s		1.0m/s	
Reach	600mm		800mm	
Repeatability	±0.02mm		±0.02mm	
Joint	Range	Max Speed	Range	Max Speed
J7	Infinite Spins	180°/s	±180°	180°/s
J6	±120°	180°/s	±110°	180°/s
J5	±180°	180°/s	±180°	180°/s
J4	±120°	180°/s	±115°	180°/s
J3	±180°	180°/s	±180°	180°/s
J2	±115°	180°/s	±105°	180°/s
J1	±180°	180°/s	±180°	180°/s
Tool Interface	GB/T 14468.1-50-4-M6(eqv ISO 9409-1)		GB/T 14468.1-50-4-M6(eqv ISO 9409-1)	
I/O — Control Box I/O	14 Dig I/O, 24V, 0.5A		14 Dig I/O, 24V, 0.5A	
I/O — End Joint I/O	2 Dig I/O, 24V, 1A		2 Dig I/O, 24V, 1A	
Power Supply	230VAC (-15%~+10%), 50-60Hz		230VAC (-15%~+10%), 50-60Hz	
Power Consumption	Typical Power Consumption 250W		Typical Power Consumption 400W	
Robot Dimensions	1035x232x202mm		1285x220x240mm	
Control Box Size	530x480x180mm		530x480x180mm	
Installation	Installed in Any Direction		Installed in Any Direction	
Ambient Temperature Range	-10℃~45℃		-10℃~45℃	
Storage Temperature Range	-40℃~55℃		-40℃~55℃	
IP Class	IP54		IP54	
Robot Package Size	735x635x350mm		735x635x350mm	
Control System Package Size	698x588x450mm		698x588x450mm	
Net/Gross Weight	24kg/34kg		24kg/33kg	

7-Axis Cobot

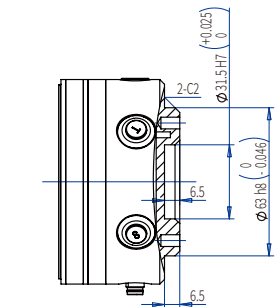## Base Flange ▶▶▶

X3-600 7A
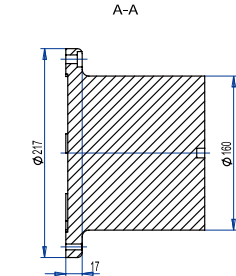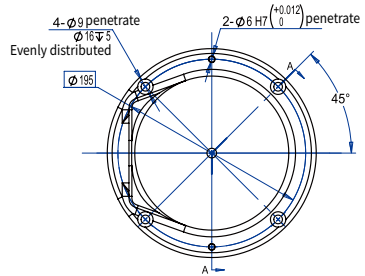
X5-800 7A

Tool Flange ▶▶▶
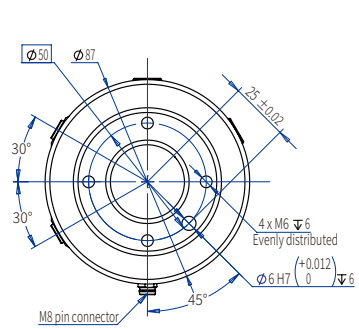
X3-600 7A

X5-800 7A

Work Space ▶▶▶

175
400
400
310
289

SR800
SR400

X3-600 7A

135
300
300
300
150

SR600
SR300
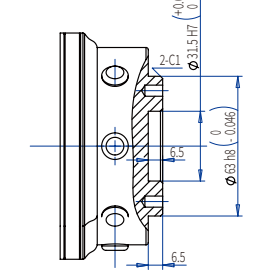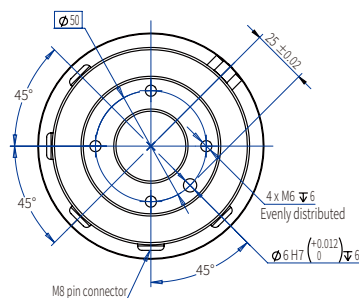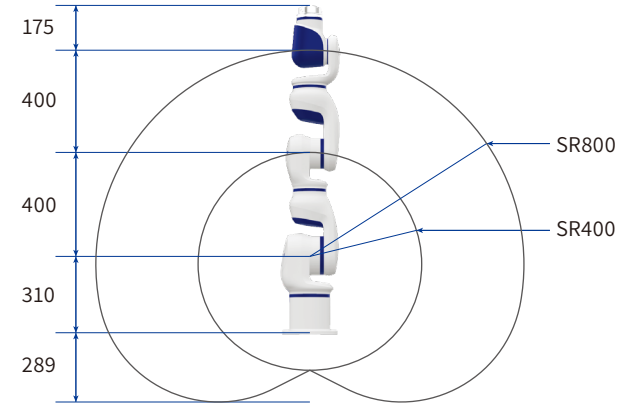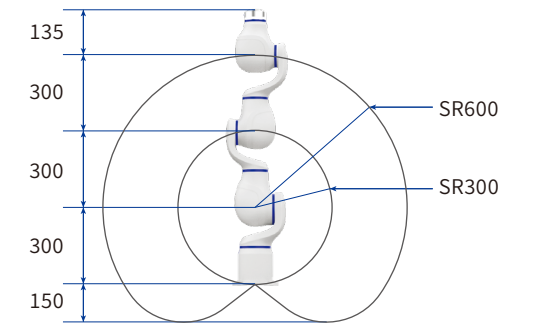
X5-800 7A

Payload Diagram ▶▶▶

X3-600 7A Payload Diagram

Lxy (mm)

— 3.0Kg
— 2.5Kg
— 2.0Kg
— 1.5Kg

Lz (mm)

X5-800 7A Payload Diagram

Lxy (mm)

— 5.0Kg
— 4.0Kg
— 3.0Kg
— 2.5Kg
— 2.0Kg
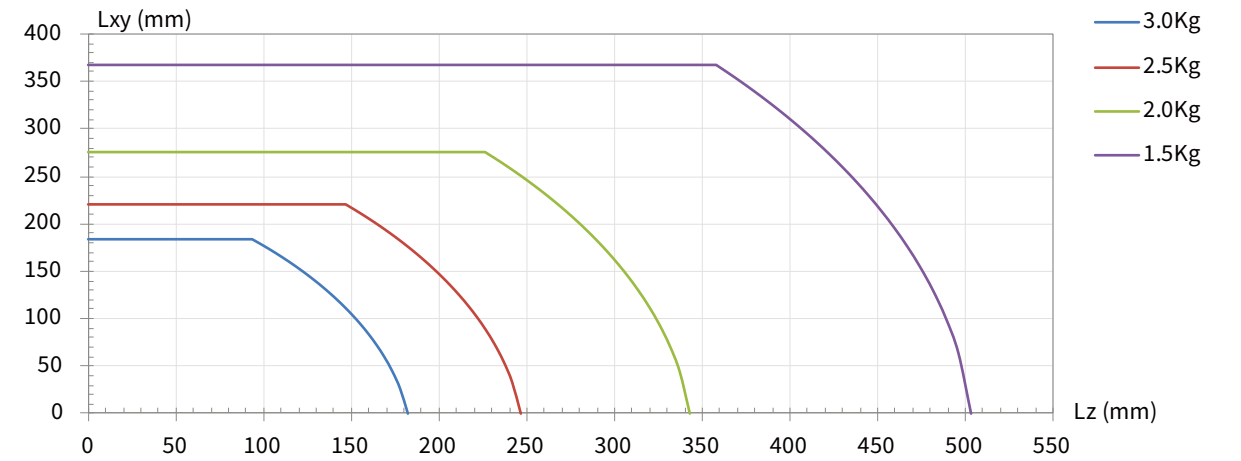
Lz (mm)
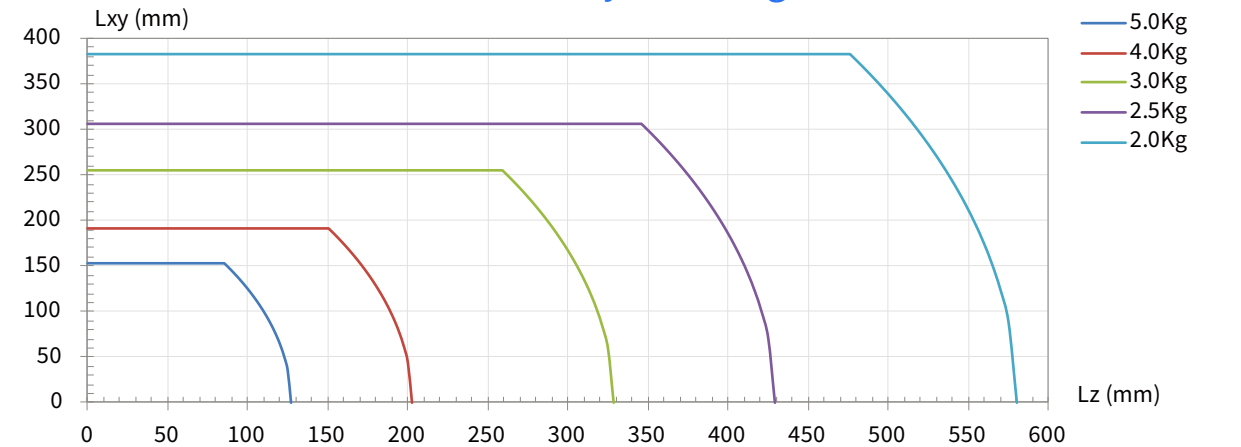
X Series Palletizing Work Station

Product Features ▶▶▶

Flexible Deployment

Modular design, easy to transport, fast deployment, and flexible production.

Safe and Efficient

No safety fence is required, and operators can work together with robots; Replace heavy handling work, reduce labor intensity, and improve production efficiency.

Easy Operation

Movable base cabinet, complete palletizing process kit, easy to program and debug, quick to get started.

Wide Application

Suitable for industries such as food, medical, and electronics.

Product Composition ▶▶▶

❶ Collaborative Robot

❷ Electrical Control Cabinet

❸ End Suction System such as Vacuum Gripper

❹ Lifting Column（Optional）

❺ Safety Peripherals such as Safety Laser Scanner（Optional）

❻ Teach Pendant With PalletStudio System

❼ Movable Base and Pallet Positioning System
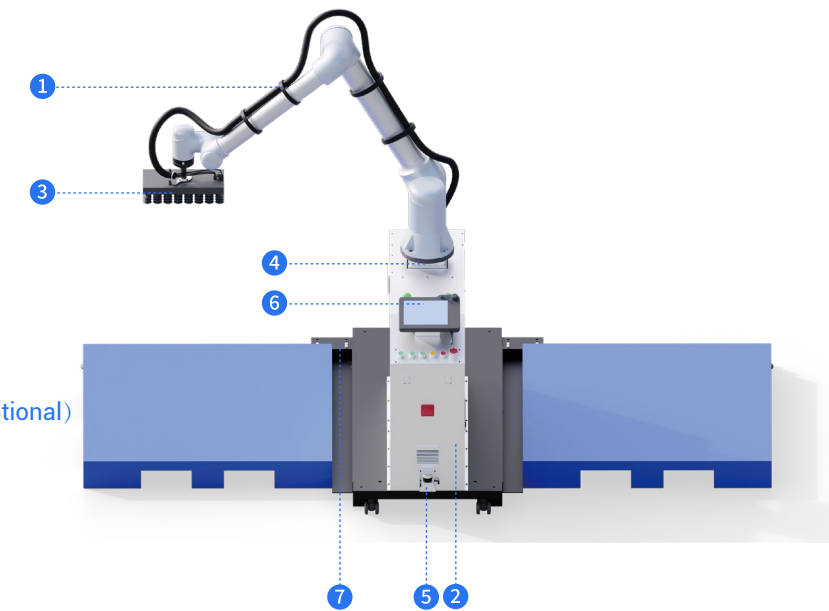
Technical Parameters ▶▶▶

Palletizing Height	1600mm(including pallet 1200mm*1000mm, by lifting device) MAX height: 2400mm(by elevating device)
Payload	25kg
Working Radius	1800mm
Effciency	6-8 boxes/min
Floor Space	1500mm*2100mm
Rated Power	1500W
Power Supply	100~220V AC
Lifting Column	Lifting height 800mm

Dual-arm Series Cobot

Product Features ▶▶▶

More Intelligent
With 7 degrees of freedom, the robot can work well in compact space.

Safe
Collision detection function enables human robot collaboration.

Easy Programming
With traction teach programming, less limitation to robot user.

Attractive and Compact Design
The robot is integrated designed with build-in control box.

More Accurate
Repeatability up to ±0.02mm.

X3-600 7A Dual   X5-800 7A Dual

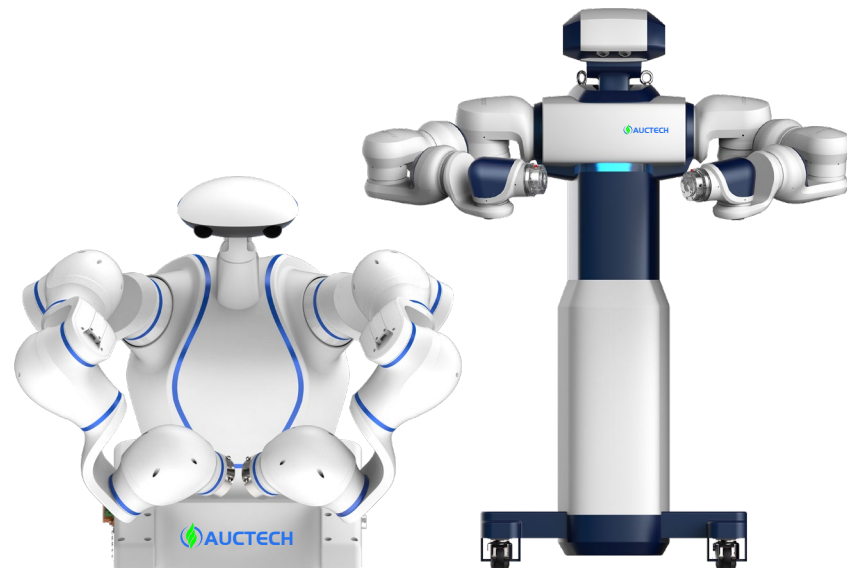Dual-arm series cobot is featured with high flexibility, extreme safety, rapid deployment. It provides an overall solution for assembling by fast, safe, agile, accurate, and highly efficient positioning and operation, which also provides a better develop environment with more freedom and possibility for users.

Technical Parameters ▶▶▶

	X3-600 7A Dual		X5-800 7A Dual	
Max Payload	6kg (3kg x 2)		10kg (5kg x 2)	
Degree of Freedom	Each arm 7x2, Head 2, Head is optional		Each arm 7x2, Head 2, Head is optional	
Max TCP Speed	2.5m/s		2.0m/s	
Max Straight-line Speed	1.0m/s		1.0m/s	
Reach	600mm x 2		800mm x 2	
Repeatability	±0.02mm		±0.02mm	
Joint	Range	Max Speed	Range	Max Speed
J7	±180°	180°/s	±180°	180°/s
J6	±120°	180°/s	±110°	180°/s
J5	±180°	180°/s	±180°	180°/s
J4	±120°	180°/s	±115°	180°/s
J3	±180°	180°/s	±180°	180°/s
J2	±115°	180°/s	±105°	180°/s
J1	±180°	180°/s	±180°	180°/s
Tool Interface	GB/T 14468.1-50-4-M6 (eqv ISO 9409-1)		GB/T 14468.1-50-4-M6 (eqv ISO 9409-1)	
Tool I/O of Each Arm	2 Dig I/O, 24V, 1A		2 Dig I/O, 24V, 1A	
Power Supply	230VAC(-15%~+10%), 50-60Hz		230VAC (-15%~+10%), 50-60Hz	
Power Consumption	Typical Power Consumption 500W		Typical Power Consumption 800W	
Robot Dimensions	1035x232x202mm		1285x220x240mm	
Control System	Built-in Control System		Built-in Control System	
Installation	Installed in Any Direction		Installed in Any Direction	
Ambient Temperature Range	-10℃~45℃		-10℃~45℃	
Storage Temperature Range	-40℃~55℃		-40℃~55℃	
IP Class	IP30		IP30	
Robot Package Size	1200x1000x1040mm		1100x1100x1900mm	
Net/Gross Weight	70kg/100kg		200kg/250kg	

Dual-arm Cobot

Work Space ▶▶▶
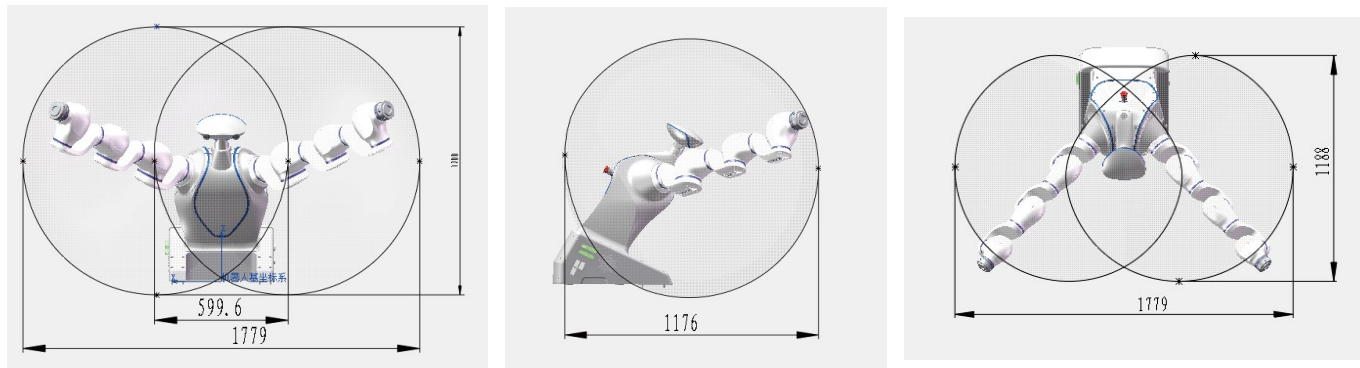
Front View

Side View
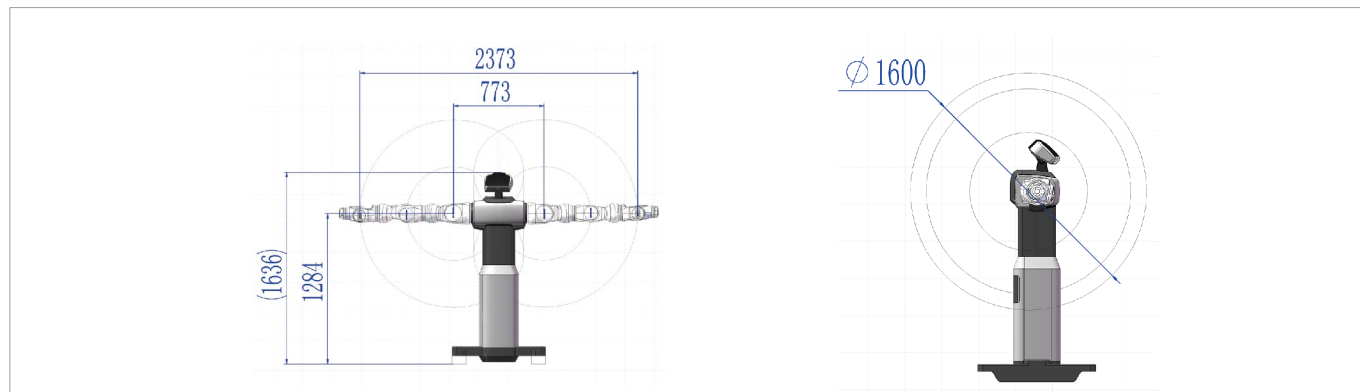
Top View

Front View

Side View
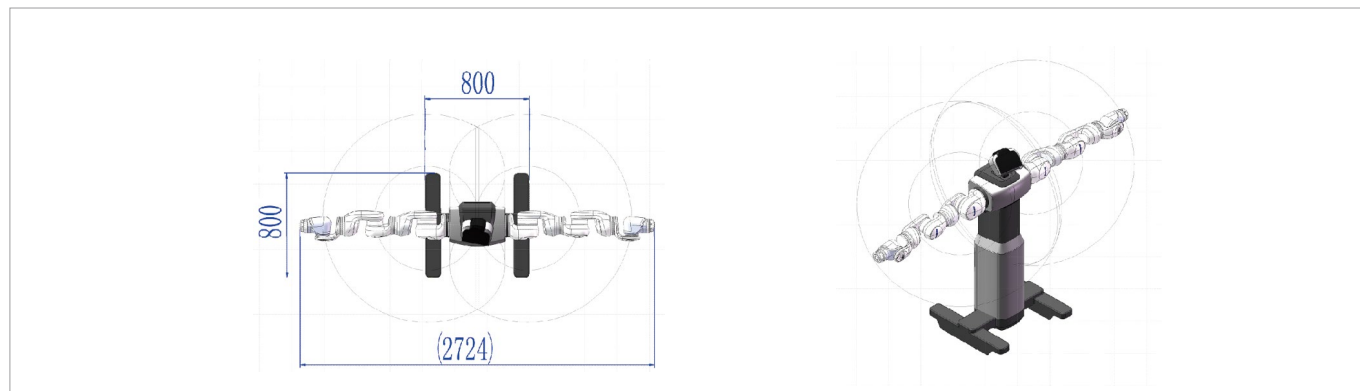
Top View

Axis View

AUCTECH Intelligent Application Controller

AUCTECH Mind is composed of intelligent software, intelligent controller and peripherals such as camera and other sensors. AUCTECH Mind is positioned to empower AUCTECH robot applications with multi-sensorfusion and AI technology.

Plugin System

Robot Module   Camera/Calibration Module

Motion Planning Module

Vision Module (2D/3D/Deep-Learning)

GUI

3D Simulation

Script Programming

Logger

Application Packages

Picking&Sorting   Gluing

Packaging   Inspection

Polishing   Assembling

AUCTECH Mind

Motion Command
Robot Status Data

Image Data

Access Equipment

Cobot

2D&3D Camera

End-Effector
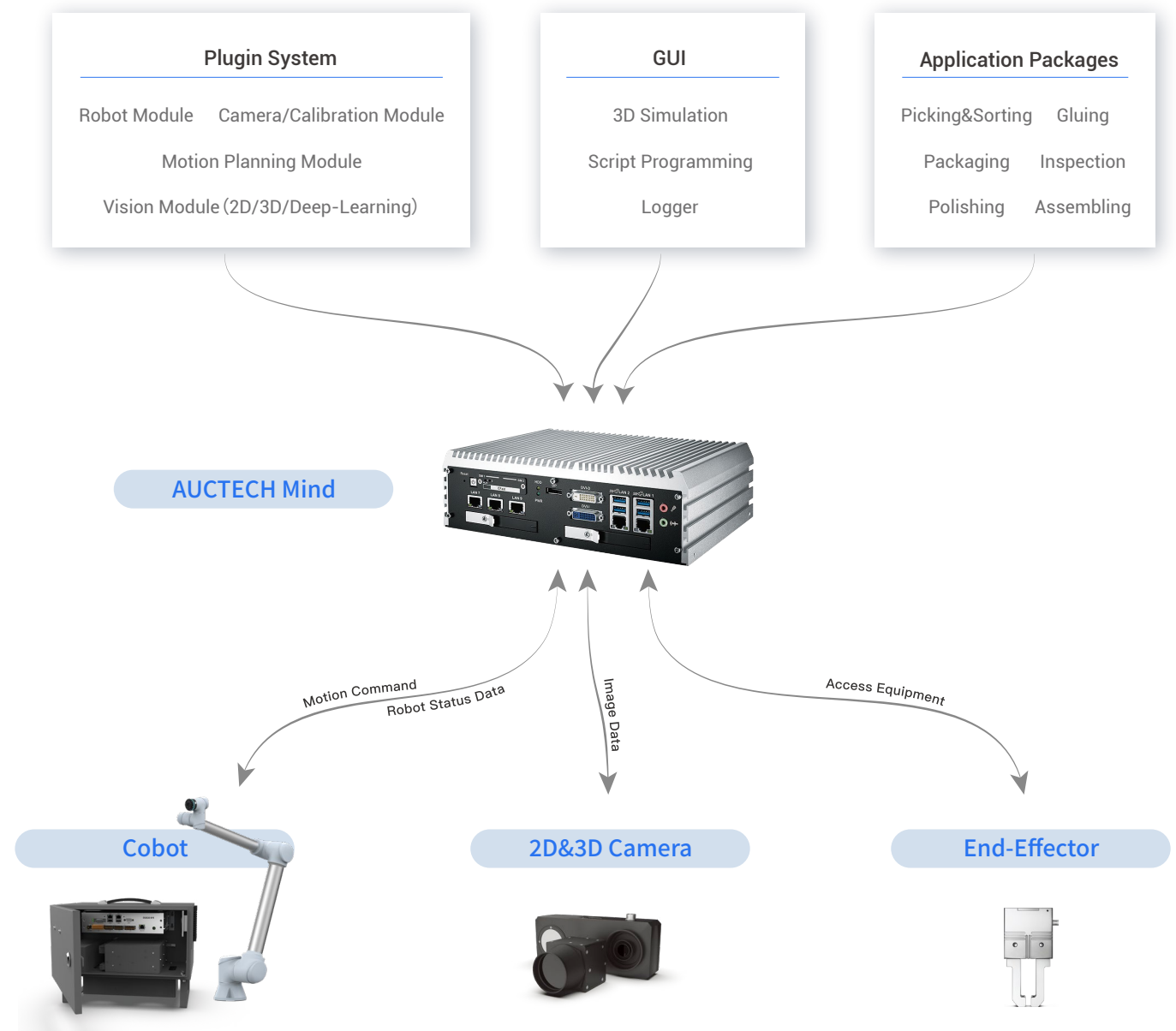
Product Introduction ▶▶▶

AUCTECH Mind is an intelligent application controller that integrates 2D, 3D, and deep learning functions. The software algorithm is fully developed by AUCTECH. It can be used in different application scenarios such as handling (palletizing), loading, picking, classification, positioning, gluing, assembly. and inspection. It has the advantages of high cost-effectiveness, strong openness, and easy deployment and implementation.
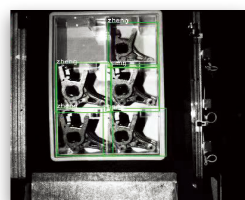
Deep Learning
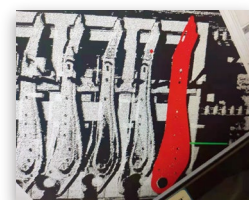
3D Location

2D Recognition

Product Features ▶▶▶

High performance CPU (i3/i5/i7)

GPU algorithm acceleration

Serial port and other expansion interfaces

DI-DO

Multiple camera interfaces (POE,USB3.0)

Technical Parameters ▶▶▶

	AUCTECH Mind-Mini	AUCTECH Mind-Lite	AUCTECH Mind-Power	AUCTECH Mind-Ai
CPU	Intel® Core™ i3-6100	Intel® Core™ i5-7500	Intel® Core™ i7-7700	Intel® Core™ i7-8700
GPU	–	–	GTX 1650	Nvidia 2080T
RAM	8G	16G	16G	16G
Disk	128G	256G	256G	256G
PC Card	GIGE*4	GIGE*2	GIGE*2	GIGE*2
POE	–	GIGE*4	GIGE*4	–
I/O	–	DI*16/DO*16	DI*16/DO*16	DI*16/DO*16
Size	230.3*152.0*79.1mm	260.0*175.0*79.0mm	260.0*215.0*79.0mm	330.0*210.0*172.0mm
Weight	2.9 kg	4.3 kg	4.8 kg	5.6 kg

AUCTECH Mind

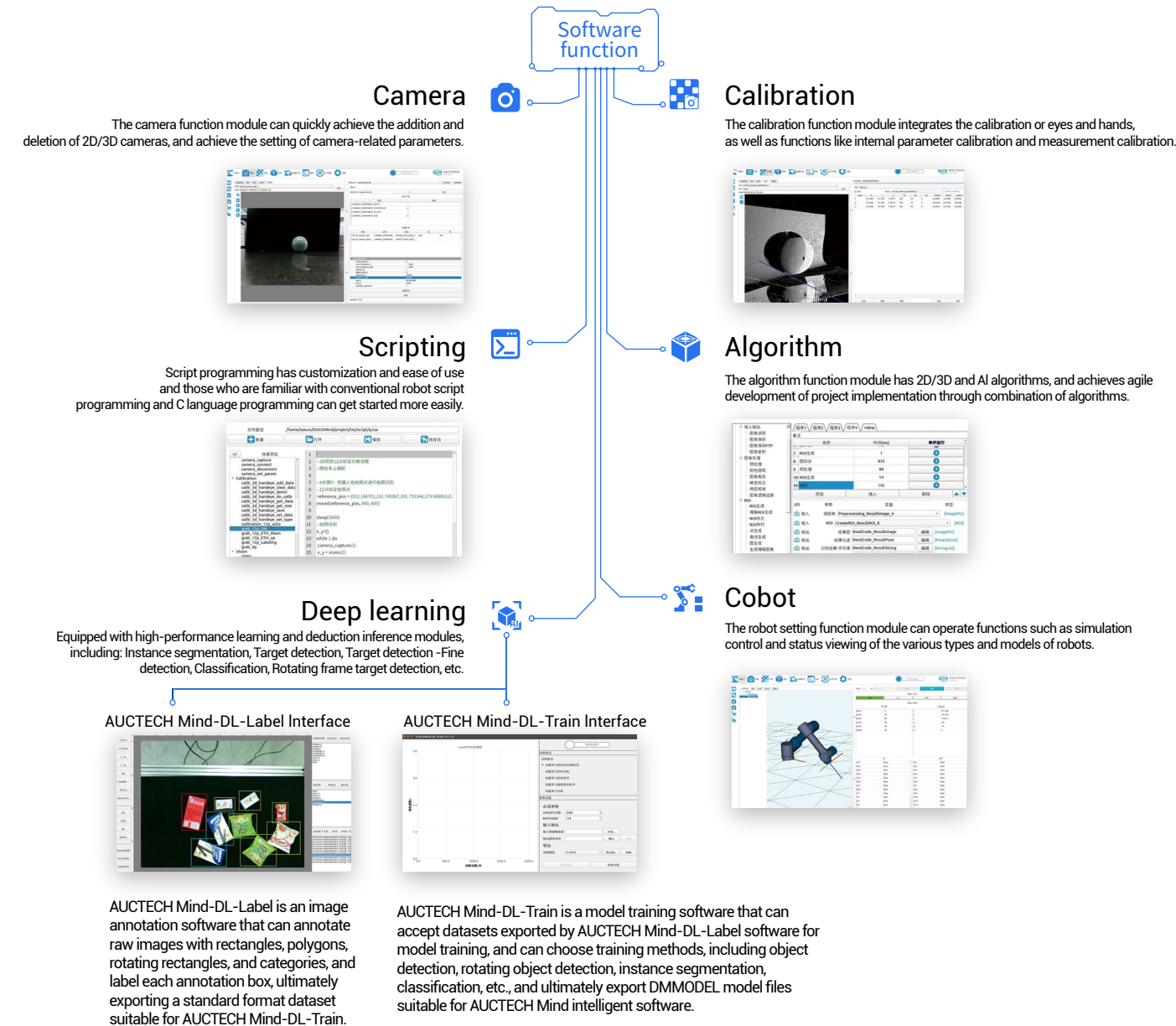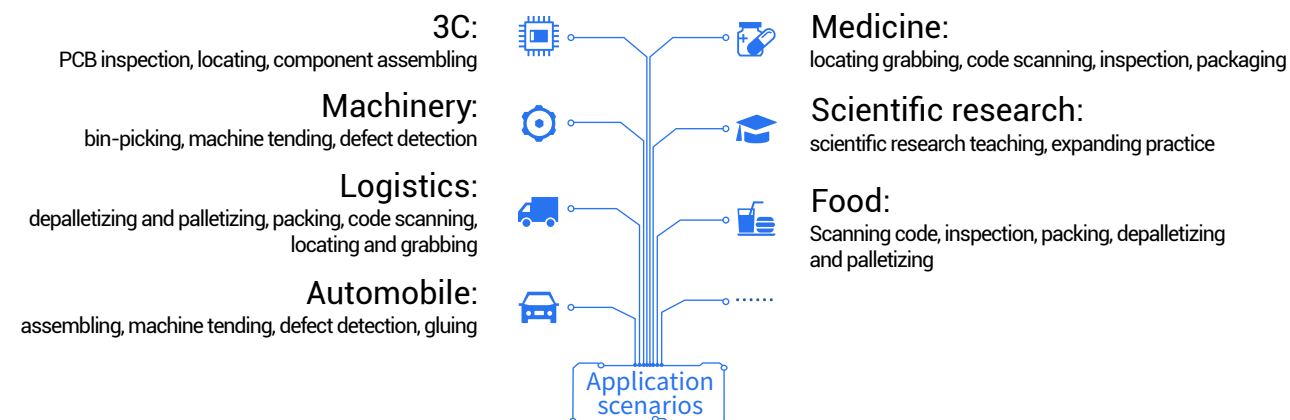**3C:** PCB inspection, locating, component assembling

Machinery: bin-picking, machine tending, defect detection

Logistics: depalletizing and palletizing, packing, code scanning, locating and grabbing

Automobile: assembling, machine tending, defect detection, gluing

Medicine: locating grabbing, code scanning, inspection, packaging

Scientific research: scientific research teaching, expanding practice

Food: Scanning code, inspection, packing, depalletizing and palletizing

Application scenarios

Software function

Camera
The camera function module can quickly achieve the addition and deletion of 2D/3D cameras, and achieve the setting of camera-related parameters.

Calibration
The calibration function module integrates the calibration or eyes and hands, as well as functions like internal parameter calibration and measurement calibration.

Scripting
Script programming has customization and ease of use and those who are familiar with conventional robot script programming and C language programming can get started more easily.

Algorithm
The algorithm function module has 2D/3D and AI algorithms, and achieves agile development of project implementation through combination of algorithms.

Deep learning
Equipped with high-performance learning and deduction inference modules, including : Instance segmentation, Target detection, Target detection -Fine detection, Classification, Rotating frame target detection, etc.

Cobot
The robot setting function module can operate functions such as simulation control and status viewing of the various types and models of robots.

AUCTECH Mind-DL-Label Interface

AUCTECH Mind-DL-Train Interface

AUCTECH Mind-DL-Label is an image annotation software that can annotate raw images with rectangles, polygons, rotating rectangles, and categories, and label each annotation box, ultimately exporting a standard format dataset suitable for AUCTECH Mind-DL-Train.
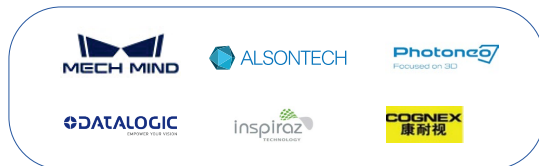
AUCTECH Mind-DL-Train is a model training software that can accept datasets exported by AUCTECH Mind-DL-Label software for model training, and can choose training methods, including object detection, rotating object detection, instance segmentation, classification, etc., and ultimately export DMMODEL model files suitable for AUCTECH Mind intelligent software.
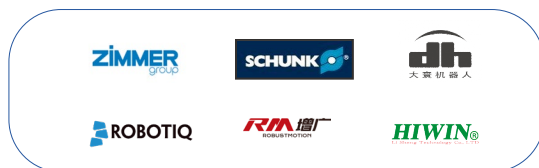
We Are Dedicated to The Advancement of Cobot

AUCTECH

Vision System
- MECH MIND
- ALSONTECH
- Photoneo (Focused on 3D)
- DATALOGIC
- inspiroz
- COGNEX 康耐视

Electrical Gripper
- ZIMMER group
- SCHUNK
- dh 大寰机器人
- ROBOTIQ
- RM 墙广
- HIWIN

Laser Scanner
- OLEI
- 大汉正源
- SICK
- KEYENCE 基恩士

Force Sensor
- Link-touch 蓝点触控
- ATI INDUSTRIAL AUTOMATION (A Novanta Company)
- NBIT
- HKM
- SRI Sunrise Instruments
- WACOH

Force Sensor
- 灵动 广州科腾
- OPT Robot Automation parts 奥普特
- ROBOTIQ
- SCHMALZ
- SRT 柔触机器人
- RoRobot 武翼机器人

Gateway&IO Expansion Module
- AMSAMOTION 艾莫迅
- MOXA
- hilscher COMPETENCE IN COMMUNICATION
- HongKe 虹科
- HMS

Quick-Change Flange
- ZIMMER group
- ATI INDUSTRIAL AUTOMATION (A Novanta Company)
- SCHUNK
- 桥田 QUICKQT

Simulatin&Off-line Programming
- ORIGITECH
- VISUAL COMPONENTS
- RoboDK
- HANHUA 翰华智能

Optical Positioning&3D Scanner
- 艾目易 | Aimooe
- 中观

Welding Machine
- MEGMEET

Dress Packs
- murrplastik
- 库鑫 CUBEXIN
- igus

Tightening System
- Rexroth Bosch Group
- Atlas Copco
- DEPRAG
- Daniker

Protective Clothing
- Tehu
- YOUGUARD 上海誉甲

Lifting Column
- EWELLIX A Schaeffler Company