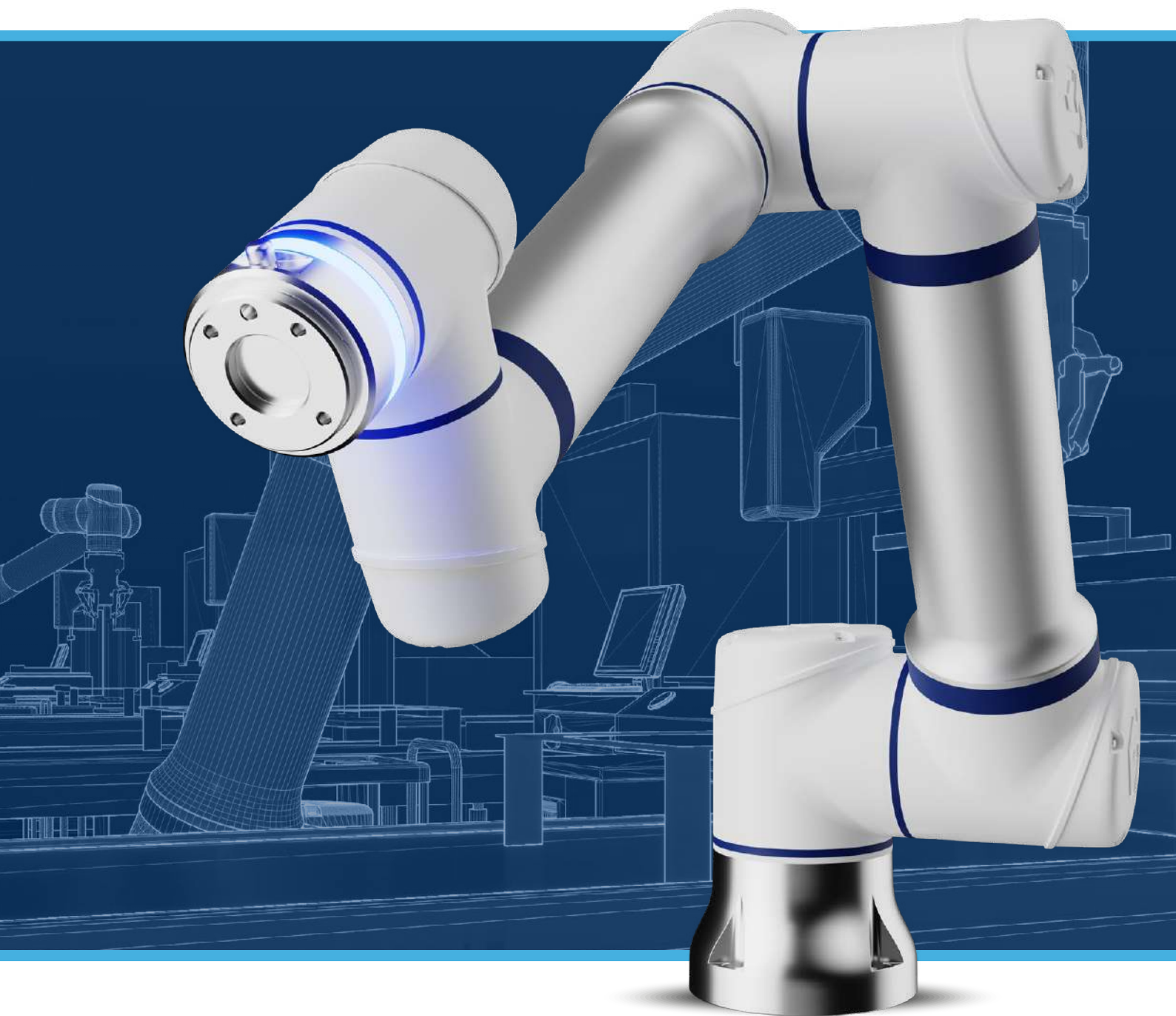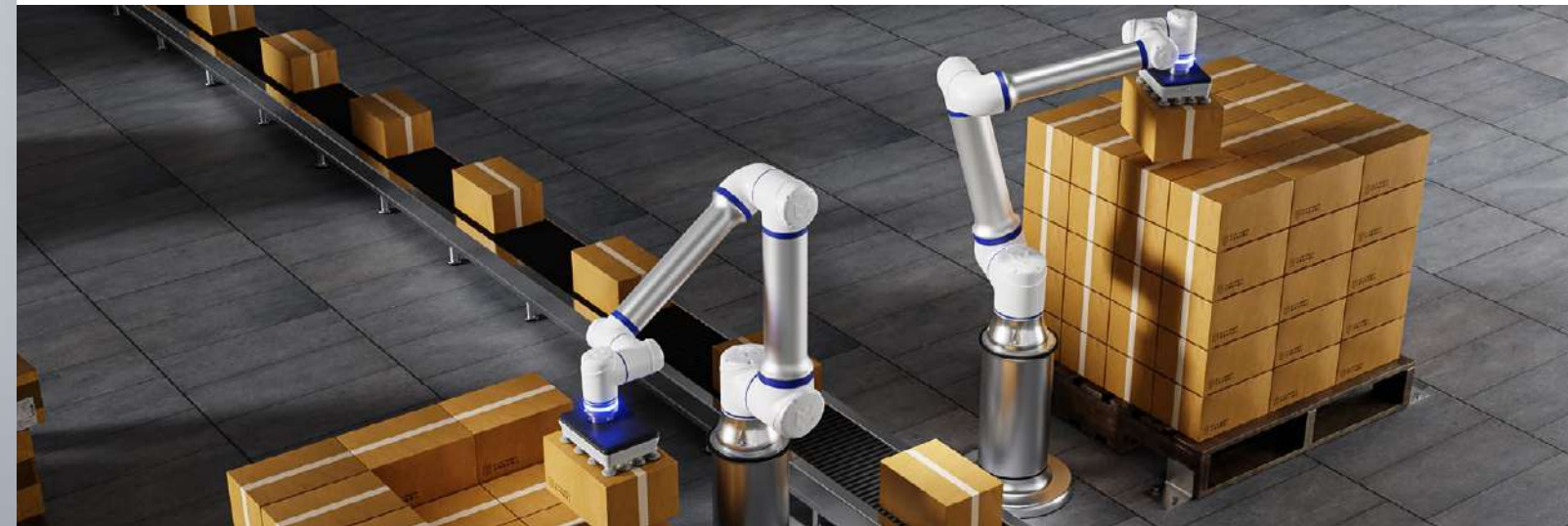# ELITE ROBOTS

# COMPANY
# PROFILE

# ELITE ROBOTS

## ALWAYS EASIER
## THAN BEFORE

Elite Robots is a global automation solutions provider focusing on collaborative robots, also known as cobots. Founded in 2016 and headquartered in Shanghai, with a workforce of more than 300 people, it is the cobot manufacturer with the highest independent R&D rate in China, boasting over 200 registered patents.

Constantly committed to developing cutting-edge yet accessible robotic solutions and improving human-machine interaction, continuous research and innovation are in the DNA of Elite Robots and the main driving forces behind its global growth.

By leveraging its partnerships with numerous distributors and system integrators around the world, as well as collaborating with complementary automation equipment OEMs (ecopartners), the company has successfully deployed over 10,000 units across more than 50 countries. Elite Robots debuted in the cobotics arena by launching the EC Series, which quickly gained a growing reputation in the industry due to its stability, speed, and unmatched price-quality ratio.

The company was then among the pioneers in the development and mass production of second-generation collaborative robots, with the development of the new CS Series. Launched in late 2022, Elite Robots' new range of cobots features a brand-new infrastructure with extensive hardware and software upgrades which allow for greater flexibility and openness, enabling the robots to smoothly perform a variety of processing tasks.

In doing so, Elite Robots, whose automation solutions have already been successfully deployed across many industries (medical, automotive, electronics, metal processing, and energy, among others), will further expand the scope of its cobots, upgrading and empowering resilient businesses worldwide and the global industry as a whole.

**2016**
Year founded

**300+**
Employees

**200+**
Patents

**10k+**
Deployed Units

*Elite Robots 8,700 square meters manufacturing site in Suzhou, China* ➤

# Cobots Range

**Cobot Superior**

## CS SERIES

**CS63 - CS66 - CS68 - CS612 - CS616 - CS618 CS620 - CS625**
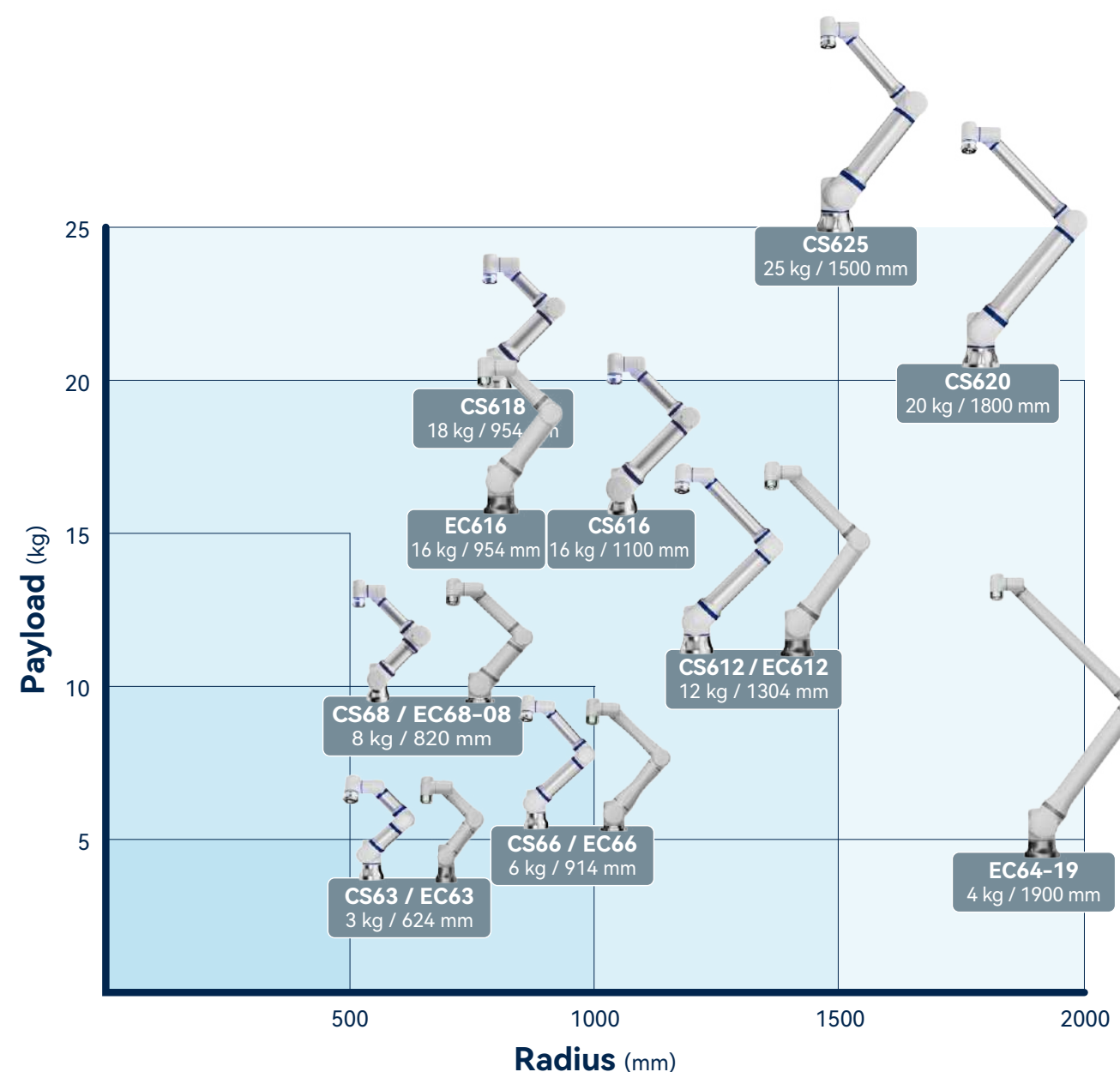
The CS Series is Elite Robots NextGen range of collaborative robots: a platform-level cobot based on a fully upgraded software & hardware infrastructure and an enhanced, customizable UI, providing extra safety, ease of use and high expandability, with payload up to 25kg and reach up to 1800mm.

**Elite Cobots**

## EC SERIES

**EC63 - EC64-19 - EC66 - EC68-08 - EC612 - EC616**

The EC Series sets itself apart in the cobotic world for its speed, flexibility, and reliability, as well as a leading price-quality ratio. Its robust and lightweight industrial design allows smooth multiangle installation and proper functioning in all environments.

**Payload (kg)** / **Radius (mm)**

- CS625 — 25 kg / 1500 mm
- CS620 — 20 kg / 1800 mm
- CS618 — 18 kg / 954 mm
- EC616 — 16 kg / 954 mm
- CS616 — 16 kg / 1100 mm
- CS612 / EC612 — 12 kg / 1304 mm
- CS68 / EC68-08 — 8 kg / 820 mm
- CS66 / EC66 — 6 kg / 914 mm
- CS63 / EC63 — 3 kg / 624 mm
- EC64-19 — 4 kg / 1900 mm

# Track Record Across Industries

### Automotive

Successfully implemented multiple automation solutions in an industry that, due to the complexity of its supply chain, requires a wide variety of applications: engine and parts assembly, quality control, screwing, gluing, loading and unloading and so on.

### Electronics

The accuracy and ease of use and reprogramming of Elite Robots' cobots let them perfectly handle electronic products, which are characterized by high variety, small size, and short life cycles.

### FMCG

The need to maintain high turnover with no downtime and very low production costs is critical in the consumer goods industry, and all manufacturers that have implemented Elite Robots' reliable and cost-effective cobots in their lines have easily overcome this challenge.

### Metals & Machining

Due to their robustness, accuracy and extensive communication capabilities, Elite Robots' cobots have successfully handled the intricate tasks required in the demanding metal industry, making them the perfect choice for various metal-related applications.

### Logistic & Warehousing

Upgrade your packaging and palletizing tasks with Elite Robots cobotic solutions. With their payload capacities expanded from 16 to 25 kg, the new models offer an even wider range of applications.

### Education & Science

Enhance learning and support research with our accurate tabletop models. Used to simulate or assist high-precision experiments, they can work closely with students and scientists in order to provide the best hands-on experience.

### HoReCa

Under the wave of new modes of consumption, numerous retail businesses have successfully utilized Elite Robots' unmanned solutions for their operations, resulting in increased efficiency and customer satisfaction.

### Energy

Collaborative robots can be utilized across multiple stages of energy production, including assembly, inspection, and maintenance. They also offer a safe and effective solution for hazardous environments where human access can be dangerous.

### Medical

Demand for medical products has surged in recent years, and so have the automation needs of this industry, which Elite Robots has successfully met by serving companies of all sizes for a wide variety of applications, from pick and pack to material addition.

## ...and more

# CS SERIES

## The NextGen Cobot is Here

Elite Robots' top-of-the-line solution for the most advanced automation requirements, the new CS series is ready to break more and more barriers to automation! With its easy programming and extensive communication capabilities, the CS series is the best solution for businesses looking to revamp or automate their production lines.

**3~25 kg**
PAYLOAD

**624~1800 mm**
RADIUS

**± 0.02~0.1 mm**
ACCURACY

**IP65/68**
PROTECTION RATING

## Your Superior Automation Partner

As the CS acronym (Cobot Superior) suggests, Elite Robots CS Series has been designed and developed with the aim of taking productivity to a superior level, by applying the 4-S PRINCIPLE: **Safe**, **Simple**, **Scalable**, and **Sustainable**.

- **SAFE**
  Designed in accordance with safety standards **ISO 10218-1** and **13849-1, PLd Category 3**, the CS Series integrates **over 20 configurable safety functions** and features **90 adjustable levels of collision detection**.

- **SIMPLE**
  Intuitive, user-friendly, and customizable graphical user interface with flow chart software. Powerful, flexible, and versatile **Python-based programming language**.

- **SCALABLE**
  Java-based expandable modular architecture. Rich interconnectivity (including **Profinet**, **Modbus RTU**, **ModbusTCP**, **Ethernet IP**, **RS485**, and **TCP/IP**) and **configurable IO ports** for enhanced communication and integration capabilities.

- **SUSTAINABLE**
  The CS Series features a **standard IP65 degree of protection, upgradeable to IP68**, perfect for use in harsh environments and able to guarantee long uptimes with no need for periodic maintenance: a future-proof investment that will remain reliable and functional for years to come.

# CS SERIES

## Main Highlights

### High payload capacity

With a load capacity of up to 25 kilograms, Elite Robots CS Series cobots are perfect for performing massive pick & place, palletizing and other heavy-duty applications with ease.

**UP TO 25kg**

### User-friendly

Quick and easy to set up and redeploy. Graphic programming with preinstalled task-specific plugins.
Full touch teach-pendant for smooth onsite operations.

### For any environment

**UP TO IP68**

Standard IP65 protection, upgradeable to IP68, allows the CS series collaborative robots to operate smoothly in even the harshest industrial environments.

### Ultra expandable

Compatibility with multiple protocols including Ethernet/IP, Profinet, Modbus. Supports custom plugins.

### Safe

ISO 10218 and ISO 13849 Cat3 PLd standards.
Collision detection with 90 adjustable levels.

### Fast

3.9 m/s industry leading max TCP speed.

# CS SERIES



| | CS63 | CS66 | CS68 | CS612 | CS616 | CS618 | CS620 | CS625 |
|---|---|---|---|---|---|---|---|---|
| **PAYLOAD** | 3 kg | 6 kg | 8 kg | 12 kg | 16 kg | 18 kg | 20 kg | 25 kg |
| **RADIUS** | 624 mm | 914 mm | 820 mm | 1304 mm | 1100 mm | 954 mm | 1800 mm | 1500 mm |
| **ACCURACY** | ±0.02 mm | ±0.03 mm | ±0.03 mm | ±0.05 mm | ±0.05 mm | ±0.05 mm | ±0.1 mm | ±0.08 mm |
| **TYPICAL TCP SPEED** | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 2.0 m/s | 2.0 m/s |
| **TOOL I/O** | 12V / 24V 3A, 2A, 1A | 12V / 24V 3A, 2A, 1A | 12V / 24V 3A, 2A, 1A | 12V / 24V 3A, 2A, 1A | 12V / 24V 3A, 2A, 1A | 12V / 24V 3A, 2A, 1A | **T1:** 12V / 24V, 3A, 2A, 1A  **T2:** 24 V, 5A | **T1:** 12V / 24V, 3A, 2A, 1A  **T2:** 24 V, 5A |

**PROGRAMMING**
Python-script, graphic programming with tree-flow structure, embedded simulation SW, user-friendly plug-in creation, one-click back-up/restore/upgrade

**IO SIGNALS**
Controller: 24 DI (8 config.) / 24 DO (8 config.), 2 AI / 2 AO; Terminal: 4 x config. DI/DO; 1 AI / 1 AO

**COMMUNICATION**
RS485, Ethernet TCP/IP, Modbus RTU, Modbus TCP/RTU, Ethernet/IP slave, Profinet slave

**SAFETY**
Pld. Cat. 3, ISO 13849; ISO 10218; ISO/TS 15066

**IP PROTECTION RATING**
Arm: IP65 (IP68 upgradable)
Controller: IP44

**TOOL POWER CAPACITY**
0 / 12v / 24v; 3A, 2A, 1A; 5A*; RS485

**TEACH PENDANT**
12,1" full-touch screen

**STATUS LIGHT**
Multi-color flange ring

\* CS620 and CS625 only

# CS SERIES



**Powerful**
8 pin connector up to 3A capacity. DI/DO adjustable, PNP/ NPN configurable, Push/Pull output. Additional 4 pin connector with 5A capacity for the most demanding tasks (CS620 and CS625 only)

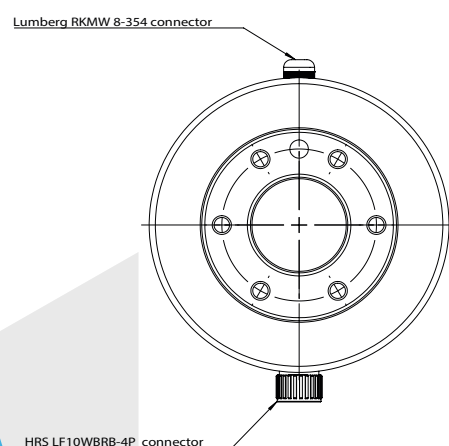Lumberg RKMW 8-354 connector

HRS LF10WBRB-4P connector

**Suitable for all environments**
Sturdy robotic arm with standard IP65 protection upgradeable to IP68, to withstand dust, dirt and water. ISO class 5 cleanrooms

**Integrated status-light**
Multi-color ring on the cobot flange to clearly indicate the robot status (4 colors)

**Productivity at your fingertips**
12.1" Teach Pendant with full-touch capacitive screen. Easily detachable from controller for no-TP scenarios.
Optional version (ERP400S) with 3-modes enable key for enhanced safety
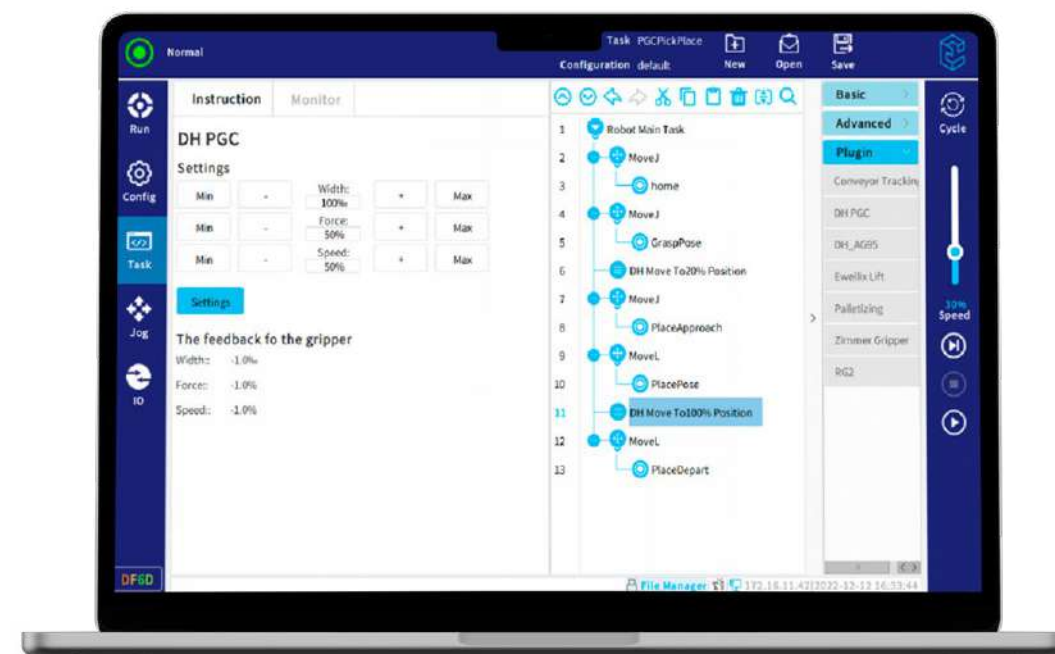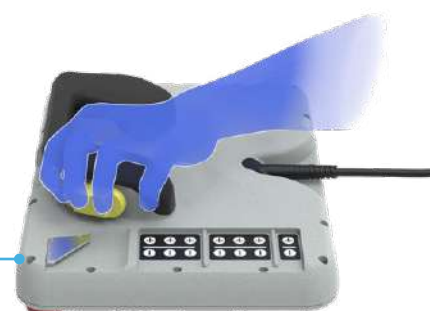
**User-friendly and Flexible UX**
Intuitive graphic interface with tree-flow structure and Python script, for both no-code operations and high-level programming. One-click upgrade/back-up/restore. Supports custom plugins for device, task and navigation configuration. Embedded simulation platform

**OEM controller**
Optional OEM controller for integrators, OEM partners and users who want to create their own custom design. The integrated handle allows easy transportation.

**Highly Expandable Controller**
24 DI (8 config.) / 24 DO (8 config.), 4 high-speed digital inputs. RS485, TCP/IP, Modbus TCP/RTU, Ethernet/IP slave, Profinet slave. Integrated holder to attach the TP for optimal storage.
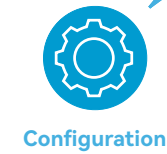
# Redefined User Experience



## Plugin Developing SDK

- Development of custom graphical plugins for configuration and task.

- The platform can be extended with various programming languages including Python, C, C++, and C#, among others.

- The standard Java development process leverages Intelligent IDEA, Eclipse, and Maven and other standard IDEs.

✓ Users can better integrate robots into their applications and processes.

✓ Integrators can increase their efficiency and value by adapting to the specific software needs of each user.

**Configuration**

**Task**

## Virtual Controller & Simulation Platform

Virtual platform specifically designed for robot simulation and offline programming. By replicating robot operations in a virtual environment, users can test, troubleshoot, and optimize them before implementing them on a real robot. The constructed program can be imported directly into a real robot.
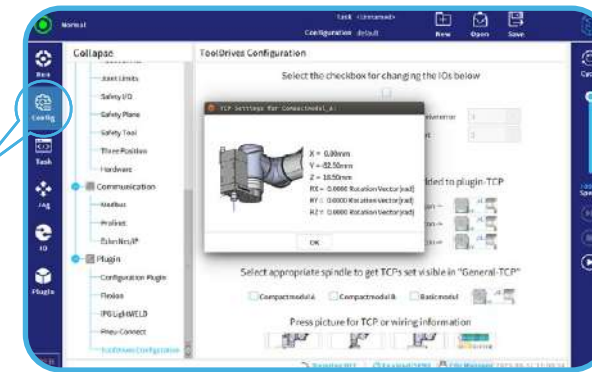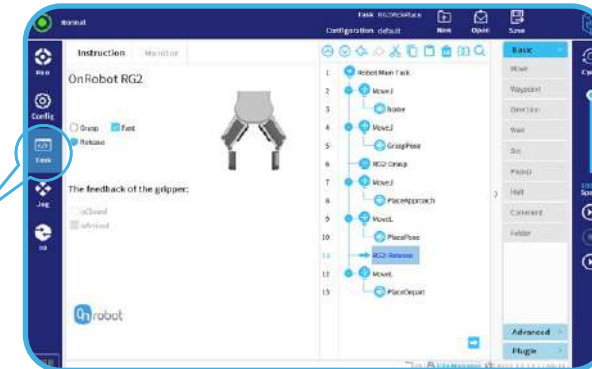
## Effortless Programming

The graphical programming method with a tree-flow structure is designed to streamline the robot programming process and is also suitable for beginners. Users can easily navigate the programming process through a simplified graphical interface.

Complete Python parser fully supporting the Python scripting language, providing increased flexibility for high-level programming and achieving modular development. Tailored software interfaces can be developed to meet the security and functionality needs of every single user.

## Embedded Palletizing Wizard

The palletizing application wizard integrated in Elite Robots proprietary software ensures a fast and easy setup and redeployment. User-friendly and highly customizable, it is the perfect and cost-effective palletizing choice for multiple industries. Maximize your production efficiency and minimize operations downtime.
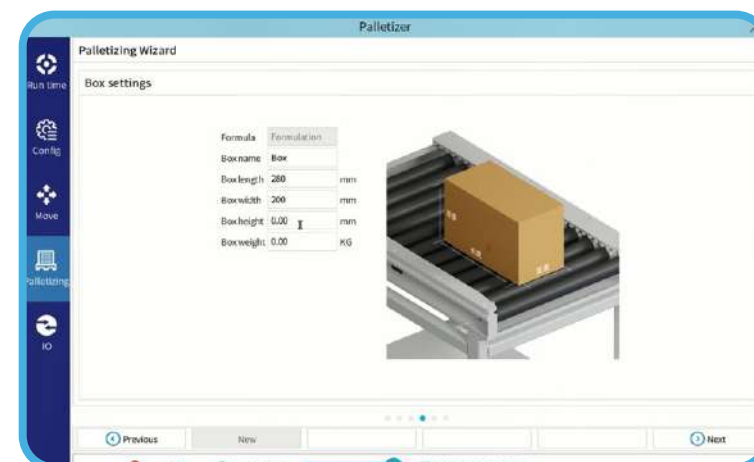
# CS SERIES

## Robotic Arm

| | | CS63 | CS66 | CS68 | CS612 | CS616 | CS618 | CS620 | CS625 |
|---|---|---|---|---|---|---|---|---|---|
| **Payload** | | 3kg | 6kg | 8kg | 12kg | 16kg | 18kg | 20kg | 25kg |
| **Radius** | | 624mm | 914mm | 820mm | 1304mm | 1100mm | 954mm | 1800mm | 1500mm |
| **Repeatability** | | ±0.02mm | ±0.03mm | ±0.03mm | ±0.05mm | ±0.05mm | ±0.05mm | ±0.1mm | ±0.08mm |
| **Axis** | | 6 | | | | | | | |
| **Joints rotation** | J1 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J2 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J3 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J4 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J5 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J6 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| **Joints speed** | J1-J2 | 180°/s | 150°/s | 150°/s | 120°/s | 120/s | 120/s | 125°/s | 125°/s |
| | J3 | 230°/s | 180°/s | 150°/s | 150°/s | 150°/s | 150°/s | 150°/s | 150°/s |
| | J4-J6 | 230°/s | 230°/s | 230°/s | 180°/s | 180/s | 180/s | 210°/s | 210°/s |
| **Typical TCP Speed** | | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 2.0 m/s | 2.0 m/s |
| **IP rating** | | IP65 (optional IP68) | | | | | | | |
| **Temperature range** | | –10~50℃ | | | | | | | |
| **Relative humidity** | | <90% (non-condensing) | | | | | | | |
| **Noise reduction** | | <70db | | | | | | | |
| **Typical power usage** | | 185w | 250w | 250w | 435w | 435w | 435w | 625w | 625w |
| **Mounting** | | Any angle | | | | | | | |
| **Tool I/O connector** | | M8, 8pin | | | | | | T1: M8, 8pin T2: Ø 12.8mm, 4pin | |
| **Tool I/O ports** | | 4 config. DI / DO; 1 AI, 1 AO | | | | | | | |
| **Tool I/O power supply** | | 0 / 12V / 24V; 3A / 2A / 1A | | | | | | T1: 0 / 12V / 24V; 3A / 2A / 1A T2: 24V; 5A | |
| **Tool I/O communication** | | RS485, Modbus RTU | | | | | | | |
| **Footprint** | | Ø 128 mm | Ø 150 mm | Ø 150 mm | Ø 190 mm | Ø 190 mm | Ø 190 mm | Ø 240 mm | Ø 240 mm |
| **Weight** | | 15 kg | 20 kg | 22 kg | 34 kg | 33 kg | 33 kg | 60 kg | 58 kg |
| **Material** | | Aluminum, steel, plastic, rubber | | | | | | | |
| **Cable length** | | 5.5m* | | | | | | | |
| **Certifications** | | ISO 13849, ISO 10218, ISO/TS 15066, ISO 14644 cleanroom class 5, RoHS; SEMI-S2; UL, CE, KCs | | | | | | | |
| **Programming** | | Python-script, graphical proprietary user interface, free-drag/offline programming | | | | | | | |

\* Optional cable lengths of 1.5m, 3m and 8m and additional extensions up to 10m are available.

## Standard controller



| **Type** | AC |
|---|---|
| **I/O ports** | 24 DI, 24 DO (8 safety config. DI/DO); 2 AI, 2 AO; 4 High-Speed DI |
| **I/O power supply** | 24V/3A (internal), 6A (external) |
| **Communication** | RS485, Ethernet TCP/IP, Modbus TCP/RTU, Ethernet/IP slave, Profinet slave |
| **Size** | 505mm x 257mm 462mm |
| **IP Rating** | IP44 |
| **Weight** | 14kg* \| 16kg** |
| **Power source** | 100-240 VAC, 50-60 Hz |
| **Temperature range** | 0~50℃ |
| **Relative humidity** | 5%~95% (non-condensing) |
| **Material** | Aluminum, Steel |

\* For cobots: CS63, CS66, CS68, CS612, CS616, CS618
\*\* For cobots: CS620, CS625
The controller is also available in an OEM version

## ERP400 Teach Pendant

| **Size** | 301mm x 232mm x 54mm |
|---|---|
| **Screen size** | 12.1" |
| **Resolution** | 1280 x 800 pixels |
| **IP rating** | IP54 |
| **Weight** | 1.7 kg |
| **Cable length** | 5.5 m |
| **Temperature range** | 0~50℃ |
| **Relative humidity** | 5%~95% (non-condensing) |
| **Material** | Aluminum, plastic, rubber |
| **Input method** | Capacitive full touch-screen |

# EC SERIES

## Meet the Elite Cobots

Reliable, safe and cost-effective, the EC (Elite Cobots) Series is the ideal productivity companion for all your processing tasks. Fast, lightweight, easy to install and operate, with an industry-leading payload to weight ratio of up to 0.49 and a maximum radius extension of 1900mm, the EC Series brings flexibility to your production process and rapid returns to your bottom-line.

**3~16 kg**
PAYLOAD

**624~1900 mm**
RADIUS

**± 0.02~0.1 mm**
ACCURACY

## Make Complex Processes Simple

Elite Robots has established its presence in the world of industrial automation with its EC series collaborative robots. Known for their exceptional speed, flexibility, and reliability, as well as their excellent price-quality ratio, the EC cobots have helped many companies worldwide to optimize their manufacturing processes and boost productivity.

- **LIGHTWEIGHT**
  The world's first collaborative robots which weigh less and lift more, with a payload to self-weight ratio up to 0.49, for effortless lifting and carrying, and lower power consumption.

- **FLEXIBLE**
  Effortless multiangle installation (floor / wall / ceiling). Working radius with maximum extension of up to 1900mm to adapt to any working environment.

- **FAST**
  The EC Series stands out among its class with a maximum tool speed of 4.0 m/s, making it one of the fastest options available. Optimize your processing tasks with Elite Robots and experience unmatched speed and efficiency.

- **INDUSTRIAL DESIGN**
  The robust and streamlined robotic arm with IP54 rating can properly function even in non-optimal environmental conditions. Rugged industrial teach pendant with resistive touch-screen.

# EC SERIES

**PROGRAMMING:**
LUA-script, free-drag/offline programming

**IO SIGNALS**
Controller: 16 DI / 20 DO (8 config.), def. NPN (DI adjust. PNP)
Terminal: 2 DI / 2 DO

**COMMUNICATION**
Ethernet, RS485, TCP/IP, MODBUS TCP/RTU, Ethernet/IP, Profinet, CCLink (optional)

**SAFETY**
ISO 10218

**IP PROTECTION RATING**
Arm: IP54
Controller: IP44

**TOOL POWER CAPACITY**
24V/2A; RS485

**TEACH PENDANT**
Industrial panel with 8" resistive touch screen

| | EC63 | EC66 | EC68-08 | EC616 | EC612 | EC64-19 |
|---|---|---|---|---|---|---|
| PAYLOAD | 3 kg | 6 kg | 8 kg | 16 kg | 12 kg | 4 kg |
| RADIUS | 624 mm | 914 mm | 820 mm | 954 mm | 1304 mm | 1900 mm |
| ACCURACY | ±0.02 mm | ±0.03 mm | ±0.03 mm | ±0.03 mm | ±0.05 mm | ±0.1 mm |
| TYPICAL TCP SPEED | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s |

# EC SERIES

**Free-drive and drag-and-teach function**
Move the cobot freely and smoothly teach it the running path.

**Collision detection**
Achieve safe human-machine interaction without worrying about collisions from your cobot.
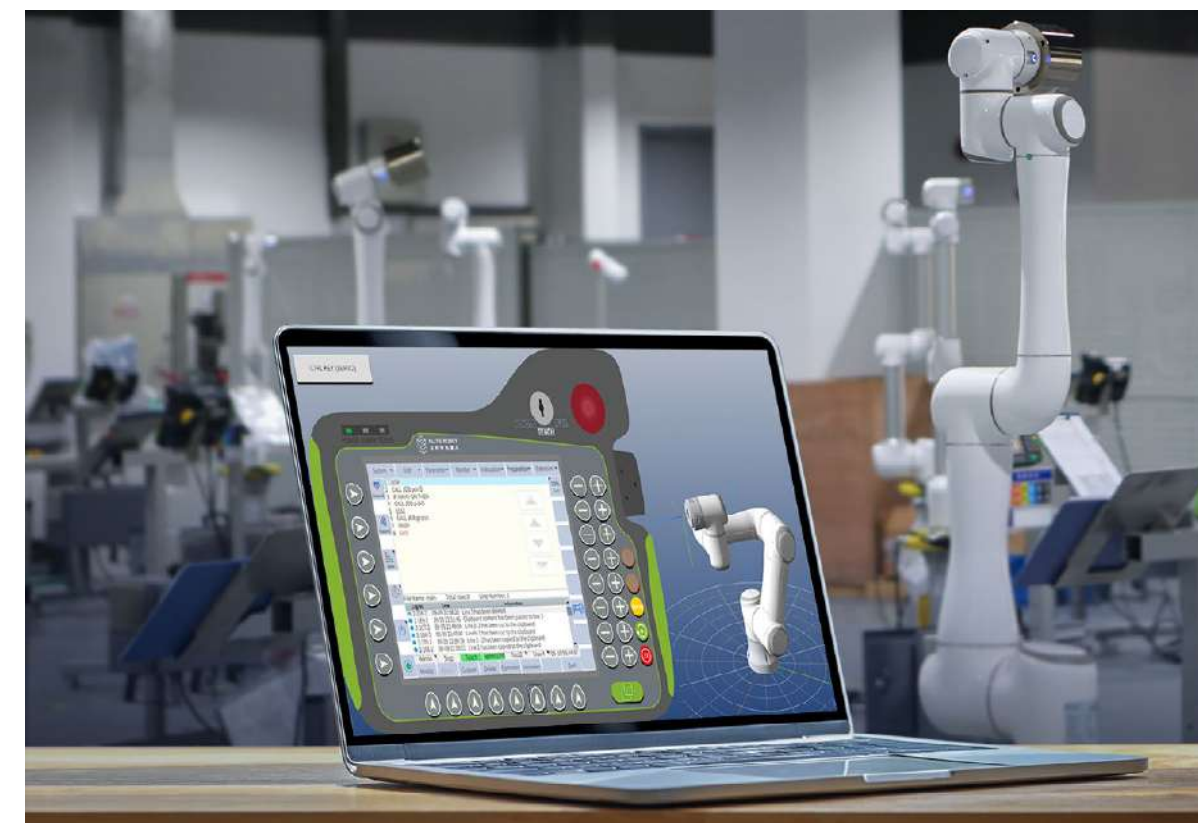
**Wide Reach**
Maximum working radius extension up to 1900 mm for high flexibility and broad applications scope.

**Lightweight and compact design**
Multi-angle installation and IP54 protection allow the cobot to operate in any environment.

**Industrial teach pendant**
8" touch-screen teach-pendant with 3-modes enable key for safe and convenient on-site operations

**Remote control via web teach-pendant**
Users can remotely interact with the cobot through Ethernet protocol via laptop, phone or pad. It allows real-time control and monitoring of the cobot (with 3D view display of its status), and more flexible programming.

**Standard and Mini Controller (optional)**
Standard AC/DC controller with 16 DI / 16 DO. Ethernet/IP / Profinet slave with Modbus TCP/RTU interface.

Optional Mini DC controller for integrators, OEM partners and users who want to create their own custom design

# EC SERIES

## Robotic Arm

| | | EC63 | EC64-19 | EC66 | EC68-08 | EC612 | EC616 |
|---|---|---|---|---|---|---|---|
| **Payload** | | 3kg | 4kg | 6kg | 8kg | 12kg | 16kg |
| **Radius** | | 624mm | 1900mm | 914mm | 820mm | 1304mm | 954mm |
| **Repeatability** | | ±0.02mm | ±0.1mm | ±0.03mm | ±0.03mm | ±0.05mm | ±0.03mm |
| **Axis** | | 6 | | | | | |
| **Joints rotation** | J1 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J2 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J3 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J4 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J5 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| | J6 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| **Joints speed** | J1–J2 | 190°/s | 120°/s | 150°/s | 150°/s | 120°/s | 120°/s |
| | J3 | 190°/s | 150°/s | 190°/s | 190°/s | 150°/s | 150°/s |
| | J4–J6 | 260°/s | 260°/s | 260°/s | 260°/s | 210°/s | 210°/s |
| **Typical TCP Speed** | | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s | 1.5 m/s |
| **IP rating** | | IP54 | | | | | |
| **Temperature range** | | –10~50℃ | | | | | |
| **Relative humidity** | | 5%~95% (non-condensing) | | | | | |
| **Noise reduction** | | <70db | | | | | |
| **Typical power usage** | | 185w | 350w | 250w | 250w | 435w | 435w |
| **Mounting** | | Any angle | | | | | |
| **Tool I/O connector** | | 12 pin | | | | | |
| **Tool I/O ports** | | 2 DI, 2 DO; 1 AI, 1 AO | | | | | |
| **Tool I/O power supply** | | 24V / 2A | | | | | |
| **Tool I/O communication** | | RS485, Modbus RTU | | | | | |
| **Footprint** | | Ø 128 mm | Ø 200 mm | Ø 150 mm | Ø 150 mm | Ø 200 mm | Ø 200 mm |
| **Weight** | | 13kg | 33.5kg | 17.5kg | 17kg | 33.5kg | 32.5kg |
| **Material** | | Aluminum, steel, plastic, rubber | | | | | |
| **Cable length** | | 5.5m* | | | | | |
| **Certifications** | | ISO 10218; RoHS-1; UL, CE, CR, KCs | | | | | |
| **Programming** | | LUA-script, free-drag/offline programming | | | | | |

* Optional cable lengths of 1.5m, 3m and 8m are available.
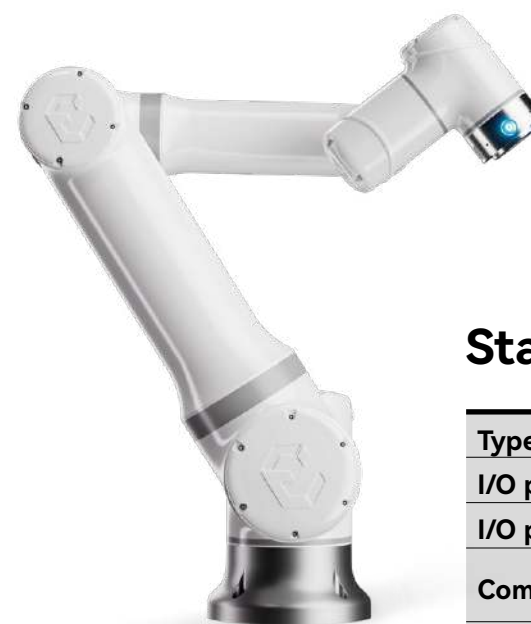
## Standard controller

| Type | AC / DC |
|---|---|
| I/O ports | 16 DI, 20 DO, 2 AI, 4 AO |
| I/O power supply | 24V / 2A |
| Communication | RS485/RS232, Ethernet TCP/IP, UDP, Modbus TCP/RTU, Ethernet/IP slave, Profinet slave, CCLink slave (optional) |
| Size | 505mm x 246mm x 447mm |
| IP rating | IP44 |
| Weight | 15kg* / 17kg** |
| Power source | 90-264VAC, 50-60Hz / 19-72VDC |
| Temperature range | 0~50℃ |
| Relative humidity | 5%~95% (non-condensing) |
| Material | Aluminum, Steel |

\* For cobots: EC63, EC66, EC68-08
\*\* For cobots: EC64-19, EC612, EC616
The controller is also available in an OEM version

## ERP300 Teach Pendant

| Size | 290mm x 225mm x 118mm |
|---|---|
| Screen size | 8" |
| Resolution | 800 x 600 pixels |
| IP rating | IP54 |
| Weight | 1.2 kg |
| Cable length | 5.5 m |
| Temperature range | 0~50℃ |
| Relative humidity | 5%~95% (non-condensing) |
| Material | Aluminium, plastic, rubber |
| Input method | Resistive touch-screen, 3-mode enable key |

# Optional Accessories

## OEM controller (CS Series)

| Type | DC / AC | |
|---|---|---|
| I/O ports | 24 DI, 24 DO (8 safety config. DI/DO); 2 AI, 2 AO; 4 x High-Speed DI | |
| I/O power supply | 24V / 3A (internal), 6A (external) | |
| Communication | RS485, Ethernet TCP/IP, Modbus TCP/RTU, Ethernet/IP slave, Profinet slave | |
| Size (WxHxL) | 495mm x 200mm x 227mm | |
| IP rating | IP40 | |
| Weight | 5 kg* | 7 kg** |
| Power source | 19–72VDC / 100–240VAC, 50–60Hz | |
| Temperature range | 0~50℃ | |
| Relative humidity | 5%~95% (non-condensing) | |
| Material | Aluminum, Steel | |

*For cobots: CS63, CS66, CS68, CS612, CS616, CS618 – **For cobots: CS620, CS625

## Mini Controller (EC Series)

| Type | DC |
|---|---|
| I/O ports | 8 DI, 8 DO |
| I/O power supply | 24V / 2A |
| Communication | RS485, Ethernet TCP/IP, UDP, Modbus TCP/RTU, Ethernet/IP slave, Profinet slave, CCLink slave (optional) |
| Size (WxHxL) | 205mm x 135mm x 40mm |
| IP rating | IP40 |
| Weight | 1.2 kg |
| Power source | 45–55VDC |
| Temperature range | 0~50℃ |
| Relative humidity | 5%~95% (non-condensing) |
| Material | Aluminum |

## ERP400S Teach Pendant (CS Series)

| Size (WxHxL) | 301mm x 232mm x 105mm |
|---|---|
| Screen size | 12.1" |
| Resolution | 1280 x 800 pixels |
| IP rating | IP54 |
| Weight | 1.8 kg |
| Cable length | 5.5 m |
| Temperature range | 0~50℃ |
| Relative humidity | 5%~95% (non-condensing) |
| Material | Aluminium, plastic, rubber |
| Input method | Capacitive full touch-screen, 3-mode enable key, jogging-keys, function keys |

# Global Case Studies

From palletizing to assembly, from inspection to finishing, Elite Robots has successfully tackled thousands of automation challenges across all continents. Whether it is inspecting a power plant, tapping a gear, screwing taillights or preparing a snack, its cobots are helping companies of all sizes around the world increase efficiency and uptime, and boost their bottom line. By seamlessly integrating its robotic arms with cutting-edge EoATs and other add-ons from leading manufacturers, and leveraging its extensive global network of partners, Elite Robots has implemented tailor-made cobotic solutions to meet any automation need. Explore some of its case studies to discover how.

## Assembly and testing of EV accessories in Mexico

Elite Robots has been chosen by the leading German subcon ZF for QC and assembly of electric vehicle (EV) accessories at one of its plants in Mexico. The EC66 cobot was used for accurately tightening the steering wheel buttons panel. In addition, a dual cobot application was deployed for testing the functioning of the steering wheel buttons and assessing the lag-time horn activation.
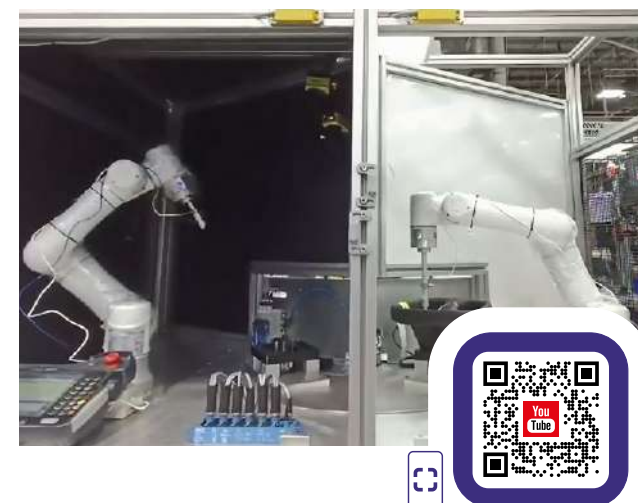
### Applications

Quality Inspection

Assembly & Screwdriving

## Packaging tasks in New Zealand (FMCG industry)

Due to the demanding concentration and precision required in salt-core production, coupled with a suboptimal working environment, this supplier to global automotive brands decided to automate a portion of their production process. Elite Robots EC66 robotic arm, featuring an interchangeable gripper and 3D camera integration, proved to be a rapid and effective solution, both in terms of implementation and return on investment.

### Applications

Pick & Place

Palletizing

# ACR for the world's largest E-vehicles market

As the global leader in electric mobility, China has also developed the world largest network of electric vehicles ACR (Auto Charging Robot). Adaptable to different business operations, Elite Robots' cobots contribute to the development of reliable and cost-effective mobile ACR solutions for e-vehicles adopted by both government agencies and leading EV manufacturers such as Li-Auto

## Applications

EV charging

AMR

# Empowering the metal industry

Qingdao Machinery, an established company in the metallurgical industry, has successfully transitioned from traditional to collaborative robotics with Elite Robots, resulting in safer and more cost-effective HMLV production. The switch allowed for enhanced safety and user-friendliness, reduced downtime, and created a flexible solution for multiple manufacturing applications.

## Applications

Pick & Place

Material Removal

# Automating salt core production

Due to the demanding concentration and precision required in salt-core production, coupled with a suboptimal working environment, this supplier to global automotive brands decided to automate a portion of their production process. Elite Robots EC66 robotic arm, featuring an interchangeable gripper and 3D camera integration, proved to be a rapid and effective solution, both in terms of implementation and return on investment.

## Applications

2D-/3D-Vision

Pick & Place

# Streamlining plastic processing

In order to meet the growing demand for one of their products, an established Portuguese company in the plastic industry needed a flexible and cost-effective automated solution to replace manual labor. The choice therefore fell on Elite Robots' EC66 robotic arm, which efficiently manages the material handling process, occupying little space and significantly reducing labor costs.

## Applications

Machine Tending

Pick & Place

# Solving labor shortage

After moving its production site to a first-tier city, a biotech company partnered with leading firms started experiencing labor shortages. To tackle the problem without disrupting production, the company opted for the "progressive automation model" proposed by Elite Robots. By adopting a table-top solution with multiple pick and place and PLC, the company was able to address labor shortages without altering the production process layout.

## Applications

Pick & Place

# Safer tapping with cobots

The noise and harshness in the work environment prompted this Spanish metal component company to automate the tapping process of one of its products with Elite Robots' robot arms. Equipped with a customized EoAT, the Ec612 collaborative robot performs the entire gear tapping process, relieving workers from operating in a noxious and dangerous environment.

## Applications

Machine Tending
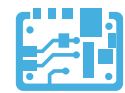
# Electronics

In this rapidly evolving industry, labor costs are a significant concern, particularly in the case of HMLV manufacturing. Flexibility is, therefore, critical, and electronics companies are actively seeking cobots that can be easily reprogrammed for new tasks or quickly redeployed to different production lines.

With Elite Robots' complete cobots range, companies in the 3C industry can achieve this level of flexibility, while also benefiting from certified safety features that permit human workers to work alongside the cobot (pending risk assessment) and perform tasks like loading and unloading, screwing, torquing, and inspecting.


PCB board tightening at BOSCH plant


Loading & unloading with machine tending


Screwdriving


Pick & place of PCB boards


1-to-3 pick and place with machine tending


Injection of PCB boards

## Popular Applications

Pick & Place

Assembly & Screwdriving

Quality Inspection

Machine Tending

Dispensing

AMR

2D-/3D-Vision

# Automotive

The automotive manufacturing industry is renowned for having one of the most intricate and extensive supply chains across all sectors. It is composed of numerous small, medium, and large manufacturing firms that perform a diverse range of tasks, including machine loading, inspection, and assembly.

This industry has established a reputation for its strict standards and high productivity, and its ability to adapt quickly to changing consumer demands through customization and flexibility. Elite Robots has successfully addressed these demands over the years, catering to an expanding roster of Tier 1 OEMs and subcontractors.


Visual inspection


Tightening of engine bolts


Bearings mounting


Taillights screwing


Screwing car body parts


Car seats visual inspection

## Popular Applications

Machine Tending

Quality Inspection

Dispensing

Assembly & Screwdriving

Welding

Polishing

2D-/3D-Vision

# Logistics & Warehousing

Logistics and warehousing are horizontal industries that have undergone significant advancements in recent years, largely driven by the rise of global e-commerce. However, these industries continue to face various challenges such as labor shortages, high labor costs, complex orders, shorter product cycles, and the need to ensure worker safety when dealing with heavy lifting and repetitive tasks.

Fortunately, Elite Robots has developed cutting-edge automation solutions in collaboration with its ecopartners. By leveraging these solutions, businesses can reduce their dependence on manual labor and significantly lower their operating costs. These automation technologies can automate many of the challenging tasks involved in logistics and warehousing, resulting in increased efficiency, productivity, and safety.


Mid-payload palletizing with lifter


Mixed palletizing demonstration


Heavy payload palletizing demonstration


Palletizing with lifter and gripper extender

## Popular Applications

Pick & Place

Palletizing

AMR

Quality Inspection

Sorting

2D-/3D-Vision

# Metal & Machining

This labor intensive industry is often characterized by 24/7 year round shifts, frequently in harsh environments and involving repetitive, physically demanding, and dangerous tasks.
Significantly reduce the risk of workplace injuries and errors, and move your workers from undesirable workstations by deploying Elite Robots' cobots for your machine tending, drilling, and welding tasks.

With an accuracy of 0.02 mm, the IP65 rated robotic arm (upgradeable to IP68), and the effortless multi-angle installation (floor / wall / inclined / ceiling), you will achieve greater consistency in quality and promote worker satisfaction.
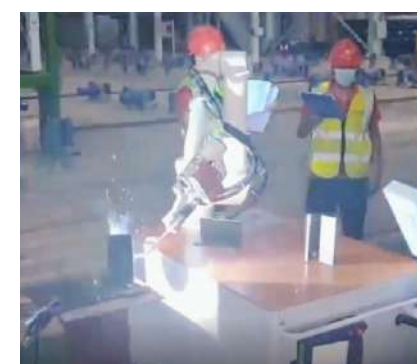

CNC machine tending with AGV


Drilling of metal sheets


Loading and unloading of engines at aerospace plant


Arc welding


Loading and unloading of gears with machine tending


End cap loading

## Popular Applications

Pick & Place

Machine Tending

Welding

Quality Inspection

Assembly & Screwdriving

Material Removal

# HoReCa
## (hotels, restaurants, catering)

Robots are gradually becoming an integral part of our lives, no longer remaining confined to production facilities or labs, but also performing customer-facing tasks and other retail-related activities.
Restaurants, kiosks, fast food outlets, hotels and more are increasingly making use of robots that can provide non-stop, top-class service while boosting their bottom line.

Elite Robots has been involved in the development of automated coffee, ice cream, tea and other unmanned stations for retail consumption since 2017, successfully serving numerous companies, including large MNCs, and also deploying its cobots at some major national events.


Making pancakes at World Robot Conference


Preparing and serving ice-cream at KFC


Double-arm coffee brewing demo


Serving tea during the National Congress


Preparing and serving bubble tea


Waffle preparation

## Popular Applications

Cooking

Coffee Making

Drink Making

Serving

# More Industries & Applications


Salt cores pick & place with vision system


Palletizing in the FMCG industry at P&G plant


Electric cars fueling with AGV


Integration with industrial robot for bus body painting


Power plant IR inspection


End of line pick and pack in medical industry


Pick & place of metal parts


Screwdriving

## End of Arm Tooling (EOAT)
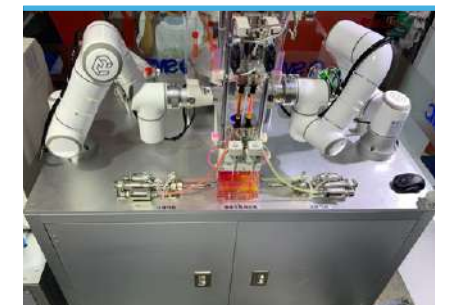

Gimatic EQC gripper


Megmeet welder


OnRobot electric gripper


SRT Robotics soft gripper


OnRobot sander


SMC pneumatic grippers

# A Broad Ecosystem

Instead of relying on a "one size fits all" approach and acknowledging that no one can excel in every aspect of robotics, Elite Robots leverages the expertise of a network of specialized third-party manufacturers, known as eco-partners, producing end-effectors and other add-ons for its cobot arms.
Elite Robots can thus provide its users with a diverse and flexible range of options, ensuring that the best solution is deployed for each automation project. This approach allows customers to combine Elite Robots' robotic arm with equipment that meets their specific needs, whether it be grippers, vision sensors, or AGVs. Move away from the standardized approach typical of traditional robotics scenarios and create a customized solution that fits your unique needs!

## Automated Guided Vehicles (AGV)


Machine tending with Standard Robots AGV


Palletizing solution with Youibot AGV


Demo for e-vehicles fueling with Geek+ AGV

## Vision systems


HikVision 2D camera


Scantech Simscan 3D scanner


Sorting solution with Solomon 3D camera

# Elite Robots Worldwide

**ELITE ROBOTS**

**50+** COUNTRIES

**10K+** DEPLOYED UNITS

**7** GLOBAL OFFICES



**Elite Robots offices**

**Authorized Partner(s)***

*one or more depending on Country*

With strategic **domestic and overseas locations** and **numerous authorized distributors and integrators** worldwide, Elite Robots can guarantee you the best support for **uptime** and **productivity**.

# ELITE ROBOTS
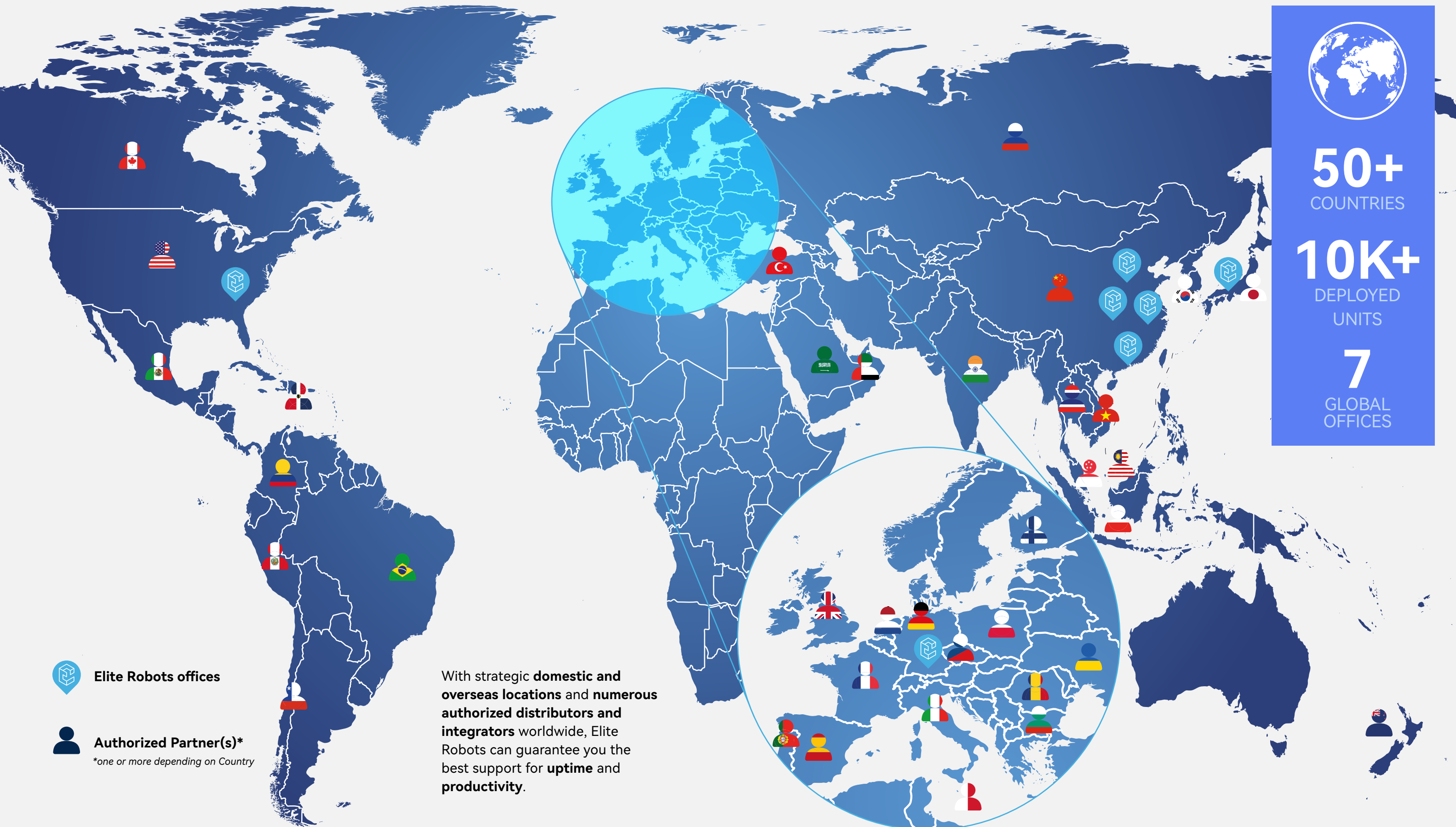
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