

MXE-5300/5310 Series

Powerful 2nd Generation Intel® Core™ i7 Processor-based Fanless Embedded Computer with High Performance Wireless Support



MXE-5300 Series



MXE-5310

Introduction

The Matrix MXE-5300/5310 series is the latest addition to ADLINK's Matrix E series, based on the Intel® Core™ i7-2710QE quad-core processor, boosting performance by almost 150% with minimal increase in power consumption, and offering outstanding computing power tailored to a variety of specific application needs.

Featuring a new design simplifying system component replacement and maintenance, the MXE-5300/5310 series allows effortless access to storage, memory, and wireless modules. Leveraging proprietary mechanical engineering, the MXE-5300 series also retains all the popular features of the Matrix E series, including rugged -20 to 70°C (-4 to 158°F) fanless operation, 5 Grms vibration resistance, and 9-32V wide range DC input.

In addition, the MXE-5300/5310 series provides dual mini-PCIe sockets and a USIM socket supporting wireless protocols such as 3G, GPS, WiFi and Bluetooth. ADLINK's proprietary wireless enhancement technology empowers the MXE-5300/5310 series to deliver industrial-grade wireless performance.

The MXE-5300/5310 series accommodates Intel® Active Management 7.0, for remote system management, enabling users to easily perform maintenance, diagnostic, update, and even BIOS configuration tasks on the MXE-5300/5310 series via Ethernet connection.

Combining superior processor performance, innovative mechanical design, superior wireless capability, and rich IO, all in a compact and robust package, the ADLINK MXE-5300/5310 series is an idea choice for a wide range of applications.

Features

- Intel® Core™ i7-2710QE (Quad-Core) / i5-2510E / i3-2330E Processor + Intel® QM67 chipset
- Rugged, up to -20°C to 70°C (-4°F to 158°F) fanless operation (w/ industrial SSD)*
- Intel® Active Management Technology 7.0 support
- Optional wireless function enhancement (WCDMA, 802.11 a/b/g/n, BT3.0, AGPS)
- 1 on-board SATA-III (6.0 Gb/s) port
- 6 USB ports (USB 3.0 port x2 + USB 2.0 port x4), 4 DI + 4 DO w/ 1.5KV isolation, 4 GbE ports
- 1 external CFast socket; 2 onboard mini PCIe card sockets
- 2 software-programmable RS-232/422/485 (COM1&2), 2 RS-232 (COM3&4)



MXE-5300 Front Panel

MXE-5300 Back Panel

Applications

- Intelligent Transportation Systems
- Facility Management
- Building Automation Systems (BAS)
- Digital Surveillance
- In-vehicle Multimedia and Surveillance

Software Support

OS Information

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

*Linux Distribution by Request

- An Ingenious Design for Easy Maintenance



MXE-5300 with Antenna



1. Ready-to-deploy wall mount kit



2. One screw removable storage bracket



3. Flexible memory expansion slots

*Extending the operating temperature is optional and requires use of an industrial solid-state drive storage device or CFast.

Specifications

Model Name	MXE-5301	MXE-5302	MXE-5303	MXE-5311/5312/5313
System Core				
■ Processor	Intel® Core™ i7-2710QE	Intel® Core™ i5-2510E	Intel® Core™ i3-2330E	Intel® Core™ i7-2710Q E/ i5-2510E/ i3-2330E
■ Chipset	Intel® Mobile Platform Controller Hub (QM67)			
■ Video	VGA+DVI dual display output by DVI-I connector Analog CRT, supports QXGA (2048 x 1536) resolution DVI output, supports up to 1920 x 1080 resolution			
■ Memory	4 GB DDR3 1066 MHz SODIMM module (Max. capacity 16 GB with 2 SODIMM socket option)			
I/O Interface				
■ Ethernet	4 GbE ports (2 Realtek® 8111C + 1 Intel® 82574IT + 1 82579LM PHY)			
■ Serial Ports	2 software-programmable RS-232/422/485 (COM1 & COM2) 2 RS-232 (COM3 & COM4)			
■ USB	4 USB 2.0 ports & 2 USB 3.0 ports			
■ DIO	4 DIO w/ 1.5KV isolation			
■ Audio	1 mic-in and 1 Line-out			
■ KB/MS	1 PS/2 keyboard and 1 PS/2 mouse (combo)			
■ Mini PCIe	2 internal PCIe mini card sockets			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 V _{DC} wide-range DC input 3P pluggable connectors with latch (GND, V-, V+)			
■ AC Input	Optional 160 W external AC-DC adapter for AC input			
Storage Device				
■ SATA HDD	1 SATA-III port for 2.5" HDD/SSD installation			One 2.5" HDD/SSD + one 3.5" HDD installation
■ CompactFlash	1 CFast slot			
■ eSATA	1 eSATA interface connectors on rear panel for storage expansion			
Mechanical				
■ Dimensions	230 mm (W) x 205 mm (D) x 75 mm (H) (9" x 8" x 2.9")			230 mm (W) x 205 mm (D) x 125 mm (H) (9" x 8" x 2.92")
■ Weight	3.8 kg (8.39 lbs)			5 kg (11.05 lbs)
■ Mounting	Wall-mount kit			
Environmental				
■ Operating Temperature*	Standard: 0°C to 50°C (32°F to 122°F) Extended Temperature: -20°C to 60°C (-4°F to 140°F) (w/industrial SSD or CFast)			Standard: 0°C to 50°C (32°F to 122°F) -
■ Storage Temperature	-40°C to 85°C (-40°F to 185°F) (excl. HDD/SSD/CFast)			
■ Humidity	~95% @ 40°C (104°F) (non-condensing)			
■ Vibration	Operating, 5 Grms, 5-500 Hz, 3 axes (w/ CFast or SSD) Operating, 0.5 Grms, 5-500 Hz, 3 axes (w/ 2.5" HDD)			Operating, 0.2 Grms, 5-500 Hz, 3 axes (w/ 3.5" HDD)
■ ESD	Contact +/-4 KV and Air +/-8 KV			
■ Shock	Operating, 50 G, half sine 11 ms duration (w/ CFast or SSD)			
■ EMC	CE and FCC Class A			

Ordering Information

Model Name	Description	Storage	Memory	DIO
MXE-5301	Intel® Core™ i7-2710QE fanless computer	One 2.5" HDD/SSD	4 GB DDR	4 DI + 4 DO w/1.5 KV isolation
MXE-5302	Intel® Core™ i5-2510E fanless computer	One 2.5" HDD/SSD	4 GB DDR	4 DI + 4 DO w/1.5 KV isolation
MXE-5303	Intel® Core™ i3-2330E fanless computer	One 2.5" HDD/SSD	4 GB DDR	4 DI + 4 DO w/1.5 KV isolation
MXE-5311	Intel® Core™ i7-2710QE fanless computer	One 2.5" HDD/SSD + one 3.5" HDD	4 GB DDR	4 DI + 4 DO w/1.5 KV isolation
MXE-5312	Intel® Core™ i5-2510E fanless computer	One 2.5" HDD/SSD + one 3.5" HDD	4 GB DDR	4 DI + 4 DO w/1.5 KV isolation
MXE-5313	Intel® Core™ i3-2330E fanless computer	One 2.5" HDD/SSD + one 3.5" HDD	4 GB DDR	4 DI + 4 DO w/1.5 KV isolation

Optional Accessories

8/16 GB DDR3 Upgrade	Upgrade to 8/16 GB DDR3 memory
320 GB HDD Option	Factory-installed 320 GB SATA hard disk drive (0 to 50°C) (32 to 122°F)
2 TB HDD Option	Factory-installed 2 TB SATA hard disk drive (0 to 50°C) (32 to 122°F) (MXE-5311/5312/5313)
8 GB/32 GB/64 GB SSD Option	Factory-installed of 8 GB/ 32 GB SLC type or 64 GB MLC type industrial-grade SATA solid state disk (-40 to 85 °C) (-40 to 185 °F)
160 W AC-DC Adapter	160 W industrial-grade AC-DC adapter (-20 to 70°C) (-4 to 158°F)
Wireless Module Option	3G/WiFi/BT/GPS wireless modules (3G/GPS for MXE-5301/5302/5303 only)
RF Matching Module Option	3G/WiFi/BT/GPS performance enhancement with RF Matching Module (MXE-5301/5302/5303 only)
Extended Temperature Option*	Optional screening to extend the operating temperature of the MXE-5301 to -20 to 60°C (-4 to 140°F) and MXE-5302/5303 to -20 to 70°C (-4 to 158°F)