NewPre5100 Self-owned Controllable Basic Edge Server with Software Defined Control

Safe and Controllable

- 100% localization for components
- Pre-installed domestic OS, kernel module source code autonomy rate 100%
- MaVIEW control development platform completely independent R&D, non-secondary development

Miniaturization Extreme Efficiency

- No fan design, -40~70℃ wide temperature operation
- Meet EMC class 3, IP40 protection to meet harsh industrial application scenario requirements
- 100mm height is suitable for single-handed DIN rail installation

Flexible Module Extension

- Provide splicing terminal block, KYIO module is extensible, including RCM, DI, DO, AI, AO, RTD, PI and PD module
- Support 4G/5G/WIFI extensions to meet multiple connection requirements

High Performance Control

- Pre-installed graphical control development platform MaVIEW, support IEC61131-3, C++ and MatLab/Simulink
- High real-time, support 1ms control cycle
- Support motion control PLCopen single axis management, single axis motion, multi-axis electronic gear coupling, electronic cam, tappet and other functions, support multi-axis space arc, space straight line interpolation
- Support CANopen and Modbus RTU, Modbus TCP, EtherCAT, EtherNet/IP, Profinet, AUTBUS, support custom serial port/-CAN/TCP protocol, OPC UA, MQTT and other common industrial communication protocols.
- Support dual hot standby redundancy, redundant switching time less than twice the operation period, effectively ensure stable operation of control system

〉〉 Specifications

	NewPre5100	
Computing	CPU	Domestic Loongson 2k1000, dual-core, basic frequency 1.0GHz
	Memory	2GB
	Storage	250MB
	Extended storage	Msata, 128GB, optional
	Power-down hold-up	128KB, optional
	Controller operation cycle	Configurable, min 1ms
	Redundancy	Support hot standby redundance controller configuration
Interface	Display interface	1xHDMI
	USB	2xUSB2.0
	Network port	4x100/1000BASE-T, RJ45
	Serial port	1xRS232, 1xRS485
	CAN	2xCAN
	Wireless	4G/5G, optional
	Extension slot	Located on the right side of power module, support Kyland KYIO module

Power Supply	Input	24VDC (18 ~ 36 VDC), KYPM-DC24 module supply power
	Output	DC 24VDC, 12VDC, backboard bus
	Consumption	20W
Mechanical Structure	Mechanical structure	Aluminum enclosure
	IP class	IP40
	Dimensions	195x100x94 (W×H×D, include power module
	Weight	1Kg
	Mounting	DIN rail
Environment	Working temperature	-40 ~ 70°C
	Storage temperature	-40 ~ 85°C
	Humidity	5 ~ 95% No condensation
	Heat radiation	No fan
Standard	EMI	FCC CFR47 Part 15, EN55022/CISPR22, Class A
	EMC	IEC61000-4-2 (ESD), Air: ±8KV; Contact: ±6kV IEC61000-4-3 (RS), 10V/m (80MHz~2GHz) IEC61000-4-4 (EFT), DC Power Port: ±2kV, Singal Port: ±2kV IEC61000-4-5 (Surge), Power Port:±1kV/DM, ±2kV/CM, Singal Port:±1kV (line to line), Singal Port:±2kV (line to earth) IEC61000-4-6 (CS), Signal ports: 0.15-80MHz at 10V/m, Power ports: 0.15-80MHz at 10V/m
	Mechanical	IEC60068-2-6(vibration) IEC60068-2-27(impact) IEC60068-2-32(Free fall)

Order Information

NewPre5100-P*-M*-D*-N*-W*

Code Definition	Code Information
P*	CPU, P611 means Loongson 2k1000
M*	Memory, M1 means 2GB Memory
D*	Hard disk storage, D0 means no extra hard disk is available except flash, D1 means additional 120GB msata hard disk besides flash
N*	NVRAM, N0 means no NVRAM, N1 means 128KB NVRAM configuration
W*	Wireless, W4 supports 4G, W5 supports 5G

Optional Typical Part Number	Description
NewPre5100-P611-M1-DO-N0-W0	Self-owned controllable basic edge general controller based on Loongson 2k1000, 250MB Storage
NewPre5100-P611-M1-D1-N1-W0	Self-owned controllable modular edge general controller based on Loongson 2k1000, 250MB Storage and 128GB hard disk, 128KB power down hold-up storage
NewPre5100-P611-M1-DO-N0-W5	Self-owned controllable modular edge general controller based on Loongson 2k1000, 250MB Storage, support 5G

Power Supply Order Information

Part Number	Description		
KYPM-DC24	24VDC power module (required)		
Optional Module KYIO			
KYDI-1601	16 channels DI module	**KYAO-0801**	8 channels current output module
KYDO-1202	12 channels DC DO module	**KYAO-0802**	8 channels voltage output module
KYAI-0801	8 channels current input module	**KYRTD-0601**	6 channels hot resistance input module
KYAI-0802	8 channels voltage input module		

Dimensions