

# MIC-7700

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

**NEW**



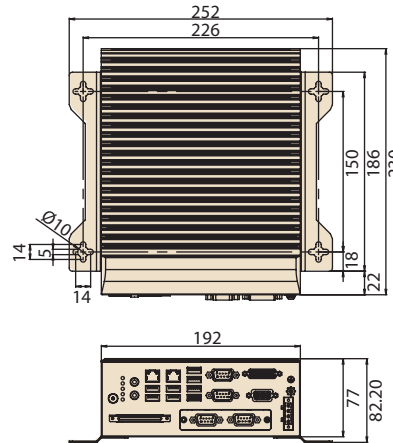
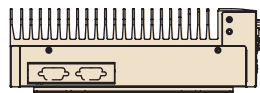
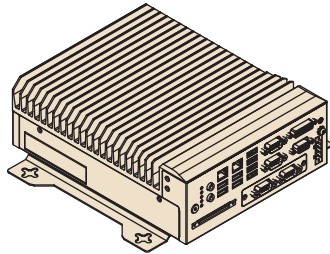
### Features

- 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 2 x LAN, isolation COMs, and 32-bit GPIO modules
- Supports Advantech i-Modules
- Supports Advantech SUSIAccess and embedded software APIs

### Specifications

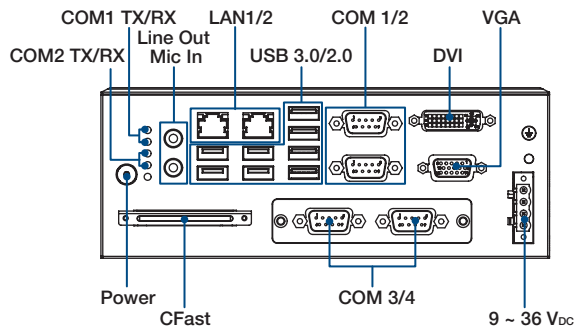
6 <sup>th</sup> Generation Processor (TDP 35W)	CPU	i7-6700TE	i5-6500TE	i3-6100TE	G4400TE
	Core Number	4	4	2	2
	Base Frequency	2.4 GHz	2.3 GHz	2.7 GHz	2.9 GHz
	Max Turbo Frequency	3.4 GHz	3.3 GHz		
	L3 Cache	8 MB	6 MB	4 MB	3 MB
	Temperature	-10 ~ 50 °C (with SSD)			
	Chipset	Q170/H110			
	BIOS	AMI 128Mb SPI Flash			
6 <sup>th</sup> /7 <sup>th</sup> Generation Processor (TDP 65W)	CPU	i5-7500	i3-7101E	i5-6500	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)			
	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	Q170: Intel® HD Graphics 530, supports DirectX 12 H110: Intel® HD Graphics 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) 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			
	CFast	1			
	mSATA	1			
	RAID	0/1/5/10 (MIC-7700Q only)			
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 H170: 1 x mini PCIe (via USIM), 1 x mSATA			
LED and Switch	LED	2 (1 x Storage and 1 x Power)			
	Button	1 x Power on/off switch			
Power	Type	ATX/AT			
	Input Voltage	9 ~ 36 V <sub>DC</sub>			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Environment	Temperature	65W CPU w/ industrial SSD -10 ~ 40 °C	35W CPU w/ industrial SSD -10 ~ 50 °C	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			
	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			

## Dimensions

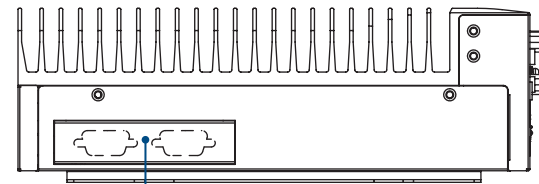


Unit: mm

## Front View



## Side View



iDoor or 2 x RS-232 expansion slots

## 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 <sub>DC</sub>
MIC-7700H-00A1	1	1	1	1	1	4	4	2	4, up to 6 via cable	i-Module (optional)*	9 ~ 36V <sub>DC</sub>

\*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-DI032-00A1E	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:

- 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

# i-Modules for MIC-7 Series

## Compatible with MIC-7 Series Fanless Systems

### 4-Slot Expansion Modules

#### MIC-75M40

- 1 x PCIe x8
- 3 x PCIe x4
- 1 x SATA (2 x 2.5" HDD bays)
- Supports 1 x 8-cm fan (optional)
- Dimensions (W x H x D): 163 x 192 x 230 mm (6.41" x 7.55" x 9.05")

#### Note

- For expansion cards with more than 45W power consumption, a fan should be added for thermal management.
- MIC-75M40 does not support MIC-73 series systems or MIC-7700H.



#### MIC-75M13

- 1 x PCIe x16
- 3 x PCI
- 1 x SATA (2 x 2.5" HDD bays)
- Supports 1 x 8-cm fan (optional)
- Dimensions (W x H x D): 163 x 192 x 230 mm (6.41" x 7.55" x 9.05")

#### Note

- For expansion cards with more than 45W power consumption, a fan should be added for thermal management.
- For MIC-73 series systems (with Intel® Atom™ CPU), only 1 PCIe x4 is supported.



### 2-Slot Expansion Modules

#### MIC-75M20 MIC-75M20-01

- MIC-75M20: 1 x PCIe x16/1 x PCIe x4
- MIC-75M20-01: 2 x PCIe x8
- Supports 2 x 4-cm fans (optional)
- Dimensions (W x H x D): 123 x 192 x 230 mm (4.84" x 7.55" x 9.05")

#### Note

- For expansion cards with more than 45W power consumption, a fan should be added for thermal management.
- MIC-75M20 does not support MIC-73 series systems.
- MIC-75M20-01 does not support MIC-7700H.



#### MIC-75M11

- 1 x PCIe x16
- 1 x PCI
- Supports 2 x 4-cm fans (optional)
- Dimensions (W x H x D): 123 x 192 x 230 mm (4.84" x 7.55" x 9.05")

#### Note

- For expansion cards with more than 45W power consumption, a fan should be added for thermal management.
- MIC-73 series systems (with Intel® Atom™ CPU) support 1 PCIe x4 or 3 PCI sockets.



#### MIC-75S20

- 1 x PCIe x16
- 1 x PCIe x4
- 2 x Hot-swappable HDD trays (15 mm)
- Supports 1 x 8-cm fan (optional)
- Dimensions (W x H x D): 163 x 192 x 230 mm (6.41" x 7.55" x 9.05")

#### Note

- Install an SSD for wide temperature range. If the system does not feature an SSD, a fan should be added for thermal management.
- MIC-75S20 does not support high-power consumption expansion cards (i.e., graphics cards).
- MIC-75S20 does not support MIC-73 series systems.



#### MIC-75M10

- 1 x PCIe x16
- Dimensions (W x H x D): 97 x 192 x 230 mm (3.81" x 7.55" x 9.05")

#### Note

- MIC-75M10 does not support fan modules.
- MIC-75M10 does not support high-power consumption expansion cards (i.e., graphics cards).



### 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)

### 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-75M20-00A1E	2-slot expansion i-Module with 1 PCIe x16, 1 PCIe x4
MIC-75M10-00A1	1-slot expansion i-Module with 1 PCIe x16
MIC-75M20-01A1E	2-slot expansion i-Module with 2 PCIe x8
MIC-75S20-00A1E	2-slot expansion i-Module with 1 PCIe x16, 1 PCIe x4, 2 2.5" HDD bay