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**PCI-1426**

# IMAQ™ PCI-1426 Specifications

## Base Configuration Camera Link Image Acquisition Device

This document lists the specifications for the IMAQ PCI-1426.  
All specifications are subject to change without notice.  
Visit [ni.com/manuals](http://ni.com/manuals) for the most current specifications.

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

## Trigger Characteristics

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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).

### 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 kΩ pull-up to 5 V

# Input Characteristics

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## 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 $\mu$ s
Reverse polarity protection .....	Yes, -30 V

## RS-422 Inputs

Number of channels .....	2
Differential input threshold .....	$\pm$ 0.2 V (maximum), RS-422 compatible
Termination .....	120 $\Omega$
Input voltage range .....	0 to 5.5 VDC

## General Characteristics

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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.<sup>1</sup>

## PCI Interface

Theoretical max PCI bandwidth ..... 133 MB/s

## Memory

Onboard memory ..... 16 MB SDRAM

## 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

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

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

## Environment

The IMAQ 1426 device 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.

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

# Compliance and Certifications

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## Safety

The IMAQ 1426 meets the requirements of the following standards for safety and 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](http://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. In addition, all covers and filler panels *must* be installed. 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](http://ni.com/certification), search by model number or product line, and click the appropriate link in the Certification column.