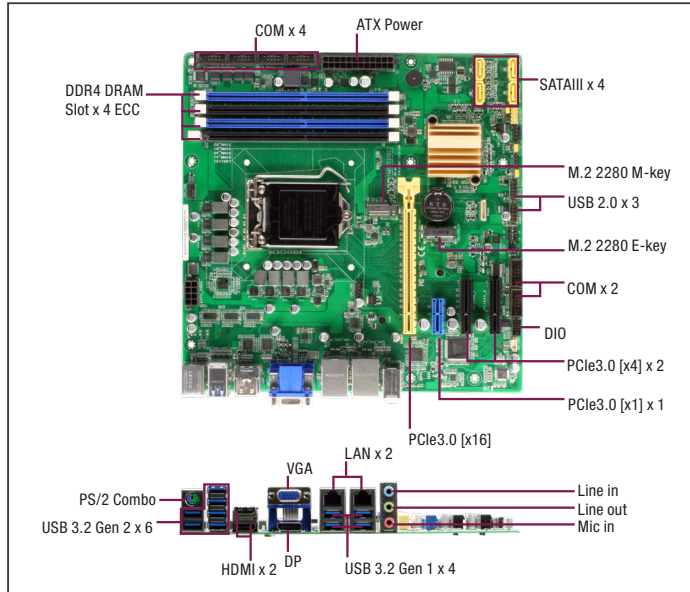


# MAX-C246A

Micro-ATX Industrial Motherboard with 8th/9th Generation Intel® Core™ Processor, DDR4 DRAM, Multiple Display Ports, Supports iAMT 12.0



## Specifications

| System                   |  |
|--------------------------|--|
| Processor                | 8th/9th Generation Intel® (Coffee Lake-S/Coffee Lake-S Refresh) Core™ i9/ i7/ i5 /i3, Pentium™ 14nm, Celeron™, Xeon™ E-2200/2100, LGA 1151 socket Processor, max. TDP 8 Core 95W |
| Chipset                  | Intel® C246 Express Chipset  |
| Memory                   | DIMM x 4, DDR4 (2666/2400/2133 MHz, max. 128GB) ECC, un-buffered memory<br>Dual-channel memory architecture  |
| I/O Chipset              | NCT6793D+ F81216HD   |
| Ethernet                 | Intel® PHY i219LM Gb LAN (supports Intel® AMT 12.0) x 1<br>Intel® i210AT Gb LAN x 1<br>RJ45 x 2  |
| Audio                    | Realtek® ALC897 6-Channel High Definition Audio CODEC  |
| TPM                      | Nuvoton NPCT750 TPM2.0 onboard   |
| Expansion Slots          | PCIe 3.0[x16] Slot x 1<br>PCIe 3.0[x4] Slot x 2(open edge)<br>PCIe 3.0[x1] Slot x 1(open edge)<br>M.2 2230 E-key x 1(PCIe/USB)<br>M.2 2280 M-key x 1(PCIex4/SATA3)               |
| BIOS                     | 256Mbit Flash ROM, AMI BIOS  |
| H/W Monitor              | Temperature Monitor on CPU/System, 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® UHD Graphics  |
| Graphics Multi Display   | HDMI+VGA+DP, HDMI+HDMI+VGA, HDMI+HDMI+DP   |
| VGA                      | Up to 1920 x 1200 @60Hz (via IT6516B)  |
| DVI                      | —  |
| HDMI                     | Up to 4096 x 2160 @ 24 Hz / 2560 x 1600 @ 60 Hz, with Digital Audio  |
| 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   |

## Features

- 8th/9th Generation Intel® Core™ LGA1151 Processor
- Supports Power 95W max.
- DDR4 2666/2400/2133 MHz, max. 128GB
- Three Independent Displays: HDMI x 2, VGA x 1, DP x 1
- Dual Intel® Gigabit Ethernet, i210AT x 1, i219LM x 1, i219LM Supports iAMT 12.0
- USB 3.2 Gen 2 ports x 6, USB 3.2 Gen 1 ports x 4, USB 2.0 ports x 3
- M.2 E-key (PCIe/USB) x 1, M.2 M-key (PCIex4/SATA3) x 1
- TPM Onboard

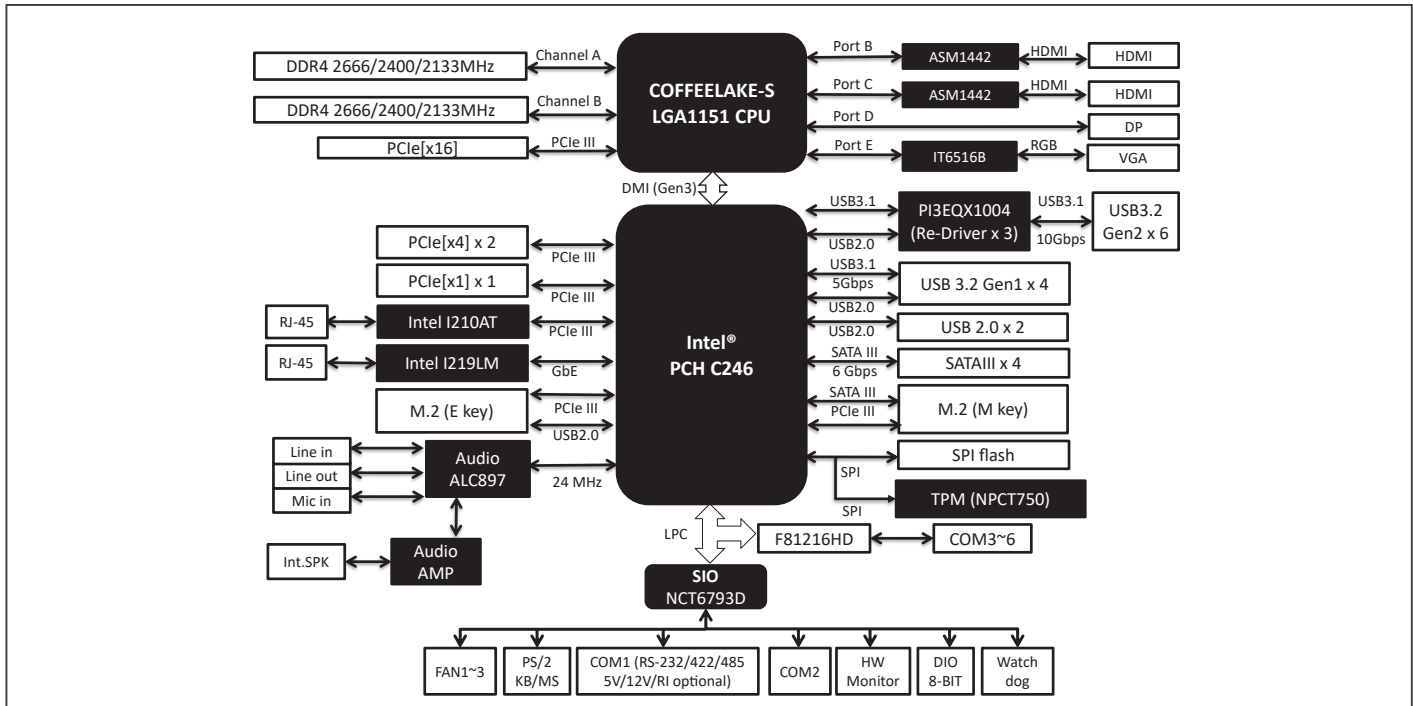


| Form Factor             | Micro-ATX Form Factor, 9.6"x9.6" (244mmx244mm)  |
|-------------------------|---|
| Weight                  | 1.76 lb (0.8 Kg)  |
| MTBF (Hours)            | 264,820   |
| Rear Panel I/O Ports    |   |
| USB                     | USB 3.2 Gen 2 ports (10 Gbps) x 6, USB 3.2 Gen 1 ports (5 Gbps) x 4                                       |
| Display I/O             | DP x 1, VGA x 1, HDMI x 2   |
| Audio I/O               | Audio Jack x 3: Line-in, Mic-in, Line-out   |
| LAN I/O                 | LAN (RJ45) ports x 2  |
| Serial Port             | —   |
| PS/2 Port               | PS/2 combo port (Keyboard & Mouse) x 1  |
| Others                  | —   |
| Internal I/O Connectors |   |
| Storage                 | SATA3 (6.0Gb/s) ports x 4, support RAID 0/1/5/10<br>M.2 2280 M-key (PCIex4/SATA3) x 1                     |
| USB                     | USB 2.0 headers support additional 3 USB ports (2x5PIN, p=2.54mm)   |
| Display I/O             | —   |
| Audio I/O               | Speaker for 2W@4Ω x 1   |
| Serial Port             | RS-232 Box headers x 5<br>RS-232/422/485 Box header (COM1, Pin9 supports 5V/12V/RI optional) x 1          |
| PS/2 Port               | —   |
| Parallel Port           | —   |
| DIO                     | 8-bit Digital I/O interface (In/Out programmable) x 1   |
| FAN                     | CPU Fan connector (4-pin) x 1<br>Chassis Fan connector(s) (4-pin) x 2                                     |
| Power                   | —   |
| Others                  | Chassis Intrusion x 1<br>AT/ATX mode select jumper x 1<br>Front panel header x 1<br>Clear CMOS jumper x 1 |
| OS                      |   |
| OS Support              | Windows® 10 64-bit, Linux Ubuntu 64-bit (18.04.1/Kernel4.8.0)   |

## Packing List

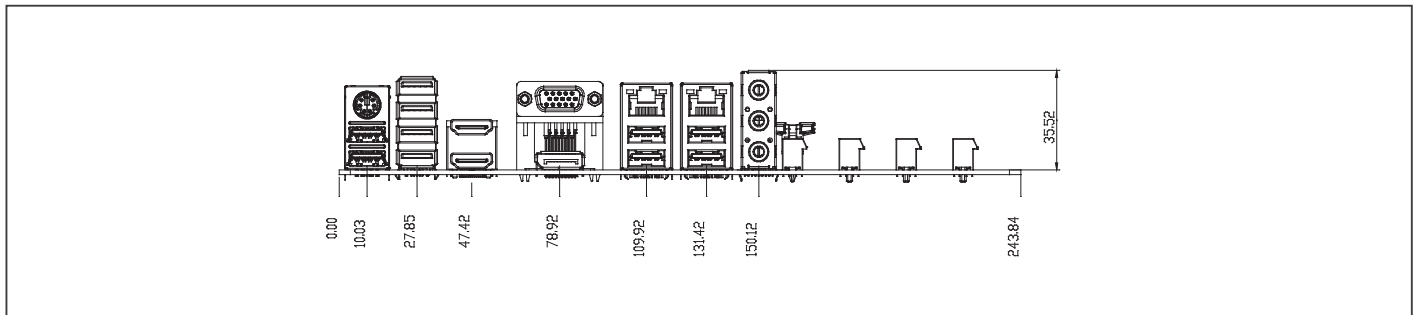
- 14001-00630100 SATA 6G Cable (7P, 180; 90, 500mm 2 in 1)
- 14001-00400100 COM Port Cable (9P, 260mm, p=2.54mm w/bracket)
- I/O Shield
- MAX-C246A

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

| Part number       | CPU             | RAM                 | Fan/<br>Fanless | Display                       | LVDS | Storage                       | LAN           | USB   | RS-232 | RS-<br>232/422/485 | Expansion Slot  | Power | TPM     | Temp.                       |
|-------------------|-----------------|---------------------|-----------------|-------------------------------|------|-------------------------------|---------------|---|--------|--------------------|---|-------|---------|-----------------------------|
| MAX-C246A-A20-210 | LGA 1151 socket | DDR4 2666/2400/2133 | Fan             | HDMI x 2<br>VGA x 1<br>DP x 1 | —    | SATA3 x 4, M.2 2280 M-key x 1 | Intel®GbE x 2 | USB 3.2 Gen 2 x 6<br>USB 3.2 Gen 1 x 4<br>USB 2.0 x 3 | 5      | 1                  | PCIe[x16] x 1, PCIe[x4] x 2, PCIe[x1] x 1, M.2 2230 E-key x 1, M.2 2280 M-key x 1 | ATX   | Onboard | 32°F ~140°F<br>(0°C ~ 60°C) |

## Optional Accessories

| Part Number     | Description                                      |
|-----------------|--|
| AP-FNTH1Q370010 | CPU Cooler (2-Ball Bearing, 2U, TDP Max. 100W)   |
| 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)  |