MXE-3000 Series

Intel® Atom™ D510 Fanless Embedded Computer with Integrated I/O

Introduction

The Matrix MXE-3000 series is the latest addition to the ADLINK's Matrix E series. It is based on the Intel® Atom™ D510 dual-core processor to offer greater computing power for your applications. The MXC-3000 series features an Intel® Atom™ D510 dual-core 1.66 GHz processor to boost its performance to almost twice that of the Atom™ N270 platform, while maintaining the same power consumption. This distinctive feature delivers to the ability to access multiple devices using a compact and rugged controller without the need for additional serial communication cards.

Leveraging the design of the Matrix MXE-1000 series, the MXE-3000 series retains all the remarkable features of the Matrix E series, including rugged -20°C to 70°C* fanless operation, 5 Grms vibration resistance, and 9-32 V_{DC} wide range power input. The design of serial ports is also flexible to meet the needs of a wide variety of applications. Two COM ports can be configured to RS-232, RS-422, or RS-485 via a BIOS setting. The MXE-3000 series is also equipped with a mini-PCIe socket, USIM socket, six USB 2.0 ports, and its fanless and cable-less structure gives you extensive durability for long-term usage.

Combing rugged design and integrated I/O functions, the ADLINK MXE-3000 series provides the best choice for your versatile applications.

Features

- Intel® Atom™ D510 1.66 GHz processor + Intel® ICH8-M chipset
- Rugged, -20°C to 70°C fanless operation*
- Built-in 9 V_{DC} to 32 V_{DC} wide-range DC power input
- Two software-programmable RS-232/422/485 ports, and two RS-232 ports
- Up to three 1000/100/10 Mbps Ethernet ports
- Up to six USB 2.0 ports
- One internal PCIe Mini Card socket and USIM socket
- One external CF socket

Applications

- Toll Gate Controllers
- Smart Grid Applications
- Intelligent Transportation Systems
- Facility Management
- Medication Management
- Pharmacy Automation
- Environmental Monitoring
- Building Automation

Software Support

- Windows® XP / XP Embedded / 7, Linux*
  *Linux Distribution by Request
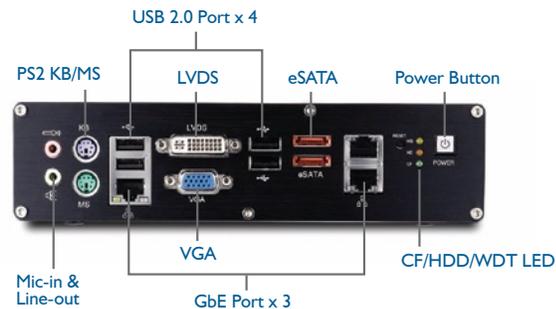
MXE-3000 Front Panel
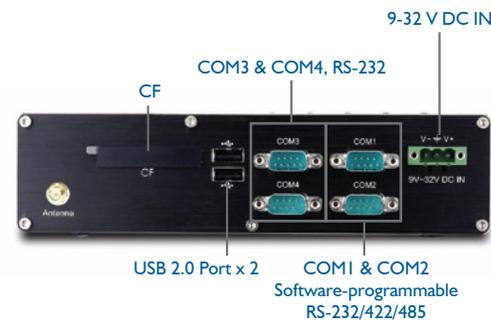
MXE-3000 Back Panel

MXE-3000 with Antenna

*Extending the operating temperature to -20°C to 70°C is optional and requires use of an industrial solid-state drive storage device.

▼ Specifications

Model Name	MXE-3002
System Core	
■ Processor	Intel® Atom™ D510 1.66 GHz CPU
■ Chipset	Intel® I/O Controller Hub 8 Mobile (ICH8-M)
■ Video	VGA+LVDS output by VGA+DVI-I stacked connector • Analog CRT, supports QXGA (2048 x 1536) resolution • 18-bit LVDS output by DVI-I connector
■ Memory	1 GB DDR2 667 MHz SODIMM module
I/O Interface	
■ Ethernet	3 GbE ports (1 Realtek® 8111C + 2 Intel® 82574L)
■ Serial Port	2 software-programmable RS-232/422/485 (COM1 & COM2) 2 RS-232 (COM3 & COM4)
■ USB	6 USB 2.0 ports
■ Audio	1 mic-in and 1 line-out
■ KB/MS	1 PS/ 2 keyboard and 1 PS/ 2 mouse
■ Mini PCIe	1 internal PCIe mini card socket
■ USIM	1 USIM socket for 3G communication (used for a 3G-mini module)
Power Supply	
■ DC Input	Built-in 9-32 V_{DC} wide-range DC input 3P pluggable connector with latch (GND, V-, V+)
■ AC Input	Optional 80 W external AC-DC adapter for AC input
Storage Device	
■ SATA HDD	On-board SATA port for 2.5" HDD/SSD installation
■ CompactFlash	1 type II CF socket, supporting PIO and DMA modes
■ eSATA	2 eSATA interface connectors on front panel for storage expansion
Mechanical	
■ Dimensions	210 mm (W) x 170 mm (D) x 53 mm (H) (8.3" x 6.7" x 2.1")
■ Weight	1.8 kg (3.97 lbs)
■ Mounting	Wall-mount kit
Environmental	
■ Operating Temperature*	Standard: 0°C to 50°C (w/HDD) Extended option: -20°C to 70°C (w/ industrial SSD)
■ Storage Temperature	-40°C to 85°C (excl. HDD/SSD/CF)
■ Humidity	~95% @ 40°C (non-condensing)
■ Vibration	Operating, 5 Grms, 5-500 Hz, 3 axes (w/ CF or SSD) Operating, 0.5 Grms, 5-500 Hz, 3 axes (w/ HDD)
■ ESD	Contact +/-4 KV and Air +/-8 KV
■ Shock	Operating, 100 G, half sine 11 ms duration (w/ CF or SSD)
■ EMC	CE and FCC Class A

*Extending the operating temperature to -20°C to +70°C is optional and requires use of an industrial solid-state drive storage device.

▼ Ordering Information

Model Name	Description	COM Ports	GbE	USB	Memory
MXE-3002	Intel® Atom™ D510 1.66 G fanless embedded computer	2 RS-232/422/485 2 RS-232	3	6	1 GB DDR2

▼ Optional Accessories

2 GB DDR2 Upgrade	Upgrade to 2 GB DDR2 memory
320 GB HDD Option	Factory-installed 320 GB SATA hard disk drive (0 to 60°C)
32 GB SSD Option	Factory-installed 32 GB SATA solid-state drive (0 to 70°C)
8 GB industrial SSD Option	Factory-installed 8 GB industrial-grade SATA solid-state drive (-40 to 85°C)
80 W AC-DC adapter	80 W industrial-grade AC-DC adapter (-20 to 70°C)
Extended Temperature Option*	Optional Screening to extend the operating temperature of the MXE-3000 series to -20°C to 70°C

*This option guarantees cold boot of the system at -20°C and operation with 100% loading at 70°C. The industrial solid-state drive storage option is required.

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[MXE-3002/M2G/160GHDD](#) [MXE-3002/M2G/SSD8G-S](#) [MXE-3002/SSD8G-S](#) [MXE-3002/M2G/32GSSD-MLCCT](#)