

# MIC-7500

## Compact Fanless System with 6<sup>th</sup> Gen Intel® Core™ i Processor



### Features

- Intel® 6<sup>th</sup> Gen Core™ i7/i5/i3/Celeron® (BGA-type) processor with Intel® QM170 chipset
- 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 (with expansion cable)
- 1 x 2.5" HDD/SSD, 1 x CFast, and 1 x mSATA
- 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

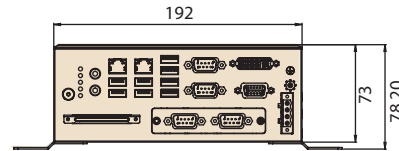
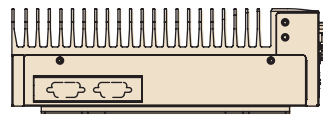
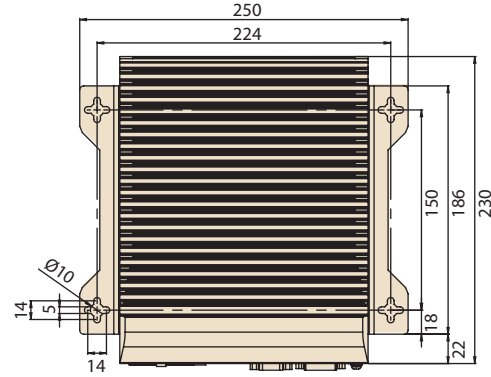
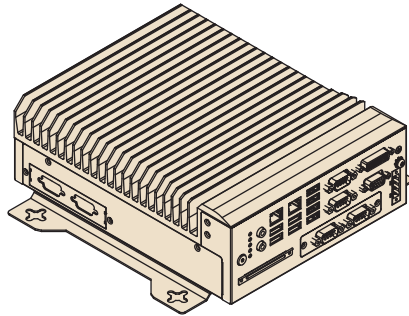


### Specifications

Processor and Chipset	CPU	Intel® Core™ i7-6820EQ	Intel® Core™ i7-6822EQ	Intel® Core™ i5-6442EQ	Intel® Core™ i3-6102E	Intel® Celeron® G3900E
	Core Numbers	4	4	4	2	2
	Base Frequency	2.8 GHz	2.0 GHz	1.9GHz	1.9 GHz	2.4 GHz
	Max Turbo Frequency	3.5 GHz	2.8 GHz	2.7 GHz		
	L3 Cache	8 MB	8 MB	6 MB	3 MB	2 MB
	Chipset	Intel® QM170				
	TDP	45W	35W	35W	35W	45W
BIOS	AMI® SPI 64 Mb					
Memory	Technology	Dual-channel DDR4 2133 MHz (without ECC)				
	Socket	2 x 260-pin DDR4 SODIMM (up to 16 GB per socket)				
	Maximum Capacity	32GB				
Display	Chipset	Intel® HD Graphics 530, supports DirectX 12				
	VGA	1 x DB15, up to 2048 x 1536 maximum resolution				
	DVI	1 x DVI, up to 1920 x 1080 maximum resolution @ 30Mhz				
	Multiple Display	Supports 3 x independent displays (third display output via optional cable)				
Ethernet	Controller	LAN1: Intel® i219-LM LAN2: Intel® i210IT (supports wake-on-LAN)				
	Interface	2 x RJ45				
Storage	HDD/SSD	1 x 2.5" HDD/SSD				
	CFast	1				
	mSATA	1				
	RAID	0/1				
I/O	USB	8 x USB 3.0 and 1 x internal USB 2.0				
	Serial Port	2 x DB9, RS232/422/485 with automatic flow control and 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	1 x mini PCIe (via USIM), 1 x mini PCIe/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 <sub>DC</sub>				
	Power consumption	Typical: 22.0W Maximum: 51.1W				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Environment	Temperature	i7-6820EQ Operating (w/ industrial wide-temp SSD)	Operating (w/ industrial wide-temp SSD)	Operating (with HDD)	Non-operating	
		-20 ~ 50 °C with 0.7 m/s air flow	-20 ~ 60 °C with 0.7 m/s air flow	0 ~ 40 °C	-40 ~ 85 °C	
	Humidity	95% @ 40 °C (non-condensing)				
	Vibration	With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis		2G		
Mechanical	Shock	With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration		50G 11 ms		
	Dimensions (W x H x D)	73 x 192 x 230 mm (2.91" x 7.55" x 9.05")				
Certifications	Weight	2.9 kg (6.39 lbs)				
	Installation	Desktop/wall mount				
OS Support	EMC	CE/FCC Class A, CCC, BSMI				
	Safety	UL, CCC, BSMI				
OS Support	Windows 10, Windows 10 IoT, Windows 8.1 (64 bit), Windows 7, Linux OS					

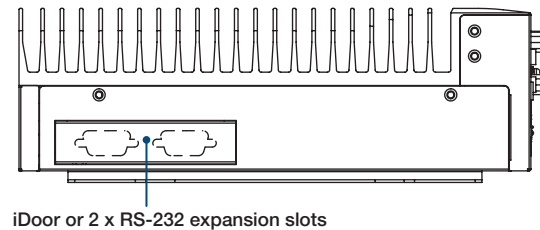
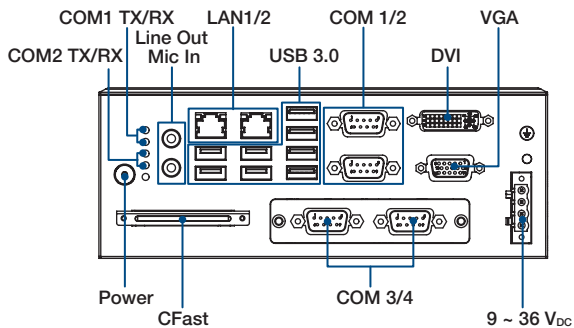
**Dimensions**

Unit: mm



**Front View**

**Side View**



**Ordering Information**

Part Number	CPU	VGA	DVI	2.5" HDD/SSD	CFAST	mSATA	USB 3.0	GbE	COM	PCIe	Power
MIC-7500B-U8B1	i7-6820EQ (45W)	1	1	1	1	1	8	2	4, up to 6 (Optional)	i-Module (optional)	9 ~ 36V <sub>dc</sub>
MIC-7500B-U0B1	i7-6822EQ	1	1	1	1	1	8	2	4, up to 6 (Optional)	i-Module (optional)	9 ~ 36V <sub>dc</sub>
MIC-7500B-S9B1	i5-6442EQ	1	1	1	1	1	8	2	4, up to 6 (Optional)	i-Module (optional)	9 ~ 36V <sub>dc</sub>
MIC-7500B-19B1	i3-6102E	1	1	1	1	1	8	2	4, up to 6 (Optional)	i-Module (optional)	9 ~ 36V <sub>dc</sub>
MIC-7500B-U4B1	G3900E (45W)	1	1	1	1	1	8	2	4, up to 6 (Optional)	i-Module (optional)	9 ~ 36V <sub>dc</sub>

## Packing List

Part Number	Description	Quantity
MIC-7500	Fanless system with 6 <sup>th</sup> Gen Intel® Core™ i processor	1
2061750000	CD-ROM	1
2001750000	Startup manual	1
1652003234	4-pin Phoenix power connector	1
1960070543T005	Mounting bracket	2
1700013095	SATA cable	1
1700024372-01	SATA power cable	1
1701200220	Dual DB9 port cable (for COM5/COM6 expansion)	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-75G30-00A2	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.

## Embedded OS

Part Number	Description
2070014106	WES7P MIC-7500 x64 V5.6.6 10MUI image
2070014584	WES7P MIC-7500 x32 V5.3.0 10MUI image

## Optional Accessories

Part Number	Description
<b>Adaptor</b>	
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
<b>Din Rail PSU</b>	
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

Note:

\* Suggest to use for MIC-7500 with i-Module added.

\*\* Suggest to use for MIC-7500 without i-Module added.

- MIC-7500 supports Advantech's iDoor modules (both MOS and PCM series). Visit the Advantech website for more information.
- The **PCM** series module requires a bracket (**P/N: 1960065854N001**) that must be ordered separately.

## Optional Flex I/O\* & Kits

Part Number	Description
<b>Flex I/O</b>	
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
<b>Storage Kit</b>	
98R1752010E	2nd 2.5" HDD/SSD kit (used in 2-slot i-Module)
<b>Mounting Kit</b>	
98R17500210	MIC Din Rail Mounting kit
98R17500501	MIC Wall Mounting kit

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