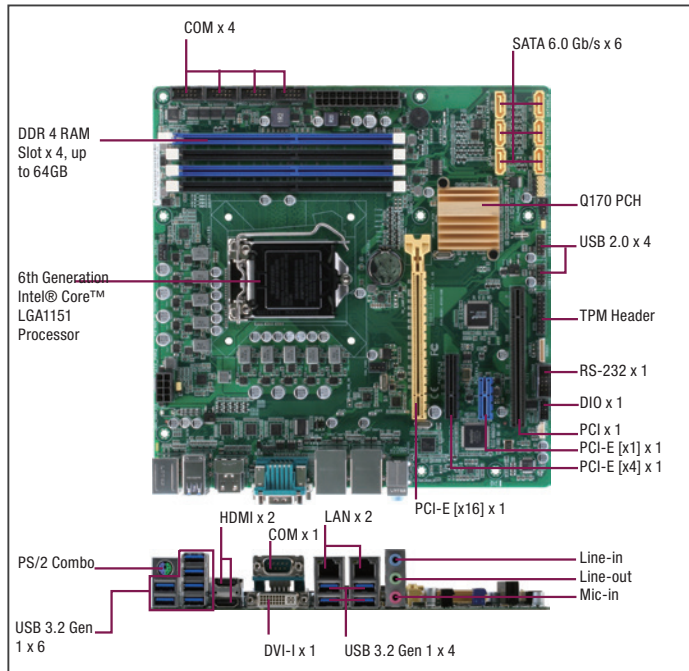


# IMBM-Q170A

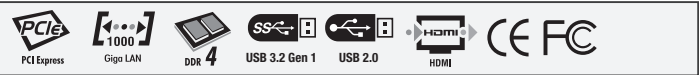
Micro-ATX with 7th/6th Generation Intel® Core™ Processor, DDR4 DRAM, USB x 14, Supports iAMT 11.0

Industrial Motherboards



## 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 3.2 Gen 1 Port x 10, USB 2.0 Port x 4
- TPM Optional (Via Pin Header)



Rear Panel I/O Ports	
USB	USB 3.2 Gen 1 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 header supports additional 2 USB ports x 2
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
Power	—
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

## 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 Gb LAN (supports iAMT 11.0) x 1 LAN 2: Intel® i211AT Gb 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-I+HDMI, 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

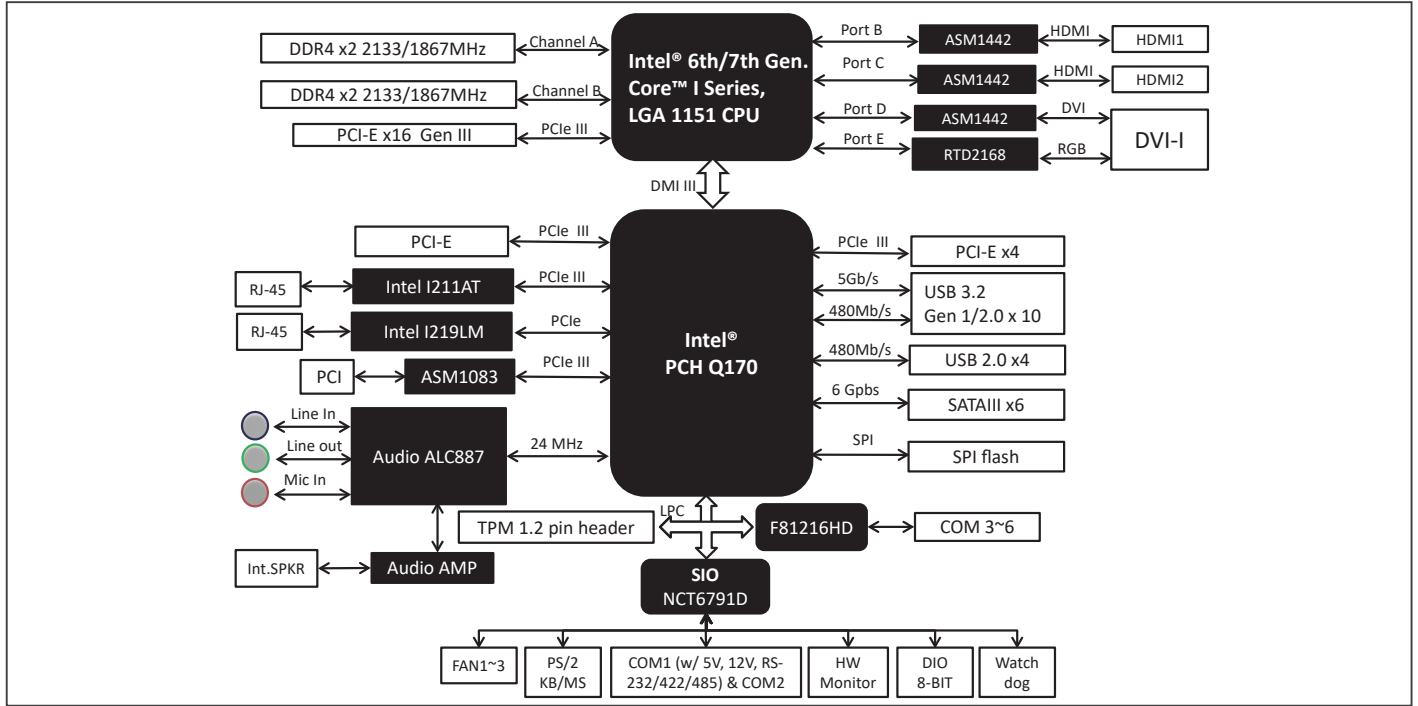
## Packing List

- 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
- IMBM-Q170A

## Optional Accessories

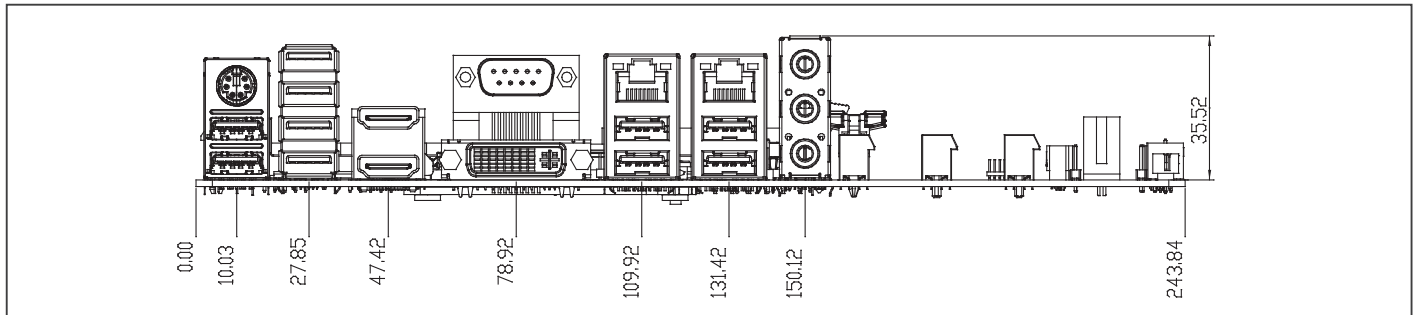
Part Number	Description
1709100330	USB 2.0 cable (9P, 330MM, p=2.54mm, w/bracket)
170910020K	USB 2.0 cable (9P, 200MM, p=2.54mm, w/o bracket)
175921156B	CPU Cooler (2-Ball, Push-pin Type)
1759200172	CPU Cooler (2-Ball, Screw with Retention Plate)
TBD	TPM Module

### 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 3.2 Gen 1 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	20-1 Pin Header	32°F – 140°F (0°C – 60°C)