

MIC-7700

Compact Fanless System with 6th/7th Gen Intel® Core™ i CPU Socket (LGA 1151)

NEW



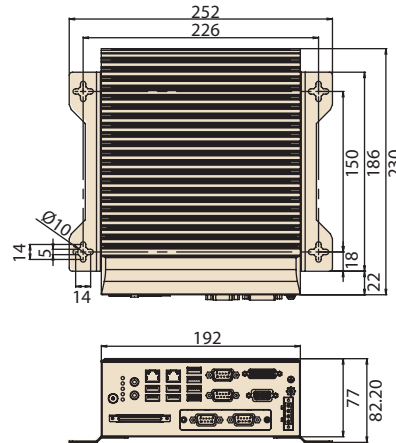
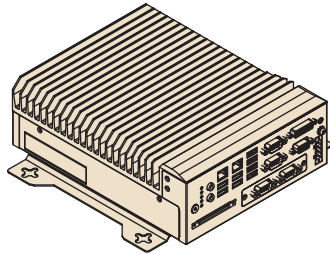
Features

- Intel® 6th/7th Gen Core™ i CPU socket-type (LGA1151) with Intel® Q170/H110 chipset
- Wide operating temperature (-10 ~ 50 °C)
- VGA and DVI output
- 2 x GigaLAN and 8 x USB 3.0
- 2 x RS-232/422/485 and 4 x RS232 serial ports
- 1 x 2.5" HDD/SSD, 1 x CFast, and 1 x mSATA
- 9 ~ 36 V_{DC} input power range
- Supports 2 x LAN, isolation COMs, and 32-bit GPIO modules
- Supports Advantech i-Modules
- Supports Advantech SUSIAccess and embedded software APIs

Specifications

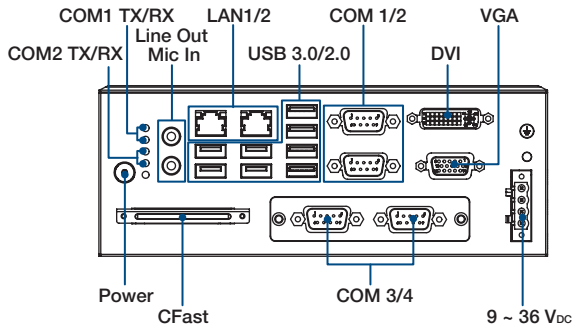
| | | | | | | |
|---|------------------------|---|-----------|---------------------------|-----------|---------------|
| 6 th /7 th Generation Processor (TDP 35W) | CPU | i7-7700T | i7-6700TE | i5-6500TE | i3-6100TE | G4400TE |
| | Core Number | 4 | 4 | 4 | 2 | 2 |
| | Base Frequency | 2.9 GHz | 2.4 GHz | 2.3 GHz | 2.7 GHz | 2.9 GHz |
| | Max Turbo Frequency | 3.8 GHz | 3.4 GHz | 3.3 GHz | | |
| | L3 Cache | 8MB | 8 MB | 6 MB | 4 MB | 3 MB |
| | Temperature | -10 ~ 50 °C (with SSD) | | | | |
| | Chipset | Q170/H110 | | | | |
| 6 th /7 th Generation Processor (TDP 65W) | BIOS | AMI 128Mb SPI Flash | | | | |
| | CPU | i5-7500 | | i3-7101E | i5-6500 | i3-6100 |
| | Core Number | 4 | | 2 | 4 | 2 |
| | Base Frequency | 3.4 GHz | | 3.9 GHz | 3.2 GHz | 3.7 GHz |
| | Max Turbo Frequency | 4.0GHz | | | 3.6GHz | |
| | L3 Cache | 6 MB | | 3 MB | 6 MB | 4 MB |
| | Temperature | -10 ~ 40 °C (with SSD) | | | | |
| Memory | Chipset | Q170/H110 | | | | |
| | BIOS | AMI 128Mb SPI Flash | | | | |
| | Technology | Dual-channel DDR4 2133/2400 MHz (without ECC) | | | | |
| Display | Socket | 2 x 260-pin DDR4 SODIMM (up to 16 GB per socket) | | | | |
| | Maximum Capacity | 32GB | | | | |
| | Chipset | Q170: Intel® HD Graphics 530, supports DirectX 12 H110: Intel® HD Graphics 510, supports DirectX 12 | | | | |
| Ethernet | VGA | 1 x DB15, up to 2048 x 1152 maximum resolution | | | | |
| | DVI | 1 x DVI, up to 1920 x 1080 maximum resolution @ 30MHz (with optional expansion cable for second DVI connector, or 1 x HDMI connector) | | | | |
| | Multiple Display | Q170: 3 x independent displays (third display output via optional cable) H110: 2 x independent displays | | | | |
| Storage | Controller | Q170 LAN1: Intel® i219LM, LAN2: Intel® i210IT H110 LAN1: Intel® i219V, LAN2: Intel® i210IT | | | | |
| | Interface | 2 x RJ45 | | | | |
| I/O | HDD | 1 x 2.5" HDD/SSD | | | | |
| | CFast | 1 | | | | |
| | mSATA | 1 | | | | |
| | RAID | 0/1/5/10 (MIC-7700Q only) | | | | |
| Expansion | USB | Q170: 8 x USB 3.0 and 1 x internal USB 2.0 H110: 4 x USB 3.0 and 4 x USB 2.0 | | | | |
| | Serial Port | 2 x DB9, 2 x RS-232/422/485 support auto flow control; 4 x RS-232 (with expansion cable) | | | | |
| | Audio | 2 (1 x line out and 1 x mic in) | | | | |
| LED and Switch | Module | Supports Advantech i-Modules | | | | |
| | Mini PCIe | Q170: 1 x mini PCIe (via USIM), 1 x mini PCIe/mSATA H170: 1 x mini PCIe (via USIM), 1 x mSATA | | | | |
| Power | LED | 2 (1 x Storage and 1 x Power) | | | | |
| | Button | 1 x Power on/off switch | | | | |
| | Type | ATX/AT | | | | |
| Watchdog Timer | Input Voltage | 9 ~ 36 V _{DC} | | | | |
| | Power consumption | Typical: 32.062W Maximum: 116.002W | | | | |
| Environment | Output | System reset | | | | |
| | Interval | Programmable 1 ~ 255 sec/min | | | | |
| | Temperature | 65W CPU w/ industrial SSD | | 35W CPU w/ industrial SSD | | Non-operating |
| | Humidity | -10 ~ 40 °C | | -10 ~ 50 °C | | -40 ~ 85 °C |
| | Vibration | 95% @ 40 °C (non-condensing) | | | | |
| Mechanical | Shock | With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis | | | | 2G |
| | Dimensions (W x H x D) | 77 x 192 x 230 mm (3.07" x 7.55" x 9.05") | | | | |
| | Weight | 2.8 kg (6.17 lbs) | | | | |
| Certifications | Installation | Desktop/wall mount | | | | |
| | EMC | CE/FCC Class A, CCC, BSMI | | | | |
| | Safety | UL, CCC, BSMI | | | | |

Dimensions

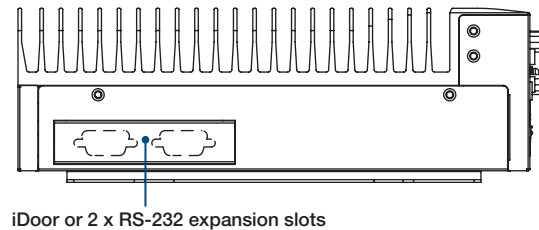


Unit: mm

Front View



Side View



Ordering Information

| Part Number | VGA | DVI | 2.5" HDD/SSD | CFast | mSATA | USB 3.0 | USB 2.0 | GbE | COM | PCIe | Power |
|----------------|-----|-----|--------------|-------|-------|---------|---------|-----|----------------------|----------------------|-----------------------|
| MIC-7700Q-00A1 | 1 | 1 | 1 | 1 | 1 | 8 | 0 | 2 | 4, up to 6 via cable | i-Module (optional) | 9 ~ 36V _{dc} |
| MIC-7700H-00A1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 2 | 4, up to 6 via cable | i-Module (optional)* | 9 ~ 36V _{dc} |

*MIC-7700H does not support MIC-75M40 or MIC-75M20-01

Packing List

| Part Number | Description |
|----------------|----------------------------------|
| MIC-7700 | MIC-7700 bare system |
| 2061770010 | Driver CD |
| 2001770000 | MIC-7700 startup manual (ENG+CN) |
| 2001770010 | MIC-7700 startup manual (TC) |
| 1652003234 | 4-pin Phoenix power connector |
| 1960070543T001 | 2 x Mounting bracket |
| 1700013095 | SATA cable |
| 1700024372-01 | SATA power cable |
| 1701200220 | Dual DB9 port cable |

Optional Accessories

| Part Number | Description |
|---------------------|--|
| 96PSA-A220W24P4-1* | Adaptor A/D, 100-240V, 220W, 24V |
| 96PSA-A150W19P4-1** | Adaptor A/D, 100-240V, 150W, 19V |
| 1702002600 | Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D |
| 1700022940-01 | Power cord PSE, 3-pin, 7A, 125V, 3 m, DAC-ST01 |
| 1702002605 | Power cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D |
| AIIS-DIO32-00A1E | AIIS GPIO module (32 bit) |
| PCA-TPM-00B1E | TPM 2.0 module |
| 98R1750000E | Secondary DVI accessory kit |
| 98R1750010E | HDMI cable/Remote power connector accessory kit |
| 98R1750030E | HDMI accessory kit |
| 9891790040E | Dual LAN module accessory kit |

Note:

* Suggest to use for MIC-7700 with i-Module added.

** Suggest to use for MIC-7700 without i-Module added.

- MIC-7700 supports Advantech iDoor modules (both MOS and PCM series), excluding the PoE model.
- The PCM series module requires a bracket (P/N: 1960065854N001) that must be ordered separately.

Optional i-Modules**

| Part Number | Description |
|--------------------------|---|
| MIC-75M40 (Q170 only) | 4-slot expansion module (4 x PCIe slots) |
| MIC-75M13 | 4-slot expansion module (1 x PCIe and 3 x PCI slots) |
| MIC-75M20 | 2-slot expansion module (2 x PCIe slots) |
| MIC-75M20-01 (Q170 only) | 2-slot expansion module (2 x PCIe slots) |
| MIC-75M11 | 2-slot expansion module (1 x PCIe and 1 x PCI slots) |
| MIC-75M10 | 1-slot expansion module (1 x PCIe) |
| MIC-75S20 | 2-slot expansion and storage module (2 x PCIe and 2 x 2.5 hot swappable HDDs) |

**Additional i-module details provided on the following page.

Embedded OS

| Part Number | Description |
|----------------|-------------------------------------|
| 2070015330 | img WES7P MIC-7700H 64b 1701 10 MUI |
| 2070015331 | img WES7P MIC-7700Q 64b 1701 10 MUI |
| 20706WX6ES0012 | img W10 16EL MIC-7700Q 64b 1709 ENU |
| 20706WX6ES0012 | img W10 16EL MIC-7700Q 64b 1709 ENU |

i-Module Series

Expansion Module for MIC-7000 Series



Features

- Flexible expansion via PCIe/PCI slot
- MIC-7000 series compatible
- Optional smart fan for thermal optimization
- Provide additional 12Vdc power source for add-on card
- Maximum 85W for add-on card power consumption
- 2.5" storage bays for HDD/SSD expansion
- Hot Swappable HDD/SSD supported

Introduction

The i-Module series provide flexible expansion function for MIC-7000 series systems. MIC-7000 system accompanied with i-Module technology can fulfill diverse demands of customers.

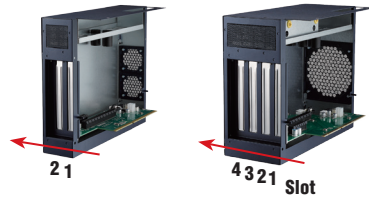
Compatible Table

| Model | MIC-7500 / MIC-7700 / MIC-7900 | | | MIC-7300 | |
|--------|---|--|--|--|--|
| 1-Slot | MIC-75M10  | | | - | |
| 2-Slot | MIC-75M20  | MIC-75M20-01*  | MIC-75M11  | MIC-73M20  | MIC-73M11  |
| 4-Slot | MIC-75M40*  | MIC-75M13  | MIC-75S20  | MIC-73M13  | |

*MIC-7700H doesn't support MIC-75M20-01 and MIC-75M40

Selection Table

i-Module slot number starts from the inner side, as the image on the right.



| i-Module | MIC-75M10 | MIC-75M11 | MIC-75M20 | MIC-75M20-01 | MIC-75M40 | MIC-75M13 | MIC-75S20 | MIC-73M20 | MIC-73M11 | MIC-73M13 |
|---|-----------------|-----------|--------------------|--------------|-----------|--------------------|-----------------------------|--------------------|-----------|--------------------|
| Slot 1 | PCIe x16 | PCIe x16 | PCIe x4 | PCIe x8 | PCIe x4 | PCIe x16 | PCIe x16 | PCIe x1 | PCIe x1 | PCIe x1 |
| Slot 2 | - | PCI | PCIe x16 | PCIe x8 | PCIe x8 | PCI | PCIe x4 | PCIe x1 | PCI | PCI |
| Slot 3 | - | - | - | - | PCIe x4 | PCI | - | - | - | PCI |
| Slot 4 | - | - | - | - | PCIe x4 | PCI | - | - | - | PCI |
| SATA Conn | - | - | - | - | - | - | 1 | - | - | - |
| SATA PWR | - | - | - | - | - | - | 1 | - | - | - |
| 2.5" Storage Bay | - | - | 1* | - | - | 2 | 2x Hot Swap + 2x Internal** | 1* | - | 2 |
| N.W. (kg) | 0.64 | - | 0.87 | - | 1.16 | - | 1.60 | 0.87 | - | 1.16 |
| G.W. (kg) | 1.71 | - | 2.02 | - | 2.47 | - | 2.98 | 2.02 | - | 2.47 |
| i-Module (W x H x D) | 24 x 192 x 230 | - | 50 x 192 x 230 | - | - | 90 x 192 x 230 | - | 50 x 192 x 230 | - | 90 x 192 x 230 |
| MIC-7000 + i-Module (W x H x D) | 97 x 192 x 230 | - | 123 x 192 x 230 | - | - | 163 x 192 x 230 | - | 123 x 192 x 230 | - | 163 x 192 x 230 |
| MIC-7700 + i-Module (W x H x D) | 101 x 192 x 230 | - | 127 x 192 x 230 | - | - | 167 x 192 x 230 | - | - | - | - |
| System Fan (Optional)*** | - | - | 4cm 98R1752000E | - | - | 8cm 98R1751300E | - | 4cm 98R1752000E | - | 8cm 98R1751300E |
| 12V _{DC} Conn | - | - | - | - | - | 1 | - | - | - | - |
| PCI/PCIe Card Max. Length (with fan) | - | - | - | - | - | 181mm | - | - | - | - |
| PCI/PCIe Card Max. Length (without fan) | - | - | - | - | - | 207mm | - | - | - | - |

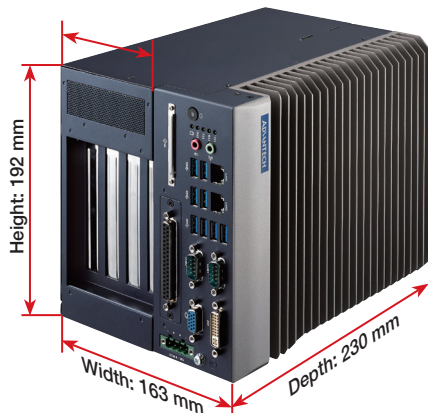
* Need to order 98R1752010E

** MIC-7500 and MIC-7700H: 1x SATA Conn.; MIC-7700Q: 3x SATA Conn.; MIC-7900: 4x SATA Conn.

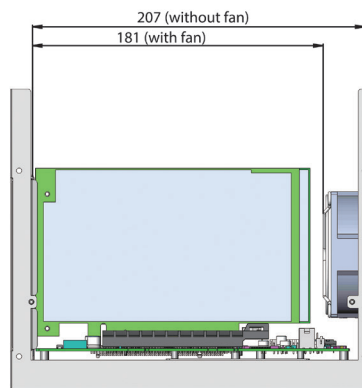
*** Suggest to add optional system fan if power consumption of add-on card is more than 45W for better thermal management.

Dimension Guide

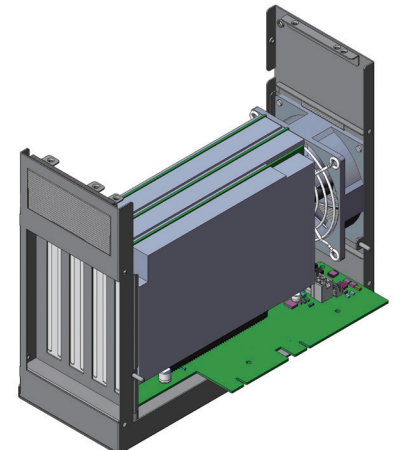
i-Module Width: 90 mm



Example: MIC-7500 + MIC-75M40



PCI/PCIe Card Max. Length Support

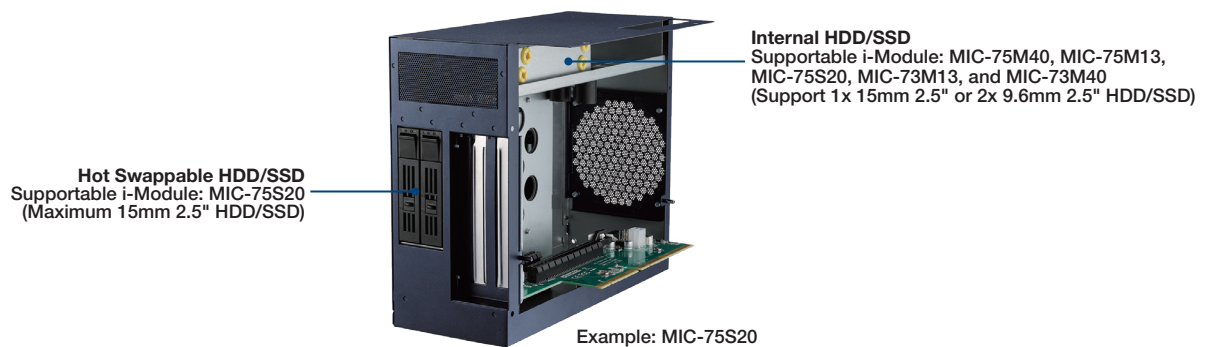


HDD / SSD Support Table

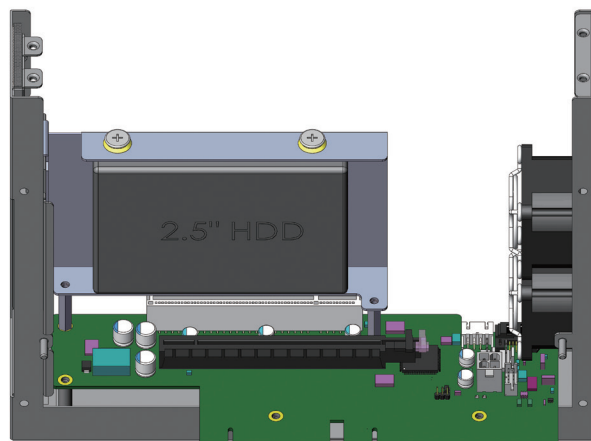
Every model of the MIC-7000 series can be installed with one HDD or SSD. With the i-Module, the numbers of supported HDD/SSD bay are as below:

| Model | In i-Module | In MIC-7000 | Max. No | Note |
|--|------------------------------|-------------|---------|---|
| MIC-75M10 | 0 | 1 | 1 | |
| MIC-75M20 MIC-75M20-01 MIC-75M11 MIC-73M20 MIC-73M11 | 1* | 1 | 2 | * Need to order 98R1752010E |
| MIC-75M40 MIC-75M13 MIC-73M13 | 2 | 1 | 3 | With MIC-7900 or MIC-7700Q, it can support to 3 x HDD/SSD |
| MIC-75S20 | 2x Hot Swap + 2x Internal | 1 | 5 | With MIC-7900, it can support up to 5 x HDD/SSD With MIC-7700Q, it can support up to 4 x HDD/SSD |

Note: i-Module BUS has only one channel SATA signal between i-Module and MIC-7000 system.



2nd HDD bracket for 2-slot i-Module



Ordering information: 98R1752010E

Supportable i-Module: MIC-75M20, MIC-75M11, MIC-73M20, and MIC-73M11

Limitation: Slot 2 will be occupied

Ordering Information

| Part Number | Description |
|-----------------|--|
| MIC-75M13-00A1E | 4-slot expansion i-Module with 1 PCIe x16, 3 PCI |
| MIC-75M40-00A1E | 4-slot expansion i-Module with 1 PCIe x8, 3 PCIe x4 |
| MIC-75M11-00A1E | 2-slot expansion i-Module with 1 PCIe x16, 1 PCI |
| MIC-75M20-00B1 | 2-slot expansion i-Module with 1 PCIe x16, 1 PCIe x4 |
| MIC-75M20-01A1E | 2-slot expansion i-Module with 2 PCIe x 8 |
| MIC-75M10-00A1 | 1-slot expansion i-Module with 1 PCIe x16 |
| MIC-75S20-00A1E | 2-slot expansion i-Module with 1 PCIe x16, 1 PCIe x4, 2 2.5" HDD bay |
| MIC-73M13-00A1E | 4-slot expansion i-Module with 1 PCIe x1, 3 PCI |
| MIC-73M11-00A1E | 2-slot expansion i-Module with 1 PCIe x1, 1 PCI |
| MIC-73M20-00A1E | 2-slot expansion i-Module with 2 PCIe x1 |

Optional Accessories

| Part Number | Description |
|-------------|--|
| 98R1751300E | 8-cm fan for 4-slot i-Modules |
| 98R1752000E | 2 x 4-cm fan for 2-slot i-Modules |
| 98R1752010E | Secondary HDD bracket (for 2-slot i-Modules) |