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Find the *National Instruments PXI-8183* at our website: *Click HERE*

850 MHz Celeron Embedded Controllers for PXI

NI PXI-8183 *NEW!*

- 2-slot embedded controller
- Intel Celeron processor (850 MHz single core)
- 256 MB (1 x 256 MB DIMM) standard, 512 MB (1 x 512 MB DIMM) maximum
- Integrated hard drive
- 10/100BASE-TX Fast Ethernet
- 2 USB ports
- VGA video connector
- RS232 serial port
- IEEE 1284 ECP/EPP parallel port
- Internal PXI trigger bus routing
- Watchdog timer

Software

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

PXI System Configuration

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



Overview

The National Instruments PXI-8183 is a two-slot embedded controller for PXI and CompactPCI systems. This low-cost embedded controller features an 850 MHz Intel Celeron processor and offers an ideal platform for deploying PXI-based systems in high-volume applications. Combine a PXI-8183 with a PXI-compatible chassis, such as the NI PXI-1036AC/DC, to create a compact and portable PC-based platform for industrial control, data acquisition, and test and measurement applications.

CPU	850 MHz Intel Celeron
On-die cache	128 KB
RAM, standard	256 MB (1 x 256 MB)
RAM, maximum	512 MB (1 x 512 MB)
Hard drive, minimum	40 GB
Video port	VGA
10/100BASE-TX Fast Ethernet	✓[1]
Serial port (RS232)	✓[1]
Parallel port	✓
USB ports (v1.1)	2
Watchdog/trigger SMB	✓
PS/2 keyboard/mouse connector	✓
Installed OS	Windows XP Professional[2]

[1]Add gigabit Ethernet and GPIB to your PXI system with the NI PXI-8232 combination gigabit Ethernet and GPIB module. [2]Contact National Instruments or visit **ni.com/pxiadvisor** *for information on other available operating systems.*

Table 1. NI PXI-8183 Features

Hardware

With state-of-the-art packaging, the PXI-8183 integrates a Celeron processor and all standard and extended PC peripherals into a single unit. Because of this, all active slots in the PXI chassis remain available for measurement modules. This rugged one-piece controller design minimizes integration issues and eliminates the need for complex cabling to peripheral daughter boards. A block diagram of the PXI-8183 is shown in Figure 1.

Peripheral I/O

In addition to standard I/O such as 10/100BASE-TX Ethernet, keyboard, mouse, and video, the PXI-8183 includes extended I/O for easy connectivity to instruments or other peripherals. Use the two USB ports for connection to a CD drive for easy software installation, or other standard PC peripherals such as USB speakers, printers, or memory sticks. Add the NI GPIB-USB-HS GPIB controller to your system for connectivity to various GPIB-based instruments. Use the onboard IEEE 1284 ECP/EPP parallel port to connect to a wide variety of devices, such as tape backup drives, printers, and scanners. Additionally, the RS232 port is available for connecting to serial devices.

Memory

The PXI-8183 has a single socket for SDRAM. It comes standard with 256 MB of SDRAM and is upgradable to 512 MB SDRAM.

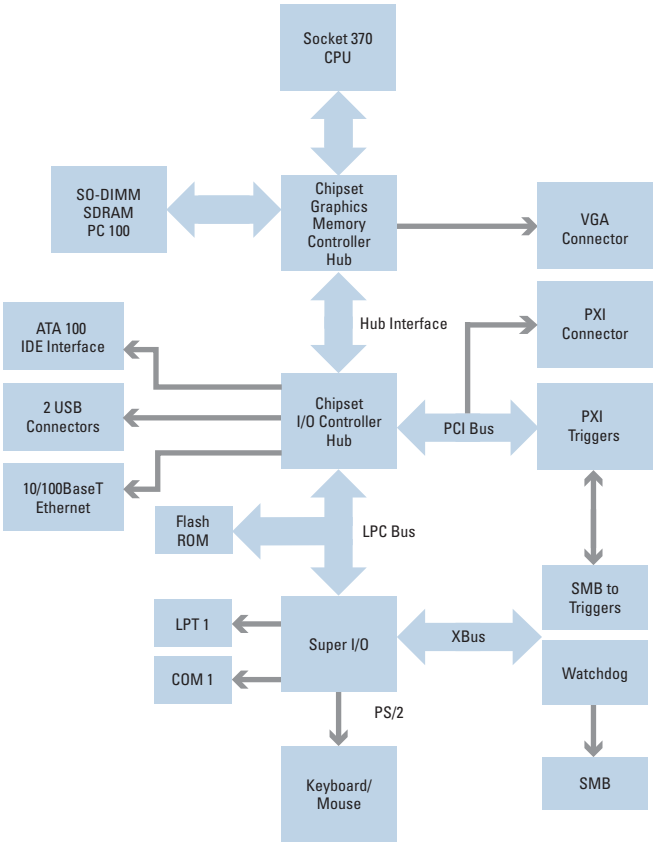
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Software

The PXI-8183 comes with the following minimum set of software already installed:

- Microsoft Windows XP Professional OS
  (contact National Instruments or visit **ni.com/pxiadvisor** for localized versions of Windows XP and for other available operating systems)
- Hard-drive-based recovery image
- NI-VISA and NI-488.2 drivers
- Drivers for all built-in I/O ports (Table 1)

With NI Factory Installation Services (FIS) added to a PXI system order, your embedded controller is shipped already configured with all software and drivers applicable for your system. For example, assume you order a PXI system that includes NI LabVIEW and NI TestStand software, as well as data acquisition modules, a digitizer, an arbitrary waveform generator, and a digital multimeter (DMM). With FIS, NI not only assembles and tests your system but also fully configures the embedded controller with the appropriate NI-DAQmx, NI-SCOPE, NI-FGEN, and NI-DMM drivers, as well as LabVIEW and NI TestStand. Additionally, your embedded controller is configured with a customized hard-drive-based recovery image, so you can restore your controller to the as-shipped configuration at any time. This combination of software configuration and recovery tools provides both a productive and reliable development experience with your PXI system out of the box. To configure a complete PXI system with FIS, contact National Instruments or visit **ni.com/pxiadvisor**.



Additional Peripheral I/O

National Instruments offers numerous plug-in modules to add more peripheral I/O to your PXI system. With the wide variety of peripheral I/O modules available, you can choose modules that add communication with serial, IEEE 1394, and SCSI. You also can obtain modules for controlling other PXI or VXI/VME systems. Visit **ni.com/pxiadvisor** to configure a system with additional peripheral I/O modules.

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Ordering Information

For online configuration of a complete PXI system, including Factory Installation Services, visit **ni.com/pxiadvisor**.

Step 1. Controller Model – select one of the following.

NI PXI-8183 .....780343-xx

Step 2. Replace "xx" to select installed OS.

01.....Windows XP Professional (English)

00.....Localized Windows XP or Other OS[1]

[1]Contact National Instruments or visit **ni.com/pxiadvisor** *for the latest operating systems.*

Step 3. Memory upgrades – select the amount of upgrade memory.

Standard:

256 MB (1 x 256 MB DIMM)

Recommended upgraded memory configurations:

512 MB (1 x 512 MB DIMM must be purchased)

512 MB SDRAM 778469-512

Step 4. Accessories[2]

40 GB (or greater) 2.5 in PATA blank hard drive spare/replacement 779175-01

NI PXI-8232 GPIB/gigabit Ethernet interface module, NI-488.2 for Windows XP/2000 778658-01

GPIB-USB-HS, NI-488.2 for Windows Vista/XP/2000 778927-01

USB-to-dual-PS/2 keyboard/mouse adapter cable 778713-02

External USB CD-ROM/DVD-ROM drive 778492-01

External USB floppy drive.....778492-02

USB English keyboard and optical mouse 779660-01

Parallel port adapter cable (6 in.).....777169-01

NI MKD-1117 (rack-mount 1U LCD monitor, keyboard, mouse drawer).....779872-01

NI FPM-1017 (17 in. flat panel monitor) 779559-01

NI FPT-1015 (flat panel touch screen with VGA interface and USB).....779560-01

[2]For additional peripheral I/O modules, including serial, IEEE 1394, and SCSI, visit **ni.com/pxiadvisor**.

BUY NOW!

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

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Specifications

Specifications subject to change without notice.

Features

Processor	850 MHz Intel Celeron
System memory (RAM)	256 MB, 7.5 ns SDRAM (Standard) 512 MB, 7.5 ns SDRAM (Maximum)
Ethernet	10/100BASE-TX, RJ45 connector
Hard drive	40 GB minimum, internal 2.5 in., 9.5 mm Fast Ultra ATA100 Interface
Video	SuperVGA, 11 MB DRAM, maximum (Dynamic Video Memory Technology. Handles resolutions of 1280 by 1024 at 24-bit color and 1600 by 1200 at 256 colors.)
Serial	1 (RS232)
Parallel	IEEE 1284, Type C Connector
USB	2 x USB 1.1

Power Requirements

	Current	
Voltage	**Typical**	**Maximum**
+3.3 V	3.0 A	4.0 A
+5 V	4.5 A	6.0 A
+12 V	0.01 A	0.04 A
-12 V	0.0 A	0.0 A

Physical

Board dimensions	2-wide 3U PXI Express module
Slot requirements	1 system slot plus 1 controller expansion slot (to the left of the system slot)
Compatibility	Fully compatible with PXI specification
Weight	0.82 kg (1.8 lb) typical

Operating Environment

Ambient temperature range	5 to 50 °C[1,2,3] in an NI PXI-1042 chassis (tested in accordance with IEC-60068-2-1 and IEC-60068-2-2)
Relative humidity range	10 to 90%, noncondensing (tested in accordance with IEC-60068-2-56)

*[1]For chassis not available in the online catalog at **ni.com**, contact National Instruments for supported operating temperatures.*

[2]5 to 50 °C for NI PXI-1036 revisions D and later and NI PXI-1036AC/DC revision C or later.

[3]5 to 40 °C for NI PXI-1036 revisions B, C, and later and NI PXI-1036AC/DC revision B.

Storage Environment

Ambient temperature range	-40 to 65 °C (tested in accordance with IEC-60068-2-1 and IEC-60068-2-2)
Relative humidity range	5 to 95% noncondensing (tested in accordance with IEC-60068-2-56)

Shock and Vibration

Operating shock	30 g peak, half-sine, 11 ms pulse (tested in accordance with IEC-60068-2-27; test profile developed in accordance with MIL-PRF-28800F)
Random vibration	
Operating	5 to 500 Hz, 0.3 g_{rms} (with solid-state hard drive)
Nonoperating	5 to 500 Hz, 2.4 g_{rms} (tested in accordance with IEC-60068-2-64; nonoperating test profile exceeds the requirements of MIL-PRF-28800F, Class 3)

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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, CSA 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:

- 2006/95/EC; Low-Voltage Directive (safety)
- 2004/108/EC; 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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NI training is the fastest, most certain route to productivity with our products. NI training can shorten your learning curve, save development time, and reduce maintenance costs over the application life cycle. We schedule instructor-led courses in cities worldwide, or we can hold a course at your facility. We also offer a professional certification program that identifies individuals who have high levels of skill and knowledge on using NI products. Visit **ni.com/training**.

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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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