

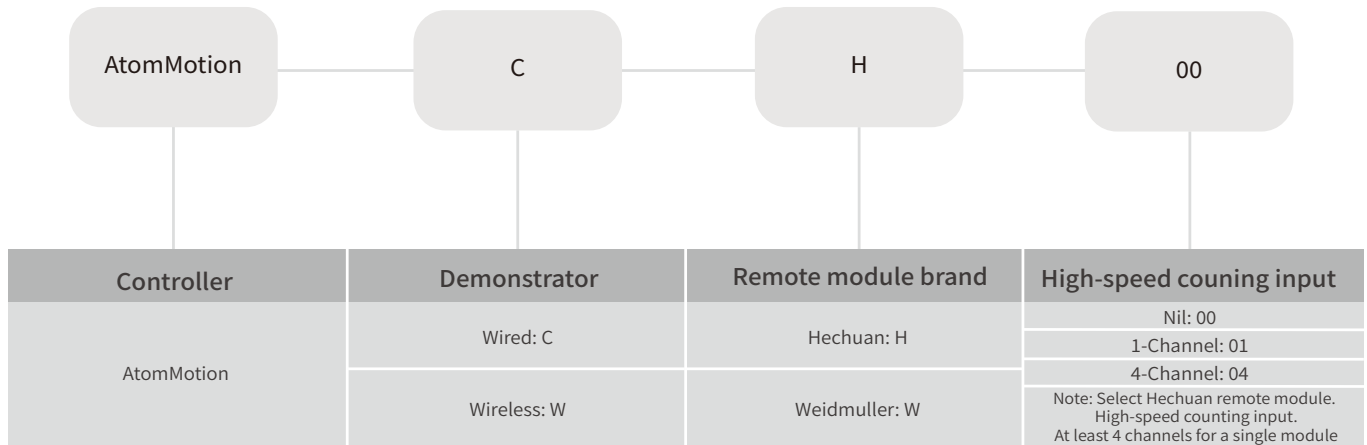
AtomMotion

- *Equipped with X86 architecture and Intel® Core™ processor*
- 🔌 *Equipped with EtherCAT bus communication protocol interface. High speed, synchronization, support for various network topology.*
- *Equipped with Ethernet interface. A completely self-developed visual tracking and positioning system*



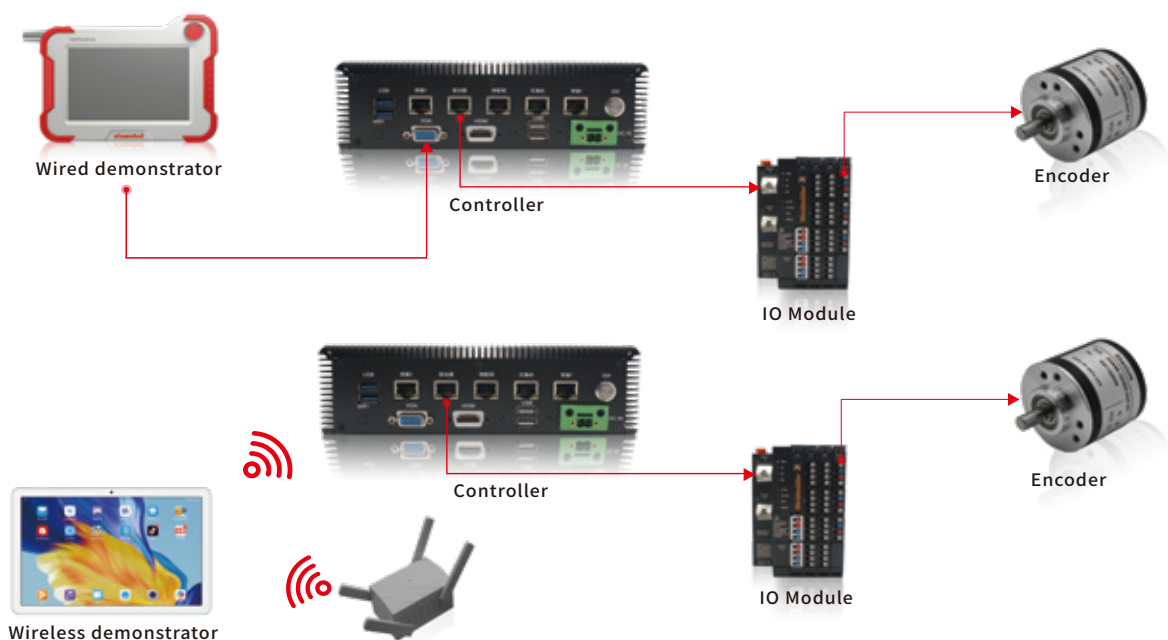
- Completely self-developed. Deeply compatible with delta robots. Matched with all general types of robots.
- Equipped with Inter Core i5 processor, with powerful computing power, satisfying robot's controlling needs of high-speed, high-precision and high-stability.
- Use self-developed modular programming language. Integrate soft PLC, supporting ST, IL, LD, FBD, SFC language programming conforming to IEC61131-3 standard, with efficient and flexible programming complex control program.
- Standard configured version supporting multi-port types
- Support large-capacity variable processing of up to 1GB. Support data collection and processing while the controlled device is running.
- Bus Diagnosis. Deadline Monitoring. WatchDog Monitoring.

Selection Program

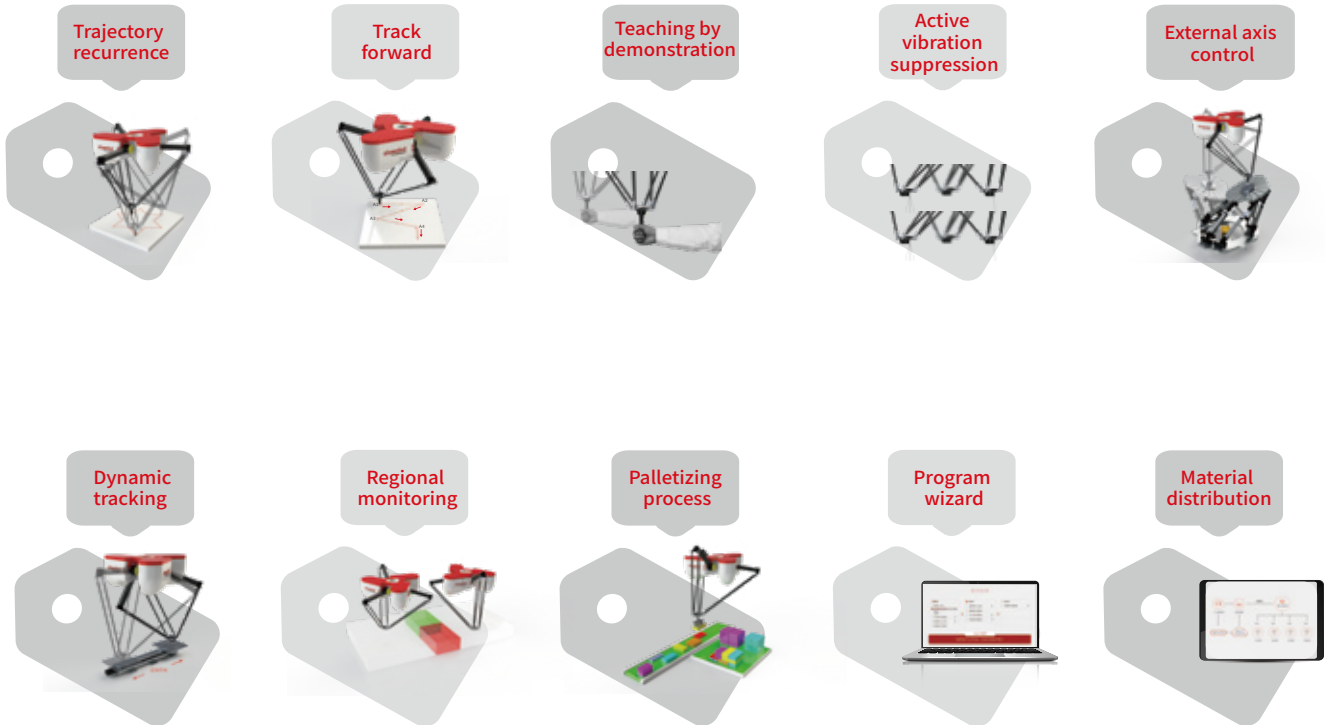


| Optional models | Accessories included | | | | |
|-------------------|----------------------------------|------------|--------------|---------|---------------------------|
| | Industrial computer | IO Module | Demonstrator | Encoder | High-speed counting input |
| AtomMotion-C-H-00 | High-performance core controller | Hechuan | Wired | Nil | Nil |
| AtomMotion-C-H-04 | High-performance core controller | Hechuan | Wired | Yes | 4-Channel |
| AtomMotion-C-W-00 | High-performance core controller | Weidmuller | Wired | Nil | Nil |
| AtomMotion-C-W-01 | High-performance core controller | Weidmuller | Wired | Yes | 1-Channel |
| AtomMotion-W-H-00 | High-performance core controller | Hechuan | Wireless | Nil | Nil |
| AtomMotion-W-H-04 | High-performance core controller | Hechuan | Wireless | Yes | 4-Channel |
| AtomMotion-W-W-00 | High-performance core controller | Weidmuller | Wireless | Nil | Nil |
| AtomMotion-W-W-01 | High-performance core controller | Weidmuller | Wireless | Yes | 1-Channel |

Topology



Software Function



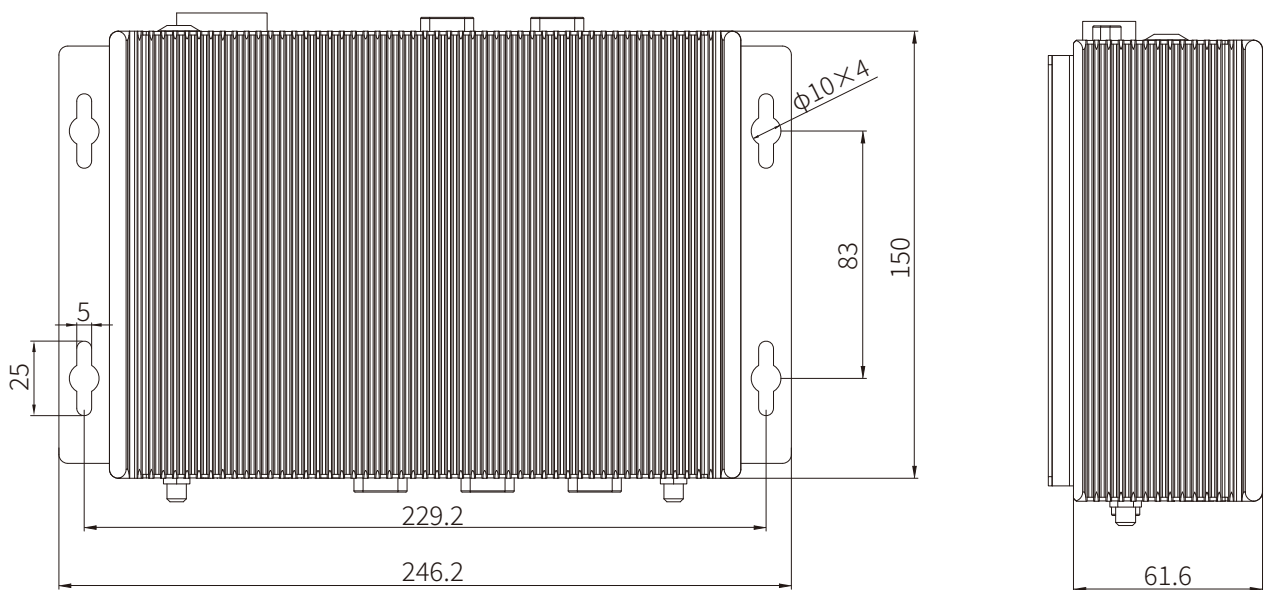
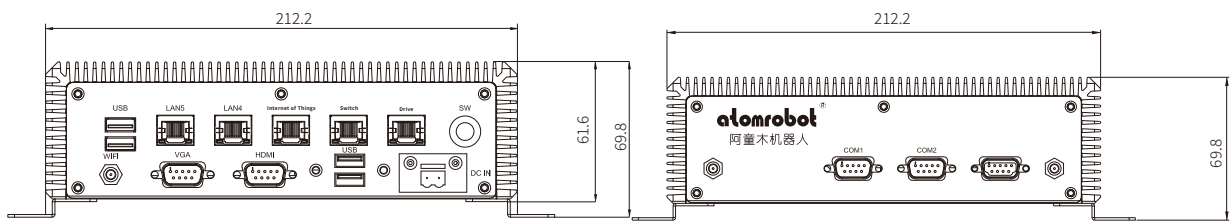
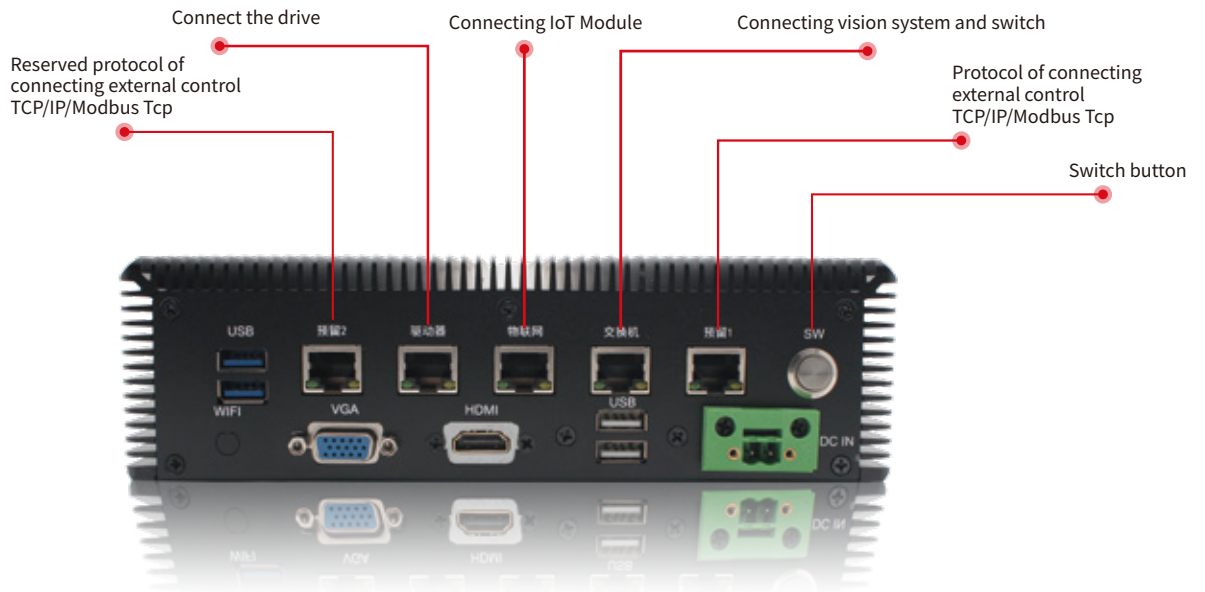
8 kinds | Robot-specific motion commands cover conventional motion trajectories.

10⁺ kinds | Basic math formulas for complex math operations.

4 kinds | Conventional logic commands, to be able to program complex robot motion logic.

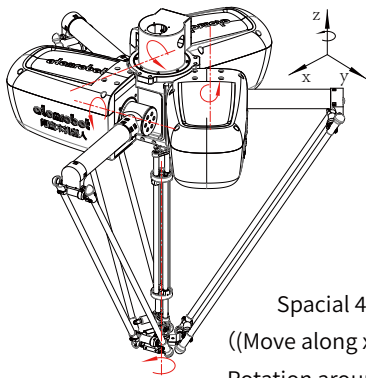
10⁺ kinds | Process commands, to be suitable for a variety of environment.

Dimension Diagram



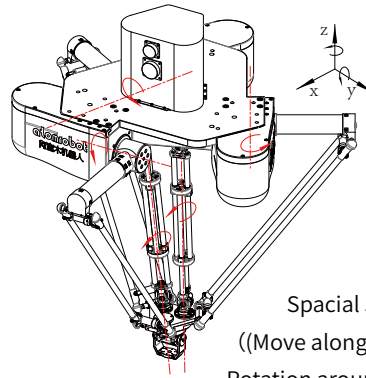
Supporting Robot Models

3+1 Axis Delta Robot



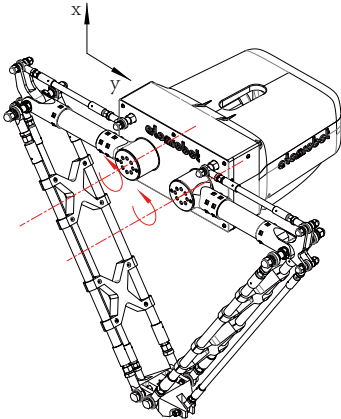
Spacial 4-DOF
((Move along x, y, z axis.
Rotation around z axis))

3+2 Axis Serial-delta Hybrid Robot



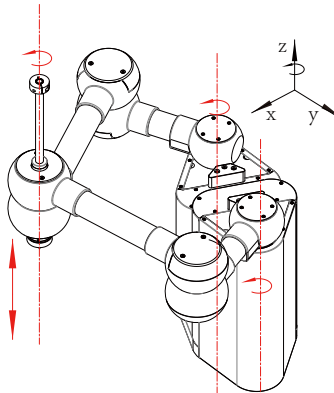
Spacial 5-DOF
((Move along x, y, z axis.
Rotation around y, z axis))

2 Axis Delta Robot



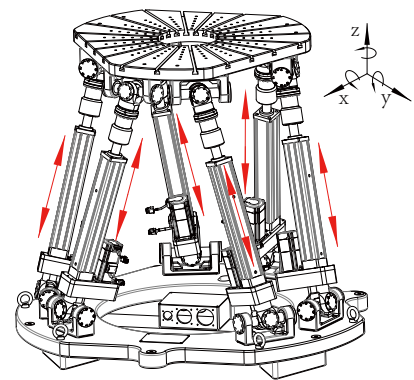
Plane 2-DOF
(Move along x, y axis)

2+2 Axis Serial-delta Hybrid Robot



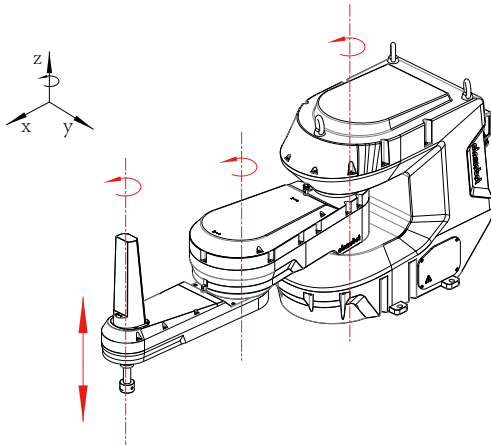
Spacial 4-DOF
(Move along x, y, z axis. Rotation around z axis)

Stewart Platform



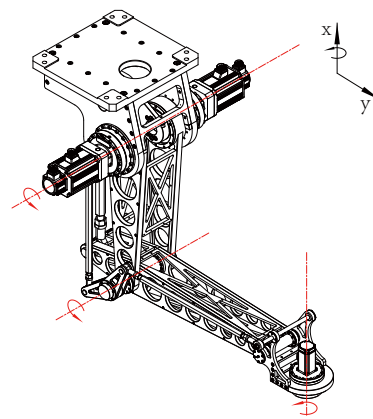
Spacial 6-DOF
(Move along x, y, z axis.
Rotation around x, y, z axis)

SCARA Robot



Spacial 4-DOF
(Move along x, y, z axis. Rotation around z axis)

3-axis palletizer robot



Plane 3-DOF
(Move along x, y axis. Rotation around x axis)

AtomPad Demonstrator **AtomPad**

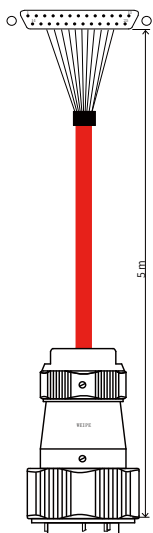


- Convenient Operation, Control in One-screen: Equipped with AtomPad, which has a 10.1-inch full touch screen. It is of light material and ergonomical design, to be matched with physical emergency shutdown and enabling.
- It has button design, graphical programming, bringing users better experience. Equipped with IoT modules, it can monitor the operating status in real time, grasping life cycle dynamics of the equipment.
- Externally set EtherCAT bus communication protocol interface and Ethernet interface to achieve high-speed data transmission and precise synchronization of slave equipment

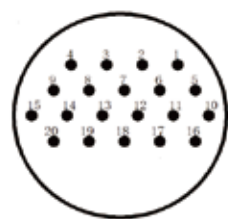
Technical parameters

| | |
|--------------------|---------------------|
| Dimensions (LxWxD) | 198.22 x 117 x 40mm |
| Weight | 0.644kg |
| H Use mode | Touch + button |
| Cable length | 4m |

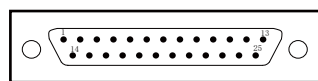
Connecting cable



Air Socket Definition



WY28J20TE S/N



DB25 S/N

| WY28J20TE S/N | DB25 S/N | Signal | Meaning |
|---------------|-----------|-----------|-----------------------|
| 1 | 3 | VGA-BLUE | Blue primary color |
| 2 | 2 | VGA-GREEN | Green primary color |
| 3 | 1 | VGA-RED | Red primary color |
| 4 | Enclosure | PE | Shielded area |
| 5 | 16 | VGA-GND | Blue area |
| 6 | 15 | VGA-GND | Green land |
| 7 | 14 | VGA-GND | Red area |
| 8 | 5 | VGA-VSYNC | Field synchronization |
| 9 | 4 | VGA-HSYNC | Row synchronization |
| 10 | 12 | USB-D- | Positive data line |
| 11 | 13 | USB-D+ | Negative data line |
| 14 | 11 | USB-V- | Shielded area |
| 15 | 10 | USB-V+ | 5V Voltage |
| 16 | 25 | Enable | Enable |
| 17 | 24 | Estop | Emergency stop |
| 18 | 23 | IO-GND | Power ground |
| 19 | 22 | IO-12V | 12V power supply |
| 20 | 21 | IO-24V | 12V power supply |



- Get rid of cable restrictions. More flexible operation mode.
- Full function coverage, to be completely consistent with wired demonstrator in functions
- Multi-terminal deployment, which is controllable not only on the tablet but also on mobile phone.

Display parameters

| | |
|----------------------------|---|
| Brand and model | Honor Tablet 7- AGM3-W09HN |
| Screen size | 10.1 inches |
| Display type | IPS |
| Screen ratio | 16:10 |
| Display chip | MediaTek Helio G80 |
| Number of speakers | 2 nos |
| Connection method | Wi-Fi; Bluetooth |
| USB interface | Type-C |
| Audio and video interfaces | USB Type-C |
| Battery capacity | 5001-6000mAh |
| Battery life | Local video playback time: approx. 7.8 hours; Standby time: approx. 30 days |
| Function | Multi-point touch; Split screen function; Gravity sensor; GPS Navigation |

Wireless expansion module parameters

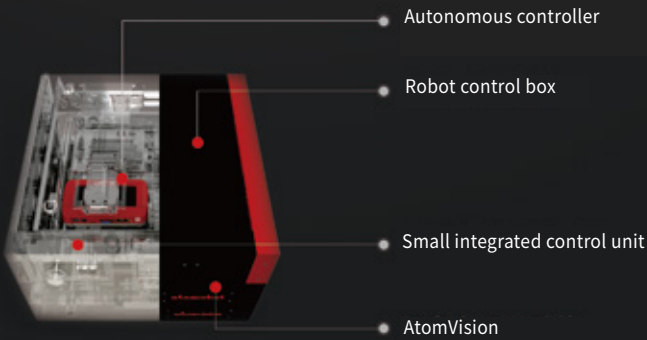
| | |
|---------------------------|---------------------------------|
| Model | TL-WDR7632 Gigabit TP-LINK |
| Applicable frequency band | 2.4GHz+5GHz |
| Net weight (kg) | 0.22 |
| Product size | 109mm x 78mm x 47mm (L x W x H) |
| Operating temperature | 0°C to 40°C |

ATOM COMPACT CONTROL CABINET

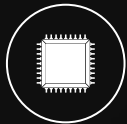
Atom-PC-OI

With AtomMotion controller equipped and visual features integrated, the volume is reduced by 60%.

It has up to 4×2 kW linkage drive capability of the servo shaft, of which the structure is variable and complete, the external expansion is convenient, and components are modular.



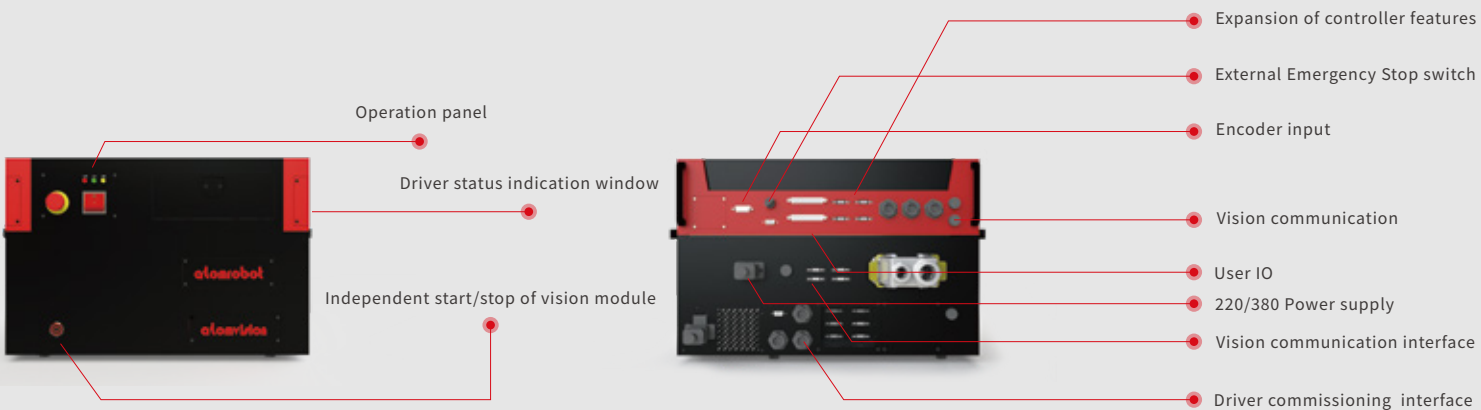
High Performance



High Integration



Modularization



Core Parameters

| Specification | | |
|--------------------------|---|--------|
| Controller hardware | Intel®CoreI5™ Processor | |
| | PCIe bus | |
| | Large capacity flash drive | |
| | 8GB Memory | |
| | 4*Usb interface | |
| | TCP/IP interface | |
| | EtherCAT interface | |
| Controller software | Based on X86 platform robot dedicated control system | |
| | Easy to use, effective advanced features pack | |
| | Easy-to-operate human-computer interaction interface, high-performance, high-precision movement and tracking features and IEC61131-3-based PLC programming software | |
| Electrical connection | | |
| Power supply | 3 phases, 220VAC -10%~+10%, 49-61HZ | |
| Power capacity | 5KVA | |
| Physical characteristics | Dimensions (Width × Height × Depth) | Weight |
| | 530x343x530 | 40kg |
| Environment | | |
| Ambient temperature | +0°C~+45°C | |
| Relative humidity | Maximum 95% | |
| Protection rating | IP40 | |
| Safety | | |
| Basic | Safe shutdown, emergency shutdown | |
| | Over-current protection | |
| | High temperature warning | |
| Mechanical interface | | |
| Digital In/Out | 16/16 | |
| Simulation | 1x0-10V | |
| Serial port | 1xRS 232/RS 422 | |
| Network | Ethernet (10/100MB/s) | |
| Two channels | EtherCat expansion | |
| | TCP/IP | |
| Sensor interface | | |
| Conveyor line tracking | | |
| Robot vision | | |
| User interface | | |
| Control panel | Master, Emergency Stop and Switching buttons | |
| External interface | USB*4 | |
| | EtherCAT expansion | |
| | TCP/IP Communication*2 | |
| Maintenance | Recovery program | |
| | Remote service | |
| | Troubleshooting | |

ATOM STANDARD CONTROL CABINET

Atom-Unit

With AtomMotion controller equipped and vision features integrated, it is compact in volume, complete in features and strong in customization.



High performance



High reliability



High applicability



Core Parameters

| Specification | | |
|----------------------------------|---|--------|
| Controller hardware | Multi-processor system | |
| | PCIe bus | |
| | Large capacity flash drive | |
| | 8GB Memory | |
| | 4*Usb interface | |
| | TCP/IP interface | |
| | EtherCAT interface | |
| Controller software | Based on X86 platform robot dedicated control system | |
| | Easy to use, effective advanced features pack | |
| | Easy-to-operate human-computer interaction interface, high-performance, high-precision movement and tracking features and IEC61131-3-based PLC programming software | |
| Electrical connection | | |
| Power supply | 3 phases, 380VAC -10%~+10%, 49-61HZ | |
| Power capacity | 10KVA | |
| Physical characteristics | Dimensions (Width × Height × Depth) | Weight |
| Single-cabinet type | 540x684x584 | 70kg |
| Double-cabinet type | 540x1270x584 | 120kg |
| Environment | | |
| Ambient temperature | +0°C~+45°C | |
| Relative humidity | Maximum 95% | |
| Protection rating | IP40 | |
| Standard compliant certification | EU CE (Standard characters) | |
| Safety | | |
| Basic | Safe shutdown, emergency shutdown | |
| | Over-current protection | |
| | High temperature warning | |
| Mechanical interface | | |
| Input/output | 16/16 | |
| Number | 24VDC or relay signal | |
| Simulation | 1x0-10V | |
| Serial port | 1xRS 232/RS 422 | |
| Network | Ethernet (10/100MB/s) | |
| Two channels | EtherCat | |
| | TCP/IP | |
| Sensor interface | | |
| Conveyor line tracking | | |
| Robot vision | | |
| Torque control | | |
| User interface | | |
| Control panel | Master, Emergency Stop and Switching buttons | |
| Maintenance | Recovery program | |
| | Remote service | |
| | Troubleshooting | |