

## CPCI321

# **Stepper Motor Controller for CompactPCI**



The CPCI321 Intelligent Stepper Motor Controller with amplifiers is an ideal solution for all applications where stepper motors must be controlled with a maximum of flexibility and a minimum of overhead.

This CompactPCI card is availabe in a 3U and a 6U form factor.

#### Features:

- > Controls two 2-phase or one 4-phase motor(s)
- > Firmware compatible with CPCI322 intelligent stepper motor controller for external amplifiers
- > Interrupts on position breakpoint, trajectory complete and command complete
- > Each phase delivers 3A@55V and is over-current and thermal protected
- > Programmable hold-current reduction
- > User configurable maximum current
- > Brake support
- > Full-, half- and micro-stepping (up to 16 micro-steps per full step)
- > Two home sensor inputs
- > Step-rates up to 50kHz with programmable acceleration from 50Hz/sec to 5,000kHz/sec
- > Hardware synchronization lines

#### Controller

- \* The CPCl321 is based on an MC68332 local controller.
- \* The MC68332 handles high-level commands and controls the onboard power amplifiers.
- \* The MC68332 is very flexible, has a versatile software interface and controls autonomously complex tasks.
- \* Full-, half- and micro- stepping are provided by the local firmware.
- \* Up to 16 micro steps per full step can be made with the CPCl321.

### **Output Drivers**

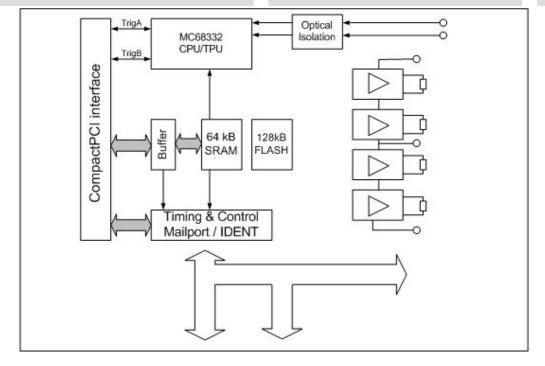
- \* CPCl321 drives four phases, so 2x2-phase, 1x3-phase or 1x4-phase stepper motor can be controlled.
- \* Each phase is capable of delivering 3Amps @ 55Volts.
- \* The board features bi-polar driving circuits in constant current driving mode.
- \* Th CPCl321 is over-current and thermal protected.
- \* Two optical isolated home-inputs provide means for feedback on home position.

#### **PCI** Interface

The CPCI321 has a PCI Specification 2.1 compliant target interface and uses a PCI9050 PCI Bus Target Interface Chip by PLX Technology Inc.

## Ordering Information

- **CPCI321/T01** 3U Stepper motor controller with onboard amplifiers
- \* CPCI4321/T01 6U Stepper motor controller with onboard amplifiers
- CPCI(4)321/SW APIS based software
- CPCI(4)321/MAN manual on paper





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