

Specification

Gantry Robot Controller

○Yes --No △Option

Product SPEC.

Model No.	A3300A	A3300D3	R6200	R6800	
Type	Cartesian Coordinates				
Monitor	7" TFT LCD ; Touch panel				
Storage	CF Card (1G)		SD Card (1G)		
Operation Panel	--		38 buttons		
Emergency Stop	--		2-stage switch		
Safety Switch	--		○		
Teaching Box Line Length	--		6m (Standard) / 8, 12, 15, 20 m (Optional)		
Knob	△		○		
HW	USB	USB HOST (2.0)			
	EtherNET	10BASE-T / 100BASE-TX			
Communication Interface	CIO	Serial Communication I/O. Expandable with LNC serial communication I/O cards, max: 128 input points/ 128 output points.			
	D1 M-II	--	--	--	○
Servo Interface	D2 RTECH	--	--	--	○
	D3 EtherCAT	--	○	--	○
	D5 PULSE	○	--	○	--
Power Supply	System Power	AC 100V/240V 50/60Hz			
	I/O Power	DC 24V(above 4A)			
Spindel Axis (Max.)	4-axis	10-axis	5-axis	10-axis	

SPEC. (Peripherals) EUROMAP 67

Model No.	SIOA1630	SIOA1730	SIOA1632	SIOA1732
Input Voltage	DC24.0±10%			
Max. Current	1.5A			
Input Point	21		32	
Input Spec.	Optocoupler input ; DC 24V ; NPN/PNP			
Output Point	24			
Output Spec.	Transistor type output (VoL); Contact point not over 1.5A			
	Relay output ; AC250 2A / DC30V 2A		--	

Intelligent Machines Information & Intelligence

Comprehensive Upgrade of Smart Machinery

Besides of the hard core technology of precision and processing speed, the developing trend of the modern machinery is to integrate smart functions to upgrade machine to intelligent machinery. The key technologies include integration of sensors, intelligent accessories and IoT. LNC Technology provides powerful product integration control capabilities to bring modern smart machinery and more efficient manufacturing process come true.



VISUAL SYSTEM



GANTRY ROBOT



LNC SCADA

GANTRY ROBOT

Support Various Protocol | Dual System/Dual Path
Built-in Working Methods | Integration with LNC Visual System

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LNC Gantry Robot Controller Series

LNC gantry robot control series, standard specification is three-axis control but also provides advanced functions include dual arms, five-axis dual systems and dual channel / dual path to meet high-end applications. According to industrial applications, product series is divided into a variety of product series containing injection molding machine reclaiming robots, lathe loading / unloading robots, punching robots, and automation robots. Furthermore, controllers are built-in with various construction methods to meet practical application requirements, such as stacking arrangement and in-mold labeling, etc. In response to the trend of intelligence, it can also be used with LNC visual system solutions to replace manual operation to achieve automation and intelligent manufacturing.

Product Series

Gantry Robot Controller Product Series

Controller

Peripheral Accessories I/O Board

Pulse Command **Fieldbus**
R6200A **R6800D** **A3300A** **A3300D3**

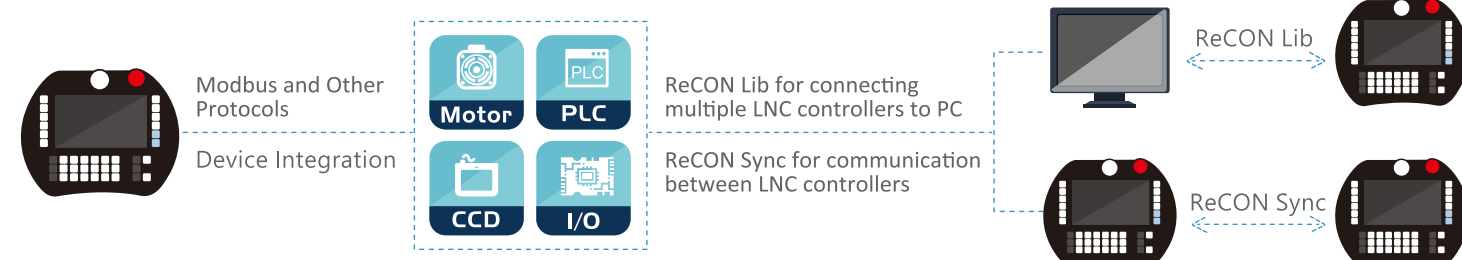
SIO1630A **SIOA1632** **SIOA1730** **SIOA1732**

SIOA1700 **SIOA1760R** **SIO2500D3**

Communications Protocol

Communication

Supports multiple servo communications to facilitate integration with peripheral equipment. High-performance communication library named "ReCON Library" is provided, allowing users to access data and parameters of controllers from PC.



Software

Software Functions

Friendly User Interface

The LNC gantry robot controllers are built-in most of the functions required for practical applications. It adopts a user-friendly interface to complete the operation with graphics and parameter inputs, including machine adjustment page and software limitation settings, etc.. By given with a teaching operation mode, users are able to learn to use various functions in a short time, such as standby point setting, restricted area setting, stacking setting, etc.

I/O Points Setting

Mechanism Setup

Software Limitation Setting



Stacking Setup

Graphic Instruction

Forbidden Zone



Software

Software Function

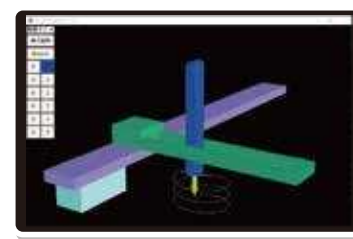
Production Management



FTP File Upload & Download



3D Simulator Software



Monitor PLC Ladder Diagram



X Axis Security Zone

Set up safe zone can prevent the robot from collisions.



Y Axis Security Zone

Set up safe zone to avoid collisions of lathe robots.



Z Axis Security Zone

Set up safe zone to avoid collisions of automated robots.



Easy Instruction Setting

Development axis control could be done by programming or macro.



Graphic Instruction

An easy graphic instruction is provided.



Set Up Stacking Function

Speedy set up stacking function is provided, after parameter setting, route will be made automatically.



Set Up Positions of Taking/Placing Materials

Provide the designated point function, the operator can set the target location and modify the location name.



I/O Points Motion Monitoring

Users can use PLC software to develop the action flow of I/O points.



Installment Payment

The installment payment function can be set if the payment is not received on time, the machine will be locked and cannot do processing. The machine could be unlocked after authorized machine makers apply and complete applications through LNC website.



Multi-language Support

LNC controller adopts UTF8 encoding to support multiple languages. In addition to the built-in 3 languages: traditional Chinese, simplified Chinese and English, the operation interface can also be translated into other languages.

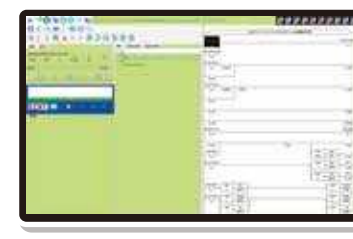


Secondary Development

Secondary Development Tools

In addition to the user-friendly HMI, LNC provides a comprehensive tool set for secondary development. Thru Open HMI, PLC ladder diagram and Macro language, equipment manufacturers can develop their own process and non-standard machines, to differentiate and add extra value to the equipment. The Macro language enables powerful command sets for logic control; it can even communicate with SmartCCD. The controller also provides data encryption to protect the result of secondary development.

PLC Ladder



PLC Macro



QUI (HMI)



QUI Macro



Application

Applications



Taking-out Robot of Injection Molding Machine



Feed-in Robot of Turning Machine



Feed-in Robot of Punching Machine

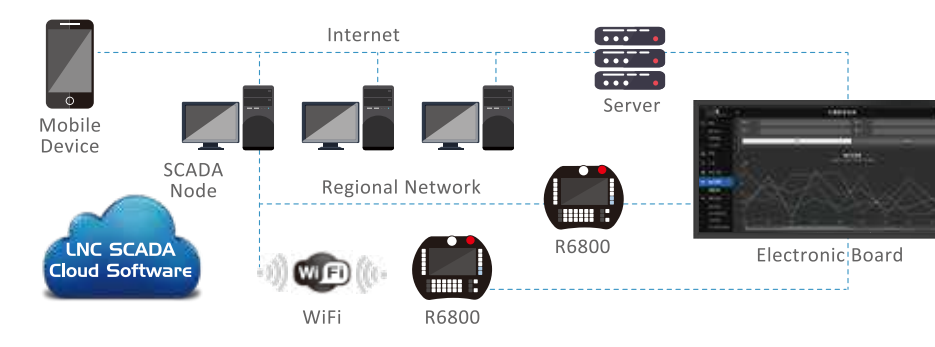


Industrial Robot of Automation

Cloud Management

Quickly Apply to Cloud Management

Through the LNC SCADA cloud software, users can monitor the product quality and production capacity of the factory, and can trace back the quality statistics and analysis related data of the product when a product abnormality occurs, and reflect it on the production decision, which can prevent the same problem from recurring. It's the current trend of smart production, which can be widely used in large-scale production lines that have high requirements for quality. LNC provides a complete cloud monitoring system solution for production plants to meet the needs of intelligent production line management and transparency of production information.



Features

- Monitor production quality, and summarize statistical analysis data to the server.
- Upload and download through the Internet and check the current processing program in real time.
- Machine maintenance schedule will be reminded in advance, and a warning will be issued if the time is overdue.
- Check the current work order production information, machine status, utilization rate... etc. at any time through the Internet.
- By setting the personnel authority, personnel can operate or view data according to different authority levels to improve security.
- Real-time alerts can be sent to designated personnel via Email, Line, Wechat, mobile phone when the machine is abnormal.

Value-added

LNC Visual System

AI2000



- CPU : Cortex-A53
- RAM : 1 GB
- Video Output : HDMI
- USB*3 ; Ethernet
- IO (Optional) : UART, PWM, I²C, SPI, GPIO
- Built-in Camera

LNC AI2000 Artificial Intelligent Automated Optical Inspection can be used for object positioning or appearance recognition, and when paired with gantry robot controller R6800, it can replace processes that require manual positioning or recognition. First, AI2000 calculates the position and angle offset of the workpiece, and then R6800 corrects the angle to accurately position the workpiece or the inspection of good and defective products can be carried out.

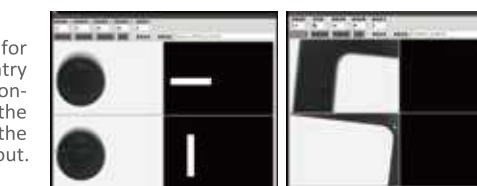


AI2000 visually recognizes workpieces according to process requirements

- Workpiece angular offset
- Workpiece size
- Workpiece center position
- Workpiece surface defects

R6800 is based on AI2000 visual inspection for the next step

- Accurately grasp the workpiece center
- Correct offset angle of the workpiece
- Good and bad product classification



Find Workpiece Center Calculate Angular Offset



MIS000



- 10" Touch Screen
- 32 GB SD
- 1GbE, 1 USB
- 3 IN/2 OUT
- Standard 2 Sets of Camera

MI5000 mold inspection system was developed for the purpose of protection of injection molding molds. After the molds open, MI5000 first confirms that all the finished products are successfully ejected, and there is no residual material sticking on the mold. If any abnormal occasion occurs, MI5000 will send out signal to gantry robot or injection molding machine controller to stop next injection.



Mold inspection with MI5000 after mold opening

- If there is any residual material in the mold
- The mold position
- The appearance is consistent with the standard product

- No abnormality: Gantry robot takes out the workpiece and unload
- Abnormality: MI5000 sends signals to signal to R6800 and then to the injection molding machine to stop next injection.



Set the Monitoring Areas : Green Line Area

MI-5000 is equipped with 10" industrial grade touch screen for easy operation: the set up and operation could be done by just one finger. Users can just touch the screen to set the wanted monitoring areas. Furthermore, the control screen is designed with function icons, so most operation could be done by clicking icons or simply input parameters.