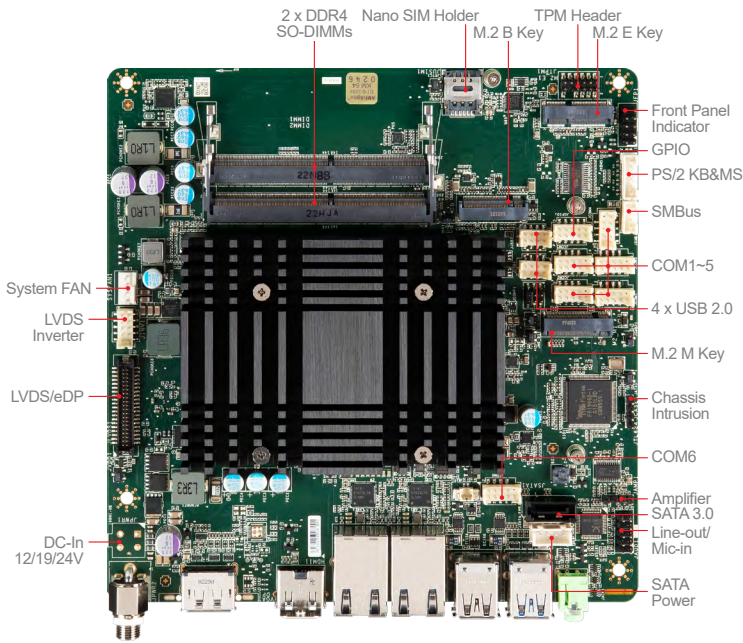


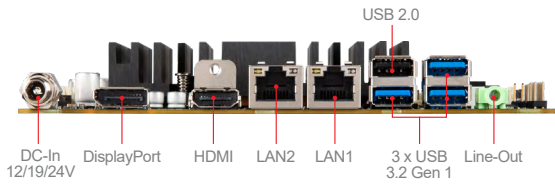
MS-98N1

Mini-ITX with Intel® Elkhart Lake SoC Series for Fanless, Low-Power, High-Performance, Multi-Displays & Multi-Functions Solution

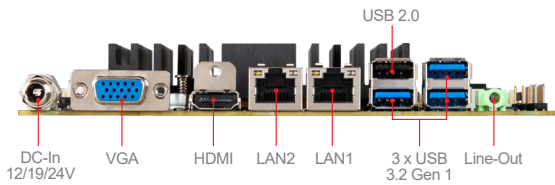
Industrial Computer
COM Express Board
Pico-ITX Board
3.5" Board
EPIC Board
Mini-ITX Board
Micro-ATX Board
ATX Board
Peripheral



SKU 1



SKU 2



Features

- Intel® Elkhart Lake Series SoC
- 2 DDR4 3200MHz SODIMM slots up to 32GB
- Triple independent displays: 1 HDMI, 1 DP/VGA, 1 LVDS/eDP
- 2 2.5GbE LAN with RJ-45
- M.2 E Key, M.2 B Key (with SIM Holder)
- M.2 M Key, 1 SATA 3.0 for storage
- 3 USB 3.2 Gen 1, 5 USB 2.0, 6 COM (2 RS-485), GPIO, PS/2, Audio, System FAN
- Onboard TPM 2.0
- DC-in 12V/19V/24V

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	Intel® Celeron® Processor J6412, QC, 10W Intel® Celeron® Processor N6210, DC, 6.5W		
	Frequency	J6412, 2.0 GHz, up to 2.6 GHz N6210, 1.2 GHz, up to 2.6 GHz		
	L2 Cache	1.5MB		
	CPU Type	BGA		
	Chipset	Integrated in SoC		
Memory	BIOS	AMI		
	Technology	Dual-channel DDR4 3200 MHz		
	Max. Capacity	Up to 32 GB		
	Socket	2 x 260-pin DDR4 SO-DIMMs		
	Controller	Intel® UHD Graphics		
Display	Graphic Memory	Depends on CPU		
	LVDS	1 x Dual channel 18/24-bit (Connector shared with eDP)		
	eDP	1 (Connector shared with LVDS)		
	VGA	N/A	1	
	DVI	N/A		
	HDMI	1		
	DisplayPort	1	N/A	
	Multiple Display	3 independent displays		
	Display Interface	LVDS up to 1920 x 1200 @60Hz eDP up to 4096 x 2160 @60Hz DP up to 4096 x 2160 @60Hz HDMI up to 4096 x 2160 @24Hz VGA up to 1920 x 1200 @60Hz		
		Ethernet	Controller	2 x Intel® I225-V 2.5 GbE LAN
Audio		Controller	Realtek® ALC897 Audio Codec (Co-lay ALC888S)	
Super I/O		Controller	Fintek F81966D-I	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer		
	Smart Fan	Yes		
TPM	Controller	Infineon SLB9672VU 2.0		
I/O Interface	USB	5 x USB 2.0 (1 x rear, 4 x internal) 3 x USB 3.2 Gen 1 (rear)		
	Serial	6 x COM ports (internal) COM1: RS-232/422/485, RI/OV/5V/12V COM2: RS-232/422/485, OV/5V/12V COM3-6: RS-232, W/O Power		
	Parallel	N/A		
	PS/2	1 (pin header)		
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V		
	Expansion Slot	PCIe x 16	N/A	
PCIe x 4		N/A		
PCIe x 1		N/A		
PCI		N/A		
M.2		1 x M key (SATA), 2242 1 x B key (PCIe x1, USB 3.2 Gen 1 x 1, USB 2.0 w/NANO SIM-Holder), 2242/3042 1 x E key (PCIe x1, USB 2.0), 2230		
Storage	Mini-PCIe	N/A		
	SATA	1 x SATA 3.0		
	IDE	N/A		
	eSATA	N/A		
	CFast	N/A		
	mSATA	N/A		
Power Supply	CompactFlash	N/A		
	DC	DC-in 12/19/24V		
Environment	ATX	N/A		
	Operating Temperature	0 ~ 60°C Note: Thermal w/ Airflow:0.7m/s		
	Operating Humidity	10 ~ 90%, non-condensing		
Form Factor	Storage Temperature	-20 ~ 80°C		
	Storage Humidity	10 ~ 90%, non-condensing		
Certification	Dimensions	170 x 170 mm (Mini-ITX)		
	Weight	0.50 kg		
Software Platform	EMC	FCC, CE, RCM, VCCI, BSMI, UKCA, IC		
	OS Support	Windows 10 IoT Enterprise 2021 LTSC (64-bit, 21H2) Linux Ubuntu20.04 (kernel5.4) (by request)		