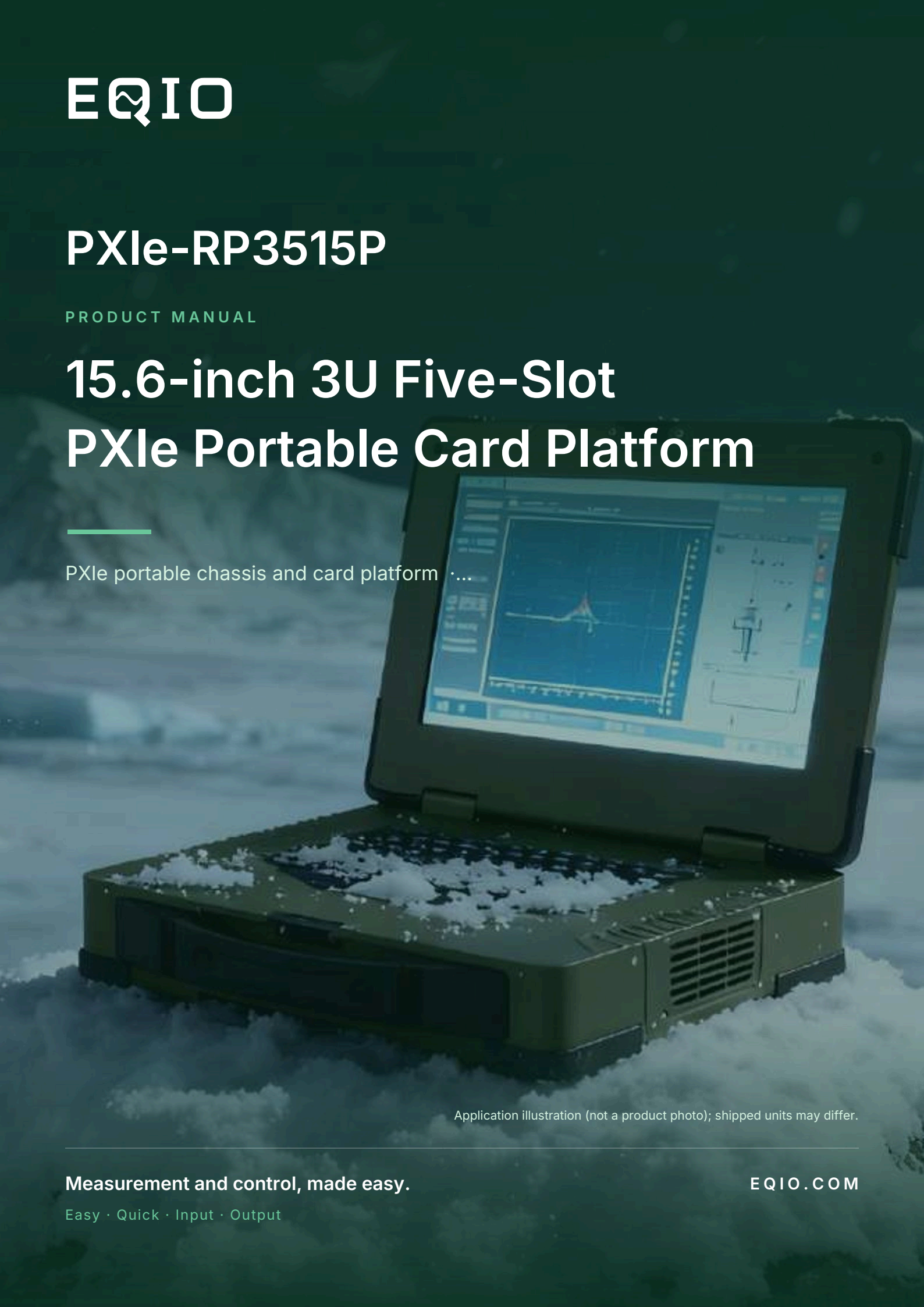
EQIO

PXIe-RP3515P

PRODUCT MANUAL

15.6-inch 3U Five-Slot 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

EQIO.COM

01 OVERVIEW

15.6-inch 3U Five-Slot PXIe Portable Card Platform

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

PXIe-RP3515P uses display on flip structure, integrates 15.6-inch display, keyboard, adapter power and air cooling system, provides 1 system slot and 4 hybrid peripheral slot, facilitates mobile test system integration.
Chassis settings dual fan and approximately airflow channel, rear part provides USB, network and VGA brought out location. Portable housing can around system controller and function card organize complete measurement and control platform, suited to field acquisition, equipment test and requires portable use modular instrument system.



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

Key features

- 15.6-inch on flip display
- 1 system slot and 4 hybrid peripheral slot
- 19V adapter, 4-core circular connector input
- Dual 60mm cooling fan
- 430 × 300 × 87mm portable housing

02 FUNCTIONS

Functions and engineering value

On flip display and card-cage structure

PXIe-RP3515P uses 15.6-inch on flip display and keyboard structure, provides 1 system slot and 4 hybrid peripheral slot. Controller and function card can around test task configured with, display, input and module installation centralized the same portable housing in, facilitates build field measurement and control terminal.

Adapter power and airflow

Platform from external 19V adapter via 4-core circular connector power, right side dual 60mm fan exhaust, left-side passive intake. Installation I/O board when, should adapter capability, module total load and air stream path together inspection, guarantee housing placement and cables arrangement not block ventilation location.

Chassis I/O brought out

Rear part settings 2-ch USB2.0, 2-ch RJ45 and 1-ch VGA brought out location, actual function requires selected controller and internal routing match. Not cannot only from chassis connector quantity treat as controller has same independent port, delivery configured with should stated each connector should function from source.

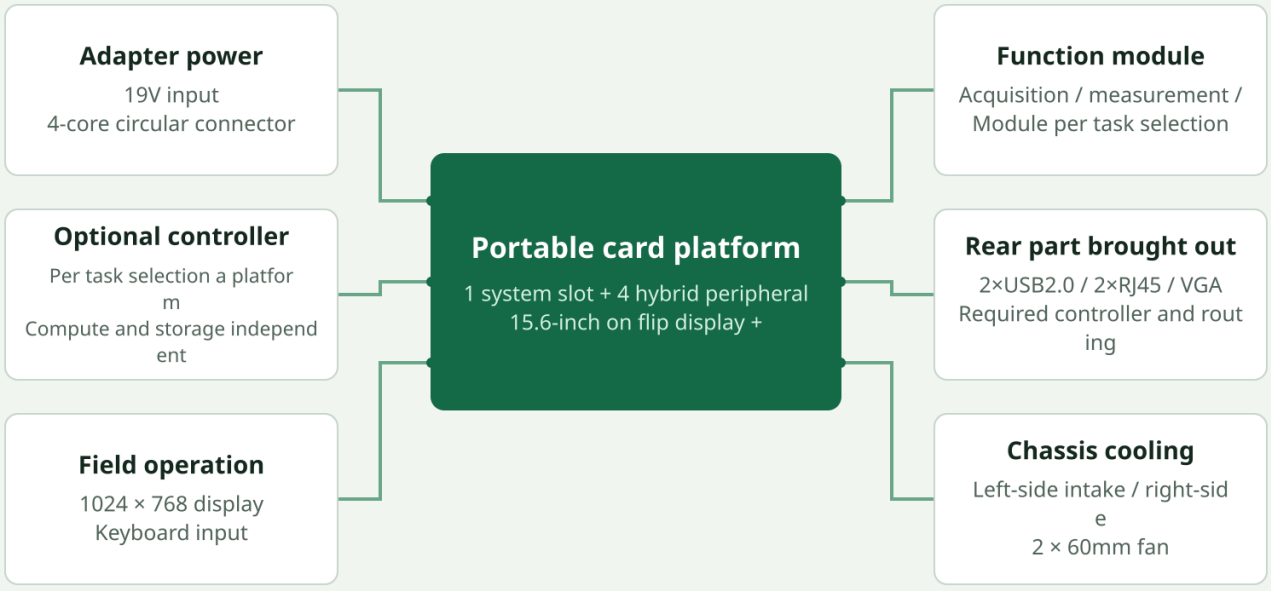
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

Functional blocks and system connections

FUNCTIONAL BLOCK DIAGRAM

PXIe-RP3515P



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 platform via portable chassis, display, keyboard, power and air cooling resources hosts PXIe system, chassis itself not has fixed compute processor. Optional CPU capability not cannot be treated as product unified configured with, rear USB, network and VGA I/O function also must and actual installation controller and connect wiring harness should.

> **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
Slot layout	1 system slot + 4 hybrid peripheral slot
Display	15.6-inch, 1024 × 768
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
Backplane PCB	39.64 × 395.55mm (H × W), thickness 3.2mm
Dimensions	430×300×87mm
Weight	≤6.5kg
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

Portable data acquisition

Can controller and acquisition module assembly completes rear forms can portable use data acquisition terminal, used on flip display and keyboard performs local operation. Storage capacity and data uplink method from controller solution determines, continuous log task should check module rate, backplane connect and field power conditions.

Field electrical power test

Suited to around electrical power equipment test task combination isolated measurement, communications and acquisition module, equipment adjacent completes configured with, observe and result log. Chassis provides portable hosts and display operation, measurement range, isolated etc.grade and wiring requirements must from selected test module and field solution single independent determine.

Industrial equipment bring-up

Can as industrial equipment installation or debug stage mobile measurement and control platform, controller and I/O board centralized portable use and field run test program. Rear part I/O requires with controller routing confirm, on flip display operation status should also inspection placement space, readable angle and airflow channel.

Integration checks

Display parameters	15.6-inch on flip display, website resolution 1024 × 768; not replace RP3515 Full HD touchscreen parameters.
Power and airflow	19V external adapter, 4-core circular connector; right side dual 60mm fan exhaust, left-side intake.
I/O from source	Rear part 2 USB2.0, 2 RJ45, 1 VGA chassis brought out; function and independent channel required controller and routing match.
Slot position and dimensions	1 system slot plus 4 hybrid slot, 430 × 300 × 87mm, ≤6.5kg; controller and function card per solution configured with.

07 CONFIGURATION

Configuration, options and selection

Configuration

Can paired with Zhaoxin, Phytium or Loongson PXIe controller, external I/O from controller and chassis routing combination implements.

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

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