

**ADTECH ADT-856 PCI BUS 6-axis Motion Control Card  
CE, LASER Marking control**

Name: pci cnc motion control systems cards usb wire cut edm

Number of axis: 6

Digital input: 32

Digital output: 16

Encoder: 6

Line interpolation: Any 2-6 axis

Circular interpolation: Hardware arc

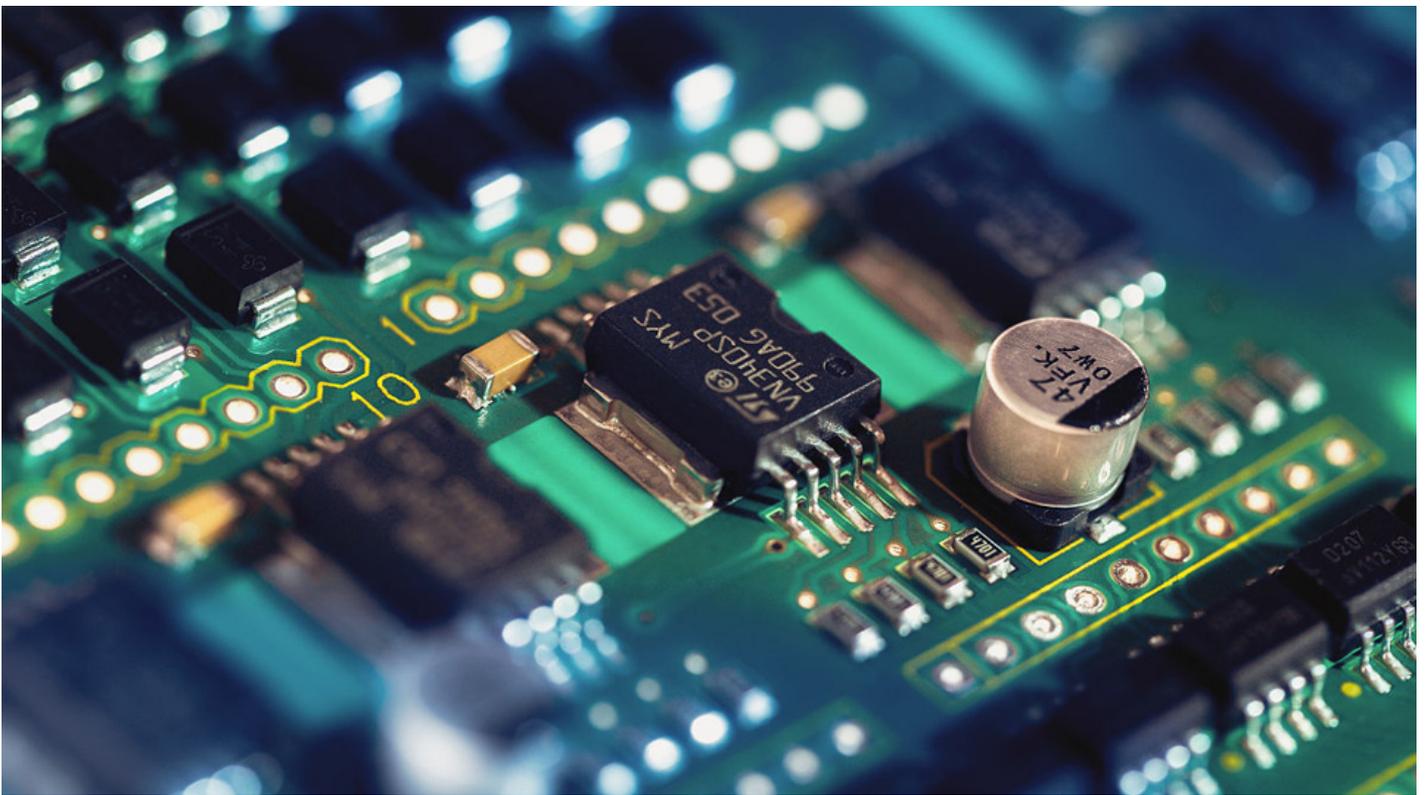
Hardware: One command cache achieved

Pulse frequency: 4MHz

Basic functions: Symmetric and asymmetric T, S-type acceleration and deceleration, etc

**The feature of ADTECH ADT-856 PCI BUS 6-axis LASER Marking control Card**

- \* 32-bit PCI bus, PnP
- \* Pulse output mode: pulse + direction, pulse + pulse
- \* Maximum pulse output frequency is 4MHz
- \* 6-axis servo/stepper motor control, each axis can control independently
- \* 2-6 axis linear interpolation ,arc interpolation, multi-axis continuous interpolation
- \* Linear or S-curve acceleration/deceleration
- \* Asymmetric linear acceleration/deceleration
- \* All the 6 axes have position(coder) feedback input; 32-bit counting; maximum frequency is 4MHz, maximum counting \* range: -2,147,483,648~+2,147,483,647
- \* 48-channel optical coupling isolation digital input, 32-channel digital output ,every axis contains two positive and negative limit signals
- \* The speed and target position can be changed in real-time in the motion process
- \* Read the logical position, real position, driving speed, acceleration and driving state in real-time in the motion process
- \* Each axis has 3 STOP signals, which are used to search for home and Z-phase of coder
- \* Each axis has two 32-bit compare registers, which can be used for software limit
- \* Each axis has 8 input signal, include 2 positive/negative limit signals,3 stop signals,1 servo in-position signal, 1 servo alarm signal and 1 general input signal. Except 2 limit signals, other 6 signals can be used as general input signals by setting them as invalid.
- \* Position counter is integrated with variable cyclic function;  
the logical position counter and actual position counter are 32-bit up/down cyclic counters
- \* Receive signals from servo motor drive, e.g. coder Z-phase signal, in-position signal, alarm signal, etc
- \* Up to 16 motion cards can be used in one system, control 96 axis
- \* This LASER Marking control card Support operating systems: DOS, WINDOWS95/98/NT/2000/XP, WINCE
- \* Support developing software with C, VC++, VB, BC++, C++builder, LabVIEW and Delphi.



## The function of ADTECH ADT-856 PCI BUS 6-axis LASER Marking control card

### \* Pulse output:

Mode of pulse output: six-channel pulse outputs, pulse/direction, pulse/pulse, maximum output frequency: 4MHz, uses advanced technology to ensure the error of pulse output frequency is still within 0.1% even it is in high level.

### \* Coder input:

Maximum input frequency: 4MHz

Phase difference pulse input or up/down pulse input of 6 axes A/B phase

Pulse frequency multiplication: 4, 2, 1

Noise removing of integration filter

### \* Digital switch input:

48-channel optical coupling isolation input, every axis contains two positive and negative limit signals

Input voltage: 5-24V

Isolation voltage 2500VDC

### \* Digital switch output:

32-channel open-collector output

NPN open-collector, 5-24VDC, maximum current: 100mA

### \* Control mode:

This LASER Marking control card offers many kinds of control modes such as quantitative motion, continuous motion, back-to-home motion, multi-axis interpolation, arc interpolation, and continuous interpolation, etc.

### \* Continuous interpolation:

Input the interpolation data of the next command during the interpolation as a pre-process to ensure the continuity of pulse output, and thus making the interpolation smooth and successive to effectively improve the process precision.

### \* Position management:

The position is managed by two UP/DOWN counters: one is logical position counter used for managing the output of inner drive pulse, and the other is actual position counter used for receiving the input of outer pulse. It is either A/B phase input signal of coder or grating scale, or input signal of up/down pulse. As actual position counter, its bits can reach 32 and the maximum range is  $-2,147,483,648 \sim +2,147,483,647$ . The outer input can also be used as hand wheel input for common counting.

### \* Speed control:

The speed control of this LASER Marking control card can be constant or linear/S-curve acceleration/deceleration. It may perform asymmetric linear acceleration/deceleration, automatic and manual deceleration. In constant driving process, it can prevent triangle wave caused by speed curve.

### \* Development libraries and operating system:

Support DOS, WINDOWS XP/2000/NT/98/95 and WINCE operating system

Support programming by developer such as C/BC++/VC/VB/C++Builder/Delphi/Labview/EVC

Applications based on DOS and Windows