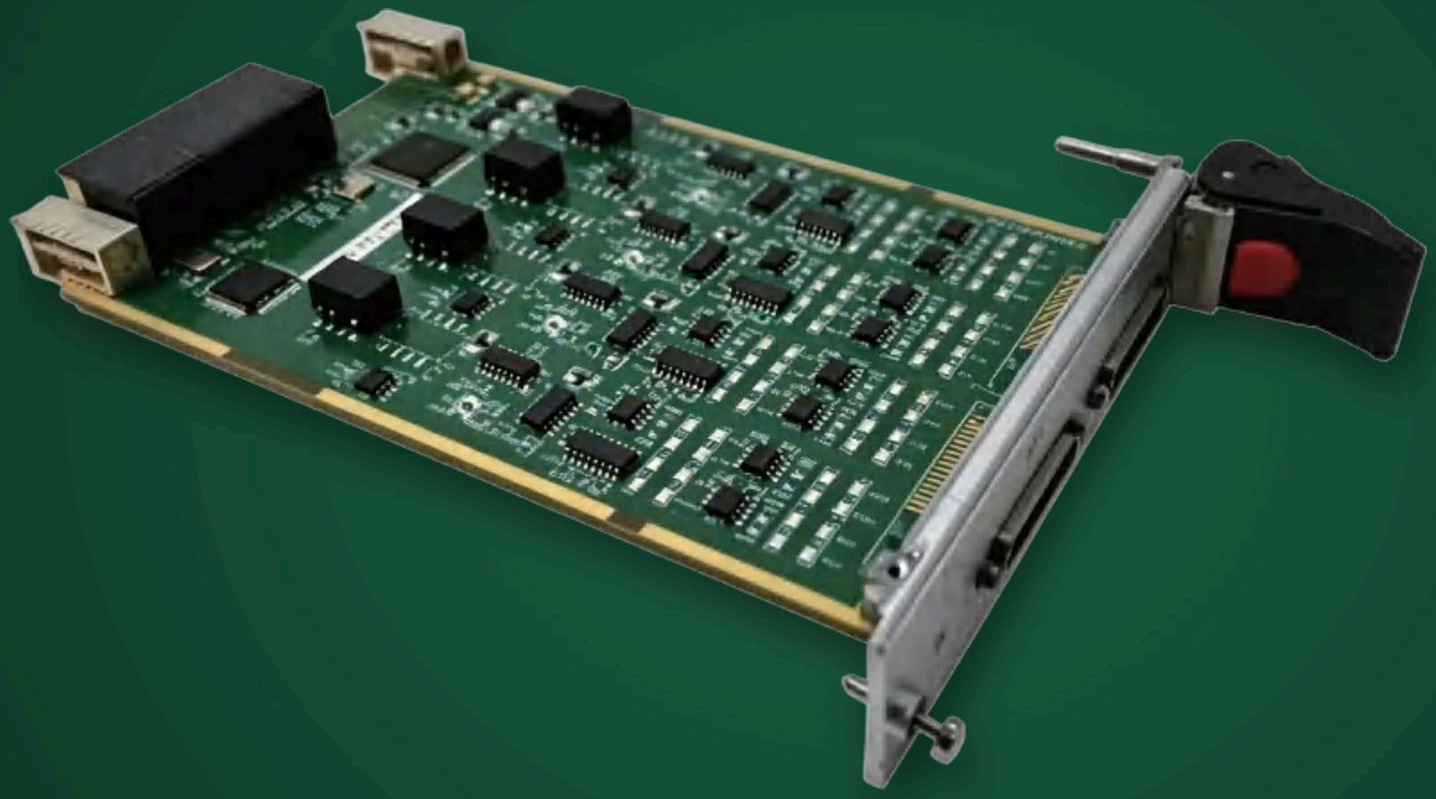
EQIO

VPX-3038

PRODUCT MANUAL

3U VPX Eight-Channel Isolated Serial Card

VPX communications and IO card · Industr...



Measurement and control, made easy.

EQIO.COM

Easy · Quick · Input · Output

01 OVERVIEW

3U VPX Eight-Channel Isolated Serial Card

VPX communications and IO card · Industrial communications · Data acquisition · Field equipment attach · VPX

VPX-3038 expansion 8-ch independent serial channel, supports RS-232, RS-422 and RS-485, uses signal and power isolated design, and provides surge protection and transceiver status indicator, suited used for industrial communications and field equipment attach.
Independent channel facilitates respectively connect multi unit instrument or field control equipment, front panel transceiver indicator can directly view communications status. Compact 3U VPX board outline suited to multi serial measurement and control chassis, isolated and surge suppress design used for industrial equipment between signal connect.



Product appearance reference; shipped units may differ.

Key features

- 8-ch independent RS-232/RS-422/RS-485
- Single channel signal and power full isolated
- Isolated isolation voltage 1500Vrms
- Up to 115.2kbps communications rate
- TVS protection and transceiver status indicator

02 FUNCTIONS

Functions and engineering value

8-ch independent serial attach

8 serial channel supports RS-232, RS-422 or RS-485 mode, up to rate 115.2kbps, can respectively connect different instrument or control equipment. Communications mode, baud rate and protocol should each channel configured with, board provides physical communications resources, actual equipment protocol de analysis and application management still by host application completes.

Isolated and transient protection

Each channel signal and power uses isolated design, published isolated isolation voltage 1500Vrms, and configured with TVS transient surge suppression device. Isolated metrics used for note electrical boundary, not can etc.same to any field voltage can directly attach; system still requires check grounding, cables display shield and connect equipment electrical conditions.

Chassis attach and run observe

J30J-37 connector centralized brought out serial signal, front panel TX, RX indicator facilitates observe communications active, 100 × 160mm board outline suited to 3U VPX chassis integrates. Temperature version respectively covers commercial temperature, ET2 and ET4 range, not can most wide temperature range as has supply version standard.

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-3038



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

Express serial communications, isolated and host management function relationship, not indicates internal controller topology; mode, signal level and temperature etc.grade must per configured with check.

Platform and I/O

This board core function is 8-ch serial transceiver and channel isolated, not published CPU or serial controller model, block diagram not invented processing core. Host application via corresponding driver management each channel, signal via isolated and protection relationship to external equipment, RS-232/422/485 mode and temperature version all per actual configured with distinguish.

> **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	J30J-37ZKW-J hole pattern connector
Up to rate	115.2kbps adaptive
Surge protection	Built-in TVS TVS diode SMBJ7.0CA
Isolated method	Single channel signal and power full isolated; voltage isolated 1500Vrms
LED indicator	Front panel has TX, RX LED status LED

Core system

Serial channel number	8-ch independent serial, RS-232/422/485 mode

Environmental conditions

Operating temperature	Commercial grade: 0 ~ 60°C, industrial grade ET2 version: -20°C ~ 70°C, military-grade ET4 version: -40°C ~ 80°C
Storage temperature	-40°C ~ 85°C
Relative humidity	95%non-condensing

Mechanical specifications and system requirements

Specification	100mm×160mm

05 APPLICATIONS

From product capability to applications

Multi instrument serial data aggregation

As measurement and control chassis requires connect multi unit serial instrument when, can used 8 independent channel respectively management wiring and communications parameters. Application software responsible for polling, command and data compiled, field should each unit verification protocol and response time, avoid 115.2kbps I/O upper limit treat as all equipment has effect data throughput.

Field control equipment attach

Per equipment electrical standard selection RS-232, RS-422 or RS-485, can different I/O control unit attach the same VPX platform. Isolated and TVS has to build electrical boundary, but long cable layout, terminal resistive and grounding solution still requires per actual field confirm, and performs complete system communications test.

Serial test and maintenance platform

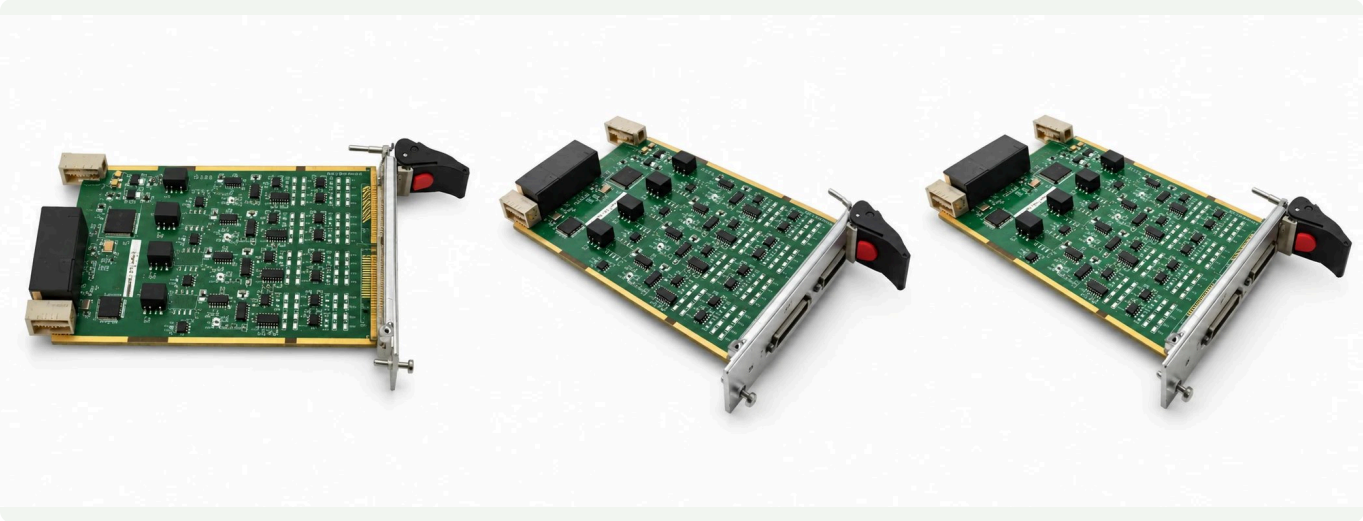
8-ch serial and transceiver indicator suited to device communications bring-up and maintenance bench, can channel en number, cables and protocol parameters establish fixed mapping. Test when distinguish without transceiver active, wiring error and protocol not match, LED only reflect active status, not can single independent prove data content or communications quality.

Integration checks

Connector pinout	Check J30J-37ZKW-J hole pattern connector channel, transceiver and reference assign, cables must follow selected mode make.
Communications parameters	8-ch respectively settings RS-232/422/485, baud rate and protocol; 115.2kbps up to I/O rate.
Isolated conditions	1500Vrms isolated and TVS device not instead of product grounding and over-voltage design, required check equipment signal level and field protection requirements.
Temperature and software	Commercial temperature 0–60°C, ET2 –20–70°C, ET4 –40–80°Crespectively option; host driver and system compatible required confirm.

06 CONFIGURATION

Appearance, configuration and selection



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

Configuration

Uses J30J-37 connector, provides commercial temperature, ET2 and ET4 temperature version.

Temperature version	0~60°C / ET2 -20~70°C / ET4 -40~80°C; different version

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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