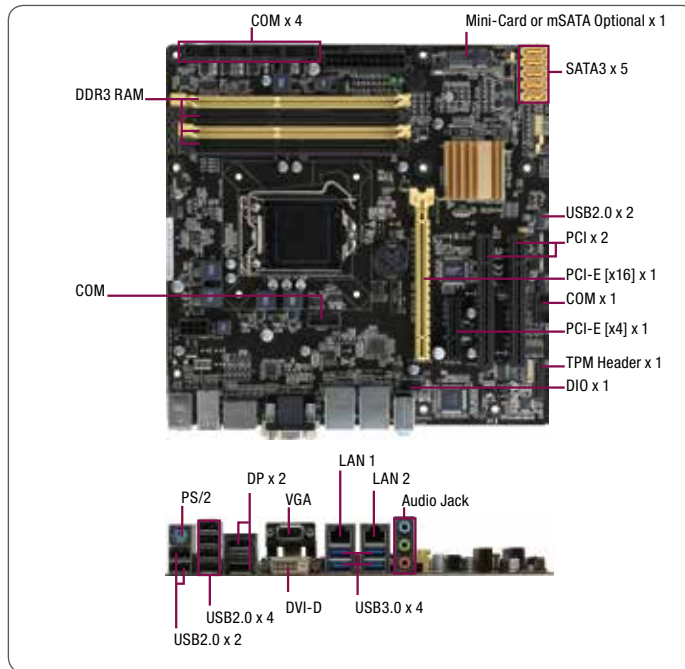


IMBM-Q87A

Micro ATX Industrial Motherboard with Intel® 4th Generation LGA1150 Processor, SATA3 x 5, Multiple Display Ports, Support iAMT 9.0



Features

- Intel® 4th Generation Core™ i7/i5/i3 22nm LGA 1150 Socket Processor
- Three/Dual Independent Display: VGA, DVI-D, DP x 2
- Dual Gigabit Ethernet, LAN1 Supports iAMT 9.0
- SATA 6.0 Gb/s x 5, USB 3.0 x 4, USB 2.0 x 8
- Rich Expansion Slot: PCI-E [x16] x 1, PCI-E [x4] x 1, PCI x 2, Mini-Card (or Optional mSATA) x 1
- TPM Support



Specifications

System	
Form Factor	Micro ATX
Processor	Intel® 4th Generation Core™ i7/i5/i3 22nm LGA 1150 socket Processor
System Memory	240-pin DDR3 1600/1333 MHz DIMM x 4, up to 32 GB, non-ECC, un-buffered memory Dual channel memory architecture
Chipset	Intel® Q87 Express Chipset
I/O Chipset	Nuvoton NCT6791D, Fintek F81216HD
Ethernet	LAN1: Intel® PHY I217LM Giga LAN x 1 (support AMT 9.0) LAN 2: Intel® I210AT Giga LAN x 1, (RJ-45 x 2)
BIOS	64Mbit Flash ROM x 2, AMI BIOS
Wake On LAN / PXE	Yes (WOL/PXE)
Watchdog Timer	1~255 step by software program
TPM	Yes, pin header
H/W Monitor	Temperature Monitor on CPU/Chassis Voltage Monitor on Vcore/5V/12V Fan Monitor on CPU/Chassis
Expansion Interface	PCI-E 3.0/2.0 [x16] Slot x 1, PCI-E 2.0 [x4] Slot x 1, PCI x 2, Half-size Mini-Card (PCI-E + USB) x 1 (m-SATA optional)
Battery	Lithium battery
Power Requirement	24-pin ATX connector x 1, 8-pin(2x4) ATX 12V Power connector x 1, CPU Fan x 1/ Chassis Fan x 2
Power Consumption	Intel® Core™ i7-4770K Processor, DDR3 1600 8 GB x 2; 1.51A@+12V, 0.4A@+5V, 0.7A@+3.3V
Board Size	9.6" x 9.6" (244mm x 244mm)
Gross Weight	1.55 lb (0.7 kg)
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
MTBF	100,000
Display	
Graphic Engine	Intel® Graphics Media Accelerator
Resolution	Up to 1920 x 1200 @60 Hz for VGA, Up to 1920 x 1200 @60 Hz for DVI Up to 3840 x 2160 @60 Hz for DP
Output Interface	VGA x 1, DVI-D x 1, Display Port x 2 DVI-D+DP, DP+DP, VGA+DVI-D, VGA+DP, DVI-D+DP+DP, VGA+DP+DP

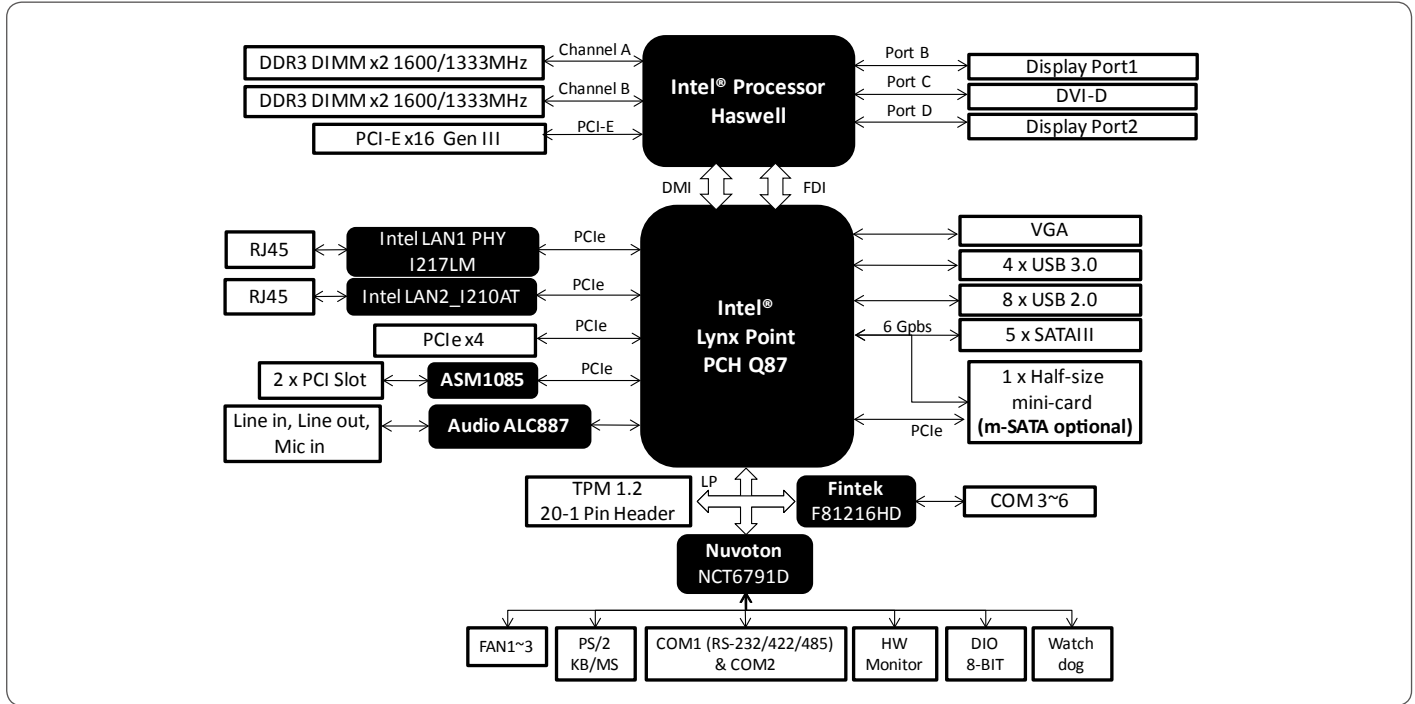
I/O	
Storage	SATA 3 (6.0 Gb/s) ports x 5, Supports RAID 0/1/5/10
Serial Port	RS-232/422/485 x 1 (supports 5/12V on RI), RS-232 x 5
Parallel Port	—
USB	USB 3.0 ports x 4 (at back panel) USB 2.0 ports x 8 (2 ports at mid-board, 6 ports at back panel)
DIO	8 bit Digital I/O x 1 (In/Out programmable)
PS/2 Port	PS/2 Combo Connector x 1
Audio	Realtek ALC887, 6 Channel, Line-in, Mic-in, Line-out

Packing List

- 1701100260
COM Cable (4P, 260MM, p=2.54mm) w/bracket
- I/O Shield
- SATA 6G Cable (7P, 180; 90, 500mm) 2 in 1
- Product DVD
- IMBM-Q87A

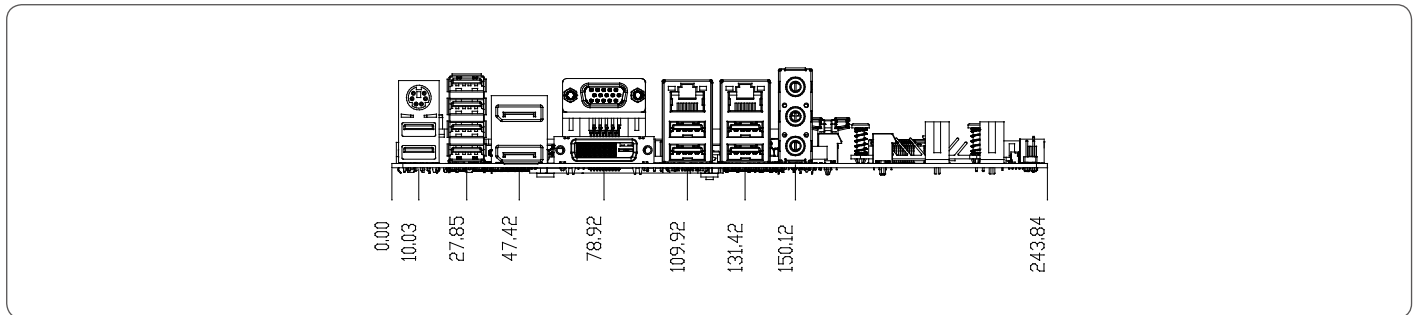
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Block Diagram



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-Q87A-A10	Socket	240-pin DIMM	Fan	VGA, DVI, DP x 2	SATA3 x 5	—	Intel®GbE x 2	USB 3.0 x 4 USB 2.0 x 8	5	1	PCI-E [x16] x 1, PCI-E [x4] x 1, PCI x 2, Half-size Mini-Card x 1	ATX	Pin Header	0°C ~ 60°C
IMBM-Q87A-A10-MS	Socket	240-pin DIMM	Fan	VGA, DVI, DP x 2	SATA3 x 5 mSATA x 1 (Half-size Mini-PCI-E Slot)	—	Intel®GbE x 2	USB 3.0 x 4 USB 2.0 x 8	5	1	PCI-E [x16] x 1, PCI-E [x4] x 1, PCI x 2	ATX	Pin Header	0°C ~ 60°C

Optional Accessories

- **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)
- **1701260305**
LPT Cable (25P, 270mm)
- **175921156B**
CPU Cooler (2-Ball, Push-pin Type)
- **1759200172**
CPU Cooler (2-Ball, Screw with Retention Plate)
- **1701160201**
VGA Cable (200mm, p=2.00mm)
- **1700060192**
PS/2 Combo Cable, 6P, 190mm
- **TPM Module**