EQIO

VPX-3304

PRODUCT MANUAL

3U VPX Four-Channel Isolated CAN Card

VPX communications and IO card · Industrial control · Rail transit



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

Measurement and control, made easy.

Easy · Quick · Input · Output

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01 OVERVIEW

3U VPX Four-Channel Isolated CAN Card

VPX communications and IO card · Industrial control · Rail transit · CAN data acquisition · VPX

VPX-3304 provides 4 independent isolated CAN I/O and 1-ch Gigabit Ethernet I/O, isolated isolation voltage rated 3500VDC, baud rate supports 5K to 1M, used for industrial bus attach and data HMI. Channel between and channel and system between respectively isolated, can multi item field bus aggregation to network interfaces. Front panel provides bus, network and power status indicator, facilitates chassis internal organize device connection, suited to industrial control, test equipment and field bus data acquisition.



Product appearance reference; shipped units may differ.

Key features

- 4-ch independent isolated CAN
- 1-ch Gigabit Ethernet
- 5K–1M baud rate range
- Bus, network and power status indicator
- Channel and system between 3500VDC isolated

02 FUNCTIONS

Functions and engineering value

4-ch independent CAN attach

Board provides 4 independent CAN I/O, can respectively connect different field bus, baud rate range 5K to 1M, including 666K configured with. Each channel rate, node address and application protocol should independent check, board provides communications attach resources, actual packet processing and equipment control logic from matching software implements.

Isolated and network data HMI

Channel between and channel and system between rated isolated isolation voltage 3500VDC, together with 1-ch Gigabit Ethernet used for organize field bus and host data HMI. Isolated isolation voltage is not the same as normal operation voltage, specific network communications protocol, cache and packet mapping method requires combined with matching driver note confirm.

Status observe and chassis integrates

CAN communications, network and power indicator facilitates observe run status, DEBUG UART used for debug maintenance. Board uses 12V power, typical power consumption low to 10W, 160 × 100mm board outline suited to match 3U VPX slot position; wide temperature capability still requires combined with complete chassis power and cooling conditions verification.

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

Signal and functional relationships

FUNCTIONAL BLOCK DIAGRAM

VPX-3304



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

Express CAN, network and host management functional relationship, not limit communications direction or inferred internal CPU; protocol, driver and isolated used conditions must follow delivery note confirm.

Platform and I/O

This board 4-ch isolated CAN communications and network HMI main function, published data not gives processor or controller chip model. Signal via J30J connect field bus, Gigabit Ethernet via rear I/O connect system, host software management application data; isolated, debug and indicator function and communications protocol capability should respectively de.

> **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.

Technical data

Connector type	4-channel completely independent isolated CAN I/O
Baud rate supports	5K-1M (step 5K, including 666K)
Isolated isolation voltage	3500VDC (channel between and channel and system between)
Power	Single 12V DC input, typical value power consumption: <10W
Communications management	Supports panel LED (CAN communications, network status, power), DEBUG signal (UART0-TX/RX)
Operating system	Linux, Windows (required custom driver program), Kylin OS, UnionTech UOS, Yihui SylixOS

I/O and expansion

Network interfaces	1-ch Gigabit Ethernet (10/100/1000M adaptive)
J30J	- CAN0~ 3-channel H/L signal and GND; - EARTH; - DEBUG UART signal
P0 rear I/O	- 12V power input (multi pins and link); - system reset (SYS RST#); - GND
P1 rear I/O	- Gigabit network signal (GBE DA±/DB±/DC±/DD±); - GND

Environmental conditions

Operating temperature	Operating temperature: -40°C ~ 85°C (wide temperature), storage temperature: -55°C ~ 105°C
Relative humidity	95%non-condensing

Mechanical specifications and system requirements

Specification	160mm × 100mm, weight ≤ 300g (typical value, not including heatsink)

05 APPLICATIONS

From product capability to applications

Multi bus equipment management

4 independent channel can respectively attach different equipment group CAN network, and via matching host software management packet and status. Design when each channel determine rate, terminal and grounding method, network side data package and acquisition cycle required based on actual driver and protocol bring-up, not cannot only from Ethernet rate calculate.

Industrial test data acquisition

Test bench can used multiple CAN channel at the same time connect different DUT equipment, software log packet and per application requirement compiled result. Published parameters not gives hardware time or channel synchronous accuracy, therefore related analysis capability should be actual driver and software confirm, not can other acquisition card function directly apply.

Rail device communications node

Match VPX chassis in, can used isolated CAN connect different field equipment, and from Gigabit Ethernet and system controller HMI. Whether meets specific rail application also requires check product standard and wiring conditions, −40–85°Ctemperature range is board-level specification, not can replace system environment and can reliability verification.

Integration checks

CAN configured with	Confirm 4-ch independent channel rate, wiring and terminal; supports 5K–1M, step 5K and including 666K configured with.
Isolated and grounding	3500VDC isolated isolation voltage metrics; check channel, EARTH and system relationship, not treat as can directly apply plus operation voltage.
Driver and protocol	Windows required custom driver; confirm Linux, Kylin, UOS or SylixOS adapts and network data package method.
Chassis power	12V input, typical power consumption<10W; check P0 power reset, P1 Gigabit signal and −40–85°Coperation conditions.

06 CONFIGURATION

Appearance, configuration and selection



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

Configuration

Uses 12V DC input, typical power consumption low to 10W, operating temperature -40–85°C.

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