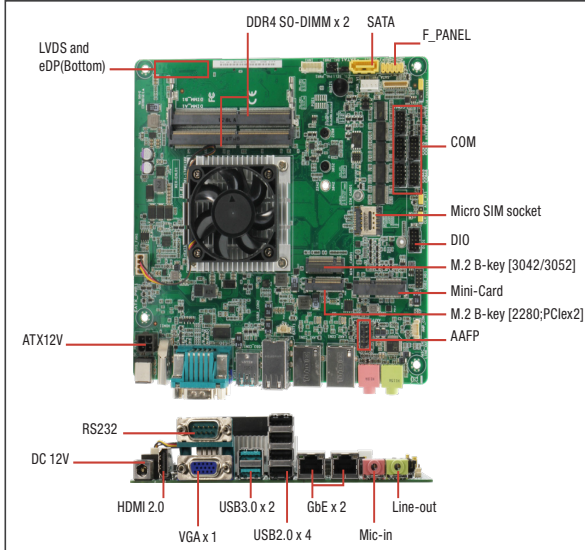


MIX-EHLD1

Mini-ITX with Intel® Atom x6000E/ Pentium/ Celeron N and J series processors , Max. 12W TDPs, Flexible rear IO, 12V DC input

Industrial Motherboards



Features

- Intel Elkhart Lake Processor, J6412/X6413E
- DDR4 SODIMM x 2, Max. 32GB
- M.2 Slot (M key; 2280) x 1, M.2 Slot (B key; 3042/52) x 1, mini card x 1
- USB 3.2 Gen1 Ports x 2, USB 2.0 Ports x 4
- RTL8111H x 2
- HDMI2.0 x 1, VGA x 1, LVDS/eDP x 1
- Flexible rear IO (Full IO or Low profile)
- 12V DC input



LAN I/O	1GbE x 2
Serial Port	RS232 by BOM Optional
PS/2 Port	—
Others	DC Jack x 1
Internal I/O Connectors	
Storage	M.2 Slot (M key; 2280; PCIe x2) SATA 6Gb/s x 1 SATA power connector (5V / 12V @1A) x 1
USB	USB2.0 ports x 2
Display I/O	40-pin LVDS / eDP connector x 1
Audio I/O	AAFP follow ASUS pin out x 1
Serial Port	Box header x 5 for COM (COM1: RS-232/422/485 supports 5V/12V/RT; COM2-6: RS-232)
PS/2 Port	—
Parallel Port	—
DIO	Digital I/O box header x 1
FAN	4-pin Chassis Fan connector x 1
Power	—
Others	Front Panel connector x 1, Chassis Intrusion x 1, Buzzer onboard x 1, Clear CMOS jumper x 1, AT/ATX mode select jumper x 1
OS	
OS Support	Windows® 10 64-bit, Linux Ubuntu 64 bit (20.04.2/Kernel 5.4)

Specifications

System	
Processor	Intel® Elkhart LAKE Processor Max. 12W TDPs
Chipset	—
Memory	SO-DIMM, max. 32GB , DDR4 3200MTS x 2
I/O Chipset	NCT6126D
Ethernet	RTL8111H x 2
Audio	Realtek® ALC897
TPM	Nuvoton NPCT750 TPM2.0 onboard
Expansion Slots	M.2 Slot (B key; 3042/3052) x1 mini-PCIe(Full/Half) x 1 SIM socket x 1(default for B-key)
BIOS	256Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V/12V, Fan Monitor on Chassis
WatchDog Timer	1~255 step by software program
Smart Fan Control	Chassis Fan
Wake On LAN/ PXE	Yes (WOL / PXE)
Power State	S3, S4, S5
Graphics	
Graphics Chipset	Intel® UHD Graphics
Graphics Multi Display	3 Independent Display(1xVGA+1x HDMI + 1x LVDS/eDP)
VGA	Up to 1920 x 1200 @60 Hz
DVI	—
HDMI	Up to 4096 x 2160 @ 60Hz
Display Port	—
LVDS	Up to 1920 x 1080 @60Hz, Daul Channel 18/24 bit (via CH7513) co-layout eDP (default LVDS)
eDP	Up to 3840 x 2160 @ 30Hz
Backlight Control	Voltage / PWM, use HW control
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	12(+/-5%) DC
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90%RH, non-condensing
Certificate	CE & FCC Class A
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
Weight	1.1 lb (0.5 Kg)
MTBF (Hours):	—
Rear Panel I/O Ports	
USB	USB 3.2(Gne1) ports x 2 USB 2.0 ports x 4 (upper 2 ports by BOM Optional)
Display I/O	HDMI x 1, VGA x 1
Audio I/O	Mic-in x 1, Line out x 1

Packing List

- SATA Cable
- I/O Shield
- MIX-EHLD1

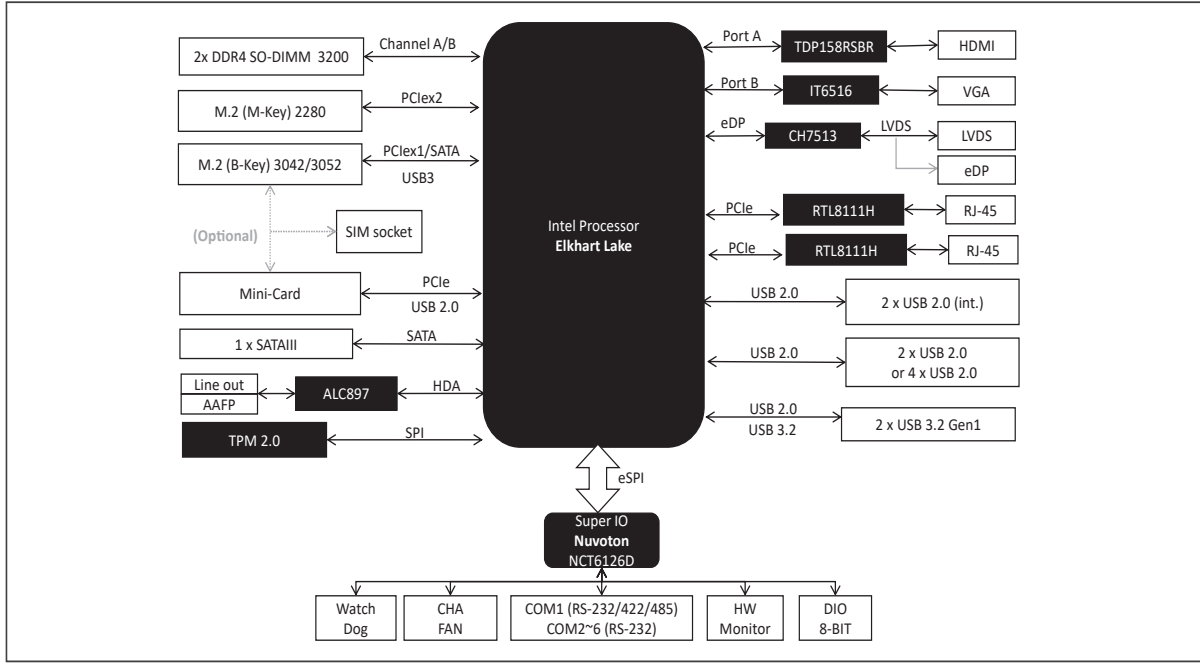
Optional Accessories

Part Number	Description
1709100201	USB 2.0 Cable (10P, 200MM, p=2.00mm, w/bracket)
1700100491	USB 2.0 Cable (2 x 5P, 490mm, p=2.00mm)
1701100206	COM Cable (200MM, p=2.00mm)
125530060Z	Adapter.60W.180D.W/Lock.FSP060-DHAN3

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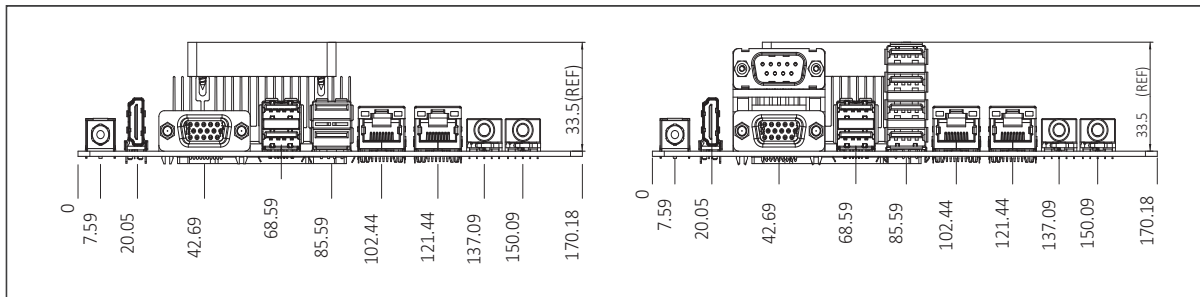
Industrial Motherboards

Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	RAM	Fan/Fanless	Display	LVDS	Storage	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
MIX-EHLD1-A10-J6412	J6412	SODIMM x 2	Fan	VGA, HDMI, LVDS/eDP	Daul Channel 18/24 bit	SATA3 x 1, M.2(M-key)	GbE x 2	USB 2.0 x 6, USB 3.2 Gen 1 x 2	5	1	Mini-Card x 1, M.2(B-Key) x 1	12V DC	2.0	32°F ~140°F (0°C ~ 60°C)
MIX-EHLD1-A10-X6413	X6413E	SODIMM x 2	Fan	VGA, HDMI, LVDS/eDP	Daul Channel 18/24 bit	SATA3 x 1, M.2(M-key)	GbE x 2	USB 2.0 x 6, USB 3.2 Gen 1 x 2	5	1	Mini-Card x 1, M.2(B-Key) x 1	12V DC	2.0	32°F ~140°F (0°C ~ 60°C)

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Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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