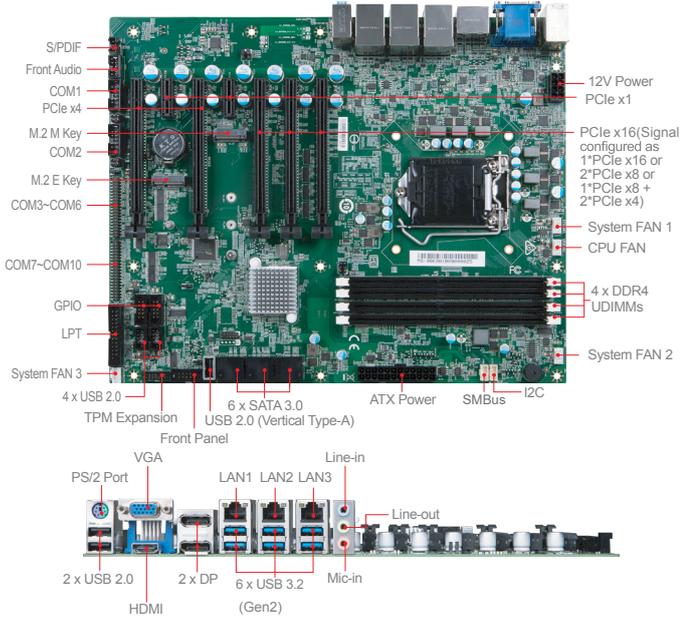


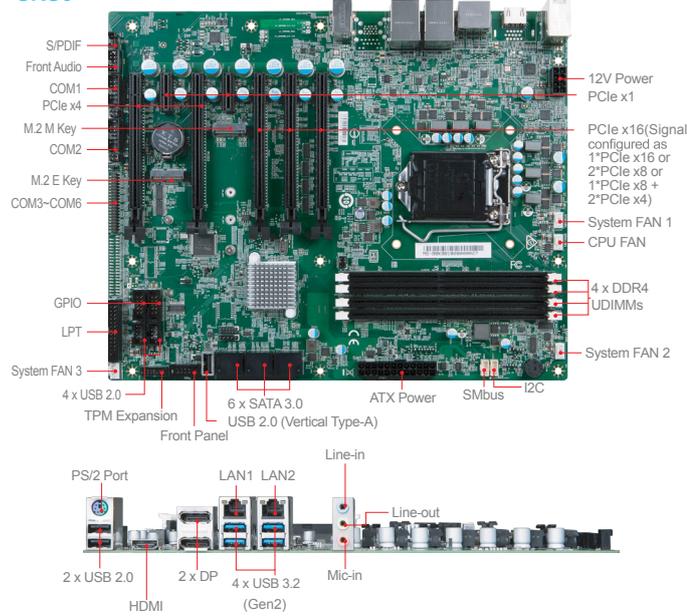
# MS-98K9

ATX with 8th Gen Intel® Coffee Lake-S Xeon®, Core™ i7/i5/i3, Pentium®, Celeron® Processor & Intel® C246/Q370 for High-Performance Solution

## SKU1/SKU2



## SKU3



## Features

- Intel® 8th Gen Coffee Lake-S Series with C246/Q370
- 4 DDR4 2666 MHz ECC/non-ECC UDIMM slots up to 64GB
- Triple independent displays: VGA, 2DP, HDMI
- 3 GbE LAN with RJ-45
- 1 PCIe x16 (Gen 3) or 2 PCIe x8 (Gen3) or 1 PCIe x8 (Gen3) & 2 PCIe x4 (Gen3), 2 PCIe x4 (Gen3), 2 PCIe x1 (Gen3), 1 M.2 E key slots
- M.2 M key, 6 SATA 3.0 for storage
- SATA RAID 0/1/5/10
- 6 USB 3.2 Gen 2, 7 USB 2.0, 10 COM (2 RS-485), GPIO, LPT, PS/2, Audio, S/PDIF, 3 System FAN
- Onboard TPM 2.0 (by option)
- SMBus, I2C, iAMT 12.x, Chassis Intrusion
- ATX Power

## Ordering Information

Part Number	Description
919-98K9-001	MS-98K9/609-98K9-010/809-98K9-005 VER10 Intel Coffee Lake-S C246, 4*DDR4 Long DIMM, 3*PCIex16, 2*PCIex4, 2*PCIex1, HDMI, 2*DP, VGA, TPM2.0, 3*LAN, 6*USB3.1, 7*USB2.0, 6*SATA3.0, 2*M.2, 10*COM, ATX POWER, RoHS, SINGLE, For Channel
919-98K9-002	MS-98K9/609-98K9-020/809-98K9-006 VER10 OPT:A Intel Coffee Lake-S Q370, 4*DDR4 Long DIMM, 3*PCIex16, 2*PCIex4, 2*PCIex1, HDMI, 2*DP, VGA, TPM2.0, 3*LAN, 6*USB3.1, 7*USB2.0, 6*SATA3.0, 2*M.2, 10*COM, ATX POWER, RoHS, SINGLE, For Channel
919-98K9-003	MS-98K9/609-98K9-030/809-98K9-007 VER10 OPT:B Intel Coffee Lake-S Q370, 4*DDR4 Long DIMM, 3*PCIex16, 2*PCIex4, 2*PCIex1, HDMI, 2*DP, 2*LAN, 4*USB3.1, 7*USB2.0, 6*SATA3.0, 2*M.2, 6*COM, ATX POWER, RoHS, SINGLE, For Channel

## Specifications

	SKU1	SKU2	SKU3	
<b>System Processor</b>	CPU	8th Gen Intel® Desktop Coffee Lake-S Xeon®/i7/i5/i3/Pentium®/Celeron® Series Processor, Max 95W	8th Gen Intel® Desktop Coffee Lake-S i7/i5/i3/Pentium®/Celeron® Series Processor, Max 95W	
	Frequency	2.1GHz~4.7GHz (Depends on CPU)		
	L2 Cache	2MB~12MB (Depends on CPU)		
	CPU Type	Socket (LGA 1151)		
	Chipset	Intel® C246 Express	Intel® Q370 Express	
<b>Memory</b>	BIOS	AMI UEFI		
	Technology	Dual-channel DDR4 (ECC/ non-ECC) 2666 MHz	Dual-channel DDR4 (non-ECC) 2666 MHz	
	Max. Capacity	Up to 64GB		
<b>Display</b>	Socket	4 x 288-pin UDIMMs		
	Controller	Intel® UHD Graphics		
	Graphic Memory	Depends on CPU		
	LVDS	1 x Dual channel 18/24-bit		
	VGA	1	N/A	
	HDMI	1		
	DisplayPort	2		
<b>Ethernet</b>	Multiple Display	3 independent displays		
	Controller	1 x Intel® I219-LM GbE LAN PHY 2 x Intel® I210-AT GbE LAN	HDMI up to 4096 x 2160 @24Hz DP up to 4096 x 2304 @60Hz	
<b>Audio</b>	Multiple Display	VGA up to 1920 x 1200 @60Hz HDMI up to 4096 x 2160 @24Hz DP up to 4096 x 2304 @60Hz		
	Controller	Realtek® ALC887-VD2-CG Audio Codec		
<b>H/W Monitor</b>	Watchdog Timer	256-level Watchdog Timer		
	Smart Fan	Yes		
<b>I/O Interfaces</b>	USB	7 x USB 2.0 (2 x rear, 5 x internal with one Vertical Type-A) 6 x USB 3.2 Gen 2 (rear)	7 x USB 2.0 (2 x rear, 5 x internal with one Vertical Type-A) 4 x USB 3.2 Gen 2 (rear)	
	Serial	10 x COM ports (internal) COM1-2: RS-232/422/485, Ring/0V/5V/12V, Auto-flow Control COM3-10: RS-232, 0V/5V/12V	6 x COM ports (internal) COM1-2: RS-232/422/485, Ring/0V/5V/12V, Auto-flow Control COM3-6: RS-232, 0V/5V/12V	
	Parallel	Yes		
	PS/2	1 x PS/2 port by Y-cable for keyboard and mouse		
	GPIO	16-bits (8 x GPI; 8 x GPO), 5V		
	TPM	Controller	Infineon SLB 9665TT2.0	Box header (Default) Infineon SLB9665TT2.0 (by BOM option)
<b>Expansion Slot</b>	PCIe x16	3 (Signal configured as 1 PCIe x16 or 2 PCIe x8 or 1 PCIe x8 + 2 PCIe x4)		
	PCIe x4	2 (PCIe x16 Slot Type; 1*PCIe x4 NVMe)		
	PCIe x1	2		
<b>Storage</b>	M.2	1 x M key (PCIe x4 NVMe, SATA 3.0), 2242/2260/2280 1 x E key (PCIe x1, USB 2.0), 2230		
	Mini-PCIe	N/A		
<b>Power Supply</b>	SATA	6 x SATA 3.0 (RAID 0/1/5/10, SATA port 6 share with M.2 M Key)		
	DC Input	N/A		
<b>Form Factor</b>	AC Input	ATX-Power 24P, 12V-8P		
	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		
<b>Certification</b>	Dimensions (W x D x H)	305 x 244 mm (ATX)		
	Weight	0.70 kg		
<b>Software Platform</b>	EMC	CE, FCC Class B, BSMI, RCM, VCCI		
	OS Support	Windows 10 IoT Enterprise LTSC/SAC 1809 (64-bit, RSS) Linux (Support by request)		

## Packing List

Part Number	Description	Quantity
K14-3008012-E06	IO SHIELD FOR MS-98D6	1
K14-1018004-V03	INT COM PORT CABLE, 510mm	1
K14-1008261-V03	INT SATA CABLE, 500mm	2
E21-98K9010-C22	I/O Shielding	1