

KYLAND

NewPreA5101 Smart Controller



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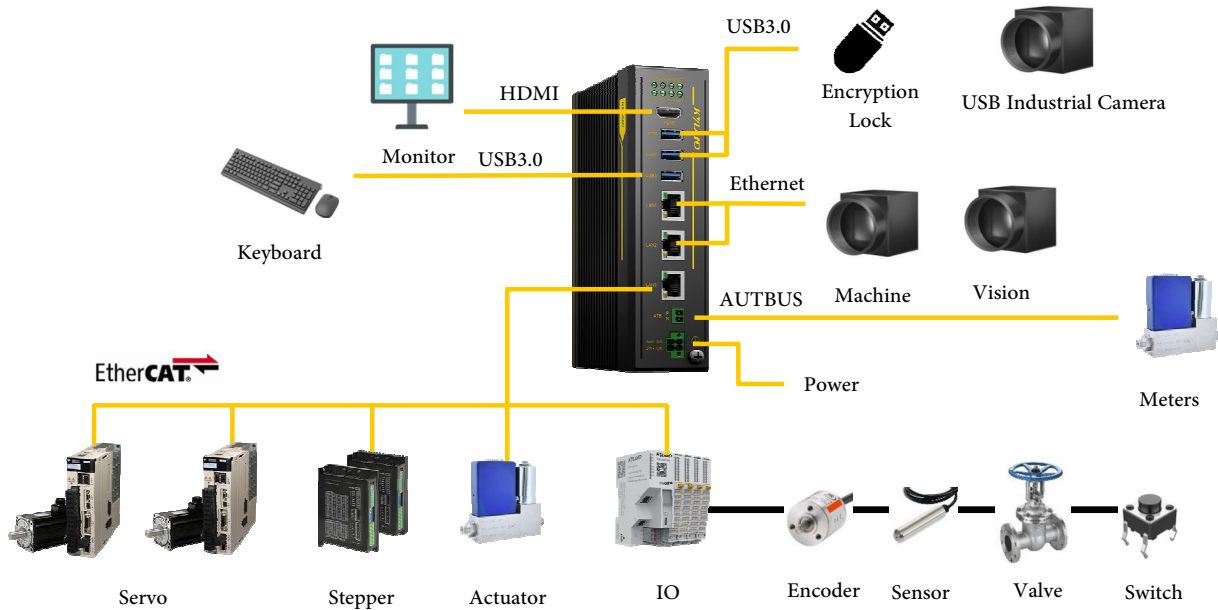
NewPreA5101

Medium-sized Smart Controller

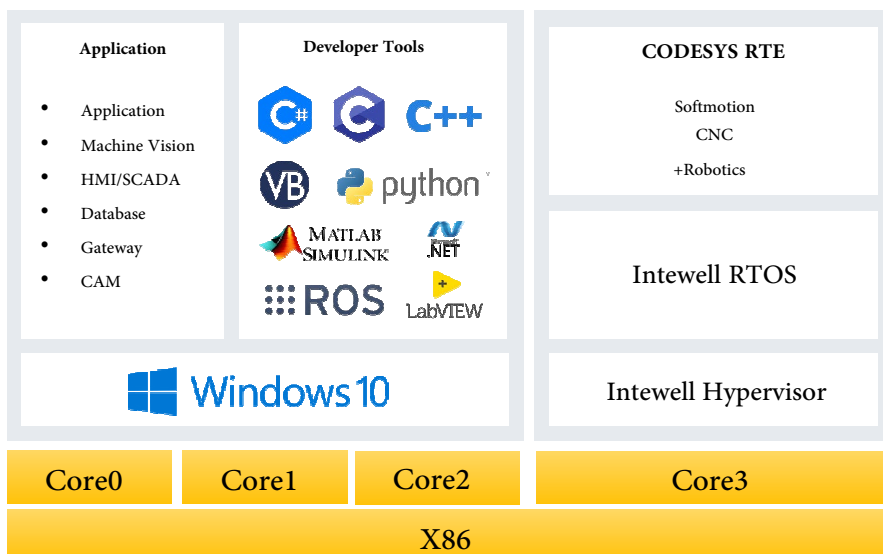
Overview

The NewPreA5101 is a medium-sized smart controller designed for high-end equipment and intelligent production line markets. It supports use in environments with high humidity, salt spray, mold, wide temperature ranges, and harsh electromagnetic interference. It seamlessly integrates logic control (PLC), machine vision, HMI, database, and customer applications into one controller hardware platform and provides an open secondary development interface. This helps users design low-cost, safe, and reliable industrial control solutions quickly and easily.

Hardware Interface

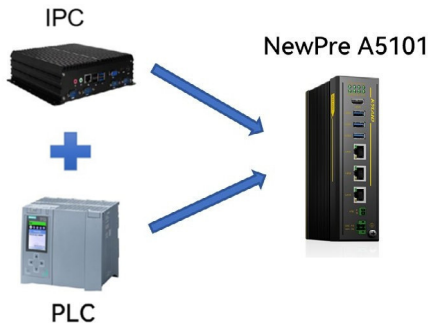


Software Architecture



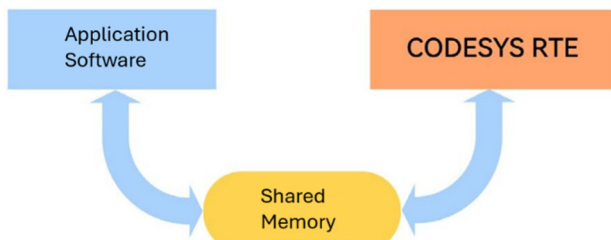
Integrated display, vision, control and customer applications

- Integrate display, control, vision and customer applications into one controller to simplify system structure and reduce user costs.



Shared memory for efficient interaction

- NewPre The A5101 shared memory function provides a standardized API, which can achieve data communication with a delay of less than 5ms between application software and between non-real-time application software and PLC.
- Significantly improve production cycle



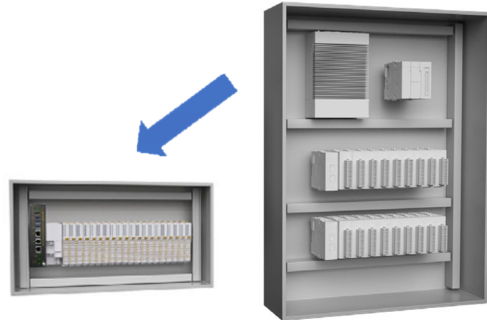
Integrated machine vision and control applications

- The main body can integrate 2-way machine vision
- Supports AI vision to complete complex defect detection
- Supports 2D vision traditional detection, recognition, guidance and measurement functions
- It can realize counting packaging, laminating, and can be used with SCARA and DELTA robots



Compact size for extreme space efficiency

- Traditional industrial computer + PLC solution is reduced to one controller, which greatly reduces the area used in the cabinet.
- Compact design, size 47x172x122mm



System isolation ensures device security

- Through Intewell virtualization, each system is assigned an independent processor core and runs internal The real-time side applications are not affected when the non-real-time side is overloaded or down.

Windows (Non-RT)	RTOS (RT)
Core0-Core2	Core3
6.2G RAM	900M RAM

Autonomous and controllable

- NewPreA5101's real-time operating system and MaVIEW® intelligent control tool software platform are both independently developed
- Kyland has mature domestic desktop operating system technology reserves, EtherCAT, Modbus and other communication protocols master the protocol stack source code
- Kyland has the experience and technical reserves in developing independent hardware platforms such as Loongson, Hygon, and Feiteng, and can provide 100% independent and controllable products in a short time.



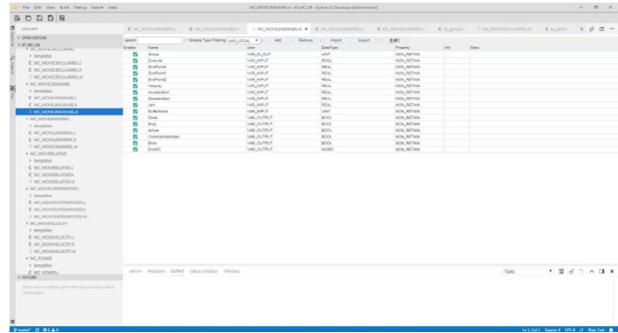
Supports rich communication protocols

- Northbound communication protocol supports OPC UA, Modbus TCP, EtherNET/IP, TCP/IP free protocol, S7
- Southbound communication protocols support EtherCAT, ProfiNET, Modbus TCP, EtherNET/IP, TCP/IP free protocol, AUTBUS



Function library development tool: Lib Developer

- Support users to use C/C++ language to develop the function blocks they need. And use Lib developer is encapsulated as a MaVIEW function block.



High protection level

EMC Industrial Level 4
Coping with high electromagnetic interference environment



Conformal coating
Resistant to humidity, salt spray, and mildew



Wide temperature operation
Support -20 ~ 60° operating temperature



Product Specification

Specification	Detail	
Hardware	CPU	Intel®Celeron®J6412
	RAM	8GB
	Diskspace	256GB
	Ethernet	LAN ×3 (RJ45)
	ATB	AUTBUS × 1
	USB	USB3.0 × 3
	Video	HDMI × 1
	I/Os	ON ×1, RL ×1
	LEDs	LED ×8 (PWR, ATB, HPD, USR, HDD, POK, RUN, ERR)
	Retentive memory	256Kb (Coming Soon)
Power	Input Voltage	24VDC (±10%) with overcurrent protection

Specification	Detail	
General info	Dimension	47 × 172 × 122mm (W × H × D)
	Weight	1.2kg
	Cooling Method	Heat sink, no fan
	Mounting Method	DIN Rail/Wall Mount
Environment	Operation Temp.	-20°C~ 60°C
	Store Temp.	-40°C~ 80°C
	Humidity	10% ~ 95%RH
	Altitude	≤2000m
Standards	IP Rating	IP40
	EMC	Grade 4
	Shock	IEC 60068-2-27
	Vibration	IEC 60068-2-6

Ordering Information

Product Model	Specification
A5101-3190	Processor J6412 , 8G memory , 256G solid state drive , 1 - way AUTBUS , Intel operating system , M a V I E W * intelligent control tool software platform , Windows desktop
A5101-3490	Processor J6412 , 8G memory , 256G solid state drive , 1 - way AUTBUS , Intel operating system , M a V I E W * intelligent control tool software platform , no desktop