

# MXC-2301

## Intel® Atom™ Quad-Core Processor-based Fanless Expandable Embedded Computer with PCI/PCIe Slots

### Features

- Intel® Atom™ E3845 processor with 4 core @1.91 GHz SoC
- 2x DDR3L SO-DIMM, supporting up to 8 GB memory
- 2 PCI + 1 PCIe x4 or 3 PCI expansion slots
- Built-in dual-port isolated CAN and 16-CH isolated DI and DO
- 1 DisplayPort + 1 DVI-I
- 2 Intel GbE ports with teaming function, 1 USB 3.0 + 4 USB 2.0 ports
- 1 external CF slot and 1 internal PCIe Mini Card socket with USIM socket
- 2 software-programmable RS-232/422/485 + 2 RS-232 ports
- Built-in 9 to 32 VDC wide-range DC power input
- Rugged, -20°C to 70°C Fanless operation (w/ industrial SSD)
- Built-in ADLINK SEMA 2.2 (Smart Embedded Management Agent)



Optional GPS and 4G/LTE module 

### Software Support

- Windows® 8/Windows® 8 Embedded
- Windows® 7/ Windows® 7 Embedded
- Linux\* Fedora 18

### Introduction

Featuring the latest Intel® Atom™ E3845 processor (Formerly Bay Trail), the Matrix MXC-2301 excels with minimal power consumption, exceptional 3D graphics, and powerful media acceleration, delivering a leading improvement in performance and cost-efficiency over any previous generation Atom-based system.

Features include dual-port CAN connectivity supported by a Philips SJA1000 controller that can run independently or bridged at the same time, bus arbitration and error detection with auto correction and ission capability, and 16-CH isolated DI/O for general industrial control.

An increased total 3PCI/PCIe expansion slot count allows installation of a variety of off-the-shelf PCI/PCIe cards for configurable applications, and an internal PCI Express Mini Card socket and USIM slot support extension of additional functions, such as wireless connection.

In addition, the MXC-2301 offers one DisplayPort and one DVI-I port for dual independent display with full HD, four USB 2.0 and one USB 3.0 ports, and 2 GbE LAN ports with teaming function. With ADLINK's proprietary SEMA (Smart Embedded Management Agent) tool, the MXC-2300 maximizes manageability and security for a world of applications. Provide efficient remote monitoring of system activity and health in real time, system control over a robust secured channel, and fully manageable complete utilization of system resources.

With its ruggedized architecture, flexibility, and rich I/O capacity, the MXC-2301 minimal power consumption, abundant features, and leading performance and cost-efficiency make it the embedded system of choice for industrial automation, facility management, and intelligent transportation systems and applications demanding reliability in harsh environments.



## Specification

| Model Name            | MXE-2301                                                                                                                             |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>System Core</b>    |                                                                                                                                      |
| Processor             | Intel® Atom™ Processor E3845 Processor, 1.91 GHz<br>4 cores; 542/792 MHz graphics frequency (Base/Turbo)                             |
| Chipset               | Intel SoC (System on Chip)                                                                                                           |
| Video                 | 1 x DisplayPort , 1 x DVI and 1 x VGA                                                                                                |
| Memory                | 4GB DDR3L 1333 MHz SODIMM (up to 8 GB)                                                                                               |
| <b>I/O Interface</b>  |                                                                                                                                      |
| Expansion Slot        | 2 PCI+1 PCIe x4 with other options for 3 PCI and or 2 PCI + 1PCI x4                                                                  |
| USIM                  | 1 USIM socket for 3G communication                                                                                                   |
| Mini PCIe             | 1 internal mini PCIe card socket                                                                                                     |
| Ethernet              | 2x Intel® WGI210IT GbE ports                                                                                                         |
| Serial Ports          | 2 software-programmable RS-232/422/485 (COM 1&2)<br>with auto-flow control, 2 RS-232 (COM 3&4)                                       |
| DIO                   | 16-CH DI and 16-CH DO with 1.5KV isolation                                                                                           |
| CAN                   | 2 DB9 isolated CAN port with SJA1000 CAN controller                                                                                  |
| USB                   | 5 external USB ports (4 USB 2.0 + 1 USB 3.0) + 1 internal USB 2.0                                                                    |
| <b>Power Supply</b>   |                                                                                                                                      |
| DC Input              | 9-32VDC                                                                                                                              |
| AC Input              | Optional 100 W external AC-DC adapter for AC input                                                                                   |
| <b>Storage</b>        |                                                                                                                                      |
| HDD                   | 1x onboard SATA-II port for 2.5" HDD/SSD installation<br>1 x Type II CF socket CompactFlash socket                                   |
| <b>Mechanical</b>     |                                                                                                                                      |
| Optional Fan Module   | Optional fan module for heat dissipation, Smart Fan Control                                                                          |
| Dimensions            | 142 (W) x219 (D) x210(H) mm (WxDxH) (5.84" x 8.76" x 8.4)                                                                            |
| Construction          | Full Aluminum Alloy                                                                                                                  |
| Weight                | 3.5 kg (7.73 lbs)                                                                                                                    |
| Mounting              | Wall mounting                                                                                                                        |
| <b>Environmental</b>  |                                                                                                                                      |
| Operating Temperature | Standard: 0°C to 50°C (32°F to 122°F)<br>Extended Temperature Option<br>-20°C to 70°C (-4°F to 158°F) with Industrial SSD/mSATA SSD) |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)                                                                                                       |
| Humidity              | Approx. 95% @40°C (non-condensing)                                                                                                   |
| Vibration             | Operating, 5 Grms, 5-500 Hz, 3 axes (w/ CF or SSD)<br>Operating, 0.5 Grms, 5-500 Hz, 3 axes (w/ HDD)                                 |
| ESD                   | Contact +/-4KV, Air +/-8KV                                                                                                           |
| Shock                 | Operating, 50 G, half sine 11 ms duration (w/ CF or SSD)                                                                             |
| EMC                   | CE & FCC Class A                                                                                                                     |
| Safety                | UL by CB                                                                                                                             |