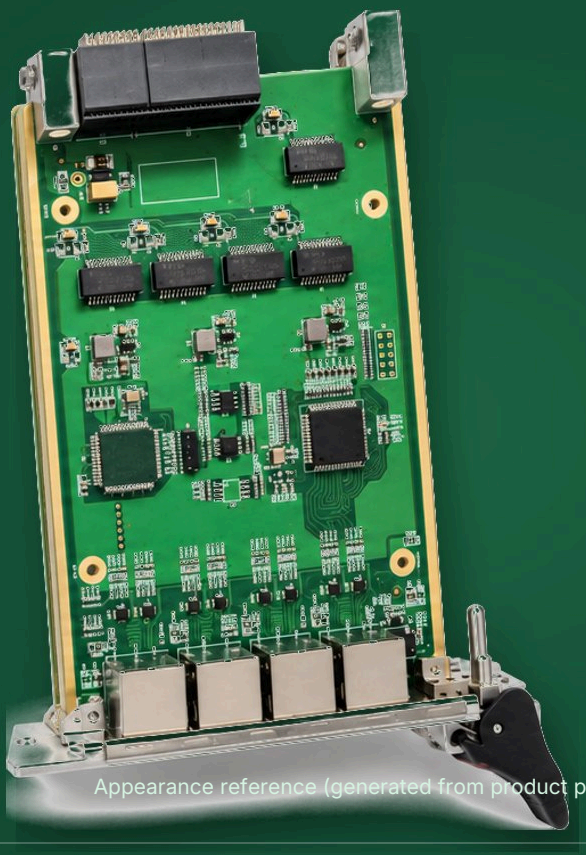
EQIO

VPX-2507

PRODUCT MANUAL

3U VPX Gigabit Ethernet Switch Card

VPX communications and IO card · Industr...



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 Gigabit Ethernet Switch Card

VPX communications and IO card · Industrial control · Vehicle-mounted platform · Network data switch · VPX

VPX-2507 provides 4-ch front panel Gigabit port and 1-ch backplane network connect, supports 10/100/1000Mbps adaptive, layer-2 storage forwarding and 9K jumbo frame, used for VPX system internal network interconnect.

4-ch RJ45 can connect chassis external equipment, backplane link used for controller and internal network interconnect, port mode can via switch code selection. Single 12V power and 3U board outline facilitates integrates, suited to modular acquisition system, communications node and industrial equipment networking.



Product appearance reference; shipped units may differ.

Key features

- 4-ch front panel Gigabit RJ45
- 10/100/1000Mbps adaptive
- 1-ch backplane 1000BASE-T
- Supports 9K byte jumbo frame
- Layer-2 storage forwarding switch

02 FUNCTIONS

Functions and engineering value

Chassis internal and external network interconnect

Switch card via 4-ch front panel RJ45 and 1-ch backplane network connect, external equipment and chassis internal control node include the same layer-2 connect solution. Each port supports 10/100/1000Mbps adaptive, port purpose and switch code settings should per actual system planning, board outline consistent and not indicates backplane pinout general-purpose.

Layer-2 storage forwarding

Product uses storage forwarding method, each network node etc.switch, and lists 9K byte jumbo frame supports. Whether used jumbo frame should and communications endpoint and link settings keep consistent, not cannot only enable switch card one side; published data not gives full port and throughput, should actual packet test evaluate system behaviour.

Single power modular integrates

12V single power, 160 × 100mm board outline facilitates 3U VPX chassis in layout network connect, maximum power consumption rated not high to 30W. Design when needed backplane power, product cooling and cables space together arrangement, 0–50°Coperation range not can reuse other wide temperature board environment etc.grade.

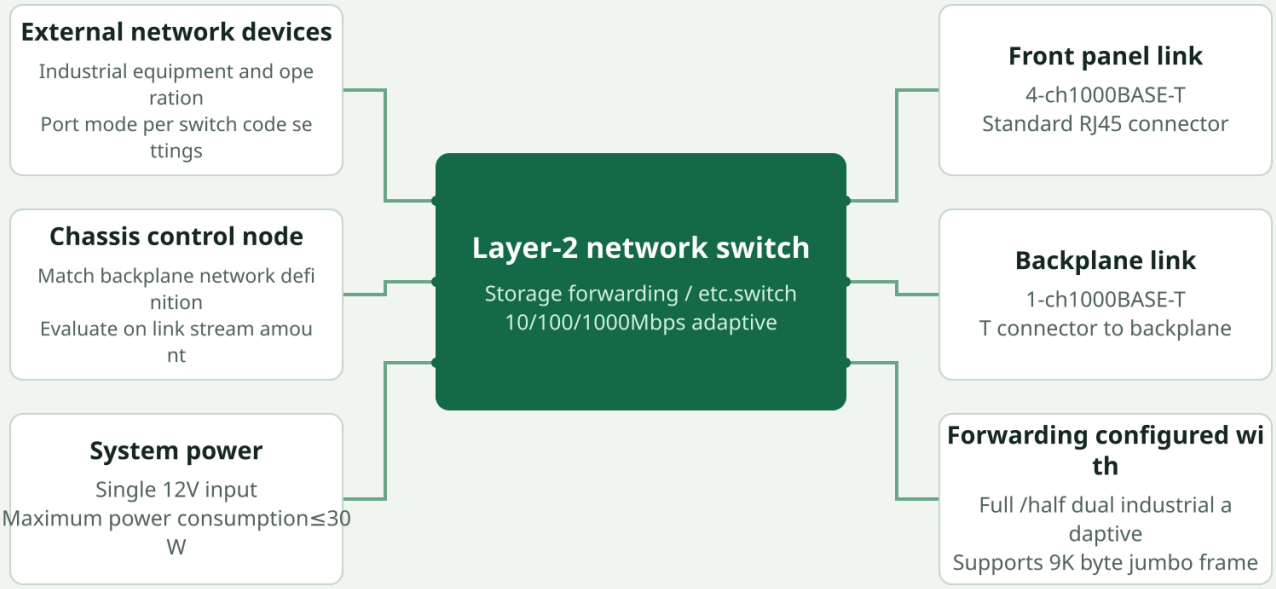
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

Signal and functional relationships

FUNCTIONAL BLOCK DIAGRAM

VPX-2507



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

Only express network port and forwarding functional relationship, not indicates switch chip internal structure; connect dual toward communications, jumbo frame and stream amount capability requires the end to end verification.

Platform and I/O

This board layer-2 network storage forwarding core, provides front panel 4-ch RJ45 and 1-ch backplane 1000BASE-T connect. Published data not gives switch chip or CPU model, block diagram only note port, power and forwarding functional relationship, 9K jumbo frame, switch code mode and stream quantity requires actual network in verification.

> **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

Power	+12V (single power power)
Transmission speed	10/100/1000MbpS, supports 9K byte jumbo frame
Switch method	Storage forwarding, each network node etc.switch
Transmission mode	Full dual industrial /half dual industrial adaptive
Application level	Layer-2
Power consumption	≤ 30W
Operating system	Linux (Ubuntu/CentOS), Windows (driver supports)
Can reliability	Can reliability: MTBF30000h, maintenance: MTIR30min
Connector type	1-ch 1000BASE-T I/O via T connector connect to backplane 4-ch 1000BASE-T I/O via standard RJ45 connector connect to baffle (can via switch code switch switch)

Environmental conditions

Operating temperature	0~50°C
Relative humidity	95%non-condensing
Storage temperature	-20°C~65°C

Mechanical specifications and system requirements

Specification	160mm × 100mm (0pen VPX3U standard), weight ≤ 500g (typical value, not including heatsink)

05 APPLICATIONS

From product capability to applications

Industrial equipment local-area interconnect

4-ch RJ45 can connect equipment, maintenance terminal or control unit, backplane link connect chassis internal controller, forms compact network attach solution. System required stated each equipment address and application stream amount, routing, network safety or remote management function should be matching equipment and software provides, not can be layer-2 switch capability automatic inferred.

Modular acquisition system networked

As multiple acquisition equipment via Ethernet transfer data when, can used switch card aggregation to VPX controller network path. Requires based on each equipment continuous stream amount evaluate on link load, and test end to end loss pack and buffer; 4 Gigabit port not represent single item backplane link has four times Gigabit bandwidth.

Mobile equipment internal communications

To installation space limited mobile equipment, can uses 3U board organize chassis internal and external network wiring, reduce spread switch equipment layout. Whether suited to specific vehicle-mounted operating condition still requires check temperature, vibration, power and connector requirements, product 0–50°Coperation range should be treated as selection boundary.

Integration checks

Backplane link	Confirm 1-ch 1000BASE-T via T connector to backplane pinout definition, match chassis controller and backplane network resources.
Port mode	4-ch front panel RJ45 and switch code switch per delivery note settings; jumbo frame requires the end point and whole link together supports.
Stream amount budget	Per backplane on and port actual stream amount evaluate and capability, not each port rated rate add as host can used throughput.
Power and environment	12V input, power consumption≤30W; check 160 × 100mm installation and 0–50°Coperation conditions, separately confirm vehicle-mounted environment requirements.

06 CONFIGURATION

Appearance, configuration and selection



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

Configuration

Uses 12V single power input, board dimensions 160 × 100mm, operating temperature 0–50°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

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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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