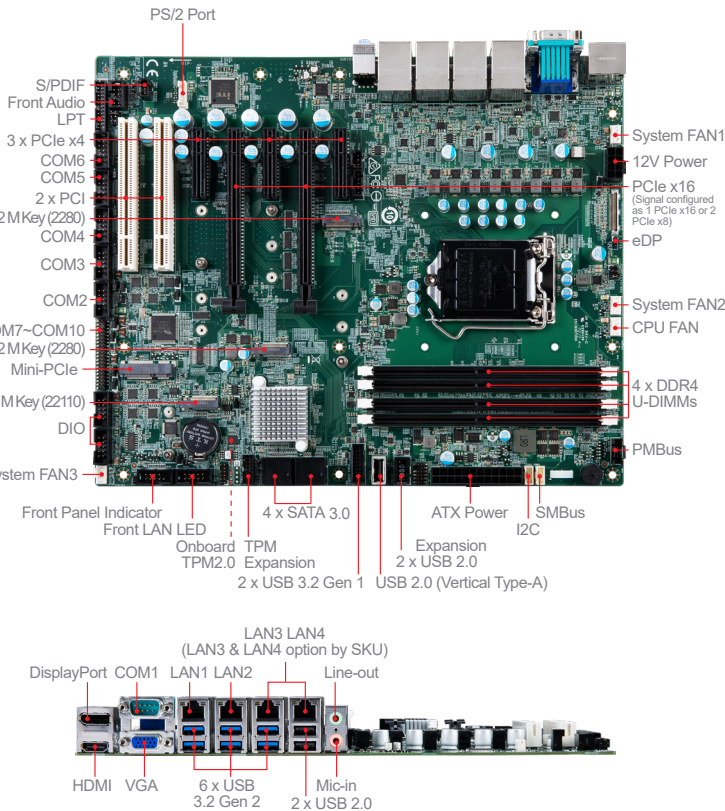


MS-98N9

ATX with 10th Gen Intel® Comet Lake-S Xeon®, Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor & Intel® W480E/Q470E for High-Performance Solution

NEW



Features

- Intel® 10th Gen Comet Lake-S Series with W480E/Q470E
- 4 DDR4 2933 MHz ECC/non-ECC UDIMMs up to 128GB
- Triple independent displays: VGA, DP, HDMI, eDP
- 4 GbE LAN with RJ-45
- 1 PCIe x16 (Gen 3) or 2 PCIe x8 (Gen 3), 3 PCIe x4 (Gen 3), 2 PCI, 1 Mini-PCIe (Full/Half-size) slots
- 3 M.2 M key, 4 SATA 3.0 for storage
- SATA RAID 0/1/5/10
- 6 USB 3.2 Gen 2, 2 x USB 3.2 Gen 1, 5 USB 2.0, 10 COM (2 RS-485), GPIO, LPT, PS/2, Audio, S/PDIF, 3 System FAN
- Onboard TPM 2.0
- SMBus, I2C, PMBus, iAMT 14.x, Chassis Intrusion
- ATX Power

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description	Quantity
Coming soon		

Optional Item

Part Number	Description
Coming soon	

Specifications

		SKU1	SKU2
Processor	CPU	10th Gen Intel® Comet Lake-S Xeon®, Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor, Max 125W	10th Gen Intel® Comet Lake-S Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor, Max 125W
	Frequency	1.8GHz~4.8GHz (Depends on CPU)	
	L2 Cache	2MB~20MB (Depends on CPU)	
	CPU Type	Socket (LGA 1200)	
	Chipset	Intel® W480E Express	Intel® Q470E Express
	BIOS	AMI UEFI	
Memory	Technology	Dual-channel DDR4 (ECC/non-ECC) 2933 MHz	Dual-channel DDR4 (non-ECC) 2933 MHz
	Max. Capacity	Up to 128GB	
	Socket	4 x 288-pin UDIMMs	
	Controller	Intel® UHD Graphics	
Display	Graphic Memory	Depends on CPU	
	LVDS	N/A	
	eDP	1	
	VGA	1	
	DVI	N/A	
	HDMI	1	
	DisplayPort	1	
	Multiple Display	3 independent displays	
	Display Interface	VGA up to 1920 x 1200 @60Hz	
		HDMI up to 4096 x 2160 @30Hz DP up to 4096 x 2304 @60Hz eDP up to 4096 x 2304 @60Hz	
Ethernet	Controller	1 x Intel® I219-LM GbE LAN PHY	1 x Intel® I219-LM GbE LAN PHY
		3 x Intel® I210-AT GbE LAN	1 x Intel® I210-AT GbE LAN
Audio	Controller	Realtek® ALC888S-VD2-GR Audio Codec	
Super I/O	Controller	Fintek F81966D-I	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
TPM	Controller	Infineon SLB 9670VQ2.0	
I/O Interface	USB	6 x USB 3.2 Gen 2 (6 x rear)	
		2 x USB 3.2 Gen 1 (2 x internal)	
		5 x USB 2.0 (2 x rear, 3 x internal with one Vertical Type-A Connector)	
	Serial	10 x COM ports (1 x rear, 9 x internal)	6 x COM ports (1 x rear, 5 x internal)
		COM1~2: RS-232/422/485, Ring/0V/5V/12V, Auto-flow Control	COM1~2: RS-232/422/485, Ring/0V/5V/12V, Auto-flow Control
	COM3~10: RS-232, 0V/5V/12V	COM3~6: RS-232, 0V/5V/12V	
	Parallel	Yes	
	PS/2	1 (wafer Connector)	
	GPIO	16-bits (8 x GPI; 8 x GPO), 5V	
	Expansion Slot	PCIe x 16	1 (Signal configured as 1 PCIe x16 or 2 PCIe x8)
PCIe x 4		3 (Slot 1 support Thunderbolt™ 3, by request)	
PCIe x 1		N/A	
PCI		2	
M.2		3 x M.2 M key (PCIe x4 NVMe, signal shared with PCIe Slot 1 & 3 & 5), two with 2242/2260/2280, one with 2242/2260/2280/22110	
Mini-PCIe		1 x Full-size/Half-size	
Storage	SATA	4 x SATA 3.0 (RAID 0/1/5/10)	
	IDE	N/A	
	eSATA	N/A	
	CFast	N/A	
	mSATA	N/A	
Power Supply	CompactFlash	N/A	
	DC	N/A	
Environment	ATX	ATX-Power 24P, 12V-8P	
	Operating Temperature	-10 ~ 60°C	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	10 ~ 90%, non-condensing	
	Storage Humidity	10 ~ 90%, non-condensing	
Form Factor	Dimensions	305 x 244mm (ATX)	
	Weight	0.735 Kg	
Certification	EMC	CE, FCC Class B, BSMI, RCM, VCCI	
Software Platform	OS Support	Windows 10 IoT Enterprise 2019 SAC (64-bit, RS5)	
		Linux Kernel 5.x (by request)	