

# PXI

## Aeroflex 3000/3000B/3001B

PXI Chassis and System Controller

**AEROFLEX**  
A passion for performance.



8-Slot PXI Chassis with/without integrated touch panel display and system controller

### PXI Chassis Features

- Compact 8-slot PXI Chassis compliant with PXI Specification Rev. 2.2
- One system controller slot and seven PXI/CompactPCI peripheral slots
- 0°C to 55°C extended operating temperature range
- 41.6 dBA silent operation
- Intelligent chassis management
- Automatic fan speed control
- Round-the-clock chassis status monitoring
- Remote chassis management including on/off control
- 5.9 kg lightweight aluminium-metal construction
- 8.4" built-in LCD with touch panel function
- 350 W industrial-grade AC power supply
- Power, temperature and fan status indication

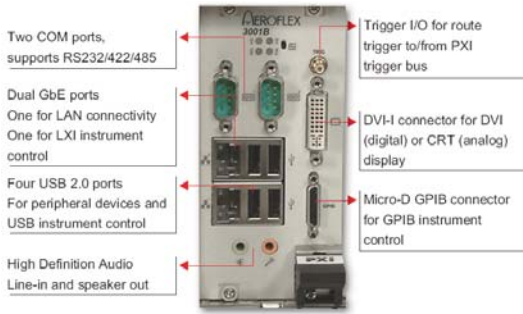
### System Controller Features

- PXI 2.2, compliant
- Intel® Pentium® M 760 2.0 GHz processor
- On board 1.5 GB 400/533 MHz DDR2 memory
- Integrated 80 GB SATA HDD
- CompactFlash® socket for HDD replacement
- Integrated I/O :-
  - Dual Gigabit Ethernet ports
  - Four USB 2.0 Ports
  - Built in GPIB (IEEE488) controller
  - Two RS-232/422/485 ports
  - DVI-I video connector
  - High definition audio I/O
  - Trigger I/O for advanced PXI trigger function
- Programmable watchdog time
- Windows XP™ pre-installed

## Introduction

The Aeroflex 3000 Series PXI Chassis is equipped with advanced features and functionality compliant with PXI and CompactPCI specifications. The chassis offers one system slot and seven peripheral slots. This portable and lightweight chassis boasts a wide operating temperature range, low operating noise, and a robust design.

Aeroflex 3001B is the state-of-the-art 3U PXI System Controller. It is designed to meet the highest performance requirements for embedded computing. The 3001B System Controller complies with PXI specifications Rev. 2.2 and features a 2.0 GHz Pentium M CPU, hot swappable CompactFlash card, USB 2.0 ports, and gigabit Ethernet. The 3001B is supplied with Window XP™, National Instruments VISA™ and Aeroflex PXI3000 Series software pre-installed. In addition to its rugged industrial package, the 3001B's extraordinary reliability, high computing performance, and low power consumption make it ideal for test and measurement applications and harsh environments.



The 3000 Chassis populated with Aeroflex 3000 Series instruments, 3001B System Controller and Aeroflex application software together form a complete and formidable RF test system for research and development or manufacturing. This open architecture platform is scalable and re-configurable by module exchange.

The 3000 is equipped with an intelligent control board that dynamically monitors and manages the chassis status including the fan speed, system voltages, and internal temperature. A standard RS-232 monitoring port makes remote management possible as chassis status are exported to and viewed from a remote computer using serial communications.

The 3000B variant of the 3000 includes an integrated 8.4" LCD that supports 800 x 600 resolution and touch panel control.



The 3000 and 3000B are equipped with an industrial grade 350 W AC power supply. Front panel LEDs provide continual status indication of cooling, power and temperature.

## HIGHLIGHTS

### Integrated 8.4" LCD with Touch Panel (3000B only)

The 3000B has a built-in 8.4" LCD display with touch panel functionality with a resolution of 800x600. The integrated display transforms the chassis into a stand-alone instrument, suitable for bench-top and portable applications.



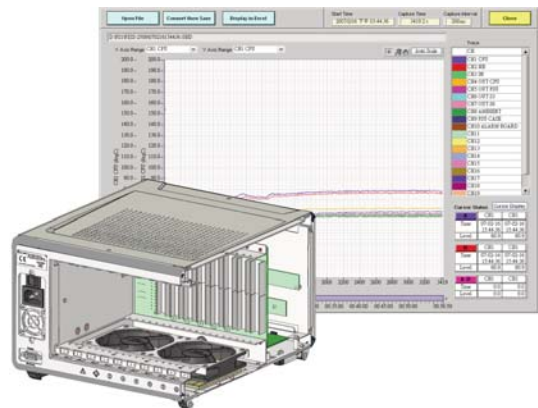
### Intelligent Chassis Management

The 3000 and 3000B have a built-in control board that monitors and manages the chassis internal temperature, fan speed, and DC voltages. The control board outputs status information to an RS-232 port. A software utility then allows remote monitoring and control including power on/off function.



### Extended Operating Temperature Range

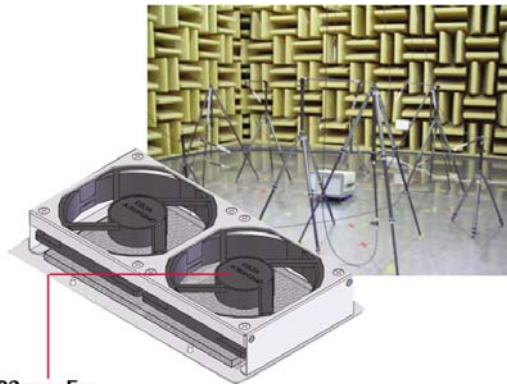
With two 60 CFM fans and efficient direct convection design, the 3000 and 3000B can effectively operate over an extended temperature range of 0°C to 55°C. Test chamber measurements demonstrate that the chassis maintains thermal stability even when subjected to an extremely heavy load and installed at high ambient temperature.



The 3000 and 3000B are equipped with an industrial grade 350 W AC power supply. Front panel LEDs provide continual status indication of cooling, power and temperature.

## Silent Operation

Because chassis fans are major sources of operating noise, the 3000 and 3000B fan speed is automatically controlled according to the current internal temperature. This enables the chassis to operate at an ultra-silent 41.6 dBA at room temperature

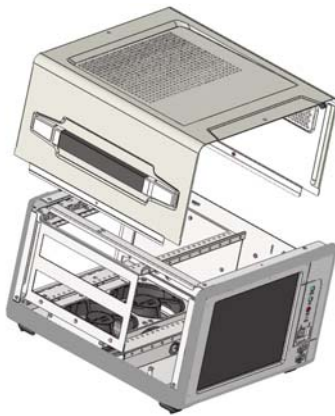


92 mm Fan  
3000 RPM, 60 CFM, 38 dBA

## Lightweight Construction

Weight limits portability. That is why the 3000 and 3000B combine lightweight aluminium internal structure with a robust metal shell to provide an easy-to-carry yet rugged PXI system.

The 3000 and 3000B are supplied separately or can be purchased together with a 3001B System Controller.



### Notice

The 3001B PXI™ controller implements rear I/O. PXI™ controllers with rear I/O are designed to operate with a matching rear transition module which provides internal or external chassis I/O.

### Warning

If the 3001B PXI™ controller is used with a chassis that contains a rear transition module that does not match the controller, the rear I/O functionality may not operate and may cause damage to the PXI™ controller or the rear transition module.

## SPECIFICATIONS 3000/3000A

### PXI CHASSIS

#### POWER SUPPLY

##### AC INPUT

###### Input voltage range

100 to 240 VAC

###### Input voltage frequency

50 to 60 Hz

###### Input current rating

8 A/115 VAC or 4 A/230 VA

##### DC OUTPUT

Total DC power output: 350 W

VDC	Minimum	Maximum	Load Maximum	
			Regulation	Ripple & Noise
+5 V	3.0 A	35.0 A	±5%	50 mA
+12 V	2.0 A	18.0 A	±5%	120 mA
+3.3 V	1.0 A	20.0 A	±5%	50 mA
-12 V	0.1 A	2.0 A	±10%	150 mA

The combined output power of +5 V and +3.3 V shall not exceed 35 A.

#### INTEGRATED DEVICES (3000A ONLY)

##### Display

8.4" TFT LCD, 800x600 resolution

##### Input device

Built-in touch panel

#### COOLING

##### Fans

2 x 60 CFM fans with filters

##### Per-slot cooling capacity

25 W (verified by 55°C chamber test)

#### ACOUSTIC EMISSIONS

##### SOUND PRESSURE LEVEL (dBA)

[measured at operator position, tested in accordance with ISO 7779:1999/Amd.1:2003(E)]

###### Minimum fan speed

41.6 dB

###### Maximum fan speed

47.3 dB

##### SOUND POWER (dBA)

[tested in accordance with ISO 7779:1999/Amd.1:2003(E)]

###### Minimum fan speed

51.9 dB

###### Maximum fan speed

55.5 dB

## **PHYSICAL**

---

**Number of PXI slots: 8 (1 system slot, 7 peripheral slots)**

### **DIMENSIONS**

280 mm x 177 mm x 303 mm (W x H x D)

11" x 4.6" x 11.9" (W x H x D)

### **WEIGHT**

#### **3000**

5.9 kg (13 lbs.)

#### **3000B**

6.4 kg (14 lbs.)

## **OPERATING ENVIRONMENT**

---

### **Ambient temperature**

0°C to 55°C

### **Relative humidity**

10% to 90%, non-condensing

## **STORAGE ENVIRONMENT**

---

### **AMBIENT TEMPERATURE**

#### **3000**

-20°C to 70°C

#### **3000B**

0°C to 70°C

### **RELATIVE HUMIDITY**

10% to 90%, non-condensing

## **SHOCK AND VIBRATION**

---

### **FUNCTIONAL SHOCK**

30 G, half-sine, 11 ms pulse duration

### **RANDOM VIBRATION**

#### **Operating**

5 to 500 Hz, 0.5 GRMS, 3 axes

#### **Non-operating**

5 to 500 Hz, 2.46 GRMS, 3 axes

## **GENERAL**

---

### **STANDARD WARRANTY**

24 Months

### **SAFETY**

IEC 61010-1/EN 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements

### **ELECTROMAGNETIC COMPATIBILITY**

#### **Emissions**

EN 55011 Class A

#### **Immunity**

EN 61326-1

## **CE COMPLIANCE**

---

The 3000 and 3000B meet the essential requirements of applicable European Directives.

## **RECOMMENDED PXI SYSTEM CONTROLLER**

---

The Aeroflex 3000 PXI Chassis Controller slot can be used with any 3rd party external or embedded 3U cPCI or PXI compliant System Controller occupying up to a maximum width of 3 slots.

The Aeroflex 3000B should only be used with Aeroflex 3001B system controller.

---

## **SPECIFICATION 3001B**

---

### **SYSTEM CONTROLLER**

---

#### **CORE FEATURES**

---

##### **Processor**

Intel® Pentium® M 760 2.0 GHz processor  
Supports 400/533 MHz front side bus (FSB)

##### **Chipset**

Intel® 915 GM Graphic Memory Control HUB  
Intel® I/O Controller Hub 6 Mobile (ICH6-M)

##### **Video**

Intel® GMA 900 graphic media accelerator

##### **DVI**

Single channel TMDS via SDVO to DVI controller  
Supports up to 1600 x 1200 resolution

##### **CRT**

Analog CRT route to DVI-I connector on the faceplate  
Supports up to 2048 x 1536 resolution

##### **LVDS (for rear I/O only)**

Single 18-bit LVDS channel route to rear transition module  
Supports LCD backlight control  
DVI-I connector for both digital and analog video signal outputs

##### **Memory**

Supports dual-channel DDR2 SDRAM, 400/533 MHz  
512 MB on-board soldered memory  
One DDR2 SO-DIMM socket fitted with 1 GB memory extension

#### **SHOCK AND VIBRATION**

---

##### **Functional shock**

30 G, half-sine, 11 ms pulse duration

##### **Random vibration**

Operating: 5 to 500 Hz, 0.5 G<sub>RMS</sub>, 3 axes  
Non-operating: 5 to 500 Hz, 2.46 G<sub>RMS</sub>, 3 axes

#### **CERTIFICATE**

---

EMC/EMI: CE, FCC Class A

#### **PHYSICAL**

---

##### **Dimension**

3-slot 3U PXI™ module

##### **Slot requirements**

1 system slot and 2 controller expansion slots

##### **Weight**

0.9 kg

#### **ENVIRONMENT**

---

##### **Operating temperature**

0 to 55°C

##### **Storage temperature**

-20 to 80°C

##### **Relative humidity**

5 to 95%, non-condensing

#### **I/O CONNECTIVITY**

---

##### **Hard Drive**

80 GB SATA hard drive, 5400 RPM

##### **Ethernet**

Dual Gigabit Ethernet controllers  
Two RJ-45 connectors with speed/link/active LED on the faceplate

##### **USB**

Four USB 2.0 ports on the faceplate

##### **GPIB**

On-board IEEE488 GPIB controller  
Micro-D 25-pin connector on the faceplate (GPIB cable not included)

##### **Serial Port**

Two 16C550 UART compatible COM ports on the faceplate  
Supports RS-232, RS-422 and RS-485, configurable by jumper setting

##### **Audio**

Supports high definition audio input/output  
Two audio jacks on the faceplate for line-in and speaker-out

##### **Trigger I/O**

SMB connector on the faceplate to route an external trigger signal to/from PXI™  
trigger bus

##### **CompactFlash® socket**

Type II CF Socket, supporting PIO and DMA modes

#### **GENERAL**

---

##### **STANDARD WARRANTY**

24 Months

## ***VERSIONS, OPTIONS AND ACCESSORIES***

---

*When ordering please quote the full ordering number information.*

### **Ordering**

#### **Numbers**

#### **Versions**

3000

8 Slot PXI Chassis with 350 W power supply

Supplied with:

EMC blanking panels

2 x spare dust filters

CDROM

3000B

8 Slot PXI Chassis with 8.4" touch panel display and 3001A PXI system controller

Supplied with:

EMC blanking panels

Stylus (for LCD)

2 x spare dust filters

CDROM

3001B

3U PXI™ Pentium® M 760 2.0 GHz system controller with DVI-I/GbE/GPIB and Windows XP™

Supplied with:

Recovery CD ROM

#### **Accessories**

Cable Accessory

ACL-IEEE488-MD1

Connectors: Micro-D 25 pins to IEEE488 24 pins

Length: 1 M

23448-906

GPIB Cable adapter 1M

For the very latest specifications visit [www.aeroflex.com](http://www.aeroflex.com)

**CHINA Beijing**

Tel: [+86] (10) 6539 1166  
Fax: [+86] (10) 6539 1778

**CHINA Shanghai**

Tel: [+86] (21) 5109 5128  
Fax: [+86] (21) 5150 6112

**FINLAND**

Tel: [+358] (9) 2709 5541  
Fax: [+358] (9) 804 2441

**FRANCE**

Tel: [+33] 1 60 79 96 00  
Fax: [+33] 1 60 77 69 22

**GERMANY**

Tel: [+49] 8131 2926-0  
Fax: [+49] 8131 2926-130

**HONG KONG**

Tel: [+852] 2832 7988  
Fax: [+852] 2834 5364

**INDIA**

Tel: [+91] (0) 80 4115 4501  
Fax: [+91] (0) 80 4115 4502

**JAPAN**

Tel: [+81] 3 3500 5591  
Fax: [+81] 3 3500 5592

**KOREA**

Tel: [+82] (2) 3424 2719  
Fax: [+82] (2) 3424 8620

**SCANDINAVIA**

Tel: [+45] 9614 0045  
Fax: [+45] 9614 0047

**SPAIN**

Tel: [+34] (91) 640 11 34  
Fax: [+34] (91) 640 06 40

**UK Cambridge**

Tel: [+44] (0) 1763 262277  
Fax: [+44] (0) 1763 285353

**UK Stevenage**

Tel: [+44] (0) 1438 742200  
Fax: [+44] (0) 1438 727601  
Freephone: 0800 282388

**USA**

Tel: [+1] (316) 522 4981  
Fax: [+1] (316) 522 1360  
Toll Free: 800 835 2352

As we are always seeking to improve our products, the information in this document gives only a general indication of the product capacity, performance and suitability, none of which shall form part of any contract. We reserve the right to make design changes without notice. All trademarks are acknowledged. Parent company Aeroflex, Inc. ©Aeroflex 2009.

[www.aeroflex.com](http://www.aeroflex.com)  
[info-test@aeroflex.com](mailto:info-test@aeroflex.com)



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.