



# ADSL PCI-NIC

## High-Performance PCI Network Interface Card

*The ADSL PCI-NIC comes with easy-to-load installation software that allows for seamless integration with PC hardware for troublefree upgrades.*



### THE LOW-COST, HIGH-PERFORMANCE PCI SOLUTION FOR PERSONAL COMPUTER AND MODEM OEMs

The Analog Devices ADSL PCI-NIC is a low-cost, high-performance network interface card enabling high-speed data communications in personal computers. It offers personal computer and modem manufacturers an enhanced communications solution using existing telecommunications networks.

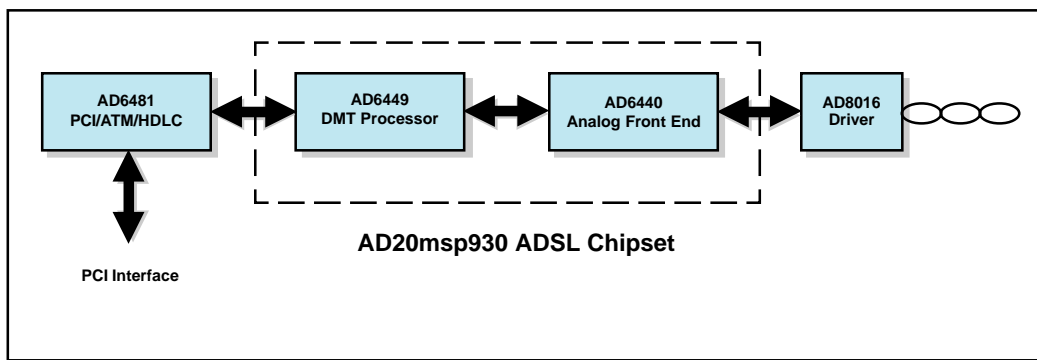
The standards-compliant Analog Devices ADSL PCI-NIC provides industry-leading interoperability with DSL access networks worldwide. It operates in both Full-rate and Lite ADSL modes.

The solution combines Analog Devices industry-leading analog and mixed-signal integrated circuits with an Asynchronous Transfer Mode (ATM) Segmentation and Reassembly (SAR) controller to offer unparalleled data transfer rates for PCI interfaced hardware. The solution is Voice over DSL capable using off-the-shelf third-party software.

### FEATURES

- Compact internal PCI-NIC, PCB size < 3 x 4 inches
- Power Requirements: 550 mA @ 5 V, 55 mA @ +12 V
- 32-bit, 33MHz PCI 2.1 system bus interface with PCI bus master for low latency burst mode promotes efficient host data transfer
- Major components: Analog Devices AD20msp930 chipset comprised of AD6449 and AD6440, AD8016 Line Driver, AD8022 Receiver and AD6481 ATM SAR/PCI controller
- Compliant to ITU, DSL Forum, ATM Forum, IETF and PC2000 specifications
- ADSL-compliant with ANSI T1.413 Issue 2, ITU G.992.1 (G.dmt) including Annex B (ADSL over ISDN) and G.992.2 (G.Lite) with fast retrain in G.Lite mode, and ETSI TR328 standards
- Protocol support for RFC 1577 (now part of RFC 2225 Classic IP over ATM), RFC 2364 (PPP over ATM), RFC 2225/2684 (IP over ATM: Bridged Ethernet/Routed IP), RFC 1662 (PPP over HDLC) and native mode ATM
- Supplied device drivers support the world's most popular operating systems including MS-DOS® and Microsoft Windows® 9x, NT, and 2000
- Operating temperature 0°C – 70°C





**PCI Network Interface Card (NIC) Functional Block Diagram**

### SOFTWARE SPECIFICATIONS

The supplied device drivers and software are compatible with MS-DOS®, Microsoft Windows® 9x, NT, and 2000. A simple graphical user interface allows for easy setup, driver installation and configuration. An application program is included for diagnostics and performance monitoring. Feature enhancements are accomplished by simple firmware upgrades. The software supports 32 active virtual connections. Additionally, the software supports the following protocols: RFC 1577 (now part of RFC 2225 Classic IP over ATM), RFC 2364 (PPP over ATM), RFC 2225/2684 (IP over ATM: Bridged Ethernet/Routed IP), RFC 1662(PPP over HDLC) and native mode ATM. The device driver is NDIS 4.0- and NDIS 5.0-compliant.

### STANDARDS COMPLIANCE

The hardware and software complies with a variety of standards and specifications including those from ITU, ANSI, ETSI, DSL Forum, ATM Forum, IETF, and PC2000. The ADSL physical layer is compliant with ANSI T1.413 Issue 2, ITU G.992.1 (G.dmt) including Annex B (ADSL over ISDN), and G.992.2 (G.Lite) with fast retrain in G.Lite mode, and ETSI TR328 standards. ATM AAL0/5 hardware and software complies with ATM Forum UNI 3.1, ITU-T I.356, I.362 and I.363; ATM signaling is compliant with ITU-T Q.2931 and Q.2971, and OAM traffic handling adheres to ITU-T I.311, I.371, and I.610 standards. The HDLC engine complies with ISO/IEC 3390 and ITU-T Q.921 and Q.922 standards. The PCI controller complies with PCI specifications 2.1.

### NEW PRODUCT R&D

Analog Devices is constantly working to develop new products that meet the changing needs of the telecommunications infrastructure. Research and development have enabled this product to address the need for compact, lower power consumption for subscriber equipment, ATM handshaking with backbone switches and routers, and nonstandard DMT-based symmetric DSL up to 1.544 Mbps.

### REFERENCE DESIGNS AND TECHNICAL SUPPORT

Analog Devices—the company with a legacy in high-performance DSP, analog, and mixed-signal processing—has the design expertise and in-house manufacturing processes to give your next-generation ADSL product the support and technical backing it deserves. We provide a full range of support for modem manufacturers, including a fully functional reference design complete with PC board layout, schematics, and off-the-shelf component lists. Documentation includes detailed data sheets and application notes. Online applications assistance is available over the phone. Product demonstrations can be arranged at your facility or at one of ADI's many sales offices. Analog Devices is a semiconductor supplier with a consistent record of dependable, on-time delivery. We maintain full control over the manufacturing process from raw wafer to finished product and we have ample capacity for high-volume production.

### Reference Design Package:

- ADI ADSL PCI modem evaluation board
- Schematics
- Board layout
- Bill of Materials
- Documentation
- Software
  - Install program
  - Configuration, GUI, and diagnosis tools
  - NDIS5 device driver (object and/or source code)
  - Firmware for AD20msp930 ADSL chipset
- Full support for hardware and software during development phase

### FIRST TO MARKET

While other vendors scramble to develop standards-compliant ADSL solutions, Analog Devices has everything you need now, off the shelf. From full-featured DSP to analog and software. We meet the needs of today's broadband wired and wireless markets with leadership in analog, digital, mixed-signal processing, RF signal processing, data conversion, interfacing, and total system design. So if time to market is important to you, it's time to connect with Analog Devices.



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