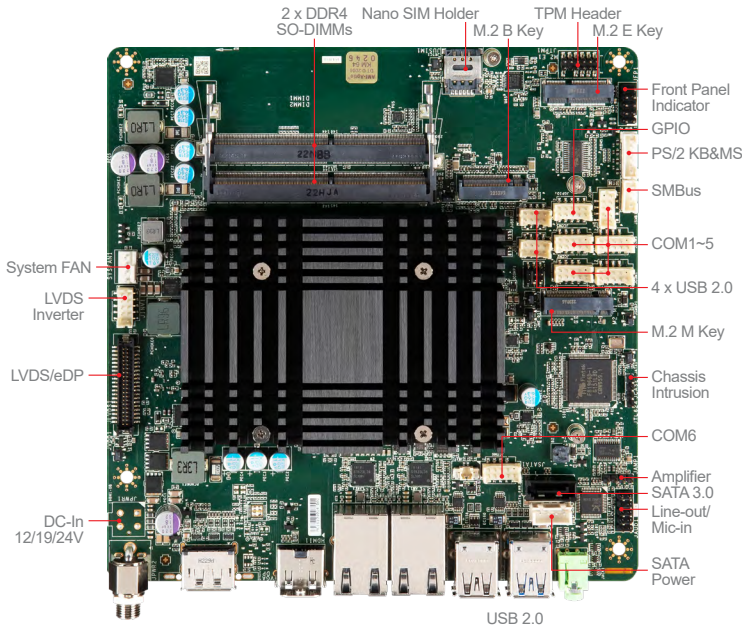
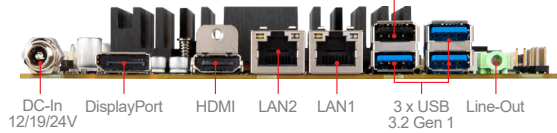


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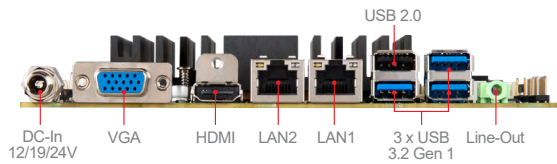
Mini-ITX with Intel® Elkhart Lake SoC Series for Fanless, Low-Power, High-Performance, Multi-Displays & Multi-Functions Solution



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
919-98N1-101	Intel Elkhart Lake J6412, 2*DDR4 SO-DIMM, 3*USB3.2, 5*USB2.0, 6*COM, 1*eDP/LVDS, 1*DP, 1*HDMI, 2*LAN, 3*M.2, 1*SATA3.0, DC-in 12/19/24V
919-98N1-102	Intel Elkhart Lake J6412, 2*DDR4 SO-DIMM, 3*USB3.2, 5*USB2.0, 6*COM, 1*eDP/LVDS, 1*VGA, 1*HDMI, 2*LAN, 3*M.2, 1*SATA3.0, DC-in 12/19/24V
919-98N1-103	Intel Elkhart Lake N6210, 2*DDR4 SO-DIMM, 3*USB3.2, 5*USB2.0, 6*COM, 1*eDP/LVDS, 1*DP, 1*HDMI, 2*LAN, 3*M.2, 1*SATA3.0, DC-in 12/19/24V
919-98N1-104	Intel Elkhart Lake X6211E, 2*DDR4 SO-DIMM, 3*USB3.2, 5*USB2.0, 6*COM, 1*eDP/LVDS, 1*DP, 1*HDMI, 2*LAN, 3*M.2, 1*SATA3.0, DC-in 12/19/24V, SEMI-WT

Packing List

Part Number	Description	Quantity
K1D-1012064-V03	SATA Cable with Power, 200mm	1
K14-1009062-V03	COM PORT Cable, 250mm	1
K1B-3008067-V03	USB Cable, 150mm	1
E21-98N1010-C22	I/O SHIELDING For DP+HDMI	1
E21-98N1020-C22	I/O SHIELDING For VGA+HDMI	1

Specifications

		SKU1	SKU2	SKU3	SKU4
Processor	CPU	Intel® Celeron® Processor J6412, QC, 10W		Intel Atom® x6211E Processor, DC, 6.5W	
	Frequency	J6412, 2.0 GHz, up to 2.6 GHz N6210, 1.2 GHz, up to 2.6 GHz x6211E, 1.3 GHz, up to 3.0 GHz			
	L2 Cache	1.5MB			
	CPU Type	BGA			
Memory	Chipset	Integrated in SoC			
	BIOS	AMI			
	Technology	Dual-channel DDR4 3200 MHz			
	Max. Capacity	Up to 32 GB			
	Socket	2 x 260-pin DDR4 SO-DIMMs			
Display	Controller	Intel® UHD Graphics			
	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	N/A	
	DVI	N/A			
	HDMI	1			
	DisplayPort	1	N/A		1
	Multiple Display	3 independent displays			
	Display Interface	LVDS up to 1920 x 1200 @60 Hz eDP up to 4096 x 2160 @60 Hz DP up to 4096 x 2160 @60Hz HDMI up to 4096 x 2160 @ 24 Hz VGA up to 1920 x 1200 @60Hz			
Ethernet	Controller	2 x Intel® I225-V 2.5 GbE LAN		2 x Intel® I225-IT 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/0V/5V/12V COM2: RS-232/422/485, 0V/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			
	PCIe x 16	N/A			
Expansion Slot	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			
	Mini-PCIe	N/A			
Storage	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			-20 ~ 70°C
		Note: Thermal w/ Airflow: 0.7m/s			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			
	Dimensions	170 x 170 mm (Mini-ITX)			
Certification	Weight	0.50 kg			
	EMC	FCC, CE, RCM, VCCI, BSMI, UKCA, IC			
Software Platform	OS Support	Windows 10 IoT Enterprise 2021 LTSC (64-bit, 21H2) Linux (Support by request)			