

MIC-770

Compact Fanless System with 8th/9th Gen Intel® Core™ i CPU Socket (LGA 1151)



Features

- Intel® 8th/9th Gen Core™ i CPU socket-type (LGA1151) with Intel® Q370/H310 chipset
- Wide operating temperature (-10 ~ 50 °C)
- VGA and HDMI output
- 2 x GigaLAN, 2 x USB 3.1 and 6 x USB 3.0
- 2 x RS-232/422/485 and 4 x RS232 serial ports (Optional)
- 1 x 2.5" HDD/SSD, and 1 x mSATA
- 9 ~ 36 V_{DC} input power range
- Supports FlexIO and iDoor technology, flexible configure additional HDMI, DVI, Comport, DIO, Remote switch IO
- Supports Advantech i-Modules
- Supports Advantech SUSI-API and embedded software APIs



Specifications

| | | | | | | | | | |
|---|------------------------|--|-----------|-------------------------------------|----------|---------------|-----------------------------------|--------|-------------|
| 8 th /9 th Generation Processor (TDP 35W) | CPU | i7-9700TE | i5-9500TE | i3-9100TE | i7-8700T | i5-8500T | | | |
| | Core/Thread number | 8/8 | 6/6 | 4/4 | 6/12 | 6/6 | | | |
| | Base Frequency | 1.8GHz | 2.2GHz | 2.2GHz | 2.4GHz | 2.1GHz | | | |
| | Max Turbo Frequency | 3.8GHz | 3.6GHz | 3.2GHz | 4.0GHz | 3.5GHz | | | |
| | L3 Cache | 12MB | 9MB | 6MB | 12MB | 9MB | | | |
| | Temperature | -10 ~ 50 °C (w/ industrial wide-temp SSD, 0.7m/s air flow) | | | | | | | |
| | Chipset | Q370/H310 | | | | | | | |
| 8 th /9 th Generation Processor (TDP 65W) | BIOS | AMI 256Mb SPI Flash | | | | | | | |
| | CPU | i7-9700E | i5-9500E | i3-9100E | i7-8700 | i5-8500 | i3-8100 | G5400 | G4900 |
| | Core/Thread number | 8/8 | 6/6 | 4/4 | 6/12 | 6/6 | 4/4 | 2/4 | 2/2 |
| | Base Frequency | 2.6GHz | 3.0GHz | 3.1GHz | 3.2GHz | 3.0GHz | 3.6GHz | 3.7GHz | 2.9GHz |
| | Max Turbo Frequency | 4.4GHz | 4.2GHz | 3.7GHz | 4.6GHz | 4.1GHz | 4.0GHz | 4.0GHz | 2.9GHz |
| | L3 Cache | 12MB | 8MB | 6MB | 12MB | 9MB | 6MB | 4MB | 2MB |
| | Temperature | -10 ~ 40 °C (w/ industrial wide-temp SSD, 0.7m/s air flow) | | | | | | | |
| Memory | Chipset | Q370/H310 | | | | | | | |
| | BIOS | AMI 256Mb SPI Flash | | | | | | | |
| | Technology | Dual-channel DDR4 2400/2666 MHz (without ECC) | | | | | | | |
| Display | Socket | 2 x 260-pin DDR4 SODIMM (up to 32GB per socket) | | | | | | | |
| | Maximum Capacity | 64GB | | | | | | | |
| | Chipset | Q370: Intel® HD Graphics 630, supports DirectX 12 H310: Intel® HD Graphics 610, supports DirectX 12 | | | | | | | |
| Ethernet | VGA | 1 x DB15, up to 1920 x 1200 maximum resolution | | | | | | | |
| | HDMI | 1 x HDMI, up to 4096 x 2160@30Hz (with optional expansion cable for 2nd HDMI or 1 x DVI connector) | | | | | | | |
| | Multiple Display | Q370: 3 x independent displays (third display output via optional cable) H310: 2 x independent displays | | | | | | | |
| Storage | Controller | Q370 LAN1: Intel® I219LM, LAN2: Intel® I210IT H310 LAN1: Intel® I219V, LAN2: Intel® I210IT | | | | | | | |
| | Interface | 2 x RJ45 | | | | | | | |
| I/O | 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) | | | | | | | |
| | mSATA | 1 | | | | | | | |
| | RAID | 0/1/5/10 (Q370 SKU only) | | | | | | | |
| Expansion | USB | Q370: 2 x USB3.1, 6 x USB3.0 and 1 x internal USB 2.0 H310: 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 (Optional) | | | | | | | |
| | Audio | 2 (1 x line out and 1 x mic in) | | | | | | | |
| LED and Switch | Module | Supports Advantech i-Modules | | | | | | | |
| | Mini PCIe | Q370: 1 x mini PCIe (via USIM), 1 x mini PCIe/mSATA H310: 1 x mini PCIe (via USIM), 1 x mSATA | | | | | | | |
| Power | 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 | | | | | | | |
| | Remote Switch | Yes, 2pin terminal block (Optional) | | | | | | | |
| Watchdog Timer | Type | ATX/AT | | | | | | | |
| | Input Voltage | 9 ~ 36 V _{DC} | | | | | | | |
| | Power consumption | Typical: 32.1W Maximum: 116W | | | | | | | |
| Environment | Output | System reset | | | | | | | |
| | Interval | Programmable 1 ~ 255 sec/min | | | | | | | |
| | Temperature | 65W CPU w/ industrial wide-temp SSD | | 35W CPU w/ industrial wide-temp SSD | | Non-operating | | | |
| Mechanical | Humidity | -10 ~ 40 °C with 0.7 m/s air flow | | | | | -10 ~ 50 °C with 0.7 m/s air flow | | -40 ~ 85 °C |
| | Vibration | 95% @ 40 °C (non-condensing) | | | | | | | |
| | 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 | | | | | | | |
| Certifications | Dimensions (W x H x D) | With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration | | | | | | | |
| | Weight | 77 x 192 x 230 mm (3.07" x 7.55" x 9.05") | | | | | | | |
| | Installation | 2.8 kg (6.17 lbs) Desktop/wall mount | | | | | | | |
| OS Support | EMC | CE/FCC Class A, CCC, BSMI | | | | | | | |
| | Safety | CB/UL, CCC, BSMI | | | | | | | |
| | | Windows 10, Windows 10 IoT, Linux OS | | | | | | | |

Vertrieb durch

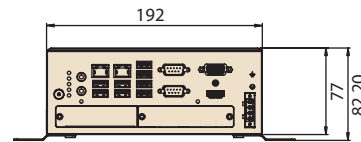
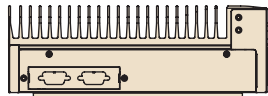
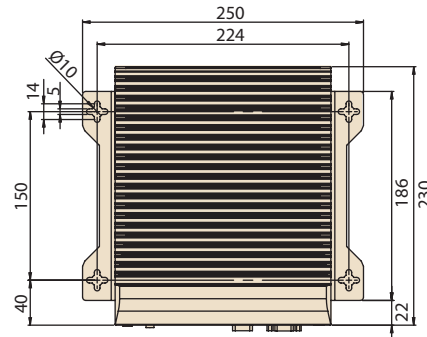
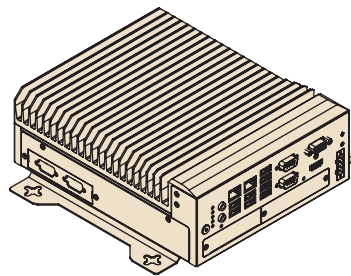


AMC – Analytik & Messtechnik GmbH Chemnitz

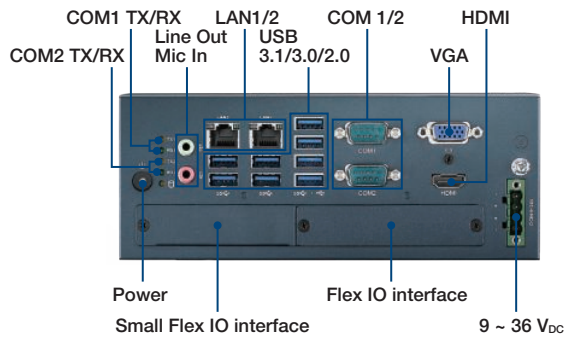
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Dimensions

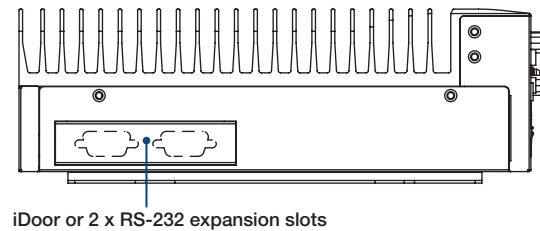
Unit: mm



Front View



Side View



Ordering Information

| Part Number | VGA | HDMI | 2.5" HDD/SSD | mSATA | USB 3.1 | USB 3.0 | USB 2.0 | GbE | COM | PCIe | Power |
|---------------|-----|------|--------------|-------|---------|---------|---------|-----|-----------------------|----------------------|-----------------------|
| MIC-770Q-00A2 | 1 | 1 | 1 | 1 | 2 | 6 | 0 | 2 | 2, up to 6 (Optional) | i-Module (optional)* | 9 ~ 36V _{DC} |
| MIC-770H-00A2 | 1 | 1 | 1 | 1 | 0 | 4 | 4 | 2 | 2, up to 6 (Optional) | i-Module (optional)* | 9 ~ 36V _{DC} |

*MIC-770H does not support MIC-75M40 or MIC-75M20-01

Packing List

| Part Number | Description | Quantity |
|----------------|------------------------------------|----------|
| MIC-770 | MIC-770 bare system | 1 |
| 2041077000 | MIC-770 startup manual (ENG+TC+SC) | 1 |
| 1652003234 | 4-pin Phoenix power connector | 1 |
| 1960070543T001 | 2 x Mounting bracket | 2 |
| 1700013095 | SATA cable | 1 |
| 1700024372-01 | SATA power cable | 1 |
| 2170000093-01 | CPU thermal grease | 1 |
| 1990019498N000 | RAM thermal pad | 2 |

Optional i-Modules*

| Part Number | Description |
|------------------|--|
| MIC-75M40-00A2** | 4-slot expansion module (4 x PCIe 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-75M11-00A2 | 2-slot expansion module (1 x PCIe and 1 x PCI slots) |
| MIC-75M10-00A2 | 1-slot expansion module (1 x PCIe) |
| MIC-75S20-00A2 | 2-slot expansion and storage module (2 x PCIe and 2 x 2.5" removable 2.5" storage bay) |
| MIC-75G20-10A2 | GPU Card expansion module (2 x PCIe and 2 x removable 2.5" storage bay) |
| MIC-75G30-10A2** | Dual GPU card expansion module (3x 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.

** Q370 SKU only

Embedded OS

| Part Number | Description |
|----------------|--|
| 20706WX9HS0005 | img MIC-770H Win10 IOT Enterprise 2019 LTSC 64b high end |
| 20706WX9VS0007 | img MIC-770H Win10 IOT Enterprise 2019 LTSC 64b value |
| 20706WX9ES0010 | img MIC-770H Win10 IOT Enterprise 2019 LTSC 64b entry |
| 20706WX9HS0004 | img MIC-770Q Win10 IOT Enterprise 2019 LTSC 64b high end |
| 20706WX9VS0006 | img MIC-770Q Win10 IOT Enterprise 2019 LTSC 64b value |
| 20706WX9ES0009 | img MIC-770Q Win10 IOT Enterprise 2019 LTSC 64b entry |

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 |

* Suggest to use for MIC-770 V2 with i-Module added.

** Suggest to use for MIC-770 V2 without i-Module added.

Note:

- MIC-770 V2 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 |
| 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 |
| Advanced Flex I/O*** | |
| 98910770301 | MIC NVMe + 4 LAN Advanced FIO |
| 98910770401 | MIC NVMe Advanced FIO |
| 98910770501 | MIC 4 PoE Advanced 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) |
| 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: 1960068787N002)

Q370 SKU only