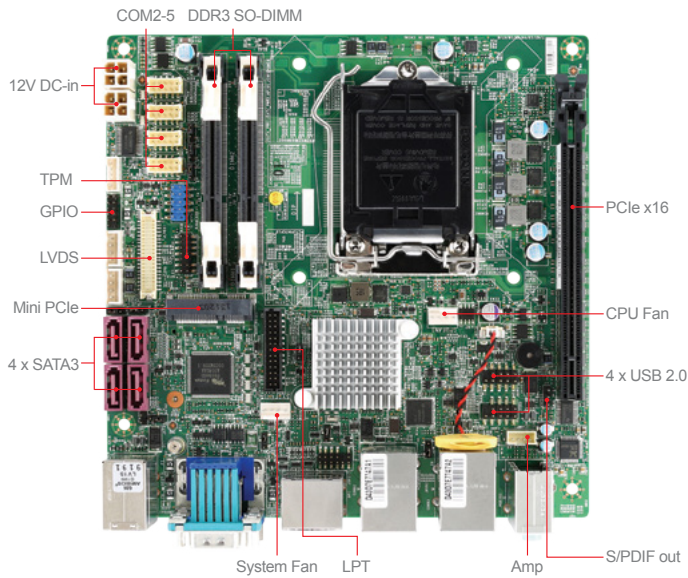
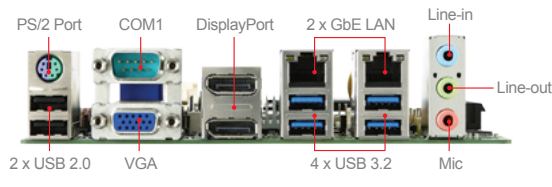


MS-98C7

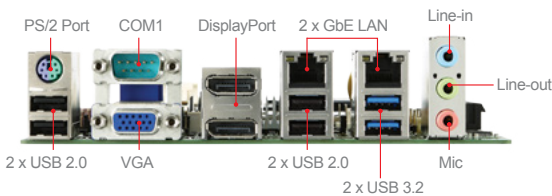
Mini-ITX with 4th Gen Intel® Haswell/Haswell Refresh Platform for Multi-Displays & High-Performance Solution



MS-98C7 with Q87



MS-98C7 with H81



Features

- Intel® 4th Gen Haswell-S Series with Q87/H81
- 2 DDR3L/DDR3 1600/1333/1066 MHz SO-DIMM slots up to 16GB
- Triple independent displays: VGA, 2 DP, LVDS
- 2 GbE LAN with RJ-45
- 1 PCIe x16 (Gen 3), 1 Mini-PCIe (Full size, with mSATA), 1 Mini-PCIe (Half size) slots
- mSATA, 4 SATA 3.0 for storage
- 4 USB 3.2 Gen 1, 6 USB 2.0, 5 COM (1 RS-485), GPIO, LPT, PS/2, Audio, System FAN
- DC-IN 12V

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

Processor	CPU	4th Gen Intel® Desktop Haswell/ Haswell Refresh Core™ i7/i5/i3/Celeron®/ Pentium® Processor, Max. 65W	
	Frequency	2.2GHz~4.4GHz (Depends on CPU)	
	L2 Cache	2M ~ 8M (Depends on CPU)	
	CPU Type	Socket (LGA 1150)	
	Chipset	Intel® H81/Q87 Express	
Memory	BIOS	AMI	
	Technology	Dual-channel DDR3/DDR3L 1333/1600MHz	
	Max. Capacity	Up to 16GB	
	Socket	2 x 204-pin SO-DIMMs	
	Controller	Intel® HD Graphics	
Display	Graphic Memory	Depends on CPU	
	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)	
	Display Interface	LVDS up to 1920 x 1200 @60Hz VGA up to 1920 x 1200 @60Hz DP up to 3840 x 2160 @60Hz	
Ethernet	Controller	1 x Intel® I217-LM GbE PHY (iAMT 9.0 supported) 1 x Intel® I210-AT PCIe GbE LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
Super I/O	Controller	Fintek F81866D	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
TPM	Controller	Pin header	
I/O Interface	USB	Q87: 6 x USB 2.0 (4 x internal, 2 x rear) 4 x USB 3.2 Gen 1 (rear) H81: 6 x USB 2.0 (2 x internal, 4 x rear) 2 x USB 3.2 Gen 1 (rear)	
	Serial	5 x COM ports (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	
	PCIe x16	1 (up to 75W)	
	M.2	N/A	
	Mini-PCIe	1 x Full-size/Half-size (nSATA)	
	Storage	SATA	Q87: 4 x SATA 3.0 H81: 1 x SATA 2.0, 2 x SATA 3.0
		mSATA	1 (shared w/ Mini-PCIe)
Power Supply	DC	DC-in 12V	
	ATX	N/A	
Environment	Operating Temperature	0 ~ 60°C	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
Form Factor	Dimensions	170 x 170mm (Mini-ITX)	
	Weight	0.37 kg	
Certification	EMC	FCC, CE, RCM, VCCI, BSMI	
Software Platform	OS Support	Windows XP (32/64-bit) Windows 7 (32/64-bit) Windows 8 (32/64-bit) Linux Fedora 19 (by request)	

Optional Item

Part Number	Description
K10-3004215-V03	DC-In Cable, 160mm
K1B-3008012-E06	USB 2.0 Cable, 330mm

Industrial Computer
COM Express Board
Qseven Board
Pico-ITX Board
3.5" Board
EPIC Board
PICMG Board
Mini-ITX Board
Micro-ATX Board
ATX Board
Compact-Size LVDS/DVI
Compact-Size DC/DC
Full-Size Mini-PCIe
Intel® SDV