

# MXC-6401D

## 6<sup>th</sup> Generation Intel® Core™ i7 Processor Expandable Fanless Embedded Computer

### Features

- 6th Gen Intel® Core™ i7/i5/i3 Processors and QM170 chipset
- 2x DDR4 SO-DIMM, supporting up to 32GB
- 1 PCI and 2 PCIe Gen3 x8 (or 1 PCIe Gen3 x16) slots
- Support for 3 independent displays via 2 DisplayPort  
And 1 DVI-I ports with resolution up to 4k UHD
- 6 USB 3.0 ports and internal USB 2.0 dongle (optional)
- 2 hot-swappable SATA III trays on the front panel and  
2 internal SATA III ports with RAID 0/1/5/10 support
- Remote power on/off switch connector on the front
- Rugged construction provides fanless -20°C to 70°C operability  
(with industrial grade SSD/CFast)\*
- Build-in SEMA 3.0

### Introduction

The Matrix MXC-6401D 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 4G/3G communication. In addition, the MXC-6401D offers independent digital display support from DisplayPort and DVI-I with resolution up to 4K UHD, as well as 6 USB 3.0 and 3 GbE LAN ports with Intel® iAMT 11.0 and teaming function. The 2 hot-swappable SATA III trays support 2.5" storage in the front panel with high speed SATA 6.0 Gb/s and 2 internal SATA III 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.

Along with the integrated 6th Generation Intel® Core™ i7/i5/i3 processor, 4x 2.5" SATA III (6Gb/s) ports, fanless rugged construction, operating shock tolerance up to 50G, withstanding vibration up to 5Grms and extended operating temperatures of -20°C to 70°C (with industrial grade SSD/CFast), the MXC-6401D fully satisfies all the needs of Intelligent Transportation System as railway rolling stock, maritime, in-vehicle infotainment, and high-speed data processing and mission critical industrial automation.



Optional GPS and 4G/LTE module **4G LTE**

### Software Support

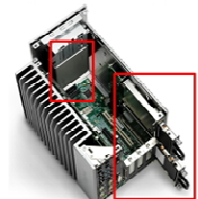
- Windows® 10 / 7 / Embedded Standard 7
- Linux® Ubuntu 12.04 and Fedora 18\*



- 2 Hot-swappable 2.5" storage trays for zero-downtime storage replacement



- Total 4 2.5" SATA 6Gb/s ports with RAID 0, 1, 5, 10 support for video streaming/ surveillance system



## Specification

Model Name	MXC-6401D
<b>System Core</b>	
Processor	Intel® Core™ i7-6820EQ 2.8GHz, 8M cache 4 Core/8 Threads (Max Turbo Frequency 3.5 GHz)
Chipset	Intel® Mobile Platform Controller hub (QM170)
Video	2 DisplayPort 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
Memory	2 SO-DIMM sockets support DDR4 2133 MHz up to 32GB
<b>I/O Interface</b>	
Expansion Slot	1 PCI +2 PCIe Gen3 x8 slots or 1 PCI and 1 PCIe Gen3 x16 slots, auto switched
USIM	1 USIM slots0 for 3G or 4G communication
Mini PCIe	2 Mini PCIe slots
Ethernet	3 Intel® GbE ports (2 Intel® I210IT and I219 PHY)
Serial Ports	2 software-programmable RS-232/422/485 (COM1 & COM2) with auto-flow control, 2 RS-232 (COM 3&4)
DIO (option)	16-CH DI and 16-CH DO with isolation
USB	6 USB 3.0 ports (two 1600 mA and four 900 mA) and 1 internal USB 2.0 port (optional)
<b>Power Supply</b>	
DC Input	9-32VDC
AC Input	Optional 160 W external AC-DC adapter for AC input
<b>Storage</b>	
HDD	2 internal SATA III ports and 2 hot-swappable SATA III ports for 2.5" HDD/SSD on front panel SATA RAID 0,1,5,10 & high speed SATA 6 Gb/s support
<b>Mechanical</b>	
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 / 5.90" x 7.87" x 8.85"
Construction	Full Aluminum Alloy
Weight	4.0 kg (8.82 lbs)
Mounting	Wall mounting kit
<b>Environmental</b>	
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) with 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/ CF or SSD) Operating, 0.5 Grms, 5-500 Hz, 3 axes (w/ HDD)
ESD	Contact +/-4KV, Air +/-8KV
Shock	Operating, 50 G, half sine 11 ms duration (w/ CF or SSD)
EMC	CE & FCC Class A
Safety	UL by CB