


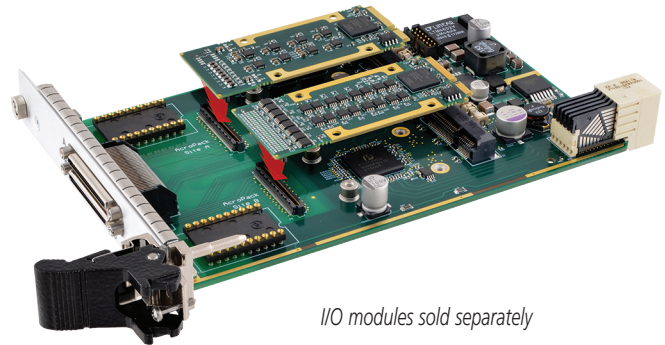
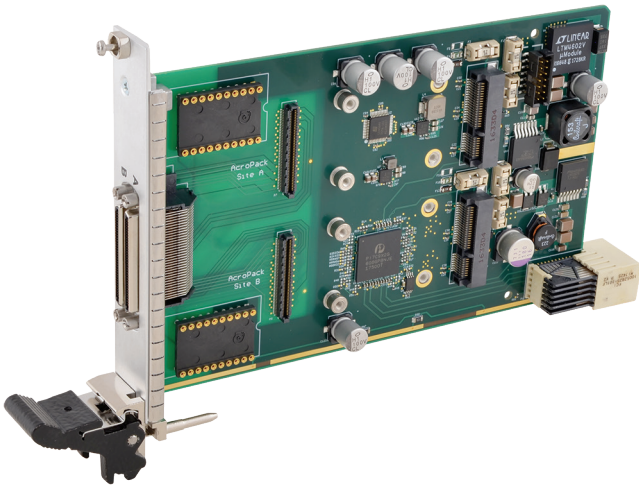


AcroPack® Carriers

ACPS3300 Series CompactPCI® Serial Carrier Cards for AcroPack Modules   



I/O modules sold separately

3U CompactPCI Serial ♦ Two isolated I/O expansion slots (AcroPack or mPCIe) ♦ Front I/O access

Description

Model: ACPS3310

The ACPS3310 is a 3U CompactPCI Serial carrier card for Acromag's AcroPack mezzanine modules. Two isolated I/O expansion slots interface AcroPack or mini PCIe modules to the PCIe bus. All connections to field signals are made through front panel connectors on the carrier board which passes them to the individual AcroPack modules.

Select from 25+ AcroPack modules to install any combination of analog I/O, digital I/O, serial I/O, communication, and FPGA processor functions. This modular approach allows the user to create a board which is customized to the application, thus saving slots and reducing costs.

The AcroPack product line updates our popular Industry Pack I/O modules with a PCIe interface format. This tech-refresh design offers a compact, low-cost I/O solution with the same functionality and memory map of the original Industry Pack mezzanine modules. New modules offer additional capabilities such as FPGA computing, Ethernet, CAN bus, and avionics interfaces.

These carriers are ideal for high-performance systems in aerospace, defense, transportation, oil/gas, test/measurement, manufacturing, and scientific research applications. End-users and system integrators benefit from a broad range of I/O functions in a small form factor.

Key Features & Benefits

General

- Two AcroPack or mini-PCIe module slots support any combination of I/O functions
- PCI Express Version 2.1 compliant carrier
- Compliant with PICMG CPCI-S.0 R2.0 standard
- PCIe switch allows two devices to share a single 4HP peripheral board slot in a CPCI-S chassis
- Geographical addressing identifies carrier location on the backplane
- Front panel 68-pin VHDCI CHAMP 0.8mm connectors for field I/O signals
- Isolated power supply option for use with isolated AcroPack modules
- Fused +1.5V, +3.3V, +5V, +12V, -12V DC power. A fuse is present on each supply line serving each AcroPack module.
- JTAG header for programming and debugging AcroPack modules with an FPGA
- Extended temperature range
- Software development tools for VxWorks, Linux, and Windows environments

Acromag 
THE LEADER IN INDUSTRIAL I/O

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Performance Specifications

■ Interfaces

CompactPCI Serial

CompactPCI Serial (CPCI-S.0) peripheral slot card with P1 connector. PCIe x4. Geographical addressing (GA0-GA3).

PCI Express

PCIe Gen 2 switch expands host PCIe port to two ports, one for each AcroPack site. The host port has one or four PCIe lanes (depending on CPCI-S slot). Each AcroPack site has one lane.

AcroPack / Mini PCIe Mezzanine

Two AcroPack or mPCIe (full-length) slots. PCIe x1. Site B includes USB 2.0 interface.

Front panel interface: Each AcroPack module routes to a 68-pin VHDCI CHAMP connector (stacked).

Rear interface: Both AcroPack modules have a PCIe x1 link (via switch) to the CPCI-S P1 connector.

Isolation: Host logic and field I/O isolated from each other up to 250V AC/DC continuous (1500V AC for one minute). Optional isolated DC/DC converter is required for use with isolated AcroPack modules. Carrier also provides 100VAC/DC continuous isolation between AcroPack module signals. Isolation between adjacent pins/signals on front I/O cable is 30V.

■ Compliance

CompactPCI Serial

Meets or exceeds PICMG[®] CPCI-S.0 R2.0.

PCI Express

PCI Express Version 2.1 compliant carrier.

EMC

Designed to comply with EMC Directive 2004/108/EC.

Immunity: EN 61000-6-2.

Emissions: EN 61000-6-4, Class A.

■ Electrical / Mechanical

Power Requirements

+12V supply ($\pm 10\%$): 290mA typical with no AcroPacks installed.

The ACPS3310 has four DC/DC converters to provide the power supply voltages to the AcroPack modules that are not present at the host interface.

The +5V, +3.3V, +1.5V and -12V supplies are sourced from the +12V host power.

Dimensions

3U CompactPCI Serial 4HP.

Size: 100 x 160 mm (3.937 x 6.299 inches).

Weight: 158 g.

■ Environmental

Operating / Storage Temperature Range

Operation: -40 to 85°C (200 LFM airflow).

Storage: -55 to 125°C.

Relative Humidity

5 to 95% non-condensing.

Shock, Operating

Designed to comply with IEC 60068-2-27: 30G, 11ms half sine, 50G, 3ms half sine, 18 shocks at 6 orientations for both test levels.

Vibration, Operating

Sinusoidal: Designed to comply with IEC 60068-2-6: 10-500Hz, 5G, 2 Hours/axis.

Random: Designed to comply with IEC 60068-2-64: 10-500Hz, 5G-rms, 2 Hours/axis.

Certifications

CE compliant.

Coating/Sealant

Conformal coating available on request.

MTBF

According to MIL-HDBK-217 FN2, GBGC.

25°C: Contact factory.

40°C: Contact factory.

■ Software Support

Operating Systems

Drivers available for Linux[®], Windows[®] and VxWorks[®].

Ordering Information

Carrier Boards

ACPS3310: 3U CPCI-S carrier, two AcroPack/mPCIe sites, front I/O, air-cooled

See Acromag.com/AcroPacks for a full list of I/O modules.

Accessories

5025-288: Termination panel, DIN-rail mountable, SCSI-3 connector, 68 screw terminals

5028-420: Round cable, shielded, male SCSI-3 connector to 68-pin CHAMP. 0.8mm, 2 meters long

5028-615: Cable, 68-pin CHAMP to pigtail, 36 inches long

5028-616: Cable, 68-pin CHAMP to pigtail, 70 inches long

Software (see software documentation for details)

APSW-API-LNX: Linux[®] support (website download only)

APSW-API-VXW: VxWorks software support package

APSW-API-WIN: Windows DLL driver software support pkg

