

MIC-770

Intel® 8th Generation Core™ i Socket Compact

Fanless Computer

Startup Manual

Packing List

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

1. MIC-770 bare-bone system x 1
2. Startup manual ENCNTC for MIC-770 1st Ed
P/N: 2041077000
3. 4-pin Phoenix connector P/N: 1652003234
4. Mounting bracket x2 P/N: 1960070543T001
5. SATA cable x1 P/N: 1700013095
6. SATA power cable x 1 P/N: 1700024372-01

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

Note: 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)

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

<http://www.advantech.com>



For technical support and service, please visit our support website for MIC-770 at:

<https://advt.ch/mic770spt>



Register your products on our website and get 2 months extra warranty for Free at:

<http://www.register.advantech.com>



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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'.

Specifications

Processor System

- Intel® 8th generation Core™ i socket CPU (LGA1151)

Memory

- Supports dual channel DDR4 SODIMM-2666 MHz, 16 GB per slot without ECC function; Max. capacity is 32GB

Graphics

- **Q370:** Intel® HD Graphics 630, supports DirectX 12
- **H310:** Intel® HD Graphics 610, supports DirectX 12

Serial Ports

- 2 x RS-232/422/485, RS-485 supports automatic flow control

Ethernet

- **Interface:** 10/100/1000 Mbps
- **Controller:**
Q370 LAN1: Intel® I219LM, LAN2: Intel® i210IT
H310 LAN1: Intel® I219V, LAN2: Intel® i210IT

Storage

- **Internal 2.5" Storage Bay:** 1
- **mSATA:** 1

Front I/O

- **Display:** 1 x VGA, 1 x HDMI
- **USB:** Q370: 2 x USB3.1 , 6 x USB3.0
H310: 4 x USB 3.0 and 4 x USB 2.0
- **Serial:** 2 x RS-232/422/485
- **Audio:** Line-out/Mic-in

Power Requirement

- **Power type:** ATX/AT
- **Power input Voltage:** 9-36 VDC
- **Minimum Power Input:** 9VDC 16A - 36VDC 5A

This product is intended to be supplied by a UL certified power supply or UL certified DC source rated 19Vdc, 7.89A minimum, TMA 50°C minimum, if you need further assistance, please contact Advantech for further information.

Specifications (Cont.)

Miscellaneous

- Power Switch
(Orange: System standby/Green: System Power boot)
- COM1 TX & RX LED; COM2 TX & RX LED; Storage Status LED

Environment

- **Operation Temperature:**
TDP 35W CPU: -10~50°C
TDP 65W CPU: -10~40°C (does not support i7)
Note: Safety Certification Test Temperature: safety max 50°C with SSD (TDP 35W CPU)
- **Storage Temperature:** -40 ~ 85°C (-40 ~ 185°F)
- **Relative Humidity:** 95% @ 40°C (non-condensing)

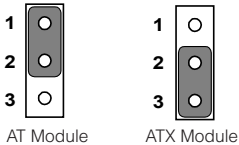
Physical Characteristics

- **Dimensions (WxHxD):** 77 x 192 x 230 mm
- **Weight:** 2.8 kg (6.17 lbs)

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
VGA1	VGA Connector
HDMI1	HDMI connector
COM 12	RS-232/422/485
COM 34	RS-232
USB C1	USB 3.0
USB C2	USB 3.0
USB C3	USB3.1 and USB3.0 (Q370) or USB2.0 (H310)
LAN 1	Intel i219LM (Q370) or Intel i219V (H310)
LAN 2	Intel i210IT
Audio	Audio Jack (Line-out, Mic-in)
LED 6	COM 1/2 TX; RX; Storage device status
DC 9-36V	Power connector



PSOEN1: System AT/ATX Module Selection

Function	Jumper Setting
1-2	AT module
2-3	ATX module (Default)

Battery

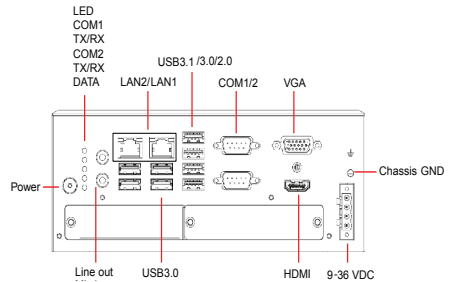
The computer is supplied with a battery-powered realtime clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.

Declaration of Conformity

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

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

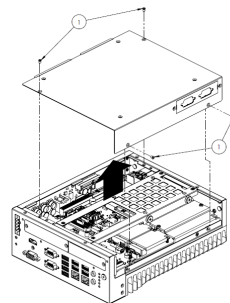
System I/O Interface



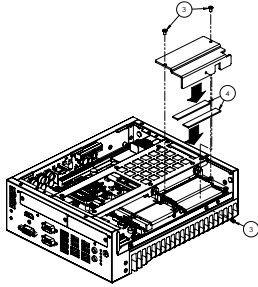
Simple Maintenance Process

Memory Installation

MIC-770 supports DDR4 SO-DIMM non-ECC type memory module. If you need a detailed memory support list, please contact your distributor or sales representative to order compatible memory modules.



Simple Maintenance Process (Cont.)

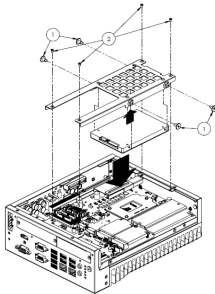


1. Undo 4 screws and remove the bottom cover.
2. Undo 4 screws to remove the storage tray.
3. Undo 3 screws to remove memory thermal cover.
4. Affix thermal pad (P/N: 1990019498N000) on memory and assemble memory.

Note : Thermal pad and memory thermal cover must be fully mated and compacted.

Storage Installation

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



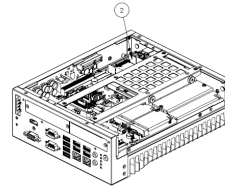
Mini-PCIE Installation

MIC-770 supports one full size Mini-PCIE.

1. Undo 4 screws and remove the bottom cover.
2. Install the module in the Mini-PCIE socket and secure with screws.
3. Replace bottom cover and secure with screws.

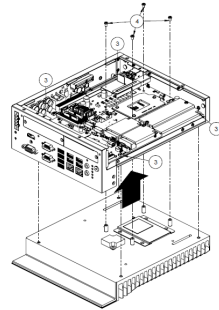
Internal USB 2.0 Installation

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



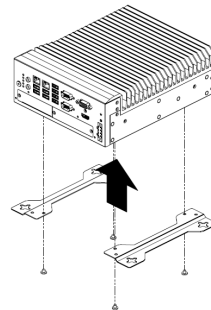
CPU Installation

1. Undo 4 screws and remove the bottom cover.
2. Undo 4 screws to remove storage tray.
3. Undo 4 screws in the corner of the chassis.
4. Undo 4 screws around the CPU to release AL heatsink.
5. Remove AL heatsink and install CPU.
6. Smear thermal grease onto CPU.
7. Replace AL heatsink, storage tray, and bottom cover.



Mounting Kit Installation

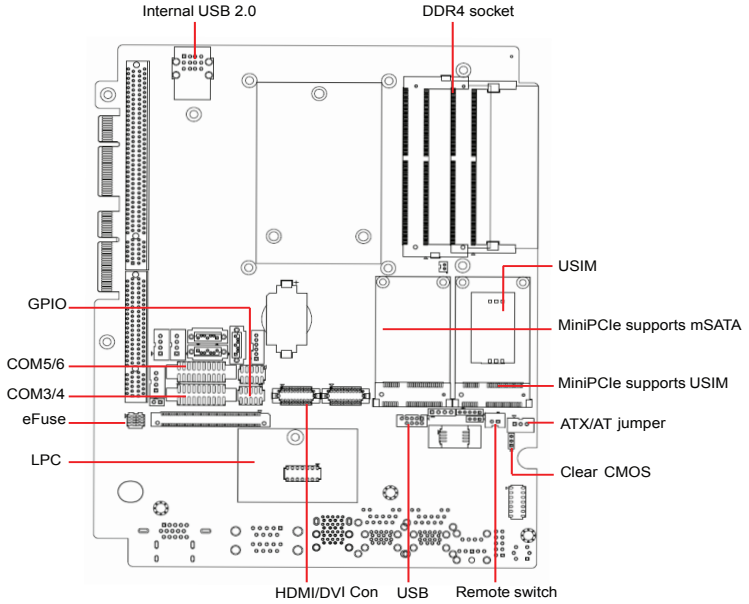
1. Take the mounting kit from the accessory box.
2. Secure with 4 x screws (P/N: 1930007259-01, M4x4L F/S D=8.5 H=1.5 (2+) ST/H BZn-NK) and install the system on table.



Safety Instructions

1. Read these safety instructions carefully.
2. Keep this Startup Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user's manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -40°C (-40°F) OR ABOVE 85°C (185°F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.**
16. **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.**
17. The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).
18. **RESTRICTED ACCESS AREA:** The equipment should only be installed in a Restricted Access Area.
19. **DISCLAIMER:** This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

IO Connectors



System Dimensions

UNIT : mm

