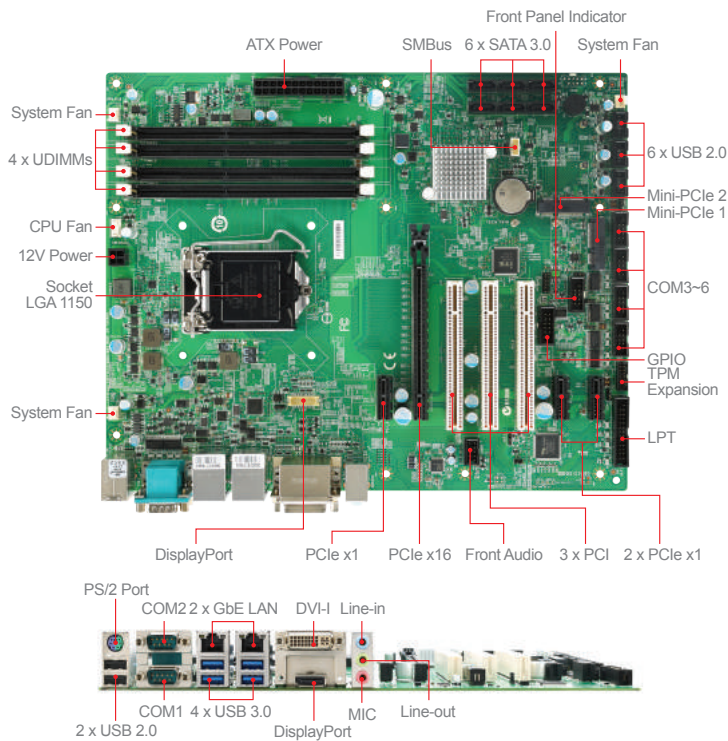


# MS-98B5

ATX with 4th Gen Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processor and Intel® H81/Q87 for High-Performance Solution



## Features

- Intel® Haswell Series CPU to maximize performance
- 4 DDR3/DDR3L 1600MHz UDIMMs up to 32GB
- Supports DisplayPort, DVI-I, Dual Intel® GbE LAN and AMT 9.0
- 6 SATA 3.0, 6 COM, 4 USB 3.0, 8 USB 2.0
- Supports ATX power

## Ordering Information

Part Number	Description
919-98B5-001	MS-98B5 10 Q87, ATX, LGA1150, 4*DDR3, 1*D-VI-I+2*DisplayPort 1.2a +4*USB3.0+8*USB2.0+6*SATA3.0+6*COM+2*GbE LAN+ATX POWER, RoHS
919-98B5-002	MS-98B5 10 OPT.A, H81, ATX, LGA1150, 2*DDR3, 1*D-VI-I+2*DisplayPort 1.2a +2*USB3.0+8*USB2.0+2*SATA3.0+2*SATA2.0+6*COM+2*GbE LAN+ATX POWER, RoHS

## Packing List

Part Number	Description	Quantity
K14-1018004-V03	Internal COM Port Cable with Bracket, 510mm	2
K18-1025011-V03	Internal LPT Cable with Bracket, 300mm	1
K1B-3008012-E06	Internal USB2.0, 330mm	1
K1D-1008261-V03	SATA Cable, 500mm	2
K39-3002004-E06	External PS/2 Y-Cable, 190mm	1
E21-98B5010-C22	I/O Shielding	1
G71-SEDC159-N56	Driver DVD	1

## Specifications

<b>Processor</b>	CPU	4th Gen Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processor, Max. 95W
	Frequency	2.4GHz~4.0 GHz (Depends on CPU)
	L2 Cache	2M~8M (Depends on CPU)
	CPU Type	Socket (LGA 1150)
	Chipset	Intel® H81/Q87 Express
<b>Memory</b>	BIOS	AMI
	Technology	Dual-channel DDR3/DDR3L 1333/1600MHz
	Max. Capacity	Up to 32GB
	Socket	4 x 240-pin DIMMs
<b>Display</b>	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	DVI	1 (DVI-I)
	DisplayPort	1
	Multiple Display	2 independent displays (H81 SKU) 3 independent displays (Q87 SKU)
	Display Interface	VGA up to 1920 x 1080 @60Hz DVI-D up to 2560 x 1600 @60Hz DP up to 2560 x 1600 @60Hz
<b>Ethernet</b>	Controller	1 x Intel® I217-LM GbE LAN PHY 1 x Intel® I210-AT GbE LAN
<b>Audio</b>	Controller	Realtek® ALC887 HD Audio Codec
<b>Super I/O</b>	Controller	Fintek F81866AD-I
	Watchdog Timer	256-level Watchdog Timer
<b>H/W Monitor</b>	Smart Fan	Yes
	TPM	Controller
<b>I/O Interface</b>	USB	8 x USB 2.0 (Q87: 2 x rear; 6 x internal; H81: 4 x rear; 4 x internal) 4 x USB 3.0 (Q87: 4 x rear; H81: 2 x rear)
	Serial	6 x COM ports (COM1~2: rear, COM3~6: internal) COM1~2: RS-232/422/485, 0V/5V/12V COM3~6: RS-232, 0V/5V/12V
	Parallel	1
	PS/2	1 x PS/2 port by Y-cable for keyboard and mouse
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
	PCIe x16	1
<b>Expansion Slot</b>	PCIe x1	3
	PCI	3
	M.2	N/A
	Mini-PCIe	2 x Full-size (Q87 only)
	Storage	SATA
<b>Power Supply</b>	DC	N/A
	ATX	ATX-Power 24P, 12V-4P
<b>Environment</b>	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
<b>Form Factor</b>	Dimensions	305 x 244mm (ATX)
	Weight	0.70 kg
<b>Certification</b>	EMC	FCC, CE, RCM VCCI, BSMI (Class A)
<b>Software Platform</b>	OS Support	Windows XP (32/64-bit) Windows 7 (32/64-bit) Windows 8 (32/64-bit) Windows 10 (64-bit)

Semi-rugged Terminal

POS System

HMI Panel PC

Embedded System

Embedded Board

COM Express Board

Oseven Board

Pico-ITX Board

3.5" Board

EPIC Board

PI/CMG 1.0 Board

Mini-ITX Board

Micro-ATX Board

ATX Board

Mini-PCIe Module