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Find the *Acromag PMC483* at our website: ***Click HERE***

Acromag
THE LEADER IN INDUSTRIAL I/O

PMC48x Counter/Timer with Quadrature

- PMC482: Ten 16-bit counters – TTL
- PMC483: Four 16-bit counters – TTL, and Four 32-bit counters – RS422
- PMC484: Six 32-bit counters – RS422

Several models with a variety of configurations provide up to ten counter/timer channels for counting events, generating waveform control signals, measuring pulse-widths or periodic rates, measuring quadrature position, and monitoring operations.

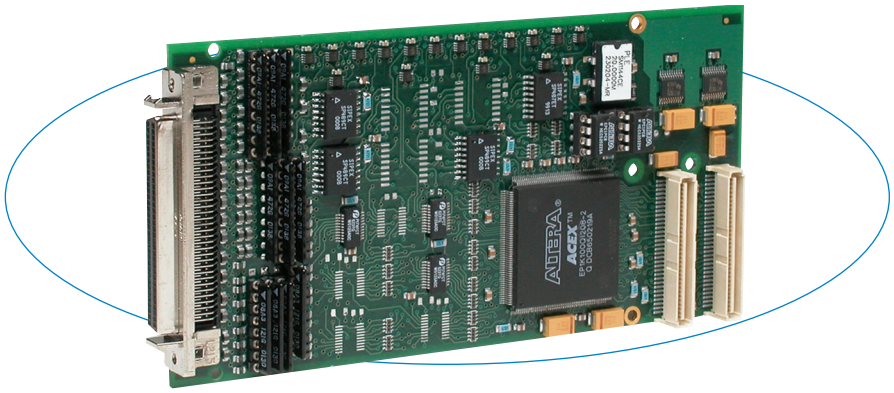
Support for internal or external triggering simplifies the synchronization of operations to specific events. Counter functions can use internally generated clocks or an externally supplied clock.

Features

- Ten 16-bit counter/timers (PMC482 only) or six 32-bit counter/timers (PMC484 only)
- Two 16-bit counters can be combined to create one 32-bit counter
- Available with both TTL and RS422 driver interface (PMC483 only)
- 16 bi-directional digital I/O
- 20MHz clock time base
- Single counter/timer modes:
  - Event counting
  - Frequency measurement
  - Period/pulse-width measurement
  - Quadrature position measurement
  - Square wave/pulse train generation
  - Time/period interrupter
  - 32-bit counter/timer
  - Pulse width generation
- Extended temperature option (-40 to 85°C)

Benefits

- Most configuration is handled by a single register which minimizes programming.
- Pullups are socketed for easy adjustment.



These modules are very flexible and available in several varieties to accommodate a broad range of counter/timer applications.

Specifications

Counter/Timers

Counter/timer configuration:
PMC482: Ten 16-bit TTL counters
PMC483: Four 16-bit TTL counters, four 32-bit RS422 counters
PMC484: Six 32-bit RS422 counters
Other I/O mixes can be made available as specials.

Clock frequency: 20MHz.

Field I/O: Front panel SCSI-3 connector.

Speed (with 20MHz internal clock):
Maximum output pulse/square wave freq.: 200nS.
Minimum event pulse width: 100nS.
Minimum pulse width measurement: 100nS.
Minimum period measurement: 200nS.

Mode accuracy (with external clocking):
Waveform generation: Period is ±62nS.
Watchdog: Timeout occurs within ±1 clock cycle.
Pulse/period measurement: ±1 clock cycle.

Internal clocks: Programmable 1.25, 2.5, 5, 10 or 20MHz via the counter control register.

External clocks: Supported on a per-counter basis via clock line. Maximum frequency 8MHz.

Interrupts: Supported for watchdog timer time-out, event count complete, pulse width or periodic rate measurement complete, pulse wave complete (one-shot mode), successive waveform generation (continuous).

Triggering/gate: Programmable via register write or external trigger. Minimum pulse width 100nS. Line may be used for gating of counter.

Counter trigger: Interface for triggering counter functions. Input level is TTL or RS422 differential digital.

Counter input: Interface for events and pulse/period measurements. Also triggers load of watchdog timer register. Level is TTL or RS422 differential digital.

TTL compatibility: $V_{IH} = 2.0V$ and $V_{IL} = 0.8V$. inputs are buffered and include 4.7K pull-ups to +5V.

Counter output: Level is TTL or RS422 differential digital.

PMC Compliance

Conforms to PCI Local Bus Specification, Revision 2.2 and CMC/PMC Specification, P1386.1.

Electrical/Mechanical Interface: Single-Width Module.

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.

Register Access Times: 8 PCI clock cycles, typical.

Environmental

Operating temp.: 0 to 70°C or -40 to 85°C (E versions)

Storage temperature: -55 to 105°C.

Relative humidity: 5 to 95% non-condensing.

Power: Consult factory.

MTBF: Hours at 25°C, MIL-HDBK-217F, notice 2
PMC482 1,744,259; PMC483 1,727,707; PMC484 1,708,729

Ordering Information

PMC Modules

PMC482: Ten 16-bit TTL counters
PMC482E: Same as PMC482 plus extended temp. range
PMC482R: Same as PMC482 with rear I/O connector
PMC482RE: Same as PMC482E with rear I/O connector
PMC483: Four 16-bit TTL counters, Four 32-bit RS422 counters
PMC483E: Same as PMC483 plus extended temp. range
PMC483R: Same as PMC483 with rear I/O connector
PMC483RE: Same as PMC483E with rear I/O connector
PMC484: Six 32-bit RS422 counters
PMC484E: Same as PMC484 plus extended temp. range
PMC484R: Same as PMC484 with rear I/O connector
PMC484RE: Same as PMC484E with rear I/O connector

Software (see software documentation for details)
PMCSW-API-VXW: VxWorks® software support package
PCISW-API-WIN: Windows® DLL software support
PCISW-API-LNX: Linux™ support (website download only)

Accessories (see accessories documentation for details)
5025-288: Termination panel, SCSI-3 connector, 68 screw terminals
5028-432: Cable, shielded, SCSI-3 connector both ends

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