

# MIC-7700

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

**NEW**



### Features

- Intel® 6<sup>th</sup>/7<sup>th</sup> 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<sub>DC</sub> input power range
- Supports FlexIO and iDoor technology, flexible configure additional HDMI, DVI, DIO, Remote switch IO
- Supports Advantech i-Modules
- Supports Advantech SUSIAccess and embedded software APIs

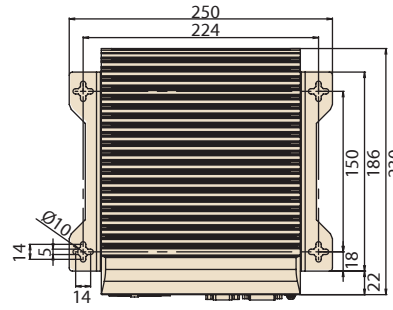
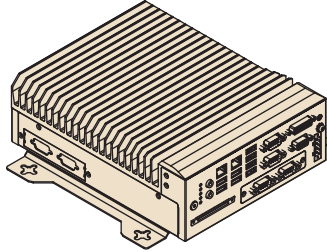


### Specifications

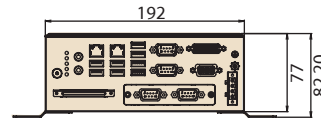
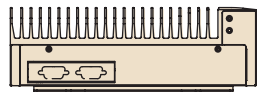
|  | CPU  | i7-6700TE  | i5-6500TE   | i3-6100TE  | G4400TE |
|--|--|--|---|--|---------|
| 6 <sup>th</sup> /7 <sup>th</sup> Generation Processor* (TDP 35W) | Core Number  | 4  | 4   | 2  | 2       |
|  | Base Frequency   | 2.4 GHz  | 2.3 GHz   | 2.7 GHz  | 2.9 GHz |
|  | Max Turbo Frequency  | 3.4 GHz  | 3.3 GHz   |  |         |
|  | L3 Cache   | 8 MB   | 6 MB  | 4 MB   | 3 MB    |
|  | Temperature  | -10 ~ 50 °C (w/ industrial SSD, 0.7 m/s air flow)  |   |  |         |
|  | Chipset  | Q170/H110  |   |  |         |
|  | BIOS   | AMI 128Mb SPI Flash  |   |  |         |
|  | 6 <sup>th</sup> /7 <sup>th</sup> Generation Processor* (TDP 65W) | CPU  | i5-7500   | i3-7101E   | i5-6500 |
| 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 (w/ industrial SSD, 0.7 m/s air flow)  |   |  |         |
| Chipset  |  | Q170/H110  |   |  |         |
| BIOS   |  | AMI 128Mb SPI Flash  |   |  |         |
| Memory   | Technology   | Dual-channel DDR4 2133/2400 MHz (without ECC)  |   |  |         |
|  | Socket   | 2 x 260-pin DDR4 SODIMM (up to 16 GB per socket)   |   |  |         |
|  | Maximum Capacity   | 32GB   |   |  |         |
| Display  | Chipset  | 7 <sup>th</sup> Gen. CPU: Intel HD Graphics 630, supports DirectX 12<br>6 <sup>th</sup> Gen. CPU: Intel HD Graphics 530/510, supports DirectX 12 |   |  |         |
|  | 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)<br>H110: 2 x independent displays                                       |   |  |         |
|  | Ethernet   | Controller   | Q170 LAN1: Intel® i219LM, LAN2: Intel® i210IT<br>H110 LAN1: Intel® i219V, LAN2: Intel® i210IT |  |         |
| Interface  |  | 2 x RJ45   |   |  |         |
| Storage  | HDD  | 1 x 2.5" HDD/SSD   |   |  |         |
|  | CFast  | 1  |   |  |         |
|  | mSATA  | 1  |   |  |         |
|  | RAID   | 0/1/5/10 (MIC-7700Q only)  |   |  |         |
|  | SATA Conn.   | Q170: 3 x SATA signal, 3 x SATA power<br>H110: 1 x SATA signal, 1x SATA power  |   |  |         |
| I/O  | USB  | Q170: 8 x USB 3.0 and 1 x internal USB 2.0<br>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)  |   |  |         |
|  | Module   | Supports Advantech i-Modules   |   |  |         |
| Expansion  | Mini PCIe  | Q170: 1 x mini PCIe (via USIM), 1 x mini PCIe/mSATA<br>H110: 1 x mini PCIe (via USIM), 1 x mSATA   |   |  |         |
|  | LED and Switch   | 2 (1 x Storage and 1 x Power), 4 for COM1 TX/RX and COM2 TX/RX<br>1 x Power on/off switch  |   |  |         |
| Power  | Type   | ATX/AT   |   |  |         |
|  | Input Voltage  | 9 ~ 36 V <sub>DC</sub>   |   |  |         |
|  | Power consumption  | Typical: 32.062W<br>Maximum: 116.002W  |   |  |         |
| Watchdog Timer   | Output   | System reset   |   |  |         |
|  | Interval   | Programmable 1 ~ 255 sec/min   |   |  |         |
| Environment  | Temperature  | 65W CPU w/ industrial SSD<br>-10 ~ 40 °C with 0.7 m/s air flow   |   | 35W CPU w/ industrial SSD<br>-10 ~ 50 °C with 0.7 m/s air flow |         |
|  | Humidity   | 95% @ 40 °C (non-condensing)   |   |  |         |
|  | Vibration  | With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis<br>With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis  |   |  |         |
|  | Shock  | With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration<br>50G 11 ms  |   |  |         |
|  | Dimensions (W x H x D)   | 77 x 192 x 230 mm (3.07" x 7.55" x 9.05")  |   |  |         |
| Mechanical   | Weight   | 2.8 kg (6.17 lbs)  |   |  |         |
|  | Installation   | Desktop/wall mount   |   |  |         |
| Certifications   | EMC  | CE/FCC Class A, CCC, BSMI  |   |  |         |
|  | Safety   | UL, CCC, BSMI  |   |  |         |
| OS Support   |  | 7th Gen. CPU: Windows 10, Windows 10 IoT<br>6th Gen. CPU: Windows 10, Windows 10 IoT, Windows 8.1 (64 bit), Windows 7                            |   |  |         |
|  |  | MIC-7700Q: Windows Server 2016<br>Linux OS   |   |  |         |

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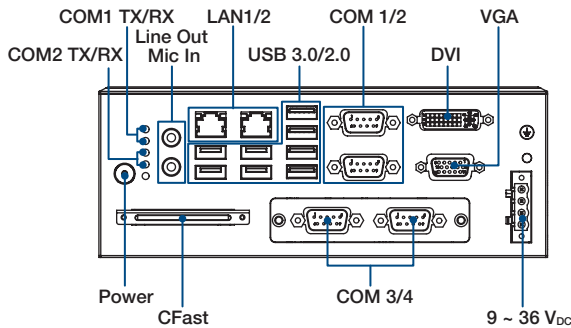
## Dimensions



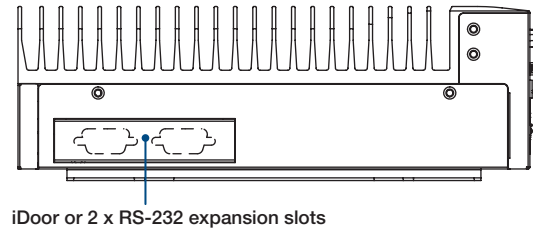
Unit: mm



## 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     | 8       | 0       | 2   | 4, up to 6 (Optional) | i-Module (optional)  | 9 ~ 36V <sub>dc</sub> |
| MIC-7700H-00A1 | 1   | 1   | 1            | 1     | 1     | 4       | 4       | 2   | 4, up to 6 (Optional) | i-Module (optional)* | 9 ~ 36V <sub>dc</sub> |

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

## Packing List

| Part Number    | Description                                   | Quantity |
|----------------|---|----------|
| MIC-7700       | MIC-7700 bare system                          | 1        |
| 2061770010     | Driver CD                                     | 1        |
| 2001770030     | Startup manual EMC/NTC for MIC-7700 1st Ed    | 1        |
| 1652003234     | 4-pin Phoenix power connector                 | 1        |
| 1960070543T001 | Mounting bracket                              | 2        |
| 1700013095     | SATA cable                                    | 1        |
| 1700024372-01  | SATA power cable                              | 1        |
| 1701200220     | Dual DB9 port cable (for COM5/COM6 expansion) | 1        |
| 2170000093-01  | CPU thermal grease                            | 1        |
| 1990019498N000 | RAM thermal pad                               | 2        |

## 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         | MIC DVI kit FIO  |
| 98R1750010E         | MIC HDMI/Remote Switch kit FIO                           |
| 98R1750030E         | MIC HDMI kit FIO   |
| 98R1750040E         | MIC Remote Switch kit FIO                                |
| 98R1750080E         | MIC Reset/Remote Switch/5VDC kit FIO                     |
| 98R1750090E         | MIC GPIO 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 module.
- 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 removable 2.5" storage bay) |
| MIC-75G20                | GPU card expansion i-Module (2 x PCIe, 2 x removable 2.5" storage bay)          |

\* Please refer to i-Module datasheet for more detail.

## Embedded OS

| Part Number    | Description                         |
|----------------|-------------------------------------|
| 2070015330     | img WES7P MIC-7700H 64b 1701 10 MUI |
| 2070015331     | img WES7P MIC-7700Q 64b 1701 10 MUI |
| 20706WX9HS0008 | img W10 19HL MIC-7700H 64b 1809 ENU |
| 20706WX9VS0010 | img W10 19VL MIC-7700H 64b 1809 ENU |
| 20706WX9ES0013 | img W10 19EL MIC-7700H 64b 1809 ENU |
| 20706WX9HS0007 | img W10 19HL MIC-7700Q 64b 1809 ENU |
| 20706WX9VS0009 | img W10 19VL MIC-7700Q 64b 1809 ENU |
| 20706WX9ES0012 | img W10 19EL MIC-7700Q 64b 1809 ENU |