MXE-5400 Series

Powerful 4th Generation Intel® Core™ i7 Processor-Based Fanless Embedded Computer

Introduction

ADLINK's new Matrix MXE-5400 series of rugged designed quad-core fanless computers, featuring the latest 4th generation Intel® Core™ i7-4700EQ (codename: Haswell) delivers outstanding processor performance with minimum power consumption. Intel's Quick Sync Technology and Core IPG equip the MXE-5400 with market-leading performance boost in image/video related applications.

With the implementation of Intel® vPro™ (iAMT™ 9.0, TXT, TPM 1.2, Intel VT) technology and ADLINK's proprietary SEMA (Smart Embedded Management Agent) tool, the MXE-5400 maximises manageability and security for a world of applications. Together they 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.

The MXE-5400 series accommodates rich I/O interfaces in a compact system size, offering versatile connection to a wide range of applications. Dual mini PCIe slots and USIM socket empower the MXE-5400 to act as a communications hub for a variety of wireless connections, such as BT/WiFi and 3G. One of the two slots is configurable to a mini SATA interface, cooperating with internal SATA storage to deliver RAID 0/1/5 functionality.

Leveraging proprietary mechanical engineering, the MXE-5400 series continues to offer all the popular features of the Matrix E series, including cable-free construction, wide operating temperature ranges, and 5 Grms vibration resistance. The entire ADLINK Matrix line undergoes rigorous testing for operational verification.

Combing superior processor performance, security and manageability, superior wireless capability, and rich I/O, in a compact and robust package, the ADLINK MXE-5400 is an ideal choice for a wide range of applications supporting intelligent transportation, in-vehicle multimedia, and surveillance and factory automation applications.

Features

- Equipped with 4th generation Intel® Core™ i7-4700EQ processor
- Intel® Quick Sync Video technology supported with ADLINK MSDK+
- Intel® vPro™ technology for security and manageability (iAMT™ 9.0, TPM 1.2, TXT, Intel® VT™)
- Built-in ADLINK SEMA 2.2 (Smart Embedded Management Agent)
- Rich I/O :
  - DVI-I+2x DisplayPorts, 6x USB 3.0, 4x GbE ports, 8x isolated DI/O
  - 2x SATA-III (6.0 Gb/s) ports, 2x mPCIe slots (one supporting mSATA SSD)
- Rugged design for -20ºC to 60ºC fanless operation (w/ industrial SSD)

Applications

- Intelligent Transportation Systems
- Digital Security & Surveillance
- Facility Management in Critical Infrastructures
- Building Automation Systems
- In-Vehicle Infotainment Systems
- Factory/Machine Automation

Software Support

OS Information

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

*Linux Distribution by Request

MXE-5400 Series Front Panel

MXE-5400 Series Back Panel

MXE-5400 with Antenna
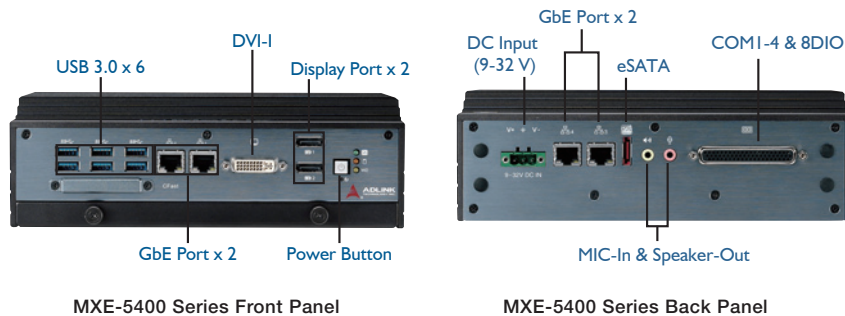
■ Easy Maintenance and High Flexible

- Ready-to-deploy wall mount kit

- Dual 2.5" SATA-III Storage capability
- One internal USB 2.0 for dongle

- Two Mini PCI-e slots (one supporting mSATA SSD)

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

Specifications

Model Name	MXE-5401
System Core	
■ Processor	Intel® Core™ i7-4700EQ 2.4 GHz processor
■ Chipset	Intel QM87
■ Video	Support for up to 3 independent displays, 1*DVI-I + 2*Display port
■ Memory	DDR3L 1600 SODIMM 4GB (up to 16 GB)
I/O Interface	
■ Ethernet	4x GbE (3x Intel® I210IT + 1x I217LM PHY)
■ Serial Ports	4x COM (2x RS-232 + 2x RS-232/422/485)
■ USB	6x USB3.0 + 1x USB2.0
■ DIO	8x DI + 8x DO w/ 1.5 kv isolation
■ Audio	1x Audio In + 1x Line Out
Expansions	
■ Mini PCIe	2x PCIe mini card slots w/ 1x mSATA support (jumper select)
■ USIM	1x USIM slot for 3G communication
Manageability	
■ WDT	Hierarchical WDT supported
■ SEMA	SEMA 2.2 (Smart Embedded Management Agent)
Power Supply	
■ DC Input	9-32 V_{DC}
■ AC Input	optional 160W AC-DC adapter
Storage Device	
■ SATA Storage	2x onboard SATA-III, supporting 2.5" storage
■ CompactFlash	1x type II CFast slot
■ eSATA	1x eSATA
Mechanical	
■ Demension	230 (W) x 205 (D) x 75 (H) mm (9" x 8" x 2.9")
■ Weight	3.8 kg (8.39 lbs)
■ Mounting	Wall mount kit
Environmental	
■ Opertating Temperature*	Standard: 0°C to 50°C (32 °F to 122 °F) / [Extended temperature option*]:-20°C to 60°C (-4°F to 140°F)
■ Storage Temperature	-40°C to 85°C (-40°F to 185°F)
■ Humidity	~95% @ 40°C (non-condensing)
■ Vibration	Operating 5Grms, 5-500 Hz, 3 axes w/ CF or SSD Operating 0.5Grms, 5-500 Hz, 3 axes w/ HDD
■ ESD	Contact +/- 4kV, Air +/- 8kV
■ Shock	Operating 100G, half sine 11 ms duration w/ CF or SSD Operating 20G, half sine 11ms duration. w/ HDD
■ EMC	CE & FCC Class A
■ Safety	UL, CB

Ordering Information

Model Name	Description	Storage	Memory	DIO	Expansion
MXE-5401	**Intel® Core™ i7-4700EQ fanless embedded computer**	2x 2.5" HDD/SSD	4 GB DDR3L	8DI+8DO w/ 1.5kv isolation	2x mPCIe slots (one supporting mSATA SSD)

Optional Accessories

8/16 GB DDR3L Upgrade	Upgrade to 8/16 GB DDR3L memory
500 GB HDD Option	Factory-installed 500 GB SATA HDD (0 to 50°C) (32 to 122°F)
32/64 GB SSD Option	Factory-installed 32/64 GB MLC industrial grade SSD (-20 to 70°C) (-4 to 158°F)
160 W AC-DC Adapter	160 W industrial grade AC-DC adapter (-20 to 60°C) (-4 to 140°F)
Wireless Kit Option	3G/WiFi/BT/GPS wireless kit
Extended Temperature Option*	Optional screening to extend the operating temperature of MXE-5401 to -20 to 60°C (-4 to 140°F)