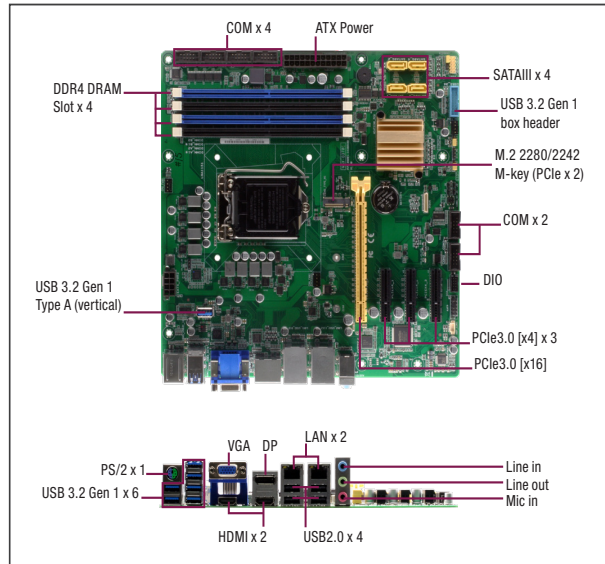


# MAX-Q370C

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

Industrial Motherboards



## Features

- 8th/9th Generation Intel® Core™ LGA1151 Processor
- Supports Max. TDP 6 Core 95W, Do Not Support 8 Core 65W/ 95W
- DDR4 2666/2400/2133 MHz, max. 128GB
- Three Independent Displays: HDMI x 2, VGA x 1, DP x 1
- Dual Intel® Gigabit Ethernet, LAN1 Supports iAMT 12.0
- USB 3.2 Gen 1 x 9, USB 2.0 x 4
- Internal USB 3.2 Gen 1 box header x 1, USB 3.2 Gen 1 Type A (vertical) x 1, M.2 2280/2242 M-key (PCIe x 2) x 1
- TPM Onboard



## 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® Q370 Express Chipset                                                                                                                   |
| Memory                   | DIMM x 4, DDR4 (2666/2400/2133 MHz, max. 128GB)<br>non-ECC, un-buffered memory<br>Dual channel memory architecture                            |
| I/O Chipset              | NCT6793D+ F81216HD                                                                                                                            |
| Ethernet                 | Intel® PHY i219LM Giga LAN (supports Intel® AMT 12.0) x 1<br>Intel® i210AT Giga 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 (open edge) x 3<br>M.2 2280/2242 M-key (PCIe SSD (Ideal speed: 800MB/S)) x 1                      |
| BIOS                     | 256 Mbit 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, 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                                                                                                                              |
| Form Factor              | Micro-ATX Form Factor, 9.6"x9.6" (244 mm x 244 mm)                                                                                            |
| Weight                   | 1.76 lb (0.8 Kg)                                                                                                                              |
| MTBF (Hours)             | 264,820                                                                                                                                       |

### Rear Panel I/O Ports

|             |                                                     |
|-------------|-----------------------------------------------------|
| USB         | USB 3.2 Gen 1 ports (5 Gbps) x 6, USB 2.0 ports 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       | SATA III (6.0Gb/s) ports x 4, support RAID 0/1/5/10<br>M.2 2280/2242 M-key (PCIe SSD (Ideal speed: 800MB/S)) x 1                                            |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| USB           | USB 3.2 Gen 1 box header x 1, support additional 2 ports (2x5PIN, p=2.54mm),<br>USB 3.2 Gen 1 Type A (vertical) connector x 1                               |
| Display I/O   | —                                                                                                                                                           |
| Audio I/O     | AAFP x 1                                                                                                                                                    |
| Serial Port   | RS-232 headers x 5<br>RS-232/422/485 (COM1, 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(s) (4-pin) x 1, 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<br>3-pin ME lock header x 1<br>Buzzer on-board x1 |
| OS            |                                                                                                                                                             |
| OS Support    | Windows® 10 64bit, Windows® 11 64bit,<br>Linux Ubuntu 64bit (18.04.1/Kernal4.8.0)                                                                           |

## Packing List

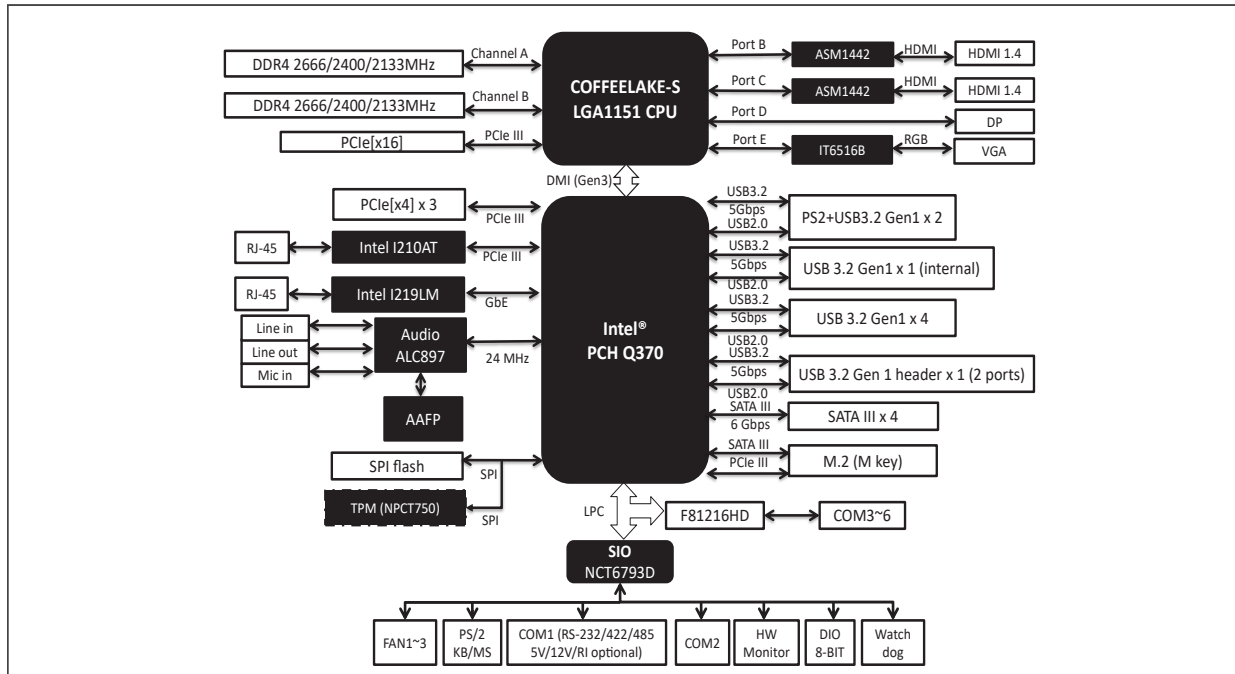
- 14001-00630100 SATA 6G Cable (7P, 180; 90, 500mm 2 in 1)
- 14001-00400100 COM Port Cable (9P, 260mm, p=2.54mm w/bracket)
- I/O Shield
- MAX-Q370C

# MAX-Q370C

10

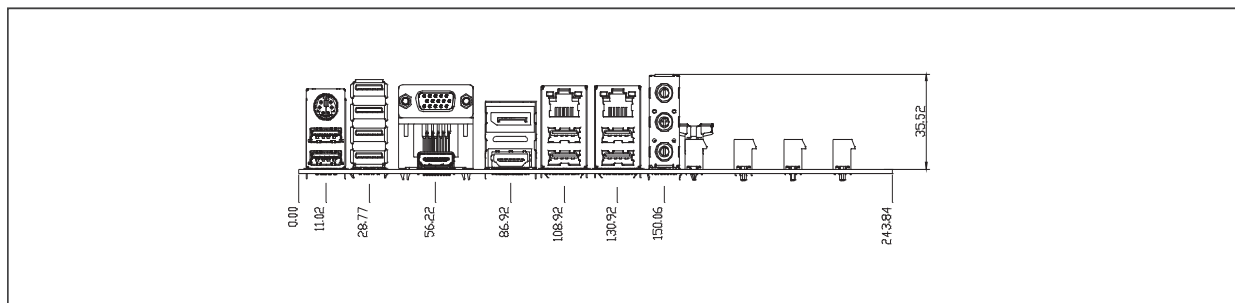
Industrial Motherboards

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

| Part number       | CPU                | RAM                    | Fan/<br>Fanless | Display                         | LVDS | Storage                                  | LAN              | USB                                                                                                     | RS-232 | RS-232/<br>422/485 | Expansion Slot                                                      | Power | TPM     | Temp.                       |
|-------------------|--------------------|------------------------|-----------------|---------------------------------|------|------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------|--------|--------------------|---------------------------------------------------------------------|-------|---------|-----------------------------|
| MAX-Q370C-A11-210 | LGA 1151<br>socket | DDR4<br>2666/2400/2133 | Fan             | HDMI x 2,<br>VGA x 1, DP<br>x 1 | —    | SATA3 x 4, M.2<br>2280/2242<br>M-key x 1 | Intel®GbE<br>x 2 | USB 3.2 Gen 1 x 6, USB 2.0 x 4,<br>USB 3.2 Gen 1 box header x 1, USB<br>3.2 Gen 1 type A (vertical) x 1 | 5      | 1                  | PCIe[x16] x 1, PCIe[x4] (open edge)<br>x 3, M.2 2280/2242 M-key x 1 | ATX   | Onboard | 32°F ~140°F<br>(0°C ~ 60°C) |

## Optional Accessories

| Part Number     | Description                                      |
|-----------------|--------------------------------------------------|
| 1700190450      | USB 3.2 Gen 1 Cable (19P, 450mm, w/bracket)      |
| 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)  |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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