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SYNTEC ROBOT CONTROLLER

Robotic Arm Controller

最 值 得 信 任 的 電 控 伙 伴
TRUSTED TECHNICAL SERVICE

About Syntec

PROFILE

SYNTEC has become one of the most influential and development potential controller brand in the Asia-Pacific market. With smart manufacturing system among its core strengths, SYNTEC is well experienced in lean and diverse manufacturing, the digital and physical integration, and on-site services. With the support of multiple distributions, we are the ideal one-stop shop for complete solutions and we hope all the small and medium manufacturers can join us in stepping into Industry 4.0.



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SYNTEC
TECHNOLOGY CO.,LTD.
" TRUSTED TECHNICAL SERVICE "



Product Features and Solutions

Support

20+ Arm Configurations

6-axis, 4-axis palletizing, SCARA, DELTA,...etc.

Serial Communications Protocol

Mechatrolink-III / EtherCAT

Expansion Module



FC IO

Provide

Graphical Coding HMI

user-friendly interface

Various Application Packages

conveyor tracking, stacking, painting, and welding

Software Development Tools

easy-to-develop, application-specific packages

Syntec Servo Package

straight-forward tuning, numerous wattage configurations



Product Solutions

MES



SYNFACTORY



External Devices

Grippers, barcode scanner, welding equipment, force sensor, vision, measuring instruments, ...etc.

Controller



multi-axis servo driver



axial motor

Servo

SRI
AD · DA · PWM



Handheld Controller

- ▶ Ergonomic teach pendant with a built-in controller
- ▶ Touchscreen and easy-accessed hotkeys
- ▶ Safety switches



Multi-axis Servo Driver

- ▶ Serial communication interface
- ▶ Compact multi-axis design
- ▶ Easy tuning using Analysis Platform



FC IO Series

- ▶ IModular design
- ▶ Compact size
- ▶ Up to 256 I/O



Software Functions

Support for Numerous Arm Configurations

Built-in 20+ predefined types of robot for faster customization



Six-Axis Articulated Robot Arm

capable of complicated motion with 6 degrees of freedom (DOF) and suitable for a wide variety of applications, such as picking and placing, welding, painting, polishing, deburring and more

SCARA

with 4 DOF, SCARA is capable of wide range of movement and is suitable for food and electronic industry. Vision package can be added to provide workpiece alignment and quality measurement



DELTA

with 3 to 4 DOF, DELTA is nimble and quick and advantageous for high speed pick and place

Palletizing Robot Arm

4-axis robot equipped with parallel 4-link mechanism, palletizing robot is perfect for moving large and heavy objects



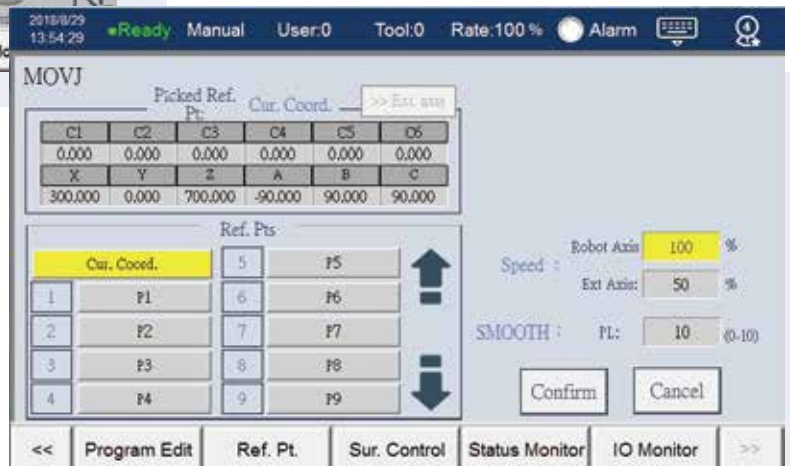
Graphical Coding HMI

Increase User-Friendliness to Allow Easy Control Operation

Intuitive Programming

icon-based programming for reducing the learning curve

multi-program management for increasing application flexibility



Allow In-House Customization

easy-to-use tool kits for developing industry-specific packages






Feature Highlights

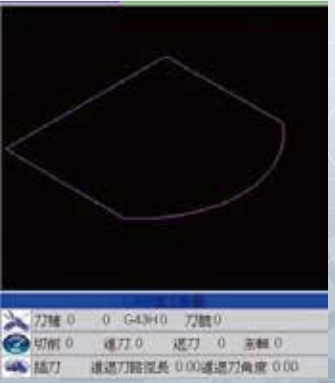


Real-time Simulation
changing program speed on the fly for early development




Role-based Access Control
setting function accessibility based on different authority levels for better management

- OEM
 - System Settings
 - Software Update
- Manager
 - Parameter Setting
 - Backup and Restore
- Engineer
 - Robotic Programming
 - Reference Point Teaching
- User
 - Machine Operation
 - Trouble Shooting



DXF File Conversion
converting DXF file directly into reference points, which creates an easier and faster way for robot motion planning



External Axis
supporting ground rails, industrial turntables, and synchronized movement.

Application Packages

Customized HMI for different industrial needs

Stacking

Simple Parameters Configuration

Modular system setup

Key Reference Points

Quick setup for automation program



Conveyor Tracking

Tracking Package

Quick integration of vision and sensors

Applications

Production line pick & place and glue tracking



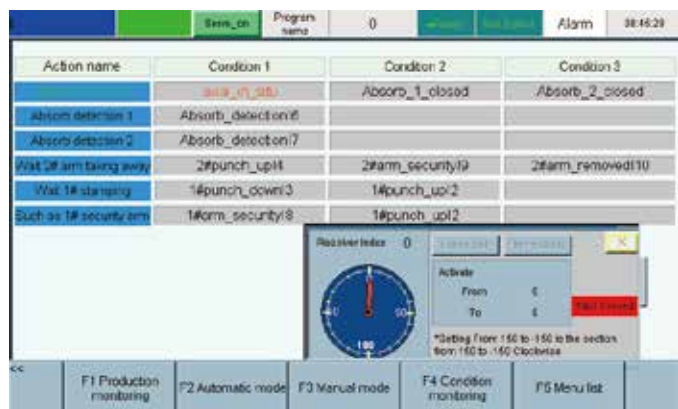
Stamping Press

Pressing Package

Ready to use once points are taught

Encoder Feedback

Improve efficiency



Welding

Welding Package :

Weaving Functionality

Welding HMI

Settings for welding power supply and robot





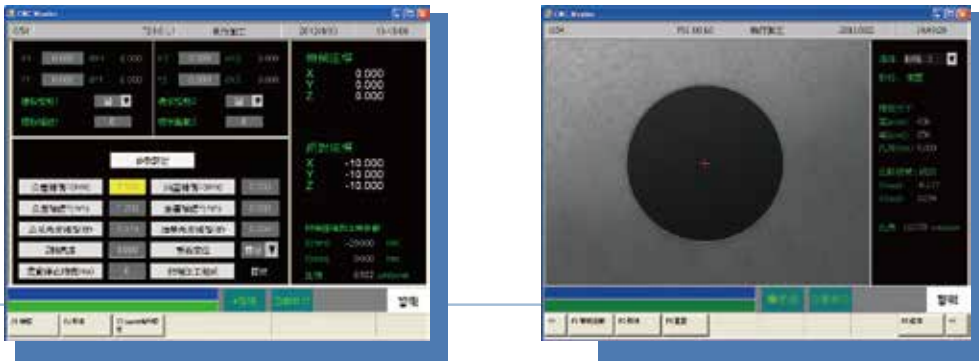
Machine Vision

Vision solution is provided to satisfy the needs for visual alignment and measurement of feed trays



81R controller

Live video feeds on controller ; parameter settings in one shot



Highly-integrated Vision System

- **Camera images** are fed live to the handheld controller for intuitive and user-friendly operations, thus easily satisfying the needs for **workpiece alignment** and **visual measurement**
- Camera parameters are adjustable directly on the robot controller for easy operations
- Support for major camera brands such as **Cognex**, **ImageSource**, and **Hikvision**
- Support for IP Cam for **live monitoring** and **remote instructions**

Applications



Machine Tending

Suitable for multi-stations loading and unloading applications for **lathes, milling machines, and grinding machines**
Greatly reduced wiring time with the use of network cables for communication between robot and machines



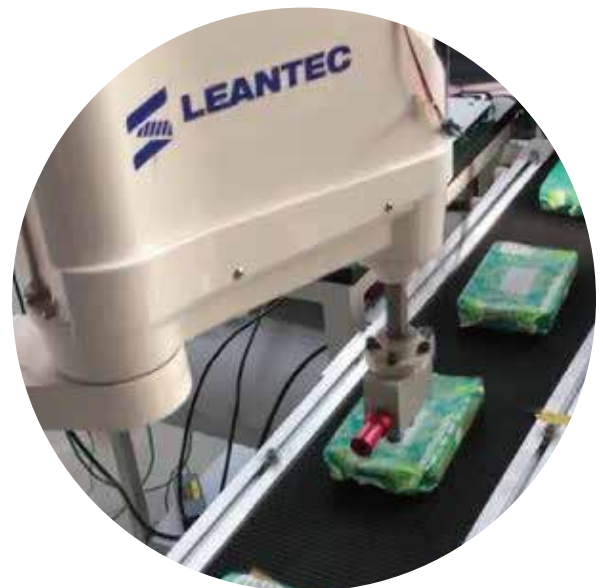
Stamping Press Pick and Place

Offering a **stamping press package**
Supporting 5- and 6-axis articulated robots, and SCARA robots



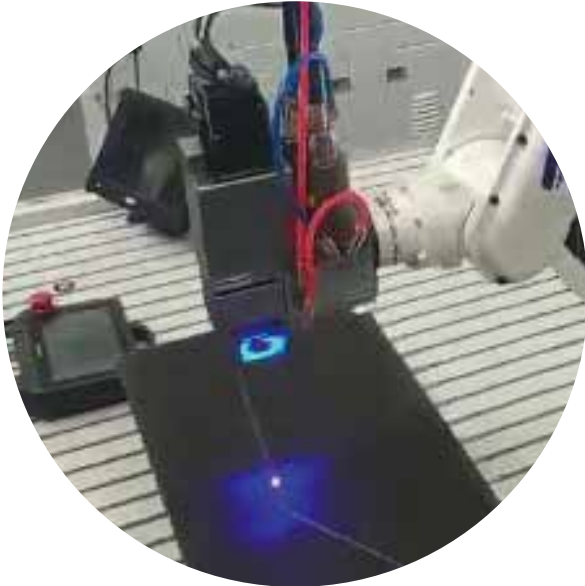
Wood Drilling

Providing **incremental movement** commands for greater programming efficiency
4-axis and 6-axis robotic solutions are available upon request



Conveyor Tracking

Integrated **vision sensors** for tracking
Perfect for **production line** systems in electronic and food industry



Laser Welding

Optional camera monitoring and seam tracking
Highly-integrated robotic arm and laser 2D vibrating mirror module



Arc Welding

Providing a turnkey solution for arc welding
Highly-integrated welding equipment and external axis



Painting

Allowing customized painting applications
Providing a painting package for quick parameter settings

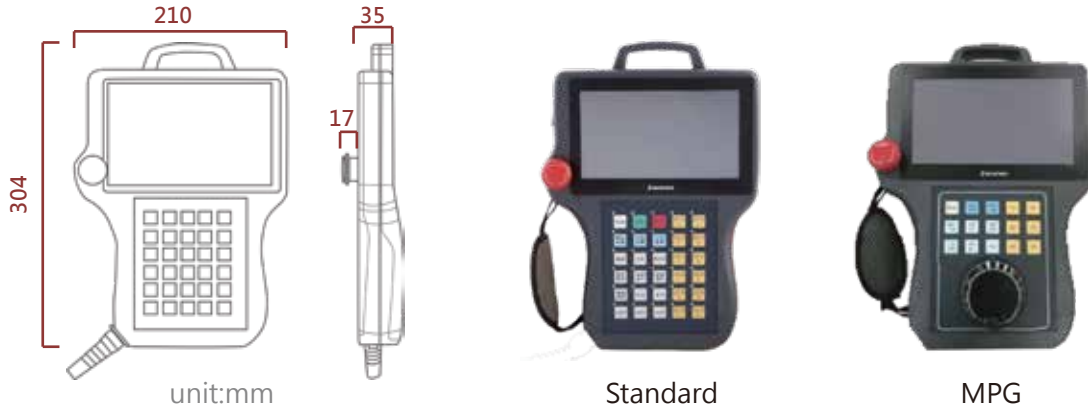


Grinding & Polishing

Using a 6-axis force sensor
Supporting offline programming

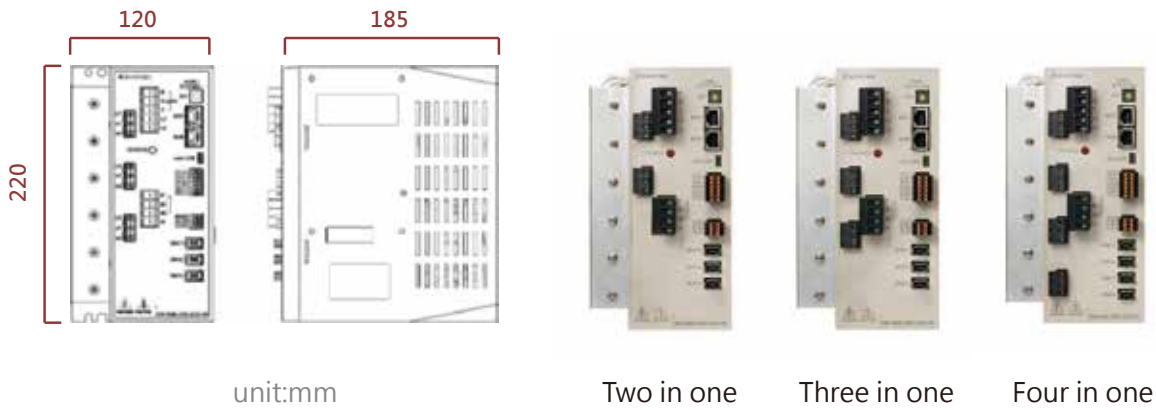
Other Specifications

81R Handheld Controller



Model	81RA	81RS	81RD
Robot Type	Artic	SCARA	DELTA
No. of Axes (max.)	4 (8)		
No. of I/O (max.)	16I / 16O (256)		
Servo Communication	Mechatrolink-III / EtherCAT		
Cable Length (m)	10 / 17		
USB	1		
Network	10/100 Mbps * 1		
Supported Communication	Modbus TCP · EtherNet/IP		
Other specifications	Safety Switch, E-Stop, 7" Touchscreen		

Multi-axis Servo Driver



Model	SMD-22B	SMD-23B	SMD-24B
No. of Axes	2	3	4
Encoder Type	Nikon · Tamagawa · Sankyo · Panasonic · Hiwin		
No. of I/O	2I / 2O		
Communication	Mechatrolink-III		
Power Supply	220V		



Global Locations

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