MXC-6400 Series

6th Generation Intel® Core™ i7/i5/i3 Processor-Based Fanless Expandable Embedded Computer

Features

- *6th Gen Intel® Core™ i7/i5/i3 Processors and QM170 chipset*
- *2 DDR4 SO-DIMM sockets support up to 32 GB memory*
- *1 PCI and 2 PCIe x8 or 1 PCI and 1 PCIe x16 slots, supporting PCIe Gen2*
- *Support for 3 independent displays with 2 DisplayPort and 1 DVI-I port*
- *6 USB 3.0 ports and internal USB 2.0 dongle*
- *2 hot-swappable SATA III ports on the front panel and 2 internal with RAID 0/1/5/10 support*
- *Remote power on/off switch connector on the front panel*
- *Rugged construction provides fanless -20°C to 70°C operability (w/ industrial SSD)**
  Build-in SEMA 3.0

Preliminary

Introduction

The Matrix MXC-6400 series is a line of high-performance fanless embedded computers, integrating 6th generation Intel® Core™ i7/i5/i3 processors and the QM170 chipset for more powerful computing and graphics performance with minimal power consumption.

Features include 3 PCI/PCIe expansion slots allowing installation of a variety of off-the-shelf PCI/PCIe cards for configurable applications, 2 internal mPCIe, and 1 USIM slot for 3G communication. In addition, the MXC-6400 series offers independent digital display support from DisplayPort and DVI-I with HD 4K resolution, as well as 6 USB 3.0 and 3 GbE LAN ports with Intel® iAMT 11.0 and teaming function. The two hot-swappable SATA III ports support 2.5" storage in the front panel with high speed SATA 6.0 Gb/s and two onboard SATA III internal ports carry RAID 0, 1, 5, 10 support. Optional 16 channel isolated DI/O with digital filter meets the needs of general purpose industrial automation.

With its compact construction, flexibility, and rich I/O capacity, the MXC-6400 is an ideal choice for a wide range of applications supporting factory and machine automation, surveillance, railway and maritime automation, and in-vehicle transportation systems.

Software Support

- *Windows® 10 / 7 / Embedded Standard 7*
- *Linux® Ubunto 12.04 and Fedora 18**

Ordering Information

- **MXC-6401D**
  Intel® Core™ i7-6820EQ fanless embedded computer
- **MXC-6402D**
  Intel® Core™ i5-6440EQ fanless embedded computer
- **MXC-6403D**
  Intel® Core™ i3-6100E fanless embedded computer

Optional Accessories

- **MXC-6400 Optional Fan Module**
  Hot-pluggable fan module for MXC-6400 series
- **8 GB DDR4 Upgrade**
  Upgrade to 8 GB DDR4 Memory
- **500 GB HDD Option**
  Factory-installed 500 GB SATA hard disk drive
- **1TB HDD Option**
  Factory-installed 1TB SATA hard disk drive
- **64 GB SSD option**
  Factory-installed 64 GB MLC SATA solid-state drive
- **160W AC-DC Adapter**
  160W industrial grade AC-DC adapter (-20 to 70°C. -4°F to 158°F)
- **Extended Temperature Option***
  Optional screening service to extend the operating temperature of (-20 to 70°C. -4°F to 158°F)

Specifications

Model Name	MXC-6401D	MXC-6402D	MXC-6403D
System Core			
Processor	Intel® Core™ i7-6820EQ 4 Core/8 Threads, 2.8GHz, 8M cache (Max Turbo Frequency 3.5 GHz)	Intel® Core™ i5-6440EQ 4 Core/4 Threads, 2.7GHz, 6M cache (Max Turbo Frequency 3.4 GHz)	Intel® Core™ i3-6100E 2 Core/4 Threads, 2.7 GHz, 3M cache
Chipset	Intel® Mobile Platform Controller hub (QM170)		
Video	2 Display Port 1.3 support VGA/DVI/HDMI interfaces by convertor cable with latch VGA+DVI dual display output by DVI-I connector support up to 4096 x 2304@60Hz resolution HD 4K resolution support 3 independent audio streams with video audio Gen9 Graphics, GT2e and GT4e		
Memory	2 SO-DIMM sockets support DDR4 2133 MHz up to 32GB		
I/O Interface			
Expansion slots	1 PCI +2 PCIe x8 slots or 1 PCI and 1 PCIe x16 slots, auto switched		
Mini PCIe	2 Mini PCIe slots		
USIM	1 USIM slot for 3G		
Ethernet	3 Intel® GbE ports (2 Intel® I210IT and I219 PHY) Teaming function support, Intel iAMT 11.0, Wake On LAN		
Serial Ports	2 software-programmable RS-232/422/485 (COM1 & COM2) with auto-flow control 2 RS-232 (COM3 & COM4)		
USB	6 USB 3.0 ports (two 1600 mA and four 900 mA) 1 internal USB 2.0 port		
DIO (option)	16-CH DI and 16-CH DO with isolation COS interrupt for all digital input Configurable Digital Filter		
Audio	Audio-in / Line-out		
KB/MS	1 PS/2 keyboard and 1 PS/2 mouse		
WDT	Watch Dog Timer supported		
Power Supply			
DC Input	Built-in 9-32 VDC wide-range DC input 3 pluggable connectors with latch (GND, V-, V+) 3-pin remote power on/off switch on the front		
AC Input	Optional 160 W external AC-DC adapter for AC input		
Storage Device			
SATA HDD	2 hot-swappable SATA III port for 2.5" HDD/SSD on front panel 2 onboard internal SATA III for 2.5" HDD/SSD installation SATA RAID 0,1,5,10 & high speed SATA 6 Gb/s support		
CompactFlash	1 type II CFAST socket		
Mechanical			
Optional Fan Module	Optional hot-pluggable fan module for dissipating heat from PCI/PCIe card, smart fan control		
Dimensions	150 (W) x 200 (H) x 225 (D) mm		
Weight	4 kg (8,82 lbs)		
Mounting	Wall-mount kit		
Environmental			
Operating Temperature	Standard: 0°C to 50°C (32°F to 122°F) (w/HDD) Extended Temperature option*: -20°C to 70°C (-4°F to 158°F) (w/industrial SSD or CFAST)		
Storage Temperature	-40°C to 85°C (-40°F to 185°F) (excl. HDD/SDD/CFAST)		
Humidity	approx. 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		
Safety	UL/cUL,CB		

*Extending operating temperature is optional and requires use of an industrial solid-state drive storage device or CFast card..
**Other Linux Distribution support by request

ADLINK®