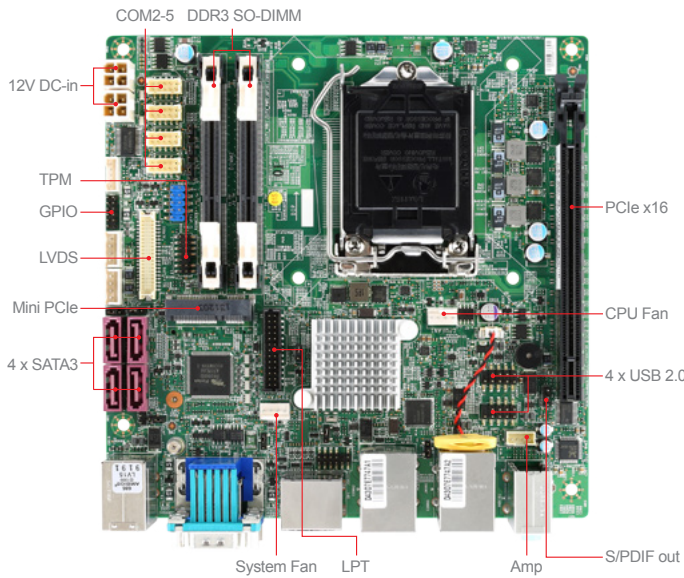
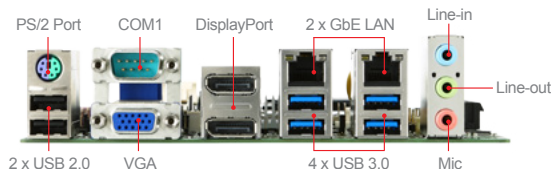


MS-98C7

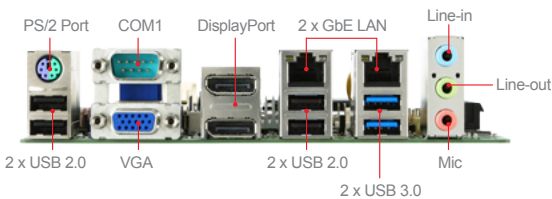
Mini-ITX with 4th Gen Intel® Haswell/Haswell Refresh Platform for Multi-Displays & High-Performance Solution



MS-98C7 with Q87



MS-98C7 with H81



Features

- 4th Gen Intel® Core™ i7/i5/i3/Celeron®/Pentium® processors (formerly Haswell) w/ Intel® H81/Q87 chipset
- 3 independent displays with multiple interfaces: VGA, LVDS, and dual DisplayPorts
- Supports DDR3\DDR3L memory up to 16GB
- Supports 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/2190mm

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 16 GB
Display	Socket	2 x 204-pin SO-DIMMs
	Controller	Intel® HD Graphics
	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)
Ethernet	Display Interface	LVDS up to 1920 x 1200 VGA up to 1920 x 1200 DP up to 3840 x 2160
	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 3.0 (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
Expansion Slot	PCIe x16	1 (up to 75W)
	M.2	N/A
	Mini-PCIe	1 x Full-size (w/ mSATA) 1 x Half-size
Storage	SATA	Q87: 4 x SATA 3.0 H81: 2 x SATA 3.0; 1 x SATA 2.0
	mSATA	1
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	170mm 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

Optional Items

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