

PMC408 High Voltage Digital Input/Output

The PMC408 monitors or controls on/off (high/low) status for up to 32 devices. Each channel can be used as an input or output. A unique two-piece board design brings the proven reliability of Acromag's Industry Pack (IP) modules to a PMC format. An IP408 module is embedded on a PMC interface card that maintains maximum performance and transparent communication to the host.

Input channels can be configured with interrupts for a change of state or level detection of any bit on up to eight channels. The TTL input threshold includes hysteresis for increased noise immunity.

In order to ensure safe, reliable control under all conditions, output operation is "fail-safe." That is, the outputs are always off upon power-up and are automatically cleared following a software reset.

Loopback monitoring of critical control signals is easy since the input and output circuitry are connected in tandem to each channel.

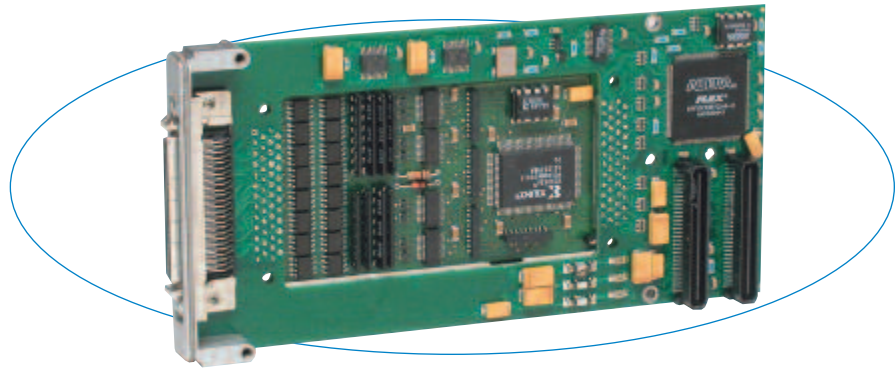
Features

- 32 digital input and/or output channels
- 0 to 60V DC input range, 60V DC low-side switch outputs
- Outputs sink up to 1A per channel
- TTL-compatible input threshold with hysteresis
- Change-of-state/level interrupts (up to 8)

Benefits

- Buffered inputs include hysteresis to increase noise immunity.
- Interrupts are software-programmable for a change of state or level detection.
- Loopback monitoring enables self-test and fault diagnostics to detect open switches or shorts.
- High impedance inputs prevent loading of the input source and minimize current.

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The PMC408 provides an easy method to perform loop-back monitoring of your critical control signals.

Specifications

Digital Inputs

- Input channel configuration: 32 non-inverting buffered inputs with a common connection.
- Input voltage: 0 to 60V DC, maximum.
- Input signal threshold: TTL compatible. 1.5V DC with 200mV of hysteresis, typ. Limited to TTL levels of 0.8V DC (max. low level) and 2.0V DC (min. high level).
- Input response time: 250nS minimum to 375nS maximum.
- Interrupt: Change-of-state and level on channels 0-7.

Digital Outputs

- Voltage range: 0 to 60V DC, maximum.
- Output ON current range: 0 to 1A DC, continuous per channel (10A total for all channels combined).
- Turn on time: varies with load (320nS typical).
- Turn off time: varies with load (500nS typical).

PMC Compliance

- Conforms to PCI Local Bus Specification, Revision 2.2 and CMC/PMC Specification, P1386.1 (mechanical height exception, see Page 102).

Electrical/Mechanical Interface: Single-Width Module. Two-piece board design (see Page 102).

32-bit PCI Target: Implemented by Altera FPGA.

4K Memory Space Required: One Base Address Register

Signaling: 5V Compliant, 3.3V Tolerant

Interrupts (INTA#): Interrupt A is used to request an interrupt.

PMC Module Write Cycle: 1000nS typical measured from falling edge of FRAME# to module write complete.

PMC Module Read Cycle: 1000nS typical measured from falling edge of FRAME# to falling edge of TRDY# providing valid data.

Environmental

- Operating temp.: 0 to 70°C or -40 to 85°C (E version)
- Storage temperature: -55 to 100°C.
- Relative humidity: 5 to 95% non-condensing
- Power: 70mA at +5V. 10mA at +12V. -12V (not used).
- MTBF: 958,506 hrs. at 25°C, MIL-HDBK-217F, notice 2.

Ordering Information

PMC Modules

PMC408
32 bidirectional input/output channels.

PMC408E
Same as PMC408 plus extended temperature range

Software (see [software documentation](#) for details)
PMCSW-API-VXW
VxWorks® software support package

PCISW-API-QNX
QNX® software support package

PCISW-API-WIN
Windows® DLL Driver software package

PCISW-LINUX
Linux™ support (website download only)

Accessories (see [accessories documentation](#) for details)
5028-378

- Termination panel, SCSI-2 connector, 50 screw terminals

5028-438
Cable, shielded, SCSI-2 connector at both ends



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