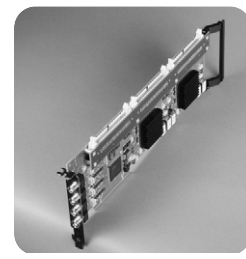
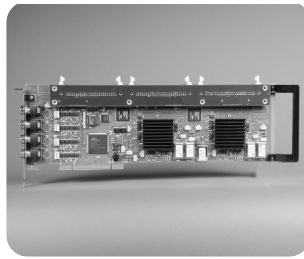
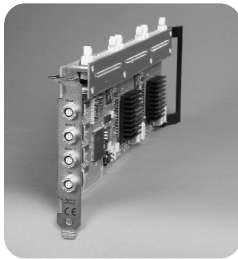


# Agilent N1231A PCI Axis Laser Board

## Data Sheet



The Agilent N1231A PCI Three-Axis Laser Board is a register based PCI bus board that implements three axes of laser measurement for position monitoring and closed-loop servo control. The hardware outputs, optimized for connection to a DeltaTau PMAC servo control system, provide parallel digital position data at rates up to 4MHz. The same position data along with velocity data is available over the PCI bus at rates up to 100kHz (3 axes of position and velocity) or 200kHz (position or velocity only).

### Features and Benefits

- **Three axes of laser measurement on one board**
- **20 MHz hardware update rate**
- **Adjustable hardware output rate (4 MHz max)**
- **Simple programming API (Windows NT4/2000/XP)**
- **Software sample rates up to 200kHz (3 axes of data)**
- **Measurement resolution**
  - \* **0.6 nm ( $\lambda/1024$ ) using Linear or Single Beam interferometers**
  - \* **0.3 nm ( $\lambda/2048$ ) using Plane Mirror type interferometers**
  - \* **0.15 nm ( $\lambda/4096$ ) using High Resolution interferometers**
- **Power Requirements (typical)**
  - \* **+5 Vdc +0.25V / -0.125 V at approximately 2.8 Amps**
  - \* **+12 Vdc +/-0.5V at approximately 50 milliamps**
  - \* **-12 Vdc +/-0.5V at approximately 50 milliamps**
- **PCI Compliant**
- **Bus Interface: 33 MHz @ 3.3 or 5 Volt signal levels**
- **Data Transfers: 16 or 32 bit transfers**
- **IRQ: can generate IRQ on error conditions**
- **Board Size: 98 x 312 mm**



**By internet, phone, or fax, get assistance with  
all your test & measurement needs**

**Online assistance:**  
**[www.agilent.com/find/assist](http://www.agilent.com/find/assist)**

**Phone or Fax**

**United States:**  
(tel) 800 452 4844

**Canada:**  
(tel) 877 894 4414  
(fax) 905 282 6495

**China:**  
(tel) 800 810 0189  
(fax) 800 820 2816

**Europe:**  
(tel) (31 20) 547 2323  
(fax) (31 20) 547 2390

**Japan:**  
(tel) (81) 426 56 7832  
(fax) (81) 426 56 7840

**Korea:**  
(tel) (82 2) 2004 5004  
(fax) (82 2) 2004 5115

**Latin America:**  
(tel) (305) 269 7500  
(fax) (305) 269 7599

**Taiwan:**  
(tel) 0800 047 866  
(fax) 0800 286 331

**Other Asia Pacific Countries:**  
(tel) (65) 6375 8100  
(fax) (65) 6836 0252  
Email: [tm\\_asia@agilent.com](mailto:tm_asia@agilent.com)



**Agilent Email Updates**

**[www.agilent.com/find/emailupdates](http://www.agilent.com/find/emailupdates)**  
Get the latest information on the products and  
applications you select.

Product specifications and descriptions in this  
document subject to change without notice.

Copyright © 2003 Agilent Technologies  
Printed in USA *February 2003*



**Agilent Technologies**