MXC-2000 Series

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



MXC-2002/2011



MXC-2012

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 MXC-2000 series can operate in a -20 to 70°C (-4 to 158°F) temperature range and withstands 5 Grms vibration. Its fanless and cable-less structure provides additional durability for long-term usage.

The 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 MXC-2000 series also integrates ADLINK in-house DIO design to deliver optional isolated DIO channels for industrial control usage.

ADLINK's 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 slots options
  - 2 PCI Slots for MXC-2002
  - 1 PCI Slot + 1 PCIe x1 Slot for MXC-2011
  - 2 PCI Slot + 1 PCIe x4 Slot for MXC-2012
- Rugged, -20°C to 70°C (-4°F to 158°F) fanless operation*
- Built-in wide-range DC power input
  - 9 VDC to 32 VDC for MXC-2002 and MXC-2011
  - 18 VDC to 36 VDC for MXC-2012
- 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
- IEC-60945 maritime standards compliance (MXC-2012)

Applications

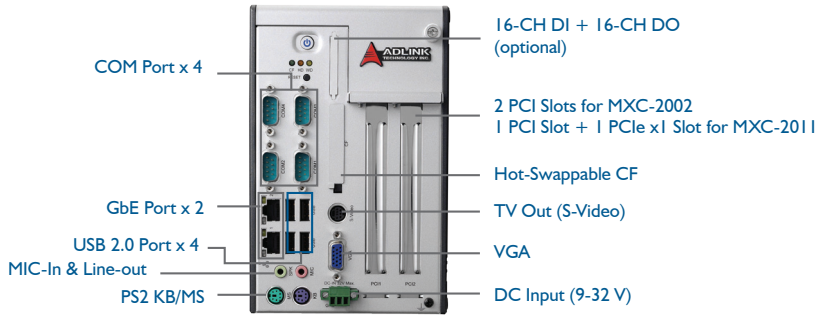
- Industrial Automation
- Factory Control
- Test Instrumentation
- Security Surveillance
- Data Acquisition System
- Building Automation
- Maritime Computer (MXC-2012)

Software Support

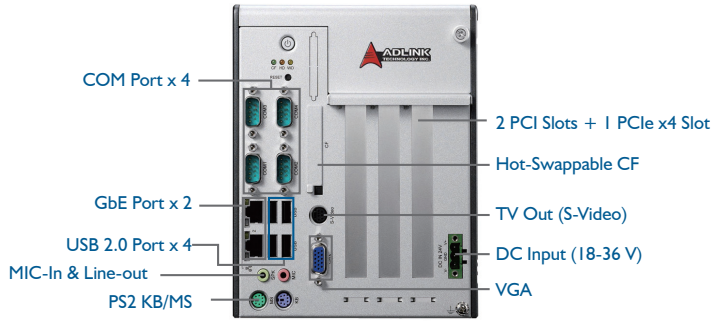
OS Information

- Windows® CE6.0/XP/XP Embedded/7
- Linux*

*Linux Distribution by Request



MXC-2002/MXC-2011 Front Panel



MXC-2012 Front Panel



Easy Installation for HDD and PCI/PCIe Cards

*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.

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Specifications

Model Name	MXC-2002	MXC-2011	MXC-2012
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		
Memory	1 GB DDR2 533 MHz SODIMM module		
I/O Interface			
Expansion Slots	2 PCI slots	1 PCI slot and 1 PCIe x1 slot	2 PCI slots and 1PCIe x4 slot
Ethernet	2 GbE ports (Realtek® 8111C)		
Serial Port	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 line-out		
KB/MS	1 PS/2 keyboard and 1 PS/2 mouse		
DIO	Optional 16-CH isolated DI + 16-CH isolated DO		
WDT	Supports a watchdog timer		
Power Supply			
DC Input	Built-in 9-32 VDC input with over-voltage protection 3P pluggable connector with latch (GND, V-, V+)		Built-in 18-36 VDC isolation DC input
AC Input	Optional 60 W external AC-DC adapter for AC input		Optional 100 W external AC-DC adapter for AC input
Storage Device			
SATA HDD	Onboard SATA port for 2.5" HDD/SSD		
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")		150 mm (W) x 219 mm (D) x 183 mm (H) (5.9" x 8.6" x 7.2")
Weight	2.8 kg (6.17 lbs)		3.1 kg (6.83 lbs)
Mounting	Wall-mount kit		
Environmental			
Operating Temperature*	Standard: 0°C to 50°C (32°F to 122°F) Extended option: -20°C to 70°C (-4°F to 158°F) (w/industrial SSD)		
Storage Temperature	-40°C to 85°C (-40°F to 185°F) (excluding 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, 0.7 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		CE, FCC Class A IEC-60945 Compliance

Ordering Information

Model Name	Description	PCI	PCIe x1	PCIe x4	GbE	COM	USB	Memory	DIO	IEC-60945
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	-
MXC-2012	Intel® Atom™ N270 fanless expandable embedded computer	2	0	1	2	4	4	1 GB DDR2	-	v

Optional Accessories

2 GB DDR2 Upgrade	Upgrade to 2 GB DDR2 memory
320 GB HDD Option	Factory-installed 320 GB SATA hard disk drive (0°C to 60°C, 32°F to 140°F)
32 GB SSD Option	Factory-installed 32 GB SATA solid-state drive (0°C to 70°C, 32°F to 158°F)
8 GB Industrial SSD Option	Factory-installed 32 GB SATA solid-state drive (0°C to 70°C, 32°F to 158°F)
60 W AC Adapter	60 W industrial-grade AC adapter (-20°C to 70°C, -4°F to 158°F)
100 W AC Adapter	100 W industrial-grade AC adapter (-20°C to 70°C, -4°F to 158°F)
Extended Temperature Option*	Optional Screening to extend the operating temperature of the MXC-2000 series to -20°C to 70°C (-4°F to 158°F)

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