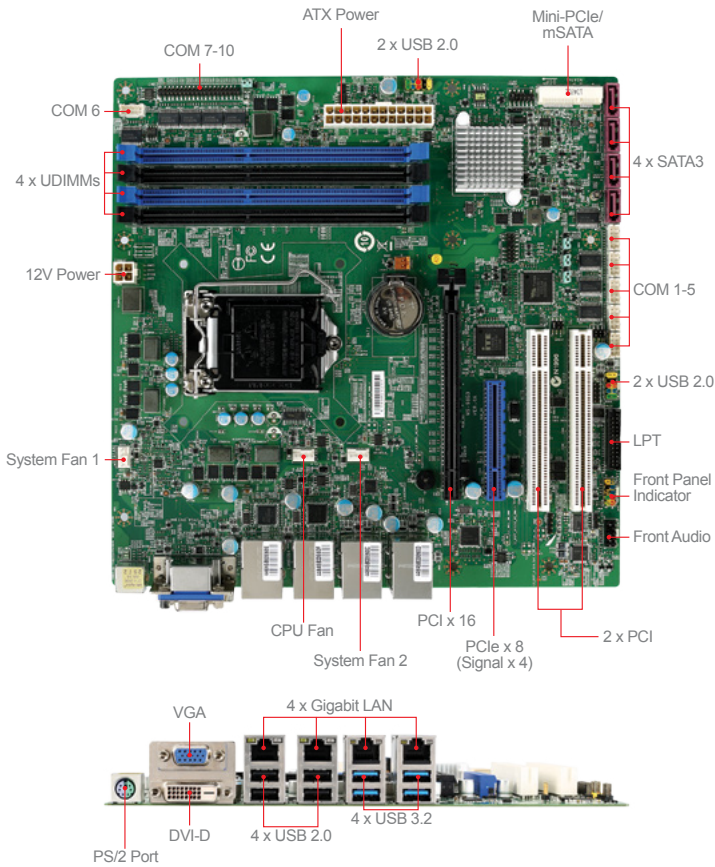


MS-98G3

Micro-ATX with 4th Gen Intel® Haswell/Haswell Refresh Platform for Q87, 4 LAN, 10 COM & USB 3.0 for Vision Applications



Features

- Intel® 4th Gen Haswell Refresh-S/Haswell-S Series with Q87
- 4 DDR3 1600/1333/1066 MHz UDIMM slots up to 32GB
- Dual independent displays: DVI-I, 2 DP
- 2 GbE LAN with RJ-45
- 1 PCIe x16 (Gen 3), 1 PCIe x8 (Gen 2), 2 PCI, 1 Mini-PCIe (Full size, with mSATA) slots
- mSATA, 4 SATA 3.0 for storage
- SATA RAID 0/1/5
- 4 USB 3.2 Gen 1, 8 USB 2.0, 10 COM(2 RS485), Audio, GPIO, LPT, PS/2, 2 System FAN
- ATX Power

Ordering Information

Part Number	Description
919-98G3-001	MS-98G3, Q87 Haswell / Haswell Re-Flash Desktop CPU, 4 x DDR3 Long DIMM, VGA/DVI-D, 4 x SATA3.0, 4 x GbE LAN, 10 x COM, 4 x USB3.0, 8 x USB2.0

Packing List

Part Number	Description	Quantity
K14-1018003-V03	COM PORT Cable, 300mm	1
K1D-1008261-V03	SATA CABLE, SIGNAL, 500mm	2
E21-98G3010-C22	IO Shielding	1
G71-SEDC125-X03	Driver CD	1

Specifications

Processor	CPU	4th Gen Intel® Desktop Haswell/ Haswell Refresh Core™ i7/i5/i3/Celeron®/ Pentium® Processors, Max. 95W
	Frequency	2.2GHz~4.4GHz (Depends on CPU)
	L2 Cache	2M ~ 8M (Depends on CPU)
	CPU Type	Socket (LGA 1150)
	Chipset	Intel® Q87 Express
Memory	BIOS	AMI
	Technology	Dual-channel DDR3 1066/1333/1600 MHz
	Max. Capacity	Up to 32GB
	Socket	4 x 240-pin UDIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Depends on CPU
	VGA	1
	DVI	1 (DVI-D)
	Multiple Display	2 independent displays
Ethernet	Display Interface	VGA up to 1920 x 1080 @60Hz DVI up to 2560 x 1600 @60Hz
	Controller	1 x Intel® I217-LM GbE-PHY 3 x Intel® I210-AT PCIe GbE LAN
	Audio	Controller: Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I + F81216AD
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	8 x USB 2.0 (4 x rear, 4 x internal) 4 x USB 3.2 Gen 1 (4 x rear)
	Serial	10 x COM ports (internal) COM1~4: RS-232, 0V/5V/12V COM5: RS-232/422/485, 0V/5V/12V COM6: RS-232/422/485, without power COM7~10: RS-232, 0V/5V/12V
	Parallel	1
	PS/2	1
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V
	PCIe x16	1
	PCIe x4	1*PCIe x8 (x4 signal)
Expansion Slot	PCI	2
	M.2	N/A
	Mini-PCIe	1 x Full-size (mSATA)
Storage	SATA	4 x SATA 3.0
	mSATA	1 (shared w/ Mini-PCIe)
Power Supply	DC	N/A
	ATX	ATX-Power 24P, 12V-4P
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	244 x 244mm (uATX)
	Weight	0.6 kg
Certification	EMC	FCC, CE, RCM, VCCI, BSMI
Software Platform	OS Support	Windows XP (32-bit) Windows 7 (32/64-bit) Windows 8 (32/64-bit)