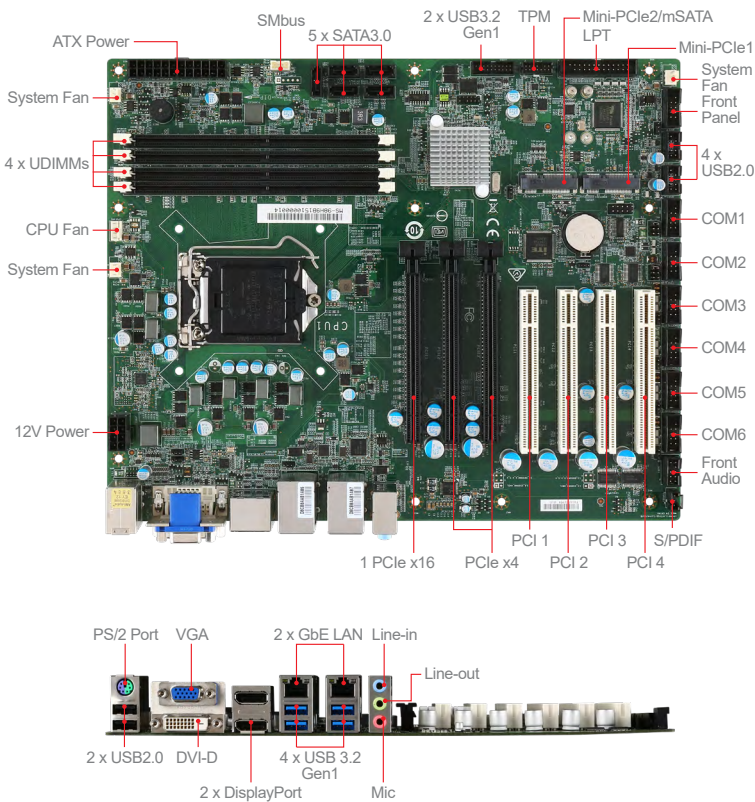


MS-98H9

ATX with 7th/6th Gen Intel® Kaby Lake/Skylake Core™ Xeon® i7/i5/i3, Pentium®, Celeron® Processor & Intel® C236/Q170/H110 for High-Performance Solution



Features

- Intel® 7th/6th Gen Intel® Kaby Lake-S/Skylake-S Series with Intel® C236/Q170/H110
- 4 DDR4 2133 MHz ECC/non-ECC UDIMM slots up to 64GB
- Triple independent displays: VGA, DVI-D, 2DP
- 2 GbE LAN with RJ-45
- 1 PCIe x16 (Gen 3), 2 PCIe x4 (Gen 3), 4 PCI, 1 Mini-PCle (Full-size, with mSATA), 1 Mini-PCle (Full-size) slots
- mSATA, 5 SATA 3.0 for storage
- SATA RAID 0/1/5/10
- 6 USB 3.2 Gen 1, 6 USB 2.0, 6 COM (2 RS-485), GPIO, LPT, PS/2, Audio, S/PDIF, 3 System FAN
- SMBus, Chassis Intrusion
- ATX Power

Ordering Information

Part Number	Description
919-98H9-001	MS-98H9 VER:10 Intel Kaby Lake-S/Skylake-S, Intel C236, 4*DDR4, 1*DVI-D+1*VGA+2*DP+6*USB3.2 Gen 1+6*USB 2.0+5*SATA 3.0+1*PCIe x16+2*PCIe x4+4*PCI+2*Mini-PCle+1*mSATA+6*COM+2*LAN+ATX POWER
919-98H9-002	MS-98H9 VER:10 Intel Kaby Lake-S/Skylake-S, Intel Q170, 4*DDR4, 1*DVI-D+1*VGA+2*DP+6*USB3.2 Gen 1+6*USB 2.0+5*SATA 3.0+1*PCIe x16+2*PCIe x4+4*PCI+2*Mini-PCle+1*mSATA+6*COM+2*LAN+ATX POWER
919-98H9-003	MS-98H9 VER:10 Intel Kaby Lake-S/Skylake-S, Intel H110, 2*DDR4, 1*DVI-D+1*VGA+2*DP+4*USB3.2 Gen 1+4*USB 2.0+4*SATA 3.0+1*PCIe x16+1*PCIe x4+4*PCI+6*COM+2*LAN+ATX POWER

Packing List

Part Number	Description	Quantity
K1B-3008012-E06	USB 2.0 Cable, 330mm	1
K14-1018004-V03	COM Port Cable, 510mm	1
K39-3002004-E06	PS/2 Y-Cable, 190mm	1
K18-1025011-V03	LPT Cable, 300mm	1
K1D-1008261-V03	SATA Cable, 500mm	2
E21-98H9010-C22	I/O SHIELDING	1

Specifications

		C236 SKU	Q170 SKU	H110 SKU	
Processor	CPU	7th/6th Gen Intel® Desktop Kaby Lake/Skylake Xeon® i7/i5/i3/Pentium®/Celeron® Series Processor, Max 95W			
	Frequency	2.6 GHz~4.5 GHz (Depends on CPU)			
	L2 Cache	2MB~8MB (Depends on CPU)			
	CPU Type	Socket (LGA 1151)			
	Chipset	Intel® C236 Express	Intel® Q170 Express	Intel® H110 Express	
Memory	BIOS	AMI UEFI			
	Technology	Dual-channel DDR4 (ECC) 2133 MHz	Dual-channel DDR4 (non-ECC) 2133 MHz		
	Max. Capacity	Up to 64GB	Up to 32GB		
	Socket	4 x 288-pin UDIMMs	2 x 288-pin UDIMMs		
Display	Controller	Intel® HD Graphics			
	Graphic Memory	Depends on CPU			
	VGA	1 (Non Hot Plug)			
	DVI	1 (DVI-D)			
	DisplayPort	2			
	Multiple Display	3 independent displays	2 independent displays		
Display Interface	Display Interface	VGA up to 1920 x 1080 @60Hz DVI-D up to 1920 x 1200 @60Hz DP up to 4096 x 2304 @60Hz			
	Ethernet	Controller: 1 x Intel® I219-LM GbE LAN PHY (Support Intel® AMT 11) 1 x Intel® I210-AT GbE LAN			
Audio	Controller	Realtek® ALC887 HD Audio Codec			
Super I/O	Controller	Fintek F81866AD-I			
H/W Monitor	Watchdog Timer	256-level Watchdog Timer			
TPM	Smart Fan	Yes			
I/O Interface	Controller	Box header			
	USB	6 x USB 2.0 (2 x rear, 4 x internal) 6 x USB 3.2 Gen 1 (4 x rear, 2 x internal)	4 x USB 2.0 (2 x rear, 2 x internal) 4 x USB 3.2 Gen 1 (rear)		
	Serial	6 x COM ports (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			
	Expansion Slot	PCIe x16	1		
		PCIe x4	2		1
		PCI	4		
		M.2	N/A		
Mini-PCle		2 x Full-size (one w/ mSATA)		N/A	
Storage	SATA	5 x SATA 3.0 (RAID 0/1/5/10)		4 x SATA 3.0	
	mSATA	1		N/A	
Power Supply	DC	N/A			
	ATX	ATX-Power 24P, 12V-8P			
Environment	Operating Temperature	-10 ~ 60°C Note: Thermal w/ Airflow:0.7m/s			
	Operating Humidity	10 ~ 90%, non-condensing			
	Storage Temperature	-20 ~ 80°C			
	Storage Humidity	10 ~ 90%, non-condensing			
Form Factor	Dimensions	305 x 244 mm (ATX)			
	Weight	0.70 kg			
Certification	EMC	FCC, CE, RCM, VCCI, BSMI (Class B)			
Software Platform	OS Support	Windows 7 (32/64-bit) (Skylake-S Series CPU Only) Windows 8.1 (64-bit) (Skylake-S Series CPU Only) Windows 10 IoT Enterprise LTSC/SAC 1809 (64-bit, RS5) Linux (Support by request)			