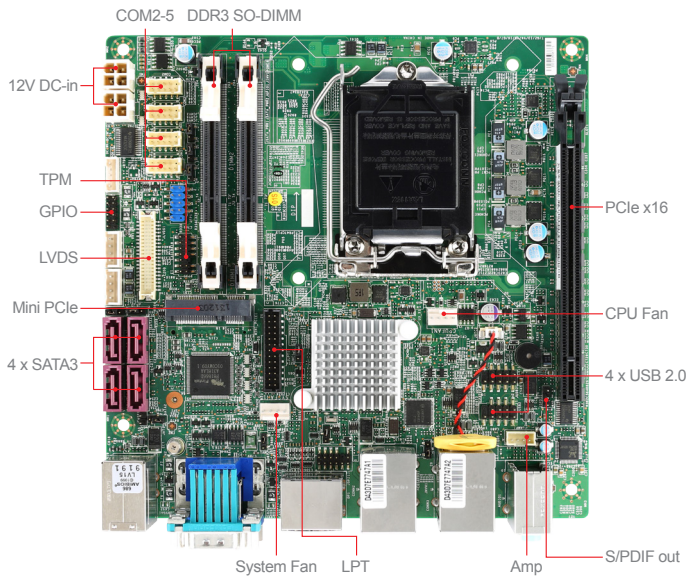
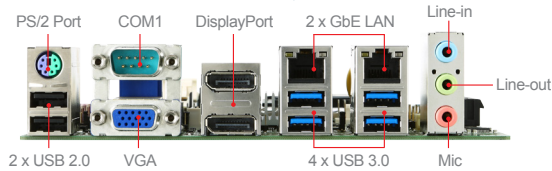


# MS-98C7

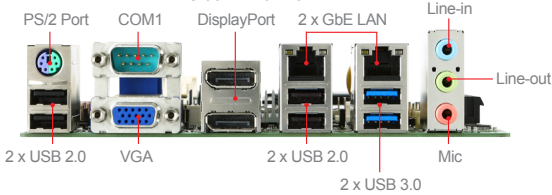
Intel® 4th Gen Q87/H81 Platform with Multi-displays



MS-98C7 with Q87



MS-98C7 with H81



## Features

- 4th Gen Intel® Core™ processors w/ Intel® 8 series chipset (formerly codename Haswell)
- 3 independent displays with multiple interfaces: VGA, LVDS, and dual DisplayPorts
- Support DDR3/DDR3L memory up to 16GB
- Support dual Intel® GbE LAN

## Ordering Information

Part Number	Description
919-98C7-005	MS-98C7 10 Mini-ITX, Q87, Haswell Mbl, 2x DDR3 SO-DIMM, LVDSx1/VGAx1/DPx2, 4x SATA III, 2x GbE LAN, 10x USB, 5x COM DC Power (ROHS)
919-98C7-006	MS-98C7 10 OPT A Mini-ITX, H81, Haswell Mbl, 2x DDR3 SO-DIMM, LVDSx1/VGAx1/DPx2, 2x SATA III, 1x SATA II, 2x GbE LAN, 8x USB, 5x COM DC Power (ROHS)

## Packing List

Part Number	Description
E21-98C7010-C22	I/O shield
K14-1018003-V03	INT COM PORT CABLE, 300mm
K1D-1008261-V03	INT SATA CABLE, 500mm
K1D-3008006-V03	INT SATA CABLE, POWER, 200/300mm
K39-3002004-E06	EXT OTHER CABLE, PS2 Y-CABLE/2/190mm

## Specifications

<b>Processor</b>	CPU	4th Gen Intel® Desktop H3 Core i7/i5/i3/ Celeron Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (LGA 1150)
	Chipset	Intel® Q87/H81 Express
<b>Memory</b>	BIOS	AMI
	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz
	Max. Capacity	Up to 16GB
	Socket	2 x 204-pin SO-DIMMs
	Controller	Intel® HD Graphics
<b>Display</b>	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 24-bit (add chrontel 7511B chipset)
	VGA	1
	DisplayPort	2
	Multiple Display	2 independent displays (H81 SKU) 3 independent displays (Q87 SKU)
<b>Display Interface</b>	Display Interface	LVDS up to 1920 x 1200 VGA up to 1920 x 1200 DP up to 3840 x 2160
	Ethernet	Controller 1 x Intel® I217-LM GbE PHY (iAMT 9.0 supported) 1 x Intel® I210-AT PCIe GbE LAN
<b>Audio</b>	Controller	Realtek® ALC887 HD Audio Codec
<b>Super I/O</b>	Controller	Fintek F81866D
<b>H/W Monitor</b>	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
<b>TPM</b>	Controller	Pin header
<b>I/O Interface</b>	USB	Q87: 6 x USB 2.0 (4 x internal; 2 x rear ); 4 x USB 3.0 (rear) H81: 6 x USB 2.0 (2 x internal; 4 x rear ); 2 x USB 3.0 (rear)
	Serial	5 COM (COM1: rear; COM2-5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232, w/ WOR function COM3-5: RS-232, 0V/5V/12V
	Parallel	1 (Pin header)
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
<b>Expansion Slot</b>	PCIe x16	1 (up to 75W)
	Mini-PCIe	1 x Full-size, mSATA 1 x Half-size
<b>Storage</b>	SATA	Q87: 4 x SATA 3.0 H81: 2 x SATA 3.0; 1 x SATA 2.0
	mSATA	1
<b>Power Supply</b>	DC	DC-in 12V
	ATX	N/A
<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	170mm x 170mm (Mini-ITX)
	Weight	0.37 Kg
<b>Certification</b>	EMC	FCC, CE, C-Tick, VCCI, BSMI