

# MXC-6300 Series

High Performance 3rd Generation Intel® Core™ i7/i5/i3 processor-based Fanless System with PCI/PCIe (Gen2) Slots

Coming Soon



## Introduction

The Matrix MXC-6300 series is a high-performance fanless embedded computer integrating a 3rd generation Intel® Core™ i7/ i5/i3 processor and QM77 chipset to provide powerful computing and superior graphic performance. Graphic-intensive and computing-oriented applications including image and vision measurement, machine automation, maritime automation, surveillance and high-resolution medical imaging all benefit.

Increased PCI & PCI express (Gen2) expansion slots allow installation of a variety of PCI, PCIe x8 or PCIe I6 add-on cards, meeting the needs of application platform development environments. In addition, the MXC-6300 series offers 2xDisplayPort and 1xDVI-I port for three independent display support connections, 4xUSB3.0 and 2xUSB2.0 ports, and 2 GbE LAN ports with teaming function. The two 2.5" onboard SATA III ports with high speed SATA 6 Gb/s and RAID 0, 1 ensure all data in the RAID array is fully backed up. Built-in 16CH isolated DIO provides overall industrial control.

Delivering high quality, durable and compact construction, the MXC-6300 leverages a reliable fanless and cable-free configuration, optimal thermal dissipation, and easy installation for flexible and user-friendly system development and application implementation in harsh environments.

## Features

- Supports 3rd generation Intel® Core™ i7/i5/i3 processor + QM77 chipset
- 2 x DDR3 SO-DIMM socket, supporting up to 16GB memory
- 2 PCIe x8 + one PCI slots or 1 PCIe x16 + 1 PCI expansion slots, supporting PCIe Gen2
- 3 independent display capability with onboard 2 DisplayPort + 1 DVI-I
- 6 external USB ports (4 USB 3.0 + 2 USB 2.0) + 1 internal USB 2.0
- 2 Intel® GbE ports with teaming function, Intel® iAMT 8.0
- 2 CFast sockets, onboard SATA III for 2x2.5" HDD/SSD installation, SATA 6Gb/s and RAID 0,1 support
- Built-in 9 V<sub>DC</sub> to 32 V<sub>DC</sub> wide-range DC power input
- Rugged, up to -20°C to 60°C (-4°F to 140°F) fanless operation (w/ industrial SSD)

## Applications

- Factory Automation / Machine Vision
- Intelligent Transportation Systems / Surveillance
- Maritime Automation
- High Resolution Medical Imaging

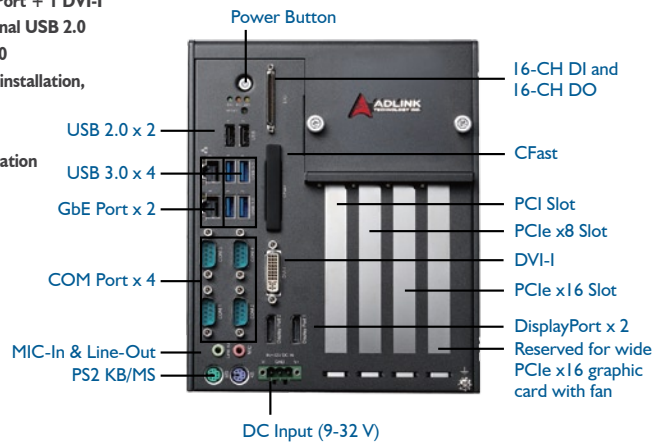
## Software Support

- Windows® 7 / embedded standard 7, XP / XP embedded, Linux

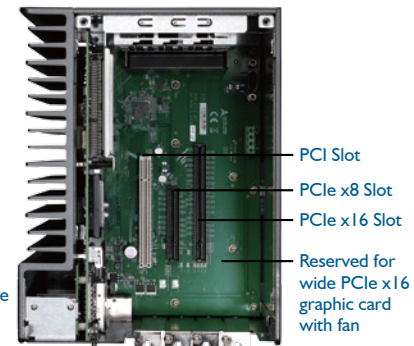
\*Linux Distribution on request\*

- Easy-to-install Optional Fan Module

### MXC-6300 Series Front Panel



### Inside of the MXC-6300 Series



\*Expansion slots:

- 1) 2 PCIe x8 + 1 PCI slots
- 2) 1 PCIe x16 + 1 PCI slots, PCIe x16 signal converting to PCIe x8 automatically if two PCIe x8 cards are integrated at the same time.



1. Undo the thumbscrews by hand



2. Withdraw the thumbscrew and remove the top cover



3. Seat the fan module cover and slide into place, the fan connects automatically

\*Extending the operating temperature to -20°C to +60°C (-4°F to 140°F) is optional and requires use of an industrial solid-state drive storage device. Heat dissipation from inserted PCI/PCIe cards may affect thermal performance.

## Specifications

Model Name	MXC-6301D	MXC-6302D	MXC-6303D
<b>System Core</b>			
■ Processor	Intel® Core™ i7-3610QE Quad Core, 2.3GHz, 6M cache (Max Turbo Frequency 3.3GHz)	Intel® Core™ i5-3610ME Dual Core, 2.7GHz, 3M cache (Max Turbo Frequency up to 3.3GHz)	Intel® Core™ i3-3120ME Dual Core, 2.4GHz, 3M cache
■ Chipset	Intel® Mobile Platform Controller hub (QM77)		
■ Video	Three independent display capability (2 DisplayPort + 1 VGA or 2 DisplayPort + 1 DVI-D) *DP to DVI Active Converter cable ready for connecting a DVI monitor to a DP *DP support VGA/DVI/HDMI by converter cable *1st DP: up to 2560x1600 / 2nd DP: up to 1920x1600 / DVI-I port: up to 1920x1200		
■ Memory	2x 204-pin SO-DIMM socket, supports up to 16GB DDR3 1333/1600 SO-DIMM module		
<b>I/O Interface</b>			
■ Expansion Slots	1 PCI + 2 PCIe x8 slots or 1 PCI + 1 PCIe x16 slots by auto switch (Supports PCIe Gen2) Add-on card length 174mm max		
■ Ethernet	2 Intel® GbE ports (1 Intel® Springville WG1210IT + 1 82579LM) Support Teaming function, Intel iAMT 8.0, Wake On LAN		
■ Serial Ports	2 software-programmable RS-232/422/485 (COM 1&2) with autoflow control, 2 RS-232 (COM 3&4)		
■ USB	6 external USB ports (4 USB 3.0 + 2 USB 2.0) + 1 internal USB 2.0		
■ DIO	16-CH DI and 16-CH DO with 1.5KV isolation		
■ Audio	1 MIC-in and 1 Line-out		
■ KB/MS	1 PS/2 keyboard and 1 PS/2 mouse		
■ WDT	Supports a watchdog timer		
<b>Power Supply</b>			
■ DC Input	Built-in 9-32 V <sub>DC</sub> wide-range DC input pluggable connectors with latch (GND, V-, V+), 2-pin remote power on/off switch		
■ AC Input	Optional 160 W external AC-DC adapter for AC input		
<b>Storage Device</b>			
■ SATA HDD	2 onboard SATA-III for 2.5" HDD/SSD installation, SATA RAID 0, 1 & SATA 6 Gb/s support		
■ CompactFlash	2 CFast socket (external + internal)		
<b>Mechanical</b>			
■ Optional Fan Module	Optional fan module for dissipating heat generated by PCI/PCIe card, Smart fan control		
■ Dimensions	172.5 (W) x 225 (D) x 213 (H) mm (6.9" x 9" x 8.52")		
■ Weight	4.3 kg (9.5 lbs)		
■ Mounting	Wall-mount kit		
<b>Environmental</b>			
■ Operating Temperature	Standard: 0°C to 50°C (32°F to 122°F) (w/HDD) MXC-6301 Extended Temperature: -20°C to 55°C (-4°F to 131°F) (w/industrial SSD or CFast) MXC-6302/6303 Extended Temperature: -20°C to 60°C (-4°F to 140°F) (w/industrial SSD or CFast)		
■ Storage Temperature	-40°C to 85°C (-40°F to 185°F) (excl. HDD/SDD/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/ 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 +60°C (-4°F to 140°F) is optional and requires use of an industrial solid-state drive storage device.

## Ordering Information

Model Name	Description	PCI	PCIe x8 (or PCIe x16)	GbE	USB	Memory	DIO
MXC-6301D	Intel® Core™ i7-3610QE fanless system	1	2 (or 1)	2	7	4GB	16 DI + 16 DO
MXC-6302D	Intel® Core™ i5-3610ME fanless system	1	2 (or 1)	2	7	4GB	16 DI + 16 DO
MXC-6303D	Intel® Core™ i3-3120ME fanless system	1	2 (or 1)	2	7	4GB	16 DI + 16 DO

## Optional Accessories

MXC-6300 Optional Fan Module	Fan module for MXC-6300 series
8GB DDR3 Upgrade	Upgrade to 8GB DDR3 Memory
320/500GB HDD Option	Factory-installed 320/500GB SATA hard disk drive (0°C to 60°C, 32°F to 140°F)
8G/16G CFast Option	Factory-installed 8G/16G industrial CFast (-40°C to 85°C, -40°F to 185°F)
32/64GB SSD Option	Factory-installed 32/64GB MLC SATA solid-state drive (0°C to 70°C, 32°F to 158°F)
160W AC-DC Adapter	160W industrial grade AC-DC adapter (-20°C to 70°C, -4°F to 158°F)
Extended Temperature Option*	Optional screening service to extend the operating temperature of the MXC-6302/6303 to -20 to 60°C (-4°F to 140°F)