EQIO

CNB-3027

PRODUCT MANUAL

17-inch 3U CompactPCI Portable Card Cage

Zhaoxin KX-6640MA 4-core processor



Appearance reference (generated from product photos); shipped units may differ.

Measurement and control, made easy.

Easy · Quick · Input · Output

EQIO.COM

01 OVERVIEW

17-inch 3U CompactPCI Portable Card Cage

Portable card platform · Portable measurement and control · Industrial automation · Special data acquisition · CompactPCI · Zhaoxin

CNB-3027 uses Zhaoxin KX-6640MA main card, configured with 8 GB memory and 2TB SSD, integrates 17-inch display and optical drive, provides CompactPCI expansion card space and multi type communications I/O, used for portable measurement and control and equipment integrates. AFDX, industrial Ethernet, RS-422, RS-485 and CAN test provides multi type connect method, 4 expansion location can combination acquisition and communications board card. Display, storage, optical drive and card-cage space centralized portable housing internal, suited to field bring-up and measurement.



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

Key features

- Zhaoxin KX-6640MA 4-core platform
- 8GB memory, 2TB SSD
- 17-inch display and optical drive
- 4 3U expansion card slot
- AFDX, CAN and industrial serial

Applications

Portable measurement and control

Industrial automation

Special data acquisition

02 FUNCTIONS

Functions and engineering value

Integrates compute and field operation

Platform uses Zhaoxin KX-6640MA 4-core main card, configured with 8 GB memory and 2TB SSD, integrates 17-inch display and optical drive. Compute, data storage and local operation centralized portable housing in, suited to requires field load data, run test application and view result operation.

Network and industrial bus connect

2-ch redundant AFDX I/O, 2-ch industrial Ethernet debug interface, and RS-422, RS-485 and 2-ch CAN different equipment provides connect method. Specific protocol stack, packet configured with, driver and physical layer conditions should per project verify, not cannot only from I/O name inferred certification or application compatible.

Card-cage expansion and display peripherals

4 3U expansion slot occupancy used for increase compatible acquisition or communications function, VGA supports external display unit, USB used for common peripherals. Platform circular connector and 19V adapter power, Windows 7 64-bit software environment, board resources and cooling should be treated as overall solution performs confirm.

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

Product functional architecture

FUNCTIONAL BLOCK DIAGRAM

CNB-3027



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

From published specification illustrative functional grouping, does not show internal circuits, on-board bus or signal routing; I/O direction actual protocol shall prevail. AFDX etc.I/O software function and protocol adapts actual delivery solution shall prevail.

Platform and I/O

Uses Zhaoxin KX-6640MA 4-core processor, clock 2.2GHz, configured with 8 GB memory and 2TB SSD, source data gives Windows 7 64-bit solution. The platform at the same time integrates communications I/O and 3U expansion space, specific protocol capability and data throughput still depends on to installed board, driver and software.

> **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-6640MA, 4-core processor, clock 2.2GHz
Capacity	8GB+2TB SSD solid-state HDD
Operating system	Windows 7 64-bit
Display	17-inch display, supports outdoor sunlight environment under readable; supports VGA I/O external expansion display unit
Optical drive	Built-in optical drive, has read / write (R/W) function

I/O and expansion

Network	2-ch redundant AFDX Ethernet I/O, bandwidth≥100Mbps, 2-ch industrial Ethernet debug interface, bandwidth≥100Mbps
Serial/bus	1-ch RS-422 I/O, 1-ch RS-485 I/O, 2-ch CAN I/O
Peripheral I/O	USB I/O, VGA display interfaces, circular connector type power I/O
Expansion slot occupancy	4 3U expansion slot occupancy

Mechanical specifications and system requirements

Dimensions / weight	458±2mm (L) × 307.5±2mm (W) × 80 (-1~0) mm (high)
Environmental ratings	Operating temperature: -20°C ~ 45°C, storage temperature: -45°C ~ 70°C
Power	Circular connector power, standard 19V adapter power

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-6640MA

Processor core count	4-core
Hardware threads number	4 threads
Website partnership data listed clock	2.2 GHz
CPU series ISA	X86 32/64-bit; SSE4.2, AVX
Series memory controller	Dual channel DDR4-2666, chip series up to 64GB
Series integrates graphics and display	Integrates 3D graphics and video de code; supports DP/HDMI/VGA category and 4K display
Series PCIe resources	Up to 16 lanes PCIe3.0
Series native USB/SATA resources	2×USB3.1、4×USB2.0、2×SATA 3.2
Hardware virtualization	Processor and IO virtualization

Zhaoxin KX-6640MA (continued)

Acceleration command	SM3、SM4

Sources: Shanghai Zhaoxin integrates Co., Ltd., Lenovo Zhaoyang CF4620 custom model parameters (website case study); Shanghai Zhaoxin integrates Co., Ltd., High-performance Micro ATX industrial main board (website technical news); Shanghai Zhaoxin integrates Co., Ltd., KX KX-6000 series processor.

06 GALLERY

Appearance and scene

Reference views



Product appearance reference; shipped units may differ.

Scene



Application illustration (not a product photo).

07 APPLICATIONS

From product capability to applications

Portable measurement and control and protocol bring-up

AFDX, industrial Ethernet, RS-422/RS-485 and CAN per target equipment protocol consists of bring-up connect, 17-inch display used for view packet, status or test UI. Each I/O driver, protocol supports and test software must first verification, system capability from actual delivery combination determines.

Multi I/O data acquisition workstation

Via 4 3U location configured with required acquisition or communications board card, uses 8GB memory and 2TB SSD hosts application and data log. I/O combination relatively multi when planning bus resources, log rate and storage policy, expansion slot position quantity this body not represent acquisition channel number or synchronous performance.

Equipment maintenance and offline data management

Built-in optical drive can together with project both has media procedure, USB and VGA used for peripherals and auxiliary display, built-in display completes field operation. Portable housing facilitates move to equipment adjacent maintenance, but used media, software version and Windows 7 driver compatible should per delivery environment check.

Integration checks

Protocol and driver	Check AFDX, CAN and industrial serial software supports, packet configured with and physical connect.
Main card and board	Confirm KX-6640MA main card, 4 3U expansion location and intended board compatible.
System software	Check Windows 7 64-bit required driver, test tool and project run environment.
Power environment	Confirm 19V circular connector adapter and -20–45°Cproduct run conditions.

08 CONFIGURATION

Configuration, options and selection

Configuration

Uses 19V adapter and circular connector power, provides Windows 7 64-bit system solution.

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

Email lyping@eqio.com Phone +86 182 8191 2988
Web eqio.com

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

Email lyping@eqio.com Phone +86 182 8191 2988 Web EQIO.COM