ADVANTECH

MIC-7500
Intel® 6th Generation Core™ i Processor Compact Fanless System
Startup Manual

Packing List

Before you begin installing your card, please make sure that the following items have been shipped:

1. MIC-7500 bare-bone system x1
2. 4G DDR4 memory x1 — P/N: AQD-SD4U4GN21-SG
3. MIC-7500 Startup manual x1 — P/N: 2001750000
4. MIC-7500 Driver CD x1 — P/N: 2061750000
5. 4-pin Phoenix connector — P/N: 1652003234
6. Mounting bracket x2 — P/N: 1960070543N001
7. SATA cable x1 — P/N: 1700020036
8. SATA Power cable x1 — P/N:1700024372-01
9. 2xDP9 Ports cable x1 — P/N: 1701200220

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

Note 1: For detailed contents of MIC-7500, please refer to information on the enclosed CD-ROM (in PDF format).

Note 2: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: get. adobe.com/reader (Acrobat is a trademark of Adobe)

Caution: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

Attention: DANGER D'EXPLOSION SI LA BATTERIE EST INEXACTEMENT REMPLACÉE. REMPLACEZ SEULEMENT AVEC LA MÊME CHOSE OU LE TYPE ÉQUIVALENT RECOMMANDÉ PAR LE FABRICANT, JETTENT LES BATTERIES UTILISÉES INSTRUCTIONS DE S SELON FABRICANT DES'.

For more information on this and other Advantech products, please visit our website at:

http://www.advantech.com

http://www.advantech.com/eplatform

For technical support and service, please visit our support website at:

http://support.advantech.com.tw/support/default. aspx

This manual is for the MIC-7500 Series Rev. A1.

Specifications

Processor System
• Intel 6th Geneeration Core i Processer with QM170 Chipset

Memory
• Support dual channel DDR4 SO-DIMM-2133 MHz, 4 GB per slot without ECC function; Max. capacity is up to 32GB

Graphics
• Intel® HD Graphics 530, support DirectX12

Serial Ports
• 2 x RS-232/422/485, selection by BIOS
• 2 x RS-232

Ethernet
• **Interface:** 10/100/1000 Mbps
• **Controller:**
  LAN1 : Intel i219LM, supports Wake on LAN
  LAN2 : Intel i210AT, supports Wake on LAN

Storage
• **Internal 2.5" HDD Bay:** 1
• **m-SATA:** 1
• **CFast slot:** 1

Front I/O
• **Display :** 1 x VGA / 1 x DVI
• **USB:** 8 x USB3.0
• **Serial:** 2 x RS-232/422/485; 2 x RS-232
• **Audio:** Line-out/Mic-in

Power Requirement
• **Power type:** ATX/AT
• **Power input Voltage:** 9-36 VDC
• **Minimum Power Input:** 9 V @ 20 A - 36 V @ 5 A
This product is intended to be supplied by a Listed Power Adapter or DC power source, rated 19Vdc, 7.89A minimum and tma 60 degree C, if need further assistance, please contact Advantech for further information.

Miscellaneous
• Power Switch
  (Orange: System standby/Green:System Power boot)
• COM1 TX & RX LED; COM2 TX & RX LED; HDD Status LED

Environment
• **Operation Temperature:**
  -20 ~ 60° C with 0.7m/S air flow: with 1x industrial SSD
  0 ~ 40° C with 0.7m/S air flow: with 1x 2.5"HDD or m-SATA
• **Storage Temperature:** -40 ~ 85° C (-40 ~ 185° F)
• **Relative Humidity:** 95% @ 40° C (non-condensing)
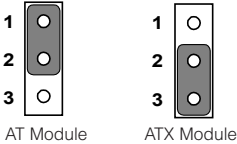
Specifications (Cont.)

Physical Characteristics
- **Dimension (WxHxD):** 74 x 192 x 230 mm
- **Weight:** 2.9 kg

Jumpers and Connectors

The board has a number of jumpers that allow you to configure your system to suit your application. The table below lists the function of each of the jumpers and connectors.

Connectors	
Label	**Function**
DVI1	DVI Connector
VGA1	VGA Connector
COM 12	RS-232/422/485
COM 34	RS-232
USB1234	USB 3.0
USB 56	USB 3.0
USB 78	USB 3.0
LAN 1	Intel i219LM
LAN 2	Intel i210AT
Audio	Audio Jack (Line-out, Mic-in)
LED 1234	COM 1/2 TX; RX; LED
LED 5	HDD status
DC 9-36V	Power connector

AT Module   ATX Module

PSON1: System AT/ATX Module Selection	
Function	**Jumper Setting**
1-2	AT module
2-3	ATX module

Software Installation

The drivers for the MIC-7500 are located on the software installation CD. Please click through the folder and follow the on screen instructions to install them.

Caution! The computer is supplied with a battery-powered realtime clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.
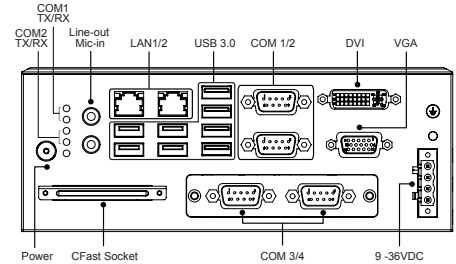
Declaration of Conformity

This device complies with the requirements in Part 15 of the FCC rules. Operation is subject to the following two conditons:

1. This device may not cause harmful interference;
2. This device must accept any interference received, including interference that may cause undesired operation.
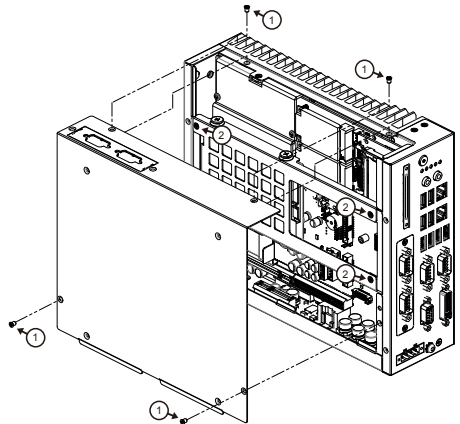
System I/O Interface

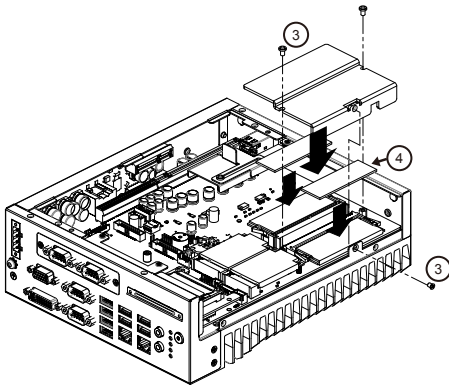## Simple Maintenance Process

Memory Installation

MIC-7500 system already has 4GB memory on board, if you want to expand more memory, please connect your distributor or sales representative to order compatible memory modules; Part number below:

- 4G SO-DDR4-2133 512X8 1.2V SAM P/N: AQD-SD4U4GN21-SG
- 8G SO-DDR4-2133 512X8 1.2V SAM P/N: AQD-SD4U8GN21-SG
- 16GB DDR4 2133 1.2V SO-DIMM 1GbX8 SAM P/N: AQD-SD4U16N21-SE

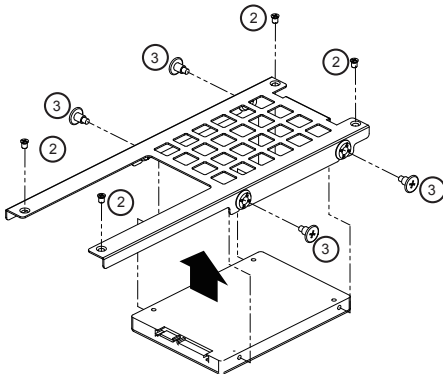**Note:** If MIC-7500 uses the different board of SO-DIMM memory, the system will be not boot.

1. Undo 4 screws and remove the bottom cover.
2. Undo 4 screws to remove the HDD tray.
3. Undo 3 screws to remove memory Thermal cover.
4. Affixed Thermal pad (P/N: 1990019498N000) on Memory and Assemble Memory.

Note 1: Thermal pad and memory thermal cover must completely covered and compacted.

Note 2: MIC-7500 already assemble 4GB memory & one Thermal pad inside. There are only 1 pcs thermal pad in assessory box.

HDD Installation

1. Undo 4 screws and remove the bottom cover
2. Undo 4 screws to remove HDD tray.
3. Secure the 4xHDD screws (P/N:1930002235)
4. Assemble SATA cable/power cable and replace HDD tray to secure 4x screws.
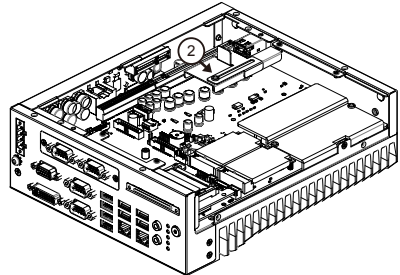5. Replace bottom cover.

m-SATA/Mini-PCIe Installation

MIC-7500 supports 2 Mini-PCIE signal and one supports m-SATA. (Please refer MB internal I/O connector specificaton at next page)

• Mini-PCIe A : Support Mini-PCIE signal & USIM
• Mini-PCIe B : Support Mini-PCIE signal & m-SATA
1. Undo 4 screws and remove the bottom cover
2. Install the module at Mini-PCIe socket and secure with screws.
3. Replace bottom cover and secure with screws.

Internal USB 2.0 Installation

1. Undo 4 screws and remove the bottom cover.
2. Loosen the screw and adjust bracket size in accordance the USB dongle size.
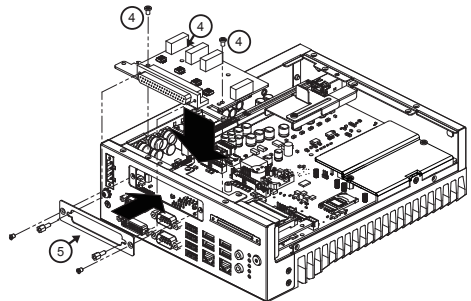3. Secure the screw and replace bottom cover and secure with screws.

Expansion module Installation (Optional)

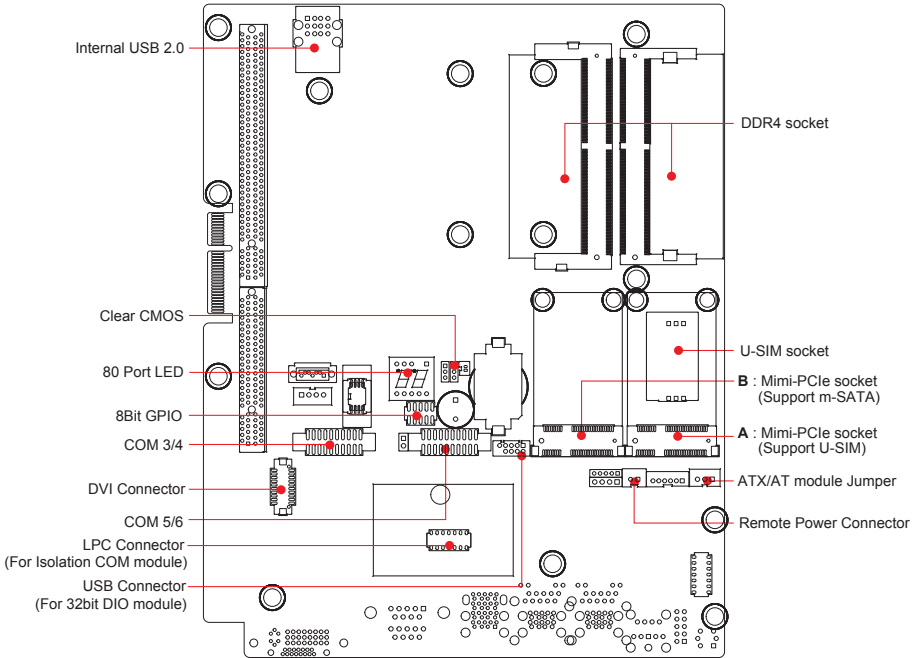MIC-7500 supports 2 kinds of optional modules for different applications.

• 32-bit GPIO module   P/N: AIIS-DIO32-00A1E
• 4 x Isolation COM module P/N: 98R2C48510E
1. Undo 4 screws and remove the bottom cover.
2. Undo HDD tray & expansion module baffle.
3. Remove COM cable and undo baffle cover.

4. Assemble module on M/B (Note: 32-bit GPIO module needs to connecting by a cable. (Please refer MB internal I/O connector specification at next page for GPIO connector)
5. Assemble module baffle by screws.
6. Replace bottom cover and secure with screws.

IO Connectors

Internal USB 2.0

DDR4 socket

Clear CMOS

U-SIM socket

80 Port LED

B : Mimi-PCIe socket
(Support m-SATA)

8Bit GPIO

A : Mimi-PCIe socket
(Support U-SIM)

COM 3/4

DVI Connector

ATX/AT module Jumper

COM 5/6

Remote Power Connector

LPC Connector
(For Isolation COM module)

USB Connector
(For 32bit DIO module)

System Dimensions

UNIT : mm

252
226
150
186
230
10
14
5
14
18
22

192
73
78.20