ITRI
Industrial Technology
Research Institute

EPCIO-4005

PCI Interface Pulse type 4-axis Motion Control Card

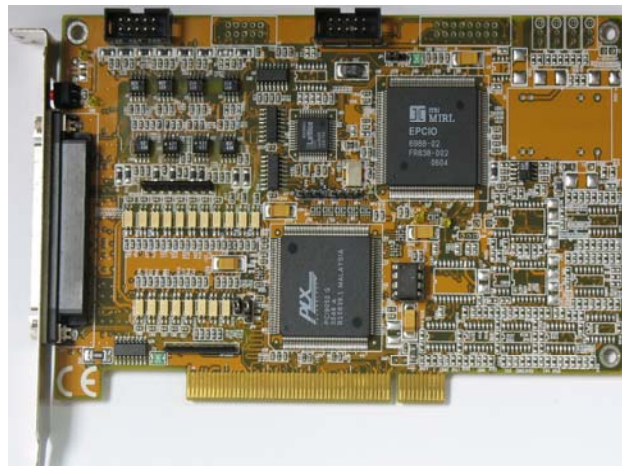## Features

- PCI Bus interface
- 4-axis servo or stepping motor pulse command control
- 5 -channel encoder input
- 13 dedicated input and 5 dedicated output
- 128 remote serial input / output interfaces
- Pulse type version of EPCIO-4000 (connector compatible)

Introduction

EPCIO-4005 applied EPCIO ASIC developed by ITRI, which sent the pulse of each axis with DDA (Digital Differential Analyzer) algorithm to realize 4 axis servo positioning and synchronized control. At pulse output control, the encoder value can be read back from the encoder input port. So ,It is easily to carry out the software close loop control in stepping motor application. At control of each axis , there is one set sensor input point, including home point, plus limit point and minus limit point. In addition, there are inhibit signal output points, Position ready output point and emergency stop input point. For other input / output points, this board uses wiring saving IO design, which can be expanded to 64 points input and 64 point output maximum.

Specifications

- Size:185mm x 109mm
- System Clock:40 MHz
- Bus Interface: PCI
- Motion:
  - Positioning Axes:4
  - DDA Pulses: 1024 ~32767 Pulse/DDA Cycle
  - DDA Cycle: 25us ~3350ms Programmable
  - Pulse Output Format:
    Pulse/Direction、CW/CCW 、A/B Phase
  - Error Counter(For Output Pulse):16 Bits
- Remote IO:64 IN/64 OUT Maximum

- Encoder Input:
  - 5 Axes
  - Interface: Differential Input with Photo-Isolation
  - Input Format:
    A/B/Z Phase 、Pulse /Direction、CW/CCW
  - Decoder:x0,x1,x2,x4
    Software programmable in A/B/Z phase input
  - Encoder Counter: 32 bits
  - Latch :15 trigger signal for each axis
- Local IO:
  - Home Sensor Signal Inputs:4
  - Positive Over Travel Signal Inputs:4
  - Negative Over Travel Signal Inputs:4
  - Inhibit Signal Outputs:4
  - Emergency Stop Input:1
  - Position Ready Output:1

Software Support

- Device driver for Windows 98se/2000/NT/XP/Vista
- Motion control library MCCL for Windows 98se/2000/NT/XP/Vista