A

Specifications

This appendix lists the specifications of the PCI-1409 and PXI-1409 devices. These specifications are typical at 25 °C, unless otherwise stated.

Formats Supported

RS-170/NTSC	60 Hz (Interlaced mode: 60 fields/s)
CCIR/PAL	50 Hz (Interlaced mode: 50 fields/s)
VGA	60 Hz, 640 × 480 resolution
Variable scan	Programmable

Video Input

Quantity	Four monochrome
Input impedance	75 Ω ±1%
VIDEO0	RSE (BNC), RSE or DIFF (VHDCI)
VIDEO<3..0>	RSE or DIFF (VHDCI)
Frequency response	30 MHz (–3 dB) typ
Digital Antichrominance filter	Programmable (disabled, 3.58 MHz notch filter, or 4.43 MHz notch filter)
Filter characteristics	Attenuation at notch frequency > 30 dB

Input range (black to white).....700 mV (calibrated)
200 mV to 1.40 V full scale

Accuracy.....±1.5% of reading

Temperature drift.....< 250 ppm/°C

A/D Conversion

Gray levels.....1024 (10-bit)

Differential nonlinearity .....±1 LSB max

RMS noise .....< 0.5 LSB rms

Signal-to-noise ratio .....56 dB typ

Sampling rate.....2 MHz to 40 MHz, externally clocked

Pixel aspect ratio.....Programmable ±5% of nominal

Internal Pixel Clock

Frequencies range .....11.6 to 25.8 MHz

Pixel ratio for
standard video sources.....±5%

Pixel jitter .....< 2 ns peak

PCI Interface

PCI initiator (master) capability .....Supported

PCI target (slave) capability .....Supported

Data path.....32 bits

Card voltage.....5 V only

Card type.....32-bit half-size card

Parity generation/checking,
error reporting.....Supported

Target decode speed .....Medium (1 clock)

Target fast back-to-back capability ..... Supported

Resource locking ..... Supported as a master and slave

PCI interrupts ..... Interrupts passed on INTA# signal

Base address registers ..... BAR0 (16 KB)
BAR1 (64 KB)

Expansion ROM ..... 4 KB

PCI master performance

- Ideal ..... 133 Mbytes/s
- Sustained ..... 100 Mbytes/s

Power Requirements

Voltage ..... +5 V (1.5 A)
+12 V (100 mA)
–12 V (50 mA)

Physical

Dimensions

- PCI-1409 ..... 10.7 by 17.5 cm (4.2 by 6.9 in.)
- PXI-1409 ..... 10 by 16 cm (3.9 by 6.3 in.)

Weight

- PCI-1409 ..... 0.127 kg (0.28 lb)
- PXI-1409 ..... 0.172 kg (0.38 lb)

Environment

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

Storage temperature ..... –20 to 70 °C

Relative humidity ..... 10 to 90%, noncondensing

Electromagnetic Compatibility

EMC/EMI.....CE, C-Tick, and FCC Part 15 (Class A) Compliant

Electrical Emissions .....EN 55011 Class A at 10 meters. FCC Part 15A above 1 GHz

Electrical Immunity .....Evaluated to EN 61326:1998, Table 1

Note This device should only be operated with shielded cable for full EMC and EMI compliance. See the *Compliance* section of this manual and the *Declaration of Conformity* included in your kit for any additional regulatory compliance information.

Functional shock (PXI only).....MIL-T-28800 E Class 3 (per Section 4.5.5.4.1) Half-sine shock pulse, 11 ms duration, 30 g peak, 30 shocks per face

Operational random vibration (PXI only).....5 to 500 Hz, 0.31 grms, 3 axes

Nonoperational random vibration (PXI only).....5 to 500 Hz, 2.5 grms, 3 axes

Note Random vibration profiles were developed in accordance with MIL-T-28800E and MIL-STD-810E Method 514. Test levels exceed those recommended in MIL-STD-810E for Category 1 (Basic Transportation, Figures 514.4-1 through 514.4-3).