# AX92350 NEW

Real-Time Vision I/O Card
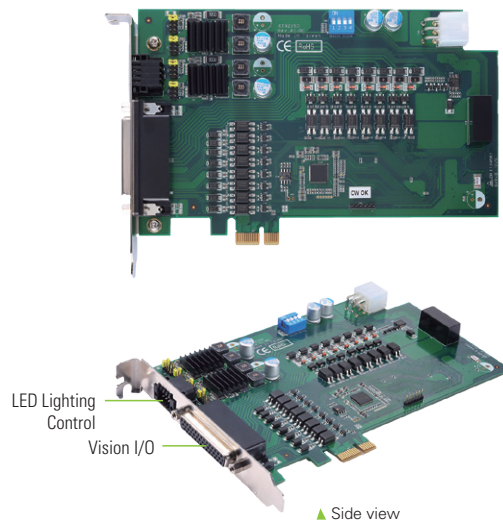
## Features

- Integrated vision I/O
  - 4-CH trigger input
  - 4-CH or 8-CH trigger output
  - 4-CH LED lighting control (LED trigger output channels are defined by software settings)
  - 1-CH quadrature encoder input
  - 8-CH isolated DI, 8 CH isolated DO
  - 1-CH auto measurement function
- Programmable interrupt functions
- PCI Express x1 compliant
- Flexible design for vision inspection

### Introduction

The AX92350 integrates various I/O features for machine vision applications, including trigger input and output with microsecond-scale real-time control, an auto measurement timer, as well as LED lighting control with dimming support. It also provides an encoder input function suited for conveyor applications in factory automation. The AX92350 can fit in the PCI Express slot of any vision control system to simplify deployment and maintenance of your machine vision platform.



LED Lighting Control

Vision I/O

▲ Side view

## Specifications

**Isolated Digital Input**

| | |
|---|---|
| Channels | 8-CH |
| Type | Sink/Source |
| Input Voltage | On (Logic 1): 10 to 30 VDC or dry contact<br>Off (Logic 0): 0 to 3 VDC |
| Impedance | 7.5KΩ |

**Isolated Digital Output**

| | |
|---|---|
| Channels | 8-CH |
| Output type | Sink, open collector |
| Supply voltage | 5 to 30 VDC |
| Sink current | Max. 200 mA per channel |

**Isolated Trigger Input**

| | |
|---|---|
| Channels | 4-CH |
| Type | Sink |
| Input range | On (Logic 1): 3 to 30 VDC<br>Off (Logic 0): 0 to 2 VDC |
| Response Time | 1us (from trigger input to trigger output) |
| Input Filter | Programmable de-bounce filter |

**Isolated Encoder Input**

| | |
|---|---|
| Channels | 1-CH 16-bit incremental quadrature encoder input (A/B/Z) |
| Type | Differential, single-ended |
| Counter Mode | x4 |
| Frequency Input | Max. 1MHz |

**Isolated Trigger Output**

| | |
|---|---|
| Channels | 4-CH or 8-CH |
| Output Voltage | 12 VDC |
| Output Impedance | 1KΩ |
| Response Time | 1us (from trigger input to trigger output) |
| Configuration | Derived from 4CH trigger input or encoder input.<br>Can set the pulse delay time and duration time<br>Trigger output channel 4,5,6,7 can only be selected either for trigger output or for LED lighting control |
| Auto Measurement | Timer that measures response interval between trigger input and trigger output |

**Interrupt**

| | |
|---|---|
| Sources | Two interrupt sources from DI, trigger input, encoder Z phase and encoder check pointer |

**LED Lighting Control**

| | |
|---|---|
| Channels | 4-CH |
| Output Voltage | 24 VDC, Max. 0.5A per channel |

| | |
|---|---|
| Output Current | Each channel can be set 100mA/250mA/350mA/500mA output by jumper, support dimming control |
| Mode | Trigger mode |
| External Power Supply Connector | 6-pin ATX 2x3 connector for connection to 12V external power supply when LED power consumption exceeds 24V @500mA |
| Connector | 4-CH LED lighting control via a 8 pin terminal connector |

**General Specifications**

| | |
|---|---|
| Bus Type | PCI Express x1 |
| I/O Connector | D-sub 44-pin female connector |
| Isolation Voltage | 1000 VDC |
| Power Requirements | 50mA @ +3.3V (Max.)<br>220mA @ +12V (Max.)<br>Note: Excluding the power consumption of 24V LEDs |
| Dimensions | 168 x 107 mm |
| Board ID | Yes, 4-bit |
| Operating Temperature | 0°C to +60°C (32°F to +140°F) with air flow |
| Storage Temperature | -20°C to +80°C (-4°F to +176°F) |
| Humidity | 5 to 95% RH, non-condensing |

**Software Support**

| | |
|---|---|
| EOS Support | Windows® 7/Windows® 10 (32/64bit) |
| Software Compatibility | C#, C/C++, Visual Basic |

## Ordering Information

| | |
|---|---|
| AX92350 (P/N: E392350100) | Vision I/O card |
| Vision Power Cable (P/N: 59492350700E) | 4P 4.2/6P 4.2, L=10 cm (only be used with IPC962/IPC964) |

**Accessories**

| | |
|---|---|
| 5A244AP1200E | 44-pin DIN-rail terminal board DM44-AP12 |
| 594DM443500E | 44-pin D-SUB cable, L=1m WHDM44/1.0-6954 |
| 594DM443510E | 44-pin D-SUB cable, L=2m WHDM44/2.0-6954 |
| 594DM443520E | 44-pin D-SUB cable, L=3m WHDM44/3.0-6954 |

*Specifications and certifications are based on options and may vary.

## Packing list

**Standard**

User's manual, utility, CD and I/O bracket, CN-terminal block 4 x 2