

# DE-1002

Intel® Atom™ E3845 Quad Core Power Efficient Fanless Computer with 2x PCI / 2x PCIe Expansion



## Key Features

- Onboard Intel® Atom™ E3845 Processor Quad Core, 1.91GHz
- 2x DDR3L SO-DIMM Max. up to 8GB
- Dual Independent Display from 1x DVI-I and 1x DisplayPort
- 2x Intel® GbE Port, Support Wake-on-LAN and PXE
- 1x USB 3.0, 4x USB 2.0
- 6x RS232/422/485 Port with 5V/12V Power
- 4x Isolated DI, 4x Isolated DO
- 2x 2.5" SATA SSD/HDD Bay, 1x mSATA (Shared by Mini-PCIe Socket), 1x CFast Card and 1x SIM Card Socket
- 9~48VDC Power Input, Support AT/ATX Mode
- 2x Mini-PCIe Slot for Wi-Fi, GSM, or I/O Expansion
- 2x PCI or 2x PCIe x1 Expansion
- Power Ignition
- Compliant with EN50155 for Rail Transportation Applications

## Overview

DE-1000 Series Fanless Embedded PC supports Intel® Bay Trail platform, integrated with Intel® Atom™ E3845 Quad Core 1.91 GHz processor. Delivering the excellent quad-core processing power at only 10 watts power consumption, DE-1000 series is definitely an ideal solution for ultimate computing performance, energy efficiency, and superior reliability.

Designed with rich I/O, high flexibility and easy expansion capabilities, DE-1000 series is ideal for diverse industrial applications. It offers multiple I/O extension modules, including up to 2x PCI or 2x PCIe x1 slot for flexible integration of a variety of add-on cards; 2x mini-PCIe slot for GSM and WLAN wireless communication; it also supports three storage expansions: 2.5" SATA HDD, CFast and SIM card.

Supporting up to 6x LAN or 4x POE versions, and power ignition function, DE-1000 series can meet various applications, such as: surveillance, in-vehicle, and industrial automation applications, etc.

DE-1000 series supports wide temperature range from -25°C to 70°C, wide range (9~48V) DC power input, power protection, cable free and one-piece housing design, as well as compliant with EN50155 certification for rail transportation applications; it is designed to ensure stable operation in robust and harsh environments.

## Specifications

### Processor

- Onboard Intel® Atom™ Processor E3845 Quad Core, 1.91 GHz with AMI 64Mbit SPI BIOS.

### Memory

- 2x 204-Pin DDR3L 1066 / 1333MHz SO-DIMM (un-buffered and non-ECC), Max. up to 8GB

### Graphics

- Intel® HD Graphics Max. 792 MHz
- Support Dual Display
  - 1x DVI and 1x DisplayPort
  - 1x DVI-D and 1x VGA (with optional split cable)
  - 1x DisplayPort and 1x VGA (with DVI-I to VGA adapter)

### Storage

- 2x 2.5" SATA HDD Bay
- 1x Internal mSATA Slot (Shared by Mini-PCIe Socket)
- 1x External CFast Socket
- 1x External SIM Card Socket

### Watchdog Timer

- Software Programmable Supports 1~255 sec. System Reset

### External I/O Interface

- 1x DVI-I & 1x DisplayPort
- 2x GbE LAN Port (Intel® i210-AT, Support Wake-on-LAN and PXE)
- 1x Mic-in and 1x Line-out (Codec: Realtek ALC888S)
- 1x USB 3.0 Port & 4x USB 2.0 Port
- 1x 4 Isolated DI & 4 Isolated DO Port
- 6x COM (DB9, RS232/422/485 with Auto Flow Control)
- 1x PS/2 Port
- 2x Antenna Hole
- 1x Power Switch
- 1x AT/ATX Switch
- 1x Remote Power Connector and Reset Connector

### Expansion

- 2x Full-size Mini PCIe Socket for Wi-Fi / GSM / Expansion Module
- 2x Universal I/O Bracket
- 2x PCIe x1 (DE-1002-EE Only)
  - Support maximum dimension of add-on card (H x L): 111.15mm x 174.63mm
- 2x PCI (DE-1002-PP Only)
  - Support maximum dimension of add-on card (H x L): 111.15mm x 174.63mm

**Power Requirement**

- Support AT/ATX Power Mode
- Power Input Voltage 9~48VDC
- One 3-pin Terminal Block Connector
- Optional Power Adapter AC/DC 12V/5A 60W

**Physical**

- Dimension: 203mm (W) x 200mm (D) x 114.5mm (H)
- Weight: 3.66 kg
- Construction: Aluminum Chassis with Fan-less Design
- Mounting: Wall Mounting
- Cable-less Design

**Environment**

- Operating Temperature: -25°C to 70°C (ambient with air flow; with Industrial Grade Peripherals)
- Storage Temperature: -30°C to 85°C
- Relative Humidity: 10%~95% (non-condensing)
- Shock: 50 Grms  
(With SSD According to IEC 60068-2-27, Half Sine, 11ms Duration)
- Vibration: Random: 5 Grms  
(With SSD According to IEC 60068-2-64, 5~500Hz, 1 hr/axis)

**Digital Input & Output**

- 4x Digital Input (Source Type)
  - Input Voltage (Dry Contact):
    - Logic 0: Close to GND
    - Logic 1: Open
  - Input Voltage:
    - Logic 0: 3V max.
    - Logic 1: 5V min. (DI to COM-)
- 4x Digital Output
  - Supply Voltage: 5~30VDC
  - Sink Current: 580 mA Max. Per Channel

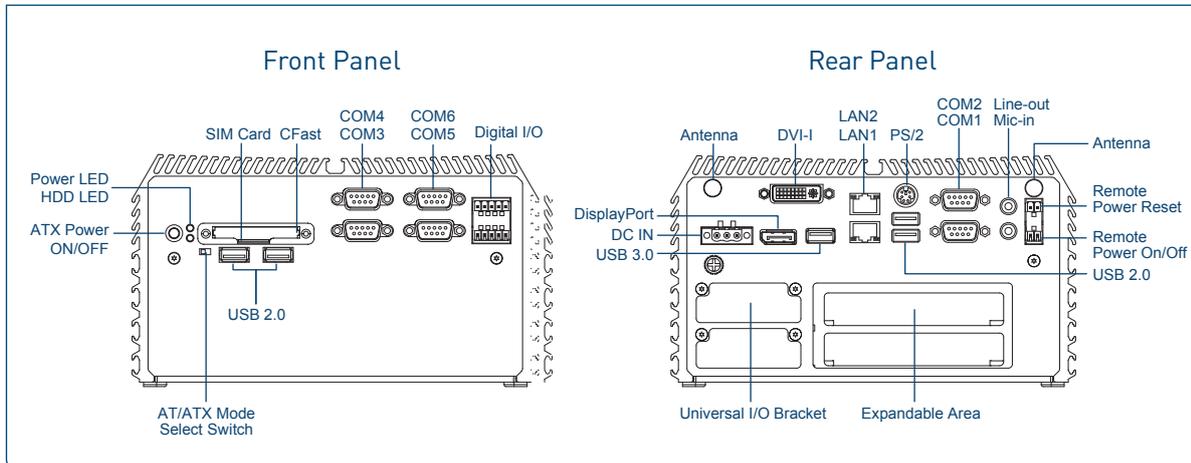
**Regulations**

- CE
- EN 50155
- FCC Class A
- EN 50121-3-2

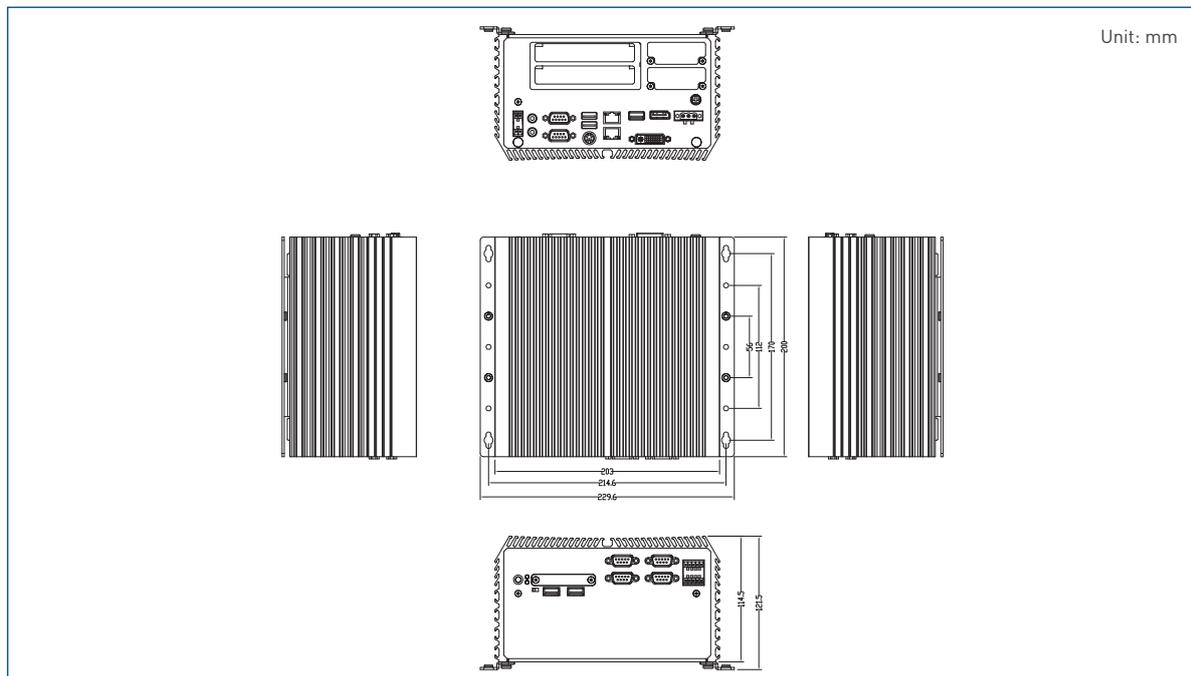
**Operating System**

- Windows® 10
- Windows® 8
- Windows® Embedded 8 Standard
- Windows® 7
- Windows® Embedded Standard 7
- Linux® Ubuntu 14.04

»» External I/O Mechanical Layout



»» Dimensions



## Ordering Information

### Available Models

| Model No.         | Product Description   |
|-------------------|---|
| <b>DE-1002-EE</b> | Intel® Atom™ E3845 Quad Core Power Efficient Fanless Computer with 2x PCIe x1 Expansion |
| <b>DE-1002-PP</b> | Intel® Atom™ E3845 Quad Core Power Efficient Fanless Computer with 2x PCI Expansion     |

### Package Checklist

- DE-1002 Embedded System x 1
- Utility DVD Driver x 1
- DIO Terminal Block Connector x 2
- Power Terminal Block Connector x 1
- Remote Power Terminal Block Connector x 2
- DVI-I to VGA Adapter x 1
- Screw Pack x 1
- Wall Mount Kit x 1

### Optional Accessories

| Model No.       | Description  |
|-----------------|--|
| GSM60A12-CIN    | Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug 5.0mm Pitch, GSM60A12-P1J             |
| SL2-SL3         | US 2 heads power cord, US B type to IEC C13, SVT 18AWG/3C Black 1.8M SL-2+SL-3               |
| SL6-SL3         | EU 2 heads power cord, EU G type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M SL-6+SL-3         |
| QP026-SL3       | UK 2 heads power cord, UK I type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M QP026+SL-3        |
| 59381560000E    | MINI-DIN(M) [PS/2 KB+MS] TO MINI-DIN(F) [PS/2 KB]+MINI-DIN(F) [PS/2 MS] L:10CM, 59381560000E |
| N0307-140507-01 | DVI-I(M) TO DVI-D(F) + VGA(F) Cable, L=200mm, N0307-140507-01                                |