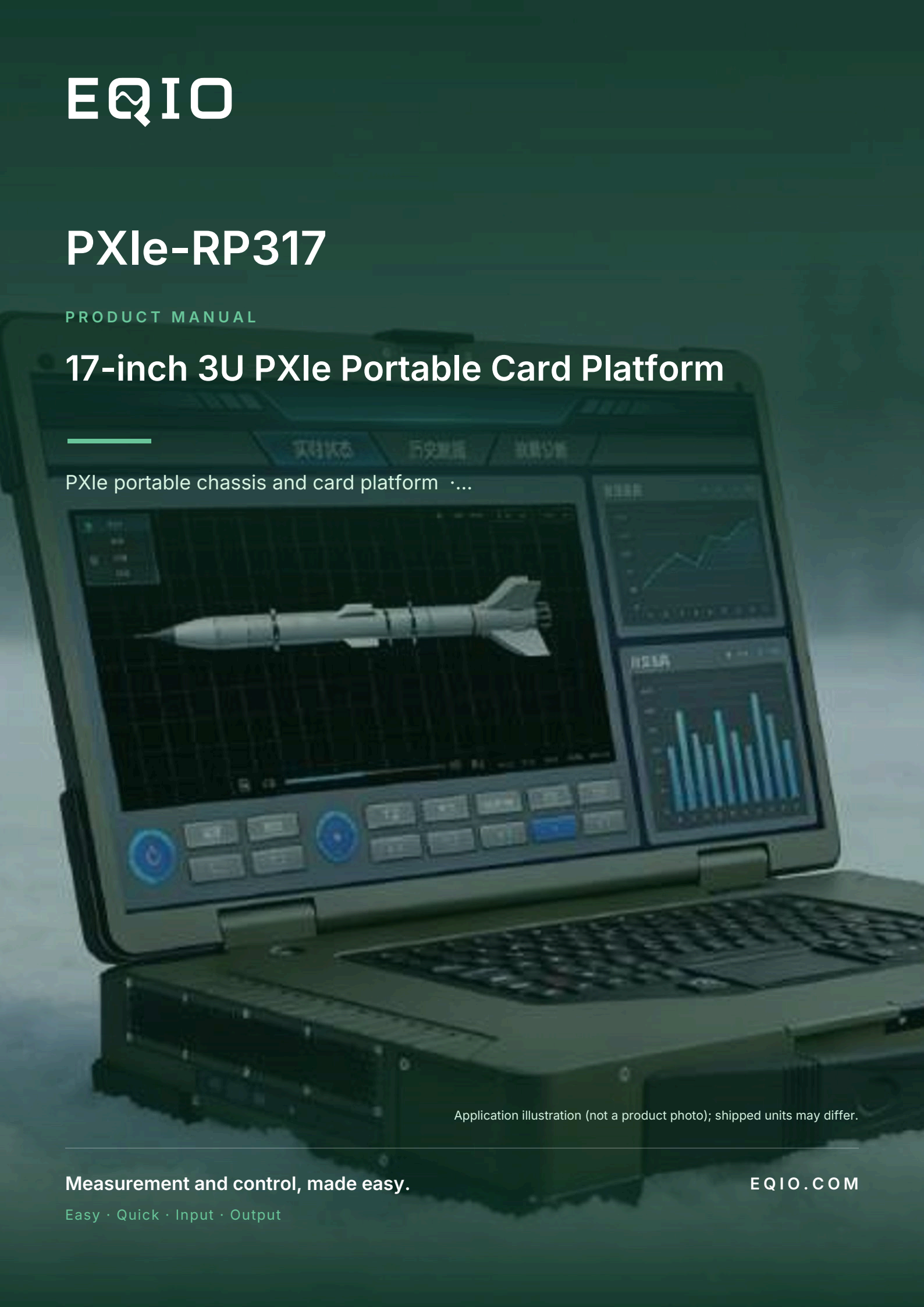
EQIO

PXIe-RP317

PRODUCT MANUAL

17-inch 3U PXIe Portable Card Platform

PXIe portable chassis and card platform ·...



Application illustration (not a product photo); shipped units may differ.

Measurement and control, made easy.

Easy · Quick · Input · Output

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01 OVERVIEW

17-inch 3U PXIe Portable Card Platform

PXIe portable chassis and card platform · Data acquisition · Electrical power test · Industrial automation · PXI Express

PXIe-RP317 integrates 17-inch Full HD display and optical drive, uses display on flip and dual aluminium-alloy layer structure, supports controller and expansion card replacement, suited used for data acquisition, electrical power test and mobile measurement and control platform.
Housing provides USB, network and VGA brought out location, dual fan organize forced air, external adapter via circular connector power. Display, optical drive and card-cage space centralized portable structure in, facilitates combined with acquisition, communications and control module forms field test operation unit.



Application illustration (not a product photo); shipped units may differ.

Key features

- 17-inch 1920 × 1080 display
- Display on flip and dual aluminium-alloy layer structure
- Built-in optical drive
- Dual 60mm cooling fan
- 19V adapter and 4-core circular connector input

02 FUNCTIONS

Functions and engineering value

Large display portable operation platform

PXIe-RP317 17-inch Full HD display, on flip structure and 3U card-cage space centralized portable housing in, uses dual aluminium-alloy layer structure and supports controller and expansion card replacement. Compute and measurement capability with installation solution adjust, suited to forms can portable use field test operation unit.

Display and media operation

1920 × 1080 display website mark sunlight readable, built-in optical drive facilitates per application requires used optical disc media. Display, storage media and measurement and control software together with still depends on to selected controller and system environment, should configured with stage confirm driver and operation procedure.

I/O and power organize

Rear part USB, RJ45 and VGA chassis brought out I/O, must be coordinated with controller and routing match; platform uses 19V adapter and 4-core circular connector power. Dual 60mm fan from right-side exhaust, left-side intake, field deployment required display expand, power cables and cooling leave space.

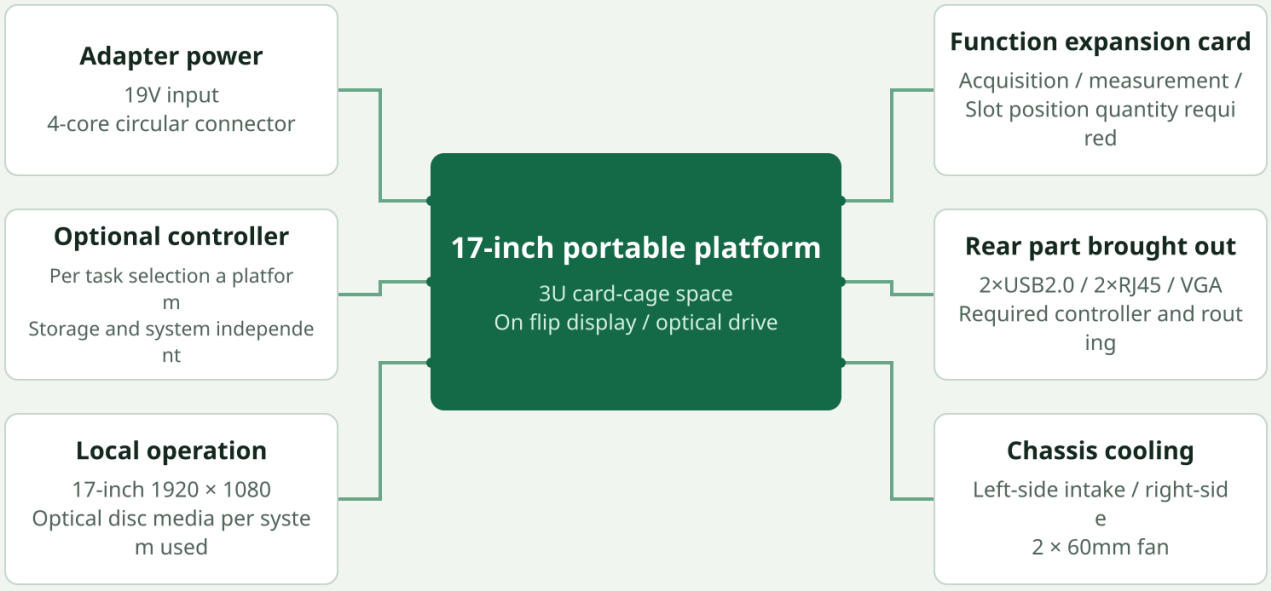
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

Functional blocks and system connections

FUNCTIONAL BLOCK DIAGRAM

PXIe-RP317



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

Chassis function relationship illustration; controller and I/O board per solution option, in the diagram controller represent a optional configuration, not indicates at the same time installation all processing platform.

Platform and I/O

The product is 17-inch portable PXIe hosts platform, controller and expansion card can per test requirement replacement, therefore not has only CPU, memory or storage configured with. Chassis fixed resources including display, optical drive, power and air cooling; not published slot position total, internal topology and processor configured with not should from nearby model derive.

> **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.

Chassis and backplane

Module specifications	3U
Display	17-inch, 1920 × 1080, sunlight readable
Power	External 19V adapter, 4 core circular connector I/O
Air cooling	Right-side exhaust, 2 60 × 60mm fan; left-side passive intake
Chassis I/O	Rear part 2 USB2.0, 2 RJ45, 1 VGA; function required and selected controller and routing match
Optical drive	Built-in optical drive, supports R/W
Weight	≤8.9kg
Interface specification	PXI-5 PXI Express Hardware Specification Rev1.1

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 (Optional)

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.

Zhaoxin KX-6000G series (Optional) (continued)

Acceleration command	SM2、SM3、SM4
Hardware virtualization	Processor and IO virtualization

Zhaoxin KX-6640MA (Optional)

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

05 COMPONENTS

Processor and device specifications (continued)

Zhaoxin KX-6640MA (Optional) (continued)

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
Acceleration command	SM3、SM4

Phytium D2000 (Optional) (continued)

Hardware virtualization	Supports
Floating-point and SIMD	Single/dual accuracy floating-point and ASIMD
Chip safety architecture	PSPA 1.0

Phytium D2000 (Optional)

Processor core count	8-core
Processor micro architecture	FTC663
ISA and actuation mode	ARMv8; supports ARM64 and ARM32 actuation mode
Up to clock	2.3 GHz
Layer-2 cache	8 MB
L3 cache	4 MB
CPU memory controller	2 DDR4 I/O
CPU PCIe resources	34 lanes PCIe 3.0
CPU network controller	2 Gigabit Ethernet I/O
Other on-chip I/O	1 × SD2.0, 4 × UART, 32 × GPIO, 4 × I2C, 1 × QSPI, 2 × general-purpose SPI, 3 × CAN, 2 × WDT, 16 × external interrupt

05 COMPONENTS

Processor and device specifications (continued)

Loongson Chinese Academy 3A6000 (Optional)

ISA	LoongArch
Physical core number	4-core
Logic processor number	8 threads
Processor core	64-bitLA664, 6-issue out-of-order actuation
Frequency	2.0–2.5GHz
Vector unit	128-bit and 256-bit
Per core layer-1 command cache	64 KB/core
Per core layer-1 data cache	64 KB/core
Per-core private has layer-2 cache	256 KB/core
Shared L3 cache	16 MB

Loongson Chinese Academy 3A6000 (Optional) (continued)

Memory controller	2-ch72-bitDDR4-3200, supports ECC
High-speed bridge chip interconnect	1-chHyperTransport 3.0
Native low-speed I/O	1-chSPI, 1-chUART, 2-chI2C, 16-chGPIO
Package	BGA, 35 × 35mm, 1190 pins
Typical power consumption	38W@2.5GHz
Dual accuracy peak compute	240 GFLOPS

Sources: Shanghai Zhaoxin integrates Co., Ltd., KX KX-6000G series processor; 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; Phytium IT Co., Ltd., Phytium Tengrui D2000 high-performance desktop CPU; Loongson Chinese Academy, Loongson 3A6000 product parameters.

06 APPLICATIONS

From product capability to applications

Mobile data acquisition unit

Can around 17-inch display UI combination controller and acquisition module, field configured with task, observe signal and compiled result. Website not listed slot total, selection when first confirm can used slot position and board combination, again according to log scale selection storage and communications method, avoid preset expansion capability.

Electrical power equipment field test

Suited to as requires larger local UI field test hosts platform, via dedicated measurement module attach electrical power equipment test signal. Chassis responsible for display, power and module installation, measurement safety, isolated etc.grade and wiring method must per specific module and test solution confirm.

Industrial system installation debug

Can controller, communications and measurement board organize mobile bring-up operation unit, via local display completes software operation, and per requires used optical drive. Different controller will change change system I/O and software environment, delivery should first check rear part connector mapping, driver and field used procedure.

Integration checks

Slot position pending confirm	Website gives 3U module specifications, not published slot total and each slot topology, not can from same series model infer.
Display and optical drive	17-inch 1920 × 1080, sunlight readable; built-in optical drive supports read/write, media compatible per configured with confirm.
I/O and power	19V external adapter, 4-core circular connector; rear part USB/RJ45/VGA required selected controller and routing match.
Portable use and cooling	Chassis weight≤8.9kg, dual 60mm fan right exhaust left in air; reserved display expand and ventilation space.

07 CONFIGURATION

Configuration, options and selection

Configuration

Can paired with different PXIe system controller and I/O board, chassis weight no more than 8.9kg.

System controller	Zhaoxin KX-6000G / Zhaoxin KX-6640MA / Phytium D2000 / Loongson 3A6000

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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