PMC Modules

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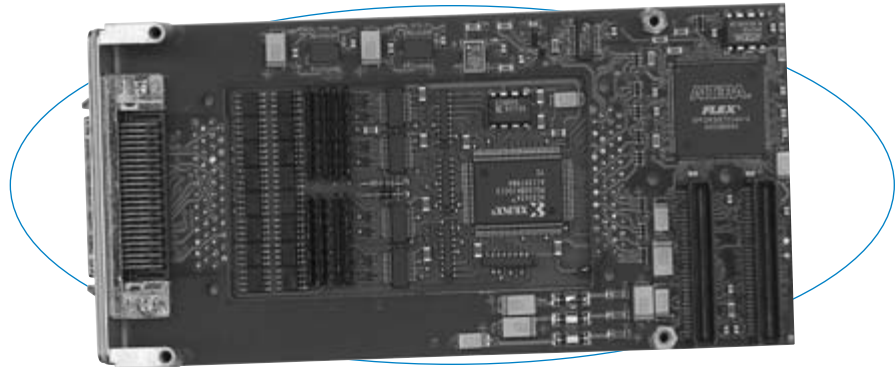
Loopback monitoring of critical control signals is easy since the input and output circuitry are connected in tandem to each channel.

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

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.

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 98).

Electrical/Mechanical Interface: Single-Width Module. Two-piece board design (see Page 98).

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 105°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 Page 81)*
PMCSW-API-VXW
   VxWorks® software support package

PCISW-API-QNX
   QNX® software support package

PCISW-API-WIN
   Windows® DLL Driver software package

Accessories *(see Page 87)*
5028-378
   Termination panel, SCSI-2 connector,
   50 screw terminals

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

Acromag, Inc. • **PO Box 437, Wixom, MI 48393** • **Phone: 248-624-1541** • **Fax: 248-624-9234** • **solutions@acromag.com** • **www.acromag.com**

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