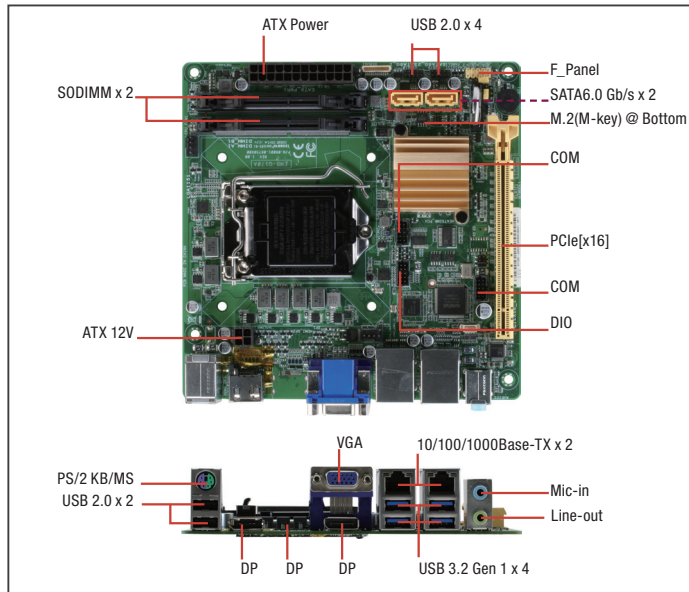


EMB-Q170A

6th/7th Generation Intel® Core™ i Series, LGA1151 Socket Processor, Max. 65W TDPs, M.2 x 1, SATA 6.0 Gb/s x 2, USB x 10



Specifications

| System | |
|--------------------------|--|
| Processor | 6th/7th Generation Intel® Core™ i7/i5/i3, LGA1151 Socket Processor, Max. 65W TDPs |
| Chipset | Intel® Q170 |
| Memory | DDR4 2133/1867 MHz SODIMM x 2, Up to 32GB, Non-ECC, Un-buffered Memory, Dual channel memory architecture |
| I/O Chipset | NCT6791D |
| Ethernet | Intel® PCIe Gb LAN 219LM x 1, Intel® PCIe Gb LAN i211AT x 1 |
| Audio | Realtek® ALC887 |
| TPM | Infineon SLB96XX TT 1.2/2.0 (default: No) |
| Expansion Slots | PCIe3.0 [x16] x 1, M.2 M-key(22 x 80 mm) at bottom side x 1 |
| BIOS | 128M bit 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® HD Graphics |
| Graphics Multi Display | DP+DP, DP+VGA, DP+DP+VGA, DP+DP+DP |
| VGA | Up to 1920 x 1200 @60 Hz |
| DVI | — |
| HDMI | — |
| 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 | ATX |
| Operating Temperature | 32°F ~140°F (0°C ~ 60°C) |
| Storage Temperature | -40°F ~185°F (-40°C ~85°C) |
| Operating Humidity | 0% ~ 90% R/H, 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) | 221,850 |

Features

- LGA1151 Socket For 6th/7th Generation Intel® Core™ i Series Processor
- DDR4 SODIMM x 2, Up to 32 GB
- Three Independent Display: DP x 3, VGA x 1
- 4K for Display Port
- Intel® LAN 211AT x 1, LAN 219LM for vPro x 1 (LAN1 Supports iAMT11.0)
- SATA 6.0 Gb/s x 2, M.2 slot (M-key) x 1
- PCI-Express [x16] (Gen3) x 1
- ATX Power



Rear Panel I/O Ports

| | |
|-------------|---|
| USB | USB 3.2 Gen 1 (5 Gbps) x 4, USB 2.0 x 2 |
| Display I/O | VGA x 1, DP x 3 |
| 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 | PS/2 for KB/MS x 1 |
| Others | — |

Internal I/O Connectors

| Storage | SATA3.0 (6.0Gb/s) x 2, M.2 M-key (22 x 80 mm) at bottom side x 1 |
|---------------|--|
| USB | USB 2.0 (2 x 5-pin, 2.00mm) x 2 ports support additional 4 USB. |
| Display I/O | — |
| Audio I/O | Speaker x 1 |
| Serial Port | Boxer header for COM (RS-232/422/485) x 1, Boxer 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 | ATX Power Connector x 2, AT/ATX mode select jumper (optional) x 1 |
| Others | Front Panel connector x 1, Chassis Intrusion x 1, Buzzer onboard x 1, CMOS jumper x 1 |
| OS | |
| OS Support | Windows® 7 32/64-bit, Windows® 8.1 32/64-bit, Windows® 10 64-bit, Ubuntu16.04.02/Kernel4.8.0 |

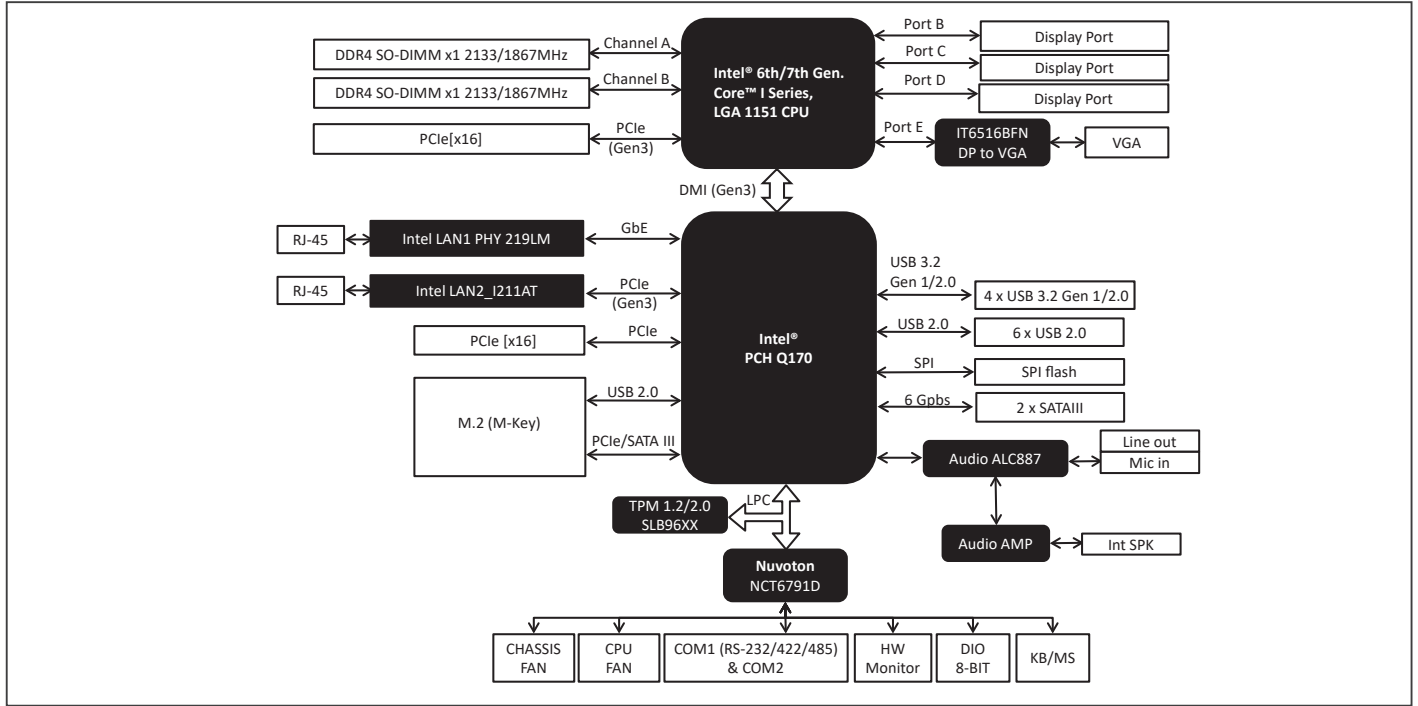
Packing List

- 14001-00630100
SATA 6G Cable (7P, 180; 90, 500mm 2 in1)
- I/O Shield
- EMB-Q170A

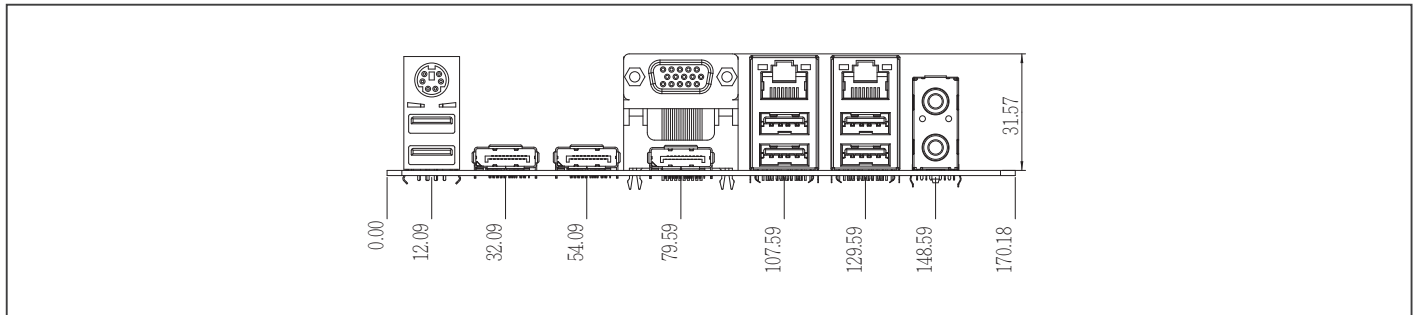
Optional Accessories

| Part Number | Description |
|---------------|--|
| 1759200172 | CPU Cooler (2-Ball, Screw with Retention Plate) |
| 175921156B | CPU Cooler (2-Ball, Push-pin Type) |
| COOLER-65W-01 | CPU Cooler |
| 1709100201 | USB 2.0 Cable (10P, 200MM, p=2.00mm, w/ bracket) |
| 1701100206 | COM Cable (200MM, p=2.00mm) |
| 1700100491 | USB 2.0 Cable (10P, 490mm, p=2.00mm) |
| 1709050201 | USB 2.0 Cable (5P, 220mm, p=2.00mm) |

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. |
|-----------------|--------|------------|-------------|---------|-----------------------|------|---------|-------------------------------|--------|----------------|----------------------------------|-------|-----|--------------------------|
| EMB-Q170A-A10-K | Socket | SODIMM x 2 | Fan | VGA, DP | SATA3 x 2, M.2(M-key) | — | GbE x 2 | USB 3.2 Gen 1 x 4, USB2.0 x 6 | 1 | 1 | PCIe3.0[x16] x 1, M.2(M-key) x 1 | ATX | — | 32°F ~140°F (0°C ~ 60°C) |