

Specifications

| System | |
|--------------------------|--|
| Processor | Intel® 8th/9th Generation (Coffee Lake-S/Coffee Lake-S Refresh) Core™ i9/ i7/ i5/ i3, Pentium 14nm LGA 1151 socket Processor, Max. 6 Core 95W |
| Chipset | Intel® H310 Express Chipset |
| Memory | DIMM x 2, DDR4 (2666/2400/2133 MHz, max. 64GB) non-ECC, un-buffered memory Dual channel memory architecture |
| I/O Chipset | NCT6793D+ F81216HD |
| Ethernet | Intel® PHY i219V Giga LAN x 1 Intel® i211AT Giga LAN x 1 RJ45 x 2 |
| Audio | Realtek® ALC887 6-Channel High Definition Audio CODEC |
| TPM | Nuvoton NPCT750AABYX TPM2.0 onboard (optional, default: N/A) |
| Expansion Slots | PCIe 3.0[x16] Slot x 1, PCIe 2.0[x4] Slot (open edge) x 2 (#1: 1Lane #2: Default: 2Lanes, only support 1Lane when Mini PCIe slot is installed.), PCI x 3, M.2 2280/2242 M-key (PCIex1/SATA3) x 1, Mini PCIe + Micro SIM card Slot (optional, default: N/A) |
| BIOS | 128Mbit Flash ROM x 1, AMI BIOS |
| H/W Monitor | Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on CPU/Chassis |
| WatchDog Timer | 1~255 steps by software program |
| Smart Fan Control | CPU Fan/ Chassis Fan x 2 |
| Wake On LAN/ PXE | Yes (WOL / PXE) |
| Power State | S3, S4, S5 |
| Graphics | |
| Graphics Chipset | Intel® Graphics Media Accelerator |
| Graphics Multi Display | HDMI+VGA+DP |
| VGA | Up to 1920 x 1200 @60Hz (via IT6516B) |
| DVI | — |
| HDMI | Up to 4096 x 2160 @ 30 Hz |
| Display Port | Up to 4096 x 2160 @ 24 Hz / 3840 x 2160 @ 60 Hz, with Digital Audio |
| LVDS | — |
| eDP | — |
| Backlight Control | — |
| Environment & Power & ME | |
| Battery | Lithium battery |
| Power Requirement | 24-pin ATX connector x 1, 8-pin (2x4) ATX 12V Power connector x 1 |
| Operation Temperature | 32°F ~ 140°F (0°C ~ 60°C) |
| Storage Temperature | -40°F ~ 185°F (-40°C ~ 85°C) |
| Operation Humidity | 0% ~ 90%RH, non-condensing |
| Certificate | CE & FCC Class A |
| Form Factor | ATX Form Factor, 12" x 9.6" (305mm x 244mm) |

Features

- 8th/9th Generation Intel® Core™ LGA1151 Processor
- Supports Max. TDP 6 Core 95W
- DDR4 2666/2400/2133 MHz, max. 64GB
- Two Independent Displays: HDMI x 1, VGA x 1, DP x 1
- Dual Intel® Gigabit Ethernet, i211AT x 1, i219V x 1
- USB 3.2 Gen1 ports x 4, USB 2.0 ports x 5
- M.2 2280/2242 M-key (PCIex1/SATA3) x 1
- TPM Onboard (optional)

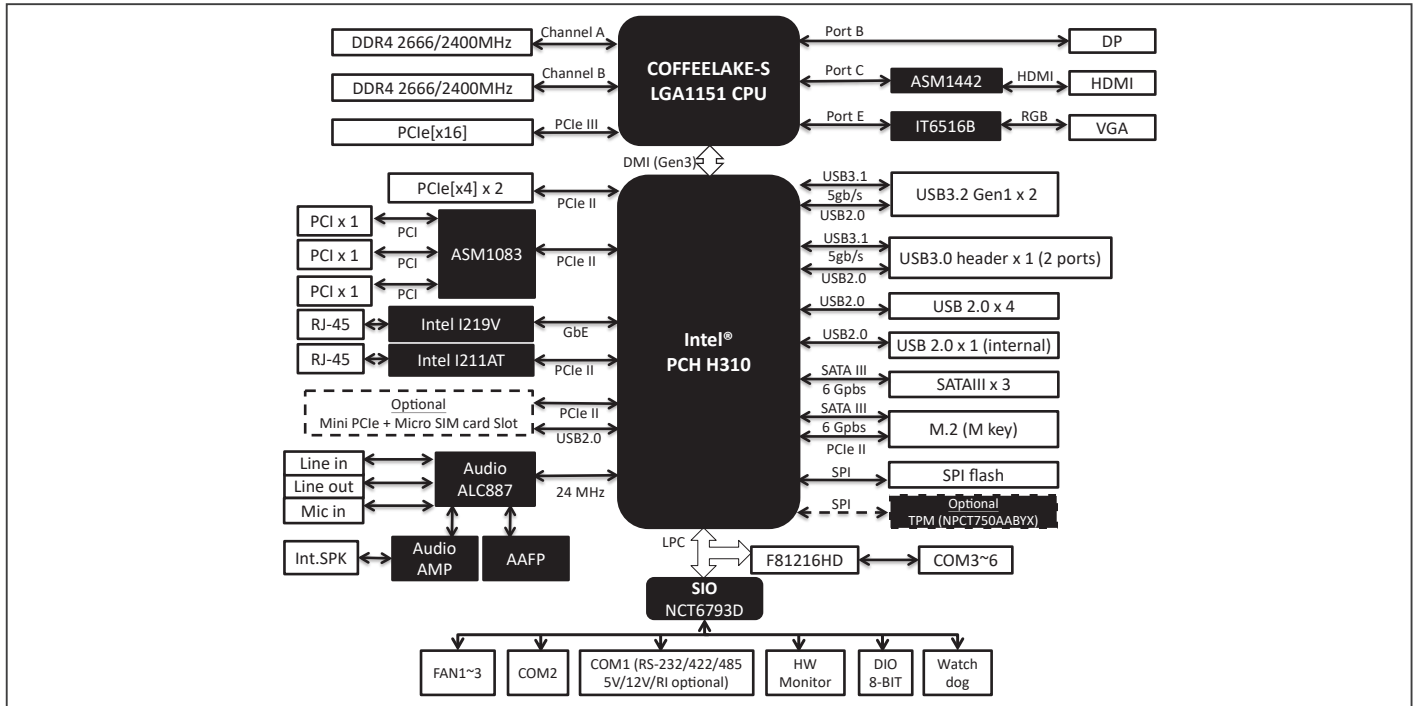


| Weight | 1.76 lb (0.8 Kg) |
|-------------------------|---|
| MTBF (Hours) | 285,600 |
| Rear Panel I/O Ports | |
| USB | USB 3.2 Gen 1 ports x 2, USB 2.0 ports x 4 |
| Display I/O | HDMI x 1, VGA x 1, DP x 1 |
| Audio I/O | Audio Jack x 3: Line-in, Mic-in, Line-out |
| LAN I/O | LAN (RJ45) ports x 2 |
| Serial Port | DB-9 COM x 1 (supports RS-232/422/485, 5V/12V/RI) |
| PS/2 Port | — |
| Others | — |
| Internal I/O Connectors | |
| Storage | SATA III (6.0Gb/s) ports x 3, support RAID 0/1/5/10 M.2 2280/2242 M-key (PCIex1/SATA3) x 1 |
| USB | USB 3.2 Gen 1 headers support additional 2 USB ports (2x5PIN, p=2.54mm) x 1, USB 2.0 Type A (vertical) x 1 |
| Display I/O | — |
| Audio I/O | Speaker header (Line-out) x 1, AAFP x 1 |
| Serial Port | RS-232 headers x 5 |
| PS/2 Port | — |
| Parallel Port | — |
| DIO | 8-bit Digital I/O interface (In/Out programmable) x 1 |
| FAN | CPU Fan connector(s) (4-pin) x 1, Chassis Fan connector(s) (4-pin) x 2 |
| Power | — |
| Others | Chassis Intrusion x 1, AT/ATX mode select jumper x 1, Front panel header x 1, Clear CMOS jumper x 1 |
| OS | |
| OS Support | Windows® 10 64bit, Linux Ubuntu 64 bit (18.04.3/Kernal5) |

Packing List

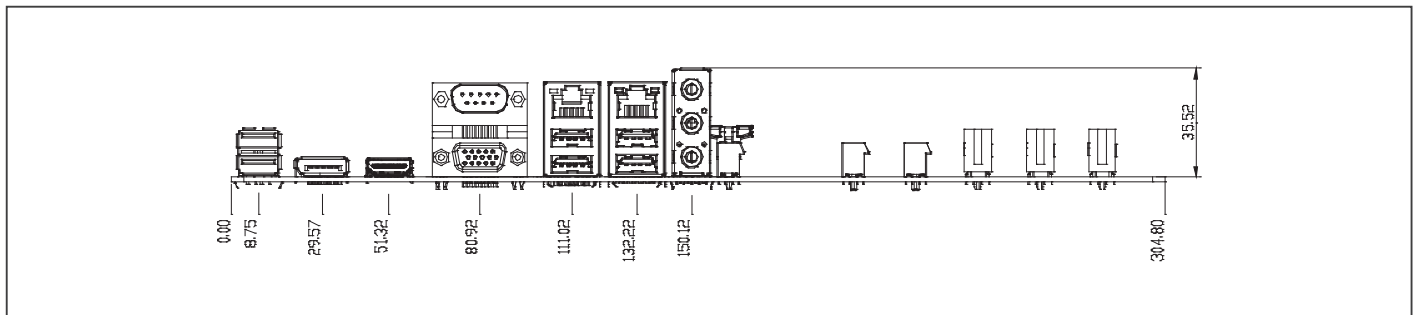
- 14001-00630100 SATA 6G Cable (7P, 180; 90, 500mm 2 in 1)
- 14001-00400100 COM Port Cable (9P, 260mm, p=2.54mm w/bracket)
- I/O Shield
- ATX-H310A

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. |
|---------------|-----------------|---------------------|-----------------|-------------------------------|------|---------------------------------------|---------------|---|--------|--------------------|---|-------|-----|-----------------------------|
| ATX-H310A-A10 | LGA 1151 socket | DDR4 2666/2400/2133 | Fan | HDMI x 1 VGA x 1 DP x 1 | — | SATA3 x 3, M.2 2280/2242 M-key x 1 | Intel@GbE x 2 | USB 3.2 Gen 1 x 2 USB 2.0 x 4 USB 3.2 Gen 1 header x 1 USB 2.0 type A (vertical) x 1 | 5 | 1 | PCIe[x16] x 1, PCIe[x4] (open edge) x 2 (#1: 1Lane, #2: 2Lanes), PCI x 3, M.2 2280/2242 M-key x 1 | ATX | — | 32°F ~140°F (0°C ~ 60°C) |

Optional Accessories

| Part Number | Description |
|-----------------|--|
| 1700190450 | USB3.2 Gen 1 Cable (19P, 450mm, w/bracket) |
| 1709100330 | USB 2.0 cable (9P, 330MM, p=2.54mm, w/bracket) |
| 170910020K | USB 2.0 cable (9P, 200MM, p=2.54mm, w/o bracket) |
| 175921156B | CPU Cooler (2-Ball, Push-pin Type) |
| 1759200172 | CPU Cooler (2-Ball, Screw with Retention Plate) |
| AP-FNTH1Q370010 | CPU Cooler (2-Ball Bearing, 2U, TDP Max. 100W) |