

MIC-7700

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



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
- 1 x 2.5" HDD/SSD, 1 x CFast, and 1 x mSATA
- 2 x RS-232/422/485 and 4 x RS232 serial ports
- 9 ~ 36 V_{DC} input power range
- IP40 dust proof for deployment in harsh environment
- Supports FlexIO and iDoor technology, flexible configure additional HDMI, DVI, DIO, Remote switch IO
- Supports Advantech i-Modules
- Supports Advantech SUSI-API and embedded software APIs
- Supports Intel® vPro™/AMT and TPM technologies
- Microsoft Azure Certified

Specifications

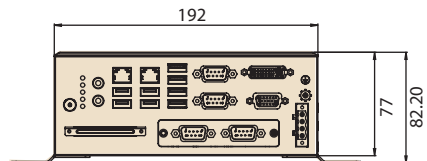
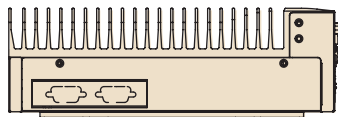
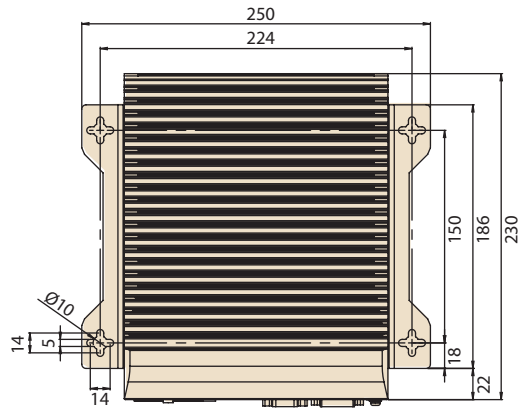
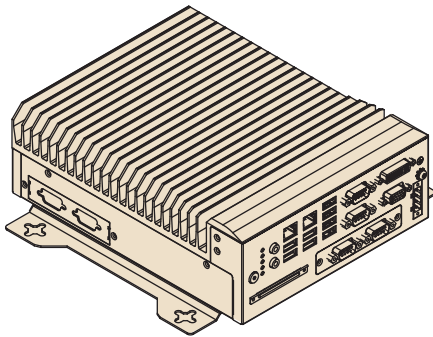
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|--|---------------------|--|-----------|-----------|---------|
| 6 th /7 th Generation Processor* (TDP 35W) | CPU | i7-6700TE | i5-6500TE | i3-6100TE | G4400TE |
| | Core Number | 4 | 4 | 2 | 2 |
| | Base Frequency | 2.4 GHz | 2.3 GHz | 2.7 GHz | 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 th /7 th Generation Processor* (TDP 65W) | 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 (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 th Gen. CPU: Intel HD Graphics 630, supports DirectX 12 6 th 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 | | | |
| | Multiple Display | Q170: 3 x independent displays (with Flex I/O for 2nd DVI, 1 x HDMI or 1 x DP) H110: 2 x independent displays | | | |
| Ethernet | Controller | Q170 LAN1: Intel® I219LM, LAN2: Intel® i210IT H110 LAN1: Intel® I219V, LAN2: Intel® i210IT | | | |
| | Interface | 2 x RJ45 | | | |
| Storage | HDD | 1 x 2.5" HDD/SSD (up to 2 x 2.5" SSD by optional kit; 2 x 3.5" HDD by i-Module) | | | |
| | CFast | 1 | | | |
| | mSATA | 1 | | | |
| | RAID | 0/1/5/10 (MIC-7700Q only) | | | |
| | SATA Conn. | Q170: 3 x SATA signal, 3 x SATA power H110: 1 x SATA signal, 1x SATA power | | | |
| I/O | 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) | | | |
| Expansion | Module | Supports Advantech i-Modules | | | |
| | Mini PCIe | Q170: 1 x mini PCIe (via USIM), 1 x mini PCIe/mSATA H110: 1 x mini PCIe (via USIM), 1 x mSATA | | | |
| LED and Switch | LED | 2 (1 x Storage and 1 x Power), 4 for COM1 TX/RX and COM2 TX/RX | | | |
| | Button | 1 x Power on/off switch | | | |
| Power | Type | ATX/AT | | | |
| | Input Voltage | 9 ~ 36 V _{DC} | | | |
| | Power consumption | 32.1W 116W | | | |

Specifications (Cont.)

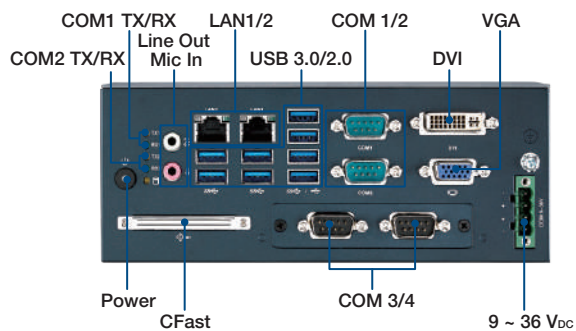
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|----------------|------------------------|---|--|------------------------------|
| Watchdog Timer | Output Interval | System reset Programmable 1 ~ 255 sec/min | | |
| Environment | Temperature | 65W CPU w/ industrial wide-temp SSD -10 ~ 40 °C with 0.7 m/s air flow | 35W CPU w/ industrial wide-temp SSD -10 ~ 50 °C with 0.7 m/s air flow | Non-operating -40 ~ 85 °C |
| | Humidity | 95% @ 40 °C (non-condensing) | | |
| | Vibration | 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 |
| | Shock | With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration | | 50G 11 ms |
| Mechanical | 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) | | |
| | 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 6th Gen. CPU: Windows 10, Windows 10 IoT, Windows 8.1 (64 bit), Windows 7 Linux OS | | |

Dimensions

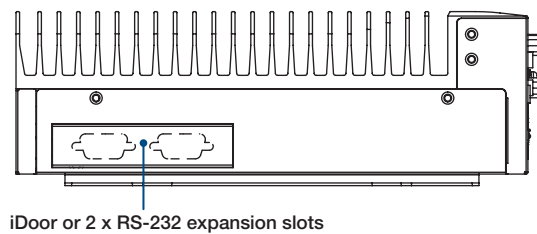
Unit: mm



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-00A2 | 1 | 1 | 1 | 1 | 1 | 8 | 0 | 2 | 4, up to 6 (Optional) | i-Module (optional) | 9 ~ 36V _{DC} |
| MIC-7700H-00A2 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 2 | 4, up to 6 (Optional) | i-Module (optional)* | 9 ~ 36V _{DC} |

*MIC-7700H does not support MIC-75M40, MIC-75M20-01 and MIC-75G30

Packing List

| Part Number | Description | Quantity |
|----------------|---|----------|
| MIC-7700 | MIC-7700 bare system | 1 |
| 2061770010 | Driver CD | 1 |
| 2001770030 | Startup manual EN/CN/TC for MIC-7700 1st Ed | 1 |
| 1652003234 | 4-pin Phoenix power connector | 1 |
| 1960070543T005 | Mounting bracket | 2 |
| 1700013095-01 | 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 i-Modules*

| Part Number | Description |
|------------------|---|
| MIC-75M10-00A2 | 1-slot expansion module (1 x PCIe) |
| MIC-75M11-00A2 | 2-slot expansion module (1 x PCIe and 1 x PCI slots) |
| MIC-75M13-00A2 | 4-slot expansion module (1 x PCIe and 3 x PCI slots) |
| MIC-75M20-00C1 | 2-slot expansion module (2 x PCIe slots) |
| MIC-75M20-01A2** | 2-slot expansion module (2 x PCIe slots) |
| MIC-75M40-00A2** | 4-slot expansion module (4 x PCIe slots) |
| MIC-75G20-10A2 | GPU card expansion module (2 x PCIe and 2 x removable 2.5" storage bay) |
| MIC-75G30-00A2** | Dual GPU card expansion module (3 x PCIe and 2 x removable 2.5" storage bay, 1 x HDMI, 1 x DP) |
| MIC-75GF10-00A1 | MXM GPU expansion module (1 x MXM, 1 x PCIe and 2 x removable 2.5" storage bay, 1 x HDMI, 3 x DP) |
| MIC-75S00-00A1 | 2 x removable 2.5" storage bay |
| MIC-75S20-00A2 | 2-slot expansion storage module (2 x PCIe and 2 x removable 2.5" storage bay) |
| 98R17520301 | 2 x 3.5" HDD kit |

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

** Q170 SKU only

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 |

Optional Accessories

| Part Number | Description |
|---------------------|---|
| Adaptor | |
| 96PSA-A230W24P4-3* | ADP A/D 100-240V 230W 24V C14 TERMINAL BLOCK 4P |
| 96PSA-A150W19P4-3 | ADP A/D 100-240V 150W 19V C14 TERMINAL BLOCK 4P |
| 1702002600 | Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D |
| 1700022940-01 | Power cord PSE, 3-pin, 7A, 125V, 3M, DAC-ST01 |
| 1702002605 | Power Cord (EU), 3-pin, 10A, 250V 1.83M, 90D |
| Din Rail PSU | |
| 96PSD-A240W24-MN | A/D 100-240V 240W 24V NDR DIN RAIL |
| 1700031170-01 | DC-DC power cord, A cable TEM*4/TEM*4 UL2464 18AWG 150cm |
| 1700029720-01 | AC-DC power cord (US), M cable AC CONN 3P 183cm |
| 1700030520-01 | AC-DC power cord (CN), M cable conn 3P CCC 10A 250V 150cm |
| 1700031408-01 | AC-DC power cord (EU), M cable conn 3P/G-TEM*3 80CM |

* Please use 230W adaptor when i-Module is added.

Note:

- 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 Flex I/O* & Kits

| Part Number | Description |
|---------------------|---|
| Flex I/O | |
| AiIS-DIO32-00A1E** | AiIS GPIO module (32 bit) |
| PCA-TPM-00B1E | TPM 2.0 module |
| 98R17500001 | MIC DVI FIO |
| 98R17500101 | MIC HDMI/Remote power on/off FIO |
| 98R17500301 | MIC HDMI kit FIO |
| 98R17500401 | MIC Remote power on/off FIO |
| 98R17500601 | MIC COMport kit FIO |
| 98R17500701 | MIC Remote power on/off kit for SFIO |
| 98R17500801 | MIC Reset/Remote power on/off/5VDC kit FIO |
| 98R17500901 | MIC GPIO kit FIO |
| 98R17501001 | MIC DP kit FIO |
| 9891790040E*** | MIC Dual LAN FIO |
| Storage Kit | |
| 98R1752010E | 2nd 2.5" HDD/SSD kit (used in 2-slot i-Module) |
| 98R1752020E | 2 x 2.5" SSD kit (Thickness: 7mm, used insides of MIC-7700) |
| Mounting Kit | |
| 98R17500210 | MIC Din Rail Mounting kit |
| 98R17500501 | MIC Wall Mounting kit |

* Please refer to Flex I/O datasheet for more detail.

** AiIS-DIO32 requires a DB37 bracket (P/N: 1960068787N003)

*** for MIC-7700Q (Q170) Sku only

Note: Decorative cover for regular Flex I/O P/N: 1960068779N004