

NI 6514/15 Specifications

This appendix lists the specifications for the NI 6514 and the NI 6515 devices. These specifications are typical at 25 °C, unless otherwise noted.

Power Requirements

Power consumption on +5 VDC ($\pm 5\%$).....	150 mA
Power consumption on +3.3 VDC ($\pm 5\%$).....	300 mA, typical; 500 mA, maximum
Power available at I/O connector	+3.75 to +5.25 VDC



Note The power at the I/O connector is derived from the output Vcc (user provided). If Vcc is greater than 10 VDC, then the the output voltage is 5 VDC ($\pm 5\%$).

Digital I/O

Number of channels	64, optically isolated
Power-on state.....	0 (open), default; user-programmable to 0 or 1
Data transfers	Interrupts, programmed I/O
I/O connector.....	100-pin keyed female SCSI connector

Isolated Inputs

Number of input lines	32 bi-directional, each bank with its own ground reference isolated from other banks
Bank isolated inputs	8 lines per bank

Maximum input voltage.....30 VDC

Level	Min	Max
Input logic low voltage (V_{IL})	0 VDC	± 4 VDC
Input logic high voltage (V_{IH})	± 11 VDC	± 30 VDC

Input current

11 V inputs4.5 mA/line, maximum

30 V inputs12.5 mA/line, maximum

Propagation delay30 μ s, typical

Isolated Outputs

Number of lines32, each bank with its own ground reference isolated from other banks

Bank isolated outputs.....8 lines per bank

Maximum switching voltage30 VDC

Maximum switching capacity

NI 6514.....350 mA (75 mA)

Maximum switching capacity

NI 6515.....500 mA (120 mA)

Pin 50/Pin 100 (at +5 V).....200 mA, maximum

Propagation delay10 μ s, typical

Physical Characteristics

PCI dimensions.....14.1 \times 11.4 cm
(5.54 \times 4.47 in.)

PXI dimensions.....16 \times 10 cm
(6.3 \times 3.9 in.)

PCI weight70.87 g (2.5 oz)

PXI weight.....172.9 g (6.1 oz)

Environmental

Operating temperature..... 0 to 55 °C

The following table lists the derated current values (100% duty cycle).

Ambient Temperature	NI 6514, All Lines	NI 6514, One Line per Port	NI 6515, All Lines	NI 6515, One Line per Port
Up to 25 °C	75 mA	350 mA	125 mA	475 mA
Up to 35 °C	65 mA	350 mA	125 mA	425 mA
Up to 45 °C	55 mA	350 mA	115 mA	375 mA
Up to 55 °C	50 mA	300 mA	100 mA	325 mA

Storage temperature –20 to 70 °C

Relative humidity 10% to 90% noncondensing

Maximum altitude 2000 m

Operating shock (PXI only) IEC 68-2-27; half-sine shock pulse, 30 g peak, 11 ms duration, 3 shocks per face

Operating random vibration (PXI only) 5 to 500 Hz, 2.5 Grms, 3 axes; IEC 68-2-64

Nonoperating random vibration (PXI only) 5 to 500 Hz, 2.5 Grms, 3 axes; IEC 68-2-64



Note The NI 6514/15 devices are intended for indoor use only.

Safety

The NI 6514/15 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 3111-1, UL 61010B-1
- CAN/CSA C22.2 No. 1010.1



Note For UL and other safety certifications, refer to the product label, or visit ni.com/hardref.nsf, 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
EMC/EMI	CE, C-Tick, and FCC Part 15 (Class A) Compliant



Note For EMC compliance, you *must* 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/hardref.nsf, search by model number or product line, and click the appropriate link in the Certification column.

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