EQIO

# RMC-2814

PRODUCT MANUAL

# 2U Four-Slot CompactPCI Compact Rack Platform

Rack-mount CPCI platform · Data acquisition · Compact rack integrates



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

# 2U Four-Slot CompactPCI Compact Rack Platform

Rack-mount CPCI platform · Data acquisition · Compact rack integrates · Industrial automation · CompactPCI

RMC-2814 uses compact 2U chassis and 4-slot 6U CompactPCI backplane, supports 1 system slot, 3 expansion slot and rear I/O card, equipped with thermal control speed control fan and 250W AC power, used for cabinet space limited measurement and control and data acquisition system. Chassis supports 80mm rear I/O card, front panel settings USB, switch and LED, facilitates cabinet internal operation. Can combination controller, acquisition board and communications module, rear part routing and front card-cage respectively arrangement, suited to automation test node.



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

## Key features

- Compact 2U rack structure
- 1 system slot, 3 expansion slot
- Supports 80mm rear I/O card
- Thermal control speed control fan
- 250W AC power

02 FUNCTIONS

# Functions and engineering value

## Compact backplane and rear I/O structure

2U chassis configured with 4-slot 6U CompactPCI backplane, 1 system slot and 3 expansion slot supports module combination, and supports 80mm rear I/O card. Main card and rear part connect can separate arrangement, suited to requires control front card-cage space and cabinet routing depth system integration.

## Thermal control cooling and front end operation

Thermal control speed control fan with cooling requirement operation, provides with isolated or not with isolated structure selection, front panel settings USB, switch and power indicator. Actual thermal control policy and isolated structure should follow delivery solution confirm, cabinet installation still requires retain necessary ventilation and maintenance space.

## AC power and I/O matching

Platform uses 250W AC power, USB, network and VGA etc.standard interfaces from system controller and rear I/O board matching provides. 442 × 88 × 300mm compact outline facilitates space planning, controller, function card and rear I/O power consumption, depth and I/O compatible must together verify.

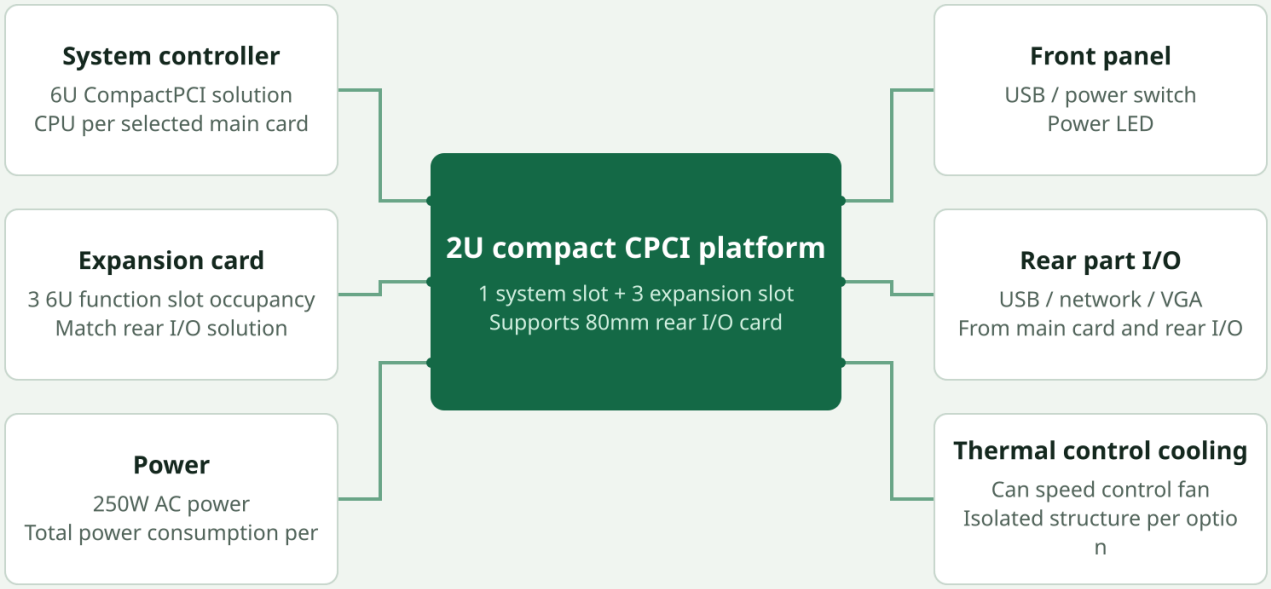
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

# Product functional architecture

FUNCTIONAL BLOCK DIAGRAM

RMC-2814




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. Rear part standard interfaces and CPU capability with system controller and rear I/O solution determine.

### Platform and I/O

Platform uses 6U 4-slot CompactPCI backplane, CPU and memory from selected 6U system controller provides. Data reference 3rd-generation Intel Core i7 controller but not specified specific CPU or shipped with the unit range; this product should backplane, 250W power, rear I/O supports and cooling structure main 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.

## Mechanics and system

| | |
|---|---|
| Front panel | Has power LED power switch, USB I/O |
| Handle | Front panel both sides chassis handle, rear panel fan module handle |
| Cooling | Thermal control can speed control fan, can supports not with isolated or with isolated |
| Process | Front rear aluminium alloy panel brushed anodized process, surface dual layer paint process |

## I/O and expansion

| | |
|---|---|
| Backplane | 4-slot 6U CPCI backplane, 1 system slot, 3 expansion slot, supports 80mm rear I/O card |
| Backplane bus | CompactPCI®bus, 64bit/33MHz or 66MHz |
| Controller configuration | 6U CompactPCI® 3rd-generation Intel®Core™i7 processor system controller |
| Standard interfaces | Main board rear IO board provides USB, Ethernet port, VGA display etc.standard interfaces |

## Mechanical specifications and system requirements

| | |
|---|---|
| Dimensions / weight | 442mm*88mm*300mm (tolerance ±1mm), weight≤8.0kg |
| Environmental ratings | Operating temperature: -20°C ~ 55°C, storage temperature: -40°C ~ 85°C, 10%~95%, non-condensing |
| Power | 250W AC power |

05 APPLICATIONS

# From product capability to applications

## Compact rack acquisition node

Can installation compatible system controller and acquisition board, 2U height internal build data acquisition node, 80mm rear I/O used for compiled external connect. Actual sampling function, channel number and synchronous method from board solution determines, selection when at the same time consider front card-cage and rear part cables space.

## Industrial automation control cabinet

Control in the cabinet uses CompactPCI board combination equipment compute and communications function, front panel USB can used for maintenance peripheral connection. Thermal control fan suited to together with cabinet cooling design, but should per fully populated load verification temperature rise, and check isolated structure layout and maintenance affect.

## Modular equipment matching

Requires fixed installation equipment provides unified card-cage, power and rear I/O space, system controller and I/O card can per different project selection. 300mm housing depth has to arrangement compact cabinet, connector, cables bend half diameter and cabinet rear part maintenance distance required separately into.

### Integration checks

| | |
|---|---|
| Rear I/O depth | Per 80mm rear I/O supports conditions check board, connector and cables space. |
| Controller configured with | Confirm 6U main card and 3 expansion location, USB/network/VGA per matching rear I/O. |
| Fan solution | Stated thermal control speed control parameters and with isolated or not with isolated structure option. |
| Power environment | Check 250W power load and -20–55°Coperation environment, non-condensation humidity conditions. |

06 CONFIGURATION

# Configuration, options and selection

### Configuration

Used 6U CompactPCI board, optional select fan isolated structure 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**

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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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