

Matrix MXC-2000 Series

Intel® Atom™ Fanless Expandable Embedded Computer with PCI/PCIe Slots



Introduction

ADLINK's MXC-2000 series is an exceptionally fanless expandable embedded computer with configurable PCI and PCIe slots. It is designed to provide a reliable platform for a wide variety of applications by accepting standard PCI and PCIe cards. The Matrix MXC-2000 series can operate in a -20 to 70°C temperature range and withstands 5 Grms vibration. Its fanless and cable-less structure provides additional durability for long-term usage.

The Matrix MXC-2000 series features the Intel® Atom™ N270 1.6 GHz processor to deliver adequate performance at low power. Its PCI and PCIe slots enable the possibility of integrating off-the-shelf PCI/PCIe cards for a configurable application platform. Generic I/O interfaces, such as Gigabit Ethernet, COM, and USB are provided for connecting devices, while VGA+S-Video dual graphic outputs to allow connections to larger displays such as an LCD TV. The Matrix MXC-2000 series also integrates ADLINK in-house DIO design to deliver optional isolated DIO channels for industrial control usage.

ADLINK's Matrix MXC-2000 series is the perfect combination of configurability, reliability, durability, and compactness. With the MXC-2000 series, creating your rugged application system has never been easier.

Features

- Intel® Atom™ N270 1.6 GHz processor + 945GSE chipset
- Configurable, providing both PCI and PCIe x1 slot options
- Rugged, -20°C to 70°C fanless operation*
- Built-in 9 Vdc to 32 Vdc wide-range DC power input
- Dual 1000/100/10 Mbps Ethernet ports
- Two RS-232 ports and two RS-232/422/485 ports
- Two CF sockets for HDD replacement and hot-swappable data storage
- VGA + S-Video independent dual display outputs
- Optional on-board 16-CH isolated DI and 16-CH isolated DO

Applications

- Industrial Automation
- Factory Control
- Test Instrumentation
- Security Surveillance
- Data Acquisition System
- Building Automation

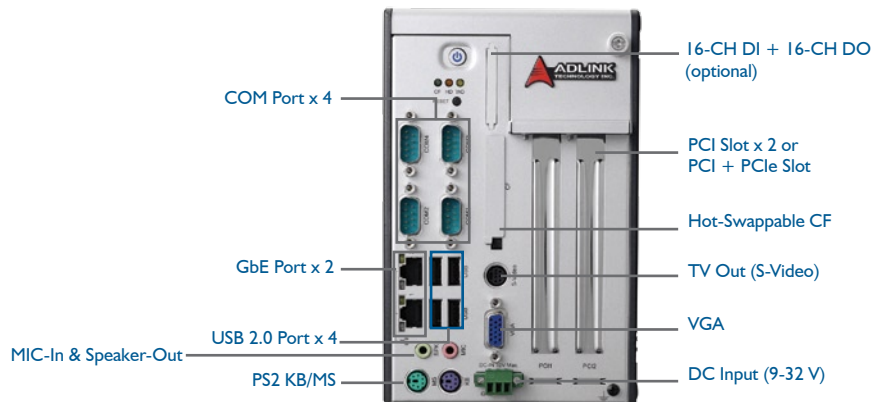


**Cable-free!
Trouble-free!**

Inside of the MXC-2000 Series



Easy Installation for HDD and PCI/PCIe Cards



MXC-2000 Series Front Panel

*Extending the operating temperature to -20°C to +70°C 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-2002	MXC-2011
System Core		
■ Processor	Intel® Atom™ N270 1.6 GHz CPU	
■ Chipset	Intel® 945GSE Graphic Memory Control Hub Intel® I/O Controller Hub 7 Mobile (ICH7-M)	
■ Video	Analog CRT, supports QXGA (2048 x 1536) resolution TV-out, supports s-video and composite outputs	
■ Memory	1 GB DDR2 533 MHz SODIMM module	
I/O Interface		
■ Expansion Slots	2 PCI slots	1 PCI slot and 1 PCIe x1 slot
■ Ethernet	2 GbE ports (Realtek® 8111C)	
■ Serial Ports	2 RS-232/422/485 (jumper selectable, COM1 & COM2) 2 RS-232 (COM3 & COM4)	
■ USB	4 USB 2.0 ports	
■ Audio	1 mic-in and 1 speaker-out	
■ KB/MS	1 PS/2 keyboard and 1 PS/2 mouse	
■ DIO	Optional 16-CH isolated DI + 16-CH isolated DO	
Power Supply		
■ DC Input	Built-in 9-32 Vdc input with over-voltage protection 3P pluggable connector with latch (GND, V-, V+)	
■ AC Input	Optional 60 W external AC-DC adapter for AC input	
Storage Device		
■ SATA HDD	On-board SATA port for 2.5" HDD/SSD installation	
■ CompactFlash	2 type II CF Sockets, supporting PIO and DMA modes CF1 (internal) for HDD replacement CF2 (external) supports hot-swapping	
Mechanical		
■ Dimensions	118 mm (W) x 219 mm (D) x 183 mm (H) (4.6" x 8.6" x 7.2")	
■ Weight	2.8 kg (6.17 lbs)	
■ Mounting	Wall-mount kit	
Environmental		
■ Operating Temperature*	Standard: 0°C to 60°C (w/HDD) Extended option: -20°C to 70°C (w/industrial SSD)	
■ Storage Temperature	-40°C to 85°C (excluding HDD/SSD/CF)	
■ Humidity	~95% @ 40°C (non-condensing)	
■ Vibration	Operating, 5 Grms, 5-500 Hz, 3 axes (w/CF or SSD) Operating, 0.7 Grms, 5-500 Hz, 3 axes (w/HDD)	
■ Shock	Operating, 50 Grms, half-sine 11 ms duration (w/CF or SSD)	
■ EMC	CE and FCC	

*Without PCI/PCIe card installation

Ordering Information

Model Name	Description	PCI	x1 PCIe	GbE	COM	USB	Memory	DIO
MXC-2002	Intel® Atom™ N270 fanless expandable embedded computer	2	0	2	4	4	1 GB DDR2	
MXC-2002D	Intel® Atom™ N270 fanless expandable embedded computer	2	0	2	4	4	1 GB DDR2	16 DI+ 16 DO
MXC-2011	Intel® Atom™ N270 fanless expandable embedded computer	1	1	2	4	4	1 GB DDR2	
MXC-2011D	Intel® Atom™ N270 fanless expandable embedded computer	1	1	2	4	4	1 GB DDR2	16 DI+ 16 DO

Optional Accessories

2 GB DDR2 Upgrade	Upgrade to 2 GB DDR2 memory
160/320 GB HDD Option	Factory-installation of 160/320 GB SATA hard disk drive
32 GB SSD Option	Factory-installation of 32 GB SATA solid-state drive
8 GB Industrial SSD Option	Factory-installation of 8 GB industrial-grade SATA solid-state drive
60 W AC Adapter	60 W industrial-grade AC adapter
Extended Temperature Option*	Extend the operating temperature of the MXC-2000 series to -20°C to 70°C

*This option guarantees cold boot of the system at -20°C and operation with 100% loading at 70°C. The industrial solid-state drive storage option is required.