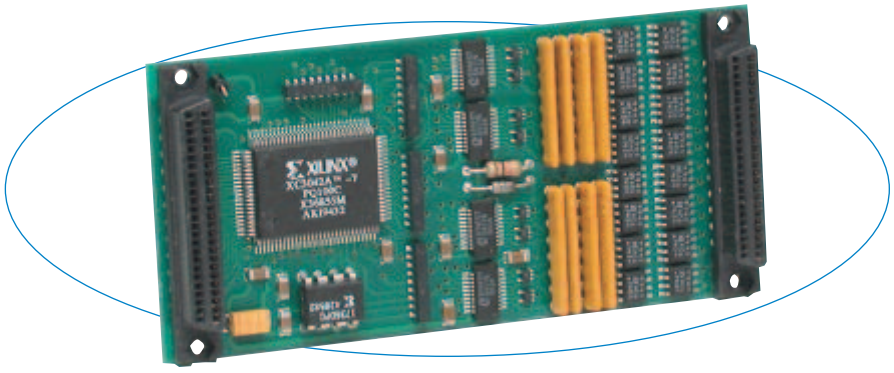
Acromag
THE LEADER IN INDUSTRIAL I/O

IP408
High Voltage Digital Input/Output



The IP408 provides an easy method to perform loop-back monitoring of your critical control signals.

The IP408 monitors or controls the on/off (high/low) status of up to 32 devices. Each channel can be used as an input or output.

Input channels can be configured with interrupts for a change of state or level detection of any bit on up to 8 channels. The TTL input threshold includes hysteresis for increasing 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 output switches or shorts.
- High impedance inputs prevent loading of the input source and minimize current.
- Individual outputs sink up to 1A DC continuous. No deration of output current required at elevated temperatures.

Specifications

Digital Inputs

Input channel configuration: 32 noninverting buffered inputs with a common connection. Input signal voltage range: 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 (minimum high level).

Input response time: 250nS minimum to 375nS max.

Interrupts: Change-of-state and level on channels 0-7.

Digital Outputs

Channel configuration: 32 open-drain DMOS MOSFETs with common source connection.

Output ON current range: 0 to 1A DC, continuous per channel (10A total for all channels combined). No deration required at elevated ambients.

Turn on time: 320nS typical (varies with load).

Turn off time: 500nS typical (varies with load).

IP Compliance (ANSI/VITA 4)

Meets IP specifications per ANSI/VITA 4-1995.

IP data transfer cycle types supported: Input/output (IOSel*), ID read (IDSel*).

Access Times (8MHz clock): 1 wait state (375nS cycle).

Interrupt handling format: An 8-bit vector is provided during interrupt acknowledge cycles on D0 - D7.

Updates: Two 16-bit read/writes to update all channels.

Environmental

Operating temperature: 0 to 70°C (IP408) or -40 to 85°C (IP408E).

Storage: -55 to 125°C (all models).

Relative Humidity: 5 to 95% non-condensing

MTBF: 1,317,013 hrs at 25°C, MIL-HDBK-217F, Notice 2.

Power: +5V (±5%): 50mA max. +12V (±5%) from P1: 8.5mA max. -12V (±5%) from P1: 0mA (not used).

Ordering Information

Industry Pack Modules

IP408
32 bidirectional input/output channels

IP408E
Same as IP408 plus extended temperature range

Acromag offers a wide selection of Industry Pack Carrier Cards.

Software *(see software documentation for details)*

IPSW-API-VXW
VxWorks® software support package

IPSW-API-QNX
QNX® software support package

IPSW-API-WIN
Windows® DLL driver software support package

IPSW-LINUX
Linux™ support (website download only)

See accessories documentation for additional information.

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