EQIO

PXIe-ZX6000

PRODUCT MANUAL

3U Zhaoxin KX6000G PXIe Controller

Zhaoxin KX-6000G series 4-core processor



Measurement and control, made easy.

Easy · Quick · Input · Output

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01 OVERVIEW

3U Zhaoxin KX6000G PXIe Controller

PXIe controller · Automation test · Data acquisition · Measurement and control system · PXI Express · Zhaoxin

PXIe-ZX6000 uses Zhaoxin KX-6000G 4-core processor, supports up to 32GB DDR4 memory, system bandwidth rated up to 8GB/s, provides display, USB, Gigabit Ethernet and trigger I/O, used for PXIe automation test platform.
Controller provides mSATA storage location, front panel USB, Gigabit Ethernet and display connection used for field operation. SMB I/O external trigger and PXI trigger bus connect, facilitates together with acquisition, communications and measurement board, build modular industrial test system.



Product appearance reference; shipped units may differ.

Key features

- Zhaoxin KX-6000G 4-core four-wire range
- DDR4 SO-DIMM, up to 32GB
- PCIe3.0 dual link or four link configured with
- DP, VGA and Gigabit Ethernet
- SMB external trigger I/O

02 FUNCTIONS

Functions and engineering value

4-core x86 control platform

Controller uses Zhaoxin KX-6000G 4-core four-wire range platform, configured with single memory slot and supports up to 32GB memory. For Windows10/11 or Kylin environment, can centralized run test program, module scheduling and local HMI, memory form and same series dual slot model requires stated distinguish.

PCIe data and event trigger

System side provides PCIe3.0 connect, supports dual link or four link configured with, rated system bandwidth up to 8GB/s. SMB I/O external trigger attach or brought out PXI trigger bus, can test event and module data channel respectively planning, facilitates organize acquisition and measurement task.

Field operation I/O

DP up to supports 4096 × 2160@60Hz display, VGA can connect common field display equipment; Gigabit Ethernet and 4-ch USB carries system communications and operation peripherals. MSATA provides local system storage, website 16GB memory plus 1TB SSD solution can as preliminary selection discuss starting point.

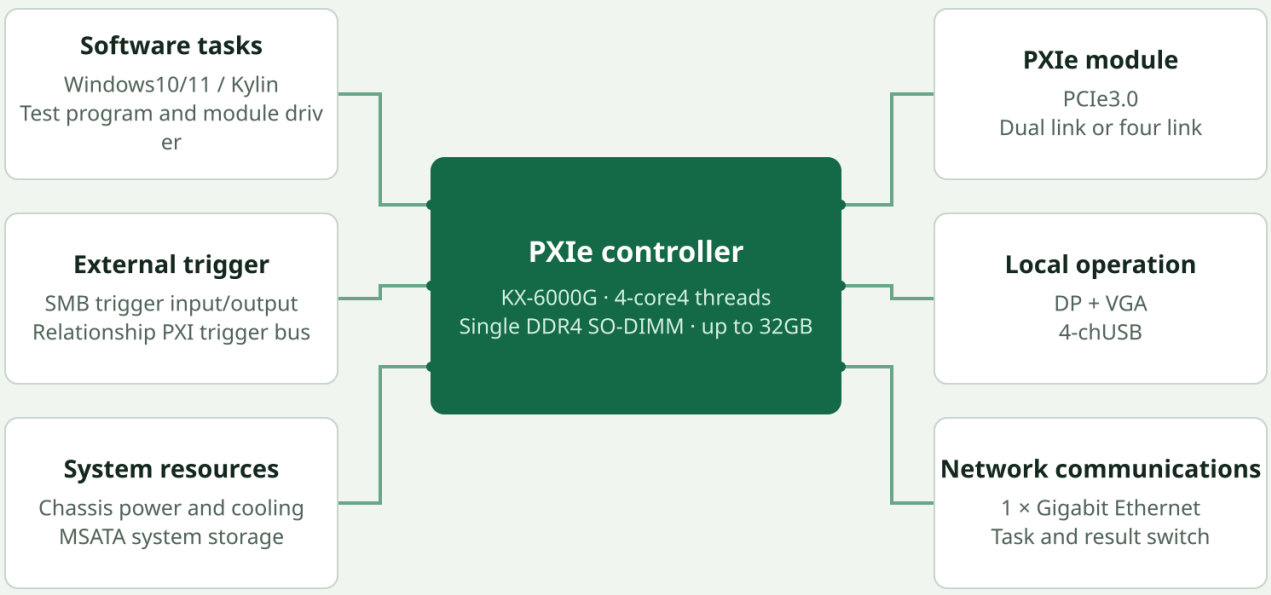
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

Functional blocks and system connections

FUNCTIONAL BLOCK DIAGRAM

PXIe-ZX6000



Functional relationships · lines do not show internal circuits, pins or dedicated bus topology

Function relationship illustration, based on website product configured with compiled; not indicates actual on-board routing, bridge chip connect or I/O exclusive bandwidth.

Platform and I/O

Website compute platform list Zhaoxin KX-6000G 4-core four-wire range, and not gives the controller processor specific model or operation frequency. Device section can note KX-6000G series architecture and I/O resources, product section only uses published single slot 32GB memory, display and PXIe connect parameters.

> **Reading the diagram**
>
> Solid lines show published functional relationships, not on-board buses, bridge chips or connector pins. Optional controllers, radios, storage and software follow the configuration and interface files.

04 SPECIFICATIONS

Technical specifications

Compiled from published product data. Batch, I/O and environmental ratings follow the order confirmation.

Core system

Processor	Zhaoxin KX-6000G, 4-core4 threads
Memory	Single DDR4 SODIMM memory item, up to supports 32 GB memory
Display interfaces	1 DP I/O, up to supports 4096 × 2160 @60Hz resolution 1 VGA I/O, up to supports 1920 × 1080 @60Hz resolution
Bus	PCI Express 3.0 (compatible PCI Express 2.0 and PCI Express 1.1)
PXIe link configuration	2 Link Mode: ×8、×8 4 Link Mode: ×4、×4、×4、×4
System bandwidth	Up to up to 8GB/S

Mechanical specifications and system requirements

Module size and weight	3U 8HP PXI Express, weight≤0.64kg
Operating system	Windows 10/11, Kylin OS

I/O and expansion

Storage	1 mSATA I/O SSD
Ethernet	1 Gigabit Ethernet I/O
USB	2 × USB 3.0，2 × USB 2.0
Trigger I/O	Front panel installation SMB connector, used for external trigger signal attach / brought out PXI trigger bus

Environmental conditions

Slot requirements	1 system slot additional 1 controller expansion slot
Operating temperature	0 °C ~ 55 °C
Storage temperature	-20 °C ~ 70 °C
Relative humidity	5% ~ 95%, non-condensing

05 COMPONENTS

Processor and device specifications

Device figures come from vendor publications and describe the chip or module. The implemented product follows the specification tables. Optional devices are supplied with the selected configuration.

Zhaoxin KX-6000G series (Platform data)

Series CPU core count	4-core
Series published high-speed cache	4 MB
Series memory controller	Dual channel DDR4-3200
ISA	X86 32/64-bit, SSE4.2/AVX
Display interfaces capability	DP/HDMI/VGA, 4K display
Native PCIe resources	16 lanes PCIe3.0
Native USB resources	4×USB3.2 Gen1、2×USB2.0
Native storage interfaces	2×SATA3.2
Low-speed expansion i/O	SPI, LPC etc.
Acceleration command	SM2、SM3、SM4

Zhaoxin KX-6000G series (Platform data) (continued)

Hardware virtualization	Processor and IO virtualization

Sources: Shanghai Zhaoxin integrates Co., Ltd., KX KX-6000G series processor.

06 APPLICATIONS

From product capability to applications

Industrial test workstation

Can together with PXIe chassis and measurement board establish industrial test workstation, via local display and input peripherals operation test procedure, using Gigabit Ethernet transfer result. Integrates when per actual Windows or Kylin version check application program, instrument driver and module management tool.

Multi I/O acquisition system

Requires combination acquisition, communications and measurement board system in, can from controller unified arrangement software tasks, again according to backplane structure selection system link. To has together start event test, can external SMB trigger include solution, and single independent confirm each function module trigger supports.

Equipment adjacent measurement and control node

Suited to controller and I/O board installation to equipment adjacent modular chassis, local UI completes debug, network switch task and data. Continuous log application should at the same time check mSATA capacity, software write method and cooling conditions, avoid only per processor or bus metrics estimate system behaviour.

Integration checks

Memory form	Single DDR4 SO-DIMM, up to 32GB; not cannot apply used KX-6640MA controller dual slot note.
Display distinguish	DP up to 4096 × 2160@60Hz, VGA up to 1920 × 1080@60Hz; per I/O respectively describe.
System compatible	Windows10/11 or Kylin, confirm measurement and control software and module driver; product occupy system slot and 1 expansion slot.
Configured with boundary	Website provides 16GB plus 1TB SSD; 0–55°Coperation, link and continuous transmission performance required combined with backplane.

07 CONFIGURATION

Appearance, configuration and selection



Multi-angle reference (generated from product photos); shipped units may differ.

Configuration

Provides 16GB memory plus 1TB SSD solution, occupancy system slot and 1 controller expansion slot, supports Windows and Kylin system.

Configured with	16GB memory + 1TB SSD

Selection guide

Order confirmation	Batch, I/O and environmental ratings follow the order confirmation
Published data	Compiled from published product data; EQIO provides selection and system integration
Configuration talk	Share the application, I/O count, environment and software so a configuration can be proposed

Request a quotation and selection support

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EQIO

Easy · Quick · Input · Output

BRAND

Measurement and control, made easy.



EQIO product family · concept rendering

Brand story

EQIO builds measurement and control products and systems. The name stands for Easy Quick Input Output: Easy is a clear structure that is quick to learn, Quick is a direct path to efficient delivery, and Input / Output is every link between the device under test and the control system.
The soft single-cycle wave inside the Q links the brand to signals, acquisition and I/O. “Measurement and control, made easy” is our promise for every selection, integration and delivery.

What we do

Products

Data acquisition, test instruments, control and I/O, modular platforms, software, cables

Systems

Configured to the measurand, channels, accuracy and software, from design to commissioning

Support

Selection advice, training, maintenance and calibration

How we deliver

01
Requirements

02
Solution design

03
Build & integration

04
Factory test

05
Delivery & training

06
Ongoing support

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