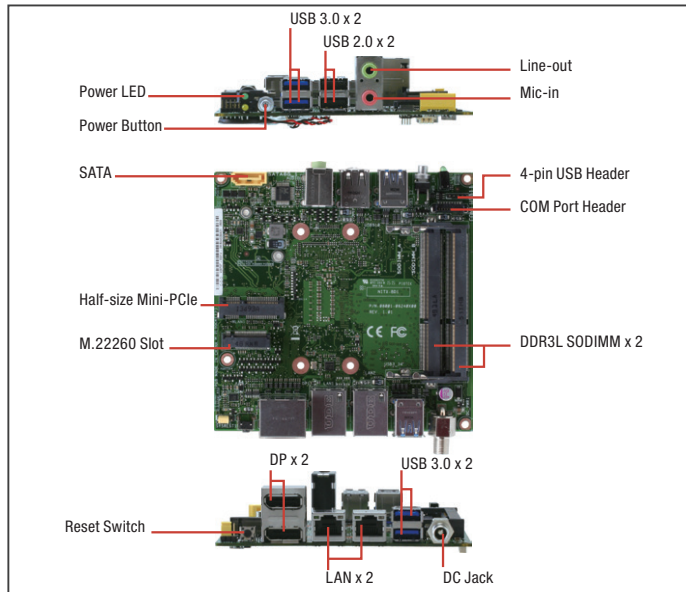


5th Generation Intel® Processor Nano-ITX Board with DP x 2, LVDS x 1 and USB Port x 7



Specifications

| System | |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor | 5th Generation Intel® 14nm ULT i7-5650U/ i5-5350U/ i3-5010U, BGA CPU, 15W TDP. |
| Chipset | Integrated into SoC |
| Memory | SODIMM x 2, max. 16GB, DDR3L 1600 MHz, non-ECC, un-buffered memory |
| Graphics | Integrated Graphics LVDS via Chronitel CH7511, support by add on M2 module |
| I/O Chipset | NCT5538D |
| Ethernet | Realtek 8111G Giga LAN 10/100/1000Mb LANs x 2, RJ-45 x 2 |
| Audio | Realtek® ALC887 |
| TPM | — |
| Expansion Slots | 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 |
| BIOS | 128M bit Flash ROM, AMI BIOS |
| H/W Monitor | Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on Chassis |
| WatchDog Timer | 1~255 steps by software program |
| Smart Fan Control | Chassis Fan |
| Wake On LAN/ PXE | Yes (WOL/PXE) |
| 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 | DP 1.2a (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%) |
| Operating Temperature | 32°F ~ 131°F (0°C ~ 50°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: 4.72" x 4.72" (120mm x 120mm) |
| 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 USB 2.0 port x 1 (p=2.00mm) |
| Display I/O | — |

Features

- 5th Generation Intel® 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 |
| 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 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=1.25mm (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, int. 2-pin reset switch x 1, int. 2-pin power switch x 1, |
| 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 Support | Windows® 7 32/64-bit, Windows® 8.1 32/64-bit, Windows® 10 64-bit, Linux Fedora |

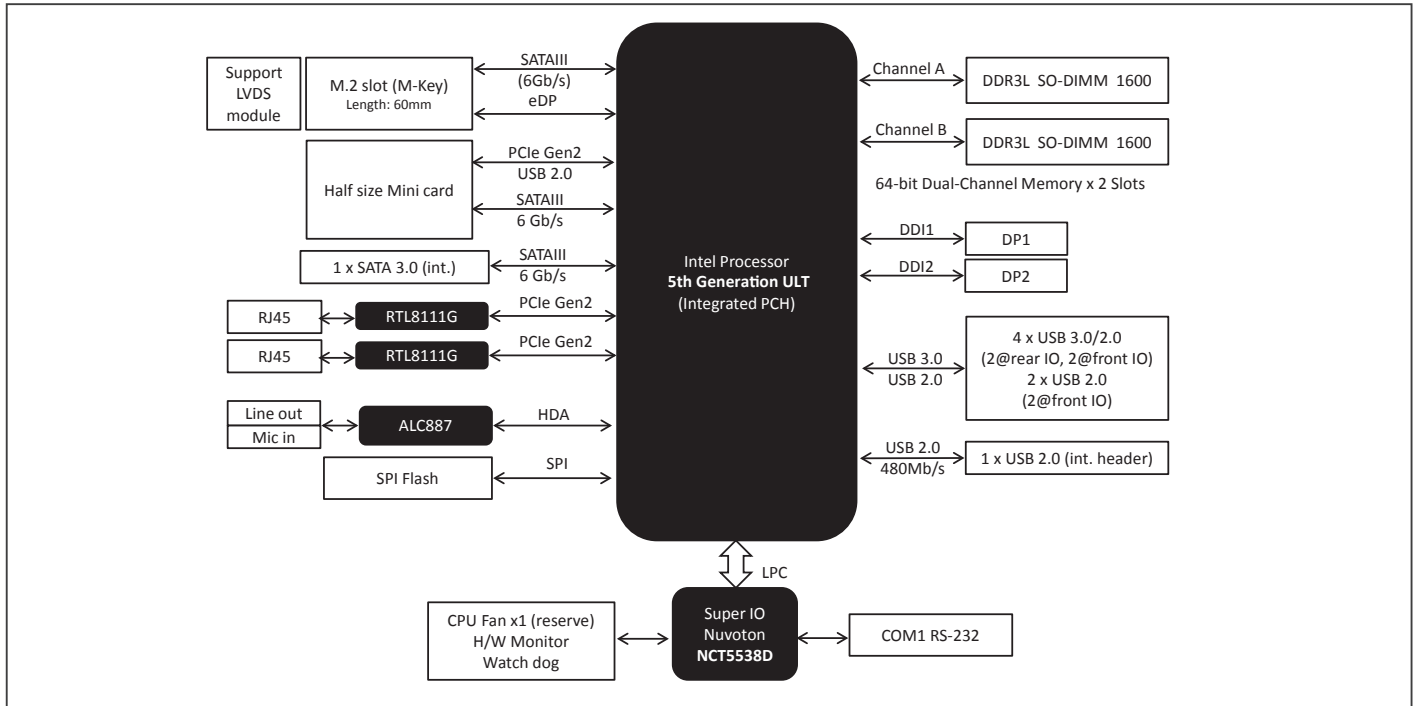
Packing List

- NITX-BD1
- Product DVD

Optional Accessories

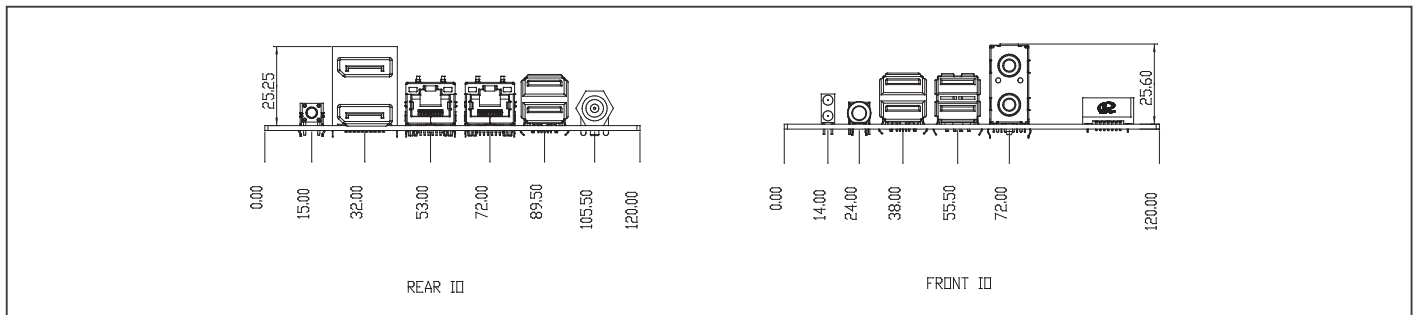
| Part Number | Description |
|--------------|-------------------------------------------------------------------|
| PER-V03B-A10 | M2 (M-KEY), LVDS module |
| 1702150300 | SATA Power Cable (4P, 300mm, P=2.54mm) |
| 968C032G0Z | M.2 2260 32G SSD |
| 968C064G1G | M.2 2260 64G SSD |
| 968C128G1L | M.2 2260 128G SSD |
| 968C256G0C | M.2 2260 256G SSD |
| 968C512G07 | M.2 2260 512G SSD |
| 1701090150 | (TF)Flat Cable.D-Sub 9(M).9P Housing.9P 1.25mm pitch Housing.15cm |

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-A10-5650 | I7-5650U 2.2G/4M | DDR3 1600/1333 | Depends on customer's Mechanical design | 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 | — | 32°F ~140°F (0°C ~ 60°C) |
| NITX-BD1-A10-5350 | I5-5350U 1.8G/3M | DDR3 1600/1333 | | 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 | — | 32°F ~140°F (0°C ~ 60°C) |
| NITX-BD1-A10-5010 | I3-5010U 2.1G/3M | DDR3 1600/1333 | | 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 | — | 32°F ~140°F (0°C ~ 60°C) |