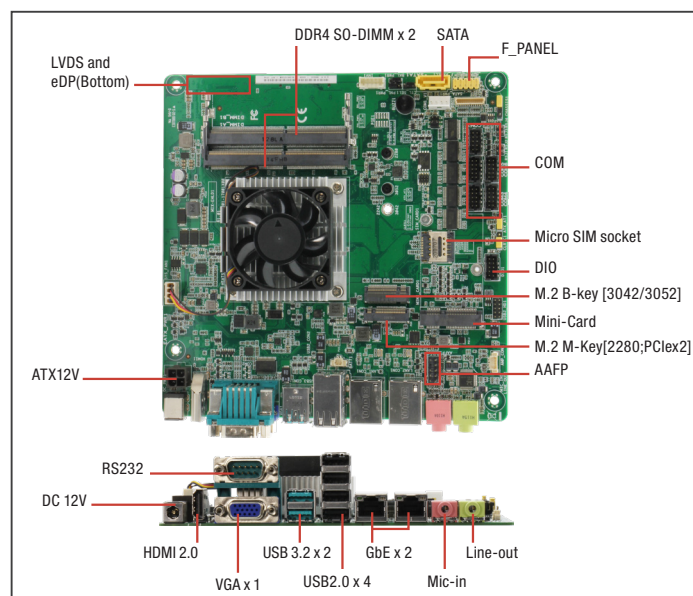


Mini-ITX with Intel Atom® x6000E Series/Intel® Pentium®/Celeron® N & J Series Processors (12W)



Specifications

System	
Processor	Intel Atom® x6000E Series/Intel® Pentium®/Celeron® N & J Series Processors (12W)
Chipset	—
Memory	Dual-Channel DDR4 3200 SODIMM x 2, up to 32GB, Non-ECC
I/O Chipset	Nuvoton NCT6126D
Ethernet	Realtek RTL8111H, GbE x 2
Audio	Realtek® ALC897
TPM	TPM 2.0
Expansion Slots	M.2 3042/3052 B-Key x 1 Full/Half-size mPCIe x 1 SIM Socket x 1 (default: 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, Dual 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	DC 12V Power consumption 60W
Operating Temperature	32°F - 140°F(0 - 60°C) (Operational humidity: 60°C @ 90% RH Non-Condensing)
Storage Temperature	—
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):	399,940
Rear Panel I/O Ports	
USB	USB 3.2 Gen 1 x 2 USB 2.0 x 4 (upper 2 ports by BOM Optional)
Display I/O	HDMI x 1, VGA x 1

Features

- Intel Atom® x6000E Series/Intel® Pentium®/Celeron® N & J Series Processors (12W)
- DDR4 SODIMM x 2, Max 32GB
- M.2 2280 M-Key x 1, M.2 3042/3052 B-Key, Mini Card x 1
- USB 3.2 Gen 1 x 2, USB 2.0 x 4
- LAN x 2
- HDMI 2.0 x 1, VGA x 1, LVDS/eDP x 1
- Flexible rear I/O (Full I/O or Low-Profile)
- 12V DC input



Audio I/O	Mic-in x 1, Line out x 1
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 2280 M-Key x 1(PCIe [x2]) SATA 6Gb/s x 1 SATA Power Connector x 1 (5V/12V @1A)
USB	USB 2.0 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)

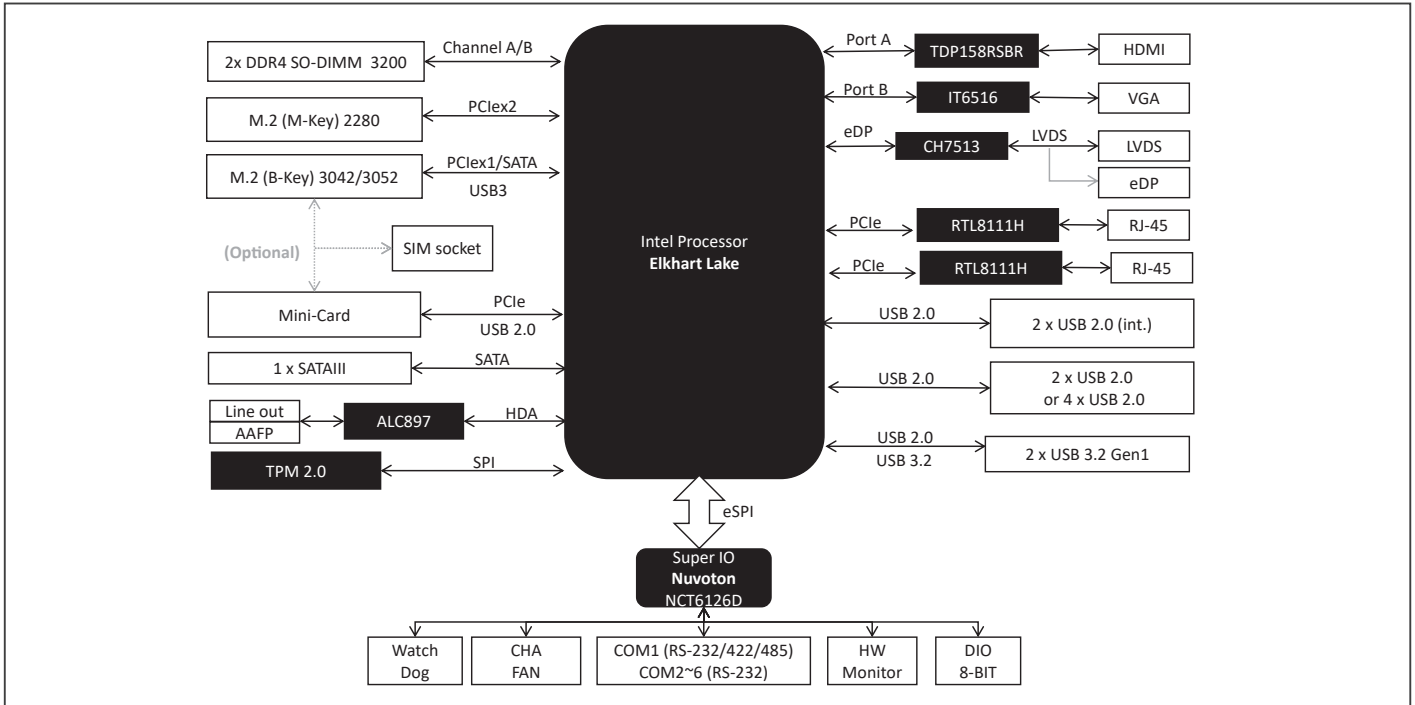
Packing List

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

Optional Accessories

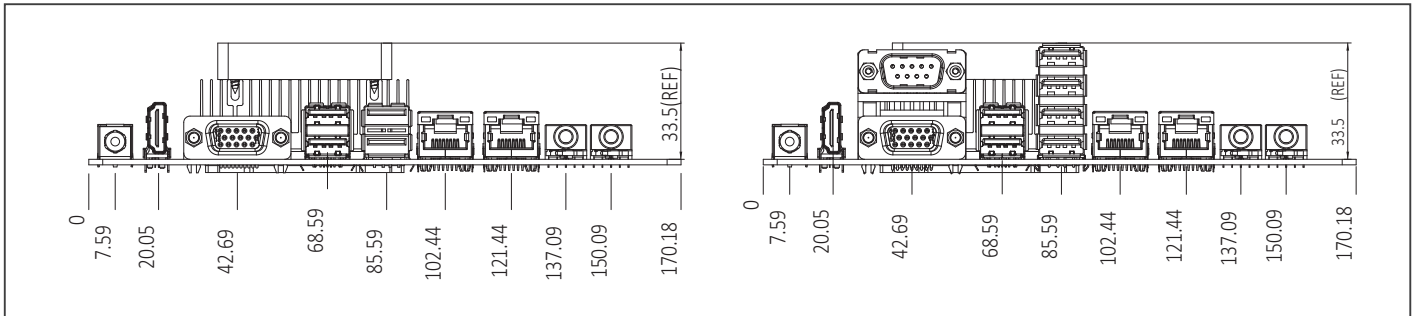
Part Number	Description
1709100201	USB 2.0 Cable (10P, 200MM, p=2.00mm, w/bracket)
1700100491	USB 2.0 Cable (2 x 5P, 490mm, p=2.00mm)
1701100206	COM Cable (200MM, p=2.00mm)
125530060Z	Adapter.60W.180D.W/Lock.FSP060-DHAN3

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	Intel® Celeron® Processor 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	Intel Atom® 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)