

PCI-8432/8433 2- and 4-Channel Hardware Specifications

This document lists the specifications for the PCI-8432 and PCI-8433 2 and 4-channel boards.

Environment

Maximum altitude	2,000 m (at 25 °C ambient temperature)
Pollution Degree	2
Indoor use only	
Operating environment	
Ambient temperature range	0 to 55 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2.)
Relative humidity range.....	10% to 90%, noncondensing (Tested in accordance with IEC-60068-2-56.)
Storage environment	
Ambient temperature range	-20 to 70 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2.)
Relative humidity range.....	5% to 95%, noncondensing (Tested in accordance with IEC-60068-2-56.)

Other Specifications

Dimensions	10.7 × 17.4 cm (4.2 × 6.9 in.)
IO connector—2 port	DB-9 (male) x2
IO connector—4 port	10-position modular (RJ-45) x4 (RJ-45 to male DB-9 adapter included)
Power requirement (from PCI bus)	
PCI-8432/2	
+5 VDC	380 mA typical 570 mA maximum
PCI-8433/2	
+5 VDC	380 mA typical 570 mA maximum
PCI-8432/4	
+5 VDC	550 mA typical 815 mA maximum
PCI-8433/4	
+5 VDC	785 mA typical 1.2 A maximum
Isolation voltage ¹	
From port to port	2,000 Vrms/60s
From any port to host computer	2,000 Vrms/60s
Maximum serial transfer rate ²	
RS-485	2,000,000 bps
RS-232	1,000,000 bps
Maximum cable length	
RS-485 ³	30 m (limited by EMC/surge)
RS-232	2,500 pF equivalent (TIA-EIA-232-F 2.1.4)
Data line ESD protection (human body model)	
RS-485	± 15 kV
RS-232	± 15 kV

¹ Verified by a dielectric withstand test.

² Actual speed may vary considerably from speed shown due to system and instrumentation capabilities.

³ RS-485 is capable of 1.2 km (4,000 ft) without surge limitation.

Safety

This product is designed to meet the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 61010-1
- CAN/CSA-C22.2 No. 61010-1



Note For UL and other safety certifications, refer to the product label or visit ni.com/certification, search by model number or product line, and click the appropriate link in the Certification column.

Electromagnetic Compatibility

Emissions EN 55011 Class A at 10 m
FCC Part 15A above 1 GHz

Immunity EN 61326:1997 + A2:2001,
Table 1

CE, C-Tick, and FCC Part 15 (Class A) Compliant



Note For EMC compliance, operate this device with shielded cabling.

CE Compliance

This product meets the essential requirements of applicable European Directives, as amended for CE marking, as follows:

Low-Voltage Directive (safety) 73/23/EEC

Electromagnetic Compatibility
Directive (EMC) 89/336/EEC



Note Refer to the Declaration of Conformity (DoC) for this product for any additional regulatory compliance information. To obtain the DoC for this product, visit ni.com/certification, search by model number or product line, and click the appropriate link in the Certification column.

National Instruments, NI, ni.com, and LabVIEW are trademarks of National Instruments Corporation. Refer to the *Terms of Use* section on ni.com/legal for more information about National Instruments trademarks. Other product and company names mentioned herein are trademarks or trade names of their respective companies. For patents covering National Instruments products, refer to the appropriate location: **Help»Patents** in your software, the `patents.txt` file on your CD, or ni.com/patents.