MXE-3000 Series

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



Introduction

The Matrix MXE-3000 series is based on the Intel® Atom™ D510 dual-core processor to offer greater computing power. 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 series, the MXE-3000 series retains all the remarkable features of the Matrix E series, including rugged -20°C to 70°C (-4°F to 158°F)* fanless operation, 5 Grms vibration resistance, and 9-32 VDC 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 (-4°F to 158°F) fanless operation*
- Built-in 9 VDC to 32 VDC 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

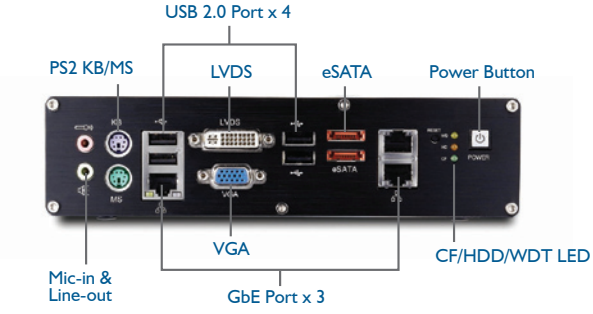
- Toll Gate Controllers
- Smart Grid Applications
- Intelligent Transportation Systems
- Facility Management
- Medication Management
- Pharmacy Automation
- Environmental Monitoring
- Building Automation

Software Support

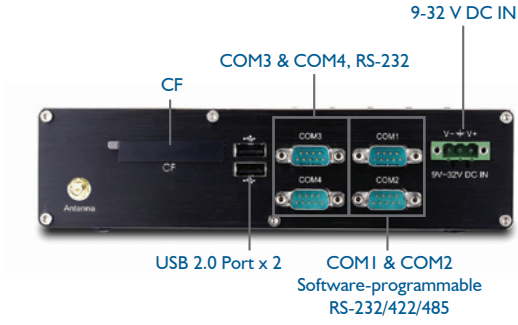
OS Information

- Windows® XP / XP Embedded / 7
- Linux*

*Linux Distribution by Request



MXE-3000 Front Panel



MXE-3000 Back Panel



MXE-3000 with Antenna

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*Extending the operating temperature 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)
WDT	Supports a watchdog timer
Power Supply	
DC Input	Built-in 9-32 VDC 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 I 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 (32°F to 122°F) Extended temperature option*: -20°C to 70°C (-4°F to 158°F) (w/ industrial SSD)
Storage Temperature	-40°C to 85°C (-40°F to 185°F) (excl. HDD/SSD/CF)
Humidity	~95% @ 40°C (104°F) (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

Ordering Information

Model Name	Description	COM Ports	GbE	USB	Memory
MXE-3002	Intel® Atom™ D510 1.66 GHz 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
500 GB HDD Option	Factory-installed 500 GB SATA hard disk drive (0°C to 60°C, 32°F to 140°F)
32 GB SSD Option	Factory-installed 32 GB SATA solid-state drive (0°C to 70°C, 32°F to 158°F)
8 GB industrial SSD Option	Factory-installed 8 GB industrial-grade SATA solid-state drive (-40°C to 85°C, -40°F to 185°F)
80 W AC-DC Adapter	80 W industrial-grade AC-DC adapter (-20°C to 70°C, -4°F to 158°F)
90 W AC-DC Adapter	90 W commercial grade AC-DC adapter (0°C to 50°C, 32°F to 122°F)
Extended Temperature Option*	Optional Screening to extend the operating temperature of the MXE-3000 series to -20°C to 70°C (-4°F to 158°F)

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