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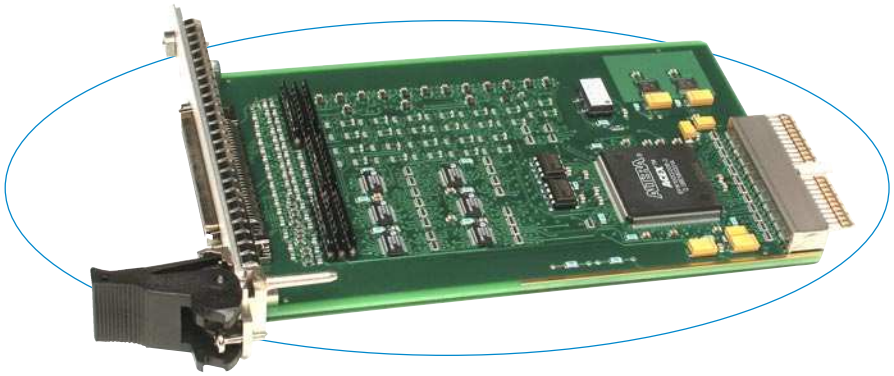
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Find the *Acromag / Xembedded / Xycom AcPC464* at our website: *Click HERE*

AcPC464
Digital I/O and Counter/Timers



This module saves money and CompactPCI slots by combining digital I/O and counter/timer functions on a single card.

The AcPC464 module provides 64 digital input/ output channels and four 16-bit multifunction counter/timers.

All 64 I/O channels, when set as inputs, support configuration for interrupts on either a change-of-state or on a high-to-low or low-to-high transition. A debounce timer is selectable to help filter out false transitions.

Four 16-bit multifunction counters/timers are configurable for pulse width modulated output, watchdog timer, event counter, frequency measurement, pulse width measurement, period measurement, or one shot pulse output. The four 16-bit counters can also be configured into two 32-bit counter/timers.

Features

Digital I/O

- 64 digital input/output channels:
  - 16 individually programmable channels
  - 48 channels configured on an 8-bit port basis
- Programmable change of state/level interrupts
- Input signal filtering debounce logic

Counter/Timer

- Four 16-bit or two 32-bit counter/timer channels (control lines shared with 16 TTL I/O channels)
- Six operating modes:
  - Pulse width modulation
  - Watchdog timer
  - Event counter
  - Frequency measurement
  - Pulse width or period measurement
  - One-shot and repetitive one-shot
- TTL-compatible thresholds
- Power-up and system reset is failsafe

Specifications

Digital I/O

I/O channel configuration:
64 bidirectional TTL transceivers.

Channels 0-47: Direction controlled on a port basis.
Channels 48-63: Direction controlled independently (shared as counter/timer control signals).

Reset/power-up condition: All channels default to input.

Digital Input

Input voltage range: 0 to 5V DC.

Input signal threshold (channels 0-47):
Low to high: 2.0V typical.
High to low: 0.8V typical.

Input signal threshold (channels 48-63):
Low to high: 3.5V typical.
High to low: 1.5V typical.

Interrupts: 64 channels of interrupts for high-to-low, low-to-high, or any change-of-state event types.

Debounce: Selectable for each channel. User-selectable (5.6µS, 50.4µS, 408.8µS, or 3.276mS).

Digital Output

Output voltage range: 0 to 5V DC.

Output ON current range (channels 0-47): -15 to 64mA.

Output ON current range (channels 48-63): -32 to 32mA.

Output pullups: 4.7K ohm socketed resistors.

Counter/Timers

Counter/timer configuration: Four 16-bit counters can be configured into two 32-bit counters.

Functions: Pulse width modulation, watchdog timer, event counting, frequency measurement, period measurement, pulse width measurement, and one-shot/repetitive.

Counter input: Each counter has an IN_A, IN_B, and IN_C port. These TTL input signals control start/stop, reload, event input, external clock, trigger, and up/down operations.

Counter output: Each counter has one output signal. The TTL output is used for waveform output, watchdog active indicator, or 1.6µS pulse upon counter function completion. Programmable as active high or low.

Counter clock frequencies: Selectable for 20MHz, 10MHz, 5MHz, 2.5MHz, 1.25MHz or external up to 8MHz.

Minimum I/P event: 100nS (debounce disabled).

Minimum pulse measurement: 100nS (debounce disabled).

Minimum period measurement: 200nS (debounce disabled).

Minimum gate/trigger pulse: 100nS (debounce disabled).

CompactPCI bus Compliance

Meets PCI spec. V2.2 and PICMG 2.0, R3.0.

Data transfer bus: Slave with 32-bit, 16-bit, and 8-bit data transfer operation.

Interrupts (INTA#): Interrupts requested on Interrupt A.

Plug-and-Play: The system maps the base address into the PCI bus 32-bit memory space.

Environmental

Operating temperature: 0 to 70°C (AcPC464) or -40 to 85°C (AcPC464E)

Storage temperature: -55 to 125°C.

Relative humidity: 5 to 95% non-condensing.

MTBF: Consult factory.

Power: 160mA at +5V, typical.

Ordering Information

CompactPCI Boards

AcPC464: Digital I/O and counter/timer module

AcPC464E: Same as AcPC464 plus extended temp. range

Software

PMCSW-API-VXW: VxWorks® software support package

PCISW-API-WIN32: 32-bit Windows® DLL Driver software package

PCISW-API-WIN64: 64-bit Windows® DLL Driver software package

PCISW-API-LNX: Linux™ support (website download only)

Accessories

5025-288: Termination panel, SCSI-3 connector, 68 screw terminals

5028-432: Cable, shielded, SCSI-3 connector both ends

Visit web page for more information

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