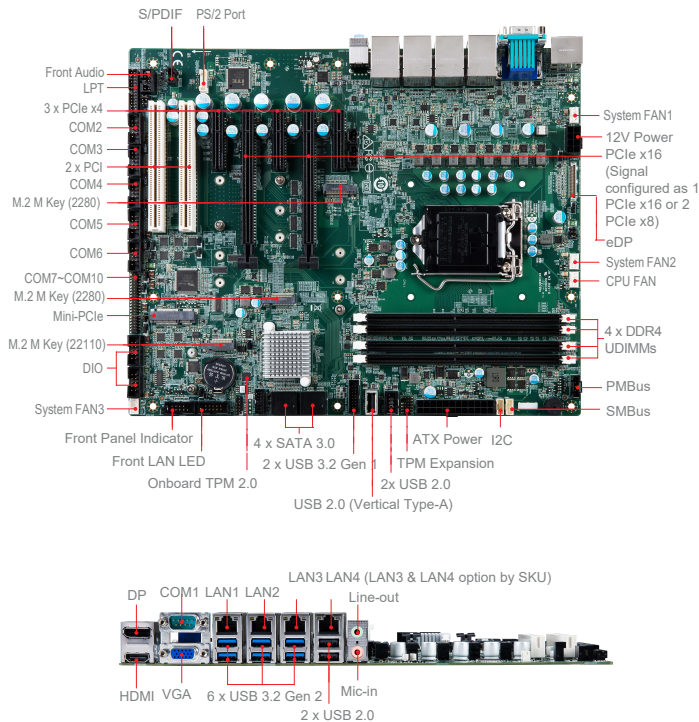


MS-98N9

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, 7 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
Coming soon	

Specifications

		SKU1	SKU2
			10th Gen Intel® Comet Lake-S Xeon®, Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor, Max 125W
Processor	CPU		
	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	
Display	Controller	Intel® UHD Graphics	
	Graphic Memory	Depends on CPU	
	eDP	1	
	VGA	1	
	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 3 x Intel® I210-AT GbE LAN	1 x Intel® I219-LM GbE LAN PHY 1 x Intel® I210-AT GbE LAN
	Audio	Realtek® ALC887-VD2-CG HD 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) COM1-2: RS-232/422/485, Ring/0V/5V/12V, Auto-flow Control COM3-10: RS-232, 0V/5V/12V	6 x COM ports (1 x rear, 5 x 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 (wafer connector)	
	GPIO	16-bits (8 x GPI; 8 x GPO), 5V	
	PCIe x 16	1 (Signal configured as 1 PCIe x16 or 2 PCIe x8)	
Expansion Slot	PCIe x 4	3 (Slot 1 support Thunderbolt™ 3 card by request)	
	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)	
Power Supply	ATX	ATX-Power 24P, 12V-8P	
Environment	Operating Temperature	-10 ~ 60°C	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-10 ~ 60°C	
	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)	