ECU-1710A

Intel® Atom™ D510 Controller with 16-ch AI, 4-ch AO and 32-ch Isolated DI/O

NEW

Features

- Onboard Intel Atom D510 1.66 GHz processor
- 2 x RS-232 ports
- 2 x 10/100Base-T RJ-45 ports
- 2 x USB ports
- Integrated PCI-1710UL & PCI-1720U modules
- 16-ch single-ended or 8-ch differential or a combination of Analog Input
- 12-bit A/D converter, with up to 100kS/s sampling rate
- 4-ch 12-bit Analog Output
- 16-ch Isolated Digital Input/Digital Output
- 1-ch Isolated Counter

Introduction

The ECU-1710A is a standalone automation controller with integrated PCI-1710UL and PCI-1720U to provide 16-ch Analog Input, 4-ch Analog Output, 16-ch Isolated Digital Input and 16-ch Isolated Digital Output. This controller also supports serial communication ports and several other networking interfaces. You can seamlessly integrate your applications into the ECU-1710A and speed up your system development with these application ready controllers.

Specifications

General

- **Dimensions (W x D x H)** 255 x 152 x 59 mm (10" x 6.0" x 2.3")
- **Power Consumption** 28 W (Typical)
- **Power Requirements** 18 ~ 30 V_{DC} (e.g 24 V @ 2 A) (Min. 48 W), AT
- **Weight** 2.4 kg (Typical)
- **OS Support** WES 2009

System Hardware

- **CPU** Intel Atom D510 1.66 GHz/ 512 KB L2 Cache
- **Memory** 1GB DDRII 667MHZ
- **Indicators** LEDs for Power, IDE and LAN (Active, Status)
- **Keyboard/Mouse** 1 x PS/2
- **Storage** 1 x internal typeI/II CompactFlash® slot, 1 x Built-in 2.5" SATA HDD bracket

I/O Interface

- **Serial Ports** 2 x RS-232
- **LAN** 2 x 10/100Base-T RJ-45 ports
- **USB Ports** 2 x USB, EHCI, Rev. 2.0 compliant

Analog Input

- **Channels** 16 single-ended/ 8 differential
- **Resolution** 12 bits
- **Max. Sampling Rate** 100 kS/s
- **FIFO Size** 4,096 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** >18M ohm
- **Sampling Mode** Delay to Start, Delay to Stop,None
- **Input Range** (V)

Unipolar	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Bipolar	±10	±5	±2.5	±1.25	±0.625
Accuracy (% of FSR ±1LSB)	0.1	0.1	0.2	0.2	0.4

Analog Output

- **Channels** 4
- **Resolution** 12 bits
- **Output Range** (Software programmable)
  Unipolar (V) 0 ~ 5, 0 ~ 10
  Bipolar (V) ±5, ±10
  Current Loop (mA) 0 ~ 20, 4 ~ 20
- **Driving Capability** 5 mA
- **Accuracy** Relative: ±1 LSB; Differential Non-Linearity: ±1 LSB (monotonic)
- **Excitation Voltage** 48 V (max.)

Digital Input /Output / Counter

- **DI Channels** 16
- **DI Input Voltage** Logic 0: 2 V max. Logic 1: 5 V min. (30 V max.)
- **DO Channels** 16
- **DO Output Type** Sink Type (NPN)
- **DO Output Voltage** 5 ~ 40 V_{DC}
- **DO Sink Current** 300 mA max. per channel
- **Counter Channels** 1
- **Counter Resolution** 16 bits
- **Counter Input Voltage** Logic 0: 2 V max. Logic 1: 5 V min. (30 V max.)
- **Counter Max. Input Frequency** 1 MHz
- **Isolation Protection** 1,000 V_{DC}

Environment

- **Storage Humidity** 5 ~ 95% RH, non-condensing (IEC-60068-2-3)
- **Operating Temperature** -10 ~ 60°C (14 ~140°F) @ 5 ~ 85% RH
- **Storage Temperature** -20 ~ 80°C (-4 ~176°F)

Ordering Information

- **ECU-1710A-A32E** Intel Atom D510 1.66 GHz controller with AI/O and DI/O

Accessories

- **ADAM-3925-AE** DB25 DIN-rail Wiring Board
- **ADAM-3937-BE** DB37 DIN-rail Wiring Board

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