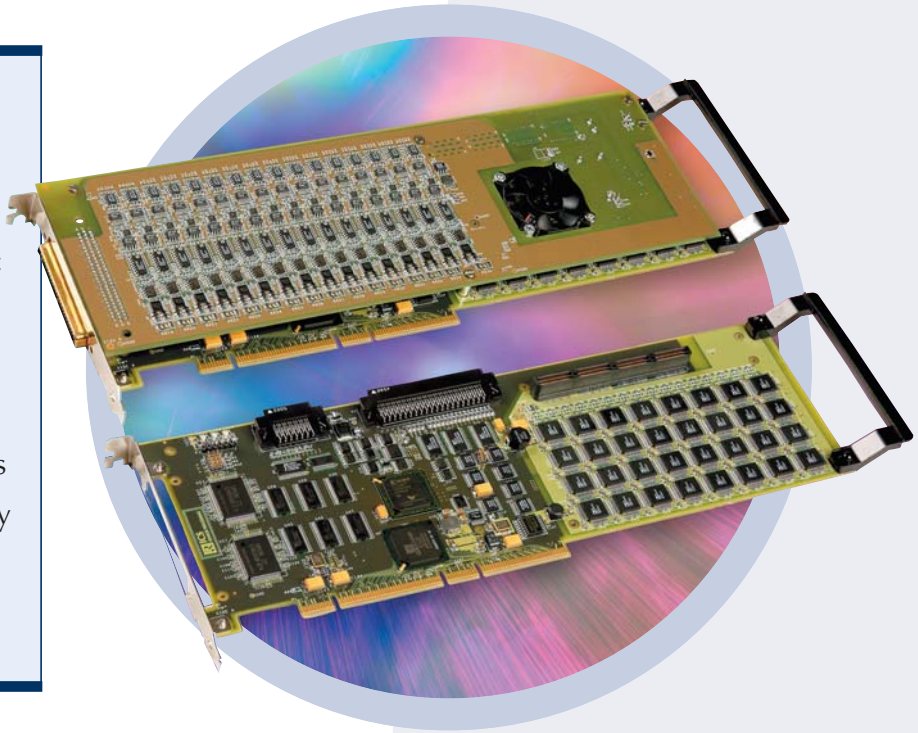
ICS-645D

High-speed 32-channel PCI ADC board with signal conditioning

- 32 ADC channels (Analog Devices AD9260): 16 bits @ 5 MSample/sec
- Signal band width ≤ 1.25 MHz
- 64-bit 66 MHz PCI interface (PCI 2.2 compliant), 400 MBytes/sec FPDP II interface
- Differential inputs with onboard signal conditioning
- Simultaneous sampling across all channels, even in multi-card systems
- Up to 16 MBytes of onboard memory
- Windows, Linux device drivers
- Extensive application and technical support available



ICS SENSOR PROCESSING

Continuing the evolution of the ICS-645 high-speed acoustic product line, the new ICS-645D brings a comprehensive suite of data acquisition capabilities to industrial PC systems. Combining high-speed oversampled ADCs (AD9260) with onboard gain and filtering, as well as high-speed data routes (PCI 64/66 or FPDP II) back to the host system, the board has been optimized to provide maximum functionality in a single full length PCI card.

A development of the ICS-645C, the ICS-645D not only bundles ADC, gain, and anti-alias filtering resources in one PCI card, but also eliminates the need for auxiliary clock sources by including a programmable clock source onboard.

The primary concern in a high channel count, high-speed ADC card is the problem of moving the data back to the host processor or recorder. The ICS-645D provides the user with two high bandwidth data paths for communication with host systems. The PCI 2.2 interface provides data rates in excess of 400 MBytes/sec (sustained aggregate rate), while the FPDP II port provides a dedicated connection to collect data from multiple cards, eliminating operating system concerns such as interrupt latencies. The ICS-645D provides up to 16 MBytes of onboard storage, allowing it to tolerate unpredictable interrupt latencies encountered in non real-time operating systems.

FEATURES

General

- Full length (long) PCI form factor
- Linux and Windows software drivers available
- 32 differential input channels, simultaneously sampled by oversampled ADCs

Onboard resources

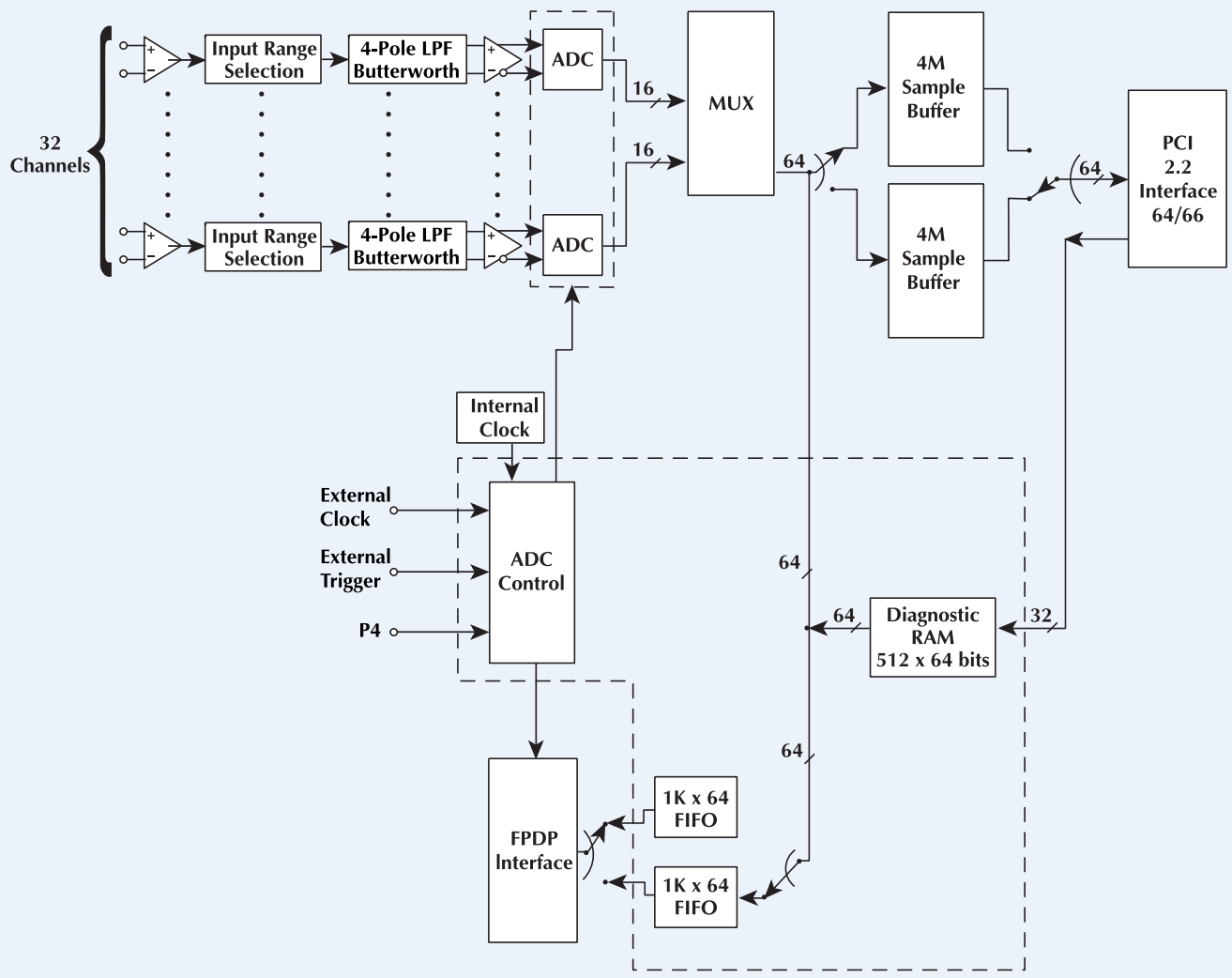
- Four input voltage ranges supported: 10Vp-p, 1Vp-p, 0.1Vp-p, 0.01Vp-p
- 4 MBytes (16 MBytes optional) synchronous SRAM memories

I/O specifications

- PCI 2.2 64-bit, 66 MHz PCI bus interface
- FPDP II interface

Environmental

- Approximately 490 LFM (forced air) cooling required
- -0 to +50 degrees Celsius operating temperature
- Storage temperature -40 to +85 degrees Celsius
- 95% non-condensing humidity



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