

4 Axis Encoder Interface Card Model: EIC-325

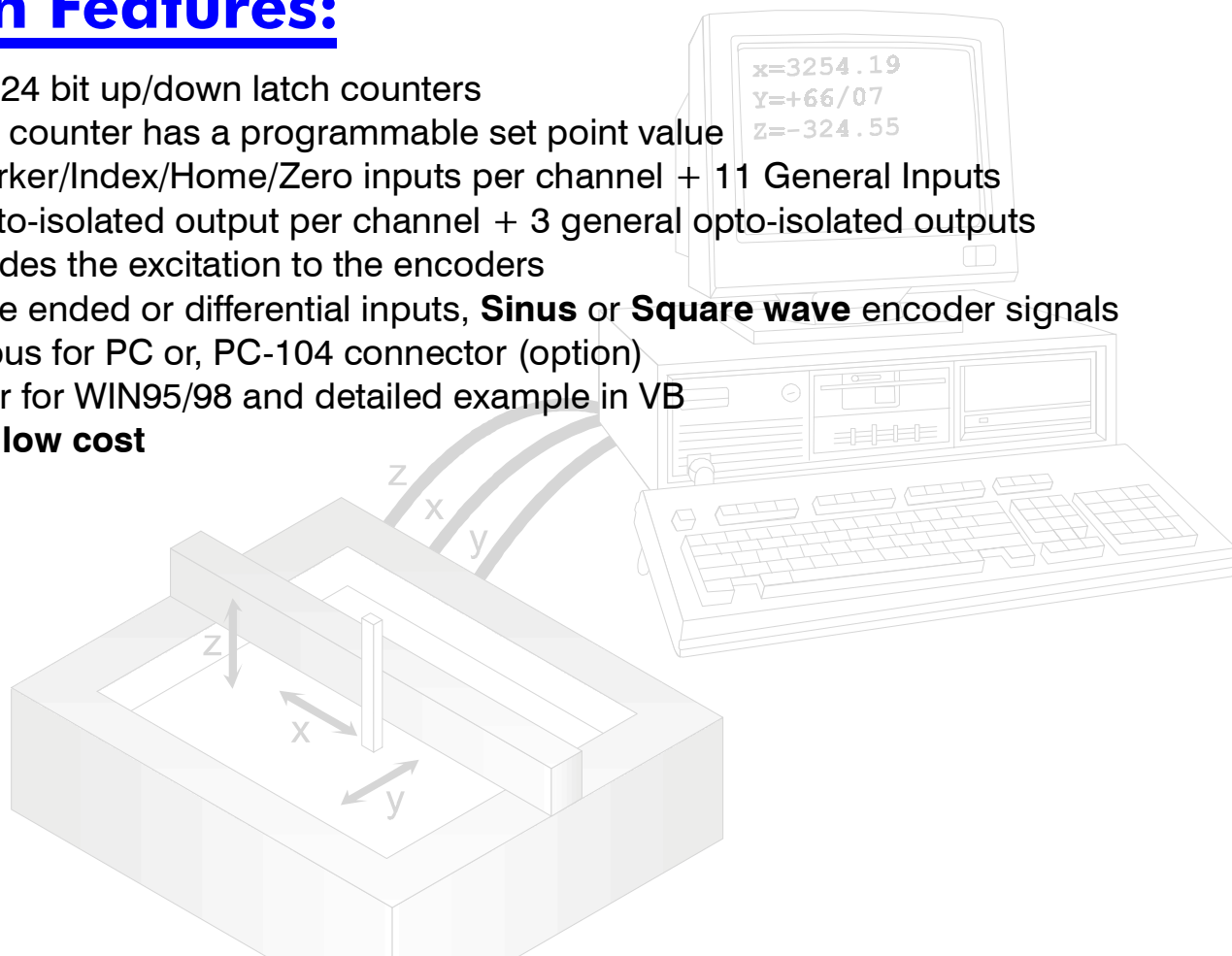
For IBM PC (ISA Bus) or PC-104

The EIC-325 — a half-size PC card — was designed to accommodate the most popular industry standard optical encoders available in the market. It supports encoders with either **Square-wave** or **Sinus** output. As with all of our other PC add-on products, it was designed for industrial purposes and the most requested features are built on the board.



Main Features:

- Four 24 bit up/down latch counters
- Each counter has a programmable set point value
- 1 Marker/Index/Home/Zero inputs per channel + 11 General Inputs
- 1 Opto-isolated output per channel + 3 general opto-isolated outputs
- Provides the excitation to the encoders
- Single ended or differential inputs, **Sinus** or **Square wave** encoder signals
- ISA bus for PC or, PC-104 connector (option)
- Driver for WIN95/98 and detailed example in VB
- **Very low cost**



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4 Axis Encoder Interface Card Model EIC-325

Introduction

The 4 Axis Encoder Interface Card was designed to accommodate most of the popular optical encoders available in the market, such as Dr. HEIDENHAIM®, RENISHAW®, HP®, and others.

The board supports either **Square-wave** or **Sinus** output encoders, both linear and rotary types.

It can be directly connected to up to 4 encoders and will also provide necessary excitation to the encoders.

The card is equipped with four differential inputs for limit or home switches / marker / encoder index, etc., and 11 more for general use. Also there are four opto-isolated outputs that may be used for set-points, carry, marker, etc., and three outputs for general use.

Main Features

- Four 24 bit up/down latch counters.
- Each counter can be programmable for preset value.
- Four opto-isolated outputs which can be used for set-points, carry or index/marker and three outputs for general use.
- Four differential inputs for connection of encoder's Index or limit switches and 11 single ended inputs for general use.
- Internal status register for rapid storing and clearing signals.
- **Same board fits Square-wave or Sinus encoders.**

Specifications

- Number of encoders: 2/4 per board.
- Multiple encoder pulses: 1, 2 or 4 (software selectable)
- Encoder type: **Sinus** or **Square wave** types.
- Counters size: 24 bit up/down with latched buffer
- Method of communication with PC bus: I/O addressing (16 addresses to select from)
- Inputs / Outputs: All encoder Inputs (4xSinus, 4xCosinus and 4xIndex) are differential.
- All general purpose inputs are TTL/CMOS compatible schmitt trigger single ended.
- All outputs are opto-isolated.

Encoder Signals Specifications

- Square wave signal
 - Square wave A phase and B phase shifted by 90°, single-ended or differential
 - HTL 0.5-5v or TTL compatible
 - 800 KHz max. quadrature rate (5 MHz option)
- Sinus wave signal
 - Two incremental sinusoidal signals (Phase A and B Shifted by 90°).
- Signal range (Encoder output impedance: < 1 K Ω)
 - Current output encoders: > $\pm 100 \mu\text{A}$
 - Voltage output encoders: > $\pm 100 \text{ mV}$ for Phases A,B and for the reference marker / index pulse.
- Excitation to the encoders: 5Vdc.
- Light source current: max. 900 mA total. Protected by a polyswitch resettable fuse.
- Max. frequency input: 600 KHz

Encoder Counter Features

- 24 bit up/down counter + 24 bit latched buffer per counter.
- Independent programmable set-point for each counter
- User may freeze the buffers without stopping the counters from counting.
- Independent operation mode for each axis
 - Single / multiple encoder pulses
 - Reset counter when index reached / by software
- Independent selectable output options for each encoder:
 - Set-point reached
 - Counter carry flag
 - Index/Marker
- Independent selectable interrupts options for each axis:
 - Set-point reached
 - Counters carry flag
 - Index/Marker

General

- Power: (All supplied from ISA/PC-104 bus)
 - +5V: 200mA max
 - +12V: 100mA max
 - -12V: 50mA max
- Connectors
 - Encoders: Mini DIP 44 pin
 - Outputs: DIP 9 pin
 - PC-104 (option)
 - ISA edge connector.
- Environmental
 - Operating temperature: 0-50° C (32-122° F)
 - Humidity: up to 80% non-condensing
- Board dimensions
Half size PC card
- Software included
 - A package to utilize the PC as a 4-axis sophisticated counter
 - Examples and source code on how to communicate with the board under DOS and drivers for WIN95/98 with full example in VB
 - Constantly updated on our web page.



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