

▶ MXE-5300 Series

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



Introduction

The Matrix MXE-5300 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 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 fanless operation, 5 Grms vibration resistance, and 9-32V wide range DC input.

In addition, the MXE-5300 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 to deliver industrial-grade wireless performance.

The MXE-5300 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 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 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 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 onboard 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)

Applications

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

Software Support

- Windows® XP / XP Embedded / 7, Linux*
- *Linux Distribution by Request

■ An Ingenious Design for Easy Maintenance



MXE-5300 Front Panel

MXE-5300 Back Panel



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

Specifications

Model Name	MXE-5301	MXE-5302	MXE-5303
System Core			
■ Processor	Intel® Core™ i7-2710QE	Intel® Core™ i5-2510E	Intel® Core™ 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 (Up to 16 GB support)		
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 speaker-out		
■ KB/MS	1 PS/2 keyboard and 1 PS/2 mouse (combo)		
■ Mini PCIe	2 internal PCIe mini card sockets		
■ 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 connectors with latch (GND, V-, V+)		
■ AC Input	Optional 160 W external AC-DC adapter for AC input		
Storage Device			
■ SATA HDD	1 onboard SATA-III port for 2.5" HDD/SSD 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")		
■ Weight	3.8 kg (8.39 lbs)		
■ Mounting	Wall-mount kit		
Environmental			
■ Operating Temperature*	Standard: 0°C to 50°C (w/HDD) Extended Temperature: -20°C to 60°C (w/industrial SSD or CFast) Extended Temperature: -20°C to 70°C (w/industrial SSD or CFast)		
■ Storage Temperature	-40°C to 85°C (excl. HDD/SSD/CFast)		
■ Humidity	~95% @ 40°C (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/ 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		

*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	DIO	COM Ports	GbE	USB	Memory
MXE-5301	Intel® Core™ i7 fanless embedded computer	4 DI & 4DO w/1.5KV isolation	2 RS-232/422/485, 2 RS-232	4	6	4 GB DDR3
MXE-5302	Intel® Core™ i5 fanless embedded computer	4 DI & 4DO w/1.5KV isolation	2 RS-232/422/485, 2 RS-232	4	6	4 GB DDR3
MXE-5303	Intel® Core™ i3 fanless embedded computer	4 DI & 4DO w/1.5KV isolation	2 RS-232/422/485, 2 RS-232	4	6	4 GB DDR3

Optional Accessories

8 GB DDR3 Upgrade	Upgrade to 8 GB DDR3 memory
320 GB HDD Option	Factory-installed 320 GB SATA hard disk drive (0 to 50°C)
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)
160 W AC-DC Adapter	160 W industrial-grade AC-DC adapter (-20 to 70°C)
Wireless Module Option	3G/WiFi/BT/GPS wireless modules
RF Matching Module Option	3G/WiFi/BT/GPS performance enhancement with RF Matching Module
Extended Temperature Option*	Optional screening to extend the operating temperature of the MXE-5301 to -20 to 60°C and MXE-5302/MXE-5303 to -20 to 70°C

*This option guarantees system cold boot at -20°C and operation at 100% load at 70°C, with industrial solid-state drive storage option required.