Rack-Mount 1U 3.0 GHz Dual-Core PXI Express Controller

NI PXIe-8351

- Intel Pentium D processor 830 (3.0 GHz dual core)
- Up to 798 MB/s sustained throughput
- 512 MB dual-channel DDR2 RAM standard, 4 GB maximum
- Optional RAID-0 hard drive configurations for high-speed streaming to disk
- Complete x4 MXI-Express PXI Express remote control kit included
- High-performance server architecture
- Dual onboard Gigabit Ethernet
- Optimized for installation in 1U height in a 19 in. rack
- Universal AC power supply

Software

- OS and drivers already installed
- Hard drive-based recovery image

PXI Express System Configuration

- Complete PXI Express system configuration at **ni.com/pxiadvisor**

Overview

The National Instruments PXIe-8351 is a rack-mount 1U PXI Express controller comprised of a 19 in. rack-optimized, server-class, dual-core computer bundled with a complete x4 MXI-Express kit for remote control of a PXI Express system. The entire package provides integrated, ready-to-run server-class performance for PXI Express systems.

Features	NI PXIe-8351
Processor	Intel Pentium D processor 830 (3.0 GHz dual core)
Front-side bus	800 MHz
L2 cache	1 MB per core
Dual-channel DDR2 RAM, Standard Maximum	 512 MB 4 GB
Hard drive, minimum	160 GB SATA II, standard 2 x 160 GB SATA II RAID-0, optional 2 x 250 GB SATA II RAID-0, optional
Gigabit Ethernet ports	2
Hi-Speed USB ports	4
RS232 serial port	✓
Parallel port	✓
PS/2 ports	2
CD-ROM drive	24x
Video	VGA, ATI Radeon 7000, 16 MB
Expansion slot	x4 PCI Express (populated with PCI Express MXI-Express board)
Rack-mount rails	✓
Installed OS	Windows XP Professional[1]

[1]Contact National Instruments or visit **ni.com/pxiadvisor** for information on other available and supported operating systems.

Table 1. NI PXIe-8351 Features

NI PXIe-8351 Shipping Components

- NI PXIe-8351 controller
- All peripherals in Table 1 installed
- Complete NI PXIe-PCIe8371 x4 MXI-Express kit with 3 m copper cabling (PCI Express board installed)
- 19 in. rack-mount slide rails

RAID Configurations

The NI PXIe-8351 supports both RAID-0 (stripped) and RAID-1 (mirrored) configurations with two SATA II hard drives (RAID stands for redundant array of independent disks). A RAID-0 configuration increases the rate at which a computer can write data to and read data from disk by evenly distributing data among multiple hard drives. This is beneficial in applications that require high-speed streaming to disk. The NI PXIe-8351 is available with factory-configured RAID-0 configurations of 2 x 160 GB SATA II hard drives or 2 x 250 GB SATA II hard drives.

Applications and Acoustic Noise

The NI PXIe-8351 is designed to maximize performance in automated and manufacturing test applications. It is optimized purely for performance, and, like other server-class computers, uses high-speed cooling fans, which are relatively noisy.

Memory Options

The NI PXIe-8351 has four DIMM sockets (dual-channel) for high-bandwidth DDR2 SDRAM. The following memory options are available:

- 512 MB standard (2 x 256 MB DIMMs, 2 sockets empty)
- 2.5 GB upgrade (2 x 256 MB and 2 x 1 GB DIMMs)
- 4 GB upgrade (4 x 1 GB DIMMs)

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Ordering Information

Step 1. Select controller[1]

NI PXIe-8351 with Windows XP

- Standard 779715-01
- 2 x 160 GB RAID-0 779715-320
- 2 x 250 GB RAID-0 779715-500

Step 2. Select optional memory upgrades

- 2.5 GB RAM upgrade 779715-2048
- 4 GB RAM upgrade 779715-4096

Step 3. Select additional power cords[2]

- North American 240 VAC 763068-01
- Japanese 100 VAC 763634-01
- United Kingdom 240 VAC 763064-01
- Swiss 220 VAC 763065-01
- Australian 240 VAC 763066-01
- Universal Euro 240 VAC 763067-01

Step 4. Select additional accessories

- USB English Keyboard and Optical Mouse 779660-01
- Flat Panel Monitor with VGA Input 779559-01
- Flat Panel Touch Screen with VGA Input and USB 779560-01
- NI GPIB-USB-HS IEEE 488 Controller 778927-01

[1]For additional configuration options, including MXI-Express cable length and other available operating systems, contact National Instruments or visit **ni.com/pxiadvisor**.

[2]U.S. 120 VAC power cord included.

BUY NOW!

For complete product specifications, pricing, and accessory information, call (800) 813 3693 (U.S.) or go to **ni.com/pxi**.

Specifications

Electrical

AC Input

Input voltage range	100 to 240 VAC
Operating voltage range	90 to 264 VAC
Input frequency	50/60 Hz
Operating frequency range	47 to 63 Hz
Input current rating	6 to 3 A
Power disconnect	The AC power cable provides the main power disconnect. Depressing the front panel power switch enables or inhibits the internal power supply.

Mainboard

Chipset	Intel E7230 chipset
Memory slots	4 dual-channel DIMMs (184-pin), 2 per channel (ECC or non-ECC memory)
PCI Express slot	x4 PCI Express slot using riser card
SATA II ports	2, compliant with the Serial ATA 2.0 specification; maximum data rate of 300 MB/s
IDE	1 primary and 1 secondary IDE connector; ultra DMA 33/66/100 capability
Hi-Speed USB ports	4
Ethernet	2, 10/100/1000BaseTX, RJ45 connector
Keyboard	1, PS/2 port
Mouse	1, PS/2 port
Video	1, VGA, ATI Radeon 7000, 16 MB
RS232 serial port	1
Parallel port	1

CPU

CPU	Intel Pentium D processor 830 (dual core)
Clock speed	3.0 GHz
Front-side bus speed	800 MHz
L2 cache	1 MB per core

Hard Disk Drive

Capacity	160 GB or larger
Interface	SATA II

Memory

Standard memory	2 x 256 MB, DDR2 SDRAM, ECC, unbuffered, 184-pin DIMMs
2.5 GB memory upgrade	Standard memory plus 2 x 1 GB, DDR2 SDRAM, ECC, unbuffered, 184-pin DIMMs
4 GB memory upgrade	4 x 1 GB, DDR2 SDRAM, ECC, unbuffered, 184-pin DIMMs

Mechanical

Overall dimensions (standard chassis)	4.3 by 43.5 by 43.4 cm (1.7 by 17.1 by 17.1 in.)
Weight	8.6 kg (19.0 lb)

Environmental

Ambient temperature	
Operating	5 to 35 °C
Storage	-10 to 60 °C
Relative humidity	
Operating	10 to 90%, noncondensing
Storage	5 to 95%, noncondensing
Operating location	Indoor use
Installation category	II
Pollution degree	2

Safety and Compliance

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

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

- EN 61326 EMC requirements; Minimum Immunity
- EN 55011 Emissions; Group 1, Class A
- CE, C-Tick, ICES, and FCC Part 15 Emissions; Class A

Note: For EMC compliance, operate this device according to product documentation.

CE Compliance

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

- 73/23/EEC; Low-Voltage Directive (safety)
- 89/336/EEC; Electromagnetic Compatibility Directive (EMC)

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.

Waste Electrical and Electronic Equipment (WEEE)

EU Customers: At the end of their life cycle, all products must be sent to a WEEE recycling center. For more information about WEEE recycling centers and National Instruments WEEE initiatives, visit **ni.com/environment/weee.htm**.

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We also offer service programs that provide automatic upgrades to your application development environment and higher levels of technical support. Visit **ni.com/ssp**.

Hardware Services

NI Factory Installation Services

NI Factory Installation Services (FIS) is the fastest and easiest way to use your PXI or PXI/SCXI combination systems right out of the box. Trained NI technicians install the software and hardware and configure the system to your specifications. NI extends the standard warranty by one year on hardware components (controllers, chassis, modules) purchased with FIS. To use FIS, simply configure your system online with **ni.com/pxiadvisor**.

Calibration Services

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. We provide manual calibration procedures, services to recalibrate your products, and automated calibration software specifically designed for use by metrology laboratories. Visit **ni.com/calibration**.

Repair and Extended Warranty

NI provides complete repair services for our products. Express repair and advance replacement services are also available. We offer extended warranties to help you meet project life-cycle requirements. Visit **ni.com/services**.

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