Industry Pack Modules
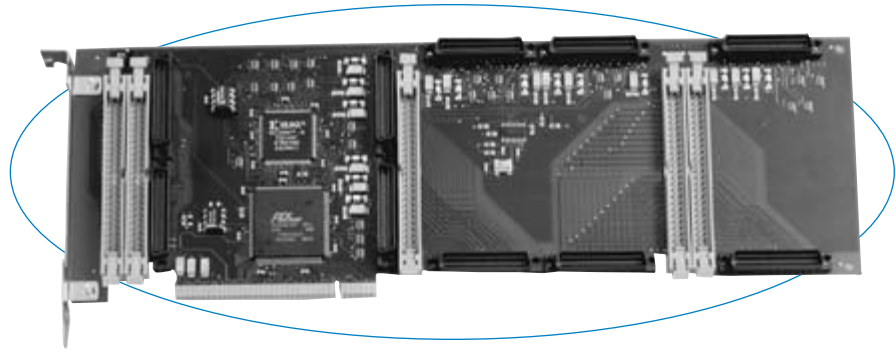
Acromag®
THE LEADER IN INDUSTRIAL I/O

APC8620
PCI Bus
IP Carrier Card

This board interfaces industry-standard Industrial I/O Pack (IP) modules to a PCI bus on a PC-based computer system.

Five IP module slots give you the freedom to mix a variety of I/O functions (A/D, D/A, digital in, digital out, serial I/O, etc.) on a single board. Or, combine modules of the same type for hundreds of channels on a single card. Either way, the APC8620 saves your precious card slots and reduces your costs.

Select I/O modules from Acromag's offering of more than forty models or use any third-party IP mezzanine ANSI/VITA 4 modules.

Features

■ Five industry-standard IP module slots

■ Board resides in memory space

■ Supports IP module I/O, ID and INT spaces

■ Plug-and-play carrier configuration and interrupt support

■ Two interrupt channels per IP module

■ Supervisory circuit reset generation

■ Individually filtered and fused power

Benefits

■ Quickly create custom I/O boards by mixing and matching I/O functions.

■ Conveniently configure and control the I/O modules through software with full IP module register/data access.

■ Easily integrate IPs with your software using OLE controls for Windows® 95/98/NT® and its object-oriented programming interface to numerous function routines.

The APC8620 carrier card holds up to five plug-in I/O modules for extremely high channel density.

Specifications

IP Module Compliance (ANSI/VITA 4)

Meets or exceeds all written IP specifications per ANSI/VITA 4-1995 for 8MHz operation, only.
Supports Type I and Type II ID space formats.

Electrical/mechanical interface: Supports five single-size IP modules (A-E), or two double-size and one single-size IP module. 32-bit IP modules are not supported.

IP Module I/O space, ID space, and INT space supported.

IP module I/O space: 16 and 8-bit; supports 128 byte values per IP module.

IP module ID space: 16 and 8-bit; Supports Type I 32 bytes per IP (consecutive even byte addresses) and Type II 32 words per IP via D16 data transfers.

IP module Memory space: Not supported.

Interrupts: Supports two interrupt requests per IP and interrupt acknowledge cycles via access to IP INT space.

PCI Bus Compliance

This device meets or exceeds all written PCI local bus specifications per rev. 2.1 dated June 1995.

System base address: This board operates in memory space. It consumes 1K of memory space which includes mapping for the IP modules.

Data transfer bus: Slave with 32, 16, and 8-bit data transfer operation. 32-bit read or write accesses implemented as two 16-bit transfers to IP modules.

Interrupts (PCI bus INTA# interrupt signal):
Up to two requests sourced from each IP mapped to INTA#. Interrupt vectors come from IP modules via access to IP module INT space.

Environmental

Operating temperature: 0 to 70°C (APC8621) or -40 to 85°C (APC8621E model).

Storage temperature: -55 to 100°C (all models).

Relative humidity: 5-95% non-condensing

Power: +5 Volts (±5%): 110mA, typical; 150mA, max. ±12 Volts to each IP module.

MTBF: Consult factory.

Physical

Physical configuration: PCI 5V Card
Length: 12.283 inches (312.0 mm)
Height: 4.200 inches (106.68 mm)
Board thickness: 0.062 inches (1.59 mm)
Maximum component height: 0.380 in. (9.65 mm)
Max. height under IP modules: 0.180 in. (4.57 mm).

Connectors:
A-E (carrier field I/O): 50-pin male header

Ordering Information

Industry Pack Carriers
APC8620
Non-intelligent PCI bus carrier board.
Holds five IP modules.

APC8620E
Same as APC8620 plus extended temperature range.

Software *(see Page 81)*
IPSW-API-VXW: VxWorks® software support package

IPSW-API-QNX: QNX® software support package

IPSW-ATX-PCI: ActiveX®/OLE Controls 2.0 software package

IPSW-LINUX: Linux™ support (website download only)

Accessories *(see Page 87)*
5025-550: Cable, unshielded, 50-pin header both ends

5025-551: Same as 5025-550 except shielded

5025-552: Termination panel, 50-pin connector, 50 screw terminals

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