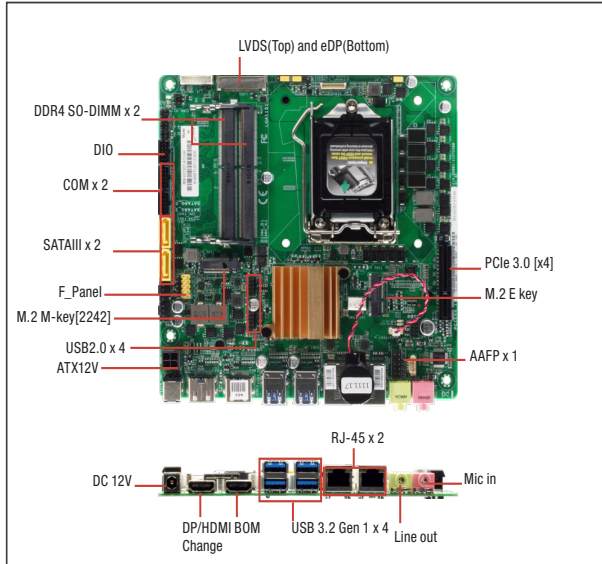


MIX-H310D1

Mini-ITX with 8th/9th Generation Intel® Core™ LGA1151 Socket Processor, Max. 65W TDPs, 12V DC Power input

Industrial Motherboards



Features

- 8th/9th Gen. Intel® Core™ LGA1151 Processor
- DDR4 SODIMM x 2, Up to 32 GB
- Two Independent Display: DP, HDMI, eDP, LVDS
- M.2 Slot (M-key, 2242) x 1, M.2 Slot (E-key) x 1
- PCIe [x4] x 1
- Low Profile
- 12V DC Power Input
- USB 3.2 Gen 1 x 4, USB 2.0 x 5



Specifications

| System | |
|--------------------------|--|
| Processor | 8th/9th Gen. Intel® Core™ LGA 1151 socket Processor (formerly Coffee Lake-S), Max. 65W TDPs |
| Chipset | Intel® H310 Express Chipset |
| Memory | DDR4 2666 MHz SODIMM x 2, Up to 32GB, Non-ECC, Un-buffered Memory, Dual channel memory architecture |
| I/O Chipset | NCT6793D |
| Ethernet | Realtek® PCIe Gb LAN RTL8111H |
| Audio | Realtek® ALC897 |
| TPM | Firmware TPM |
| Expansion Slots | PCIe3.0 [x4] x 1 M.2 E-key(22 x 30 mm) x 1 for Wireless-wifi module (PCIe+USB) |
| BIOS | 128Mbit Flash ROM, AMI BIOS |
| H/W Monitor | Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V/12V, Fan Monitor on CPU/Chassis |
| WatchDog Timer | 1~255 steps by software program |
| Smart Fan Control | CPU Fan/ Chassis Fan |
| Wake On LAN/ PXE | Yes (WOL / PXE) |
| Power State | S3, S4, S5 |
| Graphics | |
| Graphics Chipset | Intel® UHD Graphics |
| Graphics Multi Display | HDMI1+HDMI2, HDMI1+DP2, DP1+HDMI2, HDMI1+LVDS, HDMI2+LVDS, HDMI1+eDP, HDMI2+eDP, DP1+DP2, DP1+LVDS, DP2+LVDS, DP1+eDP, DP2+eDP |
| VGA | — |
| DVI | — |
| HDMI | Up to 4096 x 2304@24Hz (HDMI 1.4b) |
| Display Port | Up to 4096 x 2304@60Hz |
| LVDS | Up to 1920 x 1200 @ 60 Hz, dual-channel 18/24 bit (via CH 7511) |
| eDP | UP to 4096 x 2304 @ 60Hz |
| Backlight Control | Voltage/PWM |
| Environment & Power & ME | |
| Battery | Lithium battery |
| Power Requirement | 12V DC |
| 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 |
| Form Factor | Mini-ITX: 6.7" x 6.7" (170 mm x 170 mm) |
| Weight | 1.1 lb (0.5 kg) |
| MTBF (Hours) | 246,210 |

Rear Panel I/O Ports

| | |
|-------------|---|
| USB | USB 3.2 Gen 1 (5 Gbps) x 4 |
| Display I/O | HDMI x 2, DP x 1 + HDMI x 1 (Optional), DP x 2 (Optional) |
| Audio I/O | Mic-in x 1, Line-out x 1 |
| LAN I/O | LAN (RJ-45) port x 2 |
| Serial Port | — |
| PS/2 Port | — |
| Others | DC Jack |

Internal I/O Connectors

| Storage | SATA3.0 (6.0Gb/s) x 2 M.2 M-key (SATA) (22 x 42mm) x 1 |
|---------------|---|
| USB | USB 2.0 (2 x 5-pin, 2.00mm) x 3 ports support additional 5 USB. |
| Display I/O | — |
| Audio I/O | AAFP x 1, Speaker header x 1 |
| Serial Port | Box header for COM (RS-232/422/485) x 1 Box header for COM (RS-232) x 1 |
| PS/2 Port | — |
| Parallel Port | — |
| DIO | Digital I/O box header x 1 |
| FAN | 4-pin CPU Fan connector x 1, 4-pin Chassis Fan connector x 1 |
| Power | — |
| Others | Front Panel connector x 1, Chassis Intrusion x 1, Buzzer onboard x 1, CMOS jumper x 1 |
| OS | |
| OS Support | Windows® 10 64-bit Linux Ubuntu 18.04 LTS |

Packing List

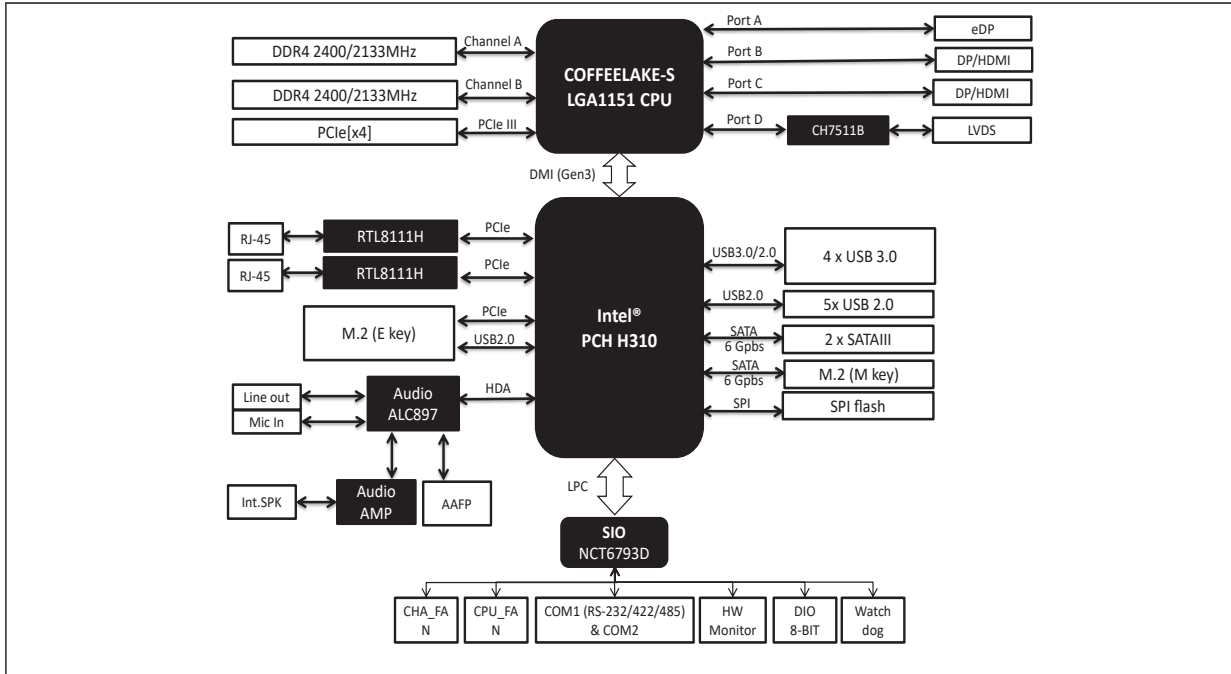
- SATA Cable
- SATA Power Cable
- I/O Shield
- MIX-H310D1

MIX-H310D1

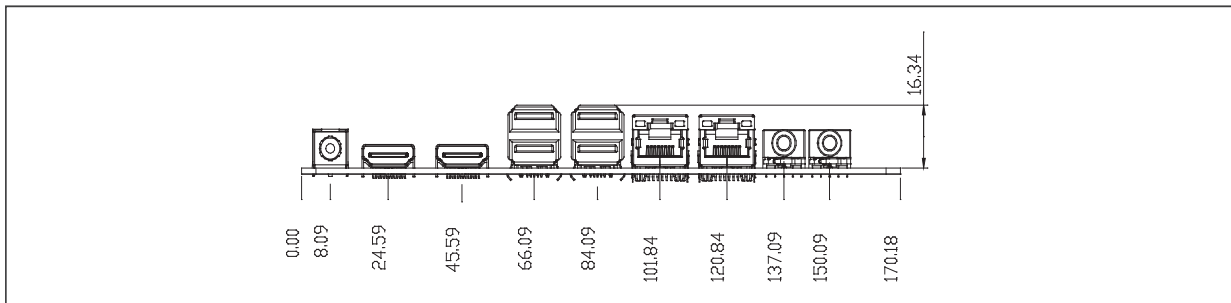
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Industrial Motherboards

Block Diagram



Dimension Unit: mm



Ordering Information

| Part number | CPU | RAM | Fan/Fanless | Display | Storage | LVDS | LAN | USB | RS-232 | RS-232/422/485 | Expansion Slot | Power | TPM | Temp. |
|-------------------|--------|------------|-------------|----------------------|------------------------------|------------------------|---------|---------------------------------|--------|----------------|----------------------------------|--------|------|-----------------------------|
| MIX-H310D1-A13-HH | Socket | SODIMM x 2 | Fan | Dual HDMI, eDP, LVDS | SATA3 x 2, M.2 (M-key; SATA) | Dual Channel 18/24 bit | GbE x 2 | USB2.0 x 5 USB 3.2 Gen 1 x 4 | 1 | 1 | PCIe3.0[x4] x 1, M.2 (E-Key) x 1 | 12V DC | fTPM | 32°F -140°F (0°C - 60°C) |

Optional Accessories

| Part Number | Description |
|---------------|---|
| 1759200172 | (TF)CPU Cooler Fan, LGA 1156 socket, 4P, 12V, 2-Ball Bearing, Dynatron, K785, (2U cooler) |
| 175921156B | (TF)CPU Cooler Fan, LGA 1156 socket, 12V, 4P, 2Ball (Tray), Dreamer, DSA-00273 |
| COOLER-65W-01 | CPU Cooler, LGA 1156, 12V, 65W, 4P, Kingcooler, 0571-1463R |
| 1709100201 | USB 2.0 Cable (10P, 200mm, p=2.00mm, w/bracket) |
| 1700100491 | USB 2.0 Cable (2 x 5P, 490mm, p=2.00mm) |
| 1709050201 | USB 2.0 Cable (5P, 220mm, p=2.00mm) |
| 1701100206 | COM Cable (200mm, p=2.00mm) |
| 1702150300 | SATA Power Cable (4P, 300mm p=2.54mm) |
| 1702151201 | SATA Power Cable (4P, 120mm, p=2.5mm) |

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