CATEGORIES

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Desktop Small 4 Axis Scara Industrial Robot Arm Price

Short Description:

The SCIC Z-Arm 2142 is designed by SCIC Tech, it is lightweight collaborative robot, easy to program and use, support SDK. In addition, it is collision detection supported, namely, it would be automatic to stop when touching human, which is smart human-machine collaboration, the security is high.

Z axis stroke:	210mm (Height can be customized)
Linear speed:	1220mm/s (payload 2kg)
Repeatability:	±0.03mm
Standard payload:	2kg
Maximum payload:	3kg

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Product Detail Product Tags

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Main Category

Industrial robot arm /Collaborative robot arm / Electric gripper/Intelligent actuator/Automation solutions

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Introducing our breakthrough 3kg payload cobot arm, the perfect solution for all your industrial automation needs. With its advanced features and cutting-edge technology, this four-axis robotic arm will revolutionize the way you work.

Our cobot arms are equipped with state-of-the-art features for exceptional flexibility and versatility. Its four-axis design enables precise, efficient motion, making it ideal for a variety of applications including pick and place tasks, assembly line operations and more. Whether you need to lift, stack, sort or pack items, this robotic arm has you covered.

Designed with safety in mind, our cobot arms are a collaborative solution that can work alongside human operators without the need for safety barriers. It is equipped with advanced sensors and software capable of detecting and avoiding any obstacles, ensuring a safe working environment for everyone involved. Not only does this collaboration feature increase productivity, but it can also be easily integrated into your existing workflow.

Our industrial robot arms 4-axis are specially designed to meet the demands of modern industrial environments. It is made of high-quality materials that guarantee durability and long-lasting performance. With its robust structure, the robot arm can easily handle heavy loads of up to 3 kg, making it ideal for a variety of industrial applications.

Our pick and place robotic arms feature advanced programming features that can be easily programmed to perform complex tasks. Its intuitive software interface allows for fast, seamless programming, even for those without extensive robotics experience. This user-friendly interface ensures smooth and efficient operation, optimizing productivity and reducing downtime.

In summary, our robotic 4-axis arms are game changers in the field of industrial automation. With its impressive payload capacity, collaboration capabilities and advanced programming capabilities, it offers unrivaled versatility and performance. Upgrade your production line today and experience the power of our 3kg payload cobot arm.

Application

SCIC Z-Arm cobots are lightweight 4-axis collaborative robots with drive motor built inside, and no longer require reducers like other traditional scara, reducing the cost by 40%. SCIC Z-Arm cobots can realize functions including but no limited to 3D printing, material handling, welding, and laser engraving. It is capable of greatly improving the efficiency and flexibility of your work and production.

Features

High Precision
Repeatability
±0.03mm

Large Payload
3kg

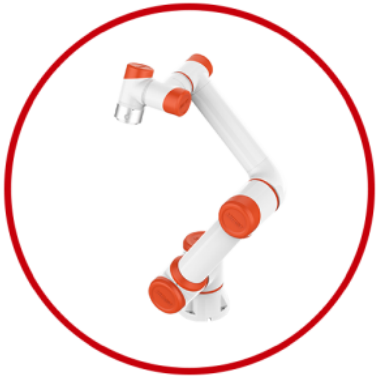
Large Arm Span
JI axis 220mm
J2 axis 200mm

Competive Price
Industrial-level quality
Competitive price

Related Products

Z-Arm-2140

Z-Arm-1832



Z-Arm-S922

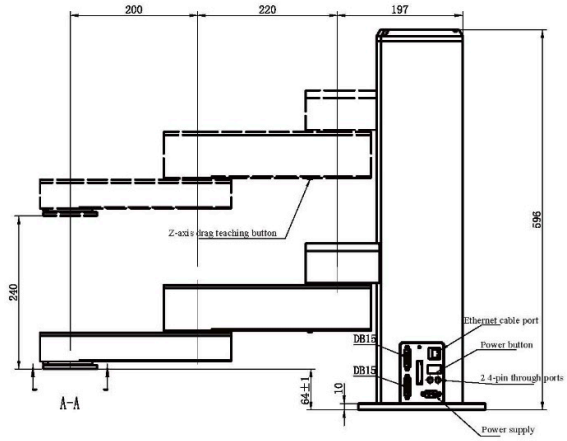
Specification Parameter

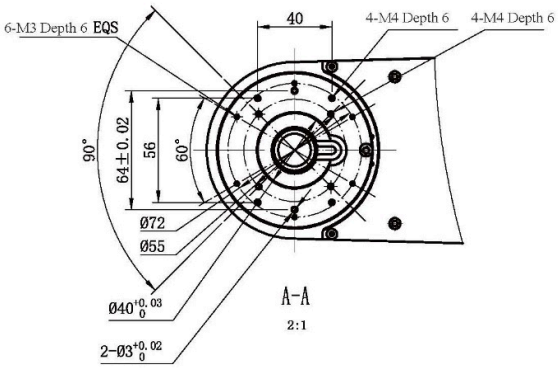
The SCIC Z-Arm 2142 is designed by SCIC Tech, it is lightweight collaborative robot, easy to program and use, support SDK. In addition, it is collision detection supported, namely, it would be automatic to stop when touching human, which is smart human-machine collaboration, the security is high.

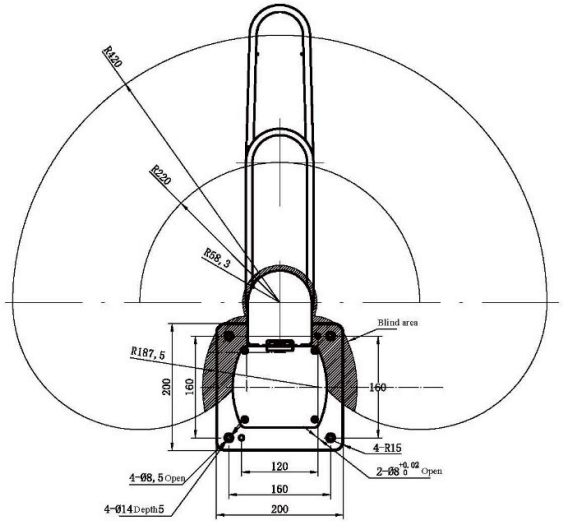
Z-Arm 2142E Collaborative Robot arm	Parameters
1 axis arm length	220mm
1 axis rotation angle	±90°
2 axis arm length	200mm
2 axis rotation angle	±164°
Z axis stroke	210 Height can be customized

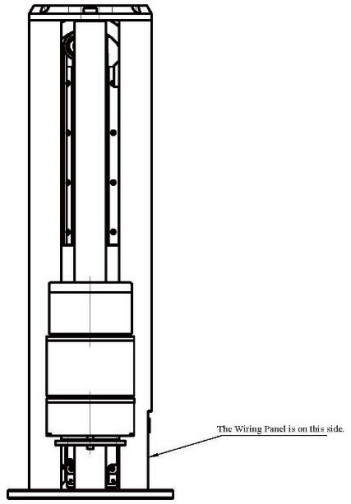
R axis rotation range	±1080°
Linear speed	1220mm/s (payload 2kg)
Repeatability	±0.03mm
Standard payload	2kg
Maximum payload	3kg
Degree of freedom	4
Power supply	220V/110V50-60HZ adapt to 24VDC peak power 500W
Communication	Ethernet
Expandability	Built-in integrated motion controller provides 24 I/O + under-arm expansion
Z-axis can be customized in height	0.11m, 0.21m, 0.31m, 0.41m, 0.51m
Z-axis dragging teaching	/
Electrical interface reserved	Standard configuration: 24*23awg (unshielded) wires from the socket panel through the lower arm cover Optional: 2 φ4 vacuum tubes through the socket panel and flange
Compatible HITBOT electric grippers	Z-EFG-8S/Z-EFG-12/Z-EFG-20/Z-EFG-20S/Z-EFG-30/Z-EFG-50, Fifth axis, 3D printting
Breathing light	/
Second arm range of motion	Standard: ±164° Optional: 15-345deg
Optional accessories	/
Use environment	Ambient temperature: 0-45°C Humidity: 20-80%RH (no frost)
I/O port digital input (isolated)	9+3+forearm extension (optional)
I/O port digital output (isolated)	9+3+forearm extension (optional)
I/O port analog input (4-20mA)	/
I/O port analog output (4-20mA)	/
Robot arm height	566mm
Robot arm weight	210mm stroke net weight 18kg
Base size	200mm*200mm*10mm
Distance between base fixing holes	160mm*160mm with four M8*20 screws
Collision detection	√
Drag teaching	√

Motion Range M1 Version (Rotate O



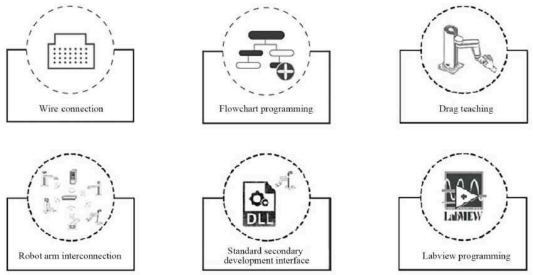






Interface Introduction

The Z-Arm 2442 robot arm interface is installed in 2 locations, the side of the robot arm base (defined as A) and the back of the end arm. The interface panel at A has a power switch interface (JI), 24V power supply interface DB2 (J2), output to user I/O port DB15 (J3), user input I/O port DB15 (J4) and IP address configuration buttons (K5). Ethernet port (J6), system



input/output port (J7), and two 4-core straight-through wires sockets J8A and J9A.

Precautions

1. Payload inertia

The payload center of gravity and the recommended payload range with the Z axis movement inertia are shown in Figure 1.

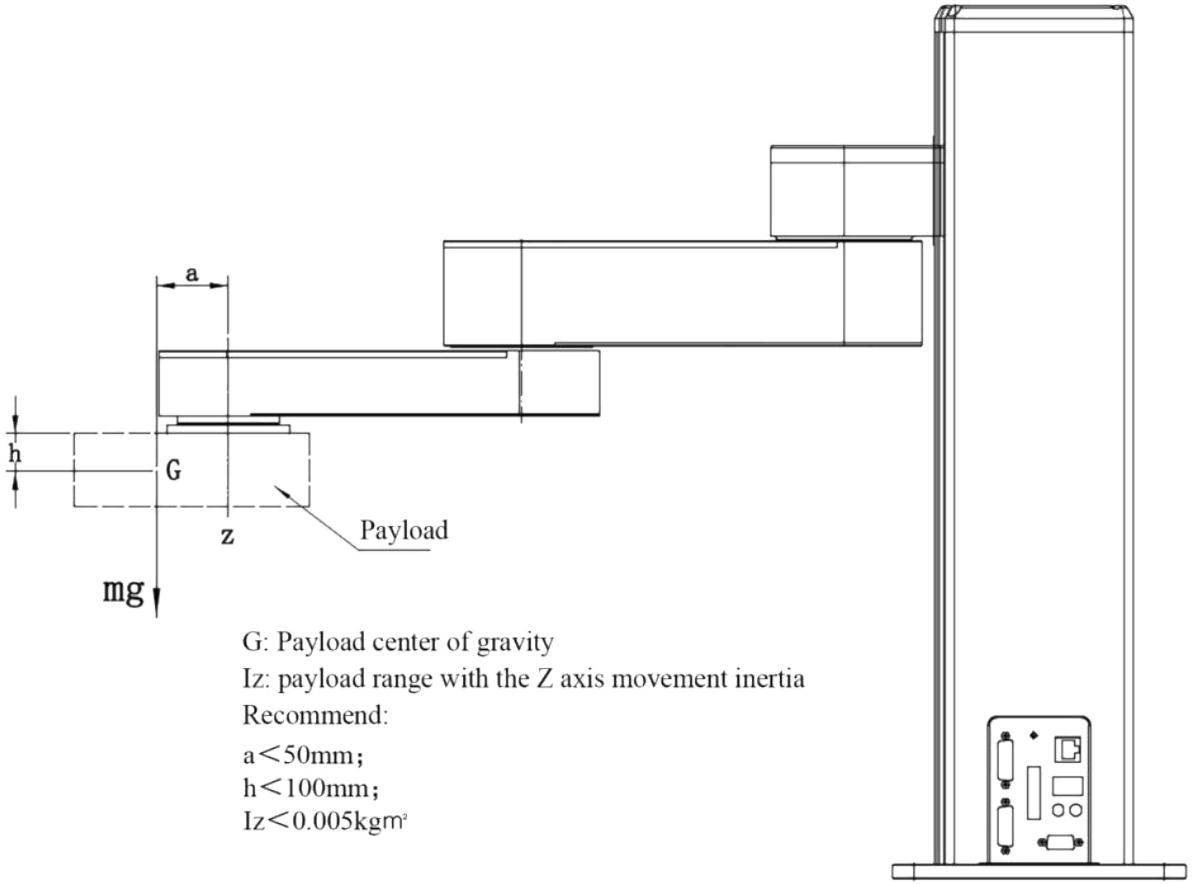


Figure1 XX32 series payload description

2. Collision force

Trigger force of horizontal joint collision protection: the force of XX42 series is 40N.

3. Z-axis external force

The external force of the Z axis shall not exceed 120N.

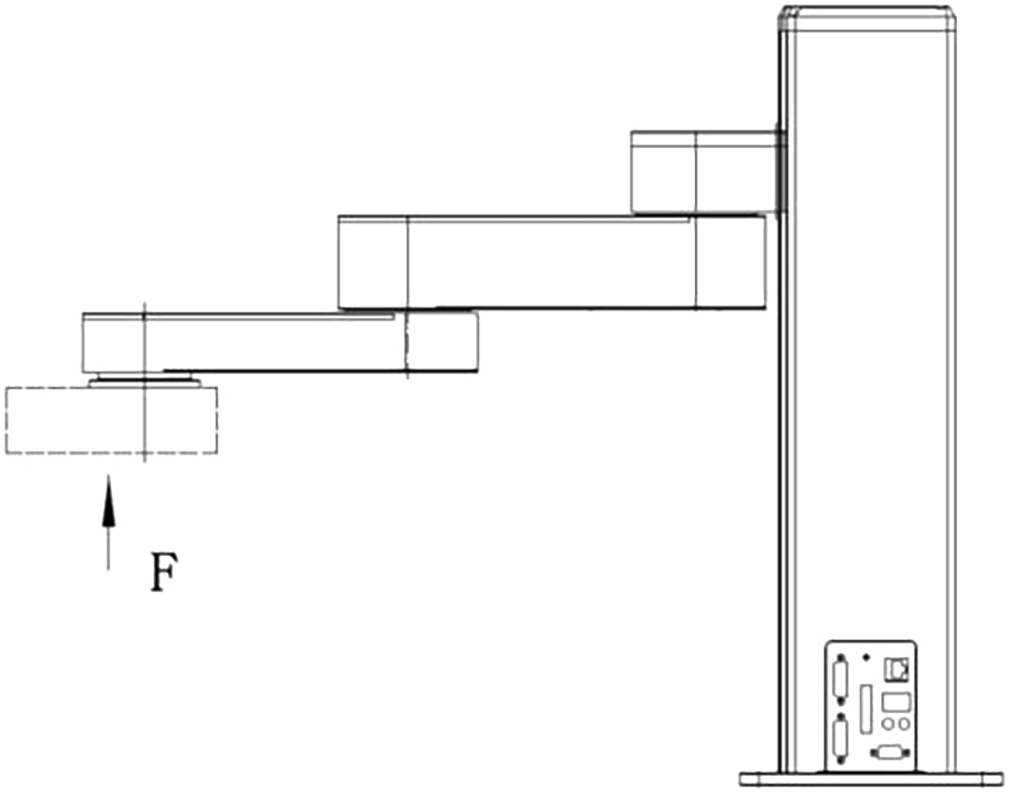


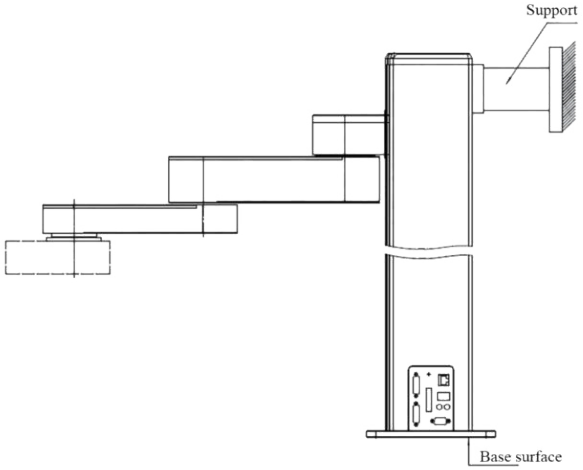
Figure 2

4. Notes for installation of customized Z axis, see Figure 3 for details.

Warning Note:

(1) For customized Z-axis with a large stroke, The Z-axis rigidity decreases as the stroke increases. When the Z-axis stroke exceeds the recommended value, the user has the rigidity requirement, and the speed is >50% of the maximum speed, it is highly recommended to install a support behind the Z-axis to ensure that the rigidity of the robot arm meets the requirement at high speed.

The recommended value are as follows: Z-ArmXX42 series Z-axis stroke >600mm



(2) After the Z-axis stroke is increased, the verticality of Z-axis and the base will be greatly reduced. If strict verticality requirements for the Z-axis and the base reference are not applicable, please consult the technical personnel separately

Figure 3

5.Power cable hot-plugging forbidden. Reverse warning when the positive and negative poles of the power supply are disconnected.

6. Do not press down the horizontal arm when the power is off.

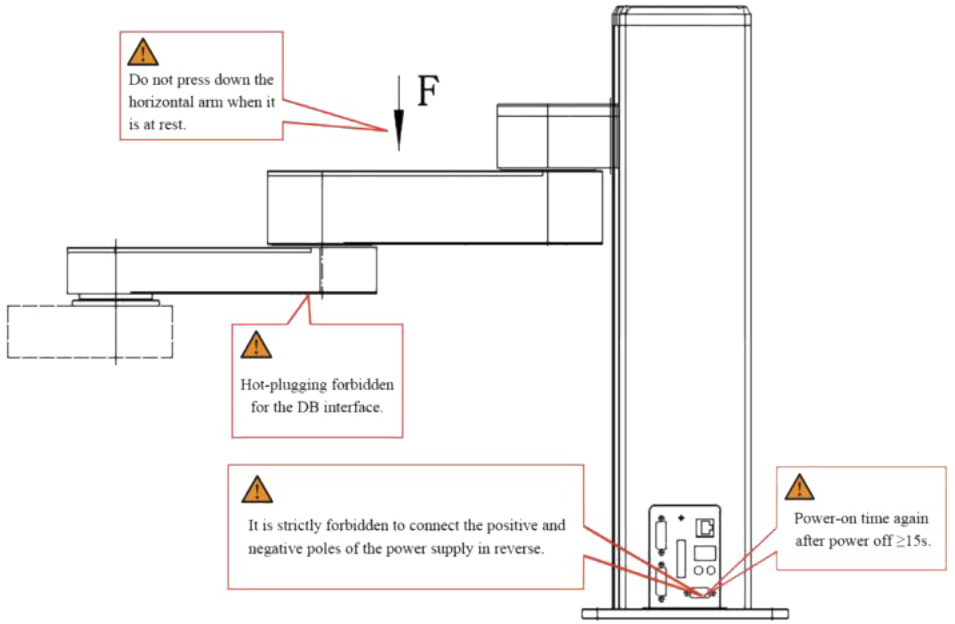


Figure 4

DB15 Connector Recommendation

Recommended model: Gold-plated male with ABS shell YL-SCD-15M Gold-plated female with ABS shell YL-SCD-15F

Size Description: 55mm*43mm*16mm

(Refer to Figure 5)

Figure 5

Robot Arm Compatible Grippers Table

Robot Arm Model No.	Compatible Grippers
XX42 T1	Z-EFG-8S NK/Z-EFG-12 NK/Z-EFG-20 NM NMA/Z-EFG-20S/ Z-EFG-30NM NMA The 5th axis 3D printing
XX42 T2	Z-EFG-50 ALL/Z-EFG-100 TXA

Power Adapter Installation Size Diagram

XX42 configuration 24V 500W RSP-500-SPEC-CN power supply

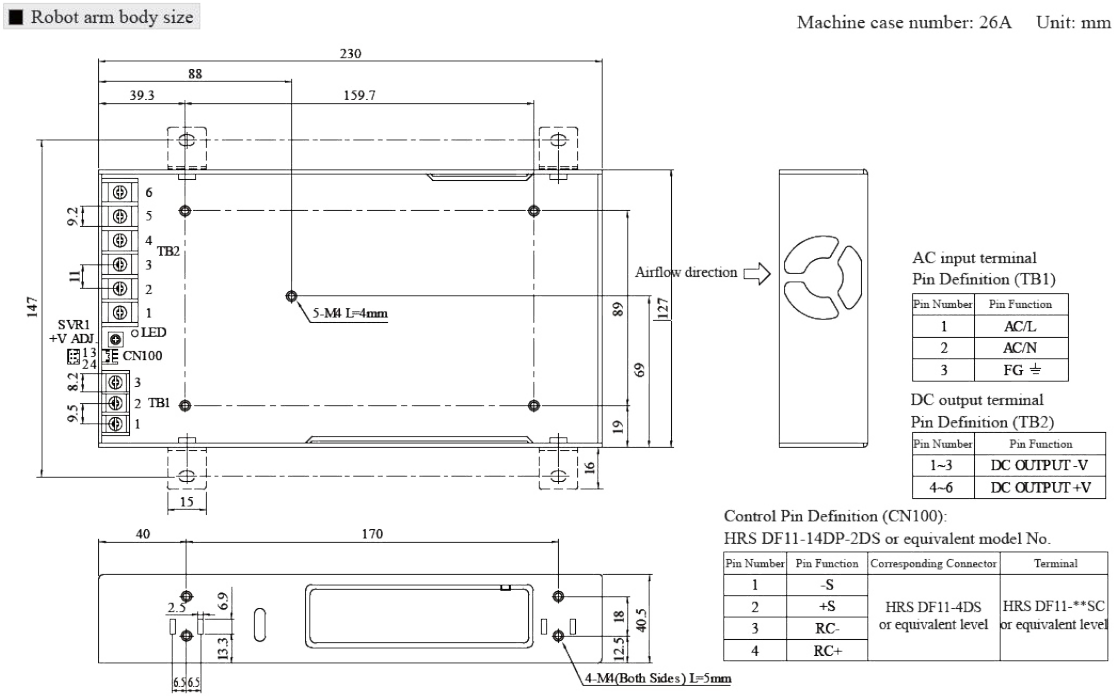
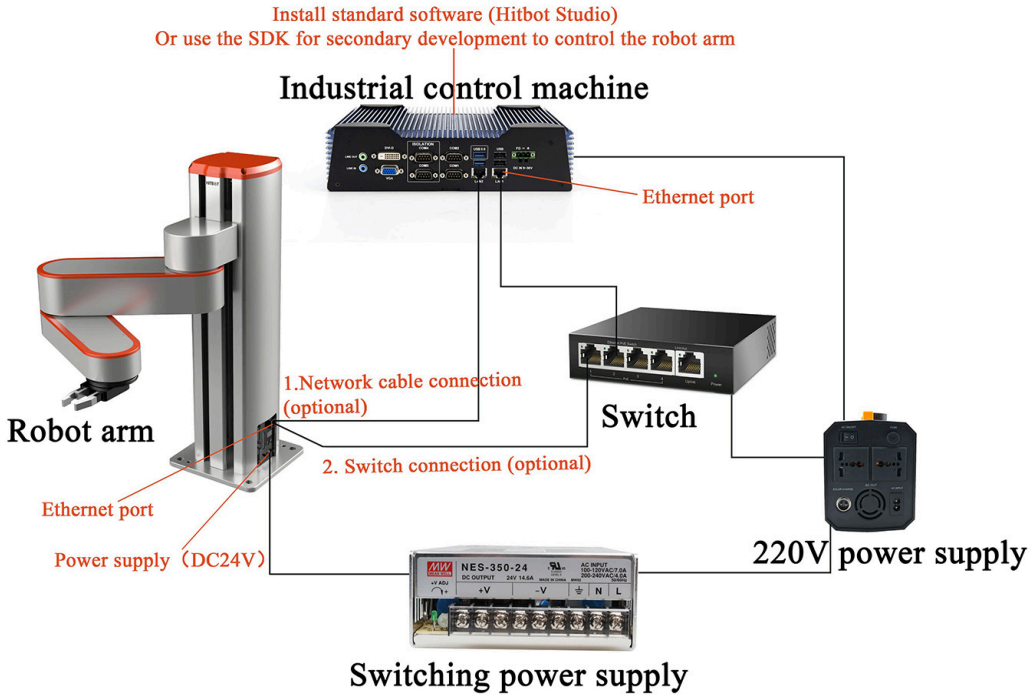


Diagram Of The External Use Environment Of The Robot Arm



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