MXC-6000 Series

Powerful Intel® Core™ i7 Processor-based Fanless Expandable Embedded Computer with PCI/PCIe Slots

Introduction

The Matrix MXC-6000 series of powerful fanless, expandable embedded computers feature the Intel® Core i7 2.0 GHz processor for maximized computing. The MXC-6000 inherits its exceptional fanless and cable-free design from ADLINK's existing Matrix C series.

The MXC-6000 series' Intel® Core i7 2.0 GHz processor and Intel® QM57 chipset deliver a level of performance ideal for image and vision measurement and automation applications. PCI and PCIe slots allow integration of off-the-shelf PCI/PCIe cards for development of configurable application platforms. 16 built-in isolated DIO channels enable standardized industrial control. A DVI-I connector output on the front panel allows direct connection to a LCD panel, and one eSATA port supports storage expansion or hot-swapping SATA drives.

Leveraging a reliable fanless and durable cable-free design, the MXC-6000 series exhibits excellent dependability in harsh environments, where severe temperature variation and vibration may exist. The MXC-6000 series provides an optional hot-pluggable fan module to dissipate heat generated within the system when high power consumption PCI/PCIe cards are installed. This inventive mechanical design retains a cable-free structure which dramatically improves thermal stability when PCI/PCIe cards are installed.

The MXC-6000 also provides an USB 2.0 port internally located on a riser card, enabling heightened reliability for secure applications, with license keys or password encryption on an internal USB dongle dramatically improve system security. Combining a reliable design with computing power and innovative features, the Matrix MXC-6000 series is the optimal choice on which to base any rugged application system.

*Extending the operating temperature is optional and requires use of an industrial solid-state drive storage device.
Heat dissipation from inserted PCI/PCIe cards may affect thermal performance

Features

- Intel® Core i7-620LE 2.0 GHz processor + Intel® QM57 chipset
- Configurable, providing PCI and PCIe x4 slots
- Rugged, -10℃ to 60℃ (-14˚F to 140˚F) fanless operation*
- Built-in 9 V_{DC} to 32 V_{DC} wide-range DC power input
- VGA+DVI-D display by DVI-I connector
- Dual 1000/100/10 Mbps Ethernet ports, 2 RS-232 ports and 2 software-selectable RS-232/422/485 ports
- USB 2.0 port internally on riser card, built-in 16-CH isolated DI and 16-CH isolated DO
- RAID 0, 1 function available through 2 internal SATA-connected HDD or one internal SATA-connected HDD and one external eSATA-connected HDD

Applications

- Machine Automation / Factory Automation
- Image & Vision Measurement
- Test Instrumentation
- Safety Surveillance

Software Support

■ OS Information
- Windows® XP/XP Embedded/7
- Linux*
- INtime*

*Linux Distribution by Request
*Custom BIOS is necessary to support INtime®

■ **MXC-6000 Series Front Panel**

- USB 2.0 Port x 4
- GbE Port x 2
- COM Port x 4
- MIC-In & Line-out
- PS2 KB/MS
- 16-CH DI+ 16-CH DO
- Hot-Swappable CF
- DVI-I
- eSATA
- DC Input (9-32 V)

■ **Inside of the MXC-6000 Series**

- Air In-take Apertures with Filter
- Internal USB Port
- Proprietary Connector for Optional Fan Module Installation
- 2 PCI Slots for MXC-6101D / 1 PCI Slot + 1 PCIe x4 Slot for MXC-6201D

■ **Easy-to-install Hot-pluggable Fan Module**

1. Undo the thumbscrew by hand
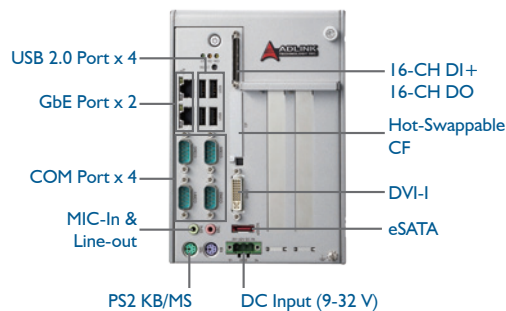2. Withdraw the thumbscrew and remove the top cover
3. Replace it by plugging the hot-pluggable fan module cover into the fan connector on CPU board
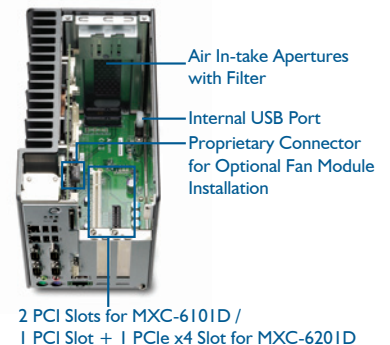
■ **A More Reliable Design of Internal USB Port**

The Matrix internal USB 2.0 port provides increased application security with connectivity for license keys or password encryption on USB dongle.

Specifications

Model Name	MXC-6101D	MXC-6201D
System Core		
■ Processor	Intel® Core i7-620LE 2.0 GHz CPU	
■ Chipset	Intel® QM57	
■ Video	VGA+DVI display by DVI-I connector • Analog CRT, supports QXGA (2048 x 1536) resolution • DVI-I 1.0 (DVI + VGA) (with external cable for connecting DVI-I connector to DVI-D and VGA device) • Optional 48-bit LVDS (by Internal box header)	
■ Memory	2 GB DDR3 800/1066 MHz SODIMM module (Max. capacity 4 GB SODIMM module option)	
I/O Interface		
■ Expansion Slots	2 PCI slots	1 PCI slot and 1 PCIe x4 slot
■ Ethernet	2 GbE ports (2 Intel® 82574L)	
■ Serial Port	2 software-programmable RS-232/422/485 (COM1 & COM2) 2 RS-232 (COM3 & COM4)	
■ USB	4 USB 2.0 ports (external), 1 USB 2.0 port (internal)	
■ Audio	1 mic-in and 1 line-out	
■ KB/MS	1 PS/2 keyboard and 1 PS/2 mouse	
■ DIO	16-CH isolated DI + 16-CH isolated DO	
■ WDT	Supports a watchdog timer	
Power Supply		
■ DC Input	AT/ATX, built-in 9-32 V_{DC} wide-range DC power input 3P pluggable connector with latch (GND, V-, V+)	
■ AC Input	Optional 100 W external AC-DC adapter for AC input	
Storage Device		
■ SATA HDD	On-board SATA port for 2.5" HDD/SSD installation Support SATA RAID 0, 1	
■ CompactFlash	1 external type II CompactFlash socket 1 internal type II CompactFlash socket	
■ eSATA	1 eSATA interface connector for external storage expansion	
Mechanical		
■ Optional Fan Module	Optional hot-pluggable fan module for dissipating heat generated by PCI/PCIe card	
■ Dimensions	130 mm (W) x 225 mm (D) x 183 mm (H) (5.1" x 8.9" x 7.2")	
■ Weight	3.5 kg (7.72 lbs)	
■ Mounting	Wall-mount kit	
Environmental		
■ Operating Temperature*	Standard: 0°C to 50°C (32°F to 122°F) Extended temperature option*: -10°C to 60°C (-14°F to 140°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)	
■ Shock	Operating, 50 G, Half sine 11 ms duration (w/ CF or SSD)	
■ EMC	CE and FCC Class A	

*Without PCI/PCIe card installation.

Ordering Information

Model Name	Description	PCI	PCIe x4	GbE	eSATA	COM	USB	Memory	DIO
MXC-6101D	Intel® Core i7-620LE 2.0 GHz fanless expandable embedded computer	2	0	2	1	4	5	2 GB DDR3	16 DI+16 DO
MXC-6201D	Intel® Core i7-620LE 2.0 GHz fanless expandable embedded computer	1	1	2	1	4	5	2 GB DDR3	16 DI+16 DO

Optional Accessories

MXC-6000 Optional Fan Module	Optional Fan module fan module for the MXC-6000 series
4 GB DDR3 Upgrade	Upgrade to 4 GB DDR3 memory
500 GB HDD Option	Factory-installed 500 GB SATA hard disk drive (0°C to 60°C, 32°F to 140°F)
32/64/128 GB SSD Option	Factory-installed 32/64/128 GB SATA solid-state drive (0°C to 70°C, 32°F to 158°F)
100 W AC-DC Adapter	100 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 MXC-6000 series to -10°C to 60°C (-14°F to 140°F)

*For more options regarding display and COM port cables, please refer to page 1-28.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Embedded Box Computers *category:*

Click to view products by ADLINK Technology *manufacturer:*

Other Similar products are found below :

tBOX312-870-FL-i7-DC   tBOX313-835-FL-RJ-DC   UPOS-3150-R0W0E   ARK-20-S8A1E   R2224WTTYSR   BXNUC9i5QNX

BXNUC9i5QNX1   BKNUC9V7QNX   BKNUC9V7QNX1   2-A0DF-2001   BKCMB1ABB   BKCMB1ABA   EM3000-3845-8-128-WL-U-1

TANK-870AI-i5/8G/2A-R10   PRFE21000038   EM5000-I3-8-128-WL-W7-1   EM3000-3845-8-128-WL-W7-1   PRFE21000039   AMOS-825-

1Q10A1   UPS-EDAI-X70864-U01-DC01   UPX-EDGEI7-A10-1664-F01   MXE-211/M8G   PXIe-3985/M16G   PXIe-3987/M16G/SSD   AIMB-

T1215DA-00Y0E   AIMB-T1217DW-00Y0E   AIMB-T12315A-00Y0E   AMAX-5580-54000A   APAX-5580-474AE   ARK-6322-Q0A2E   DS-

100GF-S8A1E   DS-100GL-S8A1E   EPC-R4680CQ-XAA1E   ESRP-CSS-UNO2484   ITA-1611-10A1E   ITA-1711-10A1E   MIC-710AI-00A1

MIC-720AI-00A1   UNO-247-J1N1AE   UTX-3115FS-S6A2E   AMI220AF-4L-7500   ELIT-1200   AIE100-903-FL   EBOX671-517-FL-DC

MVS900-511-FL   AMS200   SE-92-I7   SI-606   SI-60E   TANK-760-HM86i-i5/4G-R10