XINJE

INTELLIGENT INDUSTRY
CONTROLLER



- Rich interfaces
- Multi-purpose machine
- Built-in UPS
- Powerful axis drive capability
- Exquisite appearance design

XSA Series Industrial Intelligent Controller

To be the Most Trusted Partner in Automation

XINJE

WUXI XINJE ELECTRIC CO.,LTD.

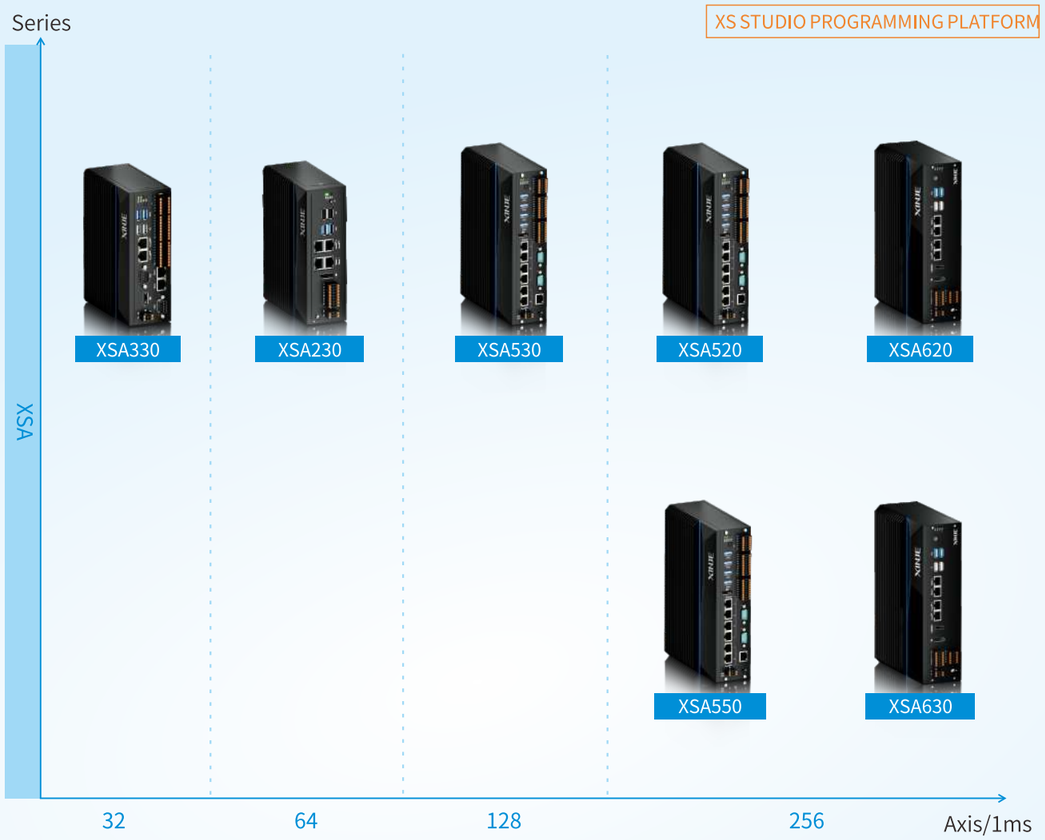
Address: No.816,Jianzhu West Road,Binhu District,Wuxi City,Jiangsu Province,China
Website:https://en.xinje.com/web/index
Email: sales@xinje.com

Tech Support
Tech@xinje.com

XINJE WeChat Official Account

Industrial Intelligent Controller

The Perfect Integration of High Flexibility and Powerful Performance



General Features

Platform Complementarity

The XA Series and XSA Series complement each other in terms of programming platforms. The XA Series supports the XDPPro programming platform, while the XSA Series supports the XS Studio programming platform.

High Performance

Based on the high-performance Intel X86 processor, it is compact in size yet offers faster response, stronger computing power, and instruction operation capability reaching the nanosecond level.

Integrated Control

Offers a choice of Windows or Linux to meet diverse needs such as informatization + control and machine vision + motion control in a single device. Supports Motion API functions.

Rich Interfaces

The main unit supports differential encoder input, frequency measurement, high-speed counting, high-speed pulse output, and other functions to meet the demands of various industrial scenarios.



XSA630-W/L

CPU	Axis Capacity	Synchronization Cycle
I5 1235U	(Recommended maximum: 256)	1ms for 256 axes

Capacity	Operating System	Communication Ports
Program:128MB Data:128MB	Windows Linux	EtherCAT*2 USB2.0*2 RS232*2 Ethernet*2 USB3.0*2 RS485*2



XSA620-W/L

CPU	Axis Capacity	Synchronization Cycle
I3 1215U	(Recommended maximum: 256)	1ms for 128 axes

Capacity	Operating System	Communication Ports
Program:128MB Data:128MB	Windows Linux	EtherCAT*2 USB2.0*2 RS232*2 Ethernet*2 USB3.0*2 RS485*2



XSA550-W/L

256axes



XSA530-W/L

256axes



XSA520-W/L

256axes

CPU	Clock Speed	Synchronization Cycle	Operating System	Capacity	Communication Ports
I7-1165G7	2.8GHz	1ms for 256 axes	Windows Linux	Program:128MB Data:128MB	EtherCAT*2 Ethernet*4 USB3.0*4 RS232/RS485*2

CPU	Clock Speed	Synchronization Cycle	Operating System	Capacity	Communication Ports
I5-1135G7	2.4GHz	1ms for 128 axes 2ms for 256 axes	Windows Linux	Program:128MB Data:128MB	EtherCAT*2 Ethernet*4 USB3.0*4 RS232/RS485*2

CPU	Clock Speed	Synchronization Cycle	Operating System	Capacity	Communication Ports
I3-1115G4	3.0GHz	1ms for 256 axes	Windows Linux	Program:128MB Data:128MB	EtherCAT*2 Ethernet*4 USB3.0*4 RS232/RS485*2



XSA330-W/L

64axes

CPU	Clock Speed	Synchronization Cycle	Operating System	Capacity	Communication Ports
J3455	1.5GHz	1ms for 32 axes 2ms for 48 axes 4ms for 64 axes	Windows Linux	Program: 128MB Data: 128MB	EtherCAT*2 USB2.0*2 RS232/RS485*2 Ethernet*2 USB3.0*2



XSA230-W/L

CPU	Clock Speed	Synchronization Cycle	Operating System	Capacity	Communication Ports
J6412	2.0GHz	250us for 8 axes 500us for 16 axes 1ms for 64 axes	Windows Linux	Program: 128MB Data: 128MB	EtherCAT*2 USB2.0*2 RS232/RS485*1 Ethernet*2 USB3.0*2

XSA Series

XSA series controllers are based on high-performance processors and support programming via the XS Studio platform. They feature a unique Taihu Lake Stone-inspired appearance design, rich built-in interfaces, and powerful motion control capabilities. The Windows version further meets the diverse needs of a single machine for applications such as informatization + control and machine vision + motion control.

Comprehensive Industry Applications

Applicable in industries such as 3C, photovoltaics, warehousing, lithium battery, semiconductor, electronics, and laser.

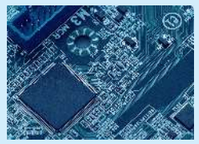

3C


Photovoltaics


Warehousing


Lithium Battery


Semiconductor


Electronics


Laser

.....

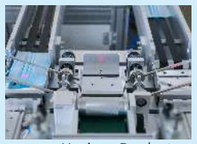
As a Standalone High-Performance Motion Controller

Enhances quality and efficiency for traditional industries with complex processes, such as printing, packaging, aluminum profile processing, hygiene products, woodworking, filling, and HVAC.


Printing Equipment


Packaging Equipment


Aluminum Profile Processing Equipment


Hygiene Products Processing Equipment


Woodworking


Filling


HVAC

.....

Distinctive Technology Integration

Supports both Windows & Linux systems, enabling functions such as CAD graphics processing (CAM), MES clients, and AGV algorithms.The XSA series integrates motion control, logic control, IPC convergence applications, machine vision, and human-machine interface into one, making the overall product topology more streamlined.



Multi-Purpose Machine

Through APIs, motion control, logic control, data processing, machine vision, human-machine interface, and more can be integrated. A single industrial computer combines functions such as PLC, motion controller, vision industrial computer, and HMI display, making the overall product topology more streamlined.

Virtualization Technology

Based on Hypervisor virtualization technology, it ensures independence between systems. If the Windows system crashes, the real-time system remains unaffected; furthermore, the performance of the real-time system is not impacted by high CPU loads in the Windows system.

High Reliability

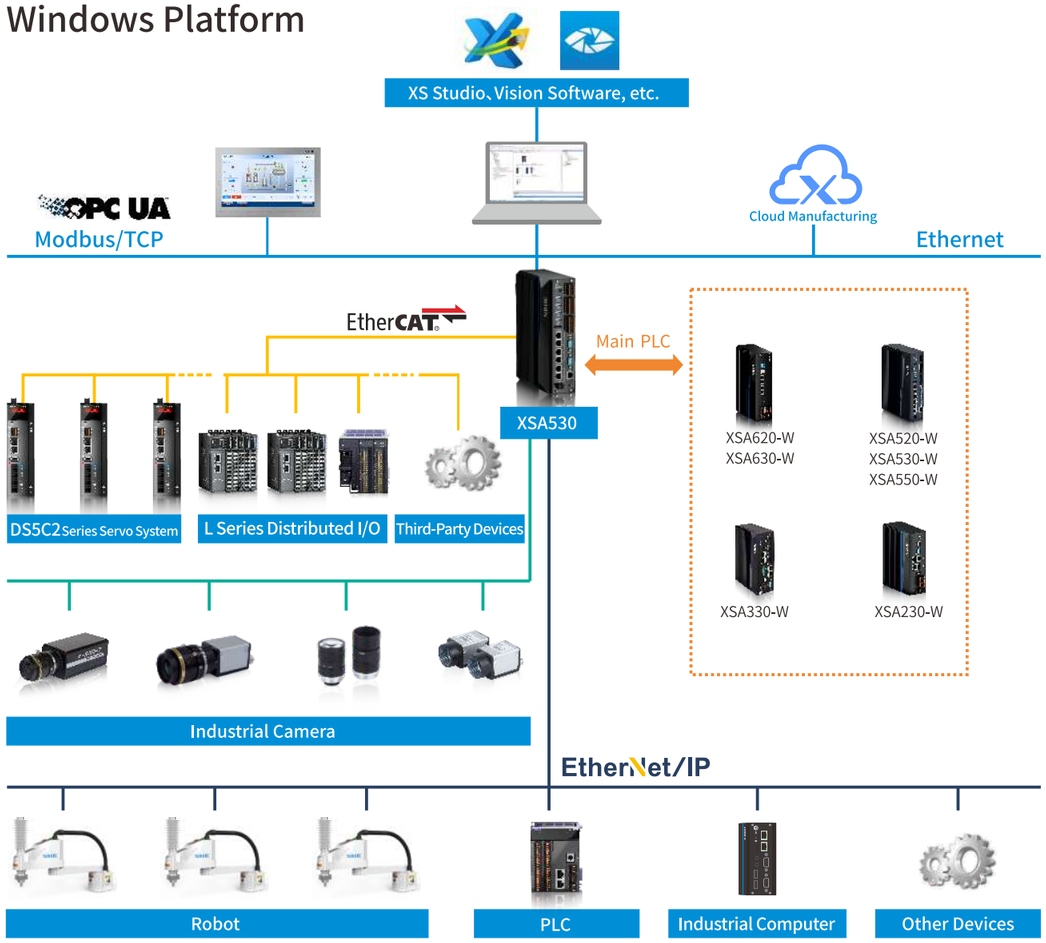
Product design fully complies with stringent PLC standards, making it more suitable for use in industrial environments.

Ease of Use

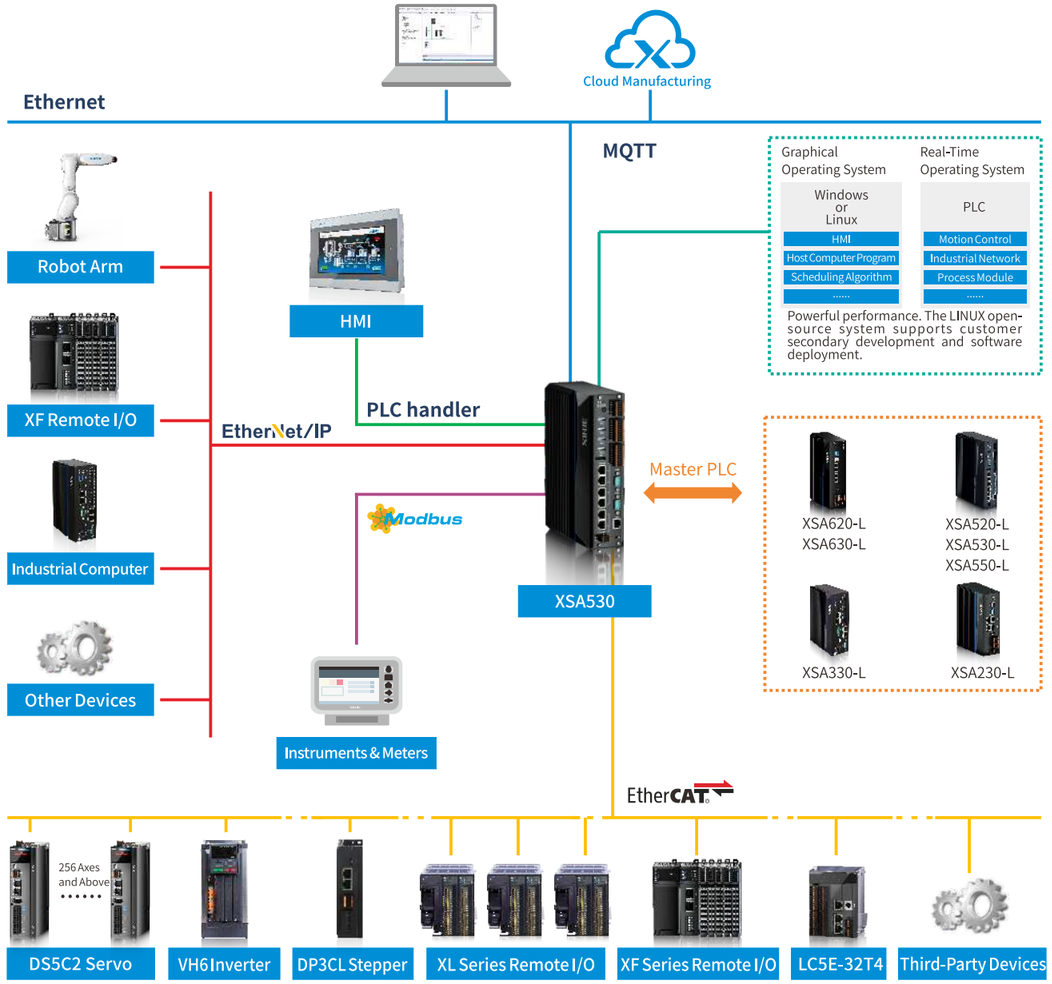
Developed based on the XS Studio platform, it supports the IEC 61131-3 standard and provides programming languages such as LD, ST, FBD, IL, and SFC. Development and debugging are faster, featuring real-time debugging, online monitoring, simulation, and more.

One-Stop Control System (W/L)

Windows Platform



LINUX Platform



Supports the XSStudio Platform

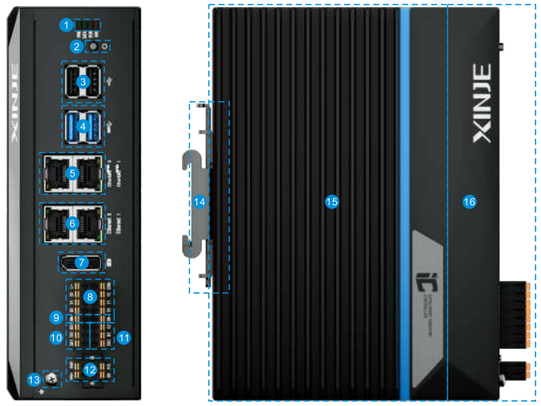
XSStudio is Xinje's programming and configuration software for the XS series, developed based on CODESYS V3.5.

It integrates PLC programming, visual HMI, device information diagnosis, resource usage monitoring, fieldbus, and motion control functions. It provides a complete environment for configuration, programming, debugging, and monitoring, allowing flexible and free handling of powerful IEC languages.



1. Powerful PLC software programming tools
2. Supports IEC 61131-3 standard protocol
3. Extensive industry libraries and custom library development
4. Supports almost all mainstream fieldbuses, ensuring device communication for each unit
5. Provides HMI device data interfaces, enabling third-party clients to establish communication with the control system
6. Supports OPC UA technology, enabling cross-platform data transmission for smart factories and Industrial 4.0 requirements
7. WEB visualization

XSA 200 Series

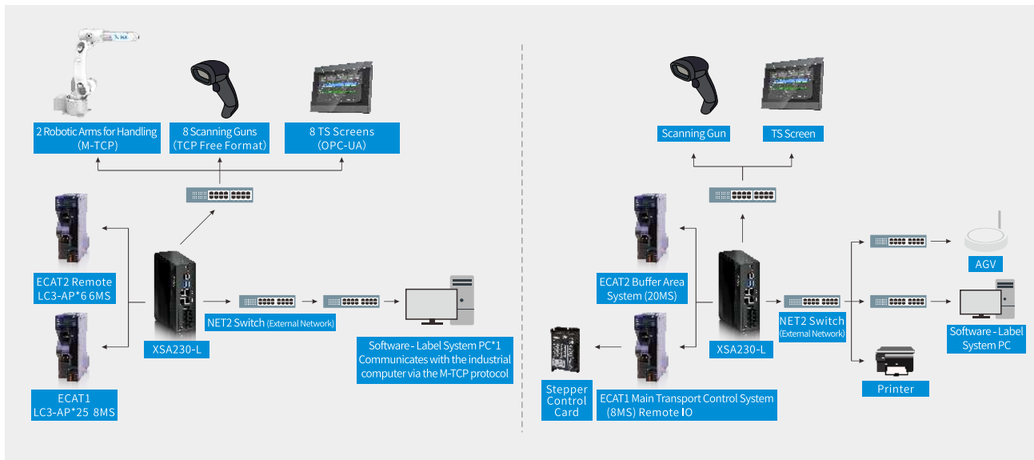


1 System Indicator Light
2 Power Button
3 USB2.0*2
4 USB3.0*2
5 EtherCAT*2
6 Ethernet*2
7 DP++*1
8 IO:3X3Y
9 Functional Terminals
10 RS232*1
11 RS485*1
12 DC24V Input
13 Grounding Terminal
14 Rail Mounting Clip
15 Heat Dissipation Fins
16 Taihu Stone Appearance

Case Study - Battery Cell Packaging and Sorting Line

Application Requirements & Product Value

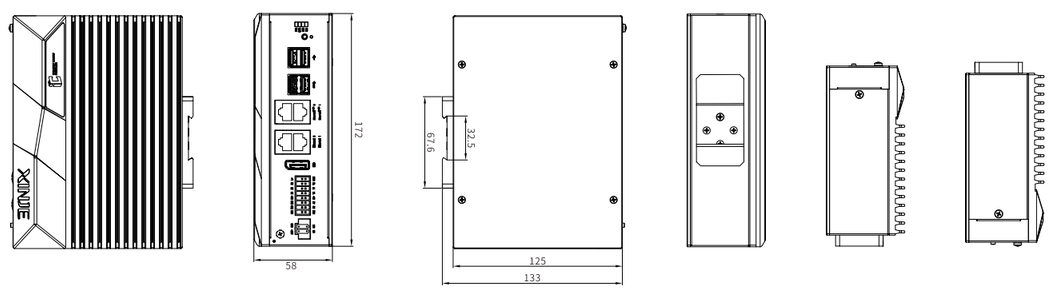
- The control end must have internal network isolation – dual IP addresses satisfy internal and external network isolation.
- Dual ECAT asynchronous DC sync cycles, supporting multi-tasking parallelism.
- Supports OPC UA for simultaneous communication with multiple HMIs, and uses PLC handler tags for rapid information exchange (up to 300K tags concurrently).



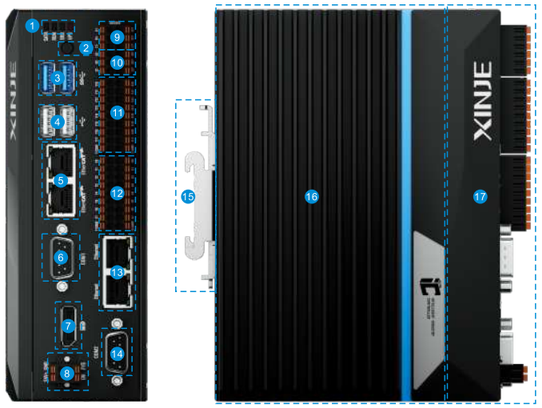
Specifications

Model		XSA230-L	XSA230-W (UNDER DEVELOPMENT)
Input Power		DC 24V	
CPU Model		J6412: 2.0GHz Quad-Core	
Operating System		Windows or Linux (Supports multi-core)	
Storage Configuration		8G+128G	
Instruction Processing Speed	Bit Transfer	3.66ns	
	Double Precision Floating Point Transfer	5.50ns	
Program Capacity		128MB Program Capacity / 128MB Data Capacity / 6MB Retentive Memory	
Local IO		3X、3Y	
High-Speed Counting		/	
EtherCAT Communication Nodes		128 EtherCAT Nodes	
EtherCAT Axis Capacity		64+64 axes	
Typical Communication Cycle		8 axes / 500us	
		32 axes / 1ms	
		64 axes / 4ms	
Ethernet		Ethernet (1000M) *2	
Serial Interface		RS232*1、RS485*1	
Operating Environment Requirement	Ambient Temperature	-20°C~55°C	
	Ambient Humidity	10% to 95% (Non-condensing)	
Dimensions		172.0*59.0*125.0 (mm)	
Product Certification		CE/UL	
Programming Language		IEC61131-3	

Outline Dimension Diagram (Unit: mm)



XSA 300 Series



1 Status Indicator Light
2 RESET Switch
3 USB3.0*2
4 USB2.0*2
5 EtherCAT*2
6 Serial Communication Port (COM1)
7 DP Display Interface
8 Power Interface
9 Differential Encoder2
11 DI/O Terminal
12 DI/O Terminal
13 Ethernet*2
14 Serial Communication Port (COM2)
15 Rail Mounting Clip
16 Heat Dissipation Fins
17 Taihu Stone Appearance

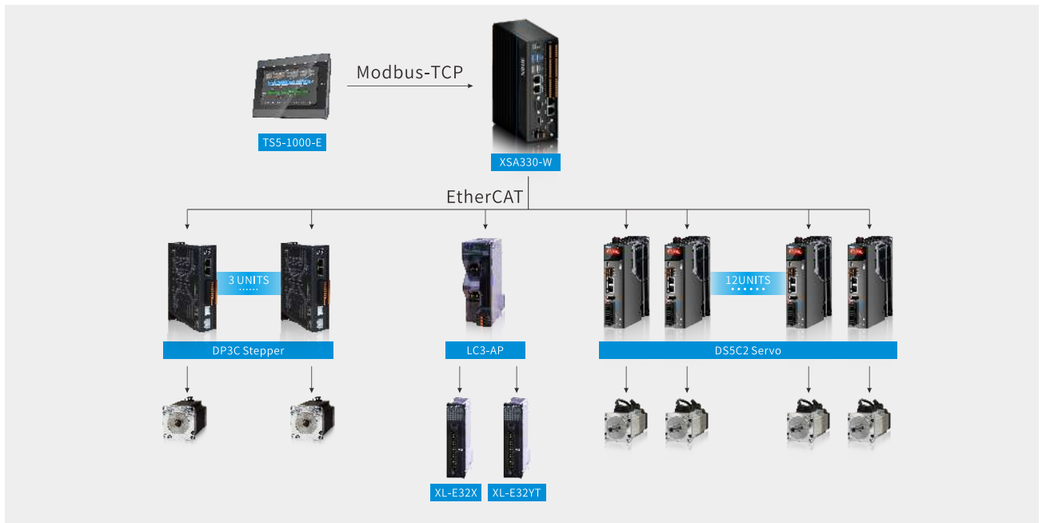
Case Study - Rotary Die Cutting Machine

Equipment Description

The entire machine performs tension control. On one hand, the winding/unwinding equipment handles material feeding and winding. Simultaneously, it utilizes a swing arm shaft that follows specific electronic cam curves to achieve intermittent synchronous film cutting.

Process Challenges

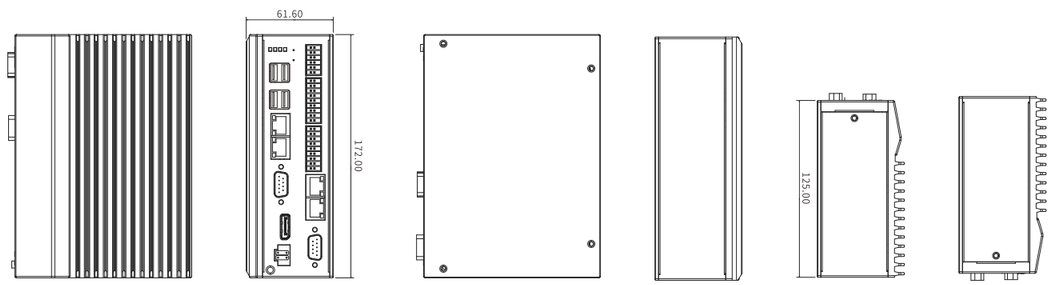
- Handling open-loop tension for winding/unwinding.
- Planning of the intermittent die-cutting cam.
- Fixed length and registration accuracy.



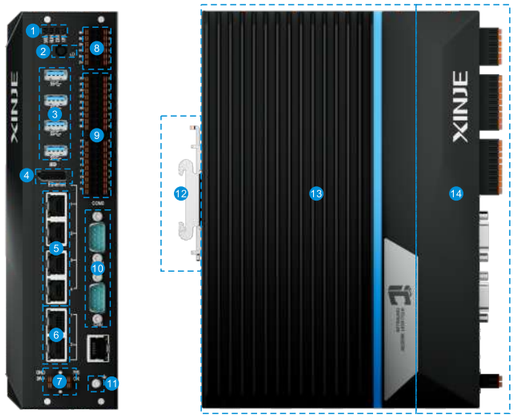
Specifications

Model		XSA330-L	XSA330-W
Input Power		DC 24V	
CPU Model		J3455：1.5GHz	
Operating System		Windows or Linux (Supports multi-core)	
Storage Configuration		8G+128G	
Instruction Processing Speed	Bit Transfer	5.50ns	5.39ns
	Double Precision Floating Point Transfer	6.83ns	6.74ns
Program Capacity		128MB Program Capacity / 128MB Data Capacity / 6MB Retentive Memory	
Local IO		16X (NPN/PNP) , 16YT (NPN)	
High-Speed Counting		2 channels differential encoder input (1MHz), 2 channels open collector input (200KHz)	
EtherCAT Communication Nodes		128 EtherCAT Nodes	
EtherCAT Axis Capacity		64 + 64 axes	64 axes
Typical Communication Cycle		8 axes / 500us	
		32 axes / 1ms	
		64 axes / 4ms	
Ethernet		Ethernet*2	
Serial Interface		RS485/RS232*2 (BIOS Switchable)	
Operating Environment Requirement	Ambient Temperature	0°C~60°C	
	Ambient Humidity	5% to 95% (Non-condensing)	
Dimensions		172.0*125.0*61.6 (mm)	
Product Certification		CE	
Programming Language		IEC61131-3	

Outline Dimension Diagram (Unit :mm)



XSA 500 Series

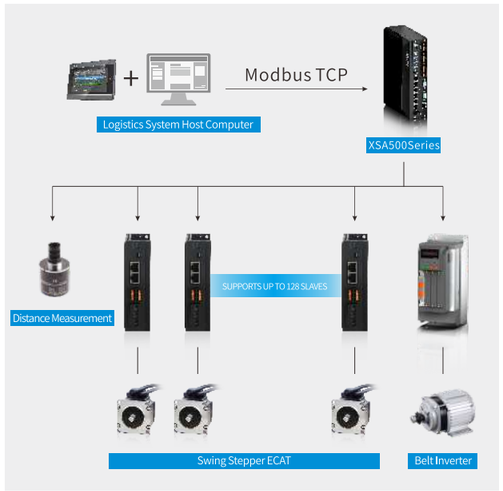


1 Status Indicator Light
2 Power Button
3 USB3.0*4
4 DP Display Interface
5 Ethernet Port*4
6 EtherCAT*2
7 Power Interface
8 Differential Encoder*2
9 DI/O Terminal
10 Serial Communication Port*2
11 Grounding Terminal
12 Rail Mounting Clip
13 Heat Dissipation Fins
14 Taihu Stone Appearance

Case Study - Express Sorting

Application Requirements & Product Value

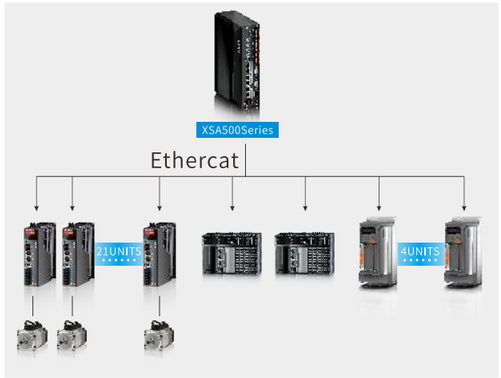
- Module controls 120 axes, high performance with 4ms for 128 axes.
- Multi-purpose machine: Open Windows enables WCS (Warehouse Control System) scheduling control.



Case Study - Sawing and Milling Machine

Application Requirements & Product Value

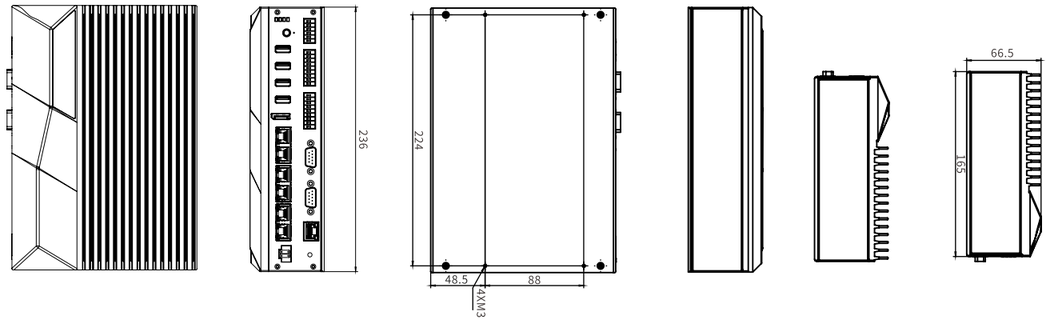
- Multi-purpose machine: Open Windows enables CAM software to parse drawings and generate G-code.
- Bus motion control ECAT 1ms for 27 axes, significantly improved performance compared to traditional control cards.
- Automatic issuing of processing files via FTP protocol.
- Automatic parsing of NC files to achieve automated machining.



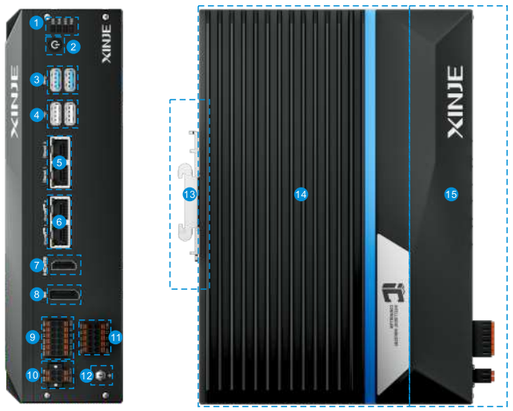
Specifications

Model		XSA520	XSA530	XSA550
Input Power		DC 24V		
CPU Model		I3-1115G4:3.0GHz	I5-1135G7:2.4GHz	I7-1165G7:2.8GHz
		Dual-Core, Quad-Thread	Quad-Core, Octa-Thread	Quad-Core, Octa-Thread
Operating System		Windows or Linux (Supports multi-core)		
Storage Configuration		8G+256G		
Instruction Processing Speed	Bit Transfer	0.68ns	0.86ns	0.73ns
	Double Precision Floating Point Transfer	1.69ns	2.12ns	1.82ns
Program Capacity		128MB Program Capacity / 128MB Data Capacity / 6MB Retentive Memory		
Local IO		16X (NPN/PNP) , 16YT (NPN)		
High-Speed Counting		2 channels differential encoder input (1MHz), 2 channels open collector input (200KHz)		
EtherCAT Communication Nodes		Maximum 256 EtherCAT Slaves		
EtherCAT Axis Capacity		256axes		
Typical Communication Cycle		8 axes / 250us	32 axes / 500us	8 axes / 250us
		32 axes / 500us	128 axes / 1.0ms	32 axes / 500us
		256 axes / 1.0ms	256 axes / 2.0ms	256 axes / 1.0ms
Ethernet		Ethernet*4		
Serial Interface		RS485/RS232*2 (BIOS Switchable)		
Operating Environment Requirement	Ambient Temperature	0°C~50°C		
	Ambient Humidity	5% to 95% (Non-condensing)		
Dimensions		236.0*165.0*66.0 (mm)		
Product Certification		CE		
Programming Language		IEC61131-3		

Outline Dimension Diagram (Unit : mm)



XSA 600 Series



1 System Indicator Light
2 Power Button
3 USB3.0*2
4 USB2.0*2
5 Ethernet*2
6 EtherCAT*2
7 HDMI Interface
8 DP Display Interface
9 COM*4
10 Power Interface
11 DI/O Terminal
12 Grounding Terminal
13 Rail Mounting Clip
14 Heat Dissipation Fins
15 Taihu Stone Appearance

Applicable Industries


Packaging Industry


Printing Industry


Pharmaceutical Industry

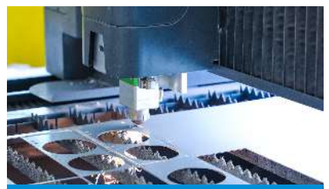

Semiconductor Industry


Photovoltaic Industry


Lithium Battery Industry


Woodworking Industry


Logistics Industry


Machine Tool Industry

Specifications

Model		XSA620	XSA630
Input Power		DC 24V	
CPU Model		I3 1215U	I5 1235U
Operating System		Windows or Linux (Supports multi-core)	
Storage Configuration		8G+256G	
Program Capacity		128MB Program Capacity / 128MB Data Capacity / 6MB Retentive Memory	
Local IO		3X、3Y	
High-Speed Counting		/	
EtherCAT Communication Nodes		Up to 256 EtherCAT Slaves	
EtherCAT Axis Capacity		256 Axes	
Typical Communication Cycle		1ms/128 axes;1ms/256 axes	
Ethernet		Ethernet (1000) *2	
Serial Interface		RS485、RS232*2	
Operating Environment Requirement	Ambient Temperature	-20°C~55°C	
	Ambient Humidity	10% to 95% (Non-condensing)	
Dimensions		231.0*160.0*68.8 (mm)	
Product Certification		CE/UL	
Programming Language		IEC61131-3	

Outline Dimension Diagram (Unit：mm)

