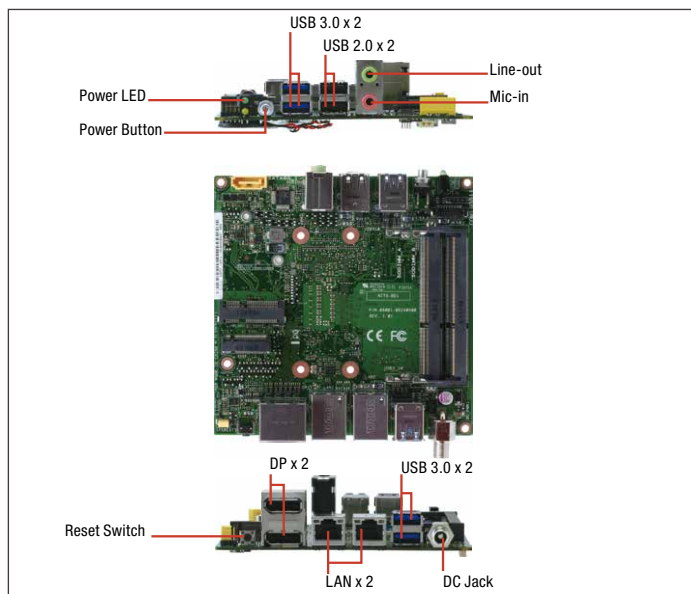


## Intel® 5th Gen processor Nano-ITX Board With 2 DP, 1 LVDS and 7 USB port



## Specifications

System	
Processor	Intel® 5th gen. 14nm Broadwell ULT i7-5650U/ i5-5350U/ i3-5010U, BGA CPU, 15W TDP.
Chipset	integrate into Soc
Memory	SO-DIMM x 2, max. 16GB, DDR3L 1600 MHz, non-ECC, un-buffered memory
Graphics	NCT5538D
I/O Chipset	Realtek 8111G Giga LAN 10/100/1000Mb LANs x 2, RJ-45 x 2
Ethernet	Realtek® ALC887
Audio	—
TPM	M.2 slot(M-key) x 1, length:60mm (mSATA colay LVDS), auto detect, Mini-Card half size (USB+PCIe+mSATA) x 1, default USB+PCIe, mSATA BOM change
Expansion Slots	128Mbit Flash ROM, AMI BIOS
BIOS	Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on Chassis
H/W Monitor	1~255 steps by software program
WatchDog Timer	Chassis Fan
Smart Fan Control	Yes (WOL / PXE)
Wake On LAN/ PXE	S3, S4, S5
Power State	S3, S4, S5
Graphics	
Graphics Chipset	Integrated Graphics, LVDS via Chronitel CH7511, support by add on M2 module
Graphics Multi Display	DP1+DP2+LVDS, DP1+DP2, LVDS+DP1, LVDS+DP2
VGA	—
DVI	—
HDMI	—
Display Port	(U): 3840 x 2160, (H): 4096 x 2304
LVDS	1920 x 1200
eDP	—
Backlight Control	Yes
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	DC power jack x 1 (DC: 12V~19V, wide rage:12V-5%~ 19V+10%)
Power Compliance	Compliant with EuP / ErP
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~185°F (-40°C ~85°C)
Operating Humidity	20% ~ 90% RH, non-condensing
Certificate	CE & FCC class A
Form Factor	NANO ITX: 120mm x 120mm (4.72" x 4.72")
Weight	—
MTBF (Hours)	434,910
Front Panel I/O Ports	
USB	USB 3.0 port x 2, USB 2.0 port x 2, USB header support 1 USB 2.0 port x 1 (p=2.00mm)
Display I/O	—

## Features

- Intel® 5th Generation ULT 15W Processor
- Three Independent Display: Display Port x 2, LVDS Port x 1 (Optional)
- Dual Gigabit Ethernet
- USB 3.0 Port x 4, USB 2.0 Port x 3
- Mini-PCIe Slot x 1, M.2 Slot x 1



Audio I/O	Audio jack x 2: Line-out (green), Mic-in (pink)
LAN I/O	—
Serial Port	—
PS/2 Port	—
Others	On/Off Button x 1, Power LED + HD LED x 1
Rear Panel I/O Ports	
USB	USB 3.0 port x 2
Display I/O	DP connector x 2
Audio I/O	—
LAN I/O	RJ-45 connector x 2
Serial Port	—
PS/2 Port	—
Others	Reset Switch x 1, DC power jack x 1 (DC: 12V~19V, wide rage:12V- 5%~ 19V + 10%), Antenna output x 1 (from internal Mini-Card)
Internal I/O Connectors	
Storage	SATA 6.0 Gb/s port x 1, M.2 slot for mSATA x 1 (optional)
USB	USB header support 1 USB 2.0 port x 1 (p=2.00mm)
Display I/O	LVDS connector x 1, support by add on M.2 module
Audio I/O	—
Serial Port	COM port header x 1, p=2.00mm (RS-232)
PS/2 Port	—
Parallel Port	—
DIO	—
FAN	Chassis Fan connector x 1 (3-pin, p=2.00mm)
Power	SATA power connector x 1, support by add on M.2 module
Others	Mini-Card half size x 1 (USB+PCIe+mSATA, default USB+PCIe, mSATA BOM change), LVDS inverter x 1, support by add on M.2 module
OS	
OS Supported	Windows® 7 32/64-bit, Windows® 8.1 32/64-bit, Windows® 10 64-bit, Linux Fedora

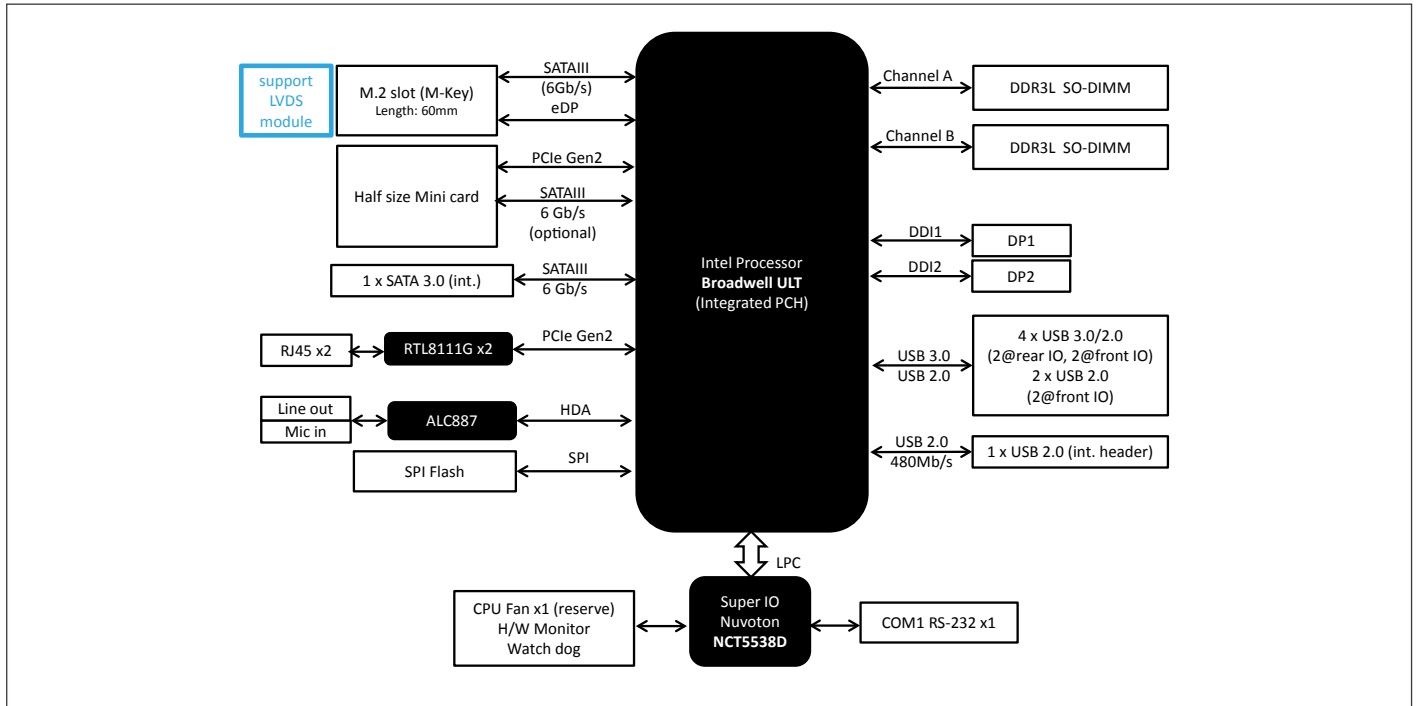
## Packing List

- Support DVD
- NITX-BD1
- CPU heatsink module

## Optional Accessories

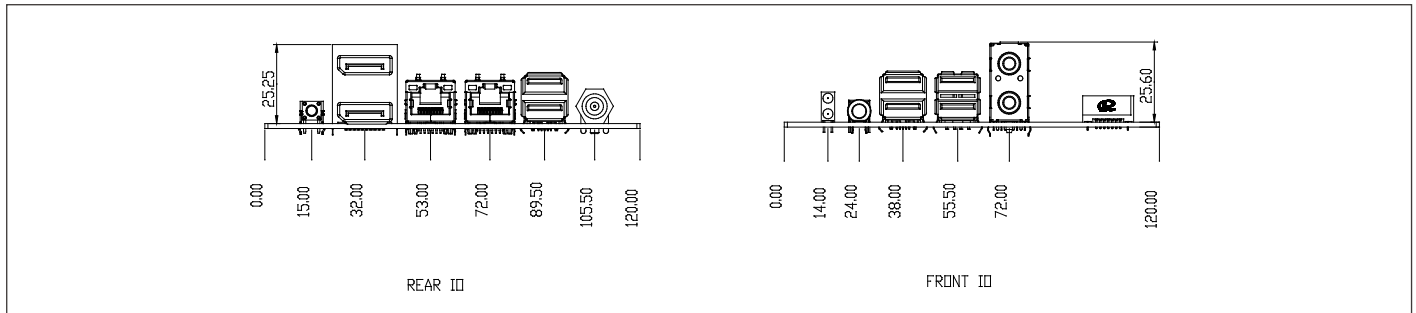
Part Number	Description
PER-V03B-A10	M2(M-KEY).LVDS module.ASUS
1702150300	SATA Power Cable (4P, 300mm, P=2.54mm)
968C032G0Z	M.2 2260 32G SSD
968C064G1G	M.2 2260 64G SSD
968C128G1L	M.2 2260 128G SSD
968C256G0C	M.2 2260 256G SSD
968C512G07	M.2 2260 512G SSD

## Block Diagram



## Dimension

Unit: mm



## Order Information

Part number	CPU	RAM	Fan/ Fanless	Display	Storage	LVDS	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
NITX-BD1-5650-A10	I7-5650U 2.2G/4M	DDR3 1600/1333	Fan/Fanless	DP x 2	SATA3 x 1	support by add on M.2 module	GbE x 2	USB3 x 4, USB2 x 2, Int. USB2 x 1	Int. RS-232 x 1	0	M.2 x 1, Mini PCI-E x 1	DC12-19V	—	0~60°C
NITX-BD1-5350-A10	I5-5350U 1.8G/3M	DDR3 1600/1333	Fan/Fanless	DP x 2	SATA3 x 1	support by add on M.2 module	GbE x 2	USB3 x 4, USB2 x 2, Int. USB2 x 1	Int. RS-232 x 1	0	M.2 x 1, Mini PCI-E x 1	DC12-19V	—	0~60°C
NITX-BD1-5010-A10	I3-5010U 2.1G/3M	DDR3 1600/1333	Fan/Fanless	DP x 2	SATA3 x 1	support by add on M.2 module	GbE x 2	USB3 x 4, USB2 x 2, Int. USB2 x 1	Int. RS-232 x 1	0	M.2 x 1, Mini PCI-E x 1	DC12-19V	—	0~60°C