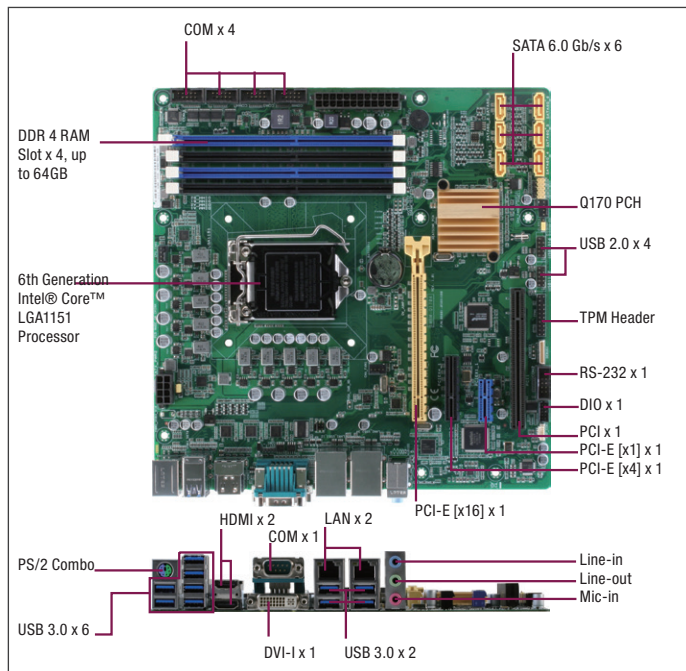


Micro-ATX with 7th/6th Generation Intel® Core™ Processor, DDR4 DRAM, USB x 14, Supports iAMT 11.0



## Specifications

| System                   |                                                                                                                   |
|--------------------------|-------------------------------------------------------------------------------------------------------------------|
| Processor                | 7th/6th Generation Intel® Core™ i7/i5/i3/Pentium®/ Celeron® 14nm LGA1151 Socket Processor                         |
| Chipset                  | Intel® Q170 Express Chipset                                                                                       |
| Memory                   | 288-pin DIMM x 4, max. 64GB, DDR4 2133/1867 MHz, non-ECC, un-buffered memory, Dual channel memory architecture    |
| I/O Chipset              | NCT6791D, F81216HD                                                                                                |
| Ethernet                 | LAN 1: Intel® PHY i219LM Giga LAN (supports iAMT 11.0) x 1<br>LAN 2: Intel® i211AT Giga LAN x 1, RJ-45 x 2        |
| Audio                    | Realtek® ALC887 (Colay with ALC886)                                                                               |
| TPM                      | 20-1 PIN header for TPM1.2/FW3.19                                                                                 |
| Expansion Slots          | PCIe 3.0/2.0[x16] Slot x 1, PCIe 3.0/2.0[x4] Slot (open edge) x 1, PCIe 3.0/2.0[x1] Slot (open edge) x 1, PCI x 1 |
| BIOS                     | 128M bit 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® HD Graphics                                                                                                |
| Graphics Multi Display   | DVI-D+HDMI, HDMI+HDMI, VGA+HDMI, DVI-D+HDMI+HDMI, VGA+HDMI+HDMI                                                   |
| VGA                      | Up to 1920 x 1200 @60Hz                                                                                           |
| DVI                      | Up to 1920 x 1200 @60Hz                                                                                           |
| HDMI                     | HDMI 1.4 up to 4096 x 2304 @30Hz                                                                                  |
| Display Port             | —                                                                                                                 |
| LVDS                     | —                                                                                                                 |
| eDP                      | —                                                                                                                 |
| Backlight Control        | —                                                                                                                 |
| Environment & Power & ME |                                                                                                                   |
| Battery                  | Lithium battery                                                                                                   |
| Power Requirement        | 24-pin ATX connector x 1, 8-pin ATX 12V Power connector x 1                                                       |
| Operating Temperature    | 32°F ~ 140°F (0°C ~ 60°C)                                                                                         |
| Storage Temperature      | -40°F ~ 185°F (-40°C ~ 85°C)                                                                                      |
| Operating Humidity       | 0% ~ 90% RH, non-condensing                                                                                       |
| Certificate              | CE & FCC Class A                                                                                                  |
| Form Factor              | Micro-ATX Form Factor, 9.6" x 9.6" (244mm x 244mm)                                                                |
| Weight                   | 1.76 lb (0.8 Kg)                                                                                                  |
| MTBF (Hours)             | 193,470                                                                                                           |

## Features

- 6th/7th Generation Intel® Core™ LGA1151 Processor
- DDR4 DRAM Support, 2133 MHz, Max. 64GB
- Three Independent Display: HDMI x 2, DVI-I Port x 1
- Dual Intel® Gigabit Ethernet, LAN1 Supports iAMT 11.0
- USB 3.0 Port x 10, USB 2.0 Port x 4
- TPM Optional (Via Pin Header)



### Rear Panel I/O Ports

|             |                                                                    |
|-------------|--------------------------------------------------------------------|
| USB         | USB 3.0 port x 10                                                  |
| Display I/O | DVI-I x 1, HDMI x 2                                                |
| Audio I/O   | Audio Jack x 3: Line-in, Mic-in, Line-out                          |
| LAN I/O     | LAN (RJ-45) port x 2                                               |
| Serial Port | RS-232/422/485 DB-9 connector x 1 (COM1, supports 5/12V on RI pin) |
| PS/2 Port   | PS/2 Combo Port (Keyboard & Mouse) x 1                             |
| Others      | —                                                                  |

### Internal I/O Connectors

|               |                                                                                                                               |
|---------------|-------------------------------------------------------------------------------------------------------------------------------|
| Storage       | SATA3 (6.0Gb/s) port x 6, supports RAID 0/1/5/10                                                                              |
| USB           | USB 2.0 connector x 2 supports additional USB port x 4                                                                        |
| Display I/O   | —                                                                                                                             |
| Audio I/O     | Speaker header x 1 (Line-out)                                                                                                 |
| Serial Port   | RS-232 header x 5                                                                                                             |
| PS/2 Port     | —                                                                                                                             |
| Parallel Port | —                                                                                                                             |
| DIO           | 8-bit Digital I/O interface x 1 (In/Out programmable)                                                                         |
| FAN           | CPU Fan connector(s) (4-pin) x 1, Chassis Fan connector(s) (4-pin) x 2                                                        |
| Others        | Front panel header x 1, Clear CMOS jumper x 1, TPM header x 1, BIOS flash header (2[x4]P p=1.27mm) x 1, Chassis Intrusion x 1 |

### OS

|            |                                                                                   |
|------------|-----------------------------------------------------------------------------------|
| OS Support | Windows® 7 32/64-bit, Windows® 8.1 64-bit, Windows® 10 64-bit, Linux Fedora 64bit |
|------------|-----------------------------------------------------------------------------------|

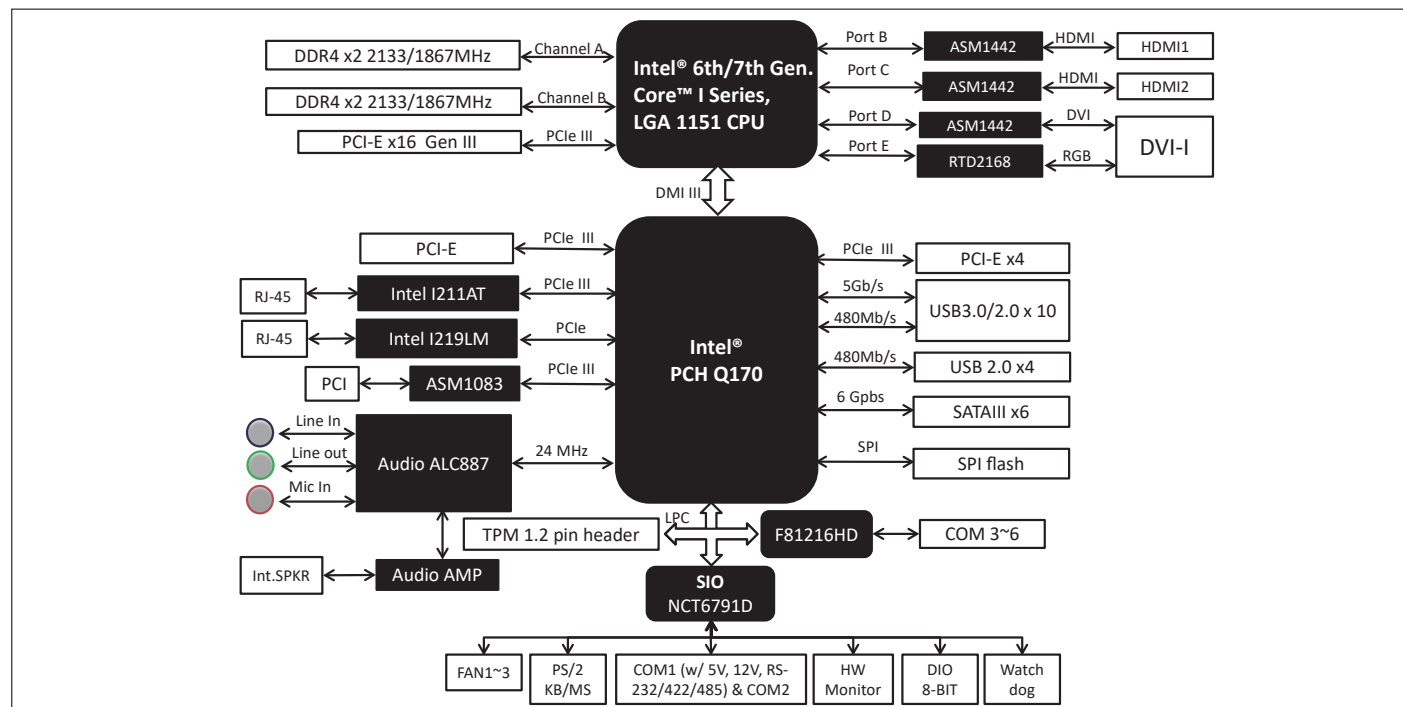
## Packing List

- 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
- Product CD
- IMBM-Q170A

## Optional Accessories

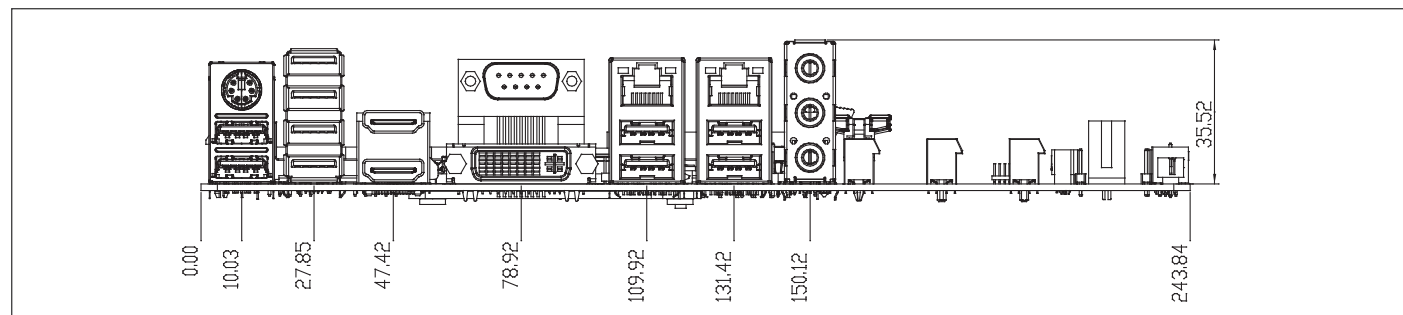
| Part Number | Description                                      |
|-------------|--------------------------------------------------|
| 1709100330  | USB 2.0 cable (9P, 330MM, p=2.54mm, w/bracket)   |
| 170910020K  | USB 2.0 cable (9P, 200MM, p=2.54mm, w/o bracket) |
| 175921156B  | CPU Cooler (2-Ball, Push-pin Type)               |
| 1759200172  | CPU Cooler (2-Ball, Screw with Retention Plate)  |
| TBD         | TPM Module                                       |

## 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.                     |
|------------------|----------------|-----------|-------------|---------------------|-----------|------|---------------|---------------------------|--------|----------------|-----------------------------------------------------|-------|---------------|---------------------------|
| IMBM-Q170A-A10-K | LGA1151 socket | DDR4 2133 | Fan         | DVI-I x 1, HDMI x 2 | SATA3 x 6 | —    | Intel®GbE x 2 | USB 3.0 x 10, USB 2.0 x 4 | 5      | 1              | PCIe[x16] x 1, PCIe [x4] x 1, PCIe[x1] x 1, PCI x 1 | ATX   | 20-Pin Header | 32°F ~ 140°F (0°C ~ 60°C) |