ECU-1871

Intel® Atom™ D510 Energy Controller with 2 x LAN, 3 x COM, IRIG-B, and I/O Extension



Features

- Onboard Intel Atom D510 1.66 GHz CPU
- IEC 61850-3 and IEEE-1613 compliant for substation application
- China Electricity Certificate IV level
- Built-in Time Synchronize IRIG-B
- Supports more Smart-Substation application I/O extension
- 1 x RS-232 port/ 2 x RS-485 isolation ports
- 2 x 10/100/1000Base-T RJ-45 ports
- Windows® CE 6.0, WES 2009, WES 7, and Linux ready solution
- Supports PCIe-104 & PCI-104 extension

Introduction

The ECU-1871 is compliant with Electricity Certificate IV Level (especially for China) and IEC 61850-3 certification. Featuring a fanless design with low power consumption and high performance Intel Atom D510 processor, the ECU-1871 comes with 2 x Ethernet, 1 x RS-232, and 2 x isolation RS-485 ports. The ECU-1871 supports two extension interfaces, PCI-104 & PCIe-104, and users can easily order other Energy I/O boards to integrate into the ECU-1871 and speed up your system development with an energy controller.

Specifications

General

- **Dimensions (W x D x H)** 220 x 150 x 89 mm (8.7"x 5.9"x 3.5")
- **Power Consumption** 24 W (Typical)
- **Power Requirements** 18 ~ 30 V_{DC} (e.g 24 V @ 2 A) (Min. 48 W), AT
- **Weight** 2.4 kg (Typical)
- **Mounting** 2U Rack-mount & Wall-mount
- **OS Support** WES 2009, WES 7, WinCE 6.0, Linux
- **System Design** Fanless

System Hardware

- **CPU** Intel Atom D510 1.66 GHz/ 512 KB L2 Cache
- **Memory** 2G DDRII 667 MHz
- **Indicators** LEDs for Power, HDD,IRIG,COM(Tx Rx) and LAN (Active Statue)
- **Storage** SSD: 1 x type I/II CompactFlash® slot
  HDD: 1 x integrated 2.5" SATA HDD bracket
- **Display** VGA, 1600 x 1200 @ 85 Hz
- **Watchdog Timer** Programmable 256 levels time interval, from 1 to 255 seconds for each tier
- **PCI-104/PCIe-104** Supports +3.3/ +5 V power

Communication Interface

- **Serial Ports** 3 Ports, 1 x RS-232, 2 x RS-485
- **Serial Ports Speed** RS-232 50 ~ 115.2 kbps
  RS-485 50 ~921.6 kbps
- **LAN** 2 x 10/100/1000Base-T RJ-45 ports
- **USB Ports** 4 x USB (include 1×internal USB), EHCI, Rev. 2.0 compliant

Time Synchronization Interface

- **Type** IRIG-B
- **Channel** 1
- **Support Format** IRIG-B00X according to IRIG STANDARD 04, 200-98
- **Input Signal** ST Multi-mode, 1 Isolation RS-485 (Optional)
- **Message Syntax** QQQHHMMSS(year, day, hour, minute & second)
- **Resolution of Time** 1s

Environment

- **Storage Humidity** 5 ~ 95% RH, non-condensing (IEC 60068-2-3)
- **Operating Temperature** -20 ~ 70°C (-4 ~158°F) @ 5 ~ 85% RH
- **Storage Temperature** -40 ~ 80°C (-40 ~176°F)

Ordering Information

- **ECU-1871 -A33CAE** Intel Atom Energy Controller with 2 x LAN, 3 x COM, IRIG-B and I/O Extension

Accessories

- **ECU-P1706-AE** 250 KS/s, 16 bit, Simultaneous 8-ch Analog input PCI-104 Card
- **ECU-P1300-AE** Vibration Signal Modulate, Vibration Sensor Driver, 8-order Low-pass Filter
- **ECU-P1702-LAE** 10 MS/s, 14bit, Simultaneous 4-ch Analog input PCI-104 Card

All product specifications are subject to change without notice