

NI PCI-1426 Specifications

Base Configuration Camera Link Image Acquisition Device

This document lists the specifications for the NI PCI-1426.

All specifications are subject to change without notice.

Visit ni.com/manuals for the most current specifications.

All specifications are typical at 25 °C, unless otherwise stated.

Trigger Characteristics

Number of external TTL I/O lines 4



Note External TTL lines become unavailable when their trigger source is set as an optically isolated input or an RS-422 input in the National Instruments Measurement & Automation Explorer (MAX) configuration software.

Trigger input

Voltage range 0 to 5 V (TTL)

Input high voltage 2.0 V

Input low voltage 0.8 V

Polarity Programmable,
active-high or active-low

Trigger output

Voltage range 0 to 5 V (TTL)

Output high voltage 2.4 V at 15 mA source

Output low voltage 0.55 V at 10 mA sink

Polarity Programmable,
active-high or active-low

Power-on state Input (high-impedance)
10 k Ω pull-up to 5 V

Input Characteristics

Optically Isolated Inputs

Number of channels.....	2
Type	Current sinking or sourcing
Input voltage range	0 to 30 V
Input ON voltage.....	3.5 V to 30 V
Input OFF voltage	0 to 2 V
Turn-on current.....	7.1 mA (typical) 14 mA (maximum)
Maximum pulse rate	100 kHz
Minimum pulse detected	10 μ s
Reverse polarity protection.....	Yes, -30 V

Quadrature/RS-422 Inputs

Number of channels (+/- pairs)	2
Differential input threshold	± 0.2 V (maximum), RS-422 compatible
Termination	120 Ω
Input voltage range	0 to 5.5 VDC
Maximum quadrature count rate.....	5 MHz

General Characteristics

Pixel clock	Camera Link compatible
Enables.....	Camera Link compatible
Control signal	Camera Link compatible
Video data.....	Camera Link compatible

Clocks

Pixel clock frequency range..... 20 MHz to 50 MHz



Note Camera Link cameras must transmit at a minimum of 20 MHz.¹

PCI Interface

Theoretical max PCI bandwidth 133 MB/s

Memory

Onboard memory 16 MB or 32 MB SDRAM
depending on memory option
purchased

Serial Requirements

Baud rates supported..... 300, 600, 1200, 1800, 2000, 2400,
3600, 4800, 7200, or 9600 bps;
19.2, 38.4, or 56 kbps

Power Requirements

Voltage +5 V (1.5 A)
+12 V (24 mA)
-12 V (20 mA)

Physical Characteristics

Dimensions..... 10.7 cm × 17.5 cm
(4.2 in. × 6.9 in.)

Weight..... 127 g (4.48 oz)

Environment

The NI 1426 is intended for indoor use only.

Operating temperature..... 0 °C to 55 °C

Storage temperature -20 °C to 70 °C

Relative humidity 5% to 90%, noncondensing

Pollution Degree 2

Approved at altitudes up to 2,000 m.

¹ This value corresponds to the post-serialization Camera Link cable transmission rate of 140 to 350 MHz.

Compliance and Certifications

Safety

The NI 1426 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 considerations, 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

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

ImmunityEN 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.

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